

HANDBOOK OF THE BIRDS OF INDIA AND PAKISTAN

*TOGETHER WITH THOSE OF BANGLADESH,
NEPAL, SIKKIM, BHUTAN AND SRI LANKA*

SÁLIM ALI
AND
S. DILLON RIPLEY

With contributions by T. J. Roberts

Volume 9
ROBINS TO WAGTAILS
Synopsis Nos. 1681–1891
With Nine Colour Plates

SECOND EDITION

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- 14 *Cinclidium leucurum*, Whitetailed Blue Robin (1681)
- 15 *Cinclidium frontale*, Bluefronted Robin (1682)
- 16 *Saxicoloides fulicata*, Indian Robin (1720)
- 17 *Saxicoloides f. cambaiensis*, Indian Robin (1717)
- 18 *Cercomela fusca*, Brown Rock Chat (1692)
- 19 *Chaimarrornis leucocephalus*, Whitecapped Redstart or River Chat (1716)

PLATE 91

- 1 *Copsychus malabaricus*, Shama (1665)
- 2 *Copsychus m. albiventris*, Shama (1668)
- 3 *Grandala coelicolor*, Hodgson's Grandala (1683)
- 4 *Copsychus saularis*, Magpie-Robin (1661)
- 5 *Enicurus scouleri*, Little Forktail (1684)
- 6 *Enicurus schistaceus*, Slatybacked Forktail (1686)
- 7 *Enicurus immaculatus*, Blackbacked Forktail (1685)
- 8 *Enicurus maculatus*, Spotted Forktail (1688)
- 9 *Enicurus leschenaulti*, Leschenault's Forktail (1687)
- 10 *Cochoa viridis*, Green Cochua (1691)
- 11 *Cochoa purpurea*, Purple Cochua (1690)
- 12 *Myiophonus blighi*, Ceylon Whistling Thrush (1727)
- 13 *Myiophonus horsfieldii*, Malabar Whistling Thrush (1728)
- 14 *Myiophonus caeruleus*, Blue Whistling Thrush (1729)

PLATE 92

- 1 *Saxicola macrorhyncha*, Stoliczka's Bush Chat (1693)
- 2 *Saxicola torquata*, Collared Bush Chat (1697)
- 3 *Saxicola t. przewalskii*, Collared Bush Chat (1696)
- 4 *Saxicola insignis*, Hodgson's Bush Chat (1694)
- 5 *Saxicola caprata*, Pied Bush Chat (1701)
- 6 *Saxicola jerdoni*, Jerdon's Bush Chat (1704)
- 7 *Saxicola leucura*, Whitetailed Bush Chat (1699)
- 8 *Saxicola ferrea*, Dark-grey Bush Chat (1705)
- 9 *Oenanthe oenanthe*, Wheatear (1708)
- 10 *Oenanthe isabellina*, Isabelline Chat (1706)
- 11 *Oenanthe xanthopygia*, Redtailed Chat (1707)

COLOUR PLATES

- 12 *Oenanthe deserti*, Desert Wheatear (1710)
- 13 *Oenanthe pleschanka*, Pleschanka's Chat (1715)
- 14 *Oenanthe albonigra*, Hume's Chat (1714)
- 15 *Oenanthe finschii*, Barnes's Chat (1711)
- 16 *Oenanthe monacha*, Hooded Chat (1713)
- 17 *Oenanthe picata*, Pied Chat (1712)

PLATE 93

- 1 *Monticola rufiventris*, Chestnutbellied Rock Thrush (1724)
- 2 *Zoothera citrina*, Orangeheaded Ground Thrush (1733)
- 3 *Zoothera c. cyanotus*, Orangeheaded Ground Thrush (1734)
- 4 *Monticola solitarius*, Blue Rock Thrush (1726)
- 5 *Monticola cinclorrhynchus*, Blueheaded Rock Thrush (1723)
- 6 *Turdus unicolor*, Tickell's Thrush (1748)
- 7 *Monticola saxatilis*, Rock Thrush (1722)
- 8 *Turdus boulboul*, Greywinged Blackbird (1750)
- 9 *Turdus albocinctus*, Whitecollared Blackbird (1749)
- 10 *Turdus merula kinnisii*, Blackbird (1757)
- 11 *Turdus m. nigropileus*, Blackbird (1753)
- 12 *Turdus m. simillimus*, Blackbird (1755)
- 13 *Turdus merula*, Blackbird (1752)
- 14 *Turdus feai*, Fea's Thrush (1761)
- 15 *Turdus kessleri*, Kessler's Thrush (1760)
- 16 *Turdus rubrocanus*, Greyheaded Thrush (1758)
- 17 *Turdus r. gouldii*, Greyheaded Thrush (1759)

PLATE 94

- 1 *Zoothera wardii*, Pied Ground Thrush (1731)
- 2 *Zoothera spiloptera*, Spottedwinged Ground Thrush (1737)
- 3 *Zoothera sibirica*, Whitebrowed Ground Thrush (1732)
- 4 *Zoothera mollissima*, Plainbacked Mountain Thrush (1739)
- 5 *Zoothera marginata*, Lesser Brown Thrush (1746)
- 6 *Zoothera dixoni*, Longtailed Mountain Thrush (1740)
- 7 *Zoothera monticola*, Large Brown Thrush (1745)
- 8 *Zoothera dauma*, Smallbilled Mountain Thrush (1741)
- 9 *Turdus naumanni*, Dusky Thrush (1765)
- 10 *Turdus dissimilis*, Blackbreasted Thrush (1747)
- 11 *Turdus obscurus*, Dark Thrush (1762)
- 12 *Turdus ruficollis*, Redthroated Thrush (1764)
- 13 *Turdus r. atrogularis*, Blackthroated Thrush (1763), ssp of 1764
- 14 *Turdus iliacus*, Redwing (1767)
- 15 *Turdus pilaris*, Fieldfare (1766)
- 16 *Turdus viscivorus*, Mistle Thrush (1768)

PLATE 95

- 1 *Prunella collaris*, Alpine Accentor (1779)
- 2 *Prunella strophiata*, Rufousbreasted Accentor (1783)
- 3 *Prunella rubeculoides*, Robin Accentor (1781)
- 4 *Prunella immaculata*, Maroonbacked Accentor (1788)
- 5 *Prunella himalayana*, Altai Accentor (1780)
- 6 *Prunella atrogularis*, Blackthroated Accentor (1787)
- 7 *Prunella fulvescens ocularis*, Radde's Accentor (1785a), ssp of 1784
- 8 *Prunella montanella*, Siberian Accentor (1787a)
- 9 *Prunella fulvescens*, Brown Accentor (1784)
- 10 *Montifringilla blanfordi*, Blanford's Snow Finch (1955)
- 11 *Montifringilla davidiana*, Pere David's Snow Finch (1956)

COLOUR PLATES

- 12 *Montifringilla adamsi*, Tibet Snow Finch (1952)
- 13 *Montifringilla nivalis*, Snow Finch (1951)
- 14 *Montifringilla taczanowskii*, Mandelli's Snow Finch (1953)
- 15 *Leucosticte nemoricola*, Hodgson's Mountain Finch (2000)
- 16 *Montifringilla ruficollis*, Rednecked Snow Finch (1954)
- 17 *Leucosticte brandti*, Brandt's Mountain Finch (2003)
- 18 *Montifringilla theresae*, Bartaile Snow Finch (SE)

PLATE 96

- 1 *Aegithalos leucogenys*, Whitecheeked Tit (1821)
- 2 *Aegithalos niveogularis*, Whitethroated Tit (1822)
- 3 *Aegithalos iouschistos*, Rufousfronted Tit (1823)
- 4 *Aegithalos concinnus*, Redheaded Tit (1818)
- 5 *Aegithalos c. manipurensis*, Redheaded Tit (1820)
- 6 *Cephalopyrus flammiceps*, Firecapped Tit (1815)
- 7 *Remiz pendulinus*, Penduline Tit (1817)
- 8 *Remiz p. nigricans*, Penduline Tit (RE)
- 9 *Parus dichrous*, Brown Crested Tit (1808)
- 10 *Parus ater*, Coal Tit (1803)
- 11 *Parus rufonuchalis*, Simla Black Tit (1804)
- 12 *Parus melanoleucus*, Crested Black Tit (1802)
- 13 *Parus rubidiventris*, Rufousbellied Crested Tit (1805)
- 14 *Parus spilonotus*, Blackspotted Yellow Tit (1812)
- 15 *Parus cyanus flavipectus*, Yellowbreasted Blue Tit (1800)
- 16 *Parus c. tianschanicus* (RE)
- 17 *Parus monticolus*, Greenbacked Tit (1799)
- 18 *Parus major*, Grey Tit (1794)
- 19 *Parus nuchalis*, Whitewinged Black Tit (1798)
- 20 *Melanochlora sultanea*, Sultan Tit (1789)
- 21 *Sylviparus modestus*, Yellowbrowed Tit (1814)
- 22 *Parus xanthogenys*, Yellowcheeked Tit (1811)
- 23 *Parus bokharensis*, Blue-grey Tit (SE)

PLATE 97

- 1 *Sitta europaea nagaensis*, Common Nuthatch (1826)
- 2 *Sitta himalayensis*, Whitetailed Nuthatch (1834)
- 3 *Sitta castanea*, Chestnutbellied Nuthatch (1830)
- 4 *Sitta europaea cashmirensis*, Common Nuthatch (1824)
- 5 *Sitta tephronota*, Eastern Rock Nuthatch (1836)
- 6 *Sitta leucopsis*, Whitecheeked Nuthatch (1832)
- 7 *Sitta frontalis*, Velvetfronted Nuthatch (1838)
- 8 *Sitta formosa*, Beautiful Nuthatch (1837)
- 9 *Tichodroma muraria*, Wall Creeper (1839)
- 10 *Certhia familiaris*, Tree Creeper (1843)
- 11 *Certhia himalayana*, Himalayan Tree Creeper (1847)
- 12 *Certhia nipalensis*, Nepal Tree Creeper (1851)
- 13 *Certhia discolor*, Sikkim Tree Creeper (1849)
- 14 *Salpornis spilonotus*, Spotted Grey Creeper (1841)
- 15 *Panurus biarmicus*, Bearded Tit-Babbler or Reedling (1235)
- 16 *Paradoxornis gularis*, Greyheaded Parrotbill (1249)
- 17 *Paradoxornis flavirostris*, Blackthroated Parrotbill (1251)
- 18 *Paradoxornis guttaticollis*, Whitethroated Parrotbill (1252)
- 19 *Paradoxornis ruficeps*, Greater Redheaded Parrotbill (1247)
- 20 *Paradoxornis atrosuperciliaris oatesi*, Lesser Redheaded Parrotbill (1245)
- 21 *Paradoxornis a. atrosuperciliaris*, Lesser Redheaded Parrotbill (1246)
- 22 *Paradoxornis nipalensis humii*, Orange Parrotbill (1241)
- 23 *Paradoxornis n. poliotis*, Orange Parrotbill (1242)
- 24 *Paradoxornis fulvifrons*, Fulvousfronted Parrotbill (1238)

PLATE 98

- 1 *Anthus novaeseelandiae richardi*, Richard's Pipit (1857)
- 2 *Anthus n. rufulus*, Paddyfield Pipit (1859), ssp of 1857
- 3 *Anthus campestris*, Tawny Pipit (1861)
- 4 *Anthus similis*, Indian Rock Pipit (1868)
- 5 *Anthus pratensis*, Meadow Pipit (1856)
- 6 *Anthus cervinus*, Redthroated Pipit (1864)
- 7 *Anthus roseatus*, Vinaceousbreasted Pipit (1865)
- 8 *Anthus hodgsoni*, Indian Tree Pipit (1852)
- 9 *Anthus trivialis*, Tree Pipit (1854)
- 10 *Anthus spinoletta*, Water Pipit (1871)
- 11 *Anthus nilghiriensis*, Nilgiri Pipit (1870)
- 12 *Anthus sylvanus*, Upland Pipit (1873)
- 13 *Motacilla alba personata*, White Wagtail (1886)
- 14 *Motacilla a. dukhunensis*, White Wagtail (1885)
- 15 *Motacilla indica*, Forest Wagtail (1874)
- 16 *Motacilla flava*, Yellow Wagtail (1880)
- 17 *Motacilla f. melanogrisea*, Yellow Wagtail (1878)
- 18 *Motacilla maderaspatensis*, Large Pied Wagtail (1891)
- 19 *Motacilla cinerea*, Grey Wagtail (1884)
- 20 *Motacilla citreola*, Yellowheaded Wagtail (1881)

CHANGES IN TERRITORIAL NAMES

The *Handbook* relies on observations made during the last hundred years, during which period many areas have changed their names and boundaries. The authors have striven to keep up with changes which have taken place during the writing and publication of the ten volumes, and hope the following notes will be helpful in interpretation.

ANDHRA PRADESH. Until 1953 the northern half of Madras State, including the deltas of the Krishna and Godavari rivers and the arid hills of the Eastern Ghats, and the former Hyderabad State.

ARUNACHAL PRADESH. 'The Province of the Dawn.' The Himalayas east of Bhutan, including the Dafla, Abor, Miri and Mishmi hills. Before 1972 this area was the North-East Frontier Agency (NEFA), comprising the Kameng, Subansiri, Siang and Lohit frontier divisions.

ASSAM. Before 1947 this province included Arunachal Pradesh, Meghalaya, Mizoram and Nagaland (q.v.). In 1972 it was restricted to the Brahmaputra Valley.

BANGLADESH. Constituted in 1971, formerly East Pakistan. Besides the Brahmaputra plains it includes the Chittagong Hill Tracts in the south.

BENGAL. Prior to 1947 the Ganges-Brahmaputra delta area, later divided into Bangladesh (q.v.) and West Bengal.

HARYANA. The fertile plains area north and west of Delhi, formerly part of the Punjab (q.v.).

HIMACHAL PRADESH. 'The Snowy Province.' The Himalayan hill States were united under this name in 1948, and in 1966 the area was enlarged by the hill regions of the Punjab.

KARNATAKA. The official name of Mysore since 1973.

MEGHALAYA. 'Cloud-land.' The Garo, Khasi and Jaintia hill districts, constituted a separate State in 1972.

MIZORAM. The Lushai or Mizo Hills area, constituted a separate State in 1972.

NAGALAND. The Naga Hills area, constituted a separate State in 1962.

NEFA. Now Arunachal Pradesh, q.v.

OUDH (=Awadh). The eastern Gangetic plains, now part of Uttar Pradesh ('Northern Province'), the name given in 1950 to the United Provinces (of Agra and Oudh).

PAKISTAN. Before 1972 West Pakistan including Sind, Baluchistan, Punjab (q.v.), the North-West Frontier Province and Bahawalpur.

PUNJAB. Prior to 1947 the whole of the northern plains area watered by the Indus, and its five tributaries namely Jhelum, Chenab, Ravi, Beas and Sutlej. Divided in 1947 into West Punjab (Pakistan) and East Punjab (India). In 1966 East Punjab was further divided into Punjab, Haryana and Himachal Pradesh (q.q.v.).

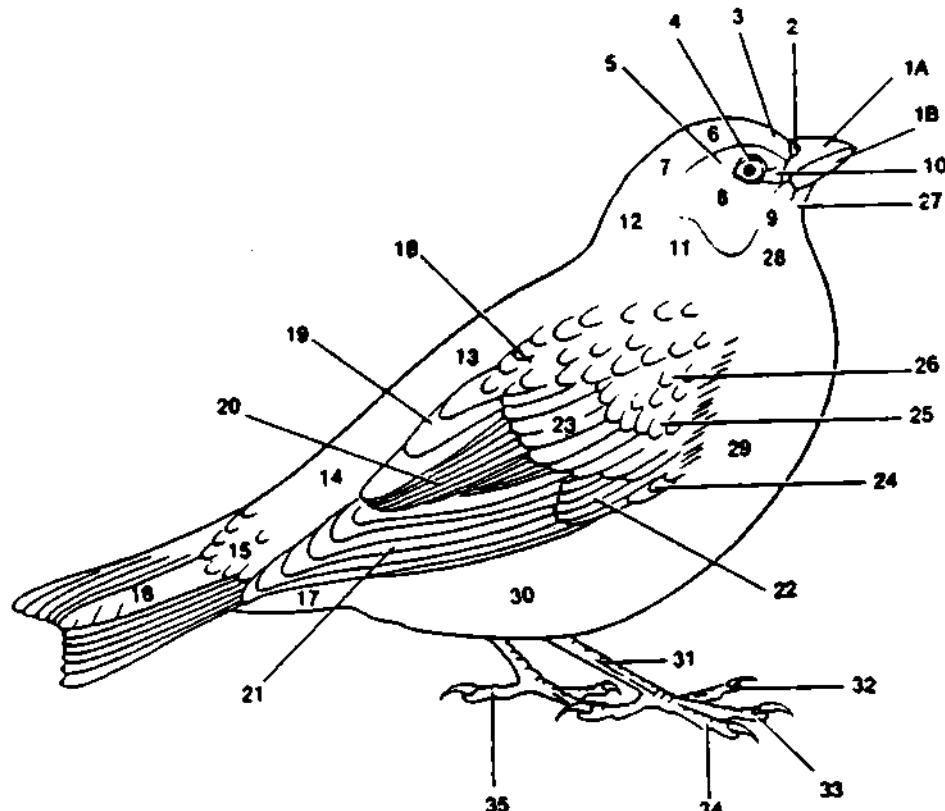
SAURASHTRA. The union of States was merged with Bombay in 1956 and since 1960 has been part of Gujarat.

SRI LANKA. The official name of Ceylon since 1972.

TAMIL NADU. The name given to Madras State in 1969.

Terms used in the description of a bird's plumage and parts

Topography of a sparrow



- | | |
|--|--------------------------|
| 1A Maxilla (=upper mandible) | 18 Scapulars |
| 1B Mandible (=lower mandible) | 19 Tertiaries |
| 2 Nostril | 20 Secondaries } |
| 3 Forehead | 21 Primaries } (remiges) |
| 4 Iris | 22 Primary coverts |
| 5 Supercilium | 23 Greater coverts |
| 6 Crown | 24 Bastard wing (alula) |
| 7 Hind crown | 25 Median coverts |
| 8 Ear-coverts | 26 Lesser coverts |
| 9 Malar region (malar stripe, moustache) | 27 Chin |
| 10 Lores | 28 Throat |
| 11 Side of neck | 29 Breast |
| 12 Hindneck (=nape) | 30 Belly (abdomen) |
| 13 Back or mantle | 31 Tarsus |
| 14 Rump | 32 Inner toe |
| 15 Upper tail-coverts | 33 Middle toe |
| 16 Tail (rectrices) | 34 Outer toe |
| 17 Under tail-coverts | 35 Hind toe (hallux) |

ABBREVIATIONS

Bull. BOC	<i>Bulletin of the British Ornithologists' Club</i>
CBCN	<i>Ceylon Bird Club Newsletter</i>
Dementiev	<i>Birds of the Soviet Union</i>
FBI	<i>Fauna of British India, Birds</i>
Ind. Hb.	<i>Handbook of the Birds of India and Pakistan</i>
J. Orn.	<i>Journal für Ornithologie, Berlin</i>
JBNHS	<i>Journal of the Bombay Natural History Society</i>
PZS	<i>Proceedings of the Zoological Society, London</i>
SF	<i>Stray Feathers</i>
SZ	<i>Spolia Zeylanica</i>
Witherby	<i>The Handbook of British Birds</i>

Abbreviated references to persons frequently quoted

Abdulali or HA	Humayun Abdulali
Alexander or HGA	Horace G. Alexander
Baker	E. C. Stuart Baker
Biswas or BB	Biswamoy Biswas
Desfayes or MD	Michel Desfayes
Diesselhorst or GD	Gerd Diesselhorst
Hartert	Ernst Hartert
Hume	A. O. Hume
Inglis	C. M. Inglis
Jerdon	T. C. Jerdon
Jones	A. E. Jones
Kinnear or NBK	Sir Norman B. Kinnear
Meinertzhagen or RM	Col. R. Meinertzhagen
Murphy	R. C. Murphy
Osmaston or BBO	B. B. Osmaston
Paynter or RAP	R. A. Paynter
Peters	J. L. Peters
Phillips	W. W. A. Phillips
Ripley or SDR	S. Dillon Ripley
Roberts or TJR	T. J. Roberts
Sálim Ali or SA	Sálim Ali
Stresemann or Stres.	Erwin Stresemann
Ticehurst or CBT	Claud B. Ticehurst
Whistler or HW	Hugh Whistler

Order PASSERIFORMES (cont.)

Family MUSCICAPIDAE (cont.)

Subfamily TURDINAE: Thrushes and Chats (cont.)

Genus CINCLIDIUM Blyth

Cinclidium Blyth, 1842, Jour. Asiat. Soc. Bengal 11: 181. Type, by monotypy, *C. frontale* Blyth

Muscisylvia Hodgson, 1845, Proc. Zool. Soc. London: 27. Type, by original designation, *M. leucura* Hodgson *nec Muscisylvia* Agassiz, 1841 (*vide* Mayr, 1938, Ibis: 293)

Myiomela 'Hodgs.' = Gray, 1846, Gen. Bds. 1: 178. New name for *Muscisylvia* Hodgson

Callene Blyth, 1847, Jour. Asiat. Soc. Bengal 16: 136. New name for *Cinclidium* Blyth, 1842

Tail considerably longer than tarsus. Bill fairly stout, rictal bristles short. Tarsus strong, moderately long.

Key to the Species

Tarsus over 32 mm *C. frontale*

Tarsus under 32 mm *C. leucurum*

1681. Whitetailed Blue Robin. *Cinclidium leucurum* (Hodgson)

M.(uscisylvia) leucura Hodgson, 1845, Proc. Zool. Soc. London: 27 (Nepal)

Notodela leucura rhipidura Koelz, 1952, Jour. Zool. Soc. India 4: 41

(Tekhubama, Naga Hills)

Baker, FBI No. 554, Vol. 2: 106

Plate 90, fig. 14

LOCAL NAME. *Mangshia* (Lepcha).

SIZE. Bulbul -; c. 17 cm (6½ in.).

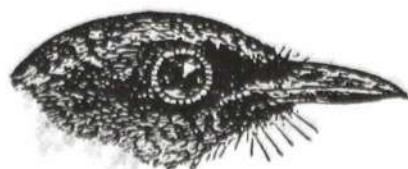
FIELD CHARACTERS. Male (adult). *Above*, lores, round the eye and sides of head black. Forehead, short supercilium and shoulders blue. Rest of upperparts dark indigo. Tail blackish with two white patches on basal half (prominent only in flight). *Below*, throat and breast black; a white patch on each side of neck, usually concealed. Belly dark indigo.

Female. *Above*, rufous olive-brown; a ferruginous eye-ring. Tail dark brown edged ferruginous, and with white patches

as in male. *Below*, throat ochraceous; breast rufous-brown; belly greyish brown.

The conspicuous white patches in the tail of both sexes diagnostic.

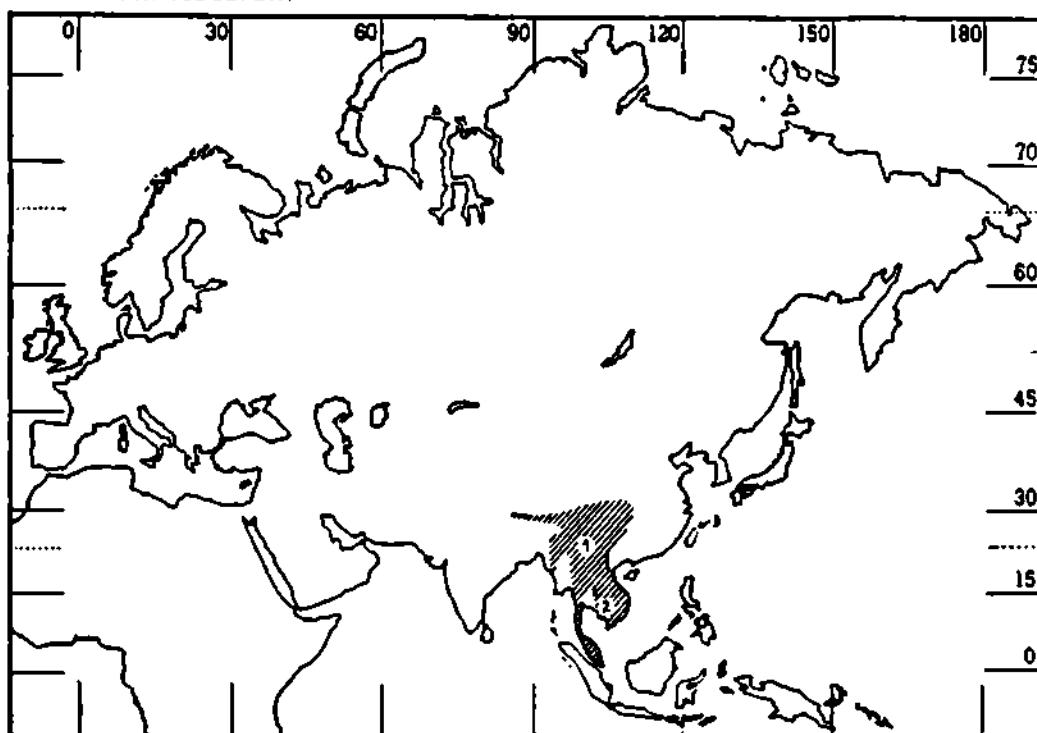
STATUS, DISTRIBUTION and HABITAT. Resident, subject to vertical seasonal movements, locally common. From central Nepal east through Arunachal Pradesh, south to Manipur, Assam in the Cachar, and Meghalaya in the



× c. 1

TURDINAE

Khasi and Garo hills. Breeds between 1200 and 2700 m; winters from c. 1500 m down to the foothills and, in Meghalaya, adjacent plains. Affects undergrowth in shady, broad-leaved evergreen forest, usually in the vicinity of small streams.

Cinclidium leucurum

Distributional range

1 *leucurum* (1681)

2 *cambodianum* (RE)

3 *montium* (RE)

Extralimital. Extends east to Hupeh, Guizhou and Vietnam, and south through the Malay Peninsula.

GENERAL HABITS. Solitary and as a rule very secretive. Feeds on the ground and in bushes. When disturbed flies on to a dead log or low branch where it sits opening and closing its tail. Presently descends again to hop about and feed, flicking aside and turning over dead leaves in the quest.

FOOD. Insects and, at least in autumn, berries (GD).

VOICE and CALLS. A clear, liquid song of robin quality—several phrases, each given separately with a considerable pause between: *te-tle-i-ta—we-i . . . il'yei-ya-we-i . . .* (Lister). Often sings from an exposed perch. ‘The bird would perch on a twig while singing and lean forwards, at the same time spreading the tail . . . One continually raised and depressed its tail quite slowly while singing and at the same time expanded and contracted it’ (Lister). Song period, mid March to mid September (Proud). Other notes unrecorded.

BREEDING. *Season,* April to August, chiefly May and June. The majority of birds have two broods, using the same nest for both (Baker). *Nest,* a deep cup when sheltered from above, often domed or semi-domed when in open banks; made mostly of rootlets mixed with some dead leaves and green moss lined

with rootlets, placed in a crack or hole in some vertical rock near streams or in a grassy or mossy bank, sometimes among boulders or exposed roots of trees overhanging a stream. Eggs, 3 or 4, almost white to pale pink, some with a faint darker coronal band at the large end and an indistinct indication of a speckled pattern; rather similar to eggs of Large Niltava (1428). Average size of 65 eggs 22.9×17 mm (Harrison & Parker, *Bull. Brit. Orn. Cl.* 86: 71-3). Building of nest by both sexes. Incubation mostly by female, also by male.

MUSEUM DIAGNOSIS. See Field Characters. Young very dark brown (σ^{\prime}) or olive-brown (φ) spotted with ferruginous; white patches in tail as in adult. Postjuvenile moult of body, lesser and median coverts. First-year birds distinguished by retention of ochraceous tips to greater coverts. Postnuptial moult apparently in September (fresh plumage in October).

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
$\sigma^{\prime}\sigma^{\prime}$	89-100	18-19	27-29	69-85 mm
$\varphi\varphi$	88-91	—	—	— mm (SDR, BB, SA).

Weight 5 $\sigma^{\prime}\sigma^{\prime}$ (Oct.-Nov.) 24-30 g (GD, SA); 1 φ (winter) 26 g (SDR).

COLOURS OF BARE PARTS. Male. Iris brown. Bill, legs and feet black. Female. Iris brown. Bill horny. Legs and feet brown.

CINCLIDIUM FRONTALE Blyth: BLUEFRONTED ROBIN

Key to the Subspecies

A	Whitish abdomen and vent; abdomen with a brownish wash	Page
..... <i>C.f. frontale</i>	3
B	Very little white on abdomen and vent	4

1682. *Cinclidium frontale frontale* Blyth

Cinclidium frontale Blyth, 1842, Jour. Asiat. Soc. Bengal 11: 181 (Sikkim)
Baker, FBI No. 555, Vol. 2: 107

Plate 90, fig. 15

LOCAL NAMES. None recorded.

SIZE. Bulbul \pm ; length c. 19 cm (7½ in.).

FIELD CHARACTERS. Male (adult). *Above*, lores, frontal band and round the eye black. Forehead, short supercilium and shoulders cobalt-blue. Rest of upperparts deep slaty blue. *Below*, deep slaty blue; centre of belly and under tail-coverts whitish.

Female. Whole plumage rufous brown; a pale eye-ring. Centre of belly and vent whitish.

Both sexes very similar in coloration to *C. leucurum* but tail greatly graduated and without any white, and tarsus considerably longer.

STATUS, DISTRIBUTION and HABITAT. A rare and little known species. Recorded only from Nepal (probably extreme eastern part), Sikkim and Darjeeling. In the latter district taken in June at Palmajua, 2250 m, about 5 km northeast of Tonglu (Paynter, *in litt.*). Affects subtropical wet forest.

Extralimital. Another subspecies in northern Vietnam and Laos.

TURDINAE

GENERAL HABITS, FOOD and VOICE. Unknown. Specimens have been taken in heavy forest near the ground.

BREEDING. Unknown.

MUSEUM DIAGNOSIS. See Field Characters.

MEASUREMENTS

	Wing	Bill (from feathers)	Tarsus	Tail
♂♂	83-91	14-15	37-38	75-80 mm
♀♀	81-82	13	—	78 mm (Baker)
				outer inner
2 ♂♂	87, 88	13	38, 40	63, 67 85, 86 mm (Eddie, Glasgow Univ. Hunterian Mus.)

Weight 2 ♂♂ (June) 25.5, 26.2; 2 ♀♀ (June) 25, 25 g (RAP).

COLOURS OF BARE PARTS. Male. Iris, bill, legs and feet black. Female. Iris very dark brown. Bill black. Legs and feet fleshy grey.

1682a. *Cinclidium frontale orientale* (Delacour & Jabouille)

Callene frontalis orientalis Delacour and Jabouille, 1930, Oiseau Rev. Franç. Orn., 11, p. 397 (Chapa, Tonkin).

LOCAL NAMES. None recorded.

SIZE. Bulbul ±; length c. 19 cm (7½ in.).

FIELD CHARACTERS. As in 1682 but very little white on lower belly and vent.

STATUS, DISTRIBUTION and HABITAT. Two specimens only known from India; both taken at Namdapha, Arunachal Pradesh (40-mile Camp, 40 mi. E. of Miao, 17.iii.79; Lone Camp, 73 km ESE Miao, 28.ii.88).

Extrazonal. Breeds in North Vietnam, in Tonkin; Laos; and Thailand.

GENERAL HABITS, FOOD and VOICE. As in 1682.

BREEDING. Nothing recorded in our area.

MUSEUM DIAGNOSIS. See Field Characters.

MEASUREMENTS

Wing	Bill (from skull)	Tarsus	Tail
87-88	18-19	35-37	81-82 mm

Weight 2 ♂♂ 25.5, 29 g.

COLOURS OF BARE PARTS. Iris brown, bill black, legs brown flesh or black with pads greyish flesh.

Genus GRANDALA Hodgson

Grandala Hodgson, 1843, Jour. Asiatic. Soc. Bengal 12: 447.

Type, by monotypy, *Grandala coelicolor* Hodgson

Wing very long and pointed, first primary (as.) minute, second longest or equal to third. Tail square. Upper tail-coverts very long, about two-thirds of tail. Bill about half the length of the head, rather slender. Rictal bristles short and weak.¹

¹ For systematic position based on osteology see Pycraft, 1927; for affinities based on habits see Meinertzhagen, 1927, Desfayes, 1965 and Diesselhorst, 1968.

1683. **Hodgson's Grandala.** *Grandala coelicolor* Hodgson

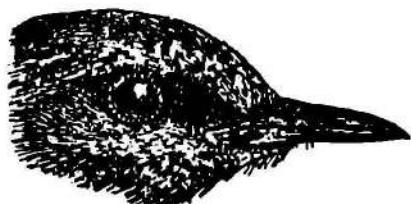
Gr.(andala) coelicolar [sic] Hodgson, 1843, Jour. Asiatic. Soc. Bengal 12: 447 (Nepal)
Baker, FBI No. 541, Vol. 2: 89

Plate 91, fig. 3

LOCAL NAMES. None recorded.

SIZE. Bulbul +; length c. 23 cm (9 in.).

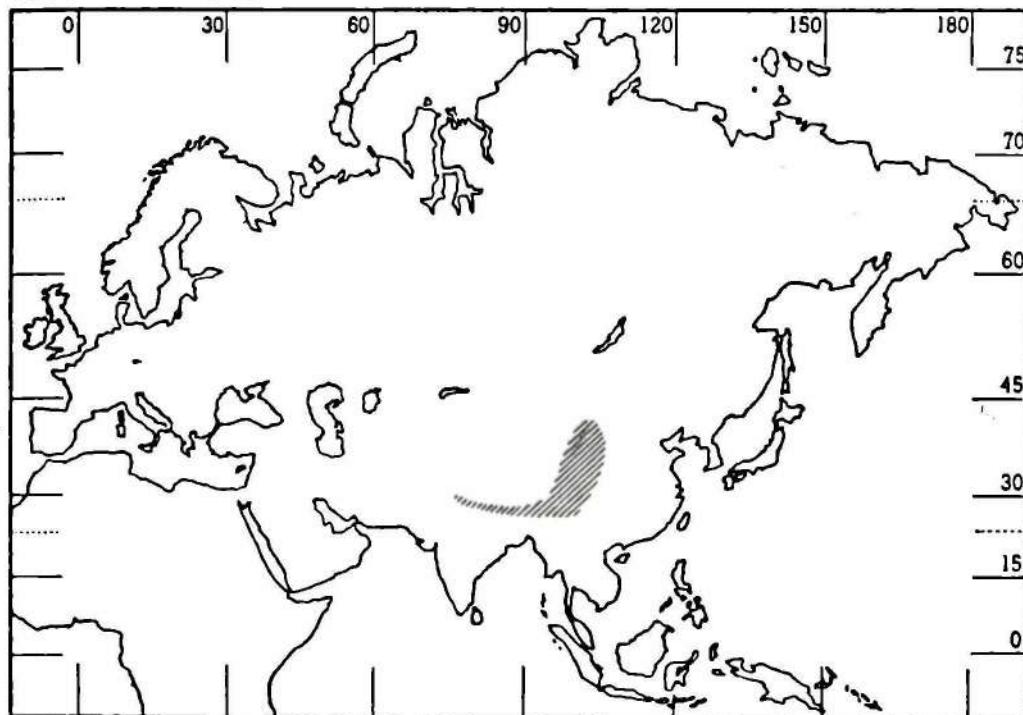
FIELD CHARACTERS. Male (adult). Entirely bright purple-blue with a silvery sheen, except for lores, wings and tail which are black.



× c. 1

Female very different. *Above*, head and neck brown streaked with fulvous white. Rest of upperparts brown. Tips of tertials and a patch on wing white, the latter conspicuous in flight. Rump and upper tail-coverts tinged with blue. *Below*, brown streaked with fulvous white, more so on throat and breast.

STATUS, DISTRIBUTION and HABITAT. Resident, subject to vertical movements, locally plentiful. The Himalayas from Kashmir (Kishenganga and Liddar valleys) east through Arunachal Pradesh. Found in summer between 3900 and 5400 m, chiefly above 4300 m. Winters mostly above 3000 m and up to at least 4300 m, irregularly descending to lower levels (c. 2200 m) in bad weather. In summer affects boulder-strewn alpine meadows, rocky slopes, scree and cliffs above the dwarf scrub zone. In winter frequents

Grandala coelicolor

Distributional range

ridges and rocky mountainsides. Both in winter and summer has a preference for rain-swept ridges and heights.

Extralimital. Extends to Yunnan, Sichuan and north to Kansu.

GENERAL HABITS. In summer keeps at the highest elevations in loose flocks of 5 to 60 individuals, presumably breaking up into pairs in late June (cf. Diesselhorst, 1968: 309) and flocking again towards the end of August. A preponderance of adult males over brown-plumaged birds has been noted by Schäfer, Sálim Ali and Desfayes. However, flocks composed almost entirely of brown-plumaged birds have been recorded by Meinertzhagen and Diesselhorst, thus supporting the view of a segregation of the sexes and brown-plumaged individuals. In winter congregates in restless swarms of several hundred birds (once estimated at over 1000). 'This swarm kept circling high over the valley, chiefly gliding, with occasional wing-beats. The cloud appeared as though wasted here and there by the wind. From time to time the birds would drop steeply like rain more or less in unison to settle on tall leafless trees, covering the top branches in dense clusters. Every little while, for no apparent reason, the swarm would suddenly take wing, circle aloft and tumble again into another tree in a restricted "beat" of rocky mountainside' (SA). Circle and glide very much like *Artamus fuscus* (982, q.v.) [Lavkumar, JBNHS 75: 221]. 'Their flight is buoyant, beautiful and effortless, and even in the strongest winds they seem to do exactly as they please, wheeling sometimes like flocks of scattered waders and at other times taking the strong, direct flight of a rock-thrush' (Meinertzhagen). Flight sometimes likened to that of starlings or even bee-eaters; this comparison however is superficial and rests upon its long-winged, slim aspect and the formation of large flocks; on closer observation, its movements and carriage appear decidedly turdine and do not show the least resemblance to starlings (GD); its flight approaches nearest that of the rock thrush, while on the ground it also resembles the rock thrush (Meinertzhagen). Finds most of its food on the ground, hopping about and often jumping chat-like on to a rock. Feeding territory often several hundred metres away from nest. Probably spends nights in cliffs as birds have been observed at dusk to fly toward mountainside crags. In autumn and winter readily perches on trees and bushes. Has a habit of flicking open its tail and wings simultaneously.

FOOD. Insects, caterpillars, tipulid larvae (GD), pupae, moths, seeds and berries; in autumn berries of *Vaccinium* and in winter those of *Hippophae*. Large flocks occasionally raid cultivated fruit-trees in autumn and cause some damage.

VOICE AND CALLS. A very silent bird. Call-note *tji-u* or *tju-ti*. Song, a mere variation of the call-note, a soft, clear *tji-u tji-u ti-tu tji-u* audible at close range only, uttered occasionally even in summer; given from a rock or boulder (Desfayes); also a characteristic *klew . . . klew . . . klew* (Lavkumar).

BREEDING. Season, second half of June and July. Nest, a large, neat cup of dry grass covered with moss, lined with feathers and other soft material, placed on a ledge of rock in a vertical or overhanging cliff (Whymper, JBNHS 20: 1158 and 22: 196; Sheriff, *Ibis* 1944: 185). Eggs, apparently only 2, greenish white marked all over with reddish brown blotches and purplish secondary markings. Two eggs measure 29.7 × 19.4 and 27.3 × 21 mm (Baker). Young fed by both parents. Breeding biology imperfectly known.

MUSEUM DIAGNOSIS. See Field Characters. Young similar to female but streaks

larger, ground colour darker; streaks extend well on to mantle but are faint on rump and upper tail-coverts which are not tinged with blue. First-winter male (after postjuvenile moult) similar to female but streaks narrower. Possibly breeds in this dress? Blue plumage assumed on first postnuptial moult in the second year when plumage shows a mixture of blue and brown feathers; moult apparently starts on abdomen and under tail-coverts. At this time brown rectrices and remiges are also replaced by black. Postnuptial moult complete, in August and September.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	140-152	20-22	{ 29-31	84-91 mm
♀♀	135-147		{ 29-30	77-87 mm

(NBK, SA)

Weight 4 ♂♂ (July) 42-46, 2 ♂♂ (August) 50, 52; 1 ♀ (July) 38; 4 juv. 43.7-51 g (GD).

COLOURS OF BARE PARTS. Male. Iris dark brown. Bill black; gape and inside of mouth bright orange-yellow (summer, MD); inside of mouth of both sexes bright lemon-yellow (winter; possibly a seasonal variation?—SA). Legs, feet and claws black.

Genus ENICURUS Temminck

Enicurus Temminck, 1822, Pl. col. (19), pl. 113. Type, by monotypy, *Enicurus coronatus* Temminck (= *Turdus Leschenaulti* Vieillot)

Microcichla Sharpe, 1883, Cat. Bds. Brit. Mus. 7: 312, 322. Type, by monotypy, *Enicurus Scouleri* Vigors

Characterized by long, graduated and deeply forked tail (except *scouleri* in which tail is short, square and only slightly forked), and by convex lower mandible. Bill strong and fairly stout. Rictal bristles well developed. Wing long, first primary (as.) about half the length of second.

Key to the Species

		Page
A	Tail under 8 cm.....	<i>E. scouleri</i> 7
B	Tail over 8 cm	
1	Back spotted	<i>E. maculatus</i> 14
2	Back unspotted	
a	Back slaty	<i>E. schistaceus</i> 11
b	Back black	
i	Black of underparts restricted to upper throat	<i>E. immaculatus</i> 9
ii	Black of underparts extending to breast	<i>E. leschenaulti</i> 12

1684. Little Forktail. *Enicurus scouleri scouleri* Vigors

Enicurus Scouleri Vigors, 1832, Proc. Zool. Soc. London: 174 (Himalayas = Simla)
Baker, FBI No. 525, Vol. 2: 65

Plate 91, fig. 5

LOCAL NAME. *Ooong-sumrek-pho* (Lepcha).

SIZE. Sparrow —; length c. 12 cm (5 in.).

TURDINAE

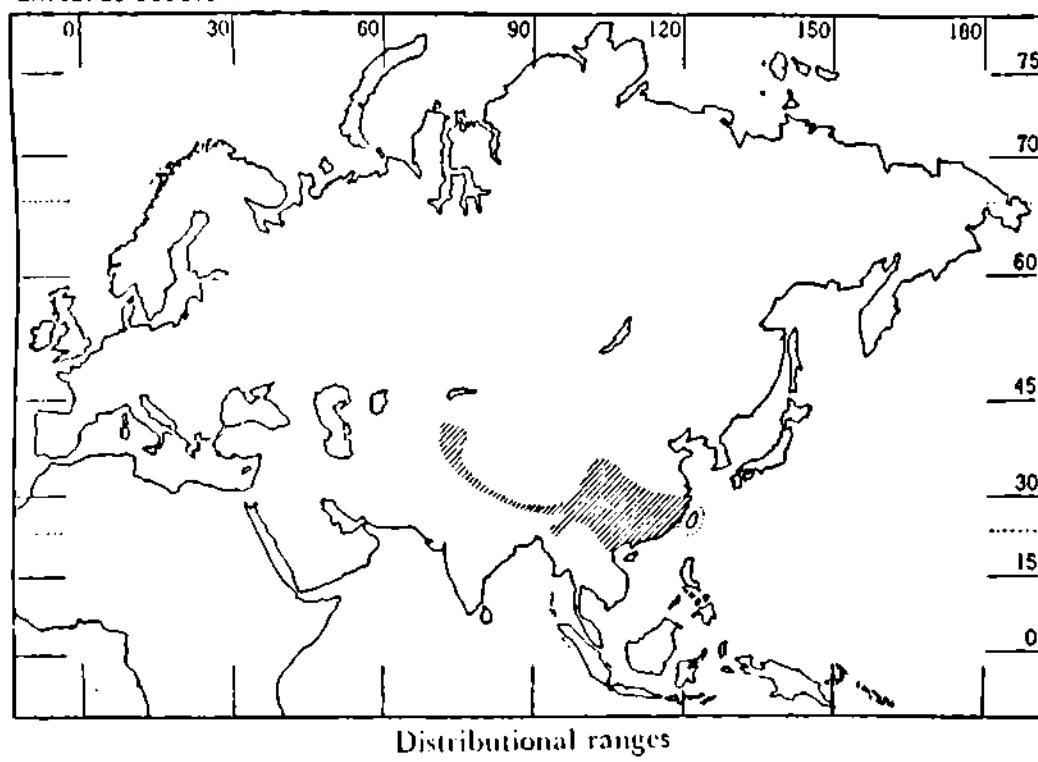
FIELD CHARACTERS. *Above*, forehead white; rest of head, neck and upper back black. A conspicuous white 'triangular' bar across wing. Lower back and base of tail white, a black band across rump. Tail blackish brown, slightly forked, outer rectrices white. *Below*, throat black; rest of underparts white smeared with black on breast and flanks. Legs fleshy white. Sexes alike.

STATUS, DISTRIBUTION and HABITAT. Resident, subject to seasonal vertical movements; locally common. The Himalayas from Chitral and Gilgit east through Arunachal Pradesh, thence south to Nagaland, Assam (Cachar), Meghalaya (Khasi Hills) and Bangladesh in the Chittagong ranges. Breeds chiefly between 1800 and 3300 m, uncommonly down to 1000 m (below Mussooree—Rattray; Cachar (Baker) or up to 3700 m (headwaters of Khola river, central Nepal—Desfayes). Winters (October to March) mostly between 1000 and at least 2400 m, locally down to c. 300 m. Affects torrential rocky streams and waterfalls.

Extralimital. Extends west to Tadzhikstan and Kirghizstan, east through China and south to northern Vietnam. Another subspecies in Taiwan.

GENERAL HABITS. Rather similar to those of Plumbeous Redstart (1679), q.v. Met with perched singly or in pairs along small rocky hill streams, usually in the vicinity of waterfalls—its favourite hunting ground—commonly in loose association with Plumbeous and Whitecapped Redstarts, but with some rivalry for coveted stances. Incessantly wags its stumpy tail slowly up and down and rapidly opens and shuts it with a rhythmic, scissors-like action, the flickering black-and-white pattern producing the exact effect of water rippling over the roughnesses of the rocks. Picks insects

Enicurus scouleri



[Hatched] *scouleri* (1684)

[Unshaded] *fortis* (RE)

off the surface of the slippery wet rocks or the water flowing over them, occasionally flying (hovering) out over the spray in their pursuit. Sometimes plunges into a foaming torrent, like a dipper, apparently running along the bottom against the current (Perreau, JBNHS 19: 908). Feeds chiefly in the morning and evening, usually resting in between in nearby scrub or holes under boulders. As a rule frequents smaller and more turbulent streams than the larger forktails, but in winter sometimes seen well out in wide slow-flowing rivers.

FOOD. Aquatic insects and their larvae.

VOICE and CALLS. A loud *ts-yoeee* (Flint *et al.*, 1984).

BREEDING. Season, April to June. Nest, a compact cup of green moss lined with skeleton leaves, placed on a ledge or cleft in rock, usually behind a waterfall, or in a hole in moss-covered banks. Eggs, normally 3, occasionally 2, rarely 4, white, sparsely speckled with light reddish. Average size of 25 eggs 20·1 × 15 mm (Baker).

MUSEUM DIAGNOSIS. See Field Characters. Young : whole crown, sides of head and back sooty brown. Underparts white, feathers of throat and breast with dark margins. Rest as in adult but black replaced by sooty brown. Postjuvenile moult of body, lesser, and median coverts.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♀	72-79	13-15	24-26	41-51 mm (Stres., SA, BB)

Weight 2 ♂♂ (Oct.-Nov.) 17, 18·6; 3 ♀♀ (Oct.-Nov.) 12-16 g (RAP, SA, BB).

COLOURS OF BARE PARTS. Iris brown. Bill black. Legs and feet fleshy white.

1685. Blackbacked Forktail. *Enicurus immaculatus* (Hodgson)

Motacilla (Enicurus) Immaculatus Hodgson, 1836, Asiatic Res. 19: 190 (Nepal)
Baker, FBI No. 520. Vol. 2: 61

Plate 91, fig. 7

LOCAL NAME. *Inridiba gajeba* (Kacha Naga).

SIZE. Bulbul, with a long tail; length c. 25 cm (10 in.).

FIELD CHARACTERS. General effect of a pied wagtail. *Above*, forehead and supercilium white. Rest of head and back black. Rump white continued as a white band across black wings. Tips of secondaries white. Tail long, very deeply forked and graduated; outer rectrices white, inner ones black with white tips emphasizing the graduated aspect. *Below*, upper throat black, rest white. Sexes alike. Slightly smaller than Spotted Forktail (1688).

Leschenault's Forktail (1687) is similar but larger and with a black breast.

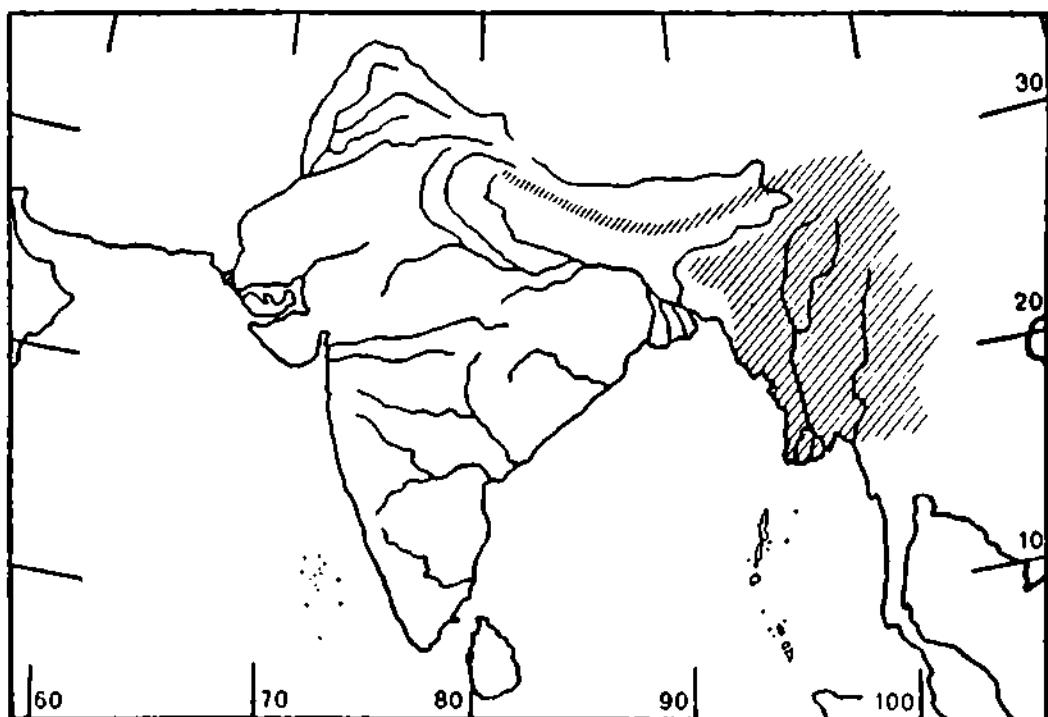
STATUS, DISTRIBUTION and HABITAT. Resident, scarce west of Sikkim, commoner eastwards. The Himalayan foothills below c. 1450 from Garhwal east through Arunachal Pradesh, the foothills of Meghalaya, Nagaland, Manipur, Assam (Cachar), Mizoram and Bangladesh south to the Chittagong region; in the latter areas breeds below 900 m, mostly below 500 m, and in the adjacent plains in wooded terrain. Affects rocky hill streams and muddy or sandy banks of rivers where current is still rapid, and almost

always flowing through dense damp forest; in Nepal restricted to streams running through deciduous forest.

Extralimital. Ranges east through Burma and Thailand.

GENERAL HABITS. Those of the genus (cf. 1686, 1688). Solitary. Frequents stones and boulders in and along wooded streams, incessantly wagging its tail.

Enicurus immaculatus



■ Distributional range

FOOD. Insects.

VOICE and CALLS. Call-note a sharp *curl-seeeee*, the second syllable two notes higher than the first (Fleming); sometimes only the first note is given. Has 'a short song'.

BREEDING. Season, end of March to May. Nest, a cup of green moss with a few roots and dead leaves, lined with skeleton leaves; placed on ledges or in crevices of rock, often where water is dripping, or in hollows in fallen trees or stream banks. Eggs, normally 3, pinkish, feebly marked with reddish brown specks and irregular blotches, sometimes forming a cap at the large end. Average size of 28 eggs 20.8×15.8 mm (Baker). Building and incubation by both sexes; incubation period undetermined.

MUSEUM DIAGNOSIS. See Field Characters and Key to the Species. Young has head, neck and back sooty brown; no white on forehead. Underparts white, breast-feathers with blackish margins. Tail as in adult but shorter and feathers narrower. Postjuvenile moult of body, lesser, median and greater coverts and apparently the tail (HW).

MEASUREMENTS

	Wing	Bill (from skull)	Tail
3 ♂♂	86–98 }	20	{ 124 (one msd.) mm
2 ♀♀	86, 90 }		{ 127 (one msd.) mm (Rand & Fleming)

Tarsus c. 26 mm

Weight 1 ♀ (October) 25 g (GD); 1 ♂ (Oct.) 26 g (SA).

COLOURS OF BARE PARTS. Iris brown. Bill black. Legs and feet pale fleshy white.

1686. Slatybacked Forktail. *Enicurus schistaceus* (Hodgson)

Motacilla (Enicurus) schistaceus Hodgson, 1836, Asiat. Res. 19: 189 (Nepal)
Baker, FBI No. 519, Vol. 2: 59

Plate 91, fig. 6

LOCAL NAME. *Innuidiba* (Kacha Naga).

SIZE. Bulbul, with a long tail; length c. 25 cm (10 in.).

FIELD CHARACTERS. *Above*, a narrow frontal band and short supercilium white. Crown and back slaty. Wings black with a broad white band across, a smaller white patch on primaries and white tips to tertials. Rump white. Tail as in *immaculatus* (1685). *Below*, chin and sides of throat black. Rest of underparts white, slaty on sides of breast. Sexes alike.

STATUS, DISTRIBUTION and HABITAT. Resident, subject to vertical movements; rare west of Sikkim. The Himalayan foothills from Kumaon east through Arunachal Pradesh, Meghalaya, Nagaland, Assam (Cachar), Manipur, Mizoram and Bangladesh south to the Chittagong region. Breeds between c. 300 and 1600 m. In winter extends down to the base of the hills and adjacent plains. Affects rocky torrents in dark dense forest, although it appears to be less a forest bird than *maculatus* (1688), and also frequents nullahs running through cultivated areas; also prefers larger streams.

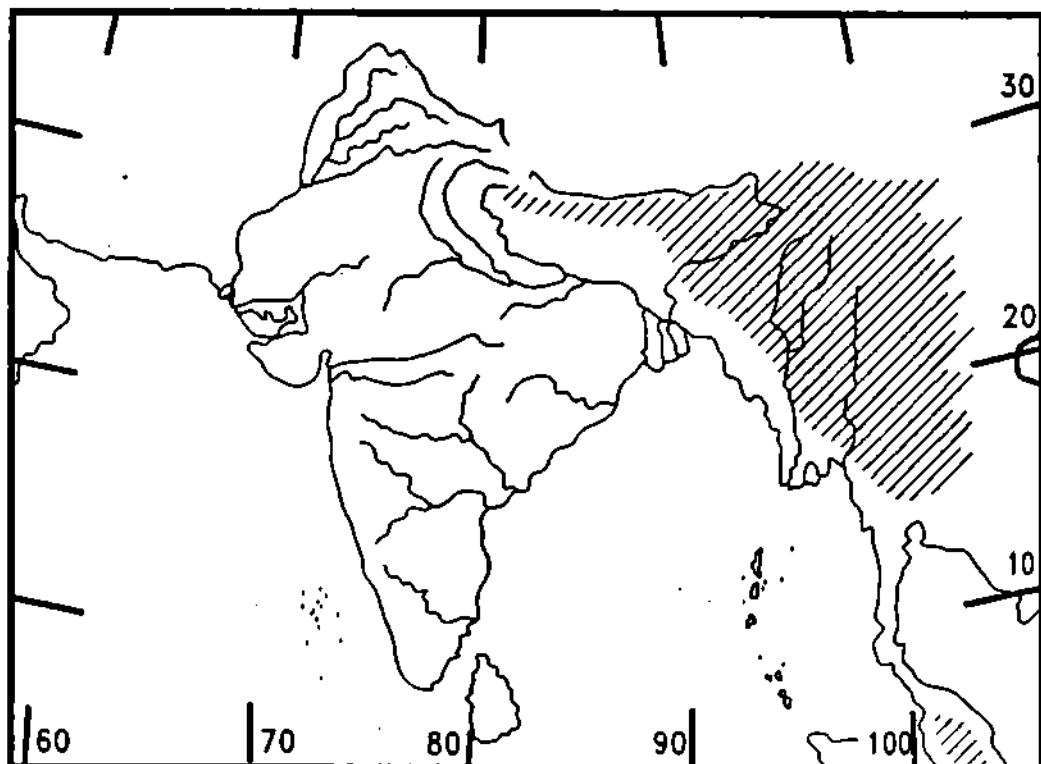
EXTRALIMITAL. Ranges east through the Indochinese countries and down the Malaysian peninsula and southern China to Fujian.

GENERAL HABITS. A low-altitude forktail. Keeps solitary or in pairs on wooded rocky streams. Hops or flits from stone to stone over the surface of water, or trips lightly over boulders in search of insects. Rarely if ever forsakes a streambed. When disturbed and driven to the limit of its territory (which may extend over a 120-metre stretch) the bird promptly doubles back to the stream in a semicircle behind the observer; sometimes seeks shelter in thickets. Often seen in company with *E. immaculatus* (Nepal). Flight and behaviour very reminiscent of a wagtail; flight somewhat less undulating.

FOOD. Insects (beetles and others—GD).

VOICE and CALLS. Largely as in 1685 and 1688. A high-pitched single note (Smythies).

BREEDING. Season, April to June. Nest, a cup of green moss lined with skeleton leaves or rootlets, placed among boulders, on ledges or in crevices of rocks, in hollows in banks, or among the roots of trees and holes in dead stumps overhanging a stream. Eggs, 3 or 4, generally the latter, pale bluish

Enicurus schistaceus

Distributional range

white, sparsely but boldly speckled or spotted with dark reddish brown with secondary markings of lavender. Average size of 100 eggs 21.4×16.3 mm (Baker). Building and incubation by both sexes; incubation period undetermined.

MUSEUM DIAGNOSIS. See Field Characters. Young : slaty parts of adult replaced by brown. No white on forehead. Feathers of underparts margined with slaty brown. Postjuvenile moult of body, lesser, median and greater coverts and tail.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail inner outer
♂♀	91-104	19-23	28-32	43-48 117-140 mm (HW, SA, BB)

Weight 4 ♂♂ 29-30; 2 ♀♀ 26, 27 g (SA, BB).

COLOURS OF BARE PARTS. Iris brown. Bill black. Legs, feet and claws whitish grey to fleshy white.

1687. Leschenault's Forktail. *Enicurus leschenaulti indicus* Hartert

Enicurus leschenaulti indicus Hartert, 1909, Vög. pal. Fauna 1: 760

(Margherita, Upper Assam)

Baker, FBI No. 521, Vol. 2: 62

Plate 91, fig. 9

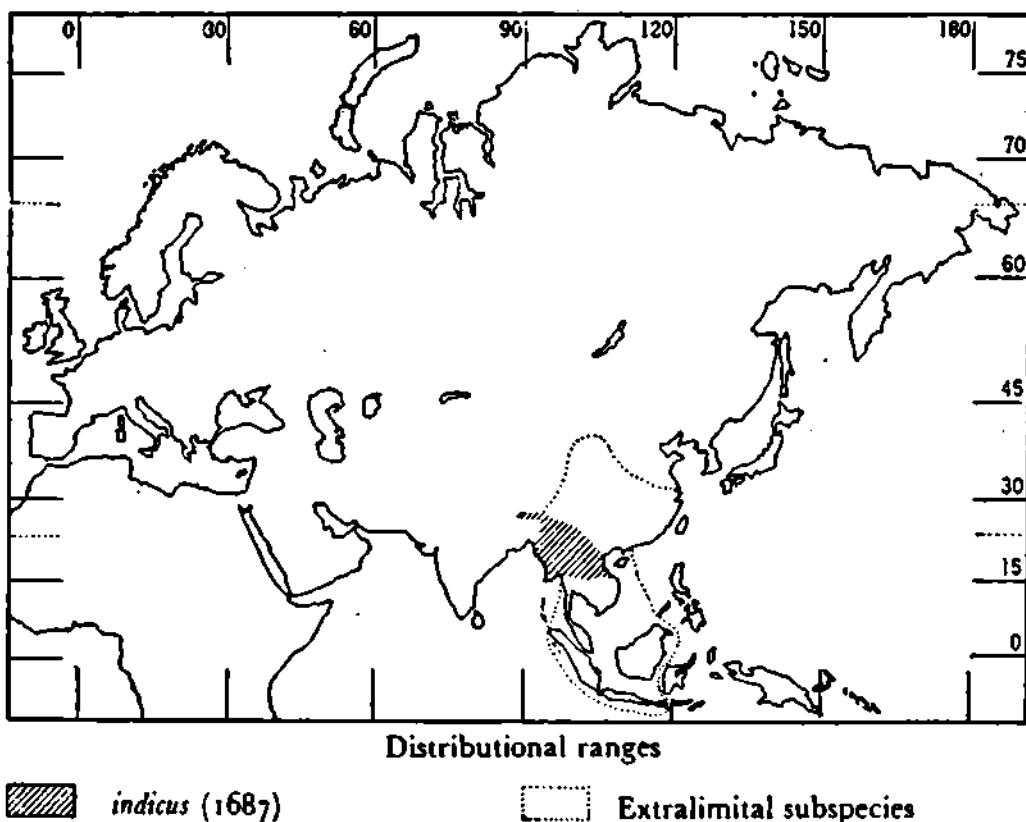
LOCAL NAME. *Inridiba gadiba* (Kacha Naga).

SIZE. Myna, with long tail; length c. 28 cm (11 in.).

FIELD CHARACTERS. The largest and blackest of the forktails. Very similar to *immaculatus* (1685, q.v.) but larger; white of forehead extending to top of crown, not as a supercilium, and black of underparts extending to breast and flanks. Sexes alike.

STATUS, DISTRIBUTION and HABITAT. Resident, subject to seasonal movements, scarce except in eastern Assam where common. The Himalayan foothills from Darjeeling and Sikkim east through Bhutan and Arunachal Pradesh, thence south through Meghalaya, Nagaland, Manipur and the foothills of Assam and Bangladesh south to the Chittagong region. Found up to c. 300 m in Assam, 600 m in Sikkim. In winter extends a few kilometres into the plains along rivers. Affects rushing torrents and the larger rivers in dense evergreen forest; also tiny rivulets in heavy and dark forest. Sometimes close to plantation labour barracks.

Enicurus leschenaultii



Extrazonal. Ranges east to northern Vietnam. The species extends north to Shaanxi, east to Zhejiang, south to Hainan, Malaya, Borneo and the Sunda islands.

GENERAL HABITS. Those of the genus. When disturbed at a jungle stream takes to the forest at once. Often met with along narrow paths in damp forest.

FOOD. Insects.

VOICE and CALLS. 'Has a very sharp single note (uttered in flight) not unlike the sound produced by turning sharply and jerkily the stopper in the neck of a glass bottle' (Davison).

BREEDING. Season, April to June. Nest, a cup of green moss mixed with some dead leaves, rootlets and fibres, lined with skeleton leaves or rootlets,

placed in steep banks covered with ferns or other rank vegetation, or in hollows in trees, rocks, or between boulders; usually in very damp situations, the nest often being soaking wet. Eggs, normally 4 sometimes 3, pale cream to deep rich buff densely marked with brick-red or brownish red specks and freckles, with secondary lavender specks. Average size of 40 eggs 24.6 × 17.7 mm (Baker). Share of the sexes in the domestic chores, and period of incubation, not recorded.

MUSEUM DIAGNOSIS. See Field Characters.

Young: Head and back dark smoky brown, no white on forehead; tips of wing-coverts buff; rest of upperparts as in adult. Throat and breast dark smoky brown with fulvous shaft-streaks. Upper belly white mixed with brown; centre of belly white; flanks brown.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂ ♀	98–114	26–29	30–32	128–150 mm (HW, Baker)

Weight 1 ♂ '1.89 oz.' (= c. 53.5 g)—Hume.

COLOURS OF BARE PARTS. Iris dark brown. Bill black. Legs and feet fleshy white.

ENICURUS MACULATUS Vigors: SPOTTED FORKTAIL

Key to the Subspecies

Black feathers of breast with white tips *E. m. maculatus*

Feathers of breast without white tips *E. m. guttatus*

1688. ***Enicurus maculatus maculatus* Vigors**

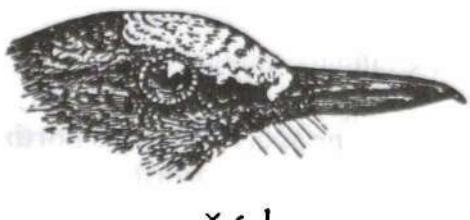
Enicurus maculatus Vigors, 1831, Proc. Zool. Soc. London: 9 (Himalayas = Simla)
Baker, FBI No. 517, Vol. 2: 57

Plate 91, fig. 8

LOCAL NAMES. *Khānjan* (N.W.F.P.); *Shakhel-lōt* (Kashmir).

SIZE. Bulbul, with long tail; length c. 25 cm (10 in.).

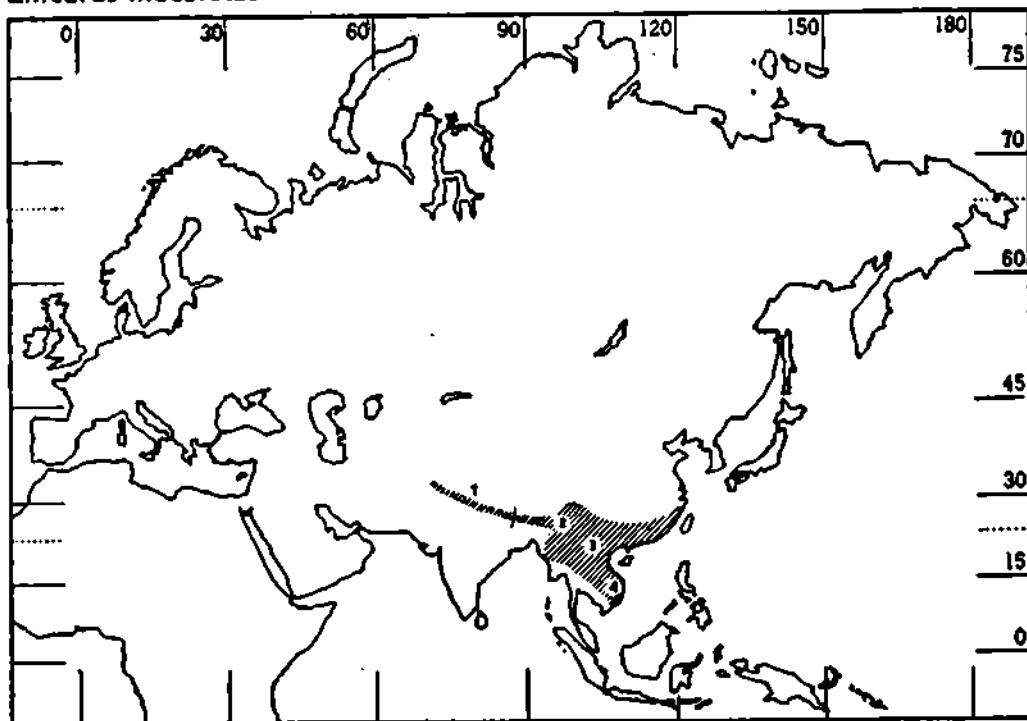
FIELD CHARACTERS. *Above*, forehead and forecrown white. Round the eye, sides of head and nape black. Back black spotted with white. A broad wing-bar and rump white. Tertiaries tipped with white. Tail deeply forked and graduated; outer rectrices white, the others black tipped with white. *Below*, throat and breast black; belly white. Sexes alike.



x c. 1

STATUS, DISTRIBUTION and HABITAT.

Common resident but rather capricious: the western Himalayas from Chitral to eastern Nepal. Breeds between 1200 and 3000 m, locally up to 3600 m (Sutlej Valley) or down to 900 m (Chamba, Dehra Dun). Some withdrawal from upper levels in winter when recorded at least up to 2300 m and down to 460 m (near Islamabad). Affects boulder-strewn, shady nullahs and streams running through forest and narrow gorges, usually shunning large rivers.

Enicurus maculatus

Distributional ranges

1 *maculatus* (1688)2 *guttatus* (1689)3 *bacatus* (RE)4 *robinsoni* (RE)

Extralimital. Adjacent parts of Afghanistan (Nuristan).

GENERAL HABITS. Movements and behaviour superficially very wagtail-like though essentially turdine. Keeps singly or in separated pairs, tripping lightly over slippery or moss-covered stones at the water's edge, or hopping from stone to stone in the torrent, the long forked tail raised horizontally well off the ground and gently swayed up and down rather than wagged. Pivots slowly on its perch, facing this way and that, to the accompaniment of this graceful swaying of the tail. When disturbed flies swiftly up or down stream with dipping wagtail-like flight uttering a sharp single note, alighting a short distance off to resume feeding. If followed, repeats this three or four times then suddenly veering off into the forest and circling back to the stream behind the intruder. Sometimes submerges completely like a dipper while feeding. Commonly met at rills and trickles alongside forest roads where it behaves just like a Grey Wagtail (*Motacilla cinerea*), flying in repeated spurts ahead of an oncoming car for considerable distances, finally looping back through the forest to the original spot.

FOOD. Aquatic insects and small molluscs.

VOICE and CALLS. A shrill rasping *kreee* or *tseek*, very like a Whistling Thrush's (*Myiofonus*), uttered in flight. A sharp, creaky *cheek-chik-chik-chik* uttered at rest as well as on wing, almost identical with one of the calls of the Blue Magpie (1027). Song undescribed.

BREEDING. Season, April to July. Nest, a cup of green moss, rootlets, hair and fibres, mixed with clay and lined with skeleton leaves; placed on a rock-ledge or crevice, a niche in a steep stream bank or between boulders,

TURDINAE

often concealed by overhanging ferns etc. Eggs 3 or 4, pale cream or very pale green marked with light reddish brown freckles or spots. Average size of 50 eggs 24.8×17.6 mm (Baker). Building, incubation and nest-feeding by both sexes. Female fed on nest by male. Incubation period undetermined. Often brood-parasitized by *Cuculus canorus*.

MUSEUM DIAGNOSIS. See Field Characters.

Downy chick (3 or 4 days old): slaty black, the down tipped with greyish brown. 'When brood lying huddled in nest gave a perfect illusion of an old deserted nest spun across the top with spiders' webs' (SA).

Young (imm.): *Above*, head and back smoky brown, no white on crown; rest of upperparts as in adult. *Below*, throat and breast smoky brown with fulvous shaft-streaks; belly white suffused with brown. Postjuvenile moult of body, lesser, median (and greater?) coverts, in August and September.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	108–111	24–25	c. 30	146–150 mm
♀♀	99–110	22–24	—	129–139 mm
(BB, Rand & Fleming)				

Weight 1 ♂ (September) 46 g (GD); 1 ♀ (October) 38.5 g (RAP).

COLOURS OF BARE PARTS. Iris dark brown. Bill black. Legs and feet fleshy white.

1689. *Enicurus maculatus guttatus* Gould

Enicurus guttatus Gould, 1865, Proc. Zool. Soc. London: 664

(Sikkim = Darjeeling)

Baker, FBI No. 518, Vol. 2: 58

LOCAL NAMES. *Oong-sam ching-pho* (Lepcha); *Chuka-leka* (Bhutia).

SIZE. Bulbul, with long tail; length c. 25 cm (10 in.).

FIELD CHARACTERS. As in 1688, q.v. See Museum Diagnosis.

STATUS, DISTRIBUTION and HABITAT. Common resident, from eastern Nepal east through Arunachal Pradesh thence south through Meghalaya, Nagaland, Manipur and the hills of Mizoram south to the Chittagong ranges. Breeds between 600 and 3100 m, optimum zone apparently 1400–2600 m. Affects small streams in dense forest; in winter may be seen in wide river-beds at the base of the hills.

EXTRALIMITAL. Extends to Burma, Yunnan and southern Sichuan. The species ranges east to Vietnam and through southern China to Fujian.

GENERAL HABITS. As in 1688. *Display* (threat or courtship?): 'Two birds careered up and down the stream for several minutes, flying so close to each other as almost to touch. They then landed on a large stone over which they ran with the tail held perpendicular, and half-turning their backs on one another. After a few seconds of this display the chase began once more and continued in ever-increasing tempo until the whole performance ended abruptly and both birds went off in different directions'. (For details see Stonor, 1943, *Ibis* 85: 344.)

FOOD AND VOICE. As in 1688.

BREEDING. As in 1688. For details see Baker, *Nidification* 2: 53. Average size of 100 eggs 24.9×17.3 mm.

MUSEUM DIAGNOSIS. Differs from *maculatus* (1688) in having no white spots on breast, fewer and smaller white spots on back, and in being somewhat smaller.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♀	95–106	21–23 (once 27)	28–31	118–143 mm (Baker, SA, BB)

Weight 1 ♂ (August) 34 g (RAP). 1 ♂ (winter) 39 g (SDR). 12 ♂♀ (Oct.–Mar.) 35–48 g (SA, BB).

COLOURS OF BARE PARTS. As in 1688.

Genus COCHOA Hodgson

Coccoa Hodgson, 1836, Jour. Asiatic. Soc. Bengal 5: 359.

Type, by original designation, *Coccoa purpurea* Hodgson

Nostrils large, exposed and oval. Rictal bristles obsolete. Tarsus strong and short. Wing long and pointed, first primary minute. Tail very slightly graduated. Sexes dissimilar. Young spotted.

Key to the Species

- | | |
|------------------------|--------------------|
| Crown lavender | <i>C. purpurea</i> |
| Crown azure-blue | <i>C. viridis</i> |

1690. Purple Coccoa. *Coccoa purpurea* Hodgson

Coccoa purpurea Hodgson, 1836, Jour. Asiatic. Soc. Bengal 5: 359 (Nepal)
Baker, FBI No. 617, Vol. 2: 184

Plate 91, fig. 11

LOCAL NAMES. *cocco* (Nepal); *Lo-nyum-pho* (Lepcha).

SIZE. Myna +; length c. 28 cm (11 in.).

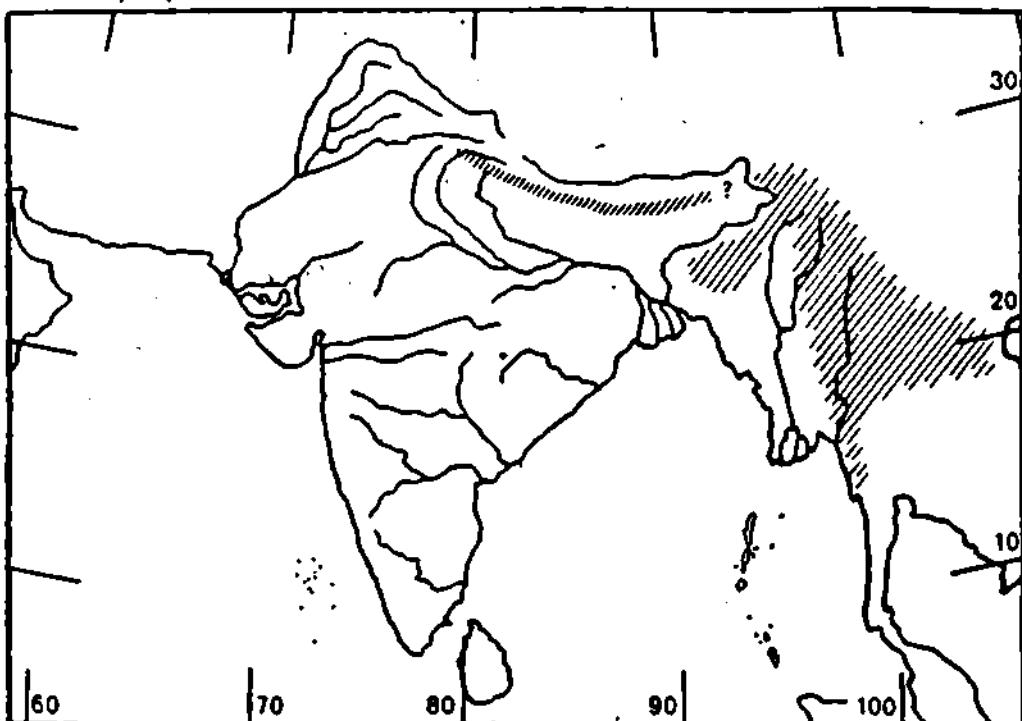
FIELD CHARACTERS. Male (adult). *Above*, crown lavender-blue. Super-cilium, ear-coverts and nape black. Back brownish purple. Wing purple-lavender with black tip and edge, a paler lavender patch near shoulder and one in the middle. Tail purple-lavender with a black terminal band. *Below*, uniform brownish purple.

Female like male but brownish purple parts replaced by reddish brown above, paler (brownish clay) below.

STATUS, DISTRIBUTION and HABITAT. Resident, rare and little known. The Himalayas from Kumaon (Almora, Naini Tal) east through Nepal, Darjeeling, Sikkim and Bhutan (SA), Arunachal Pradesh (?), Meghalaya in the Khasi Hills, and Manipur. Recorded between 1000 and 3000 m. Affects dense humid evergreen forest, and undergrowth in ravines running through pine forest (Khasi Hills).

Extralimital. Ranges east to Yunnan and northern Vietnam.

GENERAL HABITS. A very quiet and secretive thrush of dense under-growth. Keeps singly or in pairs. Feeds on the ground as well as in trees, ascending into the tops for berries.

Cochoo purpurea

Distributional range

FOOD. Berries and insects; molluscs (D'Abreu, Jerdon) and aquatic insects; slugs—one c. 2 cm long (SA).

VOICE and CALLS. A low chuckle. Song a broad flute-like *peeeeeee*; also *peeee-you-peeee*, like the music of a shepherd's bamboo flute, the pitch dropping one note in the middle of the phrases (Fleming *et al.*, 1984).

BREEDING. Season, early May to mid July. Nest, a rather shallow cup of green moss with some dead leaves, rootlets and scraps of fibres, lined with fine black rootlets, lichen, and white thread-like fungus, the latter apparently being distinctive of the nests of this genus; usually placed in a horizontal fork in small trees between two and six metres above the ground, sometimes in bushes. Eggs, normally 3, occasionally 4, pale sea-green blotched with bright reddish brown and with secondary blotches of lavender and grey, usually more numerous at the large end where they sometimes form a cap. Another type has a pale, reddish stone ground with similar markings. Average size of 50 eggs 31.3 × 21.6 mm (Baker). Incubation by both sexes. Very shy at nest and slips off noiselessly while intruders are still at some distance.

MUSEUM DIAGNOSIS. See Field Characters.

Young male. *Above*, crown-feathers white with black tips. Sides of head black. Back dull purplish brown edged with blackish on mantle and tipped with ferruginous on upper tail-coverts. *Below*, rich rusty ochraceous with bold black bars; throat ochraceous; under tail-coverts brownish; median and lesser wing-coverts dull purple tipped with ochraceous; greater coverts dull purple. Rest of wing and tail as in adult.

Young female, like young male but tips of crown-feathers brown; sides of head brown. Feathers of back brown with darker tips and small ochraceous centres. Greater coverts brown; median and lesser coverts brown with ochraceous tips. Postjuvenile moult of body, lesser and median coverts.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♀	140–145	23–24	28–31	95–105 mm (Baker, BB, SA, Stres.)

Weight 1 ♂ (Oct.) 100 g (SA); 1 ♀ (August) 106.5 g (RAP).

COLOURS OF BARE PARTS. Iris crimson-brown or red-brown; orbital skin lavender. Bill black. Legs slaty black.

1691. Green Cochoa. *Cochoa viridis* Hodgson

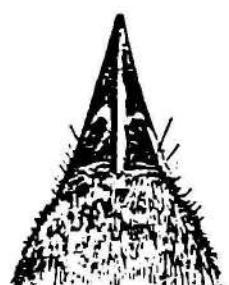
Co.(choa) Viridis Hodgson, 1836, Jour. Asiatic Soc. Bengal 5: 359–60 (Nepal)
Cochoa rothschildi Baker, 1924, Fauna Brit. India, Bds. 2: 186 (Sikkim)
 Baker, FBI Nos. 618 and 619, Vol. 2: 185, 186

Plate 91, fig. 10

LOCAL NAMES. None recorded.

SIZE. Myna +; length c. 28 cm (11 in.).

FIELD CHARACTERS. Male (adult). *Above*, crown to nape sky-blue. Lores and supercilium black. Ear-coverts dark blue. Back and wing-coverts deep green obsoletely barred with black; rump and upper tail-coverts deep green. Wing black with a broad, pale blue band, black tips of coverts forming a narrow black bar across the pale blue, and small black patch. Tail blue, outer rectrices and terminal band black. *Below*, deep green washed with blue on throat and belly. Under surface of tail black.



× c. 1

STATUS, DISTRIBUTION and HABITAT. Rare resident. Kumaon (Naini Tal), Nepal (not recorded since Hodgson), Darjeeling, Sikkim, Bhutan (?), and the hills of NE. India. Breeds between c. 700 and 1500 m (doubtful records at 3000–3300 m in Sikkim); optimum zone in Manipur 1000–1500 m. Affects undergrowth in dense evergreen forest watered by small streams and usually on precipitous ground.

Extralimital. Ranges east to Vietnam; a record from Fujian.

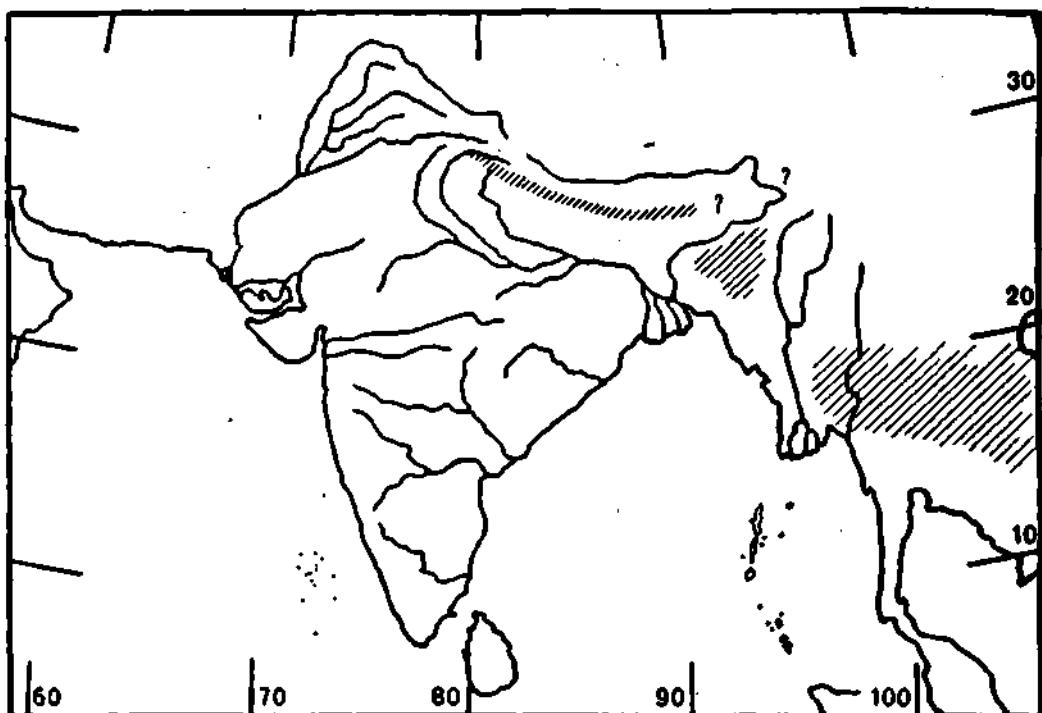
GENERAL HABITS. Little known. Keeps singly or in pairs, sometimes in small flocks. Very shy. Often feeds on the ground but at times high up in trees. A bird has been observed flying out after insects from the top of a tall tree.

FOOD. Insects and berries; molluscs.

VOICE and CALLS. 'A harsh note' is the only sound recorded.

BREEDING. Season, May to July. Nest, similar to that of *purpurea* (1690, q.v.), placed in same situations but nearly always near water. Eggs, 2 or 3, rarely 4, indistinguishable from those of *purpurea*. Average size of 42 eggs 30.4 × 21.3 mm (Baker). Incubation by both sexes; period undetermined.

MUSEUM DIAGNOSIS. See Field Characters.

Cochlearia viridis

Distributional range

Young. Crown-feathers black with a white subterminal bar; ear-coverts similar but white more apparent. A long, black supercilium. Body-feathers, above and below, black with ochraceous centres. Wings and tail as in adult of respective sex. Postjuvenile moult (July to October) of body-feathers, lesser, median, and inner half of greater coverts.

First-year birds with dark shaft-streaks on body-feathers. Male darker than adult, brownish green above and without any blue below. Female paler than male, yellowish green below; under tail-coverts ochraceous green.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
1 ♂	145	23	27	120 mm (SA)
♂♀	135–145	(from feathers) 12.5–13.5	25–26	98–117 mm (Baker)

Weight 5 ♂♂ 3.08–3.5 oz. (c. 88–99 g); 2 ♀♀ 4.12, 4.32 oz. (c. 117, 122 g)—Hume.

COLOURS OF BARE PARTS. Adult: Iris brownish orange to deep crimson or maroon-brown. Bill black; gape and orbital skin pink. Legs and feet fleshy brown to horny brown. Young: Iris dark brown. Bill black. Legs blackish brown.

Genus CERCOMELA Bonaparte

Cercomela Bonaparte, 1856, Compt. Rend. Acad. Sci. Paris 42: 766. Type, by original designation, *Cercomela asthenia* Bonaparte = *Saxicola melanura* Temminck

Bill like that of *Oenanthe*. Wing rather blunter; first primary (as.) about equal to half of second. Tail much shorter than wing. Tarsus rather short.

1692. Brown Rock Chat. *Cercomela fusca* (Blyth)

Saxicola fusca Blyth, 1851, Jour. Asiatic Soc. Bengal 20: 523 (Muttra)

Cercomela fusca ruinorum Koelz, 1939, Proc. Biol. Soc. Washington 52: 66
(Sanchi, Bhopal State)

Baker, FBI No. 516, Vol. 2: 54

Plate 90, fig. 18

LOCAL NAMES. *Dauma* (U.P.); *Kalo patharai piddo* (Gujarat); *Shāmā* (Hindi in M.P.).

SIZE. Sparrow +; length c. 17 cm (6½ in.).

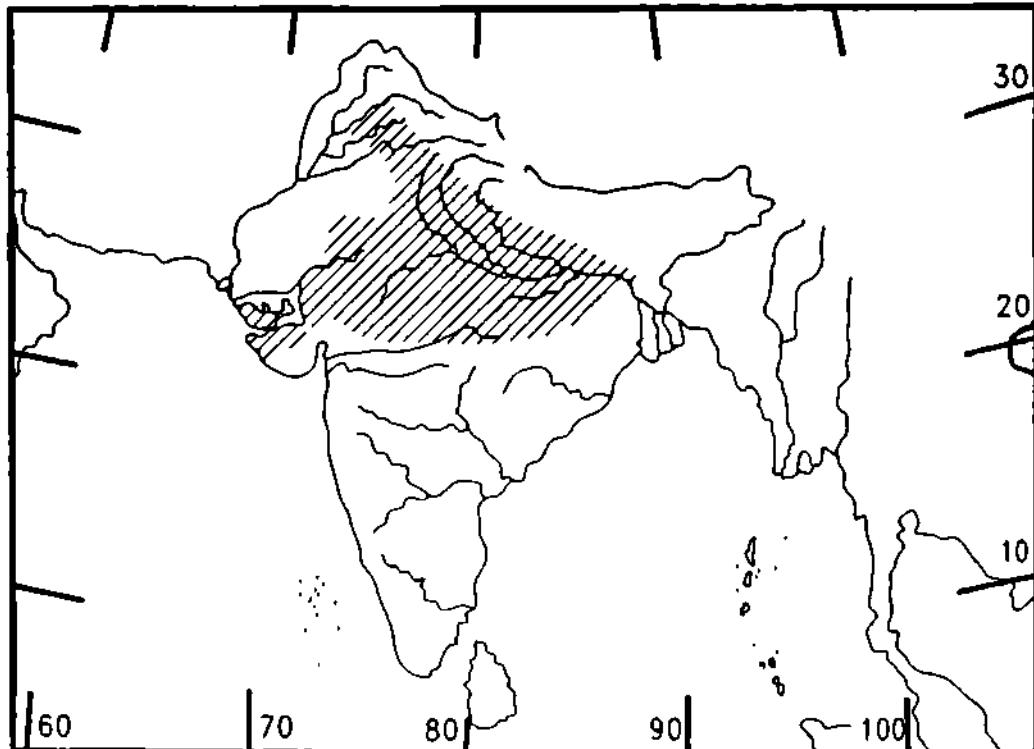
FIELD CHARACTERS. A plain brown bird, rufous-brown below, with darker wings and blackish tail. Sexes alike.

Young (juvenile), much darker brown without the rufous wash of the adult plumage.

At rest could be confused with female Indian Robin (1717), but is larger and lacks the chestnut patch under tail. In flight-silhouette, and while alighting, could be mistaken for female Blue Rock Thrush (1726).

STATUS, DISTRIBUTION and HABITAT. An endemic species. Resident; common but capriciously distributed and with some seasonal local movements. (Arrives Dehra Dun mid February departs c. October—SA.) Northeastern Pakistan east of the Chenab river, from the foothills in north

Cercomela fusca



Distributional range

south nearly to the Chenab-Jhelum confluence, and India from the Punjab foothills (Kangra, locally up to 1300 m) south through eastern Rajasthan to northern Gujarat (including Kathiawar and Kutch), Madhya Pradesh to the Narmada river, Uttar Pradesh, Nepal (specimen, Kosi Barrage, 12 March—Fleming *et al.*, 1984) and Bihar to western Bengal. Affects boulders and scarps in rocky hills, ravines, quarries, ruins, old buildings, walls and bungalows in towns and suburbs.

GENERAL HABITS. Keeps singly or in pairs. Usually tame and confiding. May often be seen flitting in and out of gaping windows of ancient palaces and forts, perching on the cornices of tombs and mosques, even fearlessly entering occupied habitations to pick up some titbit, or to shelter from the midday heat or roost at night on rafters and girders. Feeds on the ground, flying down to pick up an insect, often flicking open its wings and tail suddenly to flush out one lurking in a cranny. Has a characteristic habit of flexing its legs, partly spreading its tail and slowly raising it above the level of the back, and bobbing the forepart of its body in a comical curtsy. Is rather pugnacious near nest and will readily attack squirrels, rats, lizards and birds intruding into the vicinity.

FOOD. Beetles, ants and other insects.

VOICE and CALLS. A short whistling *chee* while bobbing forepart of body and doing a rapid 'bend-stretch'. Alarm-note, a harsh *check-check*. In breeding season a sweet thrush-like song, but less full and of something of the quality of the Striolated Bunting, with snatches of other birds' songs interlarded. Delivered from a wall, cornice or roof-top, sometimes for well over twenty minutes at a stretch with short pauses. Is a good mimic: has been recorded imitating to perfection songs of Yelloweyed Babbler (1231), Tickell's Blue Flycatcher (1442) and Cuckoo-Shrike (1077) (SA).

BREEDING. *Season*, February to August, chiefly April to June. Regularly rears two broods, often three. *Nest*, a rough cup of rootlets, grass bents, wool, hair and sundries, lined with wool, hair or feathers, usually surrounded by a rampart of small pebbles and lumps of earth; placed on ledges or in clefts of rock, hollows in walls or on window sills in ruins, outhouses, garages, etc., often occupied ones. *Eggs*, 3 or 4, pale blue marked at the large end with rusty specks and spots, often forming a ring. Average size of 50 eggs 20.5 × 15.5 mm. Incubation apparently by female only; period undetermined. Young leave nest 14/15 days after hatching. One ringed bird bred when under 12 months old.

MUSEUM DIAGNOSIS. See Field Characters. Summer plumage made paler by wear. Young is dull brown with faint darker edges. Postjuvenile moult of body-feathers, inner tertials and all wing-coverts except primary.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	87-95	18-19	25-27	65-72 mm
♀♀	85-90	18-19	25-26	61-69 mm (SA, Koelz)

Weight 1 ♀ (October) 12.7 g (BB).

COLOURS OF BARE PARTS. Iris dark brown. Bill, legs and feet black.

Genus SAXICOLA Bechstein

Saxicola Bechstein, 1803, Orn. Taschenb., (1802), 1: 216. Type, by subsequent designation, Swainson, 1827, *Motacilla Rubicola* Linnaeus

Oreicola Bonaparte, 1854, Compt. Rend. Acad. Sci. Paris 38: 6. Type, by original designation, Gray, 1855: 143, *Saxicola Pyrrhonota* Müller

Rhodophila Jerdon, 1863, Bds. India 2: 128

Type, by monotypy, *Rhodophila melanoleuca* Jerdon

Bill rather less than half the length of head, notched, broad at base. Rictal bristles strong. Wing pointed, first primary (as.) varying from half to one-third the length of the second. Tail equal to or shorter than wing, slightly rounded. Sexes dissimilar.

Key to the Species

Page

I	Plumage black and white		
A	Breast black	<i>S. caprata</i> ♂	32
B	Breast white	<i>S. jerdoni</i> ♂	37
II	Not as A		
C	Throat black		
1	Inner webs of rectrices white	<i>S. leucura</i> ♂	31
2	Rectrices mostly black	<i>S. torquata</i> ♂	26
D	Throat not black		
3	Inner webs of rectrices white	<i>S. macrorhyncha</i> ♂	23
4	Outer rectrices entirely rufous	<i>S. ferrea</i> ♀	38
5	Rectrices mostly blackish brown or black		
a	Wing over 80 mm	<i>S. insignis</i> ♂♀	25
b	Wing under 80 mm		
i	A conspicuous white or buff supercilium		
o	Ear-coverts black	<i>S. ferrea</i> ♂	38
o'	Ear-coverts rufous buff	<i>S. macrorhyncha</i> ♀	23
ii	Throat white	<i>S. jerdoni</i> ♀	37
iii	Throat buff or brown		
o''	Back plain brown	<i>S. caprata</i> ♀	32
o'''	Back streaked		
a ¹	Upper tail-coverts paler rufous	<i>S. leucura</i> ♀	31
a ²	Upper tail-coverts darker rufous	<i>S. torquata</i> ♀	26

1693. Stoliczka's Bush Chat. *Saxicola macrorhyncha* (Stoliczka)

Pratincola macrorhyncha Stoliczka, 1872, Jour. Asiat. Soc. Bengal 41: 238

(Rapur and Bhuj, Kachh [Kutch])

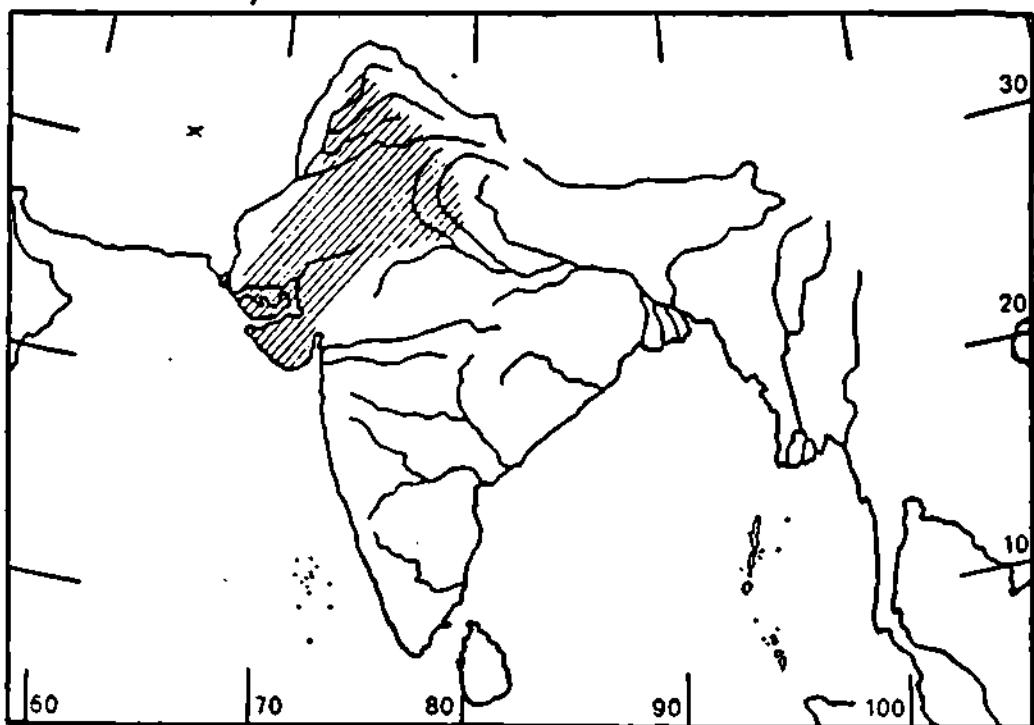
Baker, FBI No. 499, Vol. 2: 32

Plate 92, fig. 1

LOCAL NAMES. None recorded.

SIZE. Sparrow ±; length c. 15 cm (6 in.).

FIELD CHARACTERS. Male (adult), winter. *Above*, sandy buff streaked with brown. A broad pale buff supercilium. Ear-coverts rufous-buff marked with dark brown. A white wing-patch. Upper tail-coverts white or rufous

Saxicola macrorhyncha

Distributional range

Extralimital record

white. Tail dark brown, outer rectrices white. *Below*, throat white, rest of underparts pale buff.

In summer the pale margins on upperparts are worn off and the bird appears to be sooty brown. Supercilium becomes white.

Female, similar to male but lacks white wing-patch and has no white in tail.

Distinguished from other chats by longer, slimmer build, long tail and conspicuous long black bill. Tail pattern of male in flight—whitish with dark central feathers and ends—confusable with female of some of the wheatears (*Oenanthe*).

STATUS, DISTRIBUTION and HABITAT. Resident, rare and very local, but not uncommon in some areas. Formerly Pakistan east of the Indus river, Haryana (Hissar dist.), western Uttar Pradesh (Aligarh), now believed to be confined to southeastern Rajasthan and Gujarat (Deesa, Kutch and Kathiawar). A desert-loving chat affecting *pāls* in wide, waterless desert studded with *Capparis*, *Calotropis* and other shrubs.

Extralimital. Two records from Kandahar, Afghanistan (cf. JBNHS 31: 706).

GENERAL HABITS. Solitary or in pairs; at times fairly tame, at others excessively wild. Perches on exposed tops of bushes like other members of the genus, descending to the ground to pick up a titbit. Occurs in same biotope as Desert Wheatear (*Oenanthe deserti*) and Short-toed larks (*Calandrella*).

FOOD. Insects.

VOICE and CALLS. 'A little sharp *chip, chip* note heard now and then' (Hume). Song unrecorded.

BREEDING. Unknown.

MUSEUM DIAGNOSIS. See Field Characters and Key to the Species; for details of plumages H. Whistler, *Ibis* 1922: 302.

MEASUREMENTS

	Wing	Bill (from feathers)	Tarsus	Tail
♂♀	70-77	11-12	24	50-54 mm (Baker)

COLOURS OF BARE PARTS. Iris brown. Bill black, paler at base.

1694. Hodgson's Bush Chat. *Saxicola insignis* Gray

Saxicola insignis Gray, 1846, Cat. Mamms. Bds. Nepal: 71, 153 (Nepal)
Baker, FBI No. 500, Vol. 2: 33

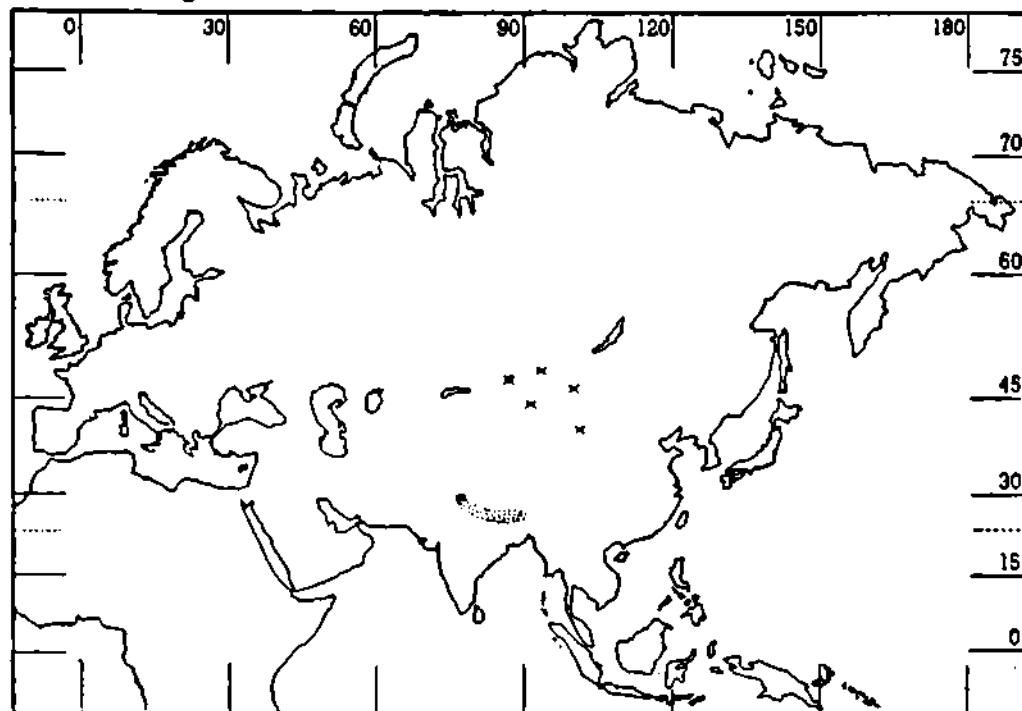
Plate 92, fig. 4

LOCAL NAME. *Gar-gugga* (Patna, Bihar).

SIZE. Sparrow +; length c. 17 cm (6½ in.).

FIELD CHARACTERS. Male (adult), winter. Very similar to ♂ Indian Bush Chat (1697) and easily mistaken for it; but larger size and greater amount of white in the wing distinctive. *Above*, head black with narrow fulvous fringes. Lores and ear-coverts black. Back black with broad fulvous edges. A large white wing-patch. Upper tail-coverts white. Tail blackish with narrow rufous edges. *Below*, throat white. Rest of underparts ferruginous, paler on belly; often a few black spots on upper breast.

Saxicola insignis



Winter range



Summer records

In summer the pale fringes are worn off the upperparts which become wholly black.

Female. Above, brown; forehead and a faint supercilium fulvous. Two broad fulvous wing-bars. Below, pale rusty fulvous, darker on throat and breast.

STATUS, DISTRIBUTION and HABITAT. Winter visitor; rare and little known. Occurs mostly in the Gangetic plains of Uttar Pradesh and Bihar from Ambala in the west to northern Bengal in the east; also the Nepal terai (Kosi Barrage, 11.iv.1975—Fleming *et al.*, 1984), the Sikkim foothills and the Jalpaiguri duars. Affects heavy grassland, reeds and tamarisks along river beds, and cane fields.

Extralimital. Breeds very locally in the alpine and subalpine zones of the mountains of Kazakhstan, western Mongolia and Inner Mongolia (Ala Shan).

MIGRATION. Arrives in October (first date 27) leaves in March or early April (last date 10).

GENERAL HABITS. Solitary. A typical bush chat in habits, perching on top of bushes and descending to the ground for insects. Appears to feed mostly on the ground, not flycatching as other bush chats often do.

FOOD. Insects (mostly beetles) and their larvae; also some vegetable matter.

VOICE and CALLS. Alarm-note, a metallic *teek teek*.

BREEDING. Extralimital.

MUSEUM DIAGNOSIS. See Field Characters.

MEASUREMENTS

	Wing	Bill (from feathers)	Tarsus	Tail
♂♀	83-92	13	27	49-54 mm (Baker)
		(from nostrils)		
♂♂	81-89	8-10	26-28	54-66 mm
♀♀	80-84	9-10	25-28	54-58 mm (Kozlova)

COLOURS OF BARE PARTS. Iris deep brown. Bill, legs and feet black.

SAXICOLA TORQUATA (Linnaeus): COLLARED BUSH CHAT

Key to the Subspecies

		Page
A	Base of tail (male) usually black	<i>S. t. stejnegeri</i>
B	Base of tail with more or less white	
1	Darkest and largest; wing usually over 71 mm	<i>S. t. przewalskii</i>
2	Smaller; wing usually under 71 mm	
a	Paler, more white at base of tail	<i>S. t. maura</i>
b	Darker, less white at base of tail	<i>S. t. indica</i>

Cf. Ticehurst, C. B., 1938, *Ibis*: 338-40.

1695. *Saxicola torquata maura* (Pallas)

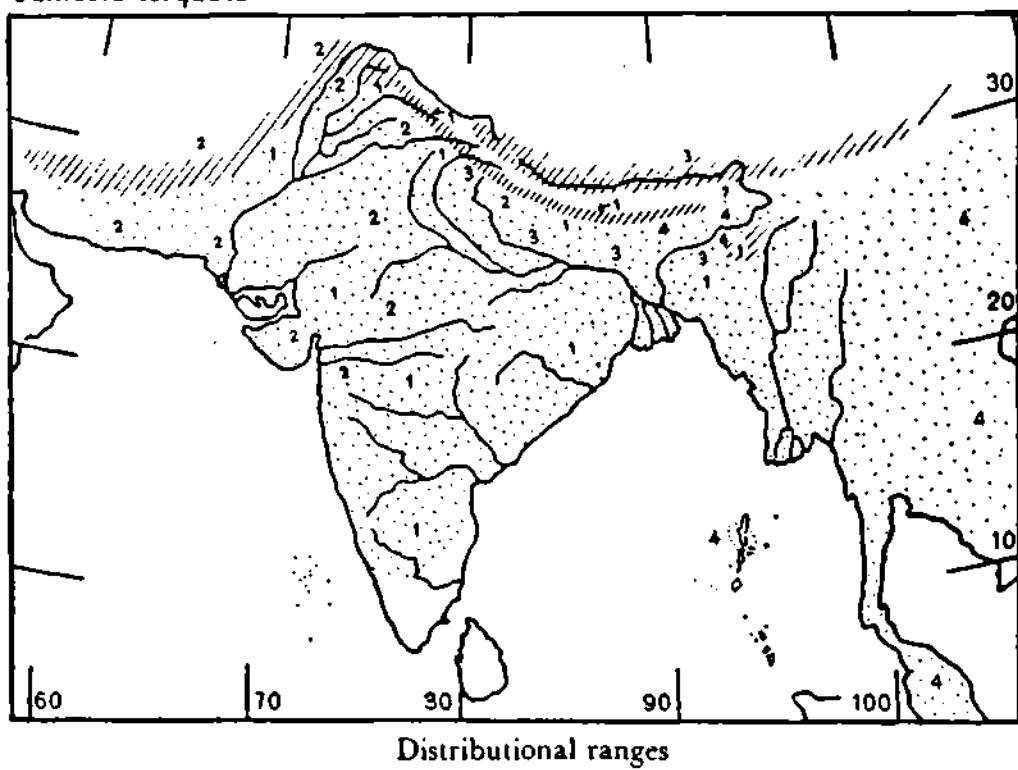
Muscicapa maura Pallas, 1773, Reise Russ. Reichs 2: 428, 708
 (Karassun, Ishim River, W. Siberia)
 Baker, FBI No. 495 (part), Vol. 2: 28

LOCAL NAMES. None recorded.

SIZE. Sparrow -; length c. 13 cm (5 in.).

FIELD CHARACTERS. As in 1697, q.v. See Museum Diagnosis.

STATUS, DISTRIBUTION and HABITAT. Mostly a winter visitor but also breeds in Pakistan: Kohat and Chitral (JBNHS 12: 339 and 19: 907; *Ibis* 1909: 216), Murree hills (JBNHS 16: 427; *Ibis* 1930: 85) and northern Baluchistan (JBNHS 31: 706). Winters in Pakistan, Nepal (Paynter, specimens in Yale Peabody Mus.) and northern India south to northern Maharashtra (Nasik). Affects dry scrub-covered hillsides (summer); damp areas, meadows, pasture land, fallow fields and tamarisk jungle (winter).

Saxicola torquata

EXTRALIMITAL. Adjacent parts of Afghanistan, Turkestan north to Lake Baikal, and western Siberia to the Urals. Winters south to Egypt and Somalia. The species ranges over most of the Palaearctic, Africa south of the Sahara, and Madagascar.

GENERAL HABITS, FOOD and VOICE. As in 1697.

BREEDING. As in 1697.

MUSEUM DIAGNOSIS. Paler than other races. Has more white at base of tail than *indica*, and a slightly longer wing.

MEASUREMENTS

Wing: 90 ♂♂ 64–73 (av. 67·7) mm; 30 ♀♀ 64–71 (av. 67) mm (Dementiev)
 Weight 1 ♂ (Nov.) 13·5; 1 ♀ (Nov.) 13·1 g (RAP); 5 ♂♂ (June) 12–14 (av. 13·0);
 1 ♀ (June) 14; 11 ♂♂ (Sept.–Oct.) 11–15 (av. 12·7); 10 ♀♀ (Sept.–Oct.) 11–13
 (av. 12·1) g—Paludan. Afghanistan.

COLOURS OF BARE PARTS. As in 1697.

1696. *Saxicola torquata przewalskii* (Pleske)

Pratincola maura var. *Przewalskii* Pleske, 1889, Wiss. Res. Przewalskii's Reise,
 Th. Vög. 2: 46, pl. 4 (Kansu)
 Baker, FBI No. 496, Vol. 2: 30

Plate 92, fig. 3

LOCAL NAMES. None recorded.

SIZE. Sparrow —; length c. 13 cm (5 in.).

FIELD CHARACTERS. As in 1697, q.v. See Museum Diagnosis.

STATUS, DISTRIBUTION and HABITAT. Mostly a winter visitor. The Himalayan foothills from Kangra in Himachal Pradesh (c. 76°E.) to Arunachal Pradesh and Assam (Sadiya) south to the Ganges river, Meghalaya and Nagaland (SDR); in the hills up to c. 1300 m. Affects high grass, paddyfields, etc. as *indica*.

Extralimital. Breeds in Tibet and in the mountains of western China.

MIGRATION. Arrives in September, leaves in March. Abundant on passage in the high Himalayas in September and October (Ladakh—Meinertzhagen; Spiti—Koelz; Nepal—Diesselhorst, Polunin); on Mt Everest up to 5100 m (*Ibis* 1922: 511); ‘Thousands passed through Nepal Valley between 5 and 14 April. No large scale passage in autumn’ (subspecies presumed. Proud, JBNHS 48: 702); also in southeastern Tibet (Ludlow, *Ibis* 1937: 268, given as ‘*indica*’).

GENERAL HABITS and VOICE. As in 1697.

FOOD. Insects and their larvae, occasionally berries (GD).

BREEDING. Breeds from 2745 m upward in *Caragana* desert country of Trans-Himalayan Nepal; c/4 nest on 20.vi at 4575 m in Dolpo (Fleming *et al.*, 1984).

MUSEUM DIAGNOSIS. Larger than other races and darker, especially below. Axillaries black with only obsolete white tips.

MEASUREMENTS

	Wing	Bill (from skull)	Tail
♂♂	71–76	15–17	53–57 mm
♀♀	68–73	16–17	51–54 mm (BB)

Weight 8 ♂♂ (Sept.–Dec.) 13·1–17·8; 10 ♀♀ (Sept.–Dec.) 13–15·5 g (RAP, GD).

COLOURS OF BARE PARTS. As in 1697.

1697. *Saxicola torquata indica* (Blyth)

Pratincola indica Blyth, 1847, Jour. Asiatic Soc. Bengal 16: 129
 (India = Calcutta)
 Baker, FBI No. 495 (part), Vol. 2: 28

Plate 92, fig. 2

LOCAL NAMES. *Dosa tiriv* (Kashmir); *Mendio piddo* (Gujarati); *Khārpiddā* (Hindi, Monghyr); *Adavi-campa-nalanchi*, *Adavi-campa-jitta* (Telugu); *Rab tine* (Munda).

SIZE. Sparrow —; length c. 13 cm (5 in.).

FIELD CHARACTERS. Male (adult) summer. *Above*, black except for white rump and white wing-patch. *Below*, throat black. A large white patch on sides of neck and breast (the 'collar'). Breast rufous-chestnut paling to buff on belly.

In summer plumage looks strongly pied—black and white—sometimes deceptively like Pied Bush Chat (1700) in the distance. In winter, feathers of upperparts broadly edged with rufous brown, and white feathers of rump tipped with rust colour.

Female. *Above*, rufous-brown streaked with dark brown. A white wing-patch. Rump pale rufous; tail blackish brown. *Below*, pale fulvous, rufous on breast.

STATUS, DISTRIBUTION and HABITAT. Common summer (breeding) visitor to central Baluchistan, and the Himalayas from Gilgit and Kashmir east to Arunachal Pradesh (Stevens, JBNHS 23: 257); also N. Cachar (JBNHS 9: 130) and Nagaland (*Nidification* 2: 21). Breeds mostly between 1500 and 2500 m, also up to 3800 m on open treeless slopes; in Nepal down to the duns (Biswas, JBNHS 58: 666). Winters from c. 2200 m down to the foothills and south through the Peninsula to southern Karnataka, east through the Bhutan foothills, Jalpaiguri duars, Bangladesh and Assam. In summer affects open country, terraced cultivation, pastures and sparsely scrubbed grassy hillsides. In winter frequents reed-beds bordering tanks, tamarisk jungle and sparse scrub on stony wasteland and around fallow fields; also sea-holly and other bushes on dry mudflats along tidal creeks, and on sand-dunes by seashore.

GENERAL HABITS. Keeps singly or in pairs. Usually seen perched on top of a low bush making short descents to the ground for insects, returning to the same perch or flying low to another. Seldom forages by hopping along ground like *Erythacus* chats (TJR). Also catches insects in the air. Tail constantly flicked open and jerked loosely up and down.

FOOD. Chiefly ants and small beetles (Hingston), also locusts and other insects and larvae.

VOICE and CALLS. A short but lively song often mixed with mimicked calls of other birds; delivered from a perch or in slow display flight with wings 'clapping' over back as in a pigeon but noiselessly (SA), or while flying up in the air to a height of some four to six metres and then sailing down with wings outspread (Bates & Lowther). Song period in Nepal, end of March till end of June (Proud). Alarm-notes rendered as *check-check*, and *pee-tack*.

BREEDING. Season, March to July; at least two broods. Nest, a cup of grass, moss, fibres and rootlets, lined with hair, fur and a few feathers; placed on

TURDINAE

the ground at the foot of a bush, in a hollow in grassy banks, or in piled-stone boundary walls in terraced cultivation; sometimes a little above the ground among dense vegetation. Eggs, 4 or 5, pale greyish blue, marked with faint, pale reddish spots forming a ring around the large end. Average size of 93 eggs 17.3×13.5 mm (Osmaston), of 100 eggs 16.9×13.5 mm (Baker). Incubation apparently by female alone; period 13–14 days. Often brood-parasitized by *Cuculus canorus*.

MUSEUM DIAGNOSIS. See Key to the Subspecies. First-winter male may be found in two phases of plumage: either indistinguishable from female though tending to be slightly darker, or similar to adult male except that primary-coverts, primaries and secondaries and narrow rectrices of juvenal plumage are retained (HW). No spring moult.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	64–73	13–14	21–23	{ 46–53 mm
♀♀	62–70			{ 44–50 mm
(BB, Rand & Fleming, SA, CBT)				

Weight 8 ♂♂ (March–Nov.) 11–12.4; 3 ♀♀ (March–Oct.) 11.6–13.5 g (GD, RAP). 3 ♂♂ (Nov.) 13.7–14.4 g (BB—Assam, ssp.?). 9 ♂♀ (Nov.–Feb.) 8–13 (av. 10.4); 8 ♂♀ (April) 10–16 (av. 12.2) g—SA.

COLOURS OF BARE PARTS. Iris dark brown. Bill, legs and feet black. Mouth pink, yellowish pink or pinkish slate.

1698. *Saxicola torquata stejnegeri* (Parrot)

Pr.(atincola) rubicola Stejnegeri Parrot, 1908, Verh. Orn. Ges. Bayern 8: 124
(Etorofu = Iturup [Kuriles], and Hokkaido)
Baker, FBI No. 497, Vol. 2: 30

LOCAL NAMES. None recorded.

SIZE. Sparrow —; length c. 13 cm (5 in.).

FIELD CHARACTERS. As in 1697, q.v. See Museum Diagnosis.

STATUS, DISTRIBUTION and HABITAT. Winter visitor to NE. India west to the Bhutan foothills and Jalpaiguri duars, and the hills of Bangladesh south to the Chittagong region. Birds from the Andamans, where it is rare (cf. Abdulali, JBNHS 61: 564), may better be assigned to this subspecies. Habitat as in 1697.

Extralimital. Breeds in eastern Asia from the Yenisey to Manchuria, Japan and Kuriles. Winters in southeast Asia south to the Malay Peninsula and Borneo, east to the Philippines.

MIGRATION. Recorded in Assam from the end of August to the end of April (Stevens, JBNHS 30: 67).

GENERAL HABITS, FOOD and VOICE. As in 1697.

BREEDING. Extralimital.

MUSEUM DIAGNOSIS. Darker above than *maura* or *indica* but paler than *przevalskii*, with a stouter bill. Base of tail usually black in males. Second primary (as.) usually longer than seventh.

MEASUREMENTS

	Wing	Bill (from skull)
22 ♂♂	65-70 (av. 67.5)	c. 14 mm
14 ♀♀	64-68 (av. 68)	(Dementiev)

Weight 1 ♂ (winter) 14.5 g (SDR). 3 ♂♂ (summer) 13.1-15.4; 2 ♀♀ (summer) 13.4, 14.4 g (Dementiev).

COLOURS OF BARE PARTS. As in 1697.

1699. **Whitetailed Bush Chat. *Saxicola leucura* (Blyth)**

Pratincola leucura Blyth, 1847, Jour. Asiatic. Soc. Bengal 16: 474
(Upper Scinde)

Baker, FBI No. 498, Vol. 2: 31

Plate 92, fig. 7

LOCAL NAMES. None recorded.

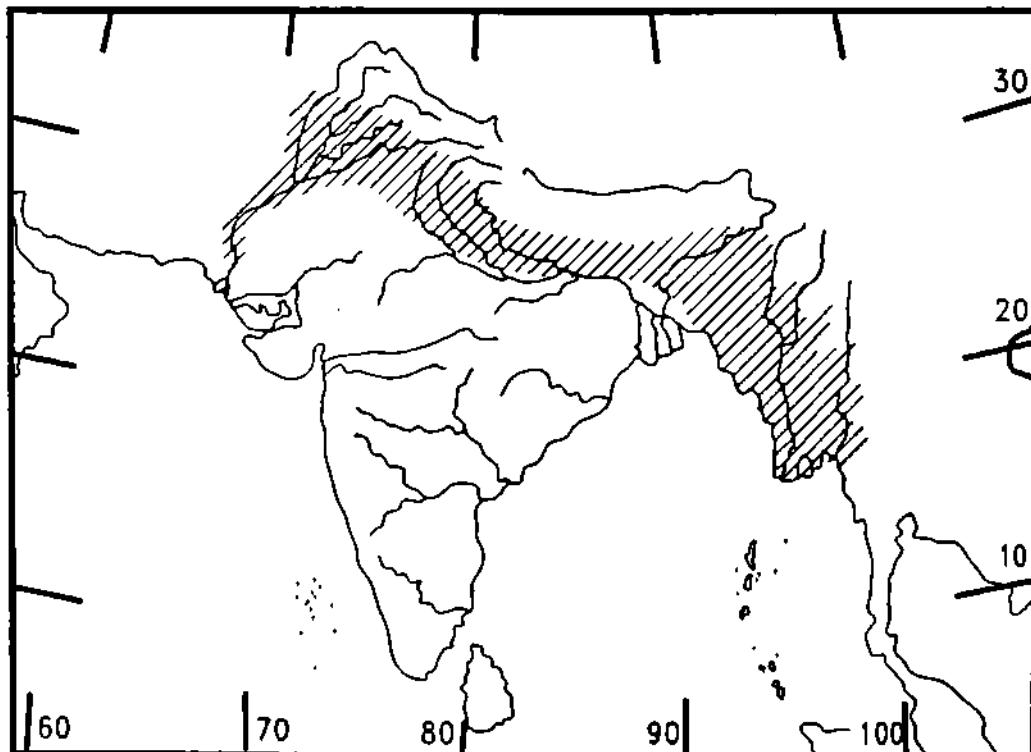
SIZE. Sparrow -; length c. 13 cm (5 in.).

FIELD CHARACTERS. As in 1697 but tail largely white; rufous of breast not extending to belly.

Female much resembles Spotted Flycatcher rather than a chat (Stanford).

STATUS, DISTRIBUTION and HABITAT. Resident, subject to local move-

Saxicola leucura



■ Distributional range

TURDINAE

ments; patchily distributed. The plains of the Indus river system in Pakistan and Punjab, Kumaon terai (Whymper), Yamuna river area (Delhi—Roberts), Nepal, the Gangetic plain in Bihar, northern Bengal, northern and eastern Bangladesh, the plains of the Brahmaputra, Cachar and Manipur. Breeding range does not overlap that of *S. torquata*. Recorded in winter from Peshawar and Orissa. Essentially a bird of the riverain tracts, barely reaching c. 700 m in the foothills. Affects high grass, reeds and tamarisks on damp or inundated ground, especially in the vicinity of large rivers. Appears to be confined to areas subject to seasonal inundation.

Extralimital. Burma lowlands.

GENERAL HABITS. As in 1697. Usually perches on top of some high grass, reed or bush descending to the ground for insects. When perched moves tail slowly up and down, at the same time fanning it rapidly, exposing the white on the lateral rectrices. Generally quite shy. When approached, drops off its perch and darts away unseen through the grass. Found singly or in loose parties of 4 or 5; pairs form in February.

FOOD. Insects.

VOICE and CALLS. Alarm-note given as *peep-chaaa*. Song 'short and lark-like' (Bell *apud* Ticehurst, *Ibis* 1922: 630).

BREEDING. Season, March to May, before the summer floods. Probably single-brooded. Nest, similar to that of *torquata*, usually well concealed in a heap of dead tamarisk leaves, under a clod, among the roots of a grass tussock or in a tangled mass of grass brought down by floods and stranded; almost always found near water. For breeding purposes prefers 4- or 5-foot high vegetation rather than tall grass or reeds. Eggs, normally 3, similar to those of *torquata* but as a whole rather more reddish. Average size of 24 eggs 18 × 14 mm (Baker).

MUSEUM DIAGNOSIS. See Key to the Species. For details of plumages see *Ibis* 1922: 20, or Baker, loc. cit. Female has the upperparts uniform earthy grey-brown without any rufous tinge; upper tail-coverts grey-brown, not rufescent as in *torquata*. Tail uniform pale brown, paler than in *torquata*. Some males breed in female-like plumage.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
6 ♂♂	67–71	14–15	c. 21	{ 49–52 mm
3 ♀♀	65–67			{ 48–52 mm (CBT)

COLOURS OF BARE PARTS. Unrecorded, probably as in 1697.

SAXICOLA CAPRATA (Linnaeus): PIED BUSH CHAT

Key to the Subspecies

		Page
A	White of lower parts extending to abdomen and lower breast	
 <i>S. c. bicolor</i>	33
B	White of lower parts restricted to vent and under tail-coverts	
1	Size smaller; bill finer and shorter, 13–15 mm <i>S. c. burmanica</i>	35
2	Larger; bill longer, 18–20 mm <i>S. c. atrata</i>	36
3	Intermediate between 1 and 2 <i>S. c. nilgiriensis</i>	35

1700. *Saxicola caprata bicolor* Sykes

Saxicola bicolor Sykes, 1832, Proc. Zool. Soc. London: 92 (Dukhun)

Saxicola caprata rupchandi Koelz, 1939, Proc. Biol. Soc. Washington 52: 65
(Londa, Bombay Presidency)

Baker, FBI No. 494, Vol. 2: 26

LOCAL NAMES. *Piddā* (Sind, Hindi); *Kālā piddā* (Hindi).

SIZE. Sparrow -; length c. 13 cm (5 in.).

FIELD CHARACTERS. Male (adult). *Above*, jet black with a white wing-patch and white upper tail-coverts. *Below*, black with white belly and under tail-coverts.



x c. 1

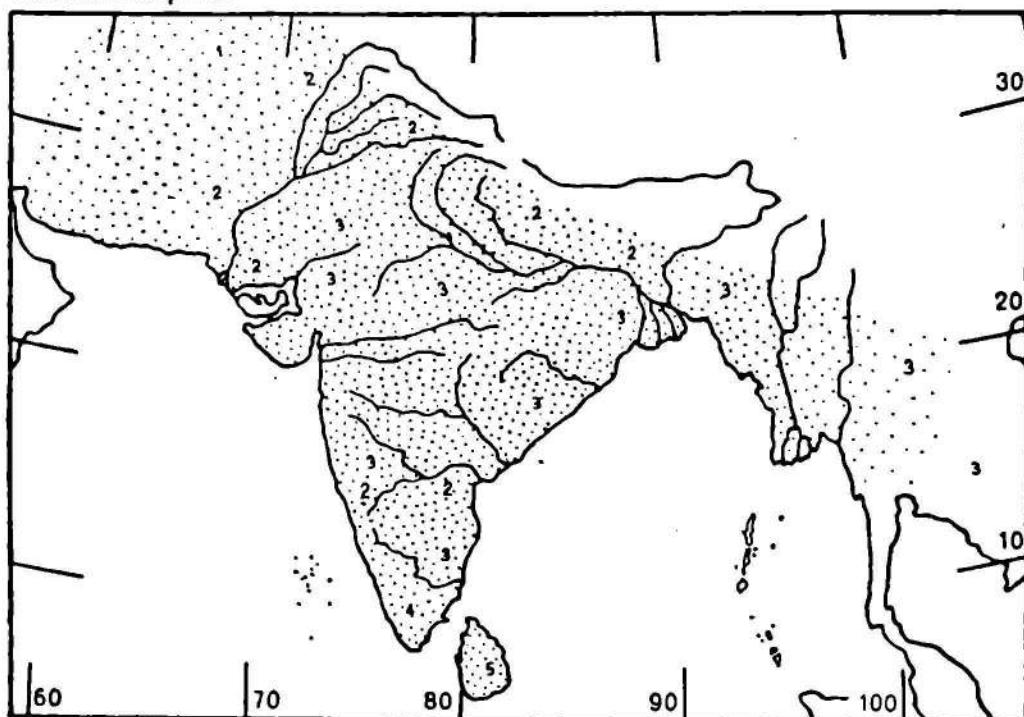
In winter the black feathers are fringed with brown.

White wing- and rump-patches very conspicuous in flight.

Female. *Above*, lores buff; head and back brown. Wing brown with buff edges. Upper tail-coverts rusty. Tail blackish brown. *Below*, fulvous, breast and belly tinged with rusty; vent and under tail-coverts buff.

STATUS, DISTRIBUTION and HABITAT. Partial migrant, very to fairly common. Pakistan and northern India, from Baluchistan, N.W.F.P. and Kashmir, east through Punjab, Uttar Pradesh, Nepal and Bihar to northern Bengal; in the hills normally up to c. 1500 m, in Nepal locally up to c. 2100 m. In the more northern parts and at higher levels, e.g. Chitral and Gilgit mostly a summer (breeding) visitor, arriving in February or March, leaving in September or October; however, may be found as high as 1400 m in

Saxicola caprata



Distributional ranges 1 *rossorum* (RE) 2 *bicolor* (1700)

3 *burmanica* (1701) 4 *nilgiriensis* (1702) 5 *atrata* (1703)

winter. Recorded as a winter visitor from Gujarat (including Kutch and Kathiawar), Madhya Pradesh, Maharashtra, northern Karnataka and Andhra Pradesh. A winter record from Gilgit (Scully). Affects cultivated fields about villages, sparsely scrubbed hillsides, tamarisk growth, reeds and coarse grass in the neighbourhood of tanks, canals, jheels and cultivation.

Extralimital. The species extends west to Aral Sea to the Persian Gulf, and east to the Philippines, Indonesia (except Borneo) and New Guinea.

GENERAL HABITS. Usually seen singly, but invariably with its mate somewhere near at hand, perched on a bush-top, weed stalk or telegraph wire, tail twitched open now and then; darts to the ground from time to time to pick up a creeping morsel or sometimes makes aerial sallies after flying insects. Very territorial, actively resisting intrusion into its feeding as well as breeding area by its own species or other chats.

Display. Flies up in the air with tail spread widely, wings flapping slowly and deliberately ('delayed action') and held high above the head, or sails slowly downwards in an arc to another perch with outspread wings, the white wing-patches and rump feathers conspicuously fluffed out, singing the while. Also displays before his mate by crouching on the perch, wings and tail outspread, singing loudly. During threat display, wings are drooped flaunting the white patches 'menacingly', tail depressed and spread, rump fluffed out and neck stiffly craned forward to the accompaniment of excited snatches of song (SA).

FOOD. Ants, beetles, larvae and some vegetable matter (Hingston); also grasshoppers and other insects, and spiders.

VOICE AND CALLS. Alarm-note, a harsh *chek-chek* ending in a subdued musical *tweet*. Contact notes, *phir*, *pritch-chew*, begins singing in February (Fleming *et al.* 1984). Has a short whistling song lasting c. two seconds, beginning with a double *chick-chick*, recalling that of the Indian Robin and the Crested Bunting; rendered as '*we are tea for two*' (highest note on *tea*)—Holmes & Wright. Uttered from a prominent perch, often a telegraph wire or a roof-top, tail depressed, wings partly drooping at the sides, displaying the white patches. In his excitement the singing bird sometimes takes short ludicrous leaps of a metre or so in the air and returns to the same perch. Song also given in display flight, q.v.

BREEDING. Season, overall March to August, in the northern parts usually not beginning before April; double-brooded. Nest, a cup of grass and rootlets lined with finer grass and hair; placed on the ground, under tufts of grass, in holes in walls or in the sides of wells, or in hollows in banks. Eggs, 3 to 5, pale blue, marked mostly at the broad end with deep reddish brown blotches and freckles. Average size of 100 eggs 17.6 × 13.9 mm (Baker). Building of nest and care of young by both sexes. Incubation chiefly by female; period 12/13 days. Often brood-parasitized by *Cuculus canorus*.

MUSEUM DIAGNOSIS. Differs from *atrrata* (1703) in being smaller and having the white of underparts extending well on to the abdomen and lower breast.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	66-67	13-15	20-24	50-55 mm
♀♀	64-75	13-15	20-23	49-53 mm
(HW, SA, Rand & Fleming)				

Weight 3 ♂♂ (Oct.-Dec.) 12·9-16·1 g (RAP). 1 ♂ 13; 1 ♀ 12 g (Roonwal). 3 ♂♂ (April) 13-14; 1 ♀ (March) 15·5 g (GD).

COLOURS OF BARE PARTS. Iris dark brown. Bill, legs and feet black.

1701. *Saxicola caprata burmanica* Baker

Saxicola caprata burmanica Baker, 1923, Bull. Brit. Orn. Cl. 43: 9 (Pegu)
Baker, FBI No. 492, Vol. 2: 24

Plate 92, fig. 5

LOCAL NAME. *Kumpa nalanchi* (Telugu).

SIZE. Sparrow -; length c. 13 cm (5 in.).

FIELD CHARACTERS. As in 1700, q.v.

STATUS, DISTRIBUTION and HABITAT. Common resident, subject to small seasonal movements. Breeds south of the range of *bicolor*, from Gujarat south to Karnataka and Tamil Nadu to the Cauvery river, east through Madhya Pradesh, southern Bihar, Bengal, Assam, Meghalaya, Nagaland, Manipur, Mizoram and Bangladesh; in the hills up to c. 1200 m (Eastern Ghats), 1800 m (Meghalaya) and 2100 m (Nagaland). Population of central India increased in winter by influx of *bicolor* from the northwest. Affects open fields, scrub land, cultivation; partial to hedges of *Agave*.

Extralimital. Extends eastward through Burma, Thailand and the Indo-chinese countries. For range of the species see 1700.

GENERAL HABITS, FOOD and VOICE. As in 1700.

BREEDING. As in 1700. Average size of 62 eggs 16·8 × 13·9 mm (Baker).

MUSEUM DIAGNOSIS. The smallest race. Coloration as in *atrata*, i.e. white of lower parts less extensive than in *bicolor*.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	67-77	13-15	20-22	48-62 mm
♀♀	68-72			47-51 mm (HW)

Weight 12 ♂♀ (May) 15-17 (av. 15·7); 7 ♂♀ (July-Aug.) 13-16 (av. 14·4) g—SA. 1 ♂ 15·5 g—SDR.

COLOURS OF BARE PARTS. Iris dark brown. Bill: ♂, black, base of lower mandible brownish; ♀, dark brown; mouth pale pink. Legs, feet and claws black.

1702. *Saxicola caprata nilgiriensis* Whistler

Saxicola caprata nilgiriensis Whistler, 1940, Bull. Brit. Orn. Cl. 60: 90
(Ootacamund)

Baker, FBI No. 493 (part), Vol. 2: 25

LOCAL NAMES. *Chutteental-kili* (Malayalam); *Kallu kūruvi* (Tamil).

SIZE. Sparrow -; length c. 13 cm (5 in.).

FIELD CHARACTERS. As in 1700, q.v.

STATUS, DISTRIBUTION and HABITAT. Common resident. The hills of southern India from the Nilgiris southward, chiefly above 900 m, commonest

at c. 1500 m. Affects grassy hillsides sparsely interspersed with dwarf wild date-palms (*Phoenix*) or 'nelly' trees (*Embla*).

GENERAL HABITS, FOOD and VOICE. As in 1700.

BREEDING. Season, February to May. Nest and eggs as in 1700. Average size of 50 eggs 19.5 × 15.2 mm (Baker).

MUSEUM DIAGNOSIS. Differs from *atrata* (1703) in having a smaller bill, but larger than in *burmanica*.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	73-79	15-17	25-27	60-67 mm
♀♀	69-75	15-16	25-26	59-63 mm (SA)

COLOURS OF BARE PARTS. Iris brown. Bill, legs, feet and claws brownish black. Mouth yellowish pink, greyish pink or brownish pink, apparently varying with age.

1703. *Saxicola caprata atrata* (Kelaart)

Pratincola atrata Kelaart, 1851, in Blyth, Jour. Asiatic Soc. Bengal 20: 177
(Newera Elia, Ceylon)

Baker, FBI No. 493 (part), Vol. 2: 25

LOCAL NAMES. None recorded.

SIZE. Sparrow -; length c. 13 cm (5 in.).

FIELD CHARACTERS. As in 1700, q.v.

STATUS, DISTRIBUTION and HABITAT. Common resident. The hills of Sri Lanka above c. 1000 m, mostly on the drier side. Affects open, grassy areas with scattered bushes.

GENERAL HABITS and FOOD. As in 1700.

VOICE and CALLS. Alarm-note, a sharp, scolding *chuh* 'like scraping a quill against sandpaper'. Song, a brisk whistle, *chip chepee-cheweechu*. Young, when beginning to fend for themselves, utter a curious, rasping chirp *creek, creek* (Henry).

BREEDING. Season, end of February to May. Nest and eggs as in 1700. For details see Phillips, 1939, p. 254.

MUSEUM DIAGNOSIS. Differs from *nilgiriensis* (1702) in having a longer and coarser bill.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
3 ♂♂	77-80	18	23	53-56 mm
2 ♀♀	76	—	—	53 mm (HW, SDR)

8 ♂♂ in Brit. Museum have bills (from skull) 17-20 mm (HW)

Weight 2 ♂♂ 22.5, 23; 1 ♀ 22 g (SDR).

COLOURS OF BARE PARTS. As in 1701.

1704. Jerdon's Bush Chat. *Saxicola jerdoni* (Blyth)

Oreicola jerdoni Blyth, 1867, Ibis: 14, new name for *Rhodophila melanoleuca* Jerdon, 1863, Bds. India 2: 128 (Purneah) *nec Oenanthe melanoleuca* Vieillot, 1818
Baker, FBI No. 501, Vol. 2: 35

Plate 92, fig. 6

LOCAL NAME. *Daotisha-gashim* (Cachari).

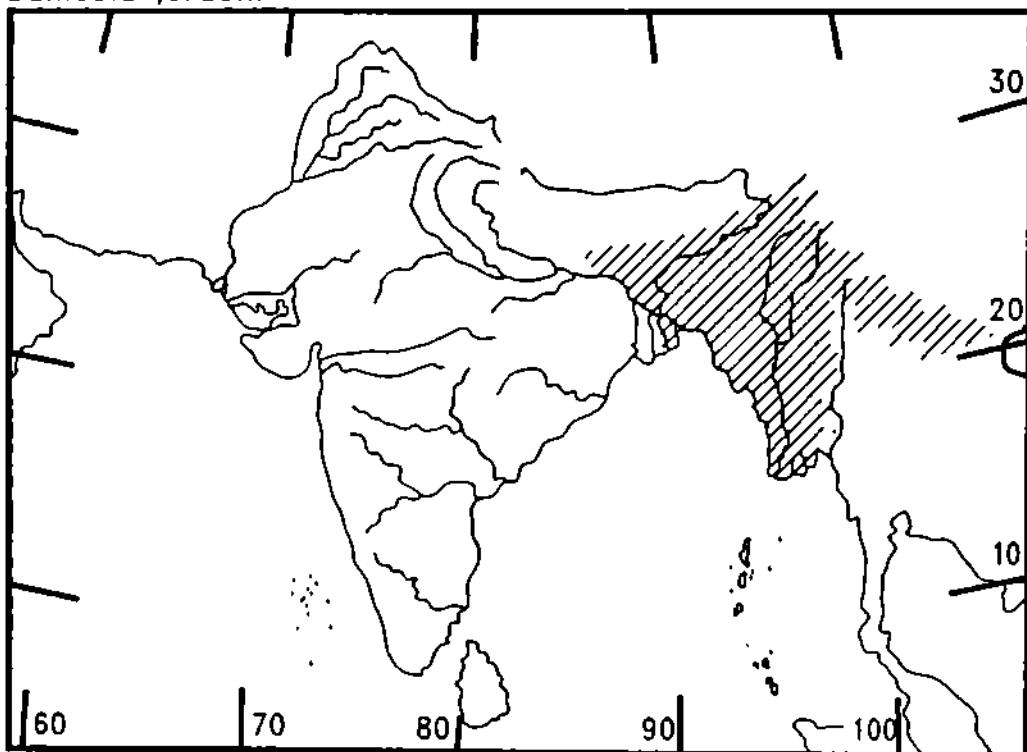
SIZE. Sparrow; length c. 15 cm (6 in.).

FIELD CHARACTERS. Male. *Above*, entirely glossy black. *Below*, entirely white.

Female. *Above*, brown tinged with rufous, especially on rump. *Below*, throat white, rest of underparts pale fulvous, darkest on breast and flanks.

STATUS, DISTRIBUTION and HABITAT. Resident, subject to short seasonal movements; locally common. Eastern Nepal (Kosi Barrage), Arunachal Pradesh, Assam, Meghalaya, Nagaland, Manipur, Mizoram, Tripura and Bangladesh, west to Bengal and eastern Bihar (Purnea). Affects the vast expanses of *ekra* grass in the plains and foothills up to c. 700 m.

Saxicola jerdoni



■ Distributional range

Extralimital. Extends east through Burma and northern Laos to northern Vietnam.

GENERAL HABITS. Typical of the bush chats. Keeps singly or in pairs; usually very shy. Perches on reed-stems or bushes, darting to the ground for insects, sometimes foraging among the rootstocks of grass and reeds. The tail is constantly expanded and flirted.

FOOD. Insects.

VOICE AND CALLS. A very silent bird. Only note recorded is a low *chitchurr*, and a *chirr* of alarm (Baker).

BREEDING. Season, February to end of May. Nest, a cup of rootlets and fine grass lined with same but finer material; placed on the ground, among the roots of a grass tuft or in a hollow in a bank. Eggs, normally 4, less often 3, deep turquoise, unspotted. Average size of 30 eggs 16.2×13.3 mm (Baker). Incubation apparently by female alone.

MUSEUM DIAGNOSIS. See Field Characters.

MEASUREMENTS

	Wing	Bill (from feathers)	Tarsus	Tail
♂♂	67-69	11	23	{ 61-69 mm
♀♀	64-68			— mm (Baker)

Bill from skull (1♂) 15 mm (MD)

COLOURS OF BARE PARTS. Iris dark brown. Bill, legs and feet black.

1705. Dark-grey Bush Chat. *Saxicola ferrea* Gray

Saxicola ferrea Gray, 1846, Cat. Mamms. Bds. Nepal: 71, 153 (Nepal)

Oreicola ferrea haringtoni Hartert, 1910, Vög. pal. Fauna 1: 711
(Lien-kiang near Fu-tschau, China)

Baker, FBI Nos. 502 and 503, Vol. 2: 36, 38

Plate 92, fig. 8

LOCAL NAME. *Sarrak-chak-pho* (Lepcha).

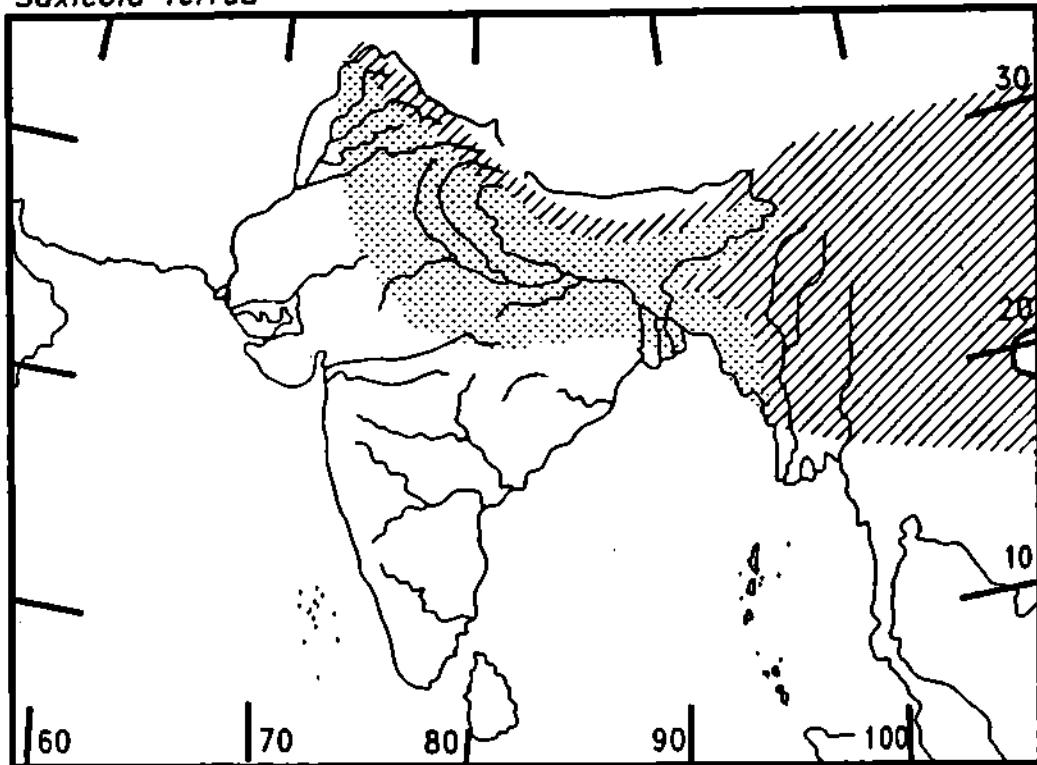
SIZE. Sparrow; length c. 15 cm (6 in.).

FIELD CHARACTERS. Male (adult), summer. General effect pied black and white. *Above*, dark ashy grey with black streaks; a white supercilium; sides of head black. Tail black with whitish outer edges. A concealed white shoulder-patch visible in flight. *Below*, throat white, breast and flanks pale grey, belly whitish.

In winter feathers of crown, back, breast and flanks tipped with rufous brown.

Female. *Above*, rufous brown faintly streaked with darker brown; a pale supercilium; sides of head dark brown; upper tail-coverts rusty; tail dark brown, outer rectrices rusty. *Below*, chin and throat white, rest of underparts fulvous, darkest on breast.

STATUS, DISTRIBUTION and HABITAT. Common resident, subject to altitudinal and short-range seasonal movements. The lower Himalayas from N.W.F.P. to Arunachal Pradesh, thence south through Nagaland (?), Manipur, Meghalaya and Mizoram. Breeds between 1500 and 3300 m, optimum zone 1800-3000 m. Winters from c. 2400 (mostly below 1200 m) down to the foothills and into the Gangetic plain south to the Yamuna river and throughout NE. India and Bangladesh. Recorded from Delhi (Gaston & Mackrel, JBNHS 77: 144) and Madhya Pradesh (Newton, ibid. 83: 494). Affects open, scrub-covered hillsides particularly along fringes of forest, glades and in the neighbourhood of terraced cultivation; in central Nepal noted in barberry and juniper scrub on dry hillsides. Tolerates denser

Saxicola ferrea

Breeding

Winter

vegetation than other bush chats. In winter frequents cultivated country, tea-gardens and grassland, especially *ekra* grass along rivers.

Extralimital. Ranges east through southern China south to the northern Indochinese countries.

MIGRATION. Occurs on summer grounds from March to September or October and in winter quarters from November to March.

GENERAL HABITS. Very parochial, frequenting the same spot day after day. Keeps singly or in pairs, sometimes in loose parties in winter. Usually perches on bush-tops or telegraph wires where available in typical bush chat fashion, flirting its tail. Drops to the ground for insects from time to time; frequently takes them also on the wing like a flycatcher.

FOOD. Insects and some seeds.

VOICE and CALLS. Call-note *pree* (rising); alarm-notes *zee-chunk* repeated at short intervals, and a sharp *tak-tak-tak-tak*; also a *tic-tic-brzeeee* (Fleming). Song typically chat-like: lasting 1·5 seconds, starting with 2 or 3 emphatic notes and ending in a feeble trill (Roberts); *tiririririri* or *sisiri-swirr*, the final *swirr* a rolling whistle, with some variations (SA). Generally uttered from a tree-top or other perch, or in the air during display flight. Song period, early April till end of June with a resumption from early September to end of October (Proud).

BREEDING. *Season,* February to May in Meghalaya, early April to July in the Himalayas. *Nest,* a cup of fine grass lined with finer grass-stems, rootlets, hair and sometimes a few feathers; usually placed in a little depression on sloping ground, well concealed by grass, sometimes under a stone or clod, rarely in holes in rock-clefts or stone revetments of hill roads. *Eggs,* 4 or 5,

rarely 6, pale blue marked with reddish freckles, mainly at the large end. Average size of 100 eggs 17.9×14.2 mm (Baker). Incubation by female alone. Often brood-parasitized by *Cuculus canorus*.

MUSEUM DIAGNOSIS. See Field Characters. Postnuptial moult complete in August and September. Nuptial plumage acquired by wear of brown tips of winter plumage. Young spotted. Postjuvenile moult of body-feathers and all coverts except primary- and outer greater coverts. First-year birds recognized by retention of juvenal primary- and outer greater coverts; male also by rusty tips of tail. For details of plumage see Baker, loc. cit.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♀	64-71	14-16 (once 12)	21-24	54-65 mm (SA, BB)

Weight 3 ♂♂ (May-Sept.) 13.8-15 g (GD). 6 ♂♂ (winter) 14.1-16; 2 ♀♀ (winter) 13.1, 15 g (RAP, SDR). 8 ♂♂ (Nov.-Apr.) 14-16; 1 ♀ (Mar.) 16 g (BB, SA).

COLOURS OF BARE PARTS. Iris dark brown. Bill, legs, feet and claws black or blackish brown; sole grey.

Genus OENANTHE Vieillot

Oenanthe Vieillot, 1816, Analyse nouv. orn.: 43. Type, by monotypy, 'Motteux' Buffon = *Turdus leucurus* Gmelin ex Latham

Cf. Vaurie, C., 1949, Amer. Mus. Novit., No. 1425: 1-47

Meinertzhagen, R., 1954, Bds. Arabia: 235-54.

Bill about half the length of the head, slender and not widened at the base. Rictal bristles few and weak. Wing pointed, first primary (as.) about one-third the length of the second. Tail shorter than wing, nearly square. Tarsus rather long and slender.

Key to the Species

Page

I Throat black		
A Crown black		
1 Belly black	<i>O. picata</i> phase <i>opistholeuca</i> ♂	51
2 Belly white		
a Larger; wing mostly over 100 mm, black glossy, restricted to throat	<i>O. alboniger</i> ♂♀	54
b Smaller; wing mostly under 100 mm, black dull, extending to upper breast	<i>O. picata</i> phase <i>picata</i> ♂	51
B Crown white, back black		
3 Outer rectrices broadly tipped with black		
c Black on outer webs of all rectrices extending farther down towards base than black of inner webs	<i>O. picata</i> phase <i>capistrata</i> ♂	51
d Black on outer webs extending farther down on outermost rectrices only	<i>O. pleschanka</i> ♂	56
4 Outer rectrices only marked with brown towards tip <i>O. monacha</i> ♂		53
C No black on crown or rump		
5 Black part of outer rectrices over 25 mm	<i>O. deserti</i> ♂	46
6 Black part of outer rectrices under 25 mm	<i>O. finschii</i> ♂	49

II Throat not black		
D Ear-coverts black		
7 First primary shorter than primary-coverts	<i>O. oenanthe</i> ♂	45
8 First primary equal to or longer than primary-coverts	<i>O. pleschanka</i> phase <i>vittata</i> ♂	56
E Ear-coverts not black		
9 Outer rectrices buff marked with brown near tip ...	<i>O. monacha</i> ♀	53
10 Black part of outer rectrices over 25 mm		
e Tarsus over 28 mm	<i>O. isabellina</i> ♂♀	41
f Tarsus under 28 mm		
i Under surface of tail white on basal half only	<i>O. deserti</i> ♀	46
ii White on under surface of tail nearly reaching tip of inner rectrices	<i>O. pleschanka</i> ♀	56
11 Black part of outer rectrices under 25 mm		
g Throat earthy brown or sooty brown ...	<i>O. picata</i> ♀ (all phases)	51
h Chin and throat buff or greyish buff		
iii Rump rufous	<i>O. xanthopyrymnna kingi</i> ♂♀	43
iv Rump white or buffish		
o' Tarsus over 26 mm	<i>O. oenanthe</i> ♀	45
o'' Tarsus under 26 mm	<i>O. finschii</i> ♀	49

1706. **Isabelline Chat.** *Oenanthe isabellina* (Temminck)

Saxicola isabellina Temminck, 1829, Pl. Col. (79), pl. 472, fig. 1 (Nubia, Africa)
Baker, FBI No. 512, Vol. 2: 49

Plate 92, fig. 10

LOCAL NAMES. *Gidik* (Brahui, all wheatears); *Pilo piddo* (Gujarat).

SIZE. Sparrow +; length c. 16 cm (6½ in.).

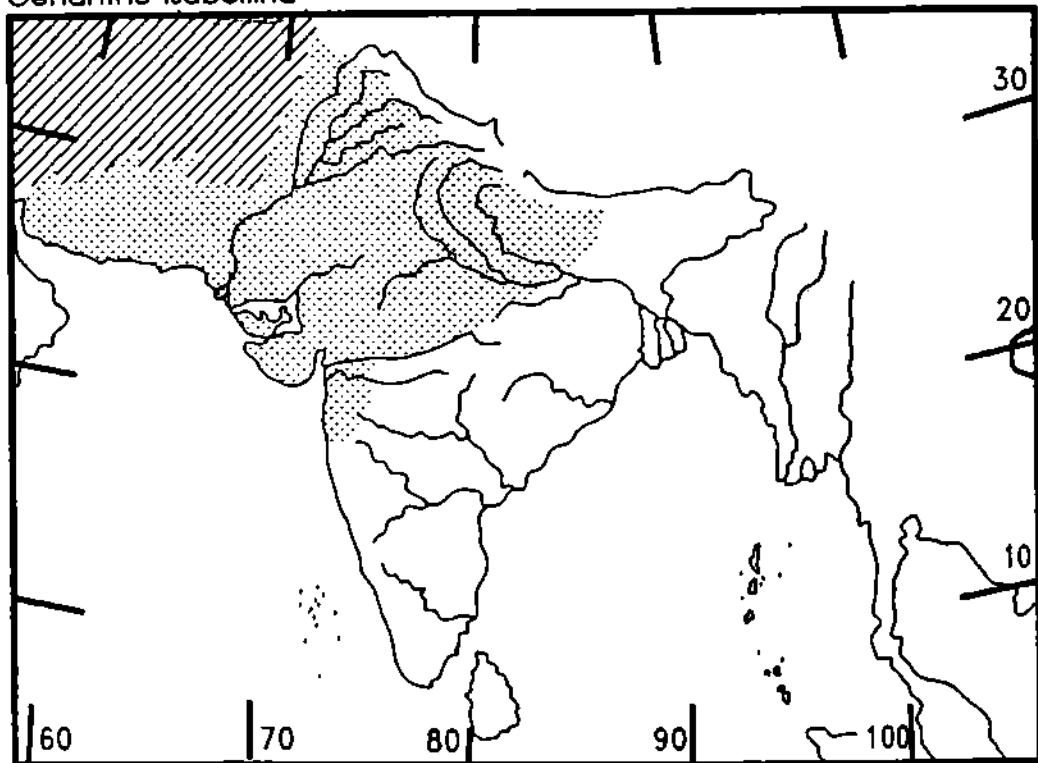
FIELD CHARACTERS. *Above*, sandy brown with a pale supercilium and eye-ring. Wings dark brown with buff edges. Upper tail-coverts and base of tail white; rest of tail blackish brown with narrow buff tips. *Below*, pale creamy buff, darker on breast and flanks. Sexes alike.



Half of tail, x c. 1

Distinguished from female *O. deserti* (1710) by its plumper build, heavier head, longer legs and absence of black in upper wing-coverts. In flight the white subterminal band on tail is conspicuous, whereas it is virtually absent in *deserti*.

STATUS, DISTRIBUTION and HABITAT. Mostly a winter visitor, fairly common. Breeds in Baluchistan (Kallat, Kharan and Chagai) and in N.W.F.P. (Thall, Parachinar). Winters in all parts of Pakistan and the plains of northwestern India including N. Gujarat (with Kutch and

Oenanthe Isabellina

Breeding

Winter

Kathiawar), straggling east and southeast to Varanasi and Sehore, and south to Ahmednagar (Fairbank, Blanford) and Pune, c. 18°30'N. (Abdulali & Pimento, JBNHS 65: 489). A passage migrant in Gilgit and other parts of northern India and Pakistan. Possibly a vagrant in Nepal (met with twice in the Kathmandu Valley). Recorded in the Maldives Islands in November (Phillips, JBNHS 60: 58). Affects sandy semi-desert and wasteland with sparse *Capparis*, *Sueda* and suchlike bushes, and old plough land. Although found up to 3000 m (Afghanistan) it requires large, flat and desolate areas (Paludan).

Extralimital. Breeds west to Turkey, north and east to Lake Baikal, Manchuria and Kansu. Winters also in Baluchistan and west through Arabia and northeastern Africa south to Tanzania.

MIGRATION. Occurs on breeding territory from March to October. Arrives in winter quarters about the end of September (first date 4 August in Jhang District—HW), leaves in March (last date 29 April). Passage recorded in Gilgit in March and April.

GENERAL HABITS. Solitary, or in widely separated pairs. Very territorial, actively resenting intrusion by other chats into its 'sphere of influence'. Runs about swiftly, feeding on the ground, bobbing and curtsying from time to time. Sits very upright on a clod or mound, infrequently on low bushes; however, in midday heat in scrubless country often noted perching on telegraph wires in the shade of the insulators, in some areas nearly every pole having its chat!

Display. 'With drooping wings and outspread tail, male approaches female, uttering the whole while a pleasant whistle. When within a foot or so

of her rises about 18 inches off the ground and flutters in a rapid, oscillating motion . . . After this performance, alights near her and struts round with outspread wings and tail, singing all the time. He then shoots up into the air, hovers and performs aerial stunts, and descends to earth in a spiral motion' (C. H. Williams, JBNHS 33: 603). Display flight also described as follows: 'Soars into the air to a height of fifteen metres or so, hovers with beating wings and outspread tail, then sails gently downwards' (Ludlow). See also Meinertzhagen, 1954, *Birds of Arabia*, p. 245

FOOD. Beetles and other insects; also some seeds.

VOICE and CALLS. Little recorded. Song is very imitative (Dementiev; Roberts) and louder than that of most chats. Flight display song lasts up to 4 seconds, starting with slow, repeated whistles ending in rapid explosive *chock-chock-chock* phrases, as the bird volplanes earthwards (Roberts). A low, sweet song may sometimes be heard in winter. Mimicks *Alauda gulgula*, a shepherd whistling, puppy yelping (Roberts), and *Coturnix coturnix* (P. A. D. Hollom).

BREEDING. *Season*, March to June. Double-brooded. *Nest*, a shallow saucer made of grass stems, rootlets and wool, lined with hair and wool; placed in a hole, usually a rat's hole, sometimes a discarded bee-eater's burrow, about 50 cm or more from the entrance. *Eggs*, 4 to 6, generally 5, pale blue, occasionally with a few reddish brown spots at the larger end. Average size of 14 eggs from Baluchistan 21.9 × 16.7 mm (Williams); of 60 eggs 23.7 × 17.4 mm (Baker). Incubation apparently by female alone. Feeding of young by both parents.

MUSEUM DIAGNOSIS. See Key to the Species. Spring moult complete. Body moult noted in September and January (HW). Young has pale spots above, and dusky edges to breast-feathers. Postjuvenile moult complete.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	98–104	18–20	30–31	56–62 mm
♀♀	92–96	19–20	29–30	51–55 mm (SA)

Weight 8 ♂♂ 26–31; 5 ♀♀ 27.1–34 g (Dementiev, Cornwallis).

COLOURS OF BARE PARTS. Iris dark brown. Bill, legs and feet black.

1707. Redtailed Chat. *Oenanthe xanthopyrrhyna kingi* (Hume)

Saxicola kingi Hume, 1871, Ibis: 29 (Jodhpur)
Baker, FBI No. 515, Vol. 2: 53

Plate 92, fig. 11

LOCAL NAMES. None recorded.

SIZE. Sparrow +; length c. 16 cm (6½ in.).

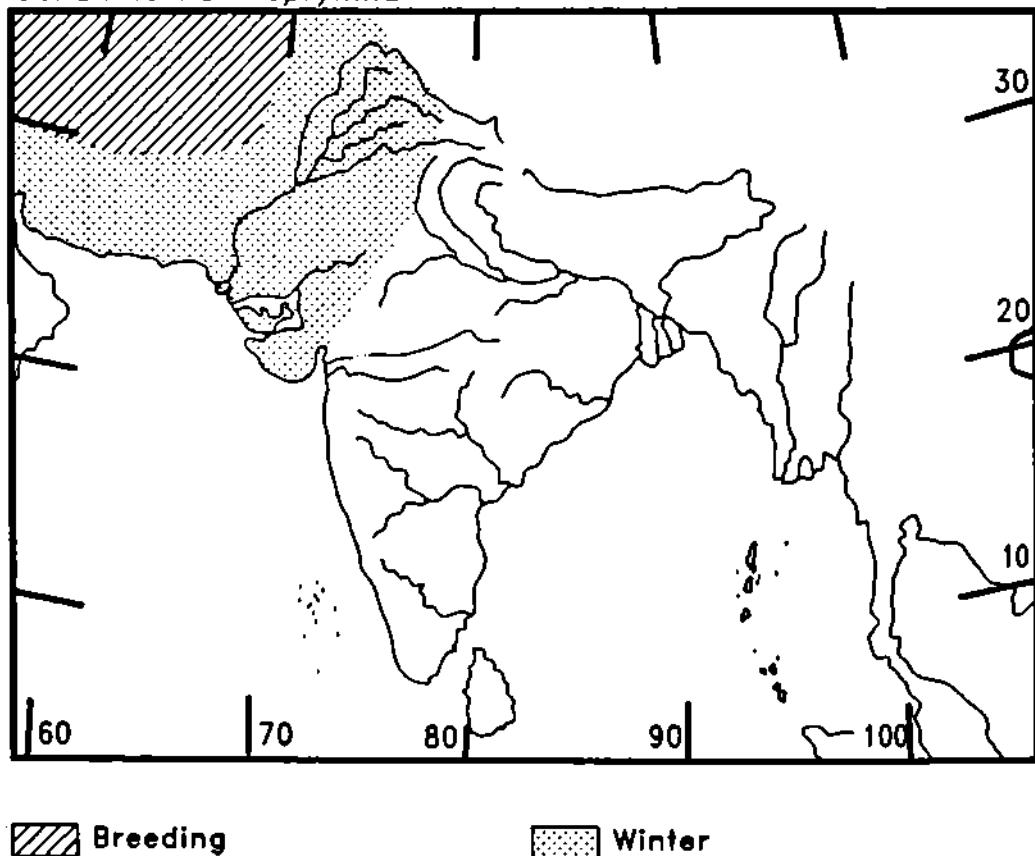
FIELD CHARACTERS. Male (adult). *Above*, head and back pale grey-brown. A dull, greyish white supercilium. Rump rufous-ochre, upper tail-coverts and base of tail paler. Centre of tail and broad terminal band blackish brown. *Below*, whitish tinged with pink. Sexes alike.

The only chat or wheatear with rufous rump and base of tail, which together with greyish underparts make it distinctive in flight.

TURDINAE

STATUS, DISTRIBUTION and HABITAT. Mostly a winter visitor, locally common. Breeds sparingly in northern Baluchistan (Amran Khwajah and along Barshor hills—Christison, JBNHS 43: 479) and north of Quetta (Williams, JBNHS 33: 604). [Alleged breeding near Thall (JBNHS 12: 339) proved to be of *Erythropygia* (loc. cit., p. 579).] Winters over most of Pakistan from N.W.F.P. and the northern foothills, south to Sind, Rajasthan (Mt Abu), Delhi and northern Gujarat. In Makran, from near sea level up to 3300 m. Recorded in autumn passage in the NW. hills from 540 to 1500 m. In winter affects flat and sandy desert stony foothill areas with sparse *Capparis* and other xerophytic bushes, and sand dunes on the edge of desert; has a marked preference for the foot of rocky hillsides. In summer frequents arid rocky slopes especially in the vicinity of small, perennial streams, usually above 2100 m.

Oenanthe xanthopyrrhyna



Breeding

Winter

Extralimital. Breeds in Afghanistan and north to the Pamirs. The species ranges west to Iraq and Armenia.

MIGRATION. Occurs on winter grounds from the beginning of October till the end of March; in Kohat from September to mid-April. Passage mostly in October and March, but movements also noted in December and February.

GENERAL HABITS. Usually seen singly, perching upright on clods or rocks, less frequently on low bushes, or running swiftly on the ground. Sometimes rapidly takes cover in gerbille holes and disappears down the subterranean tunnels. In winter almost everywhere in direct food competition with the more domineering *O. picata* by which it is mercilessly chivvied and chased.

FOOD. Ants and other insects.

VOICE and CALLS. Alarm: a characteristic *thrrrr thrrr thrrr*, less harsh than of other wheatears (Lindon Cornwallis—for subspecies *chrysopygia*). Song said to be very imitative: a very loud warbling.

BREEDING. Season, April to June. Nest, placed in small hollows quite low down in a rock-face above water; or inside holes under stones or in walls—maybe up to 60 cm deep—generally on the steep sides of bare, rocky gorges. The shallow saucer of grass, lined with fine rootlets and grass fibres, rests on a foundation of flat pebbles—often a considerable quantity—and is protected by a rampart of same. Eggs, 4 or 5, pale blue with or without a few rusty spots. Average size of 22 eggs 20·7 × 16 mm (Christison, Williams). Other details of breeding biology not recorded.

MUSEUM DIAGNOSIS. See Field Characters. Young. Upperparts and sides of head a little browner than in the adult, no pale centres or dark edges. All wing-coverts with fulvous tips. Chin and throat grey, rest of underparts with a fulvous wash. Under tail-coverts paler fulvous than in adult.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	92–97	18–20	25–26	{ 56–65 mm
♀♀	90–92			{ 59–64 mm
(HW, Paludan, SA)				

Weight 10 ♂♂ 20–25; 6 ♀♀ 20–29 g (Paludan, RAP).

COLOURS OF BARE PARTS. Iris dark brown. Bill, legs and feet black.

1708. Wheatear. *Oenanthe oenanthe* (Linnaeus)

Motacilla Oenanthe Linnaeus, 1758, Syst. Nat., ed. 10, 1: 186 (Sweden)
Baker, FBI No. 511, Vol. 2: 48

Plate 92, fig. 9

LOCAL NAMES. None recorded.

SIZE. Sparrow; length c. 15 cm (6 in.).

FIELD CHARACTERS. Male (adult), winter. *Above*, crown and back bluish grey. Lores to ear-coverts black. A white supercilium and white rump. Wings black. Centre of tail and terminal band black; base and sides white. *Below*, throat and breast pale to deep buff; rest of underparts cream-buff.

In summer crown and back become more pure grey, forehead white. First-winter male like female.

Female, winter. *Above*, crown and back olive-brown. A light supercilium. Ear-coverts brown. Rump white; tail as in male. *Below*, as in male.

In summer crown and back become greyer brown.

STATUS, DISTRIBUTION and HABITAT. A straggling passage migrant through Pakistan and the northwestern Himalayas, which apparently lie on the extreme eastern fringe of its normal migration route; recorded in Chagai, Baluchistan (March and October, *Ibis* 1941: 541), Chitral (April, at c. 1200 m), Gilgit (March at c. 1500 m), and Wardwan Valley, Kashmir (September, JBNHS 18: 462); a vagrant also recorded once near Mhow in Madhya Pradesh (Jerdon). On migration affects open stony country and cultivation.

Extralimital. Breeds in Europe and the Middle Eastern countries, east through Afghanistan and central Asia to eastern Siberia and western Alaska. Winters in Africa south of the Sahara. Another subspecies in Greenland and Labrador.

MIGRATION. Spring migration takes place mostly in April, autumn migration in September and October.

GENERAL HABITS. Generally seen singly or in twos and threes during migration. Moves on ground in a quick succession of long hops, frequently halting on some little eminence such as clods or rocks; occasionally perches on bushes or low trees. Sometimes makes little dashes into the air for insects. Carriage upright, but seldom remains still, constantly bowing and bobbing, at same time spreading tail and moving it up and down.

FOOD. Mostly insects, sometimes seeds or berries.

VOICE AND CALLS. Alarm-note *chack-chack* or *weet-chack-chack*. Usually does not sing when migrating.

BREEDING. Extralimital. A single record from Chitral c. 1300 m (Perreau, JBNHS 19: 908).

MUSEUM DIAGNOSIS. See Field Characters and Key to the Species. For details of plumages and structure (also bionomics) see Witherby, 1938, 2: 145-9.

MEASUREMENTS

	Wing	Tail
100 ♂♂	87-101 (av. 94.4)	} 50-60 mm (Dementiev)
40 ♀♀	86-95 (av. 91.7)	
	Bill (from skull)	Tarsus
♂♀	18-20	27-29 mm (HW)

Weight 8 ♂♂ 21-29; 1 ♀ 22.6 g (Dementiev).

COLOURS OF BARE PARTS. Iris brown. Bill black. Legs and feet dark brown to black; claws black.

OENANTHE DESERTI (Temminck): DESERT WHEATEAR

Key to the Subspecies

- White on inner web of second primary reaching quill *O. d. oreophila*
- White on inner web of second primary not reaching quill *O. d. deserti*

1709. *Oenanthe deserti oreophila* (Oberholser)

Saxicola oreophila Oberholser, 1900, Proc. U.S. Nat. Mus. 22: 221 (Ladak), new name for *Saxicola montana* Gould, 1865 (Tibet), *nec* *Saxicola montana* Koch, 1816 Baker, FBI No. 514, Vol. 2: 52

LOCAL NAMES. None recorded.

SIZE. Sparrow; length c. 15 cm (6 in.).

FIELD CHARACTERS. Male (adult), summer. *Above*, crown and back

sandy buff; a pale supercilium. Upper tail-coverts and basal area of outer tail feathers white. In the field tail shows all black, unlike in any other wheatear species in the region. Wings blackish brown. Inner webs of remiges partly white, this character more pronounced in flight than in 1710. *Below*, throat and sides of head black; rest of underparts buffish white.

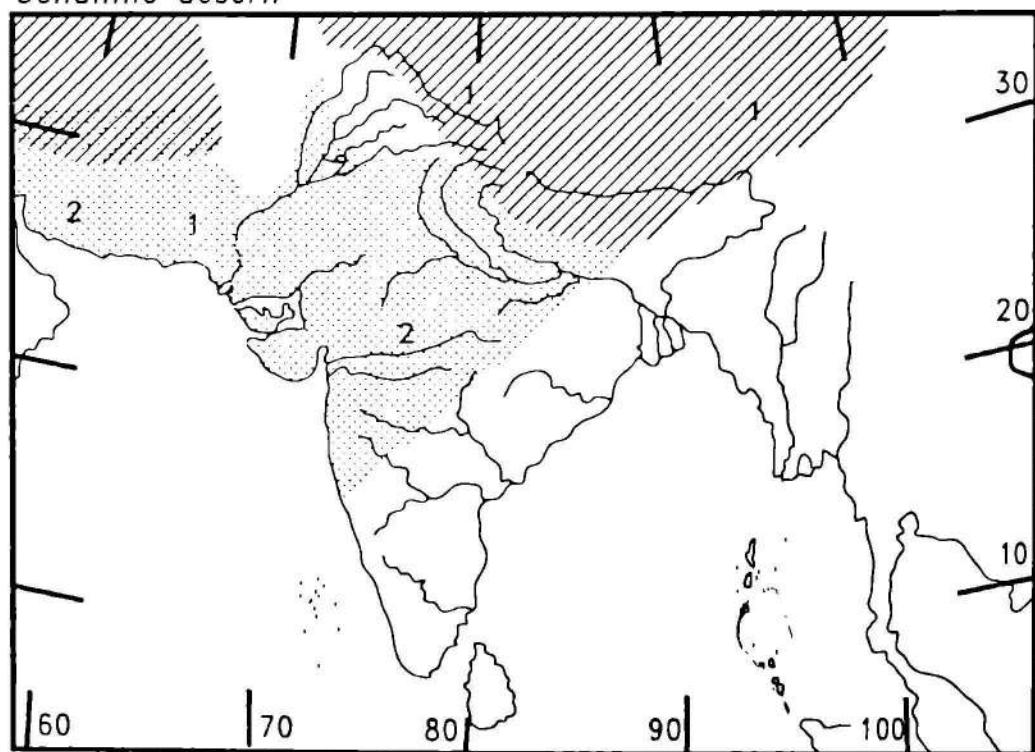
In winter the black parts are fringed with whitish.

Female. *Above*, like male but greyer; wings and tail a lighter brown. Ear-coverts rufous-brown. *Below*, whitish buff, breast darker.

STATUS, DISTRIBUTION and HABITAT. Summer visitor, locally abundant. Breeds in Hunza, Baltistan, Ladakh, Lahul and Nepal, between c. 3000 and

5100 m, optimum zone 3600–4600 m. Winters in Baluchistan and possibly in Sikkim and Assam (Margherita, North Cachar—Baker, loc. cit.). An April record from Garhwal at c. 1800 m (A. E. Osmaston). On breeding grounds affects bleak rocky or sandy plateaux and hummocks covered with sparse furze (*Caragana*) bushes; usually avoids steep slopes.

Oenanthe deserti



Breeding

Winter

Extralimital. Breeds in southern Tibet from the Pamirs to the head-waters of the Yangtze. Winters in southern Iran, Arabia and eastern Africa (Ripley & Bond, 1966, *Smithsonian Misc. Coll.* 151: 29).

MIGRATION. Arrives on breeding grounds about the middle of April, remains till September. Passage takes place in March-April and September-October.

GENERAL HABITS AND FOOD. As in 1710.

VOICE AND CALLS. Alarm-note *chuck-chrr*. Song, a mournful yet melodious, three- or four-syllable *tee-ti-ti-ti* repeated monotonously by male all day long in the vicinity of the nest; occasionally given during short hovering flight of five seconds or so a few metres above nest site (SA).

BREEDING. Season, May to July. Nest, a cup of moss, grass and goat hair neatly lined with wool, hair and sometimes feathers; placed on the ground in deep hollows under boulders or in cairns of mané stones, chortens, etc. Eggs, normally 4 or 5, pale blue or bluish green with small reddish specks at the broad end. Average size of 11 eggs 22.3 × 16.6 mm (BB), of 8 eggs 21.4 × 15.5 mm (HW). Both parents tend the young. Share of the sexes in other chores, and incubation period, not recorded.

When nest approached (3 separate observations at different nests) the female, uttering alarm-note and flicking tail excitedly up and down, repeatedly attacked and drove off her fussing mate from the vicinity as if afraid of his betraying position of nest (SA).

MUSEUM DIAGNOSIS. See Field Characters. Differs from *deserti* (1710) in having a longer wing and the inner web of the second primary white to the quill. Birds from Afghanistan are intermediate (Paludan).

JUVENILE. Uppercparts greyish brown with darker edges; pale brown on mantle. Underparts dirty white with faint brownish edges to breast-feathers. Lesser and median wing-coverts brown with pale centres and tips; inner greater coverts like the rest, not white (HW).

Postjuvenile moult of body-feathers, lesser, median, and at least inner half of greater coverts. Postnuptial moult chiefly in August.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	96-106}			{ 65-71 mm
♀♀	90-97}	18-19	26	61 mm
(Paludan, SA)				

Weight 3 ♂♂ (March-June) 19-20; 11 ♂♂ (Sept.-Oct.) 18-34 (av. 23) g (Paludan). 1 ♀ (Oct.) 17.3 g (RAP).

COLOURS OF BARE PARTS. Iris brown. Bill, legs and feet black.

1710. *Oenanthe deserti deserti* (Temminck)

Saxicola deserti Temminck, 1825, Pl. col. (60), pl. 359, fig. 2 (Egypt)

Saxicola atrocularis Blyth, 1847, Jour. Asiatic. Soc. Bengal 16: 131 (Agra)

Baker, FBI No. 513, Vol. 2: 51

Plate 92, fig. 12

LOCAL NAME. *Rām piddo* (Gujarat).

SIZE. Sparrow; length c. 15 cm (6 in.).

FIELD CHARACTERS. As in 1709, q.v. See Museum Diagnosis.

STATUS, DISTRIBUTION and HABITAT. Mostly winter visitor. Pakistan (fairly common) and India east to Bihar and south to Maharashtra, eastern Tamil Nadu (JBNHS 86: 452) and Sri Lanka (Hoffmann). A few pairs breed in the Quetta area of N. Baluchistan (Marshall *apud* Baker, *Nidification* 2: 44). Affects arid semi-desert broken tracts, either sandy or rocky, sometimes with sand dunes and scanty scrub; also freshly ploughed and fallow land in canal-irrigated colonies in desert.

Extralimital. Breeds in central Asia north of the range of *oreophila* and west to the eastern Mediterranean. The species ranges in North Africa to Morocco.

MIGRATION. Occurs in winter quarters from mid-September to April in the northwest and chiefly from November to February over the rest of its Indian range.

GENERAL HABITS. Those of the genus. Often found in same terrain as other desert-loving chats and Short-toed larks. Usually perches on a small eminence or low bush whence it darts down to take its prey or flies up flycatcher-style for insects. Display flight as of *Oe. isabellina*, (1706) q.v.

FOOD. Insects, chiefly beetles.

VOICE and CALLS. Song variable and imitative; may occasionally be heard during winter months. Alarm-note *cht-tt-tt* (SA).

BREEDING. Season, April to June. Nest, a cup of grass, hair and wool lined with similar but softer material, placed in holes in bank or among stones. Eggs, 4 to 6 (Dementiev), very pale blue with a few faint markings at the large end. Average size of 30 eggs 19.7 × 15.4 mm (Baker).

MUSEUM DIAGNOSIS. Differs from *oreophila*, q.v., in being smaller and having less white in wing (white area on inner web of second primary does not reach quill).

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	94-99	16-20	25-27	60-69 mm
♀♀	87-94	16-18	25-27	54-64 mm (SA, HW)

Weight 19 ♂♂ (March-Oct.) 17-22; 9 ♀♀ (March-Nov.) 15-19 g (*deserti* and *oreophila*)—Paludan.

COLOURS OF BARE PARTS. As in 1709.

1711. Barnes's Chat. *Oenanthe finschii barnesi* (Oates)

Saxicola barnesi Oates, 1890, Fauna Brit. India, Bds. 2: 75
(Baluchistan and Afghanistan eastward [sic] to Persia = Kandahar)
Baker, FBI No. 510, Vol. 2: 47

Plate 92, fig. 15

LOCAL NAMES. None recorded.

SIZE. Sparrow +; length c. 17 cm (6½ in.).

FIELD CHARACTERS. Male (adult), in fresh moult. *Above*, crown and back

ochraceous, becoming whiter as summer progresses; rump and base of tail

pure white. Central rectrices (except base) and terminal band of tail black, with a narrow white fringe to the lateral feathers. Wings black. *Below*, throat and sides of head black; rest of underparts buffish white.

In winter, upperparts heavily fringed with grey buff, except white upper tail-coverts; black of throat barred with narrow rufous fringes; flight-feathers edged with pale rufous.

Female. *Above*, sandy brown, rump and upper tail-coverts white. Tail as in male. Wings dark brown with pale fringes. *Below*, sandy white, throat sometimes blackish.

Could be mistaken for female *deserti* (1710) or *isabellina* (1706) but upperparts more greyish brown; throat and sides of neck greyish brown (*v.* whitish buff); also pale supercilium absent in female *isabellina*; less buff on breast; tail white with only central rectrices and terminal band black (*v.* almost wholly black).

STATUS, DISTRIBUTION and HABITAT. Mostly winter visitor in northern Baluchistan where fairly common. Breeds occasionally at about 1800 m (Williams, JBNHS 33: 603) in the hills northeast of Nushki and northwest of Quetta (Christison, JBNHS 43: 479). Affects dry, stony foothills and desolate narrow valleys; in winter also found in arid semi-desert plains.

Extralimital. Extends north to Kirghiziya and west to northeastern Iran. Winters in southern Iran and southern Afghanistan. The nominate race breeds in Turkey and Israel. May be a race of *O. lugens* widespread in Africa (cf. Dementiev).

MIGRATION. Winter visitors arrive mostly in October.

GENERAL HABITS. Those of the genus. Very shy.

BREEDING. Season, April to June. Nest, a flat saucer of grass and sticks lined with finer grass and hair, placed in a hole in a bank or rock face, or under a heap of stones. Eggs, generally 5, deeper blue than other chats' eggs, with a zone of rusty spots at the large end and a few odd spots elsewhere. Average size of 14 eggs 19.3 × 15.4 mm (Baker).

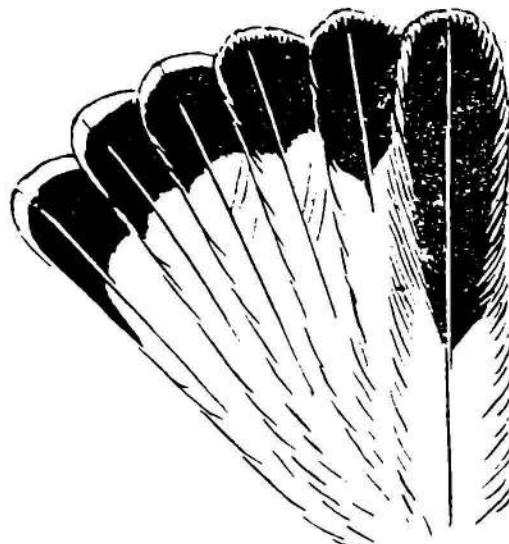
MUSEUM DIAGNOSIS. See Field Characters and Key to the Species.

Juvenile with stub tail, ready to leave nest. Pale earthy isabelline below and slightly darker above, with very broad margins to primaries and secondaries. Even paler than juvenile *isabellina* (1706) and lacks the spotting of the latter (Meinertz-hagen).

MEASUREMENTS

	Wing	Tarsus	Tail
♂♂	84–96	24–26	60–70 mm
♀♀	82–90	24–26	53–65 mm

(Dementiev, CBT, Paludan, Cornwallis)



Half of tail, $\times \approx 1$

Weight 13 ♂♂ (winter) 19·5–29·5, 5 ♂♂ (breeding) 23–26; 5 ♀♀ (winter) 20·5–24, 2 ♀♀ (breeding) 22, 23 g—Cornwallis.

COLOURS OF BARE PARTS. Iris brown. Bill black. Legs and feet dark brown or black.

1712. Pied Chat or Variable Wheatear. *Oenanthe picata* (Blyth)

Saxicola picata Blyth, 1847, Jour. Asiat. Soc. Bengal 16: 131 (Scinde)

Saxicola opistholeuca Strickland, 1849, in Jardine's Contrib. Orn.: 60
(Northern India = Punjab)

Saxicola capistrata Gould, 1865, Bds. Asia 4, pl. 28
(Upper Provinces of Hindostan = Sind)

Baker, FBI Nos. 506, 507 and 508, Vol. 2: 42–4

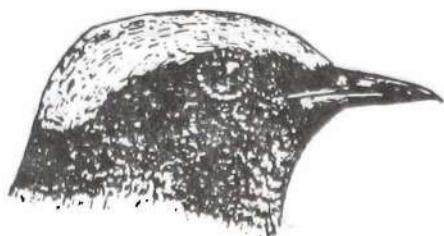
Plate 92, fig. 17

LOCAL NAMES. *Monu* (Baluchi); *Kābārō piddo* (Gujarat).

SIZE. Sparrow +; length c. 17 cm (6½ in.).

FIELD CHARACTERS. A black-and-white polymorphic chat; intermediates occur especially in females (cf. Paludan, 1959, pp. 205–13).

1. Black-bellied phase ('*opistholeuca*'). Male (adult). Entirely jet black except rump, under tail-coverts, base and sides



capistrata phase ♂, × c. 1

of tail which are white; central rectrices and terminal band of tail black.

Female has black parts replaced by sooty black.

2. White-bellied phase ('*picata*') [The most common within our limits.] Male (adult). Like the preceding but belly white. Female similar to male but black parts replaced by greyish brown; belly more buffish.

3. White-crowned phase ('*capistrata*'). Male (adult). Like *picata*, with white belly and black throat, but crown and nape white. Female similar to male but black parts and crown earthy brown; belly more buffish.

N.B. The geographical dominance of the three types of females does not exactly correspond to the dominances of the three colour phases of the males (Paludan, p. 208), but in their wintering grounds there is some corresponding separation (Roberts, pers. comm.).

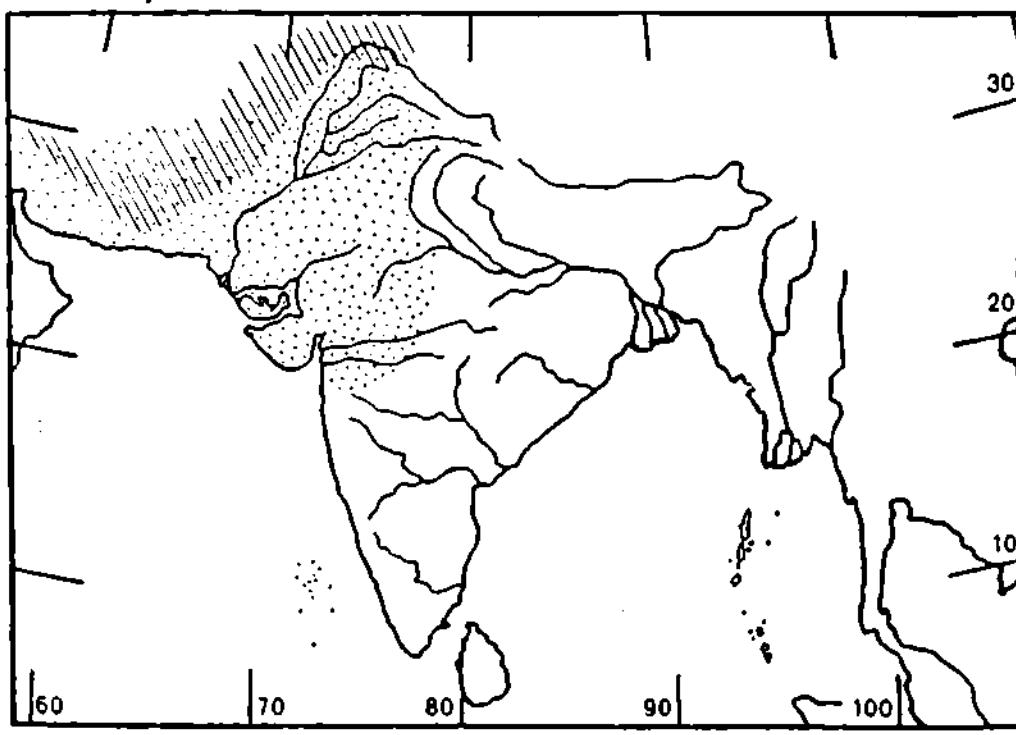


Half of tail, × c. 1

TURDINAE

STATUS, DISTRIBUTION and HABITAT. Partly resident, chiefly winter visitor. Breeds commonly throughout Baluchistan [Kalat, Fort Sandeman, Sulaiman Range—SF 3: 206; JBNHS 31: 707 and 59: 962 (*picata*)], Quetta [JBNHS 14: 480 and 16: 750; *Ibis* 1920: 164 (*picata*)], Fort Munro [JBNHS 37: 689 (*picata*, and markedly less *opistholeuca*)], Peshawar [JBNHS 32: 748 (*capistrata*)], Kohat and Kurram Valley [JBNHS 12: 339, 18: 192 and 20: 778; *Ibis* 1909: 217 (*capistrata* and *picata*)], Chitral [JBNHS 16: 50 (*opistholeuca* very common; only a few *capistrata* in the more northern areas)], Baltistan and Gilgit [*Ibis* 1881: 56, 441; *Ibis* 1927: 582; JBNHS 42: 659; SF 10: 112, 226 (*capistrata* and *picata* with every possible intergradation)]. Affects boulder-strewn barren country, steep river banks, fallow fields, tumbledown buildings and precincts of villages, from c. 600 m (Peshawar) to 3300 m (Quetta, Chitral), optimum zone 1800–2400 m. Common and generally distributed in winter in Pakistan and northwestern India southeast to Delhi, central Madhya Pradesh and northern Maharashtra (Khandesh). In winter frequents stony semi-desert, and desert with sparsely scrubbed sand dunes, cultivation, ravines, outskirts of villages and nomadic encampments, cattle corrals, etc.; usually from almost sea level to c. 1200 m, but has been observed also at 2700 m in deep snow!

Oenanthe picata



■ Breeding

■ Winter

Extralimital. Ranges north to Turkmenia and west to northern Iran.

MIGRATION. Arrives on breeding grounds in March (Baluchistan) or mid April (Chitral), remains till September. May be seen in winter quarters from the beginning of August (Karachi dist., 2/viii—TJR) till the end of March.

GENERAL HABITS. Usually met with singly, perched on some prominent position such as walls, bushes or corner of a roof, bobbing and curtsying vehemently from time to time, especially when alarmed; darts down to the ground to seize insects and then moves off to another vantage point. Also makes aerial sorties after winged insects like a flycatcher. In the heat of the day sits quietly in some shady spot, often on doors and windows of occupied houses. Frequently roosts in a hole under the roof of a bungalow. Very territorial even in winter and resents intrusion of the same or other species with similar feeding habits; its persecution of the Indian Robin (1720) and Redtailed Chat (1707), in particular, markedly noticeable everywhere.

FOOD. Chiefly insects—ants, beetles, caterpillars, etc. Also berries of 'pipal' [sic] and *Grewia* (Waite).

VOICE and CALLS. Has a pretty song, something like the Magpie-Robin's. Is also a good mimic, taking off to perfection, among others, the Common Babbler, Indian Wren-Warbler, Tailor Bird, Redwattled Lapwing and Spotted Owlet; also the twittering song of the Swallow and the musical soliloquy of the Rufousbacked Shrike (SA). Sings from a perch or on the wing, making short flights from a projecting rock, flying with hovering wings, tail spread and a little dropped. Song, or snatches of it, may also be heard on its arrival in winter quarters, especially while chasing off food competitors. Other notes unrecorded.

BREEDING. Season, March to August. Double-brooded (Whitehead). Nest, a shallow saucer of grass, feathers, wool and bits of rag, lined with hair and wool; placed in holes in or under rocks, banks, walls, cairns or sometimes under the eaves of houses or among rafters, occasionally in a tree-hollow. Once placed on a foundation of flat stone chips (Waite, JBNHS 37: 689), cf. 1707. Eggs, 4 to 6, pale blue marked with reddish brown at the large end. Average size of 50 eggs 20.7 × 16 mm (Williams), of 92 eggs 20.5 × 15.4 mm (Baker). Young fed by both parents.

MUSEUM DIAGNOSIS. See Field Characters. For distinguishing male of phase 2 from *O. alboniger* see under 1714.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	86-98	15-18	25-26	60-73 mm
♀♀	86-95	14-18	22-26	60-74 mm
(HW, SA, Paludan)				

Weight 41 ♂♂ (March-August) 21-25; 12 ♀♀ (March-July) 18-23 g (Paludan).

COLOURS OF BARE PARTS. Iris brown. Bill, legs and feet black.

1713. Hooded Chat. *Oenanthe monacha* (Temminck)

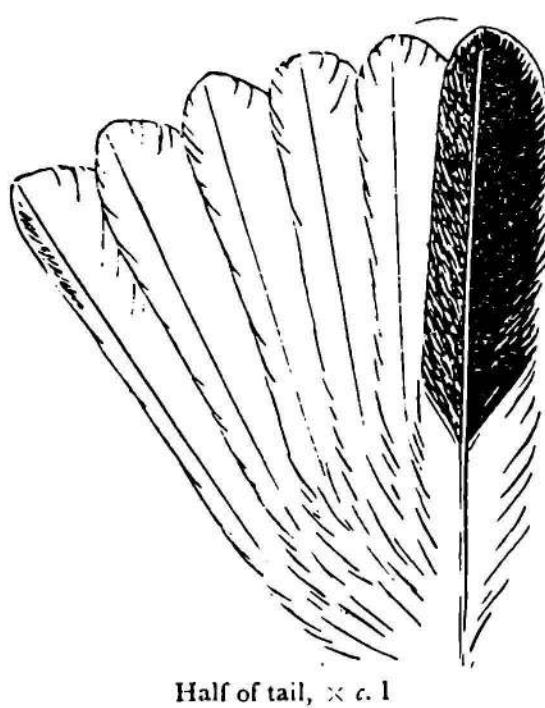
Saxicola monacha Temminck, 1825, Pl. col. (60), pl. 359, fig. 1 (Nubia = Luxor)
Baker, FBI No. 504, Vol. 2: 40

Plate 92, fig. 16

LOCAL NAME. *Monu* (Baluchi).

SIZE. Sparrow +; length c. 17 cm (6½ in.).

FIELD CHARACTERS. Male (adult). *Above*, forehead, crown, rump, basal third of tail and outer rectrices white, the latter more or less marked with brown towards the tip. Middle of back and central rectrices black. *Below*, sides of head, throat and breast black, rest of underparts white.



Half of tail, $\times c. 1$

Female. *Above*, sandy brown. Rump and upper tail-coverts creamy fawn. Tail as in male but white replaced by buff. *Below*, pale dingy buff.

Distinguished from *O. picata* and *O. pleschanka* by almost entirely white outer rectrices.

STATUS, DISTRIBUTION and HABITAT. Probably resident, very local and little known. Recorded only in the winter months from the Makran coast [Gwadar, Samán, Dasht (Baluchistan), Sehwan and

Kirthar hills (Sind)]. K. Eates found evidence of breeding in Soorjana hills in Las Bela in 1945 (unpublished MS. notes—Roberts, pers. comm.). A bird of the most desolate desert ravines.

Extralimital. Extends west to the Dead Sea and the Red Sea coast of Egypt.

GENERAL HABITS, FOOD and VOICE. Best adapted to extremely barren and arid desert zones. Shelters during hotter hours under suitable stones (Cornwallis).

BREEDING. Unknown.

MUSEUM DIAGNOSIS. See Key to the Species.

MEASUREMENTS

	Wing	Bill (from feathers)	Tarsus	Tail
♂♀	101–106	16–17	c. 24	67–70 mm (Baker)

Weight 1 ♀ (winter) 22.5 g—Cornwallis.

COLOURS OF BARE PARTS. Iris brown. Bill, legs and feet black.

1714. Hume's Chat. *Oenanthe alboniger* (Hume)

Saxicola Alboniger Hume, 1872, Stray Feathers 1: 2

(Stony hills which divide Kelat from Sindh . . . and Mekran Coast)

Baker, FBI No. 505, Vol. 2: 40

Plate 92, fig. 14

LOCAL NAME. *Monu* (Baluchi).

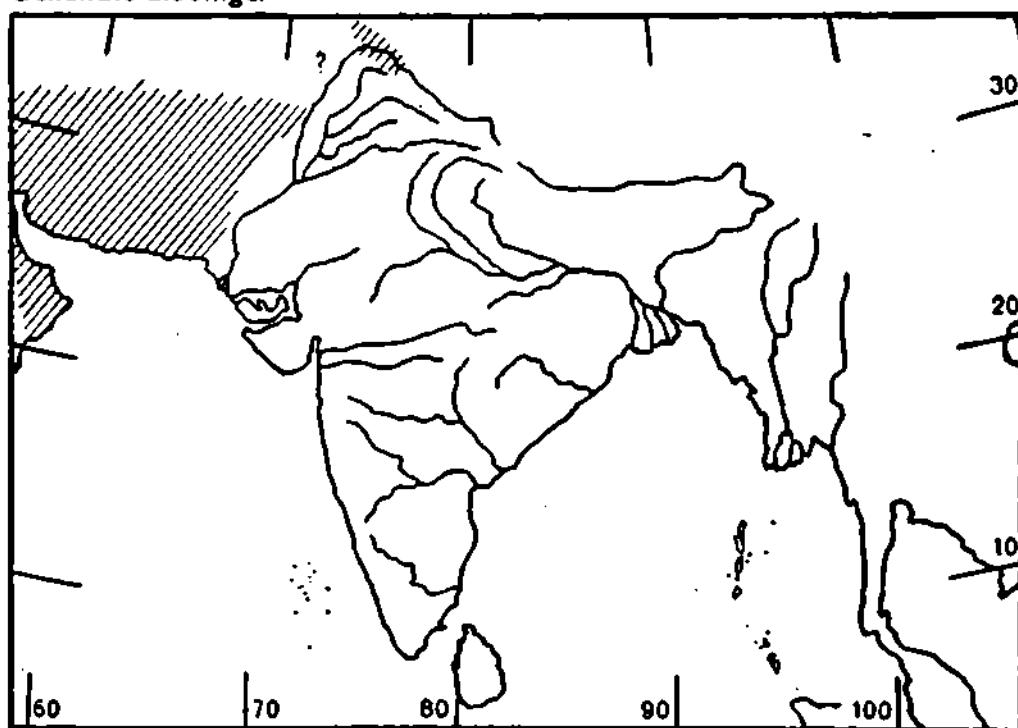
SIZE. Sparrow +; length c. 17 cm (6½ in.).

FIELD CHARACTERS. *Above*, rump and base of tail white. Outer rectrices white with a broad black terminal band; central rectrices black. Head and rest of upperparts black. *Below*, throat black, rest white. Sexes alike.

Almost identical with male *O. picata* (white-bellied phase, q.v.). Doubtfully distinguishable from it in the field by plumage though black of throat does not extend as far down on breast; white on rump extends higher up the back. Is also somewhat larger and noticeably 'bull-headed', with usually a more upright stance when perched. Call-notes may differ but comparable details not available. The only pied chat with sexes alike—a useful clue to its identification when birds are paired.

STATUS, DISTRIBUTION and HABITAT. Fairly common resident, subject to some vertical movements. Sind in the higher Kirthar hills, Baluchistan from the Makran coast to Fort Sandeman, Baltistan, Astor and Gilgit to Wanla Nala, a side nullah in the Suru Valley (BBO, JBNHS 34: 121). Breeds around 1500–1600 m. Affects steep boulder-strewn sides of nullahs.

Oenanthe albioniger



■ Distributional range

Extralimital. Extends to Afghanistan, southern Iran, Muscat and Oman.

GENERAL HABITS. Little recorded. Field notes vitiated by likelihood of confusion with *O. picata*. Described as less shy and more 'stolid' (HW). Usually seen perching on large rocks, telegraph wires, etc. whence it darts to the ground for food.

FOOD. Insects.

VOICE AND CALLS. Said to have a loud, melodious song, although not a very varied one. Call-note, a short, sharp, high-pitched whistle uttered three or four times. Alarm, a harsh grating note (Currie).

BREEDING. Season, April to June. Nest, a saucer of twigs plastered with mud into which chips of limestone are incorporated; poorly lined with soft grass, hair and feathers. 'In front of the nest was a barricade of stones, highest next the nest and then shelving off towards the entrance of the hole. This particular barricade weighed two pounds [= 910 g]' (Currie *apud* Baker). No such rampart was noticed by Meinertzhagen near two nests found in Sind (*Birds of Arabia*, p. 254). Nest placed in holes in rocks, sometimes quite high in the face of cliffs; two nests in Kirthar hills built on substantial foundation of stones (Roberts). In Iran also recorded in walls and deserted mud buildings. Eggs, 4 or 5, very pale skim-milk blue, some spotless others with a few speckles of pale reddish. Average size of 20 eggs 22.5 × 16.8 mm (Baker).

MUSEUM DIAGNOSIS. Very similar to male *O. picata* phase 2, but black more intense and glossier. Black on underparts restricted to throat: 25–36 mm (from point of chin) *v.* 35–38 mm in *picata*. White on rump more extensive: 31–50 mm (from black of back to black of central rectrices) *v.* 16–23 mm in *picata*. Feet larger and stronger (Lindon Cornwallis pers. comm.).

Postnuptial moult complete, June to August. Young similar to adult but black replaced by glossless black-brown, no spotting (Meinertzhagen).

MEASUREMENTS

	Wing	Bill (from skull)	Tail
♂♂	100–108	20–22	62–76 mm
♀♀	95–104	17–22	58–69 mm

(Vaurie, CBT)

Tarsus c. 27 mm (MD)

Weight 8 ♂♂ (winter) 24–28.5, 6 ♂♂ (breeding) 23–27.5; 7 ♀♀ (winter) 22–26.5, 5 ♀♀ (breeding) 23–27 g—Cornwallis.

COLOURS OF BARE PARTS. Iris brown. Bill, legs and feet black.

1715. Pleschanka's Chat. *Oenanthe pleschanka pleschanka* (Lepechin)

Motacilla pleschanka Lepechin, 1770, Novi Comm. Acad. Petrop. 14: 503, pl. 14, fig. 2 (Saratov, lower Volga)

Motacilla leucomela Pallas, 1771, Novi Comm. Acad. Petrop. 14: 584, pl. 22, fig. 3 (Samara, Russia)

Baker, FBI No. 509, Vol. 2: 45

Plate 92, fig. 13

LOCAL NAME. *Monu* (Baluchi).

SIZE. Sparrow; length c. 15 cm (6 in.).

FIELD CHARACTERS. Male (adult), summer. *Above*, crown and nape white, more or less sullied by brown tips of feathers. Neck (all round), back and wings black. Rump and base of tail white. Central rectrices blackish;

outer rectrices white with blackish terminal band, this colour extending on extreme outer web to about half the length of tail. *Below*, chin and throat black; rest of underparts white, tinged with pinkish buff on upper breast.

In winter the black of mantle and throat is fringed with pale brown.

Underparts, from throat downwards, dirty white ('rufous-fawn').

Female. *Above*, brown. A buff supercilium. Wings dark brown edged with buff. Rump white. Tail pattern as in male. *Below*, throat and breast pale brown, rest of underparts buff.

A rare colour phase ('*vittata*') occurs in which both male and female have a white throat.

STATUS, DISTRIBUTION and HABITAT. Common summer (breeding) visitor. N.W.F.P. in Kohat, Kurram Valley and Chitral, and the northwestern Himalayas from Gilgit through

Ladakh to Lahul and probably Spiti. Breeds between 1500 and 4200 m [record of nests taken at 4500 m in Ladakh (Ludlow, JBNHS 27: 142) is believed to be erroneous and should be cancelled according to communication by the author to HW]. Affects stony wasteland. Replaces *O. picata* at higher altitudes—Roberts.

Extralimital. Ranges east to Lake Baikal and Manchuria, west to Iran and the Black Sea. Replaced in the Mediterranean countries by the very similar *O. hispanica*. Winters in southern Iran, Arabia and Africa.

MIGRATION. A straggler or rare migrant in Kashmir and Punjab (April). Regular on passage in northern Baluchistan in March-April and September-October. An October record in the Indian Ocean halfway between Sri Lanka and the Somali coast, due south of the Makran. A straggler to the Maldives Islands (November and December—Phillips, JBNHS 60: 581), Sri Lanka (November—Henry, *Birds of Ceylon*, p. 25) and possibly Kanyakumari (Cape Comorin) (JBNHS 62: 558). Recent records of *O. isabellina* from Mannar, Sri Lanka, refer to this species (Hoffmann).

GENERAL HABITS. Those of the genus. Perches upright; wags tail up and down. Often flies a few metres straight up into the air in pursuit of winged insects.

Display. Male flies in circles at a considerable height, singing the while, sometimes ending the display by making a remarkable dive to earth at lightning speed.

FOOD. Chiefly insects, also berries.

VOICE and CALLS. A clear song, very variable and imitative, delivered from a rock or during courtship flight (described above).

BREEDING. *Season*, May to July. *Nest*, a cup of dry grass or weed stems well lined with rootlets and hair, placed in holes under stones or rocks. *Eggs*, 4 to 6, pale blue spotted with reddish at the large end. Average size of 40 eggs 19·6 × 15·1 mm (Baker). Young fed by both parents.



MUSEUM DIAGNOSIS. See Field Characters and Key to the Species.

Young. Head, back, median and lesser coverts pale brown with pale centres and dark edges. Rump and upper tail-coverts white. Underparts creamy white with faint dark edges. Young *picata* (1712) is much darker above and *deserti* (1710) much paler. Postjuvenile moult of body-feathers, median and lesser coverts, and most or all greater coverts.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	86–98	5–17	22–23	57–65 mm
♀♀	84–93			56–60 mm (Paludan, Dementiev)

Weight 20 ♂♂ (Feb.–July) 15–22 g (Paludan).

COLOURS OF BARE PARTS. Iris brown. Bill, legs and feet black.

Genus CHAIMARRORNIS Hodgson

Chaimarrornis Hodgson, 1844, in Gray's Zool. Misc.: 28.

Type, by monotypy, *Phoenicura leucocephala* Vigors

Cf. Desfayes, M., 1969, *Ibis* 111: 244–6 for affinities with African *Thamnolea*.

Tail rounded. Wing long but with large first primary equal to half the length of second. Tarsus long and strong. Sexes alike. Young lightly mottled.

1716. Whitecapped Redstart or River Chat. *Chaimarrornis leucocephalus* (Vigors)

Phoenicura leucocephala Vigors, 1831, Proc. Zool. Soc. London: 35

(Himalaya = Simla-Almora area)

Baker, FBI No. 534, Vol. 2: 79

Plate 90, fig. 19

LOCAL NAMES. *Chets tāl*, *Kumīdi* (Kashmir); *Gir-chaondia* (Hindi); *Kali-pholia* (Mohun Ghat, U.P.); *Mati-tap-pho* (Lepcha); *Chubia mati* (Bhutan).

SIZE. Bulbul; length c. 19 cm (7½ in.).

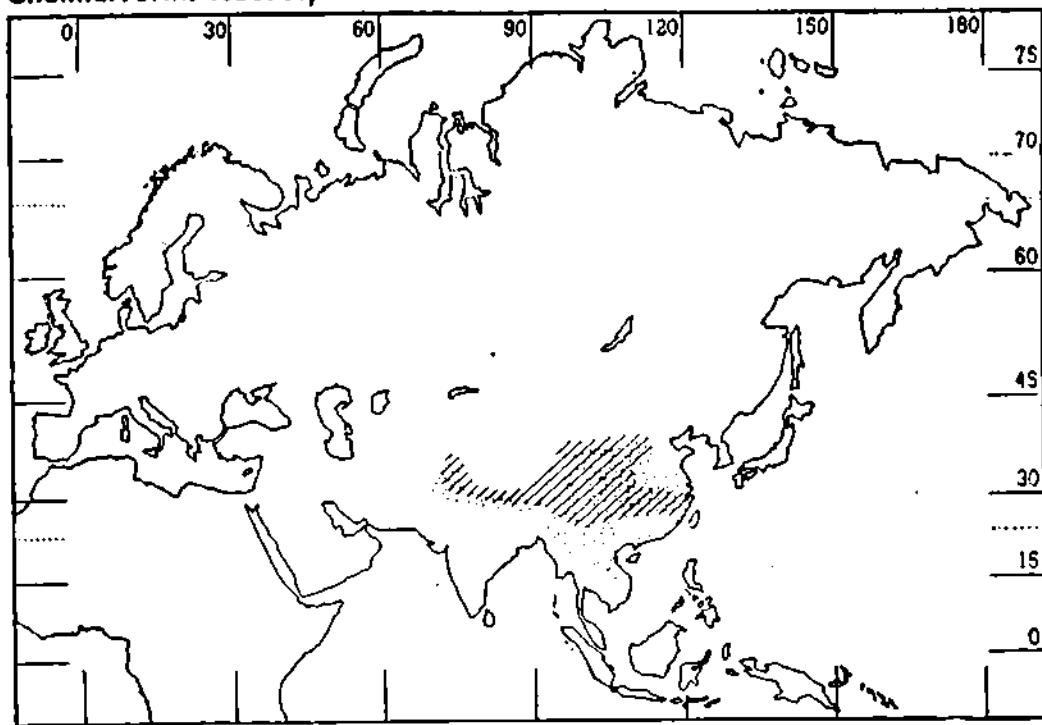
FIELD CHARACTERS. *Above*, crown and nape white. Forehead, sides of crown, sides of head, back and wings black. Rump and tail rich chestnut, the latter rounded and with black terminal band. *Below*, throat and breast black. Rest of underparts rich chestnut. Sexes alike.



x c. 1

The similarly patterned *Phoenicurus erythro-gaster* (1678) has a white wing-patch.

STATUS, DISTRIBUTION and HABITAT. Common altitudinal migrant in the Himalayas from N.W.F.P. and Hunza east through Arunachal Pradesh. Thence south through Nagaland at least to the hills of Cachar and Manipur (Hume, no date given). Breeding zone: N.W.F.P. 1800 to 3600 m; Baltistan and Ladakh 2500–3300 m; Kashmir 2100–3600 m, on Pir Panjal above 2700 m; Duala Dhar 2400–3600 m; Lahul, Spiti and Garhwal 2400 to 3900 m; Nepal 1800–5300 m; Sikkim up to 5100 m; Bhutan 1800–4500 m. Overall

Chaimarrornis leucocephalus

Breeding

Winter

optimum zone 2400–3300 m. Winters (September to April) mostly below 1500 m, sparsely up to 2100 m (Kashmir), 2400 m (Baltistan) or 2600 m (Nepal, Sikkim), down to the foothills; occasionally into the adjacent plains up to 10 km or so. Recorded in winter in northern Baluchistan (Quetta, Beleli, Manji) and in the Khasi Hills. Affects rocky or stony edges of large swift-running, often partially frozen, streams, usually avoiding smaller rivulets frequented by the Plumbeous Redstart. In forested areas remains close to water, but in open country such as the alpine zone, often found considerable distances away. In winter often along the edge of canals at low elevations, even sections running through towns (Dehra Dun, Roorkee).

Extralimital. Ranges west to northeastern Afghanistan, Tadzhikistan and Pamirs, east in the mountains of eastern Tibet, western, northern and central China.

GENERAL HABITS. Keeps singly or in pairs, perching on boulders amidst torrents or rocky banks or sometimes on roofs of houses in the immediate vicinity of water. Captures insects borne along on the swirling current or sallies into the air with quick twists and turns after winged quarry. Also flies out erratically over the torrent and zigzags in aerial pursuit of midges, returning to its base on outstretched, rapidly vibrating wings. When perched, and also upon alighting after a sortie, wags expanded tail jerkily and deliberately up and down two or three times from a cocked position until it almost presses on the perch, with wings drooping on either side. A deep bow or curtsy frequently accompanies this action. A pair's territory may extend to a 600-metre stretch of stream. Intrusion of this by forktails and other food competitors is vehemently resisted.

Display. Extraordinary behaviour described by M. J. Hackney (JBNHS 50: 655) as follows: '... this pool (about 5 feet in diameter) contained a slow circular eddy and was almost completely surrounded by small boulders. Its verge was occupied by four to five redstarts, all of them facing inwards and intent on the antics of two others which were floating in the pool. These two were leaning back on spread tails in the water, their heads held high and drawn back, their open wings thrust outwards and downwards into the water to maintain balance. In this position they sailed round and round the pool, facing one another across it; when the current drew them towards the pool centre, they fluttered together and collided breast to breast once or twice after which they drew apart again and repeated the whole performance ... Later I noted that one of the swimmers was apparently worsted and retired to a ring-side seat on the rocks, his place in the arena being immediately taken by a new entrant; and that at one period there were as many as three birds in the pool at the same time.' All birds were in adult plumage; the scene took place in early May.

FOOD. Chiefly insects; also berries (Alexander, JBNHS 48: 106; also GD) and red fruits of a ripe Aroid—Roberts.

VOICE and CALLS. Alarm-note, a loud, shrill *tsee* audible a long way off and above the roar of rushing water. Call-note, a short *sit sit*. Song brief, lasting less than a second, consisting of a plaintive, undulating whistle repeated at 5 to 6 seconds intervals (Roberts).

BREEDING. Season, May to August, chiefly June and July. Double-brooded (Magrath, JBNHS 19: 149), at least in the lower zone. Nest, a deep, massive cup of moss, leaves, roots and grass, thickly lined with wool and hair; usually well concealed in holes in steep banks, under a boulder or a cavity in the face of rock close to water; also occasionally in road cuttings, holes in trees or old stumps, or under the eaves of streamside houses. Eggs, normally 3 or 4, sometimes 5, pale blue-green, profusely marked with dark reddish brown spots usually more numerous at the larger end where they occasionally form caps or rings. (For variants see Baker, *Nidification* 2: 75.) Average size of 50 eggs 24.6 × 16.8 mm (Baker). Building of nest and care of young by both sexes; incubation by female alone, period undetermined.

MUSEUM DIAGNOSIS. See Field Characters. Postnuptial moult complete, in August and September. A spring moult of body-feathers and rectrices about March. Young not spotted in the manner of redstarts, but rather similar to that of some wheatears: mantle blackish brown, a few feathers fringed with fulvous. Crown white, the feathers fringed with blackish. Rump and tail as in adult. Underparts blackish, the feathers edged with rufous, more densely so on belly. Under tail-coverts chestnut.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	91–103}			{ 79–82 mm
♀♀	86–98}	17–19	32–33	{ 69–76 mm

(CBT, Paludan, BB, SA)

Weight 11 ♂♂ (March–Nov.) 30–36.6; 8 ♀♀ (Feb.–Dec.) 24–30.6 g (GD, Paludan, RAP). 5 ♂♂ (Nov.–Mar.) 31–37; 4 ♀♀ (Jan.–April) 29–30 g (BB, SA).

COLOURS OF BARE PARTS. Iris dark brown. Bill black. Legs and feet blackish brown.

Genus SAXICOLOIDES Lesson

Saxicoloides Lesson, 1832, in Bélanger, Voy. Ind.-Orient., Zool., pt. 4: 270. Type, by monotypy, *Turdus (Saxicoloides) erythrurus* Lesson

Bill slender, slightly curved. Rictal bristles very small. Tarsus well developed and thrush-like but scutellated. Wings short and rounded.

SAXICOLOIDES FULICATA (Linnaeus): INDIAN ROBIN

Key to the Subspecies

		Page
A	Upperparts glossy blue-black	
1	Bill heavier, chestnut on vent less extensive.....	S. f. leucoptera 66
2	Bill more slender, chestnut on vent more extensive.....	S. f. fulicata 64
B	Upperparts black washed with dark brown	S. f. intermedia 63
C	Upperparts entirely brown	
3	Brown paler, more greyish	S. f. cambaiensis 61
4	Brown darker	S. f. erythrura 63

1717. *Saxicoloides fulicata cambaiensis* (Latham)

Sylvia cambaiensis Latham, 1790, Index Orn. 2: 554 (Guzerat, India)

Saxicoloides fulicata munda Van Tyne & Koelz, 1936, Occ. Papers Mus. Zool. Univ. Michigan, No. 334: 5 (Bhadwar, Kangra Dist., Punjab, British India)

Saxicoloides fulicata lucknowensis Koelz, 1939, Proc. Biol. Soc. Washington 52: 66
(Lucknow, U.P.)

Baker, FBI No. 557 (part), Vol. 2: 111

Plate 90, fig. 17

LOCAL NAMES. *Kälchuri* (Hindi); *Dachko* (Bhil); *Deoli*, *Käli déva* (Gujarati).

SIZE. Sparrow; length c. 16 cm (6½ in.).

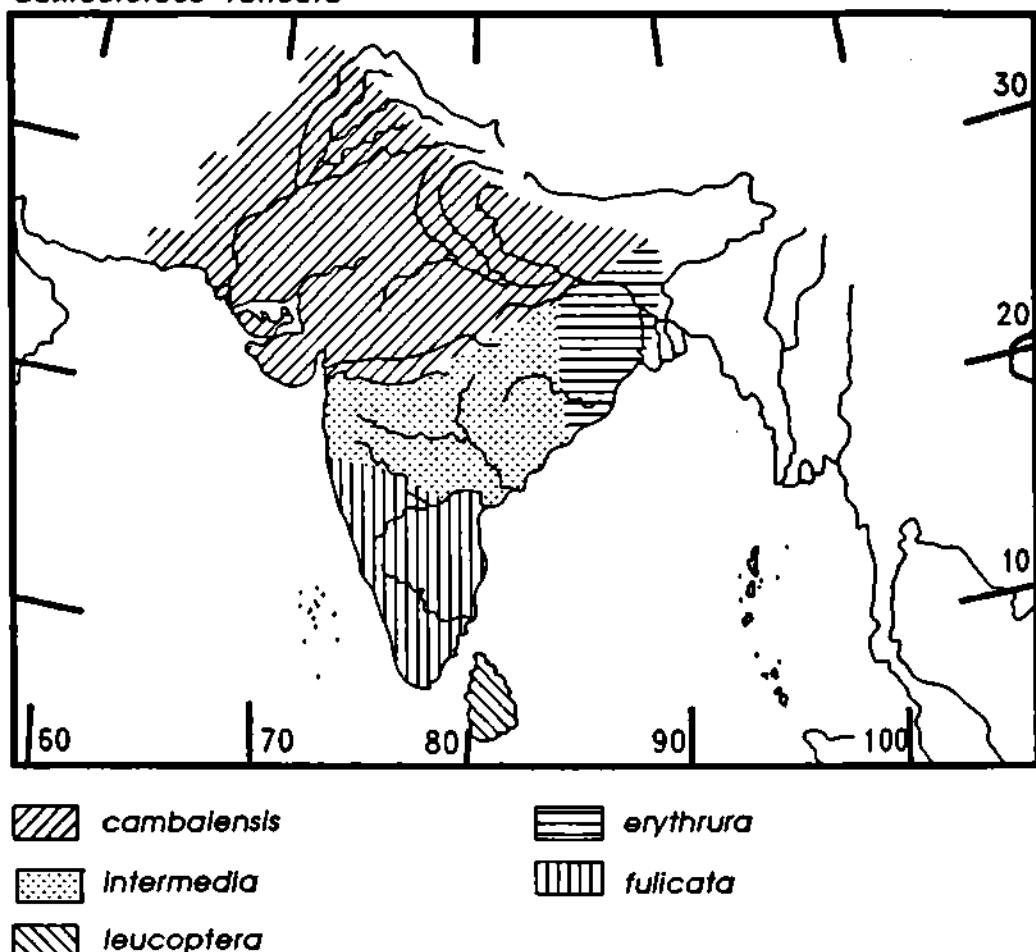
FIELD CHARACTERS. Male (adult). *Above*, crown, back and wing dark brown, the last with a conspicuous white patch. Tail black. *Below*, glossy blue-black with chestnut vent and under tail-coverts.

Female. *Above*, like male but lacks wing-patch; ear-coverts tinged with rufous. *Below*, grey-brown; under tail-coverts chestnut.

STATUS, DISTRIBUTION and HABITAT. Common resident. The plains of Pakistan from N.W.F.P. (Peshawar) and the Himalayan foothills south through Sind, west to the foothills (Fort Munro, Sibi and Las Bela plains) and east to the eastern Nepal terai (Rand & Fleming, 1957); northwestern India through Rajasthan, Gujarat, Uttar Pradesh, Bihar and Madhya Pradesh south to the Tapi (Tapti) river. In the Himalayan foothills up to c. 1000 m, locally 1500 m. Affects open scrub jungle in arid and stony country, desert with scattered Euphorbias and camel-thorn bushes, tamarisk scrub and the edge of cultivation or near habitations, sometimes in damp *kandi* jungle.

GENERAL HABITS. Keeps singly or in pairs, hopping or running along the ground with quick mincing steps, now mounting a bush or termite mound, now descending to pick up some crawling insect. In the neighbourhood of

TURDINAE

Saxicoloides fulicata

villages tame and confiding, often perching on roofs or entering verandas in search of food within arm's length of the inmates. Tail carried erect and flipped up and down, sometimes tossed so far forward as almost to touch the head, especially in moments of excitement. A nearly full-fledged young has been noted to feign death when touched, 'in a very convincing manner, closing its eyes, extending its neck and maintaining its limpness when handled' (SA). For display see 1720, under General Habits.

FOOD. Chiefly insects and their larvae: grasshoppers, ants and other Hymenoptera. Partial to termites and is commonly in attendance on or near ant-hills.

VOICE AND CALLS. As in 1720.

BREEDING. Season, March to August. Nest and eggs as in 1720. Clutch size normally 4, often 3, occasionally 2. Average size of 100 eggs 21.1×14.9 mm (Baker).

MUSEUM DIAGNOSIS. See Field Characters.

Young. Not spotted. Similar to female but darker brown; throat lightly mottled.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	72-80	14-16	{ 25-28	65-78 mm
♀♀	69-79}		{ 25-27	61-70 mm

(HW, SA)

Weight 2 ♂♂ 17, 20; 2 ♀♀ 18, 19 g (BB). 10 ♂♀ (Nov.-Mar.) 17-21 (av. 15.9) g—SA.

COLOURS OF BARE PARTS. Iris dark brown. Bill, legs and feet black.

1718. *Saxicoloides fulicata erythrura* (Lesson)

Turdus (Saxicoloides) erythrurus Lesson, 1832, in Bélanger, Voy. Ind.-Orient., Zool., pt. 4: 270 (Bengale)

Saxicoloides fulicata stuartbakeri Koelz, 1939, Proc. Biol. Soc. Washington 52: 57
(Bodhgaya, Bihar)
Not in Baker, FBI

LOCAL NAME. *Kälchuri* (Bengali).

SIZE. Sparrow; length c. 16 cm (6½ in.).

FIELD CHARACTERS. As in 1717, q.v.

STATUS, DISTRIBUTION and HABITAT. Common resident. Eastern Bihar, Orissa (JBNHS 77: 334; 78: 382), Bengal, and adjacent areas of Bangladesh. Affects open country and cultivation.

GENERAL HABITS and FOOD. As in 1717 and 1720.

VOICE and CALLS. As in 1720.

BREEDING. As in 1720.

MUSEUM DIAGNOSIS. Differs from *cambaiensis* in being a darker brown above and having slightly shorter wings and tail.

MEASUREMENTS

Wing 2 ♂♂ 71, 73; 2 ♂♀ 69, 70 mm (Koelz)

COLOURS OF BARE PARTS. As in 1717.

1719. *Saxicoloides fulicata intermedia* Whistler & Kinnear

Saxicoloides fulicata intermedia Whistler & Kinnear, 1932, Jour. Bombay nat. Hist. Soc. 36: 73 (Rahuri, Ahmednagar)

Baker, FBI No. 557 (part), Vol. 2: 111

LOCAL NAMES. *Kälchuri* (Hindi); *Kälđumnat*, *Chirak* (Marathi); *Nalanchi* (Telugu); *Wannati kūrūvi* (Tamil).

SIZE. Sparrow; length c. 16 cm (6½ in.).

FIELD CHARACTERS. As in 1717.

STATUS, DISTRIBUTION and HABITAT. Very common resident. Central India from the Tapi river, southern Madhya Pradesh and Orissa south to the Krishna river; plains and hills up to c. 900 m. Affects gardens, groves, village precincts, boulder and cactus country, cultivation and open scrub jungle, and stony deciduous forest.

GENERAL HABITS and FOOD. As in 1717 and 1720.

VOICE and CALLS. As in 1720.

BREEDING. As in 1720.

MUSEUM DIAGNOSIS. Differs from *cambaiensis* (1717) in having the black of back and crown heavily washed with a darker, chocolate-brown. Female similar to that of *fulicata* (1720).

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	70-78	14-16	25-27	{ 60-67 mm
♀♀	68-72			{ 58-61 mm (HW, SA)

Weight 10 ♂♀ (Apr.-Aug.) 16-20 (av. 18.7) g—SA.

COLOURS OF BARE PARTS. Iris brown. Bill horny black; mouth brownish pink. Legs, feet and claws dark horny brown.

1720. *Saxicoloides fulicata fulicata* (Linnaeus)

Motacilla fulicata Linnaeus, 1766, Syst. Nat., ed. 12: 336, ex Brisson, 1760, 'Le Traquet des Philippines.' (Philippines = Pondichéry *vide* Stresemann, 1952, *Ibis* 94: 515, 520)

Oenanthe ptymatura Vieillot, 1818, Nouv. Dict. d'Hist. Nat. 21: 435, ex Levaillant, 1805, 'Le Traquet à queue striée.' (Le Bengale = Pondichéry *vide* Whistler, 1935, JBNHS 38: 286)

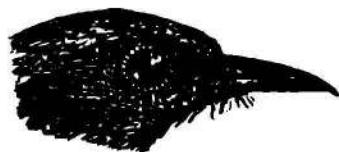
Thamnobia rufiventer Swainson, 1832, Fauna Boreali Americana, Zool.: 489, ex Levaillant, 1805, 'Le Traquet à queue striée.' ('Le Bengale', restricted to Pondichéry by Ripley, 1952, Postilla, Yale Peabody Mus., No. 13: 35) Baker, FBI No. 556 (part), Vol. 2: 109

Plate 90, fig. 16

LOCAL NAMES. *Nalanchi* (Telugu); *Wannati-kūrūvi*, *Kari-kūrūvi* (Tamil); *Kālmannati* (Malayalam).

SIZE. Sparrow; length c. 16 cm (6½ in.).

FIELD CHARACTERS. A sprightly glistening black robin with a conspicuous white patch on wings and chestnut under base of the jauntily cocked tail. Like 1717 (q.v.) but upperparts entirely blue-black *v.* dark brown. Female as in 1717.



× c. 1

STATUS, DISTRIBUTION and HABITAT. Very common resident except on the humid west coast where less generally distributed. Southern

India south to 16°N latitude (JBNHS 78: 382); plains and hills up to c. 900 m, locally up to 1800 m. Affects thin scrub jungle, dry deciduous forest, dry stony ground with short grass and a sprinkling of young date or *Borassus* palms; sparse bushes and ant-hills, fallow paddyfields bordered by *Lantana* thickets, and gardens in village precincts.

GENERAL HABITS. As in 1717.

Display. 'The male ran swiftly in front of the female, moving in a large semicircle and in short dashes of a few yards. As he ran he opened and drooped his wings slightly so that their tips trailed along the ground, flaunting thus the white shoulder-patches. The tail was very slightly spread and also trailed along the ground the chestnut at its base thus being completely concealed. At the same time the breast was puffed out, the neck stretched upwards, and the head and bill pointed into the air; once or twice during a short run they were lowered horizontally to the ground. After completing several runs in this manner, the male turned toward the female

and ran up to within a few feet of her. As he approached, he took on a new and completely different form; by the time he stopped in front of her the tail had been raised up over the back, bringing into view the chestnut crissum, the feathers of which were puffed out to more than their normal prominence. The wings were kept very slightly open, keeping the shoulder-patch in view; the head and neck were drawn into their normal shape. He kept himself sideways on to the female, fluffed out his whole body and tilted slightly towards her, quivering excitedly all the while. He kept this position for a few seconds, then, slowly resuming his normal shape, hopped towards the female; pairing followed immediately. After the act he began to display once again in a manner and sequence identical with his first performance. The division of the display into two quite definite phases, wherein at first the male dances, with no attempt to show off his colours, but then relies entirely on its colour pattern and not on his dance is most striking' (C. R. Stonor, *Ibis* 1944: 91). In aggressive display male postures and struts against another trespassing on his territory—stretching his neck and bill nearly vertical, puffing out his belly-feathers, erecting and cocking forward his fanned tail till it almost touches the crown, and flicking it provocatively while the chestnut under tail-coverts are fluffed and sticking out in prominence. At the same time he half droops his wings flaunting the white patches in obvious defiance of the intruder. He flies from one perch to another in his territory with slow deliberate 'delayed action' wing-beats (SA).

FOOD. As in 1717.

VOICE and CALLS. A short cheery warble of four to eight notes composed of shrill whistles gliding into each other; thinner and less varied than that of the Magpie-Robin (Nichols.) A secondary song heard in October is reminiscent of a Magpie-Robin's sub-song. Song uttered from the ground or a low perch with tail cocked high and wings partly drooping at the sides while the bird turns excitedly this way and that. A short monosyllabic whistle *wheech* or *sweet* repeated by male every second or two when agitated, or a bisyllabic *pi-ear*, by both sexes as when nest approached by an observer; a harsh *chur-r*, *chur-r* of concern by both sexes when nest being handled.

BREEDING. Season, end of February to July; in humid Kerala December to April. Rears up to three broods. *Nest*, a shallow cup of grass, rootlets and rubbish, lined with hair, fibres and wool; in certain areas, bits of snake slough almost invariably used for nest lining. One nest examined was made entirely of human hair. Nest usually placed in holes in walls, down open wells, earth banks or trees, under boulders or in rock crevices, occasionally inside buildings in a variety of situations like shelves etc., or sometimes in a derelict tin can or earthen water-pot. Once found in a thorn bush about 60 cm from the ground. *Eggs*, usually 3, sometimes 2, pale greenish, greyish or yellowish white, with specks or small reddish brown blotches and underlying marks of lavender, usually more numerous at the larger end. Laid in early morning at c. 24-hour intervals. Average size of 100 eggs 20.8 x 14.8 mm (Baker). Building of nest by both sexes. However, George (1963: 73) reports that in one case the male did not participate in building the second nest, having the complete charge of the first brood fledglings. Site of first nest generally used for subsequent broods, only a new lining being added. Same site often used year after year if undisturbed. Incubation chiefly by female. During very hot days (c. 40°C), a female was observed brooding only at

night, leaving the nest unattended by day. Incubation starts with second egg; period, 11 or 12 days. Feeding of young and nest sanitation by both parents. Male excessively wary and elusive in approaching nest when suspicious of being observed. Brooding of young by female alone. Male brings food to brooding female who in turn feeds nestlings. For further details on breeding behaviour see J. C George, 1963, *Pavo* 1: 71-8.

MUSEUM DIAGNOSIS. Male has entire upperparts glossy blue-black, similar to that of *leucoptera* (1721); chestnut on vent more extensive. Female less dark, more greyish. In both sexes bill is less heavy than in Sri Lanka birds. Postnuptial moult complete, in August-September. When hatched, naked chick covered with blackish brown skin, later with black down.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	70-80	14-16	24-27	60-67 mm
♀♀	69-75	13-16	23-25	58-66 mm (HW, SA)

Weight 1 ♂ 20 g (SA).

COLOURS OF BARE PARTS. Adult. Iris brown. Bill, legs and claws brownish black. Mouth blackish brown, slaty pink or greyish pink (varying with age?). Juvenile. Iris olive-brown. Mouth bright yellow. Legs and feet greyish black; claws black.

1721. *Saxicoloides fulicata leucoptera* (Lesson)

Micropus leucopterus Lesson, 1840, Rev. Zool.: 136

(Indes Orientales = Ceylon)

Baker, FBI No. 556 (part), Vol. 2: 109

LOCAL NAMES. *Kalu-pollichchā* (Sinhala); *Kāri-kūrūvi*, *Kaddukāri-kūrūvi* (Tamil).

SIZE. Sparrow; length c. 16 cm (6½ in.).

FIELD CHARACTERS. As in 1717, but upperparts entirely glossy blue-black as in 1720. See Museum Diagnosis.

STATUS, DISTRIBUTION and HABITAT. Very common resident. Sri Lanka in all zones; up to c. 1500 m on the drier northeastern side, lower elevations in more humid districts. Affects scrub-land and gardens.

GENERAL HABITS and FOOD. As in 1717.

VOICE and CALLS. A merry *cheery-wee* and a harsh, scolding *cheee*. Song as in 1720.

BREEDING. Season, in the hills from the end of March to June with a second period in August-September. Most pairs rear two broods during the first period and one in the second. In the low-country Wet zone from March to July with a peak in May. Nest, frequently built in cavities in the side of termite mounds. One was found in the old nest of a wren-warbler (*Prinia sylvatica*) in the crown of a low-growing date palm. Other usual sites as in 1720. Eggs, usually 2, sometimes 3, similar to those of *fulicata* (1720). For further details on breeding see Phillips, 1939, pp. 256-9.

MUSEUM DIAGNOSIS. Upperparts entirely glossy blue-black. Differs from *fulicata* (1720) in having a smaller amount of chestnut on vent, and a heavier and longer bill.

Females are darker throughout. Complete postnuptial moult from August to December.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	73-79}	15-17	25-27	{ 61-69 mm
♀♀	70-74}			57-62 mm (HW)

Weight 2 ♂♂ 17, 22 g (SDR).

COLOURS OF BARE PARTS. Iris brown. Bill black. Legs and feet brownish black

Genus *MONTICOLA* Boie

Monticola Boie, 1822, Isis 1: 552. Type, by subsequent designation,
Turdus saxatilis Linnaeus

Tail shorter than wing; tarsus long. Sexes dissimilar.

Key to the Species

		Page
I	Some blue in plumage	
A	Breast blue, concolorous with throat	<i>M. solitarius</i> ♂ 73
B	Breast rufous or chestnut	
1	Breast chestnut	<i>M. rufigularis</i> ♂ 72
2	Breast orange-rufous	
a	A white wing-patch	<i>M. cinclorhynchus</i> ♂ 69
b	No wing-patch	<i>M. saxatilis</i> ♂ 67
II	No blue in plumage	
C	Tail largely rufous	<i>M. saxatilis</i> ♀ 67
D	No rufous in tail	
3	Back plain olive-brown	<i>M. cinclorhynchus</i> ♀ 69
4	Back grey, lightly streaked or barred	
c	Feathers of back with dark crescents	<i>M. rufigularis</i> ♀ 72
d	Feathers of back with dark shaft-streaks only	<i>M. solitarius</i> ♀ 73

1722. Rock Thrush. *Monticola saxatilis* (Linnaeus)

Turdus saxatilis Linnaeus, 1766, Syst. Nat., ed. 12: 294 (Switzerland)
Baker, FBI No. 612, Vol. 2: 177

Plate 93, fig. 7

LOCAL NAMES. None recorded.

SIZE. Bulbul; length c. 19 cm (7½ in.).

FIELD CHARACTERS. Male (adult), summer. *Above*, head, nape and upper back pale blue. Back and rump white, more or less sullied with grey-blue. Tail rufous, central rectrices brown. *Below*, throat pale blue; rest of underparts orange-rufous.

In winter, feathers of upperparts are fringed with buff, those of belly with whitish. Easily recognized by white back.

Female. *Above*, grey-brown with dark shaft-streaks, most feathers tipped with whitish buff. *Below*, centre of throat white, sides streaked with dark

brown. Rest of underparts buff, heavily marked with dark brown on breast, less on flanks and belly.

Both sexes distinguished from other rock thrushes by rufous tail, particularly noticeable when spread in flight.

STATUS, DISTRIBUTION and HABITAT. Uncommon passage migrant in autumn in Ladakh, Baltistan, Gilgit, N.W.F.P., northern Punjab, Baluchistan and the hills of Sind. Also recorded in Liddar Valley and at Lahore. Observed mostly above 2100 m; as high as 5000 m in the Karakoram. Has straggled to Sikkim *sive* Vaurie (1959). Rare on spring passage: Karachi (once), Ladakh (once, at 4100 m), the hills of Sind and Baluchistan (perhaps regularly). Breeds (sporadically?) in N. Baluchistan, Quetta region at c. 2000–3000 m [JBNHS 31: 711; also a juvenile obtained in June (Hume coll.)]; another on 17/viii at Khuzdar (E. M. Nicholson, MS. notes). Affects rocky hillsides.

Extralimital. Breeds in southern Europe and across central Asia to Mongolia and northern China. Winters in Africa.

MIGRATION. Autumn passage takes place from the end of August through September and sparingly till the end of October; in Sind till November. Spring passage from March to early May, ♂♂ leading the vanguard.

The Rock Thrush furnishes a classical example of exceptional E.-W. migration, similar to that of *Falco vespertinus* (220). The entire palaeartic population, which extends from the Iberian peninsula to NE. China, winters in Africa south of the Sahara. For northeastern birds this means an E.-W. journey of at least 7500 km each way. *Contra* Baker, no part of the total population winters anywhere in tropical Asia. For a full account of migration see Hermann Grote, 1937, 'Die Brutgebiete, Zugwege und Winterquartiere der Steinmerle (*Monticola saxatilis* L.)', *Orn. Monatsb.* 45(2): 33–41.

GENERAL HABITS. Keeps singly or in pairs according to season, rarely in loose parties during migration 'moving through the forest from tree-top to tree-top' (Ticehurst). Often perches on boulders, prominent rocks or tops of bare trees and bushes, descending to the ground and hopping about to forage for short periods.

Display. In song-flight male flutters up with spread tail and slow wing-strokes, and descends gently with extended wings to perch again.

FOOD. Chiefly insects; also berries (*Ibis* 1933: 463).

VOICE and CALLS. Very silent except near nest where alarm-notes may be heard, a repeated *wheet* and occasional *tat-tak*. Song, a variable melodious warble, usually on a descending scale, uttered from a perch or in song-flight. Song period April to July, with occasional resumption in August (Desfayes).

BREEDING. Season, May and June. Single-brooded. Nest, a cup of grass stems and roots lined with rootlets, generally placed in rock crevices within three metres or so from the ground. Eggs, 4 or 5, deep turquoise. Average size of 92 eggs (from Europe) 25.9 × 19.5 mm (Witherby). Building of nest apparently by female alone. Incubation by female; period undetermined. Care of young by both sexes.

MUSEUM DIAGNOSIS. See Field Characters.

Young similar to female but paler, more mottled. Remiges with broad buff edgings. For details of plumages and structure (also bionomics) see Witherby, 1938, 2: 141–4.

MEASUREMENTS

	Wing	Bill (from skull)	Tail
♂♂	113-126	24-26	{ 62-70 mm
♀♀	113-119		— mm (Dementiev)

Tarsus c. 28 mm

Weight 1 ♂ 48.8; 1 ♀ (highly developed ovary) 60.9 g (Dementiev).

COLOURS OF BARE PARTS. Iris brown. Bill dark brown, paler at base of lower mandible. Legs and feet brown.

1723. Blueheaded Rock Thrush. *Monticola cinclorrhynchus* (Vigors)

Petrocincla cinclorrhyncha Vigors, 1832, Proc. Zool. Soc. London: 172

(Himalayan Mountains = Simla)

Baker, FBI No. 606, Vol. 2: 171

Plate 93, fig. 5

LOCAL NAMES. *Pāla tiriv* (Kashmir); *Krishen-patti* (Nepal); *Daohangar* (Cachari); *Vohtiglé* (Mikir); *Hengméruiné* (Kacha Naga); *Pārakkili* (Malayalam).

SIZE. Bulbul; length c. 17 cm (7 in.).

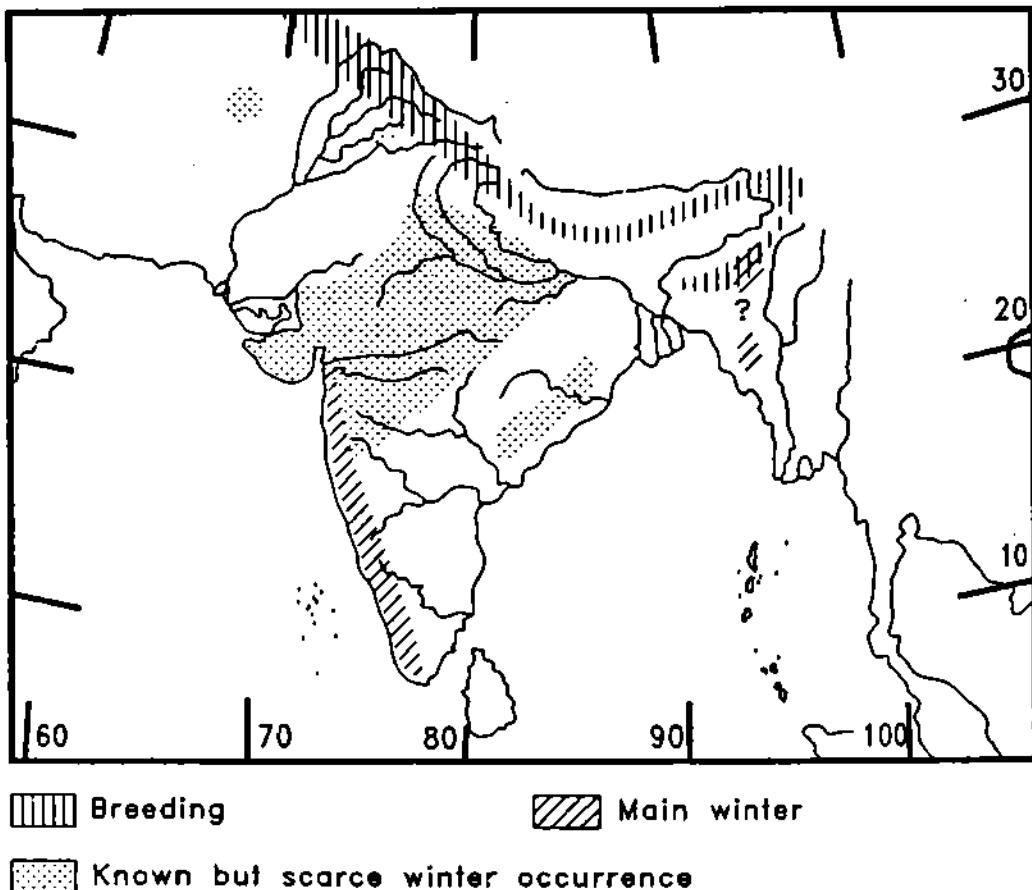
FIELD CHARACTERS. Male (adult), summer. A small blue, chestnut, and black thrush with a white patch on wings, conspicuous both at rest and in flight. *Above*, crown and nape blue. Back and a broad band from lores through ear-coverts, black. Shoulders blue; a white wing-patch. Rump rufous; tail blackish narrowly edged with blue. *Below*, throat blue; rest of underparts orange-rufous.

In winter, black feathers of back edged with fulvous. White wing-patch identifies the male.

Female. *Above*, plain olive-brown. *Below*, squamated whitish and dark brown.

Distinguished from female *solitarius* (1725-6) by olive-brown, less grey upperparts and tail, and whitish under tail-coverts.

STATUS, DISTRIBUTION and HABITAT. Common summer (breeding) visitor: the Himalayas from N.W.F.P. and Kashmir east through Arunachal Pradesh, thence south through Nagaland, Cachar, Khasi and Garo hills. Also breeds in Gilgit (Biddulph, *Ibis* 1880: 271 and SF 10: 262). In Pakistan breeds in two zones between 900 and 1500 m in *Pinus roxburghii*, and between 1800 and 3000 m in the Himalayan mixed coniferous forests (T. J. Roberts, pers. comm.); elsewhere occasionally down to 1000 m (Sikkim, Bhutan) or as high as 3000 m (Kashmir, Sikkim). A juvenile obtained at 3600 m in the Liddar Valley in August (LaPersonne coll.). Winters mostly in the Western Ghats from about the Tapi river (Dangs dist., Gujarat) south to western Tamil Nadu; severe winter records from the Eastern Ghats (Trevor Price, JBNHS 76: 417; SDR, ibid. 85: 101). Also recorded in the cold weather in Madhya Pradesh (D'Abreu, JBNHS 38: 97; Hewetson, ibid. 53: 608), Delhi (Gaston, ibid. 75: 124), Lucknow (U.P.—Reid, SF 10: 37) and Mt Abu (Rajasthan—Butler, SF 3: 470). Observed in early February in Sialkot dist. and near Karachi, 20.ii.1967 (T. J. Roberts, pers. comm.); said to be a rare

Monticola cinclorhynchus

cold weather visitor in Kohat (Whitehead, *Ibis* 1909: 223). Common in winter in North Cachar (Baker, JBNHS 9: 138) and probably other parts of Assam. Recorded in Sikkim in November and March. Winters occasionally in the plains but mostly in the foothills and up to the highest summits, frequenting moist-deciduous and secondary evergreen jungle, coffee and cardamom plantations in the hills, mango groves in the plains. In summer affects open forest, especially pine (*Pinus longifolia*), and rocky grass-covered slopes.

Extralimital. Breeds in adjacent parts of northeastern Afghanistan. Winters also in Arakan (Burma). *M. gularis*, often considered a subspecies, breeds in southeastern Siberia and northern China, and winters in southeastern Asia; nearest record, Mt Victoria (Heinrich).

MIGRATION. Begins to arrive on summer grounds about mid April, occasionally end of March, remains till September. Autumn migration in September-October recorded over most of the Peninsula west to Karachi. In winter quarters from mid October to end of March. Spring passage, chiefly in April.

GENERAL HABITS. A forest bird; usually quite secretive. Keeps singly or in pairs; in winter sometimes among the itinerant mixed flocks. Largely arboreal, finding most of its food in trees, in the form of insects picked off the trunks and branches (Betts), but also descends to the ground momentarily for some titbit or to rummage amongst the mulch like its congeners. When disturbed flies up silently into overhanging branches; perches bolt upright and wags tail slowly and deliberately up and down.

Display. 'Floats down from the top of a tree to a lower one with wings outstretched and singing all the time like a skylark' (Magrath).

FOOD. Chiefly insects; also other small animals such as frogs and lizards. Occasionally seeds and berries, and flower-nectar (*Erythrina*, *Salmania*).

VOICE AND CALLS. A peculiar grating alarm- or threat-call uttered when rivals meet. When nest territory intruded upon utters a loud and persistent warning call *tri-goink-tri-goink* (T. J. Roberts, pers. comm.). Song, reminiscent of that of *Saxicola torquata*, but richer; has a recognizable thrush-like quality, though the notes are not very clear-cut: *tra-tree-treea-tre-prua-tri-prua-tri* (Lister); also rendered as *tew-li-di*, *tew-li-di*, *tew-li-di*, *tew* repeated with varying emphasis, but rather monotonously (Magrath). Delivered from the topmost branch of a fir or pine, or during the volplaning song-flight—commonly in the mornings and evenings. Song period mid March to mid June (Proud).

BREEDING. Season, May (exceptionally April) to July. Nest, a cup of grass, twigs, roots, pine needles and some moss, lined with fine rootlets; placed on sloping ground, under a rock, a tuft of grass or among the roots of a tree, or in rock crevices; once found in the top of a pollarded tree about three metres above the ground. Eggs, normally 4, sometimes 3, rarely 5, pale yellowish cream to deep buff densely freckled with reddish. Average size of 3 eggs 23.7 x 17.9 mm (BBO). Building of nest, incubation and care of young by both sexes. The bird is a very close sitter, but when disturbed leaves with swift, direct flight, usually straight downhill and without uttering a sound.

MUSEUM DIAGNOSIS. See Field Characters.

Young male. Above, head and back entirely spotted (buff with dark brown margins). Wing-coverts and tertials edged with buff. Upper tail-coverts rufous. Tail slightly tipped with rufous. Below, like female but pale buff, not whitish. Under tail-coverts buff, not whitish marked with brown.

Young female similar but lacks rufous upper tail-coverts.

Postjuvenile moult of body-feathers in July–September. Postnuptial moult complete about August–September. No spring moult but wearing off of fringes makes summer plumage darker.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	99–108	23–25	25–26	65–71 mm
♀♀	96–103	22–25	24–27	64–71 mm
(HW, BB, Koelz)				

Weight 2 ♂♂ (summer) 32, 35.6; 1 ♂ (May) 38 g (GD). 2 ♂♂ (March, April) 38.5, 32.5 g (BB). 15 ♂♀ (early May, prior to northward migration from Peninsula) 30–41 (av. 36.2) g—SA. 2 ♂♂ 35, 36.5 g; 1 ♀ 39 g—SDR.

COLOURS OF BARE PARTS. Iris brown. Bill blackish (♂), dark brown (♀), paler at chin; gape and mouth yellow. Legs and feet greyish brown.

1724. Chestnutbellied Rock Thrush. *Monticola rufiventris*
(Jardine & Selby)

Turdus erythrogaster Vigors, 1832, Proc. Zool. Soc. London: 171

(Himalayan mountains), nec *Turdus erythrogaster* Boddaert, 1783

Petrocincta rufiventris Jardine & Selby, 1839, Ill. Orn. 3, pl. 129,
 (restricted to Simla by Ripley, 1961, Synopsis: 523)

Baker, FBI No. 605, Vol. 2: 170

Plate 93, fig. 1

LOCAL NAMES. *Ningri-pho* (Lepcha); *Daohanger* (Cachari).

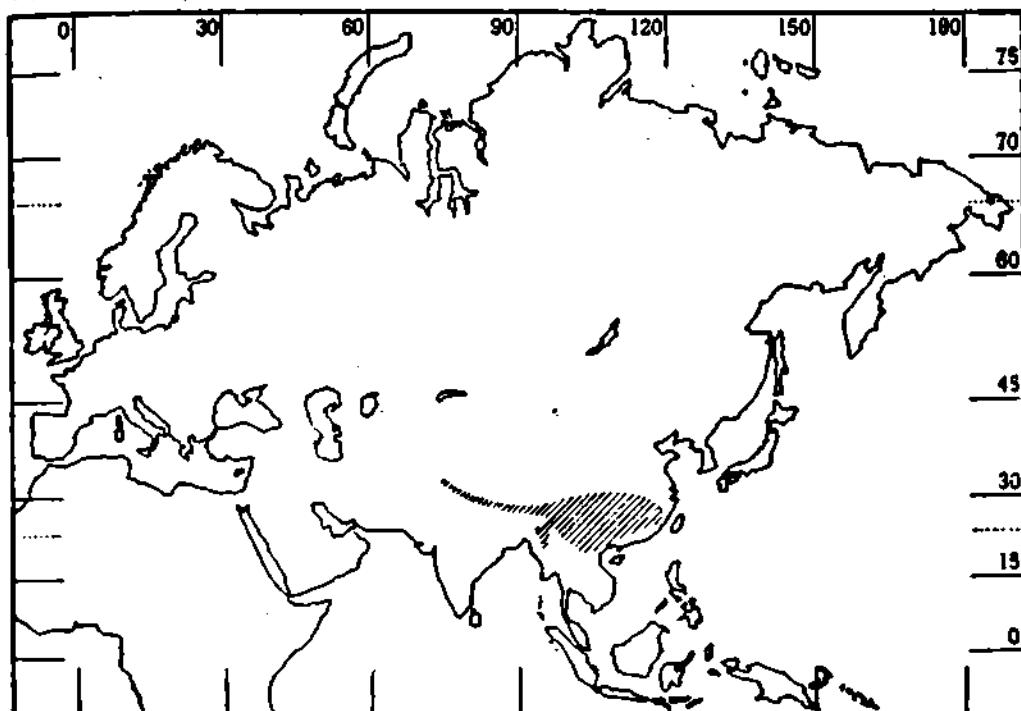
SIZE. Myna ±; length c. 24 cm (9½ in.).

FIELD CHARACTERS. Male (adult). *Above*, brilliant cobalt-blue with some blackish on mantle. Lores, ear-coverts and sides of neck black. *Below*, throat blackish blue; rest of underparts chestnut.

Female. *Above*, back and rump olive-brown with dark crescent-shaped bars. Conspicuous buff eye-ring and buff patch on sides of neck. Ear-coverts dark grey-brown more or less mottled with buff. *Below*, centre of throat whitish or buff, sides of head dark grey mottled with buff; rest of underparts squamated dark brown and buff.

STATUS, DISTRIBUTION and HABITAT. Resident, subject to vertical movements. Fairly common in the Murree hills and occasional in northern Swat, lower Kaghan Valley (several sightings, T. J. Roberts, pers. comm.), eastward along the Himalayas through Arunachal Pradesh (Ludlow, 1944), thence south through Nagaland, Manipur and Mizoram. Breeds between 1200 and 3300 m (a sight record at 3500 m in central Nepal—MD), optimum zone 1800–2400 m. Winters (October to March) from c. 1800 m down to the

Monticola rufiventris



Distributional range

foothills and occasionally into the plains (Ambala); in Nepal and Garhwal up to 2300 m, in Bangladesh in the hill tracts of the Chittagong region. Affects open forest of pine, oak, fir and deodar on steep hillsides, and rocky slopes with scattered trees; presence of rocks or cliffs appears to be essential to its requirements. In eastern Himalayas avoids deciduous forest.

Extralimital. Extends east through southern China to Fujian.

GENERAL HABITS. Keeps singly or in pairs; perches upright on bushes, trees and rocks swaying its tail slowly up and down. Feeds mostly on the ground; also hawks winged insects by aerial sorties in the manner of drongos. Often perches facing along the big branches rather than crosswise, and carries its tail high and cocked (SDR). Birds have been observed roosting in the gable of a bungalow roof and in a hole in the chimney.

FOOD. Beetles, tipulids, grasshoppers (GD), butterflies, moths and other insects. Also berries and seeds (the latter probably from berries).

VOICE and CALLS. Alarm-note, a jay-like, harsh rasping indrawn rattle *chhhrrr* interspersed occasionally with a high shrill tick (SDR). Also a curious quach—apparently a contact note (Proud). Has a pleasant warbling song somewhat resembling that of *cinclorrhynchus* (1723) but much weaker, rendered as *teetatewleedee-tweet tew* repeated several times with variations (Magrath); almost invariably uttered from the top of a tall tree. Song period, from the beginning of April till at least mid July (Proud).

BREEDING. Season, April to July, single-brooded. Nest, a cup of dry grass and pine needles or other material on a foundation of twigs, lined with rootlets and fine grass; usually placed in crevices or holes in the face of cliffs or on ledges, sometimes in hollows in banks or among the roots of trees. Eggs, 3 or 4, pale cream suffused with pink and finely but profusely freckled all over with light red-brown, usually forming a zone at the large end. Average size of 75 eggs 26.8 × 19.9 mm (Baker). Building of nest by both sexes. Incubation by female only (Jones, JBNHS 47: 239); period undetermined.

MUSEUM DIAGNOSIS. See Field Characters.

Young, both above and below with ochraceous spots and dark brown fringes. Postjuvenile moult of body-feathers, lesser, median, and inner half of greater coverts. First-year birds recognizable by ochraceous tips to primary-coverts and unmoulted greater coverts.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	117-130	24-28}	26-30	{ 96-105 mm
♀♀	111-124	26-28}		{ 96-100 mm

(BB, SA, Rand & Fleming)

Weight 3 ♂♂ (summer) 50-53.2 g (GD). 4 ♂♂ (winter) 56-61; 4 ♀♀ (winter) 48-56 g (SDR, SA). 1 ♀ (summer) 48 g (RAP).

COLOURS OF BARE PARTS. Iris dark brown. Bill black. Legs, feet and claws blackish brown; soles grey or yellowish grey.

MONTICOLA SOLITARIUS (Linnacus): BLUE ROCK THRUSH

Key to the Subspecies

- | | |
|---------------------------|---------------------------|
| Paler all over | <i>M. s. longirostris</i> |
| Darker all over | <i>M. s. pandoo</i> |

TURDINAE

1725. *Monticola solitarius longirostris* (Blyth)

P.(etrocincta) longirostris Blyth, 1847, Jour. Asiat. Soc. Bengal 16: 150
(from Scinde to Ferozapore)

Monticola cyanus transcaspicus Hartert, 1909, Bull. Brit. Orn. Cl. 23: 43
(Sirax, Aschabad near Tedjen)
Baker, FBI No. 607, Vol. 2: 173

LOCAL NAMES. None recorded.

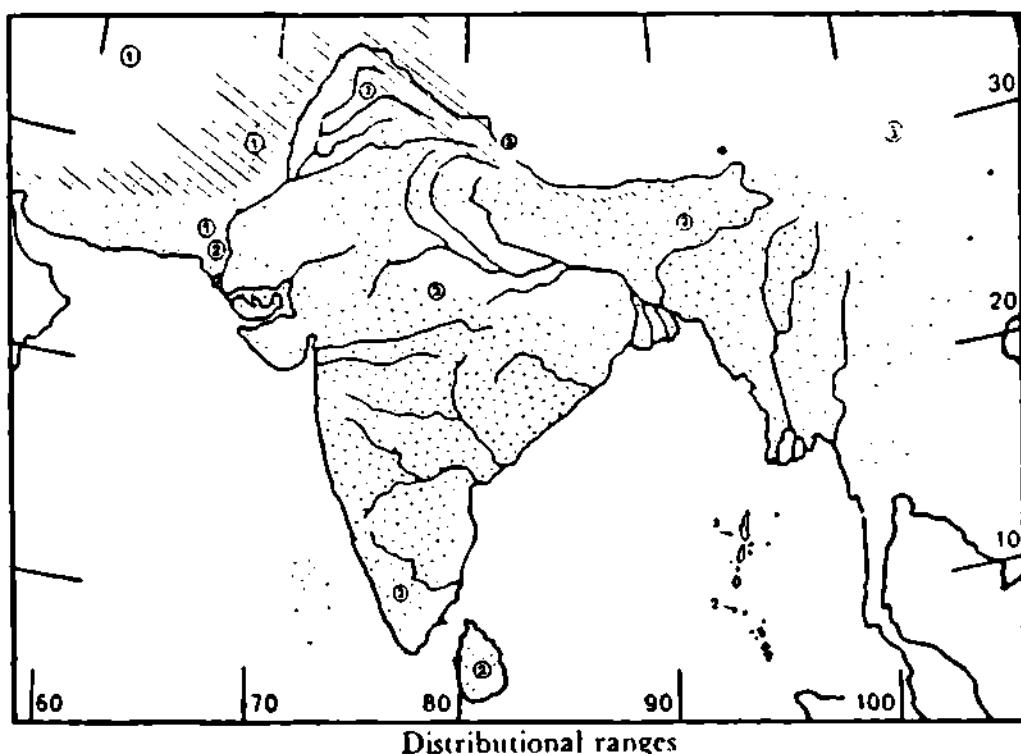
SIZE. Bulbul +; length c. 23 cm (9 in.).

FIELD CHARACTERS. As in 1726, q.v.

STATUS, DISTRIBUTION and HABITAT. Winter visitor (October–mid April) to Pakistan from Kohat to northern Baluchistan where it appears to replace the breeding population in that season. Winter range extends to Sind and probably central and coastal Makran down to sea level. Breeds in northern Baluchistan between 2100 and 3000 m and N.W.F.P. north to Samana and Kurram Valley, above 1500 m in the latter localities. Movements of local breeders not known. Intergrades with *pando* (1726) in the Sufed Koh and eastern Afghanistan (Meinertzhagen, *Ibis* 1938: 682, Vaurie, 1965, and Paludan, 1959). Affects rocky and boulder-strewn country, generally in the vicinity of streams.

Extralimital. Extends west to northern Iraq and the Caspian Sea. The nominate race ranges through the Mediterranean countries to Spain and Morocco; *pando* occurs in the Himalayas, and *philippensis* eastward to Japan and Taiwan.

Monticola solitarius



Breeding

Winter

1 *longirostris* (1725) 2 *pando* (1726) 3 *philippensis* (RE)

GENERAL HABITS, FOOD and VOICE. As in 1726.

BREEDING. As in 1726.

MUSEUM DIAGNOSIS. Differs from *pando* in being paler and slightly smaller.

MEASUREMENTS

Wing ♂♂ 116–127 mm; ♀♀ 113–125 mm (CBT, HW, Paludan)

Weight 6 ♂♂ (April–August) 43–53; 2 ♀♀ (June–July) 51, 53 g (Paludan).

COLOURS OF BARE PARTS. As in 1726.

1726. *Monticola solitarius pando* (Sykes)

Petrocincla Pandoo Sykes, 1832, Proc. Zool. Soc. London: 87 (Ghauts, Dukhun)

Petrocincla affinis Blyth, 1843, Jour. Asiatic. Soc. Bengal 12: 177
(Tenasserim and Darjeeling)

Baker, FBI Nos. 608 and 609, Vol. 2: 175

Plate 93, fig. 4

LOCAL NAMES. *Pāla tiriv* (Kashmir); *Pāndu* (♂), *Maal* (♀) (Marathi); *Podakachi pitta* (Telugu); *Pārakkili* (Malayalam); *Ningri-pho* (Lepcha); *Daohangar* (Cachari); *Hengméruiné* (Kacha Naga); *Vohtiglé* (Mikir).

SIZE. Bulbul +; length c. 23 cm (9 in.).

FIELD CHARACTERS. Male. Whole plumage dark leaden blue, very bright, almost azure blue in summer. Wings and tail brown. In winter, feathers are fringed with fulvous above, brown on breast and white on belly.

Female. Above, grey-brown with fine dark shaft-streaks; barred with blackish on rump. A pale wing-bar particularly conspicuous in flight. Below, whitish, cross-barred brown. In silhouette, both at rest and in flight, confusable with Brown Rock Chat (1692).

Female distinguished from that of *rufiventris* (1724) by less boldly barred underparts and lack of distinct throat-patch. Female *cinctorhynchus* (1723) is olive-brown above, not grey-brown, and has whitish not fulvous vent.

STATUS, DISTRIBUTION and HABITAT. Common summer (breeding) visitor to the Himalayas, from Chitral, Gilgit, Hunza and Ladakh east to central (Lowndes, 1955, JBNHS 53: 32) and eastern Nepal (Mt Everest region—Hingston, JBNHS 32: 322 and Kinnear, *Ibis* 1922: 507). One observation from Darjeeling 1350 m in June (Lister, JBNHS 52: 41). No other summer data from Sikkim, or from Bhutan and Arunachal Pradesh, although the species is common in the dry valleys of southeastern Tibet (Schäfer). From Chitral to Garhwal, breeds between c. 1500 m [locally 1300 m (Chitral) or 1200 m (Kangra, Kulu), up to c. 3000 m (Chitral)] and 4000 m (Ladakh to Garhwal). In Nepal apparently breeds only at high elevations: Manangbhot 3600 m, Dolpo c. 4880 m, Kharta 3700 m. An observation at 4800 m in July in the Rongshar Valley. The latter two localities are in Tibet (east of Mt Everest) but in Himalayan facies; the species is absent from the Tibetan plateau. Winters from the Himalayan foothills, including Sikkim, Bhutan and Arunachal Pradesh, south throughout India, Sind, Bangladesh and Assam; also Sri Lanka in the hills. Two records from Andaman Islands and one from Car Nicobar (accidental?). In the Himalayan foothills recorded in winter up to c. 1200 m (Kangra), 1400 m (Nepal), 1000 m (Sikkim) and 600 m in Bhutan and Arunachal Pradesh; in the hills of southern India up to c.

2100 m. Absent or very scarce in flat country (Gangetic plain, coastal Tamil Nadu and coastal Sri Lanka). In the breeding season affects barren rocky hills and precipitous hillsides. In winter frequents broken, rocky country, boulder hillocks, cliffs and rocks along sea shore, quarries, brick kilns, precincts of villages, old forts, buildings both ruined or inhabited, often in otherwise untypical country.

Extralimital. Turkestan and southeastern Tibet. Winters also in Burma. For range of the species see 1725.

MIGRATION. Occurs on summer grounds from April to September or October. Arrives in winter quarters in September in the north, October in the south.

GENERAL HABITS. Solitary in winter, pairs in summer. Very shy in summer but more confiding in winter when it often takes up its quarters among human habitations, resorting to the same spot year after year, and even roosting on the identical beam or cornice in a veranda or living room. Sits bolt upright on a prominent rock or roof-top bowing, curtsying and flirting tail vigorously every now and again. Feeds mostly on the ground but will occasionally take insects on the wing by vertical sorties into the air.

Display. In breeding season male indulges in short volplaning flights from one rock to another, showing off his brilliant blue plumage to best effect, and singing. In a pair with nest-young 'male repeatedly volplaned down to settle on a rock c. 15 m from the nest-hole. Each time upon alighting he raised his wings over the back and slowly and deliberately flapped them to the accompaniment of a subdued pleasant little song of 3 or 4 notes' (SA).

FOOD. Chiefly insects (grasshoppers, termites, dragonflies, etc.), spiders and centipedes, lizards and small frogs. In the Himalayas *Scincella* ground skinks a favourite food item (Roberts.) Also banyan and peepul figs, *Lantana* and other berries, and small seeds.

VOICE AND CALLS. Very silent in winter. Song, a soft, melodious, rather short whistle, 'at times reminiscent of English Blackbird [*Turdus m. merula*]' (E. A. Osmaston), uttered from a commanding position or during volplaning song-flight. Song period starts in March in winter quarters. Female with food in bill awaiting her turn to feed the chicks, announces her arrival to male within the nest-hole by a short impatient *peep* (like a redstart's) uttered repeatedly (SA). No other notes recorded.

BREEDING. Season, April to July. Nest, a cup of grass and roots lined with hair and rootlets, sometimes well concealed in crevices of rocks or holes in walls. Eggs, 3 to 5, pale blue usually with a few rusty blotches scattered over the surface. Average size of 14 eggs 26.7 × 19.7 mm (BBO), of 32 eggs 26 × 19.1 mm (Baker). Incubation apparently by female alone; period undetermined. Care of young by both sexes.

MUSEUM DIAGNOSIS. Differs from *longirostris* in being darker and slightly larger on average. Winter specimens from Assam, Meghalaya, etc.; often show a variable amount of rufous on vent, being intermediates between *pandoa* and east Asian *philippensis*.

Young male, sooty brown washed with bluish grey, feathers of crown, sides of face, chin, throat and upper breast with subterminal pale fulvous spots; rest of plumage faintly fringed with fulvous. Wings and tail as in adult male but greater coverts and tail with broader pale edges.

Young female, similar but paler and browner; wings and tail as in adult female.

Postjuvenile moult about August-September, does not include primaries, primary-coverts, secondaries or the tail. These are not moulted till the second autumn. Adults undergo a complete moult about August to October. There is no spring moult. Both male and female show a certain amount of variation in the amount of spotting and barring of the body plumage (HW). Postnuptial moult complete about August to October. No spring moult.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	111-136	25-29	25-32	77-95 mm
♀♀	112-121	25-29	25-30	75-88 mm (HW, SA, Roonwal)

Weight 5 ♂♂ 44-52; 1 ♀ 45 g (Roonwal, SA, BB).

COLOURS OF BARE PARTS. Iris brown. Bill dark brown; mouth pinkish flesh or lemon-yellow. Legs, feet and claws black.

Genus *MYIOPHONUS* Temminck¹

Myiophonus Temminck, 1822, Pl. col. 2(29), pl. 170. Type, by original designation, *Myiophonus metallicus* Temminck = *Turdus flavirostris* Horsfield

Arrenga Lesson, 1831, Traité d'Orn.: 388. Type, by monotypy,

Turdus cyanus = *Sitta glauca* Temminck

Cf. Delacour, J., 1942, Auk 59: 246-64.

Bill stout, shorter than head, laterally compressed and hooked at tip. Wing rather rounded. Legs long and strong.

Key to the Species

		Page
1	Tail under 105 mm	<i>M. blighi</i>
2	Tail over 112 mm	
a	Bill mostly yellow	<i>M. caeruleus</i>
b	Bill black	<i>M. horsfieldii</i>

1727. Ceylon Whistling Thrush. *Myiophonus blighi* (Holdsworth)

Arrenga blighi Holdsworth, 1872, Proc. Zool. Soc. London: 444, pl. 19

(Banks of Lemastota-Oya, 4,200 ft, Haputale Dist., Uva, Ceylon)

Baker, FBI No. 616, Vol. 2: 182

Plate 91, fig. 12

LOCAL NAMES. None recorded.

SIZE. Myna; length c. 20 cm (8 in.).

FIELD CHARACTERS. Male. Whole plumage dark brown, head and neck nearly black; neck, breast, and back suffused with deep blue. A bright blue shoulder-patch.

¹ On spelling of *Myiophonus* v. *Myiophonus*, see Deignan, H. G., 1965, Bull. Brit. Orn. Cl. 85: 3; also Biswas, 1961, JBNHS 58: 670, note.

TURDINAE

Female. Whole plumage ferruginous brown, lighter below. A blue shoulder-patch as in male.

STATUS, DISTRIBUTION and HABITAT. Species endemic to Sri Lanka.

Resident in small numbers above c. 900 m, mostly between 1200 and 1800 m, in the hills of Central and Uva provinces. Affects damp, heavy forest, fern-clad ravines and gorges, especially those with a rapid torrent running through.

GENERAL HABITS. Keeps singly or in widely separated pairs, seldom far from a wooded stream. A

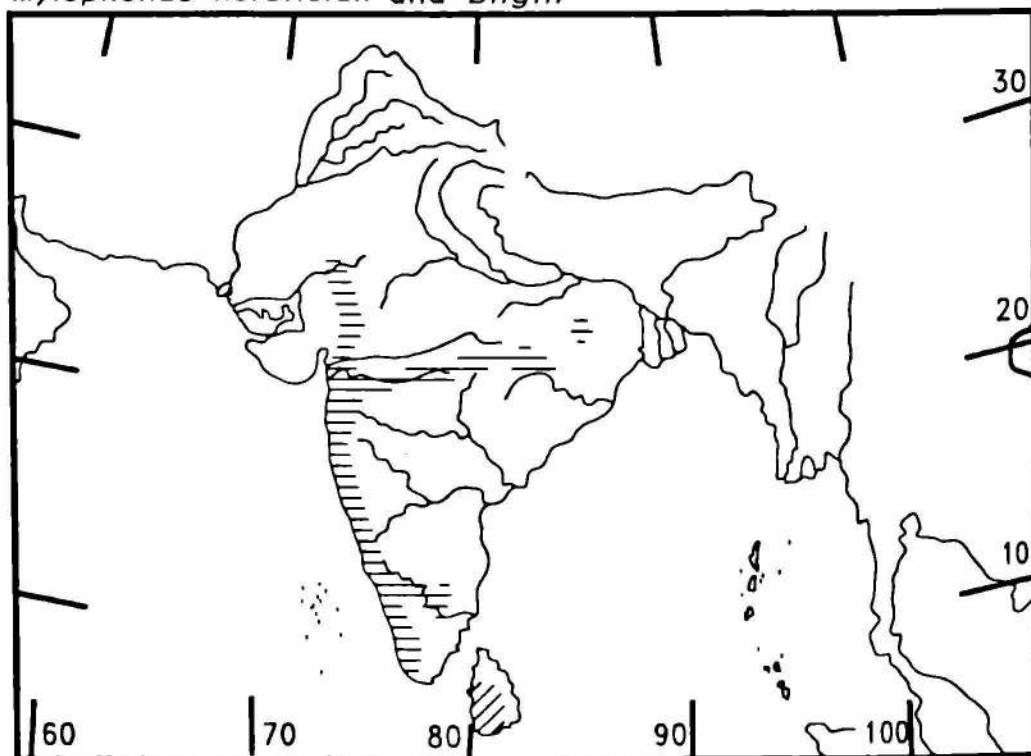
lively and restless bird; runs rapidly and has a habit of frequently opening and shutting the tail. Quite crepuscular.

FOOD. Chiefly insects; also small frogs, geckos, etc. and possibly fruit.

VOICE and CALLS. A shrill, sibilant whistle *sreeee . . . ree* often given by male in the evenings while flying to and fro above streams. Song [?], a 'long drawn plaintive though loud whistling note' (Legge).

BREEDING. Season, March to June ('January to May'—Henry). Nest, a large, neat and compact structure of green moss with some weed stems and decayed leaves, lined with blackish fern rootlets. Usually placed on a ledge of rock flanking a torrent or waterfall, about one to three metres from the ground; once among twigs of a bamboo stem in a jungle ravine. Eggs, 2 or

Myophonus horsfieldii and blighti



blighti

horsfieldii

often 1, whitish green with a few faint reddish brown streaks or freckles round the large end. Average size of 10 eggs 30.8×21.8 mm (Baker). Young fed by both parents. Share of duties unknown though incubation apparently by female only; period undetermined.

MUSEUM DIAGNOSIS. See Field Characters.

Young has brown upperparts, more rusty brown underparts, the feathers of head, neck and breast with ochraceous shaft-lines. Wings and tail brown with rufescent edges to the feathers. Young male differs in having a blue shoulder-patch.

MEASUREMENTS:

	Wing	Bill from skull)	Tarsus	Tail	
1 ♂ ad.	106	27	35	77	mm (HW)
1 ♂ ad.	103	23	37	81	mm
1 ♂ imm. 1 ♀ imm.	(c. 3 mths old)	96 91	24 24	36 36	71 72 mm
					(SDR)

COLOURS OF BARE PARTS. Iris light to dark brown; orbital skin dark olive-green. Bill black; gape dark olive-green (ad.), yellow (imm.). Legs and feet dark brown to blackish.

1728. Malabar Whistling Thrush. *Myiofonus horsfieldii horsfieldii* (Vigors)

Myophonus Horsfieldii Vigors, 1831, Proc. Zool. Soc. London: 35
(Himalayan Mountains, restricted to Malabar by Baker, 1923, Hand-list: 93)
Baker, FBI No. 613, Vol. 2: 178

Plate 91, fig. 13

LOCAL NAMES. *Kāstūro*, *Indrārāj* (Gujarati); *Gogi* (Marathi); *Bhāngrāj* (Hindi, M.P.); *Gunta-ukkee* (Kannada); *Singala karewé* (Telugu); *Chūlakākka* (Malayalam); *Sikāram* Tamil).

SIZE. Myna; length c. 25 cm (10 in.).

FIELD CHARACTERS. Forehead bright cobalt blue; crown, neck, throat and upper breast dull black. Rest of plumage including wings and tail, glistening blue-black with bright cobalt blue shoulder-patch. Sexes alike.

STATUS, DISTRIBUTION and HABITAT. Resident, fairly common. Confined to perennial hill streams in the dry season but spreading into the foothills and adjacent plains during the rains. The hills of western Gujarat (Mt Abu, Himatnagar), the Surat Dangs, the Satpura Range (Melghat, Pachmarhi) east to Chota Nagpur (Surguja), extreme northwestern Orissa, and N. Andhra Pradesh (SDR, JBNHS 85: 101). The Western Ghats complex (including the Nilgiris and Palnis) from Khandesh south through western Karnataka and Kerala to the Ashambu Hills, east to the Shevaroy Hills in Tamil Nadu (JBNHS 36: 80). Affects swift-running rocky hill streams in

shady evergreen jungle, dank cardamom ravines, etc. up to 2200 m; seldom found away from streams as the Himalayan species frequently is.

GENERAL HABITS. Keeps singly or in pairs. Feeds on the ground or in shallow water along the edge of streams, or hops from stone to stone snatching food as it is borne past on the current. Sometimes seen on forest paths or in gardens and compounds. Often perches on trees and readily takes shelter in caves and rocks. Every now and then the bird does a 'bend-stretch' on its legs and raises and lowers its tail, sometimes very slowly and deliberately; it is fully fanned out on the downward movement when its tip almost touches the ground. Locally migratory; an individual ringed on 13.vi.1972 at Mahableshwar (17°55'N., 73°40'E.), Maharashtra, was recovered at Chembu Village, Sampage (12°N., 75°50'E.), N. Coorg, Karnataka, c. 650 km south of Mahableshwar on 18.i.1976 (Ambedkar, JBNHS 88: 113).

FOOD. Chiefly insects, snails, worms, crabs, small frogs, etc.; also drupes of *Jasminum* and wind-fallen figs and berries. Snails and crabs are purposefully battered on stones before being swallowed.

VOICE AND CALLS. Alarm-note, a long-drawn piercing high-pitched *kree-ee* somewhat reminiscent of a Hill Myna, uttered chiefly while flying off from one section of a stream to another. Also some harsh notes. Song, a loud, rich whistle rambling aimlessly up and down the scale, so human in quality that it has earned the bird its popular name of Whistling or Idle Schoolboy. The melody is far superior to that of the Himalayan *M. caeruleus* (SA). Song period, February to September, but song sporadically heard also in December and January. It is one of the earliest bird calls in the morning.

BREEDING. Season, chiefly May to September (monsoon); in the south sometimes starting as early as March or even February. Double-brooded. Nest, a bulky cup of moss, roots and grass often secured in place and reinforced with mud, especially when built on a sloping ledge, lined with rootlets or moss. Usually placed on a ledge of rock beside a waterfall or torrent, often continually soaked with the spray. In the ghats a favourite site is on ledges of the dripping wet rock walls flanking entrances to the railroad tunnels, regardless of the many trains constantly thundering past; also within dank ill-lit tunnels that carry the water mains through the hills. Will occasionally nest in the rafters of a coffee estate building such as a mill or a pulphouse in the vicinity of water, or even in a hole in a tree up to c. 12 metres. A pair may occupy the same territory year after year, building in the same site, often on the foundations of an old nest. A second successive brood is frequently raised in the same nest without rebuilding (Betts). Eggs, 2 or 3 (Kerala) often 4 (Maharashtra), pale clay colour sparsely covered with pale reddish specks, spots and small blotches. Average size of 46 eggs 33.1 × 23.9 mm (Baker). Building, incubation and care of young by both sexes. Incubation period 16 or 17 days.

MUSEUM DIAGNOSIS. See Field Characters.

Young. Whole upper- and underparts, lesser and median coverts dark sooty brown; wing and tail as in adult. Postjuvenile moult of body-feathers, lesser, median and innermost greater coverts and tertials. Postnuptial moult complete, September to November, beginning with remiges followed by rectrices, then body-feathers and lastly head; some body-feathers also fall during casting of remiges (McCann, JBNHS 35: 204).

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	152–165	32–34	39–49	{ 107–121 mm.
♀♀	143–151	30–32		{ 94–108 mm (HW, SA, Koelz)

Weight 10 ♂♀ 101–130 (av. 116·9) g—SA.

COLOURS OF BARE PARTS. Iris hazel brown or dirty olive-green (Roonwal). Bill, legs, feet and claws black. Mouth pale yellow or creamy pink (ad.), orange-yellow (pull.). Soles dirty white.

Miscellaneous. Nestlings are commonly taken from the nest to be raised as cage-birds for their beautiful song and imitative ability. Birds have been taught to whistle an entire tune. The growing demand from fanciers and the attractive prices the birds fetch have caused a noticeable decline in numbers in many of its best-known haunts.

MYIOPHONUS CAERULEUS (Scopoli): BLUE WHISTLING THRUSH

Key to the Subspecies

- White tips to wing-coverts *M. c. temminckii*
- No white tips to wing-coverts *M. c. eugenei*

1729. *Myiophonus caeruleus temminckii* (Vigors)

Myophonus Temminckii Vigors, 1832, Proc. Zool. Soc. London: 171
(Himalayan Mountains = Simla-Almora area)

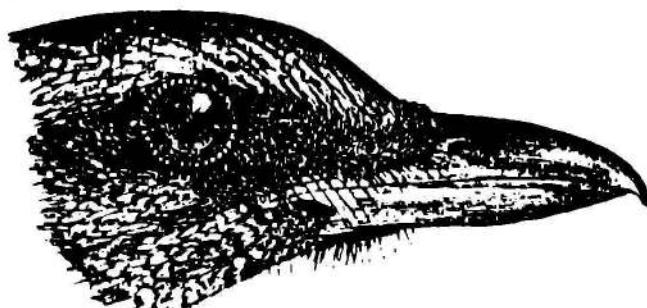
Myophonus caeruleus euterpe Koelz, 1943, Contrib. Inst. Regional Exploration, No. 1: 12
(Mawphlang, Khasi Hills)
Baker, FBI No. 614, Vol. 2: 180

Plate 91, fig. 14

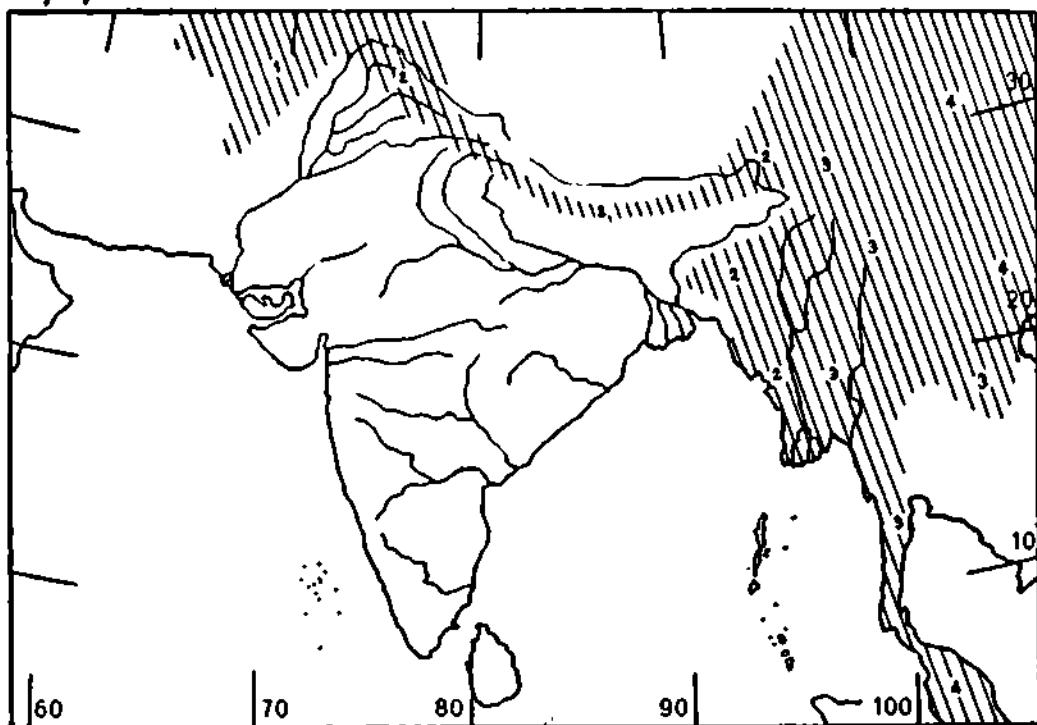
LOCAL NAMES. *Hāzār dāstān*, *Kāstūr*, *Kava kūnūr* (Kashmir); *Narel* (Kangra); *Kāstūra* (Himachal Pradesh); *Kuljel*, *Kaljit* (Duns); *Kholchara* (Paharia); *Chamong-pho* (Lepcha); *Tetiman* (Bhutanese); *Simtung* (Khasia); *Di-daokat gashim* (Cachari).

SIZE. Pigeon; length c. 33 cm (13 in.).

FIELD CHARACTERS. A large Blackbird-like species entirely dark purple-blue spotted with glistening blue. Forehead, shoulders, edge of wing and tail brighter blue. A half-dozen silver blue spots on median wing-coverts. Bill yellow. Sexes alike.



× c. 1

Myophonus caeruleus

Distributional ranges 1 *turkestanicus* (RE) 2 *temminckii* (1729)
 3 *eugenei* (1730) 4 Other subspecies

STATUS, DISTRIBUTION and HABITAT. Common resident, subject to vertical movements. The mountain ranges of Pakistan from northern Baluchistan (uncommon) to Chitral, Gilgit and Hunza, the Indus Valley as far as Upshi, and from Murree and Kashmir eastward along the Himalayas through Nepal, Sikkim, Bhutan and Arunachal Pradesh to the Dibang river (*c.* 95°–96°E. long., intergrading here with *eugenei*); also the Garo, Khasi and Mizo hills south to the Chittagong Hill Tracts, Nagaland and Manipur. Breeds mostly between *c.* 1000 and 3600 m, but altitudinal distribution varies with local conditions: in Baluchistan above 2700 m, in the western Himalayas between 1200 m (or possibly a little lower) and 3600 m, optimum zone 1500–2400 m. In Nepal occurs up to 4200 m (Lowndes, Diesselhorst), exceptionally higher (5180 m—Biswas, JBNHS 58: 670). Upper limit coincides with tree-line. Winters from *c.* 2400 m (in Sikkim 2700 m) down to the foothills, in Pakistan to the Salt Range, Lahore along the better wooded nullahs and northern Punjab in forest plantations (T. J. Roberts, pers. comm.). Affects rivers and torrents especially in heavy forest, ravines and gorges, sometimes streams with sparse bush or tree growth, but not in bare country.

Extralimital. The species extends west to northern Afghanistan and Turkestan north to Ala Tau, east through the Indochinese countries, south through Malaya and Sumatra to Java, and north in China to Kansu and Hopeh.

GENERAL HABITS. Keeps singly or in pairs. A conspicuous bird of torrential hill streams running through jungle and cliffs, every gorge seeming

to hold a pair. In the western Himalayas also frequently seen around hillstation bungalows, and everywhere partial to hill roads. Unlike *M. horsfieldii* (1728) often wanders considerable distances away from water. Hops rapidly from rock to rock amidst a rushing torrent to seize morsels floating past, or on the forest floor and bridle paths, turning over and flicking aside the leaves in search of food. Often perches in trees. Has a habit of fanning its tail upon alighting, raising and lowering it very slowly and deliberately. It is fully expanded on the downward movement. Progresses on ground in long hops, or runs in spurts with quick mincing steps. Feeding behaviour and movements typically Blackbird-like. Markedly crepuscular, often feeding and on the move till well after dusk.

Aggressive Display (e.g. when mobbing owl). Spreads tail, droops wings, throws out chest and struts stiffly in front of intruder, striking bellicose postures.

FOOD. Mainly earthworms, snails, crabs, larvae and aquatic insects, but will also take hatchling birds and almost any small living creature; also berries and some vegetable matter (horsedung, SA). Snail shells purposefully battered against stones to get at the contents.

VOICE and CALLS. Call-note, an 'exceedingly strident *tzeet tze-tze-tzeet* which carries far above the roar of the waters' (Bates). Alarm-note, a loud, shrill *kreee* given both in flight and when perched. Song, often uttered on the wing, a sweet, rather thin whistle which follows a definite pattern with slight variations (Lister); very human in quality but clearer and more resonant, though far inferior as a melody to that of its southern congener (1728). Main song period, end of February till end of June, with a resumption from mid August to end of September; may occasionally be heard as early as January (Proud). Typically sings only at dawn and dusk when other songsters are silent (Roberts, pers. comm.). Sub-song (Sept.-Oct.): a subdued creaky jingle very reminiscent of song of Rosy Pastor (*Sturnus roseus*) but richer and more musical, lasting c. 3 minutes or more, practically without a break (SA). During agonistic encounters, males utter peculiar buzzing notes, commonly at the beginning of the breeding season (T. J. Roberts).

BREEDING. Season, end of April to August. Double-brooded. [One pair laid again 11 days after first brood left nest (Jones, JBNHS 47: 240).] Nest, a bulky cup of green moss lined with rootlets, sometimes with a variable amount of mud admixed. Placed on a ledge or in a hollow or crevice of a boulder overhanging or amid a rushing stream, often wetted by the spray; occasionally on beams and rafters in forest bungalows, outhouses, etc., rarely even in a tree-hollow or on a horizontal branch. Eggs, 3 or 4, pale olive-grey to pale creamy buff with very faint reddish freckling, seldom distinctly marked. Average size of 10 eggs 36.9 × 25.6 mm (BBO), of 200 eggs 35.8 × 24.8 mm (Baker). Building of nest, incubation and care of young by both sexes. Brood-parasitizing by Hawk-Cuckoo (*Cuculus sparverioides*) recorded (Baker, JBNHS 17: 360, 362).

MUSEUM DIAGNOSIS. Differs from *eugenei* by the presence of white spots on tip of median coverts. Feathers of rump and, to a lesser extent, of belly largely white along the shafts but this colour always concealed. Postnuptial moult complete, July to October.

Young. Upperparts and wing-coverts dull brown tinged with purple. Wings and tail as in adult. Underparts dull brownish black, a faint purple tinge on breast.

TURDINAE

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	167-192	33-36 }	50-55	{ 129-140 mm
♀♀	155-184	33-35 }		(114) 120-127 mm (BB, Rand & Fleming, SA)

Weight 6 ♂♂ (summer) 135.8-193.8 g; 4 ♀♀ (summer) 156.5-181 g (GD, RAP, SDR). 5 ♂♂ (winter) 191.5-199.2; 2 ♀♀ (winter) 153.7, 159.7 g (RAP). 2 oo? (October) 158, 177 g (SA).

COLOURS OF BARE PARTS. Iris dark brown. Bill: upper mandible dusky yellow with blackish on base and culmen; lower mandible yellow. Legs, feet and claws black; soles yellowish grey.

1730. *Myiophonus caeruleus eugenei* (Hume)

Myiophonus Eugenei Hume, 1873, Stray Feathers 1: 475

(Thayetmyo and the western Pegu Hills)

Baker, FBI No. 615, Vol. 2: 181

LOCAL NAMES. None recorded.

SIZE. Pigeon; length c. 33 cm (13 in.).

FIELD CHARACTERS. As in 1729 but lacks white spots on wing (median coverts).

STATUS, DISTRIBUTION and HABITAT. Resident in the Mishmi Hills east of the Dibang river. Habitat as in 1729.

Extralimital. Burma south to Tenasserim, southern Yunnan and northern Vietnam.

GENERAL HABITS, FOOD and VOICE. As in 1729.

BREEDING. As in 1729.

MUSEUM DIAGNOSIS. Differs from *temminckii* in lacking white spots on tips of median coverts.

MEASUREMENTS and COLOURS OF BARE PARTS. As in 1729.

Genus ZOOTHERA Vigors

Zoothra Vigors, 1832, Proc. Zool. Soc. London: 172.

Type, by monotypy, *Zoothra monticola* Vigors

Geokichla Müller, 1835, Tyds. Naturl. Gesch. Phys. 2, pl. 3: 348.

Type, by original designation, *Turdus citrinus* Latham

Oreocincla Gould, 1838, Synops. Bds. Australia, pl. 55, App.: 3.

Type, by monotypy, *Turdus varius* Horsfield

Differs from *Turdus* in having the bases of secondaries and part of primaries white or buff, the well-demarcated patch clearly visible on the underwing.

Key to the Species

Page

I Upper tail-coverts tipped with white

A Plumage black and white *Z. wardii* ♂ 85

B Plumage olive-brown *Z. wardii* ♀ 85

II	Upper tail-coverts not tipped with white		
C	Plumage almost entirely slaty	<i>Z. sibirica</i> ♂	87
D	Belly orange-rufous	<i>Z. citrina</i>	89
E	Underparts spotted		
1	Bill (from skull) over 30 mm		
a	Bill over 40 mm	<i>Z. monticola</i>	104
b	Bill between 30 and 40 mm	<i>Z. marginata</i>	106
2	Bill (from skull) under 30 mm		
c	Mantle spotted	<i>Z. dauma</i>	100
d	Mantle plain		
i	Underparts spotted with olive-brown	<i>Z. sibirica</i> ♀	87
ii	Underparts spotted with dark brown		
o	Tips of wing-coverts white	<i>Z. spiloptera</i>	93
oo	Tips of wing-coverts not white		
o'	Forecrown with pale shaft-streaks	<i>Z. dixoni</i>	98
o''	Forecrown without shaft-streaks	<i>Z. mollissima</i>	95

1731. **Pied Ground Thrush.** *Zoothera wardii* (Blyth)

T.(urdus) Wardii Blyth, 1842, Jour. Asiatic. Soc. Bengal 11: 882
(Mysore)

Baker, FBI No. 584, Vol. 2: 145

Plate 94, fig. 1

LOCAL NAMES. *Daokat mēberung* (Cachari); *Kozhikkili* (Malayalam).

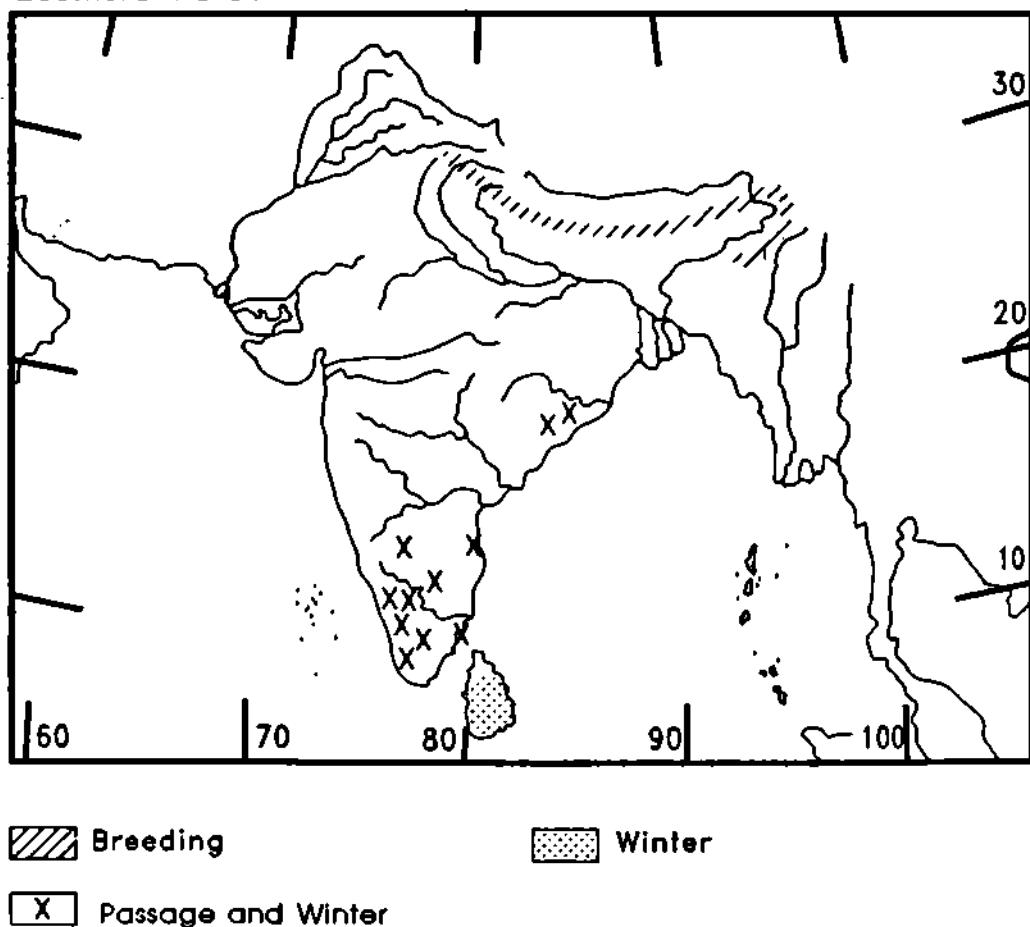
SIZE. Myna ±; length c. 22 cm (9 in.).

FIELD CHARACTERS. Male. An unmistakable black-and-white thrush with a yellow bill. *Above*, black with a conspicuous white supercilium; wing and lower rump boldly spotted with white. Tail dark brown and white (central rectrices and outer webs of other rectrices dark brown, inner webs and tips white). *Below*, throat and breast black; rest of underparts white, flanks boldly barred with blackish.

Female. *Above*, olive-brown with a conspicuous buff supercilium. Wings spotted with buff. Tail olive-brown, tips of upper coverts white, outer rectrices partly white and with white tips. *Below*, throat buffish, sides mottled olive-brown and buff. Breast dark olive-brown with buff spots. Belly white, flanks and lower breast barred with brown.

The conspicuous supercilium, spotted wings and white in tail identify the female.

STATUS, DISTRIBUTION and HABITAT. Uncommon summer (breeding) visitor to the Himalayas from Kulu Valley east through Mussooree hills, Simla, Garhwal, Nepal (Chitlang Valley—Biswas, JBNHS 58: 671; Dandeli, Trisuli and Kathmandu Valley—Fleming & Traylor, *Fieldiana* 53: 182; Jaharpowah—Hodgson), Sikkim, Jalpaiguri duars and Bhutan foothills (on passage) and Arunachal Pradesh (Baker, *Nidification* 2: 127); also the Barail Range in North Cachar (Baker, loc. cit.). Breeds between 1500 and 2400 m, in Cachar down to 1200 m. Winters in Karnataka (Nandi hills—J. N. Prasad, pers. comm.), Tamil Nadu (Shevaroy hills—Krys Kazmierczak, *Newsletter Birdwatchers* 31(7–8): 13; 1991; S. Karthikeyan, pers. comm.)

Zoothera wardii

and Sri Lanka between c. 750 and 1500 m, where numbers fluctuate greatly from year to year. In summer affects well-wooded ravines and nullahs, edges of forest, small patches of forest and jungle in open country, even gardens (Naini Tal). In winter frequents forest, jungle in ravines, and well-wooded gardens.

MIGRATION. Arrives on breeding grounds in April, departs in September-October. Arrives in Sri Lanka in October-November, leaves in March. Passage noted in the Eastern Ghats and the hills of southern India, between 1000 and 2100 m, in October and in March-April (once in February). Point Calimere in Tamil Nadu (10°17'N., 79°52'E.) is one of the take-off points for Sri Lanka in autumn, but the bird evidently follows a different route on return passage in spring.

GENERAL HABITS. Keeps singly or in pairs according to season, sometimes in small flocks during migration. Feeds on the ground, hopping about among the mulch beneath undergrowth, turning over the dead leaves in search of food. Also ascends trees to feed on berries.

FOOD. Insects and berries.

VOICE and CALLS. A strange, unmusical song of two notes (Brooks). A chirping call-note. Generally very silent.

BREEDING. Season, May to July. Single-brooded. Nest, a deep, compact cup of green moss, grass and leaves with an inner layer of coarse roots cemented with a little mud, lined with rootlets and grass stems; placed in

saplings between one and five metres above the ground, usually in a fork or on a horizontal branch near the trunk. *Eggs*, 3 or 4, white tinged with green, lightly speckled and blotched with pale reddish, sometimes over the whole surface, sometimes chiefly at the larger end. Average size of 30 eggs 26·3 × 19·4 mm (Baker). Building of nest, incubation and care of young by both sexes.

MUSEUM DIAGNOSIS. See Field Characters.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	110-119	25-28	26-28	{ 75-79 mm
♀♀	110-120			{ 74-82 mm (HW, MD, BB)

Weight 6 ♂♀ (October) 52-72 (av. 58·6) g—SA. 1 ♂ 69 g; 1 ♀ 57 g—SDR.

COLOURS OF BARE PARTS. Iris brown. Bill yellow (♂), brownish yellow (♀). Legs and feet pale brownish yellow.

ZOOTHERA SIBIRICA (Pallas): WHITEBROWED GROUND THRUSH

Key to the Subspecies

	Page
A Deep slaty blue-black, abdomen white or mixed white and medium slaty grey	<i>Z. s. sibirica</i> 87
B Blacker, abdomen almost entirely slaty grey	<i>Z. s. davisoni</i> 88

1732. Whitebrowed Ground Thrush. *Zoothera sibirica sibirica* (Pallas)

Turdus sibiricus Pallas, 1776, Reise Russ. Reichs 3: 694

(Sibiriae = Dauria *vide* Hartert, i.e. SE. Transbaicalia)

Baker, FBI No. 585, Vol. 2: 146

Plate 94, fig. 3

LOCAL NAMES. None recorded.

SIZE. Myna ±; length c. 22 cm (9 in.).

FIELD CHARACTERS. Male (adult). Entirely dark slaty with a conspicuous white supercilium to nape. Under tail-coverts and outer rectrices tipped with white.

Male (first-year). Upperparts slaty tinged with brown. Wings, tail, and primary coverts brown, with some black-tipped fulvous feathers. Below. Throat- and breast-feathers bluish with white centres.

Female. Above, olive-brown with a narrow buff supercilium. Wing-coverts tipped with ochraceous. Outer rectrices broadly tipped white. Below, throat buffish speckled with brown, a dark brown stripe on each side. Breast and flanks buff spotted with olive-brown. Centre of belly white.

Both sexes have a large underwing patch, white in male, buff in female, noticeable in flight. The prominent supercilium identifies both sexes. Female *Z. wardii* has a more spotted wing, darker breast and flanks barred with blackish brown, not olive-brown.

STATUS, DISTRIBUTION and HABITAT. Uncommon winter visitor to Mani-

pur hills, locally not uncommon (Hume, SF 11: 132). One record for the Andaman Islands (ibid. 2: 223). Affects hill forest up to at least 1800 m.

Extralimital. Breeds in Siberia from the Yenisey to Amurland. A subspecies (*davisoni*) in Sakhalin and Japan. Winters in southern China, the Indochinese countries, Burma, Malaya, Borneo (one record) and the Sunda Islands.

MIGRATION. Arrives in winter quarters in October, departs in April.

GENERAL HABITS. In winter usually keeps in small flocks, gathering in larger flocks (up to 60) before spring departure. Very shy and wary. Feeds on the ground, flying up into trees when disturbed.

FOOD. Chiefly insects and worms; fruit (*Ficus*) and berries.

VOICE and CALLS. Nothing recorded in winter.

BREEDING. Extralimital.

MUSEUM DIAGNOSIS. See Field Characters.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	114–120	22–25	31	84–90 mm
♀♀	113–115			(Dementiev, MD)

Weight 1 ♂ (summer) 60; 1 ♀ (summer) 70 g (Dementiev).

COLOURS OF BARE PARTS. Iris dark brown. Bill dark brown (♂), upper mandible dark brown, lower yellow, dusky at tip (♀). Legs and feet orange-yellow.

1732a. *Zoothera sibirica davisoni* (Hume)

Turdulus Davisoni Hume, 1877, Stray Feathers, 5, p. 63 (Mooleyit, Tenasserim)

LOCAL NAMES. None recorded.

SIZE. Myna ±; length c. 24 cm (9 in.).

FIELD CHARACTERS. As in 1732 but upperparts and breast darker, almost black; very little white on lower belly and vent.

STATUS, DISTRIBUTION and HABITAT. Two specimens only known from India; one taken at Mahableshwar, Western Ghats, Maharashtra on 7.iv.1969, and the other from Narcondam on 6.iv.1972.

Extralimital. Breeds on Sakhalin Island and northern Japan from Hokkaido to Honshu. Migrates through Shikoku and Kyushu and the south China coast. Winters in the Indochinese subregion.

GENERAL HABITS, FOOD and VOICE. As in 1732.

BREEDING. Extralimital.

MUSEUM DIAGNOSIS. See Field Characters. Averages larger than 1732.

MEASUREMENTS

Wing	Bill (from skull)	Tarsus	Tail
117–124	23–27	27–31	77–83
116–121	22–25	26–28	74–80

Weight 1 79 g.

COLOURS OF BARE PARTS. As in 1732.

ZOOTHERA CITRINA (Latham): ORANGEHEADED GROUND THRUSH

Key to the Subspecies

		Page
A	Two conspicuous dark stripes on cheeks.....	<i>Z. c. cyanotus</i> 91
B	No stripes on cheeks	
1	A white wing-bar	<i>Z. c. citrina</i> 89
2	No wing-bar	
a	Rufous colour paler; some whitish on throat....	<i>Z. c. andamanensis</i> 92
b	Rufous colour darker, more chestnut; throat white	<i>Z. c. albogularis</i> 93

1733. *Zoothera citrina citrina* (Latham)

Turdus citrinus Latham, 1790, Index Orn. 1: 350 (India, Cachar)
Baker, FBI No. 587, Vol. 2: 148

Plate 93, fig. 2

LOCAL NAMES. *Mälägir* (Kangra); *Dāmā* (Bengali); *Daokat-gajauiba* (Cachari).

SIZE. Myna —; length c. 21 cm (8½ in.).

FIELD CHARACTERS. Male. Entire head, nape and underparts orange-chestnut. Vent and under tail-coverts white. Rest of upperparts bluish grey; a white wing-bar; outer rectrices lightly tipped white.

Female. Like male but mantle strongly tinged with olive-brown.

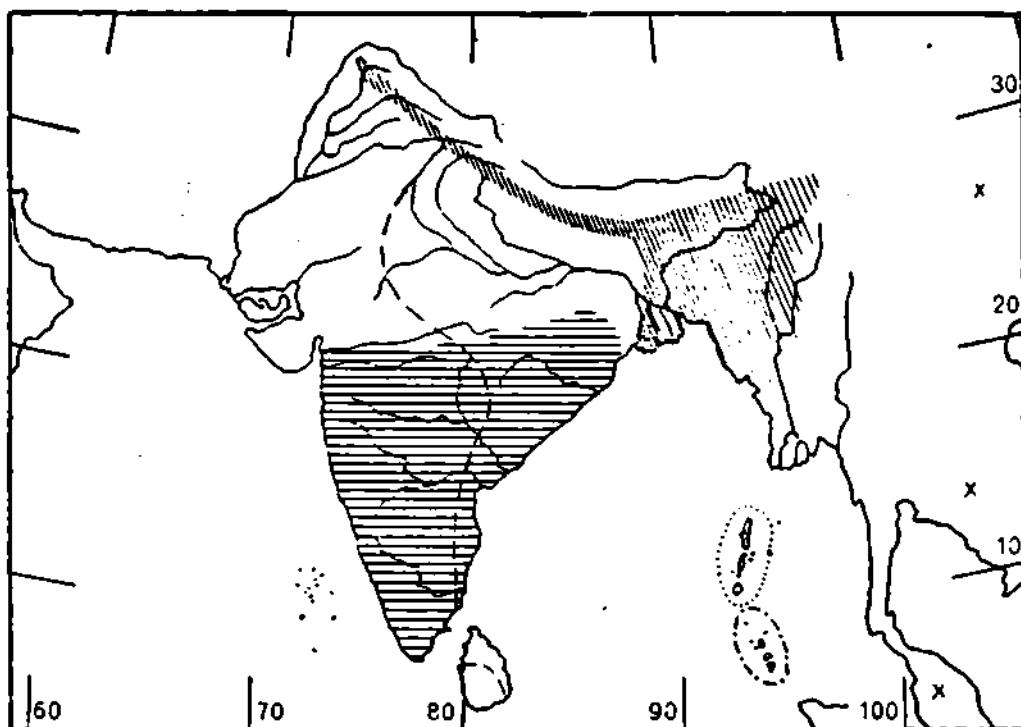
STATUS, DISTRIBUTION and HABITAT. A partial migrant, fairly common but locally distributed. The outer Himalayas from Margala hills east through Arunachal Pradesh and south through Assam, Manipur, Bangladesh to the Chittagong Hill Tracts, Bengal south to Calcutta (S. C. Law, *Ibis* 1931: 778), Bihar to the Rajmahal Hills (breeding?) and Uttar Pradesh to Gonda. In the Himalayas breeds from c. 1600 m down to the foothills; in Nepal up to 2300 m (GD). Very local in the plains and only in well-wooded areas. Withdraws from Himalayas in cold weather and winters from the duns and terai south through eastern Punjab (Rohtak), eastern Rajasthan (Sambhar Lake), Uttar Pradesh and Madhya Pradesh (sparingly in all the preceding localities), Bihar, Bengal, Bangladesh and Assam; also the Eastern Ghats south to Russellkonda (Gumsur). Irregular further south in the Peninsula to Ratnagiri, Tamil Nadu, and Sri Lanka in the low-country Dry zone. Affects damp forest with plentiful but not too dense undergrowth often in the vicinity of streams, mixed secondary and bamboo jungle on valley slopes, and groves of trees near habitations and cultivated country.

EXTRALIMITAL. The species ranges east through China to Anhui and south through the Indochinese countries to Borneo and Bali.

MIGRATION. Where a summer visitor, arrives in April/May, leaves in September. On winter grounds from October to March. Passes through Point Calimere (Tamil Nadu), apparently to Sri Lanka, in October.

GENERAL HABITS. Keeps singly or in pairs. Usually shy and difficult to observe. Feeds on the ground hopping about in dense undergrowth, rummaging among fallen leaves and rubbish for insects. When disturbed flies up into a bush or tree where it sits silent and motionless. Feeds till late into the dusk.

COURTSHIP DISPLAY. 'Male sat on branch motionless like a stuffed dummy,

Zoothera citrina

Distributional ranges

- | | |
|---------------------------------|--|
| <i>citrina</i> (1733). Breeding | <i>citrina</i> . Winter; occasional in |
| <i>cyanotus</i> (1734) | <i>andamanensis</i> (1735) Sri Lanka |
| <i>albogularis</i> (1736) | Extralimital subspecies |

head bowed double till bill-tip almost touching his feet, wings loosely drooped at sides, back arched and tail depressed. Uttered snatches of normal song in soft undertone (almost sub-song), only the tips of his mandibles moving. Female sat about 40 cm away, passive but alert, changing her position abruptly now and again from facing her suitor to a sudden about turn, but entirely silent throughout the serenade. These proceedings, timed for over 15 minutes, were in progress when the observation started and may have continued longer if the birds had not been disturbed' (SA) [refers to *Z. c. cyanotus*].

FOOD. Insects, worms (especially earthworms), berries and fruit; also leeches locally, but in spite of their great abundance these taken by a few individuals only (GD).

VOICE AND CALLS. A typical thrush song, loud, sweet and variable with some very high-pitched notes, reminiscent of the Blackbird's; continues for 4 or 5 minutes without break with mimetic phrases from *Cuculus varius*, *Clamator jacobinus* and *Cacomantis merulinus*, given from lower branches of shady trees (Roberts, JBNHS 78: 75; also pers. comm.), or from dense cover. Uttered chiefly in the morning and evening while sitting motionless, wings drooping at the sides and tail held low. Song period in Nepal, early April till end of August (Proud); in Pakistan during monsoon season only (late July and August) [T. J. Roberts, pers. comm.]. A secondary song described as a 'very tuneful, remarkable low melody'. The bird is widely prized as a cage-bird for

its song. Alarm-note likened to the shrill screeching noise produced by a pencil on a slate—a high-pitched *kreeee*.

BREEDING. Season, chiefly May and June (monsoon), occasionally until August. In Assam starts in early April. Nest and eggs (c/3 or 4, exceptionally 5) as in 1734. Average size of 100 eggs 25·6 × 19·3 mm (Baker). Brood-parasitism by Pied Crested Cuckoo, *Clamator jacobinus*, recorded (Baker, JBNHS 17: 894).

MUSEUM DIAGNOSIS. See Field Characters. For distinction from *cyanotus* see 1734, Museum Diagnosis.

Young. *Above*, head dull rufous-brown with pale centres and dark edges to the feathers. Upperparts dark grey with pale centres to scapulars. *Below*, pale yellowish rust with faint blackish tips to the feathers; tips of median and greater coverts rusty white. Wings and tail as adult. Postjuvenile moult complete, about October.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	113–126	23–25	29–33	70–83 mm
♀♀	114–123			72–81 mm (BB, HW)

Weight 5 ♂♂ (October) 56–66·5; 2 ♀♀ (October) 57, 67·5 g (GD, Nepal). 8 ♂♂ (October) 48–58 (av. 52·7); 8 ♀♀ (October) 50–60 (av. 54·4) g—SA, Tamil Nadu.

COLOURS OF BARE PARTS. Iris dark brown. Bill dark horny to black. Legs fleshy with brownish front, or light horny brown with yellowish behind; feet fleshy to light horny brown; claws fleshy to horny; soles fleshy or yellowish fleshy (BB).

1734. *Zoothera citrina cyanotus* (Jardine & Selby)

Turdus cyanotus Jardine & Selby, 1828, Ill. Orn. I, pl. 46 (India, Bangalore)

Turdus citrinus amadoni Biswas, 1951, Jour. Bombay nat. Hist. Soc. 49: 661
(Chanda, Central Provinces)¹

Baker, FBI No. 588, Vol. 2: 150

Plate 93, fig. 3

LOCAL NAMES. *Mälägir kăstūro* (Gujarati); *Kōzhikkili*, *Koori kannan kattupulleh* (Malayalam).

SIZE. Myna —; length c. 21 cm (8½ in.).

FIELD CHARACTERS. As in 1733 but throat white and ear-coverts whitish with two oblique dark brown stripes. Wings have a white shoulder-bar and whitish edge. White-and-black head pattern is diagnostic.

STATUS, DISTRIBUTION and HABITAT. Resident and also local migrant; fairly common. Peninsular India from southwestern Gujarat (Navsari and Dangs districts, SA, JBNHS 52: 770; Shull, ibid. 59: 659), Madhya Pradesh (Satpura Range, apparently not in the Vindhya Range), 'Bihar' (Hodgson) and Orissa (Sambalpur, Mahendragiri, Jeypore) south through Maharashtra, Andhra Pradesh, Tamil Nadu, Karnataka and Kerala. In the hills up to c. 1200 m, locally 1500 m. Curiously not Sri Lanka where only the more northern nominate race is an occasional winter visitor. Affects forest, shady

¹ But see Abdulali, H., 1965, JBNHS 62: 305–6. Differences still seem clinal in character to me—SDR.

ravines and nullahs, dank cardamom sholas, coffee plantations, mixed secondary and bamboo jungle, and occasionally well-wooded gardens.

GENERAL HABITS. As in 1733. Quiet and unobtrusive. Markedly crepuscular; spends the day in shady thickets and bamboo jungle, often coming out at dusk to feed on forest roads and tracks, hopping about and flicking aside dry leaves etc. in the quest.

Display. 'Male stands very erect and rigid on a bough beside its mate, with head bent stiffly and tucked into the breast feathers as it sings vigorously' (Betts). [See p. 89-90.]

FOOD. As in 1733.

VOICE AND CALLS. As in 1733. A clear rollicking song of several rich whistling notes and frequently reiterated phrases, into which are rolled the mimicked calls and songs of many other birds, e.g. Redwhiskered Bulbul, Tailor Bird, Quaker Babbler, Spotted Babbler, etc. Delivered chiefly in the mornings and evenings from well up in a tree. Alarm-note, a subdued high-pitched *kreeee*.

BREEDING. *Season*, May to September, chiefly June to August (monsoon). *Nest*, a thick pad or shallow cup of moss, roots and twigs, usually intermixed with a certain amount of mud, lined with rootlets and leaf stems; placed in a fork of a sapling, coffee bush or tree, between one and four metres above the ground; preferably in an open situation like forest edge rather than in the interior of shrubbery. *Eggs*, 3 or 4, pale green [or pale stone colour] speckled and blotched with reddish brown. Average size of 40 eggs 25 x 18.5 mm (Baker). Nest-building and incubation by both sexes but apparently more by female. Incubation period 13 to 14 days. Care of young by both parents. Young remain in nest for c. 12 days.

MUSEUM DIAGNOSIS. Differs from *citrina* (1733) in having the ear-coverts whitish with two dark brown oblique stripes, the crown suffused with olive, and the throat white.

Female, like male but mantle strongly tinged with olive.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	106-119	20-25	20-33	72-80 mm
♀♀	102-116	(mostly 23-24)	28-29	67-77 mm

(HW, SA, Koelz)

Weight 20 ♂ ♀ 47-60 (av. 53.3) g—SA. 3 ♂♂ 35 (2), 49; 10 oo? 55-63 g—SDR.

COLOURS OF BARE PARTS. Iris dark brown; bare skin behind eye slatey. Bill slatey brown, base of lower mandible flesh; mouth fleshy pink, greyish pink or yellowish pink. Legs, feet and claws brownish flesh.

1735. *Zoothera citrina andamanensis* (Walden)

Geocichla andamanensis Walden, 1874, Ann. Mag. Nat. Hist. 14: 156 (Andamans)
Baker, FBI No. 590, Vol. 2: 152

LOCAL NAMES. None recorded.

SIZE. Myna —; length c. 20 cm (8 in.).

FIELD CHARACTERS. As in 1733 but throat whitish; no white on wing.

STATUS, DISTRIBUTION and HABITAT. Common resident: Andaman Islands. Affects heavy forest.

GENERAL HABITS, FOOD and VOICE. As in 1733, q.v.

BREEDING. Season, May to July. Nest and eggs (normally c/3) as in 1734; for details see Baker, *Nidification* 2: 133. Average size of 100 eggs 25.1 × 18.5 mm (Baker).

MUSEUM DIAGNOSIS. Sex for sex like nominate *citrina* (1733) but rufous colour darker, chin and throat whitish; a trace of dark bars on cheeks; no white on wing. Size smaller.

Fledgling. 'Olive-grey above, head, neck and back streaked with buff, most broadly on neck; the two stripes below eye almost black and very distinct; upper breast with buff feathers edged with olivaceous; remaining lower parts buff' (Butler, JBNHS 12: 556).

MEASUREMENTS

	Wing	Tarsus	Tail
♂♀	100-107	30-31	70-71 mm (Baker)

COLOURS OF BARE PARTS. As in 1733.

1736. *Zoothera citrina albogularis* (Blyth)

G.(eocichla) albogularis Blyth, 1847, Jour. Asiatic Soc. Bengal 16: 146
(Nicobar Islands)

Baker, FBI No. 591, Vol. 2: 153

LOCAL NAME. Chook-chyong (Car Nicobar).

SIZE. Myna -; length c. 20 cm (8 in.).

FIELD CHARACTERS. As in 1735, also with white throat and no white on wing. See Museum Diagnosis.

STATUS, DISTRIBUTION and HABITAT. Fairly common resident: Nicobar Islands. Affects dank jungle, forest and village clearings.

GENERAL HABITS, FOOD and VOICE. As in 1733, q.v.

BREEDING. Unrecorded, probably as in 1735.

MUSEUM DIAGNOSIS. As *andamanensis* sex for sex but rufous colour darker, more chestnut, especially on head. Chin and throat white. No white on wing.

MEASUREMENTS

	Wing	Tarsus	Tail
♂♀	100-106	c. 31	66-72 mm (Baker)

COLOURS OF BARE PARTS. As in 1733.

1737. Spottedwinged Ground Thrush. *Zoothera spiloptera* (Blyth)

O.(reocincla) spiloptera Blyth, 1847, Jour. Asiatic Soc. Bengal 16: 142 (Ceylon)
Baker, FBI No. 602, Vol. 2: 165

Plate 94, fig. 2

LOCAL NAMES. *Wäl avichchiyā, Gomā avichchiyā* (Sinhala).

SIZE. Myna —; length c. 21 cm (8½ in.).

FIELD CHARACTERS. *Above*, olive-brown with two rows of white spots on wing. Cheeks whitish with two dark brown stripes. *Below*, creamy white boldly spotted with dark brown, especially on breast and upper belly. Flanks olive-brown. Sexes alike.



× c. 1

Distinguished from female *Z. wardii* (1731) by cheek-stripes, lack of prominent supercilium and spotted rather than barred underparts.

STATUS, DISTRIBUTION and HABITAT. Endemic to Sri

Lanka. Resident in moderate numbers, but locally distributed; throughout the hills up to c. 1500 m (Phillips) or 1800 m (Henry), and in the low-country Wet zone to the south and southwest almost to the coast; optimum zone 600–1200 m. Very scarce in the Dry zone forests to the north. Affects forest or well-wooded country (e.g. cardamom jungle, cacao estates, etc.).

GENERAL HABITS. Solitary. Feeds on the ground, vigorously turning over dead leaves in search of prey.

FOOD. Worms, insects, etc., and probably also berries.

VOICE and CALLS. Has a rather mournful short song of rich repeated whistles (Roberts), usually uttered from the lower branches of trees. A feeble call-note.

BREEDING. Season, two distinct periods: February to May and August to December, the second seemingly the principal breeding season. At least two broods are reared. Nest, a cup of green moss with a few twigs, decayed leaves or other material and generally with ragged scraps of material dangling beneath the nest; lining mainly of black fern and moss rootlets and decayed leaves; generally placed in a low, exposed fork between one and three metres above the ground, in a sapling or small tree growing among undergrowth in heavy forest, in cardamom plants or in the tops of tea bushes, or sometimes on a ledge of moss-covered rock. Eggs, normally 2, pale buff densely covered with blotches, freckles and specks of light reddish brown. Average size of 20 eggs 26·8 × 19·7 mm (Baker). Incubation probably by both sexes; period unrecorded. Care of young by both parents.

MUSEUM DIAGNOSIS. See Field Characters.

Young (immature). Upperparts ferruginous brown, the feathers with fine fulvous shaft-streaks. Wing and tail as in adult but median coverts with fulvous spots. Sides of head marked as in adult but white replaced by fulvous. Underparts fulvous buff, the feathers of breast and upper abdomen with brown tips.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
5 ♂♂	97–102	22–23	—	74–80 mm
1 ♀	96	23	33	78 mm
				(HW, SDR)

Weight 1 ♂ 70 g (SDR).

COLOURS OF BARE PARTS. Iris brown. Bill horny black paler at base of lower mandible. Legs and feet dusky bluish grey or greyish fleshy.

ZOOTHERA MOLLISSIMA (Blyth): PLAINBACKED MOUNTAIN THRUSH
Key to the Subspecies

- More olive-brown; crown concolorous with back *Z. m. whiteheadi*
 More rufescent; crown darker than back *Z. m. mollissima*

1738. *Zoothera mollissima whiteheadi* (Baker)

Oreocincla whiteheadi Baker, 1913, Bull. Brit. Orn. Cl. 31: 79

(Khagan Valley, Afridi Country, NWFP)

Oreocincla mollissima simlaensis Baker, 1924, Fauna Brit. India, Bds. 2: 164
 (Simla, Punjab)

Baker, FBI Nos. 600 and 601, Vol. 2: 163, 164

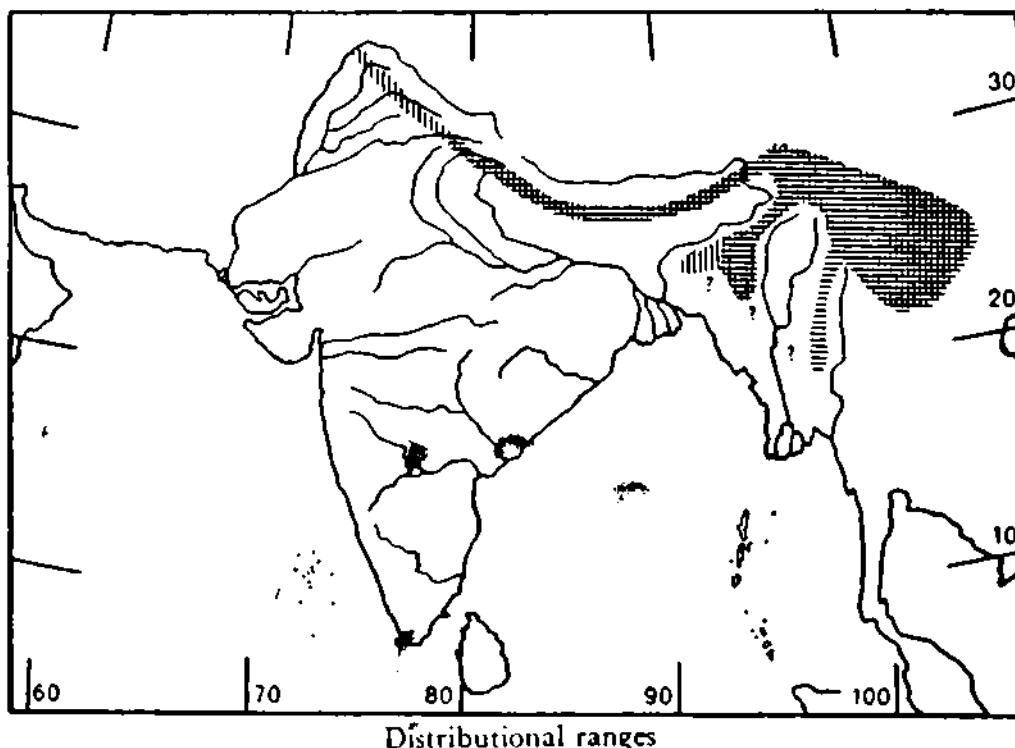
LOCAL NAMES. None recorded.

SIZE. Myna +; length c. 27 cm (11 in.).

FIELD CHARACTERS. As in 1739, q.v.

STATUS, DISTRIBUTION and HABITAT. Altitudinal migrant; on the whole rather scarce, but locally may be common. The western Himalayas from Hazara (Kagan Valley) east to Kumaon, probably intergrading in the latter area with nominate *mollissima* (*vide* Rand & Fleming, 1957: 160). Affects

Zoothera mollissima* and *Z. dixoni



■ *mollissima* (1738, 1739)

■ *dixoni* (1740)

■ Both

■ ? Breeding uncertain

dwarf rhododendron and rocky ground with scattered bushes near timber-line, open pasture interspersed with rocky ground, or bare rocky slopes above timber-line, between 3600 and 4000 m (Garhwal), 2700 and 3600 m (Kulu), 3700 and 4000 m (Kagan Valley). Winters (October to March) between c. 900 and 2600 m in open forest (*kharshu* oak and other).

FOOD. Insects, snails, berries and seeds.

VOICE and CALLS. A rattling alarm-note—‘like a policeman’s rattle’—similar to that of *Turdus merula maximus* which occurs on the same ground; a single call-note (Whitehead). Song similar to that of *Zoothera dauma* with short phrases uttered at spaced intervals but slightly more rapid and varied in tempo (Craig Robson, pers. comm.).

BREEDING. Season, May to July. Nest, a cup of moss and dried grass lined with rootlets and fine grass placed on a ledge of rock (Whitehead), on the ground among dwarf rhododendron (BBO, JBNHS 11: 472) or ‘in a low fork almost on the ground on the side of a hill’ (W. H. Matthews, JBNHS 25: 496). Eggs 4, whitish, profusely spotted with blood-red and reddish brown, more densely about the large end. In shape they are elongated oval, generally rather obtuse at both ends (Hume). Four eggs measure 35.8 × 24.3, 35.5 × 23.6, 35.5 × 23.3 and 35.3 × 24.1 mm (Matthews, loc. cit.); one egg collected by Whitehead measured 32.4 × 21.5 mm (Baker) [cf. eggs of *Z. dixoni* for differences in shape, colour and size. These data however need confirmation]. Both parents tend the young; their share in other chores unknown.

MUSEUM DIAGNOSIS. Differs from nominate *mollissima* (1739) in being paler (less rufescent) above, in having the crown concolorous with the back, and in being smaller. Baker’s description of *whiteheadi* is based on specimens ‘in such worn plumage that it is totally unfit for colour comparison’ (Vaurie, 1955).

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
1 ♂	140	26	36	{ 97 mm
1 ♀	143			102 mm
				(MD)
12 ♂♀	140–149 (av. 145)	—	—	78–95 mm (av. 86.5) (Vaurie)

COLOURS OF BARE PARTS. Iris brown. Bill blackish brown, base of lower mandible paler; inside of mouth yellow. Legs and feet yellowish.

1739. *Zoothera mollissima mollissima* (Blyth)

Turdus (*turdus*) *mollissimus* Blyth, 1842, Jour. Asiatic Soc. Bengal 11: 188 (Darjeeling)
Baker, FBI No. 599, Vol. 2: 162

Plate 94, fig. 4

LOCAL NAMES. *Phanniok-kiock-pho* (Lepcha); *Telia kanrim* (Bhutanese).

SIZE. Myna +; length c. 27 cm (11 in.)

FIELD CHARACTERS. *Above*, rufescent olive-brown. A conspicuous pale eye-ring; tips of outer rectrices white. A white wing-patch prominent in flight but concealed at rest. *Below*, throat, sides of neck, breast and flanks buff

changing to white on belly, boldly marked with dark brown crescentic spots. Sexes alike.

Confusingly like *Z. dixoni* (1740) and many sight records probably equivocal. But on a good view may be distinguished from it by absence of whitish wing-bars (wing-coverts sometimes narrowly tipped with pale colour but this character inconspicuous).

STATUS, DISTRIBUTION and HABITAT. Common altitudinal migrant. The Himalayas from western Nepal east through Darjeeling, Sikkim, Bhutan and Arunachal Pradesh, breeding between 3000 and 4300 m, wintering (October to April) between c. 1300 and 3600 m, mostly 1500–2400 m. Also occurs south of the Brahmaputra but status uncertain: Manipur (Hume—winter), Cachar (Baker—winter) and Khasi Hills (Godwin-Austen, Baker—undated). Affects open grassy hillsides (Fleming & Traylor, 1968) and rocky, boulder-strewn slopes with dense bushes and grass (cf. Diesselhorst, 1968; see also 1738). In winter affects open bush country about fallow cultivation on hillsides and stream valleys, and along mule paths.

Extralimital. Ranges east to southwestern Sichuan. The species extends to western Sichuan and Yunnan, in winter to northern Vietnam.

GENERAL HABITS. Keeps in pairs in the breeding season when very wild and difficult to approach. Often in small scattered parties in winter, feeding quietly on the ground in shady spots, flying up almost perpendicularly into overhanging branches when disturbed, and there sitting motionless, its coloration and pattern obliterating it completely. Often forages in fallow fields and sparse undergrowth away from dense cover, digging in the earth and rummaging among the mulch for insects etc.

FOOD. As in 1738.

VOICE and CALLS. As in 1738.

BREEDING. See 1738. No recent definitive data. Eggs brought to Hume measure 34·2 × 22·3 mm.

MUSEUM DIAGNOSIS. Differs from *whiteheadi* (1738) in being more rufescent above, in having the crown darker than the back, and in being larger. For distinction from *Z. dixoni* see 1740, Museum Diagnosis.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
Nepal, Sikkim				
3 ♂♂	141–146	25–26	37–39	98–99 mm
5 ♀♀	134–144	25–26	36–37	91–96 mm
(SA, Rand & Fleming, BB)				
Sikkim				
5 ♂ ♀	136–144 (av. 141)	—	—	76–96 mm (av. 84·5) (Vaurie)
SE. Tibet				
45 ♂♀	130–151	25–28	—	85–109 mm (NBK)
Sichuan				
1 ♂	159	29	38	117 mm
4 ♀♀	132–155	28–30	36–40	102–110 mm (MD)

Weight 1 ♂ (December) 93.1 g (RAP). 4 ♂♂ 98–112; 1 ♀ 89.6 g (Hume).

COLOURS OF BARE PARTS. Iris brown. Bill brownish black, dusky yellow at base of lower mandible. Legs and feet brownish flesh; claws horny brown (SA).

1740. Longtailed Mountain Thrush. *Zoothera dixoni* (Seeböhm)

Geocichla dixoni Seeböhm, 1881, Cat. Bds. British Mus. 5: 161

(Himalayas, spp. from Nepal and Darjeeling)

Not in Baker, FBI

Plate 94, fig. 6

LOCAL NAMES. None recorded.

SIZE. Myna +; length c. 27 cm (11 in.).

FIELD CHARACTERS. *Above*, olive-brown. A conspicuous pale eye-ring. Two buff wing-bars; a large buff wing-patch concealed at rest but showing prominently in flight. *Below*, throat, breast and flanks buff changing to white on belly, boldly spotted with dark brown. Sexes alike.

Very similar to *Z. mollissima* (1739) but double wing-bar distinct enough to be a good field character.

STATUS, DISTRIBUTION and HABITAT. Fairly common altitudinal migrant. The Himalayas from the Sutlej river (Rampur, Koelz coll. *fide* Vaurie, 1955: 3) and the 'hills north of Mussoorie' (specimen in British Mus.), east through Nepal, Darjeeling, Sikkim, Bhutan and Arunachal Pradesh (Baker, *Rec. Indian Mus.* 9: 252, as '*mollissima*'; Ludlow, 1944 and 1951). Also occurs south of the Brahmaputra in Nagaland (Godwin-Austen—winter); Manipur and North Cachar hill tracts (Godwin-Austen—undated). Breeds between 2100 m (Nepal—GD) and 4200 m (Bhutan, SE. Tibet—Ludlow); winters mostly between c. 1500 and 2700 m. In summer affects principally dense forest of *Abies-Betula-Rhododendron* near timber-line; no other thrush was found in the biotope of this species (GD); also occurs in juniper forest (Fleming & Taylor) and in high scrub above timber-line (Cranbrook). In winter frequents heavy forest, dense jungle, especially in the vicinity of streams, and also the same biotope as *Z. mollissima*, i.e. open bush country about fallow cultivation on hillsides (SA).

Extrazonal. Extends to southeastern Sichuan and northern Yunnan. Winters to the northern Indochinese countries.

GENERAL HABITS. Keeps in pairs or in small loose parties according to season. Spends most of its time on the ground, flying up into bushes or trees when disturbed. In breeding season very secretive and keeping to dense forest. In winter has been noted to feed in company with *Z. mollissima* (SA).

FOOD. Insects and their larvae; also snails, and berries.

VOICE and CALLS. Little recorded. A very turdine song of flute-like notes (GD). Comparable description with that of *Z. mollissima* very desirable.

BREEDING. Season, May to July. Nest, a cup of moss about the size of a Blackbird's nest, lined with dry grass, built upon a foundation of twigs and placed in a juniper three metres above the ground (Ludlow). Other nests found by Whymper in Garhwal (Baker, *Nidification* 2: 142, under *O. mollissima simlaensis*) were placed in willows broken down by snow,

blackbird-like in shape but without any mud. Nests found by Osmaston (*in Baker, loc. cit.*) probably belonged to this species; with the exception of one nest placed on a boulder, all were in trees, either silver fir or *kharshu* oak, at heights of about three metres from the ground. Eggs, 3, dull greenish marked with reddish brown blotches or stippling, numerous everywhere but more so at the larger end where they may form a cap or zone; typically like large, handsomely marked eggs of the Blackbird but ground colour duller and darker, and markings browner, less reddish. In shape they are long, pointed oval; apparently smaller than those of *Z. mollissima*. Average size of 22 eggs by Baker (not all being beyond doubt of *Z. dixoni*) 30.5 × 21.6 mm [cf. *Z. mollissima whiteheadi* (1738) for differences. Data require confirmation.]

MUSEUM DIAGNOSIS. Distinguished from *Z. mollissima* mainly by the three following characters: 1. Presence of pale shaft-streaks on crown (very worn specimens of *Z. mollissima* may show some streaks). 2. Buff tips of median and greater coverts over 2 mm wide (in adult *Z. mollissima* absent or very narrow, less than 2 mm). 3. Dark tips of abdomen feathers shaped like half-moon (crescent-shaped in *Z. mollissima*). The preceding characters should identify any single specimen at a glance. Taken as series, *Z. dixoni* is less rufescent above than nominate *mollissima* but almost identical with *whiteheadi*. Throat and breast are paler buff. Bill is noticeably smaller and lower mandible more yellow than in nominate *mollissima* but indistinguishable from that of *whiteheadi*. *Z. dixoni* has usually more white on the outer rectrices, this colour extending along the shaft towards the base. Tail averages longer. Tail-wing index¹ 80 in *Z. dixoni*, 70 in *Z. mollissima* (SA). See Measurements.

Young, more olive-brown, shaft-streaks and tips of wing-coverts yellow-buff. Below, generally paler; dark lines on either side of throat less pronounced than in *mollissima*, breast with fewer and narrower markings, and under tail-coverts yellowish with rusty edges, instead of white with dusky olive margins (NBK).

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
6 ♂♂	131–141	24–27	37–39	112–113 mm
6 ♀♀	134–144	25	(1) 37	108–116 mm (MD, Stres., SA)
26 ♂♀	132–147 (av. 138.6)	26–30 (av. 27.7)	37–40 (av. 38.2)	108–120 mm (av. 114.8) (Delacour)
25 ♂♀	131–146 (av. 140)	26–29 (av. 27)	—	94–110 mm (av. 102) (Vaurie)
22 ♂♀	132–143	24–28	—	107–116 mm (NBK)

Weight 3 ♂♂ (winter) 98–103; 4 ♀♀ (winter) 88.7–98 g (SDR, RAP). 1 ♀ (July) 71.5 g (RAP). 1 ♂ (June) 81; 4 juv. (July–Sept.) 70.4–99.8 g (GD, SDR).

COLOURS OF BARE PARTS. Iris brown; orbital skin green (imm.). Bill dark brown, yellow at base of lower mandible. Legs and feet flesh to dull yellow.

¹ Tail × 100
—
Wing

ZOOTHERA DAUMA (Latham): SMALLBILLED MOUNTAIN THRUSH**Key to the Subspecies**

		Page
A	Upperparts with buff spots	
1	Tail always of 14 rectrices; size larger	Z. d. aurea 103
2	Tail usually of 12 rectrices; size smaller	Z. d. dauma 100
B	Upperparts without buff spots; tail always of 12 rectrices	
3	Lower parts white	Z. d. neilgherriensis 102
4	Lower parts rufous buff	Z. d. imbricata 103

1741. *Zoothera dauma dauma* (Latham)

Turdus Dauma Latham, 1790, Index Orn. 1: 362 (India = Kashmir)
Baker, FBI No. 595, Vol. 2: 158

Plate 94, fig. 8

LOCAL NAMES. None recorded.

SIZE. Myna +; length c. 26 cm (10½ in.).

FIELD CHARACTERS. *Above*, olive-brown with buff and black crescent-shaped markings. Closed wings with buff and dark brown bars. A large buff wing-patch on the under surface of wing showing prominently in flight. *Below*, throat and belly white, breast and flanks buff boldly marked with dark brown crescentic spots. Sexes alike.

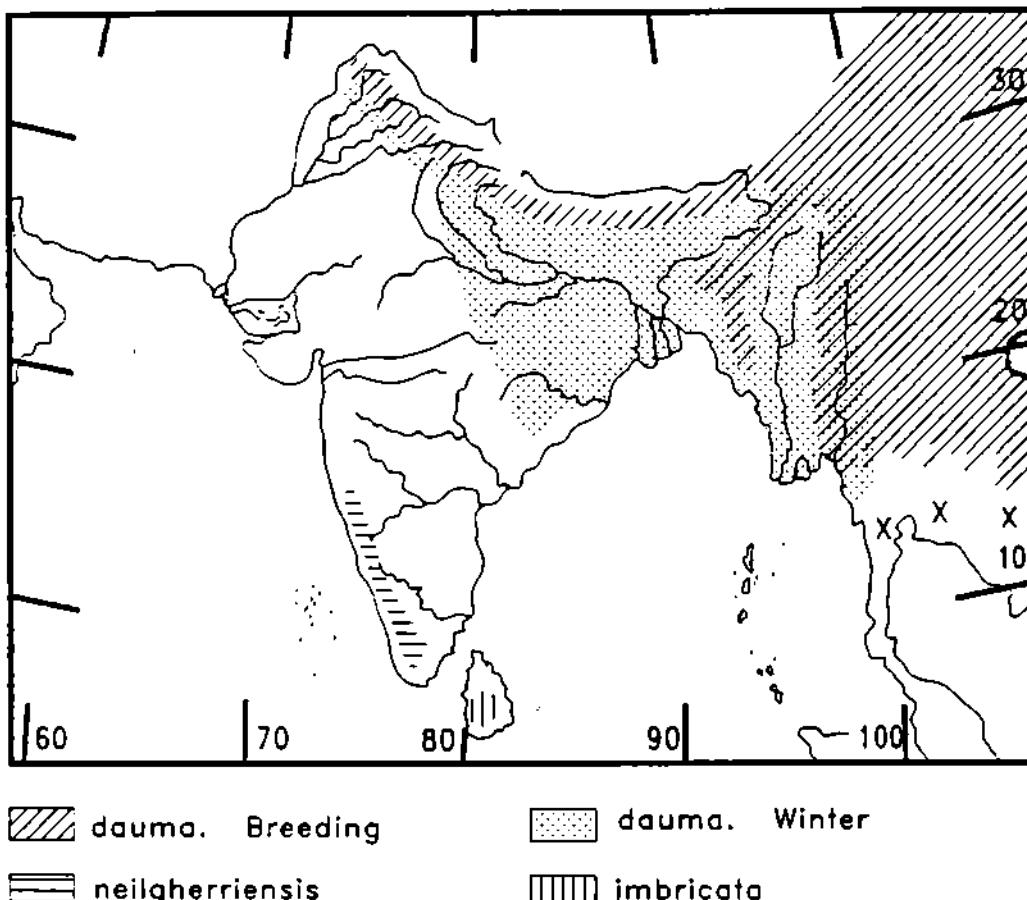
The only thrush with a spotted back.

STATUS, DISTRIBUTION and HABITAT. Altitudinal and short-range migrant, fairly common. The Himalayas from Murree and Kashmir east to Bhutan and Arunachal Pradesh (?); also in the Garo, Khasi and Cachar hills, and Manipur. Breeds above 2100 m around Murree, between 2400 and 3000 m in Kashmir, possibly up to 3600 (tree-limit) in Garhwal, and from 2400 to 3300 m in Bhutan. No summer data for Arunachal and Nepal¹ (cf. Biswas, 1961; Diesselhorst, 1968). Winters (November to April) from c. 1800 m down to the foothills (once Peshawar), terai and sparingly south to Madhya Pradesh (Gwalior), eastern Maharashtra (Kamptee), Raipur, Orissa, hills of Andhra Pradesh, Bihar (Madhubani), and southern Bengal; also the plains of the Brahmaputra, the Garo, Khasi and Mizo hills, and Bangladesh south to the Chittagong region. In the summer affects heavy forest of *kharshu* oak and silver fir; in winter dense forest with grassy clearings, dense jungle with undergrowth of bracken or seedlings, edges of pasture-land and sal forest; also well-wooded banks of streams, bamboo brakes, mango topes, etc.

Extralimital. Extends north through Sichuan, east to Guangxi, Laos and Vietnam. Disjunct subspecies in southern India and Sri Lanka. Many other subspecies in the southern Indochinese countries, Indonesia, New Guinea, northern and eastern Australia and Tasmania; also Taiwan, Japan, Manchuria and southern Siberia from Amurland to the Ural Mts (ssp. *aurea*).

GENERAL HABITS. Keeps singly or in pairs. A quiet, retiring bird generally

¹ For subsequent summer record from Pokara, C. Nepal, see Paul Hendrick, JBNHS 79: 251.

Zootnera dauma

seen hopping about on the forest floor or along paths, turning over dry leaves in quest of food. From time to time wags posterior part of body violently up and down, jerking open tail and suddenly opening and shutting wings in order to stampede lurking insects. Flies silently up into the lower branches of a tree when disturbed, remaining there motionless and difficult to spot. Flight reminiscent of Plaintive Cuckoo or Hawk-Cuckoo, with the same upward glide before alighting on a branch.

FOOD. Insects and their larvae, and berries.

VOICE and CALLS. A fine loud song reminiscent of the Mistle Thrush's but more disconnected, a long pause coming between each phrase: *chirrup . . . chewee . . . chueu . . . wiow . . . we ep . . . chirrol . . . chup . . . chewee . . . wiop* (Magrath). Also described as 'a few fine notes connected by a curious medley of squeaks and chuckles . . . for hours together with very little variation' (Proud). Song period (in Nepal) early April to mid June. Other notes not recorded.

BREEDING. Season, end of April to June. Nest, a wide cup of green moss mixed with rootlets, leaves and grass; lined with rootlets or stalks of maiden-hair fern; placed in a fork of a tree or bush usually between one and six metres from the ground, occasionally in a bank among stones covered with moss and undergrowth.¹ Eggs, 3 or 4, pale clay to yellowish green densely freckled with pale reddish. Average size of 25 eggs 30.5 × 22.3 mm

¹ However, nests described by Bates in JBNHS 30: 100 and quoted by Baker in Nidification 2: 136 appear to belong to *Monticola cinctorhynchus*.

(Baker). Share of the sexes in the domestic chores, and incubation period, unrecorded.

MUSEUM DIAGNOSIS. See Field Characters. In summer the upperparts are greyer and the underparts lose some of the ochraceous tinge (HW). Rectrices 12; occasionally 14 in eastern part of range.

Young, very like adult but markings below are more bars than crescents. Upperparts with golden bars and black tips; lesser wing-coverts with more definite ochraceous streaks. Postjuvenile moult of body-feathers, lesser and apparently inner median and inner greater coverts.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	137-150	26-31	34-36 (once 41)	91-107 mm
♀♀	135-150	21-29	34-35	97-102 mm (BB, SA, Rand & Fleming)

Wing sometimes smaller: 3 ♂♀ 127, 130, 131 mm (SDR, Stres.)

Weight 6 ♂♂ (Oct.) 94.7-115.2; 3 ♀♀ (Oct.) 93.7-104 g (GD, SA). 3 ♂♂ (Feb.-March) 92-110; 2 ♀♀ (Mar.-April) 100, 100 g (SA). 1 ♂ 1st winter 130 g (SDR).

COLOURS OF BARE PARTS. Iris dark brown; orbital skin yellowish. Bill: upper mandible horny black; lower mandible pale brownish yellow on base, whitish on middle turning horny anteriorly until tip is horny black. Legs and feet pale horny brown; claws pale horny, paler on tip; soles yellowish white.

1742. *Zoothera dauma neilgherriensis* (Blyth)

O.(reocincta) neilgherriensis Blyth, 1847, Jour. Asiatic. Soc. Bengal 16: 141
(Neilgherries)

Baker, FBI No. 596, Vol. 2: 159

LOCAL NAME. *Kozhikkilipponan* (Malayalam).

SIZE. Myna +; length c. 26 cm (10½ in.).

FIELD CHARACTERS. As in 1741 but upperparts without buff spots.

STATUS, DISTRIBUTION and HABITAT. Uncommon resident. The Western Ghats complex in southern India from Goa (?) and northern Karnataka (Londa, Koelz, JBNHS 43: 15), the Biligirirangan Hills and Coorg district south through Kerala and western Tamil Nadu (Nilgiri, Palni and associated hills) from c. 600 to 2100 m. Affects dense evergreen sholas and forest.

GENERAL HABITS, FOOD and VOICE. As in 1741, q.v.

BREEDING. Season, March to June. Nest, as in 1741. Eggs 2, rarely 3, similar to those of 1741 but as a series darker, duller and browner, and more feebly marked. Average size of 10 eggs 32.5 × 23.2 mm (Baker).

MUSEUM DIAGNOSIS. Differs from *dauma* in being much darker above, lacking the golden-buff spots almost entirely.

MEASUREMENTS

	Wing	Bill (from feathers)	Tarsus	Tail
♂♀	124-136	27-29	28-29	81-92 mm (Baker)

COLOURS OF BARE PARTS. Iris hazel to dark brown. Bill: upper mandible dark horny brown, lower pale horny brown, darker at tip. Legs and feet fleshy to horny white.

1743. *Zoothera dauma imbricata* Layard

Zoothera imbricata Layard, 1854, Ann. Mag. Nat. Hist. 13: 212 (Ceylon)
Baker, FBI No. 597, Vol. 2: 160

LOCAL NAME. *Wäl avichchiyā* (Sinhala).

SIZE. Myna ±; length c. 24 cm (9½ in.).

FIELD CHARACTERS. As in 1741 but upperparts olive-brown with black crescent-shaped marks, no buff spots. Lower parts rufous-buff.

The Spottedwinged Thrush (1737) is distinguished from it by its plain, unspotted back.

STATUS, DISTRIBUTION and HABITAT. Resident, in small numbers in the hills of Sri Lanka between c. 600 and 1500 m, mostly above 900 m. Affects dense forest.

GENERAL HABITS, FOOD and VOICE. As in 1741, q.v.

BREEDING. Season, March to May and July to October. Possibly double-brooded. Nest and eggs (c/2), as in 1741. Average size of 6 eggs 30·5 × 21·2 mm (Baker). Incubation apparently by female only.

MUSEUM DIAGNOSIS. Differs from the Nilgiri Thrush (1742) in being darker above and in having the underparts rufous-buff instead of white and the crescentic black edges to the feathers narrower.

MEASUREMENTS

	Wing	Bill (from feathers)	Tarsus	Tail
♂♀	116–127	26–27	c. 27	75–78 mm (Baker)

COLOURS OF BARE PARTS. As in 1742.

1744. *Zoothera dauma aurea* (Holandre)

Turdus aureus Holandre, 1825, Faune dép. Moselle, Ann. de la Moselle: 60 (Metz)
Baker, FBI No. 598, Vol. 2: 161

LOCAL NAMES. None recorded.

SIZE. Myna +; length c. 27 cm (12 in.).

FIELD CHARACTERS. As in 1741, q.v.

STATUS, DISTRIBUTION and HABITAT. Winter vagrant, two records: Dibrugarh, Assam, 12 February 1905 (W. Moore, JBNHS 16: 502); Tirap Div., Arunachal Pradesh, 14 December 1981 (specimen in BNHS coll.). The bird was obtained in *ekra* jungle.

Extralimital. See 1741. This subspecies winters in southern China and northern Indochinese countries.

GENERAL HABITS, FOOD and VOICE. Probably as in 1741.

MUSEUM DIAGNOSIS. Similar to *dauma* but larger. Tail with 14 rectrices (v. usually 12). For details of plumage see Dementiev.

MEASUREMENTS

	Wing	Bill (from skull)	Tail
11 ♂♀	151–165 (av. 156·9)	27–31	112–118 mm

Weight 3 ♂♂ 101, 146·5, 162 (av. 136·5); 1 ♀ 128 g—Dementiev.

COLOURS OF BARE PARTS. Iris brown. Bill brownish, yellowish at base. Legs and feet yellowish brown.

1745. Large Brown Thrush. *Zoothera monticola monticola* Vigors

Zoothera monticola Vigors, 1832, Proc. Zool. Soc. London: 172
(Himalayas = Simla-Almora area)

Zoothera monticola tenebricola Koelz, 1954, Contrib. Inst. Regional Exploration,
No. 1: 13 (Sangau, Lushai Hills)
Baker, FBI No. 603, Vol. 2: 166

Plate 94, fig. 7

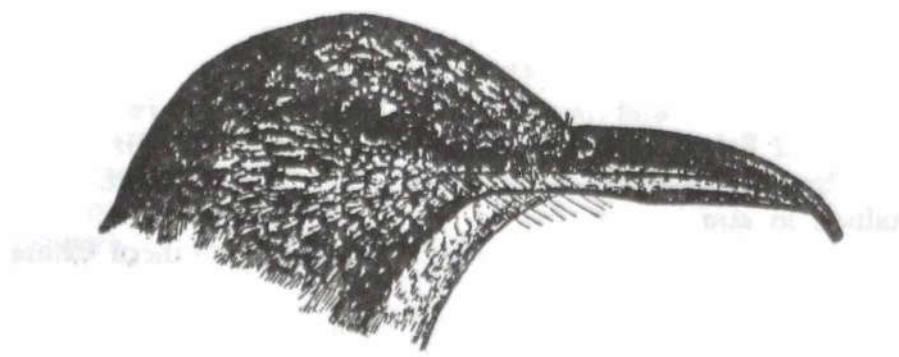
LOCAL NAME. *Daokat-buku-loubi* (Cachari).

SIZE. Myna +; length c. 28 cm (11½ in.).

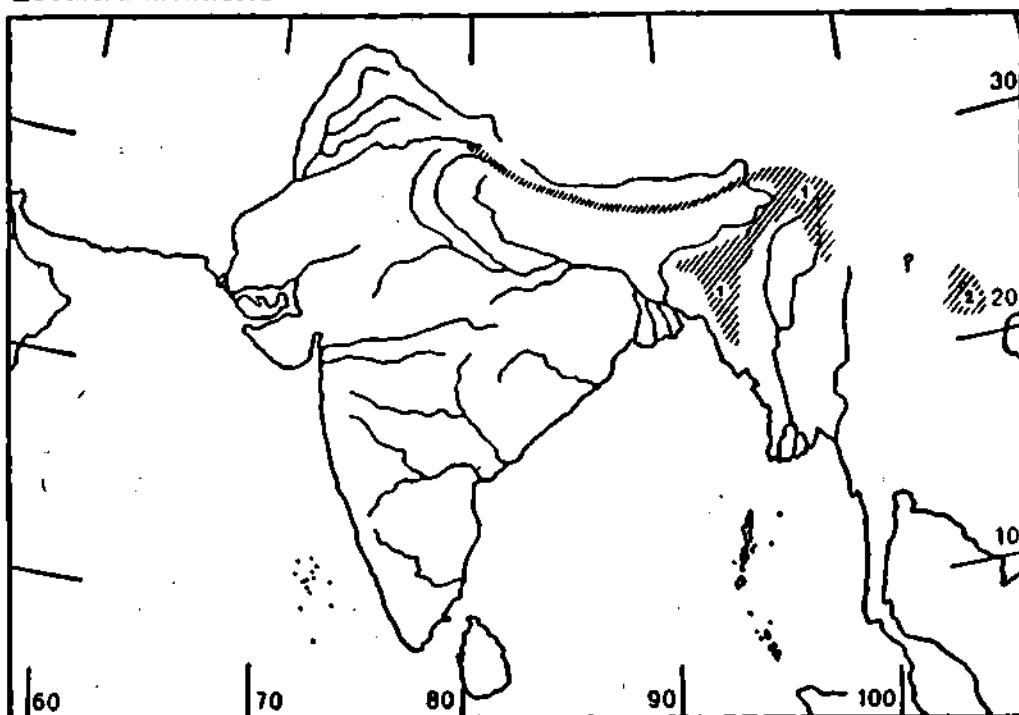
FIELD CHARACTERS. A stout, short-tailed thrush with a very large, curved bill. *Above*, dark slaty brown; sides of head with pale shaft-streaks. *Below*, throat whitish with a few dark brown spots. Sides of throat, breast and flanks olive-brown, the breast with darker brown and some buff spots. Belly, white with dark brown spots. A large white underwing patch conspicuous in flight. Sexes alike.

The remarkably large curved bill and absence of supercilium distinguish this species from female *Z. wardii*. May be easily confused with *Z. marginata* which has a paler breast, scale-like olive markings on belly (not dark brown spots), and whitish streaks on flanks.

STATUS, DISTRIBUTION and HABITAT. Scarce resident subject to vertical movements. The Himalayas from Kulu eastward through Arunachal Pradesh, thence south through Nagaland, Manipur and Meghalaya south to the Mizô Hills (Koelz) and the Chittagong Hill Tracts (Rashid). Breeds above c. 2000 m (Simla), 3400 m (Garhwal), between 2100 and 3000 m, optimum 2400–2700 m (Sikkim), 900–1800 m (Cachar), 1200–1900 m



x c. 1

Zoothera monticola

Distributional ranges

1 *monticola* (1745)

2 *atrata* (RE)

(Khasi Hills) and 2600–3000 m (Mt Victoria). Winters (November to March) between 1500 and 2000 m (Simla), down to c. 300 m (Nepal) and from the duars and foothills of Jalpaiguri district up to 2900 m in Sikkim and Bhutan. Affects small mountain streams running through dense forest, and dense, matted undergrowth of bamboo, rhododendron, etc. on swampy ground in damp forest.

Extralimital. Extends to the Chin Hills and the Myitkyina district of Burma. Another subspecies in northern Vietnam.

GENERAL HABITS. Keeps singly. Haunts dark dense forest undergrowth where its coloration is astonishingly obliterative, only movement giving it away. A quiet bird of crepuscular habits, feeding on the swampy margins of wooded streams and damp forest floor, tossing leaves about with its large bill, or turning over stones in stream-beds. 'It is a busy bird whilst feeding, moving back with its tail lowered when a stone is displaced, and then darting forward with its tail cocked and seizing any worm or insect exposed by the removal of the stone. The favourite hunting ground of this thrush appears to be accumulations of ooze and gravel at the base of boulders . . . The flight is generally up or down stream, but when much disturbed darts through thick underwood and makes for the next nullah . . . I have never seen one away from the immediate vicinity of a well-wooded nullah . . . Flight rapid, more like that of dipper than thrush' (S. J. Martin, JBNHS 26: 668).

FOOD. Insects and their larvae, snails, berries.

VOICE and CALLS. Not adequately described. Said to have 'a beautiful mellow whistle'.

BREEDING. Season, May to July. Nest, a bulky cup of fresh damp moss

mixed with earth and leaves with an inner layer of roots and twigs; lined with rootlets, lichen and soft fibres. Placed in a fork or horizontal branch of a moss-covered tree between two and five metres above the ground, sometimes up to seven metres. Occasional nests may be placed among moss and ferns against tree-trunks (once against the face of a huge boulder). Eggs, 3 or 4, pale grey-green to pale olive-green, or pale cream to warm buff, marked with reddish brown specks or small blotches. Average size of 50 eggs 30 × 21·3 mm (Baker).

MUSEUM DIAGNOSIS. See Field Characters.

Young. Upperparts blackish brown with pale shaft-streaks; lesser, median and greater coverts with ochraceous tips. Underparts much as in adult. Postjuvenile moult of body-feathers, lesser, median and inner greater coverts.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	132–150	41–46	35–36	78–93 mm
♀♀	130–141	41 (1 msd)	—	83 mm (1 msd)
			(Koelz, HW, BB, MD, SA)	

Weight 1 ♂ 122; 1 ♀ 131 g (SA, BB).

COLOURS OF BARE PARTS. Iris dark brown. Bill dark brown. Legs and feet light horny brown.

1746. Lesser Brown Thrush. *Zoothera marginata* Blyth

Z. (oothera) marginata Blyth, 1847, Jour. Asiat. Soc. Bengal 16: 141 (Arracan)

Zoothera marginata tenebrosa Koelz, 1952, Jour. Zool. Soc. India 4: 41
(Nichuguard, Naga Hills)

Baker, FBI No. 604, Vol. 2: 168

Plate 94, fig. 5

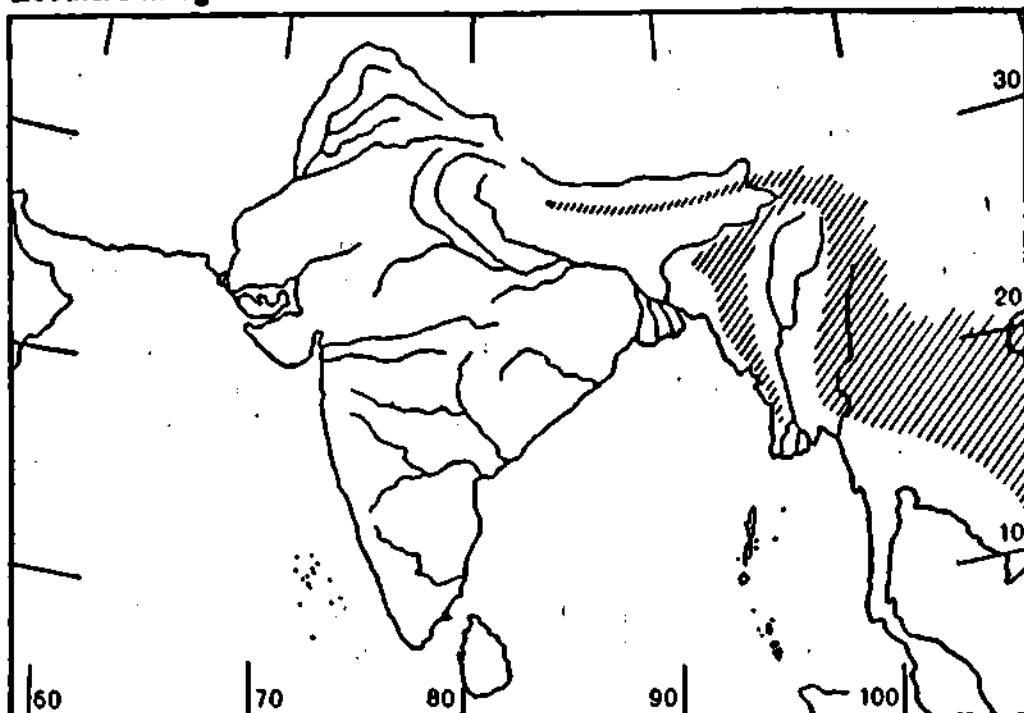
LOCAL NAME. *Daokat-buku-lowia* (Cachari).

SIZE. Myna +; length c. 25 cm (10 in.).

FIELD CHARACTERS. A stout, large-billed, short-tailed thrush. *Above*, rufescent olive-brown. *Below*, sides of head mottled whitish and brown. Throat whitish, a dark brown streak on each side. Breast and belly buffish white scalloped with olive-brown. Flanks olive-brown with whitish streaks. A buff underwing patch visible in flight. Sexes alike.

For distinction from *Z. monticola* see 1745.

STATUS, DISTRIBUTION and HABITAT. Uncommon resident, subject to short vertical movements. The lower Himalayas from western Nepal (Rand & Fleming, 1957; Biswas, 1961) eastward through northern Bengal (Darjeeling and Jalpaiguri districts); Sikkim, Bhutan and Arunachal Pradesh (Stevens, JBNHS 23: 262); thence south through Nagaland (Koelz, loc. cit.), Meghalaya, Manipur, Mizoram and Assam south to the Chittagong Hill Tracts of Bangladesh (Rashid). Recorded in winter from 1900 m (Sikkim) down to the foothills, the Nepal bhabar and the plains of the Brahmaputra. Presumably breeds in the higher parts of this zone (upper duns of Nepal, Sikkim about 1500 m). More common south of the Brahmaputra where it

Zoothera marginata

Distributional range

breeds between c. 750 and 2100 m. Affects damp forest along small watercourses; in winter also dense reed-jungle along the banks of sluggish streams in evergreen forest (plains of Lakhimpur).

Extralimital. Extends east to Vietnam.

GENERAL HABITS. Similar to those of *Z. monticola* (1745). Very retiring and crepuscular.

FOOD. Chiefly insects and molluscs.

VOICE AND CALLS. Unrecorded.

BREEDING. *Season*, May to August. *Nest* cup-shaped, made chiefly of moss mixed with some rootlets, twigs and stems, and lined with rootlets; similar to that of *Z. monticola* but more neatly built. *Eggs*, 3 or 4, like those of *Z. monticola* (1745, q.v.) but 'more handsome and much more varied'. For details see Baker, *Nidification* 2: 147. Average size of 50 eggs 27 × 20 mm. Incubation by both sexes; other details of breeding biology unrecorded.

MUSEUM DIAGNOSIS. See Field Characters.

Young birds have the upperparts darker, streaked with fulvous on back. Tips of wing-coverts fulvous. Underparts buffish, the feathers tipped with blackish, very heavily on breast.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
3 ♀♀	124–129	33–34	28–30	68–78 mm
10 ♂♀	122–130 mm (Koelz)			

Weight 1 ♂ 83 g (SDR).

COLOURS OF BARE PARTS. Iris hazel. Bill blackish brown. Legs and feet 'olivaceous-plumbeous' (Stevens).

Genus TURDUS Linnacus

Turdus Linnaeus, 1758, Syst. Nat., ed. 10, 1: 168. Type, by subsequent designation,

Turdus viscivorus Linnaeus

Arenaria Kaup, 1829, Skizz. Entwick. Nat. Syst.: 93. Type, by original designation,

Turdus pilaris Linnaeus

Bill about half the length of head. Rictal bristles moderate. Wing long and pointed, first primary (as.) small. Tarsus stout and long.

Key to the Species

	Page
I Tail largely rufous	<i>T. ruficollis ruficollis</i> ♂♀ 132
II Tail not rufous	
A Underparts uniformly coloured, no spotting or contrasting pattern	
1 Whole plumage black or slaty	
a Wings black, legs dark brown	<i>T. merula</i> ♂ 117
b Wings slaty brown, legs yellow	<i>T. m. nigropileus</i> ♂ 120
c Wings with a large grey patch	<i>T. boulboul</i> ♂ 115
2 Whole plumage dark brown	<i>T. merula</i> ♀ 117
3 Whole plumage olive-brown	<i>T. boulboul</i> ♀ 115
4 Plumage olive-brown or grey, abdomen whitish	
d Breast ashy	<i>T. unicolor</i> ♂ 111
e Breast pale brown or olive-brown	<i>T. m. nigropileus</i> ♀ 120
B Underparts with contrasting patterns but not streaked or spotted	
5 Throat white or greyish white	
f Belly and back brown or blackish brown	<i>T. albocinctus</i> ♂♀ 113
g Belly and back chestnut	<i>T. rubrocanus</i> ♂♀ 124
6 Throat black	
h Head grey	<i>T. ruficollis atrogularis</i> ♂ 130
i Head black	
a' Back whitish, rump chestnut	<i>T. kessleri</i> ♂ 127
b' Back and rump slaty	<i>T. dissimilis</i> ♂ 109
7 Throat grey or white	
j Breast and flanks rufous	<i>T. obscurus</i> ♂♀ 129
k Breast and flanks grey	<i>T. feae</i> ♂♀ 128
8 Throat dark brown, breast and flanks rufous	<i>T. kessleri</i> ♀ 127
C Underparts more or less streaked or spotted	
9 Underparts buff with dark brown roundish spots	
l Tips of outer rectrices white	<i>T. viscivorus</i> ♂♀ 136
m Tips of outer rectrices not white	<i>T. philomelos</i> ♂♀ 137
10 No white in tail	
n A conspicuous supercilium	
c' Flanks rufous, wings olive-brown	<i>T. iliacus</i> ♂♀ 135
d' Flanks spotted with blackish, wings rufous	<i>T. naumannii eunomus</i> ♂♀ 139

o No supercilium		
e' Flanks heavily spotted	<i>T. pilaris</i> ♂♀	134
f' Flanks not spotted		
O' Flanks lightly streaked, no rufous ...	<i>T. ruficollis atrogularis</i> ♀	130
O" Some rufous on flanks		
o' Lower breast rufous	<i>T. dissimilis</i> ♀	109
o" No rufous on breast	<i>T. unicolor</i> ♀	111

1747. Blackbreasted Thrush. *Turdus dissimilis dissimilis* Blyth

T.(urdus) dissimilis Blyth, 1847, Jour. Asiatic Soc. Bengal 16: 144 (Lower Bengal)
Turdus protomelas Cabanis, 1867, Jour. f. Orn. 15: 286 (Himalaya)
 Baker, FBI No. 580, Vol. 2: 140

Plate 94, fig. 10

LOCAL NAME. *Daokat gashim gajao* (Cachari).

SIZE. Myna; length c. 22 cm (9 in.).

FIELD CHARACTERS. A small dark thrush with orange-rufous flanks and axillaries.

Male. *Above*, whole head and nape black. Bill and eye-rim (orbital skin) yellow. Rest of upperparts slaty. *Below*, throat and breast black. Upper belly and flanks and axillaries orange-rufous. Centre of belly and under tail-coverts white.

Female. *Above*, dark olive-brown. *Below*, throat whitish streaked with brown. Breast olivaceous streaked with black. Rest of underparts as in male.

STATUS, DISTRIBUTION and HABITAT. Resident, subject to vertical movements, fairly common. Arunachal Pradesh (spp. in BNHS collec.); the Garo, Khasi and Cachar hills south of the Brahmaputra, Nagaland and Manipur, from c. 1200 to the highest summits (Meghalaya) and up to at least 2400 m (Nagaland). Extends in winter to neighbouring plains (Dibrugarh, Margherita) and south to Tripura and the Chittagong region. Affects damp evergreen woods with ample undergrowth, mixed oak and rhododendron forest with trees overgrown with moss, orchids and ferns in rocky ravines (Meghalaya), or in light pine forest without undergrowth on rocky slopes (Mt Victoria). In winter also noted in scrub jungle.

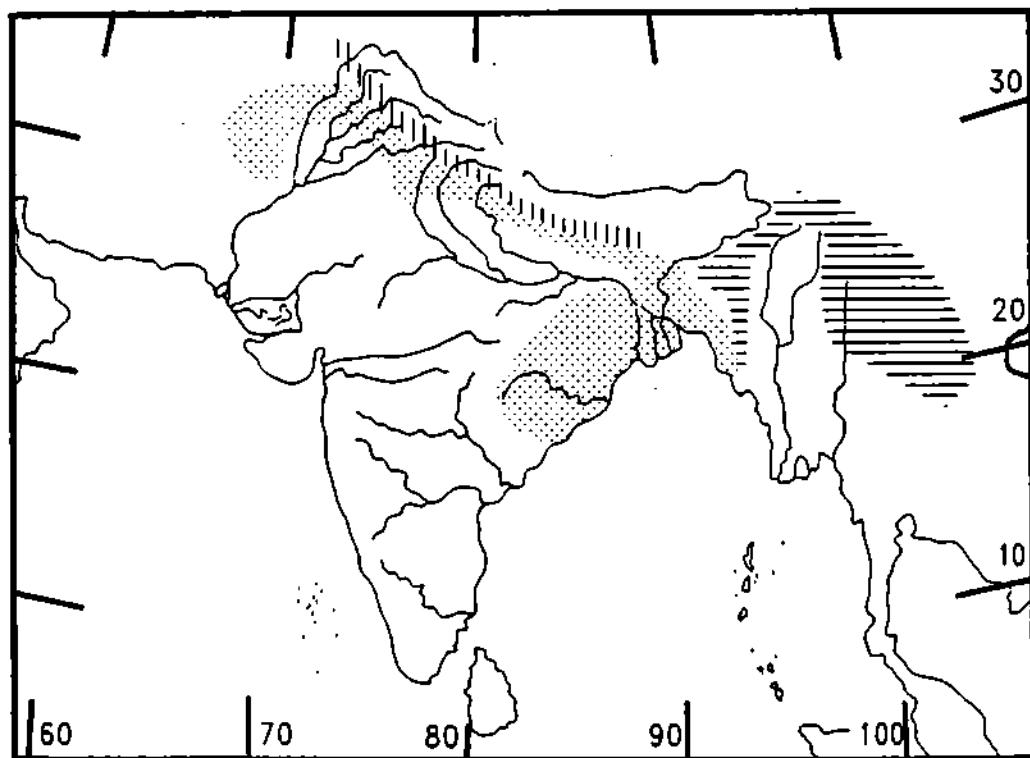
EXTRALIMITAL. Extends to Yunnan and northern Vietnam.

GENERAL HABITS. Very shy and elusive. Keeps almost entirely to the interior of forest. Feeds mostly on the ground, rummaging among fallen leaves.

FOOD. Insects, snails, slugs and berries.

VOICE and CALLS. Alarm-note a sharp resounding *tock, tock, tock, tock* (Heinrich). 'A sweet but not very powerful song.' Can be heard a great distance off and, in the breeding season, kept up for hours (Whistler).

BREEDING. Season, April to July. Nest, a well-built cup of green moss with an inner layer of grass, roots and a few dead leaves, rarely with some mud, lined with rootlets; placed in a fork of a dense tree or high bush between one and six metres above the ground; occasionally on the ground itself (Hopwood & Mackenzie, JBNHS 25: 86). Eggs, normally 4, sometimes 3, very variable, pale green to buff, more or less marked with deep red or purple-brown

Turdus dissimilis and *T. unicolor*

unicolor. Breeding

dissimilis

unicolor. Winter

blotches. Average size of 50 eggs 26.8×19.8 mm (Baker). Building of nest and incubation by both sexes; period undetermined.

MUSEUM DIAGNOSIS. See Field Characters.

Young. Upperparts brown with pale shaft-streaks on head, ochraceous streaks on mantle, scapulars, lesser and median coverts, and ochraceous tips to greater coverts. Below, chin and throat white; breast ochraceous, richer on flanks, albescent on belly. Breast- and throat-feathers with heavy blackish terminal bars. Postjuvenile moult of body-feathers, lesser, median and part of greater coverts. First-year bird distinguished by retention of part of juvenal greater coverts.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
2 ♂♂	122, 123	25	32	78, 81 mm
2 ♀♀	117, 123	—	32	80 mm
(MD, Roonwal & Nath, Stres.)				

Weight 1 ♂ (subadult) 75 g—SDR.

COLOURS OF BARE PARTS. Iris brown; orbital skin yellow to orange. Bill yellow to orange. Legs and feet yellow to orange or brownish yellow.

1748. Tickell's Thrush. *Turdus unicolor* Tickell

T.(urdus) Unicolor T.(ickell), 1833, Jour. Asiatic. Soc. Bengal 2: 577

(Bansigar in Borabhûm = Barahabhum, Purulia dist., W. Bengal)

Turdus unicolor subbicolor Koelz, 1954, Contrib. Inst. Regional Exploration, No. 1: 12
(Mawphlang, Khasi Hills)

Baker, FBI No. 579, Vol. 2: 138

Plate 93, fig. 6

LOCAL NAMES. *Kästür, Kao kumr* (Kashmir); *Desi pāwāi* (Hindi); *Machasah* (Bengali).

SIZE. Myna ±; length c. 21 cm (8½ in.).

FIELD CHARACTERS. Male. A small, plain ashy grey Himalayan thrush, paler on breast, white on belly. Under wing-coverts rufous. In the Peninsula in winter may be mistaken for a female Blackbird but the latter is more olive-brown and has a lightly streaked throat.

Female. *Above*, olive-brown; lores, a faint supercilium and eye-ring buff. *Below*. Throat white, sides streaked with brown; a broad, pale olive-brown band across breast with a few dark brown streaks; flanks tawny-olive; belly and under tail-coverts white. Distinguished from female Blackbird by tawny flanks and white throat, and in northern India from female *T. r. atrogularis* (1763 q.v.) by greyish wash on flanks of latter.

STATUS, DISTRIBUTION and HABITAT. Common summer (breeding) visitor to the Himalayas from N.W.F.P. (Chitral) east through Kashmir to Nepal (fairly common) and Sikkim (breeding?). Breeds between c. 1800 and 2700 m (Chitral), 1500 and 1800 m, occasionally 2200 m (Kashmir), 1200 and 2100 m (Kangra to Simla), 1500 and at least 2100 m (Nepal and Sikkim), overall optimum zone 1500–1800 m. Winters to the east and southeast of its main breeding grounds, from Kangra (occasionally) along the foothills to Arunachal Pradesh (Subansiri. Betts, JBNHS 53: 405), and in the Peninsula to eastern M.P. (Bastar, Raipur), Orissa (Mayurbhanj, Nilgiri—SA), northeastern Andhra (Anantagiri, Lammasinghi), southern Bengal and Bangladesh in the Chittagong region (Rashid). Regular winter visitor also to northern Baluchistan (Quetta, Fort Sandeman, Loralai—Christison, JBNHS 43: 479). In summer affects open deciduous forest on grassy ground or with little undergrowth, willow groves, orchards and gardens (very common about Srinagar, Kashmir). In winter frequents edges of forest and, in the Peninsula, groves and well-wooded areas.

MIGRATION. Arrives on breeding grounds at the end of March and April, departs in September and October. In autumn migrates eastwards along the Himalayas between c. 2100 m and the foothills. Less in evidence during spring migration. Has straggled to Ladakh, 3000 m in April, Jacobabad [?] (February), Sambhar Lake and Mt Abu (September), Bharatpur (Nov.–Feb.—apparently fairly regular), uncommon in Delhi in November (Gaston, JBNHS 75: 124) and Khandala [?] (November).

GENERAL HABITS. Keeps in pairs or in small flocks according to season. Feeds on the ground in the typical thrush manner, spurring a metre or two at a time by a series of short speedy hops or quick mincing steps, then stopping with head cocked to one side as if to gaze intently at the turf or listen for underground movement before thrusting into the ground with the bill to

extract a worm. When disturbed flies silently up into a nearby tree. Like the Blackbird, has a habit of 'scolding' while preparing to roost for the night.

FOOD. Insects, earthworms, berries and fruit (apples, plums, etc. especially windfalls). Vegetable food apparently forming major part of diet (GD).

VOICE AND CALLS. Alarm-note *juk-juk*, uttered also when food-hunting. Song typically thrush-like, of short rich notes, *wiw-wiw-wiw . . . keek-keek*, invariably reiterated twice or 3 or 4 times followed by short typical thrush chatter as interval. Repeated monotonously from stump near tree-top, maybe for ten minutes or more at a stretch (SA). Also rendered as *chellya*, *chellya*, *chirrali—cherlya*, *cherlya*, *chellya-chellya*, *chellya*, *juliu* (Magrath). Song apparently very variable in melody locally; but on the whole rather monotonous and much inferior to that of, e.g. Greywinged Blackbird. Given chiefly early morning from before dawn, and evening until dusk. Song, a relaxed warble, *dew-dew* and variations, ending in a high squeak (Fleming *et al.*, 1984); period, end of March to mid August (Proud).

BREEDING. Season, April to August. Nest a deep cup of moss, roots and dry grass lined with rootlets and finer grass; generally placed in the fork of a tree between two and seven metres above the ground, sometimes lower in bushes or in a hollow in a bank. Eggs, usually 3 or 4, sometimes 5, very variable, pale green to pale buff profusely blotched over the whole surface with reddish brown. Average size of 89 eggs 27.1 × 19.3 mm (Osmaston), of 80 eggs 27.8 × 19.5 mm (Baker). Feeding of young by both parents. Share in other duties not recorded.

MUSEUM DIAGNOSIS. See Field Characters.

Young (male and female). Upperparts darker brown than in adult female, all except rump and upper tail-coverts with pale shaft-streaks; lesser, median and greater coverts brown with ochraceous tips. Below, chin, throat and belly white tinged ochraceous; sides of throat, breast and flanks with heavy blackish terminal bars and tinged with ochraceous; under wing-coverts and axillaries ochraceous. Postjuvenile moult of body-feathers, lesser, median and part of greater coverts. Postnuptial moult complete, about August.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	116–130 }	22–24	29–32	75–95 mm
♀♀	113–123 }			74–85 mm (HW, BB, SA)

Weight 1 ♂ (Oct.) 68; 5 ♀♀ (Oct.) 64–75.1 g (GD). 12 ♂♀ (Nov.–March) 57–75 (av. 63.0) g—SA.

COLOURS OF BARE PARTS. Iris brown; eye-rim yellow. Bill yellow to orange-yellow. Legs and feet brownish yellow (Abbott).

1749. Whitecollared Blackbird. *Turdus albocinctus* Royle

Turdus Albicollis Royle, 1835, Ill. Bot: Himalayan Mountains 2 (1839), pl. 8, fig. 3
 (Himalayas), *nec Turdus albicollis* Vieillot

T.(urdus) albocinctus Royle, 1840, Ill. Bot. Himalayan Mountains 1 (1839): lxxvii, lxxviii, applied to plate of *T. albicollis* ('Hills' = Himalayas, restricted to Dehra Dun)

Baker, FBI No. 570, Vol. 2: 129

Plate 93, fig. 9

LOCAL NAMES. *Kündoo kăstūra* (Hindi); *Charchar* (Paharia, for all blackbirds and rock thrushes).

SIZE. Myna +; length c. 27 cm (11 in.).

FIELD CHARACTERS. Male. An entirely black or blackish brown thrush with a broad white collar around neck and upper back. Throat white. Under tail-coverts black with white shaft-streaks. Legs and feet yellow.

Female has a collar as in male but dull ashy in colour. Rest of plumage rufous-brown, paler below, the feathers pale-fringed, producing a scaly effect.

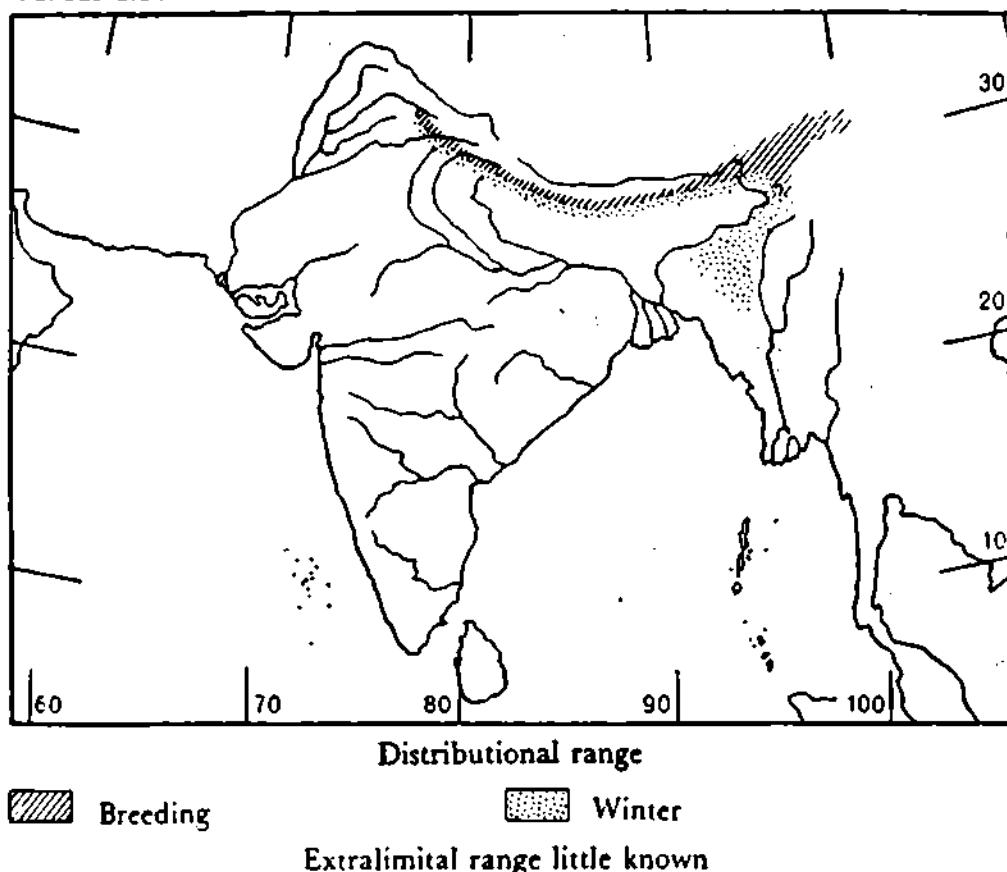
STATUS, DISTRIBUTION and HABITAT. Common resident, subject to vertical movements. The Himalayas from Chamba and Duala Dhar east through Arunachal Pradesh, possibly to Nagaland (specimen collected at end of April). Eggs found by Rattray about Murree *fide* Baker, *Nidification* 2: 116. Breeds between 2700 and 3300 m (Duala Dhar), 2100–3200 m (Simla, Garhwal), 2400–3600 m (Nepal), up to 4000 m (Sikkim), 2700 and 3600, locally up to 4200 m (Bhutan, Arunachal). Winters between c. 2400 and 1500 m (western Himalayas), up to 3000 m (Nepal, Sikkim), down to the base of the hills (Arunachal) and reaching the Cachar and Khasi hills, Nagaland and Manipur but rarely lower than c. 900 m. Affects *kharshu* oak—horse-chestnut—rhododendron forest, open coniferous or mixed broad-leaved and conifer forest, especially margins and clearings with plenty of undergrowth; in southeastern Tibet also frequents dwarf rhododendron near tree-line 'in the same surroundings as *Turdus merula maximus*' (Ludlow).

Extralimital. Southeastern Tibet to southwestern Sichuan.

GENERAL HABITS. Keeps singly or in pairs; outside the breeding season sometimes in flocks, either by themselves or with other thrushes. Shy and wary on breeding grounds; more confiding in the cold season. Appears to feed a good deal in trees; also on the forest floor, and in winter on lawns in gardens and close to villages.

FOOD. Insects, fruit and berries (crab apples, hawthorn, holly and cotoneaster berries recorded). Vegetable food probably predominant in autumn and winter. Fond of *Hedera nepalensis* fruit (Fleming *et al.*, 1984).

VOICE and CALLS. Song mellow but less varied than that of the Blackbird; usually given from the top of a tall tree; given at twilight when other birds are silent (Fleming *et al.*, 1984). Song of one individual recorded by Desfayes as uttered in several bursts of notes on a descending scale: *tew-i*, *tew-u*, *tew-o*, etc., with variations. Song period mid April at least till July (Proud). Alarm-notes a throaty *tuck-tuck-tuck-tuck* as characteristic of other thrushes; often uttered while going to roost and again at dawn, like the Blackbird in the same circumstances.

Turdus albocinctus

BREEDING. Season, early May to July. Nest, a massive cup of moss with some grass, rootlets and leaves incorporated, lined with dry grass or rootlets; built on a stout branch or in a fork, sometimes in large cavities of trees beaten down by snow, between one and three metres above the ground or even on the ground itself at the foot of a mossy stump, often blending perfectly with the surrounding moss. Eggs, 3 or 4, very similar to the Blackbird's but larger and rather more boldly blotched. Average size of 100 eggs 30.5 × 21.7 mm (Baker). Female only has an incubation patch (GD).

MUSEUM DIAGNOSIS. See Field Characters.

Young. Upperparts and sides of head brown with ochraceous shaft-streaks on head and mantle. Wing-coverts brown, all except primary with ochraceous tips. Wings and tail as adult sex for sex. Underparts pale ochraceous with heavy dark brown tips; throat more or less immaculate.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	137-151	29-30	c. 35	101-109 mm
♀♀	131-143	27 (1 msd)	34 (1 msd)	95-111 mm (Baker, Rand & Fleming, BB, MD, SA)

Weight 5 ♂♂ (May-June) 90-103; 4 ♀♀ (May-June) 92-107 g (GD). 1 ♀ (April) 105 g—SA.

COLOURS OF BARE PARTS. Iris brown. Bill yellow, dusky at tip. Legs and feet dark ochraceous yellow.

1750. **Greywinged Blackbird.** *Turdus boulboul* (Latham)

Lanius boulboul Latham, 1790, Index Orn. 1: 80 (India = Darjeeling)
Baker, FBI No. 571, Vol. 2: 130

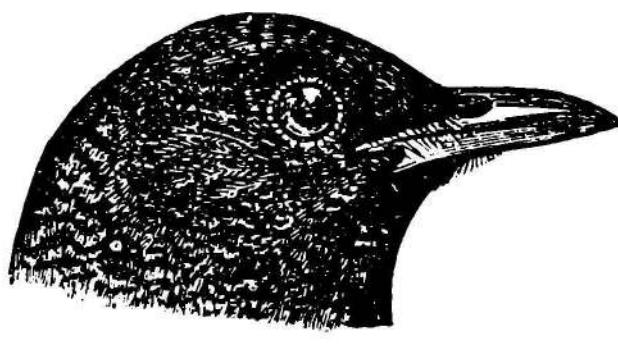
Plate 93, fig. 8

LOCAL NAMES. *Kăstūri* (Hindi); *Păhāriyā măśāichā* (Bengali); *Phoyiong-pho* (Lepcha); *Chemam* (Bhutanese).

SIZE. Myna +; length c. 28 cm (11½ in.).

FIELD CHARACTERS. Male. Overall black, with a large and distinctive pale grey wing-patch; belly and under tail-coverts with whitish fringes. Eye-rim yellow, bill orange.

Female brownish ashy tinged with olivaceous; grey wing-patch of male replaced by rufous-brown.

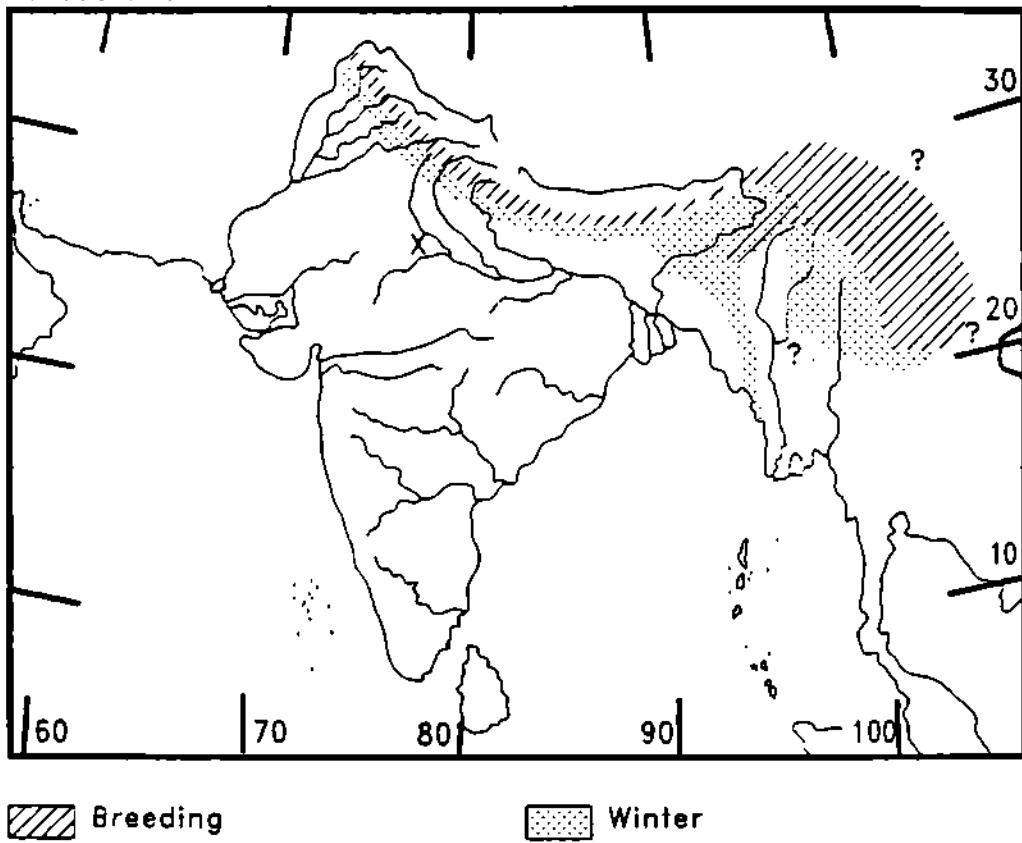


× c. 1

STATUS, DISTRIBUTION and HABITAT. Common resident, subject to vertical movements. The Himalayas from Kaghan Valley east through Nepal, Sikkim, Bhutan and Arunachal Pradesh; thence south to the hills of Cachar. Breeds between 1800 and 2300 m (Murree), and up to 2700 m farther east (observed at 3300 m in eastern Nepal—GD); in Cachar breeds about 1200–1400 m. Winters (November to March) between 1200 and 2100 m in the western Himalayas, occasionally reaching the foothills and entering adjacent plains (Sialkot, Lahore, Ludhiana, Chandigarh, Ambala), occasionally straying farther south (Bharatpur, Rajasthan—JBNHS 65: 490). Common in winter between 2400 and 2600 m near Naini Tal (Meinertzhagen) and in Nepal above 2100 m, but also regularly descending to the duns and terai. In Sikkim, Darjeeling dist., and Bhutan winters from c. 1800 m down to the foothills, commonly entering the plains of northern Bengal (Jalpaiguri duars); sometimes farther south (Bharatpur—JBNHS 65: 490). Farther east reaches Nagaland, Manipur, the Khasi and Cachar hills south to Hailakandi. Affects humid broad-leaved forest of oak, rhododendron, etc. Apparently prefers denser forest than *T. albocinctus*. In winter frequents woods, bush jungle and village precincts.

Extralimital. Extends east to northern Vietnam and Guangxi. Winters to Burma and Thailand.

GENERAL HABITS. Keeps singly or in pairs in the breeding season, singly or in small flocks in winter; in this season sometimes in company with other thrushes, especially *T. rubrocanus*. Feeds mostly on the ground. Rather shy

Turdus boulboul

and retiring. Males become pugnacious during nesting season, and intolerant of others of their kind.

FOOD. Insects, earthworms, berries and fruit.

VOICE AND CALLS. Song rich, flutey and far-carrying—of great variety and mellowness, reminiscent of the Blackbird's. It consists of one soft introductory note followed by four high-pitched ones on a descending scale. For details see Lister, JBNHS 52: 39. Song period mid March to mid August (Proud). Alarm-notes, the typical Blackbird chuckles *chük, chük, chük*, and an angry *churr* near nest. At dusk birds going to roost utter two-noted rising and falling whistles (Roberts, pers. comm.).

Is one of our finest songsters and a favourite cage bird, especially in Kashmir and Punjab.

BREEDING. Season, March to August. Double-brooded. Nest, a bulky cup of moss, leaves, grass and tendrils, often but not always with a layer of mud, lined with dry grass or rootlets, generally placed in the fork of a horizontal branch of a tree between two and five metres from the ground; sometimes in banks or among the roots of a fallen tree. Eggs, 3 or 4, pale green blotched over the whole surface with pale red-brown. Average size of 50 eggs 29×20.9 mm (Baker). Building of nest and care of young by both parents. Incubation apparently by female only; period undetermined.

MUSEUM DIAGNOSIS. See Field Characters.

Young male. Upperparts, ear-coverts and sides of neck, lesser wing-coverts and under tail-coverts blackish brown, all except rump and upper tail-coverts with pale shafts. Underparts ochraceous, all feathers except on chin and throat boldly fringed with blackish brown; on flanks, the ochraceous reduced to narrow streaks. Median

coverts blackish brown with large ochraceous tips and shafts. Outer webs of greater coverts and inner secondaries fulvous grey with pale shaft-lines at the tip of the former. Flight-feathers and tail as in adult but not so pure black.

Young female like male but rufous-olive replaces blackish brown of plumage and fulvous grey of wings. Postnuptial moult of body-feathers, lesser, median and? greater coverts. A complete moult apparently takes place in spring.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	140-151	27-30 }	35-37	{ 107-122 mm
♀♀	131-148	26-30 }		{ 100-114 mm (BB, MD, SA)

Weight 1 ♂ (July) 100.5; 1 ♀ (July) 88.8 g; 3 ♂♂ (Nov.-Dec.) 94.1-105; 3 ♀♀ (Dec.) 97.1-108.2 g (RAP). 6 ♂♂ (Oct.-Apr.) 88-111 (av. 94.5); 6 ♀♀ (Oct.-Apr.) 85-104 (av. 98) g—BB, SA.

COLOURS OF BARE PARTS. Iris brown; eye-rim yellow. Bill deep orange with dark tip of upper mandible. Legs and feet brownish in front, yellow behind (♂), brown (♀); soles yellow.

TURDUS MERULA Linnaeus: BLACKBIRD

Key to the Subspecies

		Page
A	Plumage entirely black or blackish	
1	Smaller and blacker	<i>T. m. intermedium</i> 117
2	Larger and browner	<i>T. m. maximus</i> 119
B	Plumage dark grey or slaty	
3	Crown black	
i	A broad greyish brown collar; black cap well defined	<i>T. m. nigropileus</i> 120
ii	No collar; black cap shading into dark grey of mantle	
a	Paler	<i>T. m. simillimus</i> 122
b	Darker	<i>T. m. bourdillonii</i> 123
4	Crown slaty, concolorous with back	<i>T. m. kinnisi</i> 123

1751. *Turdus merula intermedium* (Richmond)

Merula merula intermedia Richmond, 1896, Proc. U.S. Nat. Mus. 18: 585
(Aksu, Eastern Turkestan)

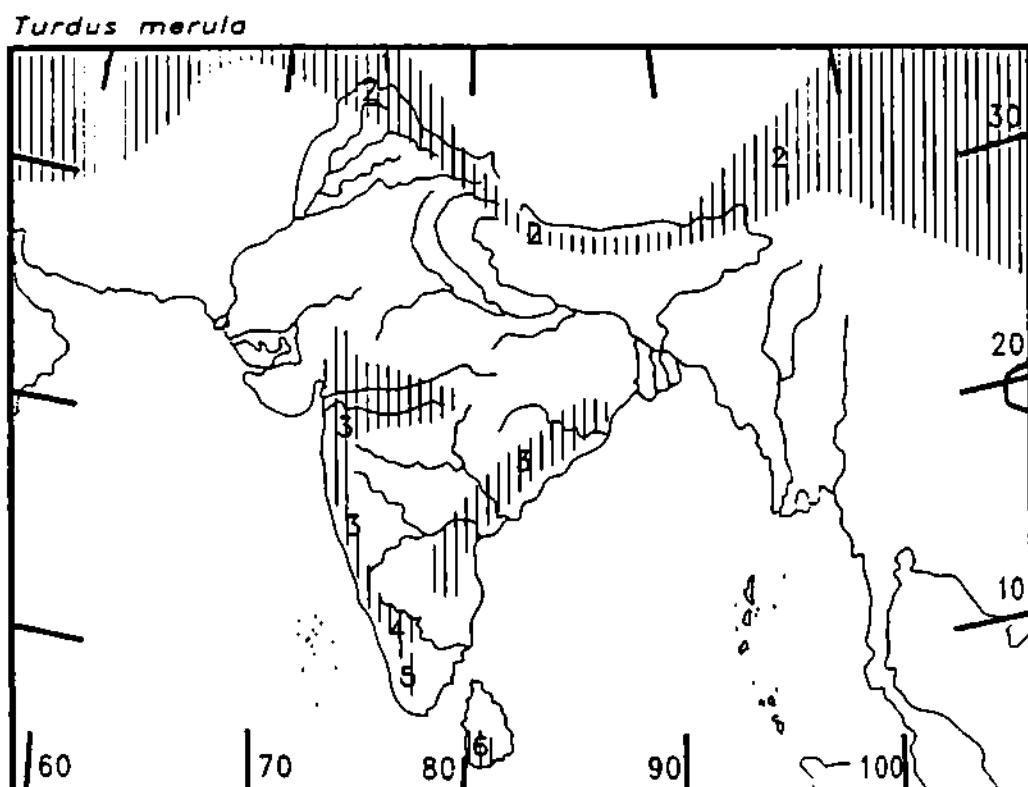
Turdus merula brodkorbi Koelz, 1939, Proc. Biol. Soc. Washington 52: 67
(Farakar, Afghanistan)
Not in Baker, FBI

LOCAL NAMES. None recorded.

SIZE. Myna +; length c. 26 cm (10½ in.).

FIELD CHARACTERS. As in 1752, q.v.

STATUS, DISTRIBUTION and HABITAT. Possibly an occasional winter visitor to Pakistan. A sight record in Quetta on 17 February (JBNHS 35: 894) and one specimen obtained near Peshawar (Magrath, JBNHS 21: 680) but not



[Hatching] Distributional ranges 1 intermedius 2 maximus
 3 nigropileus 4 simillimus 5 bourdillonii 6 kinnisii

critically examined; also said to be common between Quetta and Kandahar and in the Bolan Pass in March (Murray *apud* Ticehurst, JBNHS 31: 710).

Extralimital. Breeds in Turkestan and Afghanistan.

GENERAL HABITS, FOOD AND VOICE. Similar to other subspecies.

MUSEUM DIAGNOSIS. Male differs from *maximus* (1752) in being smaller and blacker. Female is darker and greyer, less olive.

MEASUREMENTS

	Wing	Tail
♂♂	130–140	120–130 mm
♀♀	127–139	

(NBK, Dementiev, Paludan, Koelz)

Bill from skull 20 ♂♂ 27–32; 10 ♀♀ 27–31 mm (NBK)

Weight 5 ♂♂ (July) 84–102; 3 ♀♀ (July) 85–92 g (Paludan).

COLOURS OF BARE PARTS. Iris reddish brown. Bill and feet black (female adult—Abbott).

1752. *Turdus merula maximus* (Seebohm)

Merula maxima Seebohm, 1881, Cat. Bds. Brit. Mus. 5: 405
 (Cashmere, restricted to Gulmarg)

Turdus merula buddae R. & A. Meinertzhagen, 1926, Bull. Brit. Orn. Cl. 46: 98
 (Gyangtse, Southern Tibet)
 Baker, FBI No. 565, Vol. 2: 123

Plate 93, fig. 13

LOCAL NAMES. None recorded.

SIZE. Myna +; length c. 27 cm (11 in.).

FIELD CHARACTERS. Male very dark brown with a yellow bill. Female dark brown with a brown bill.

STATUS, DISTRIBUTION and HABITAT. Resident, subject to short downward movements in winter; common locally but scarce in the more humid central Himalayas. From Safed Koh (Whitehead, JBNHS 20: 781), Hunza (David Mallon in Roberts, 1992) and Baltistan (Ludlow MS.) east through Arunachal Pradesh. Breeds between 3000 and 3600 m (Kohat), 3300 and 4000 m (Hazara; Kashmir), [an observation at 2800 m in May in Kangra], 3600 and 4000 m (Garhwal—Whymper, JBNHS 20: 1158), about 4200 m (Nepal—Desfayes, JBNHS 67: 571; *Ibis* 1965: 400), 3600 and 4500 m (Sikkim and adjacent parts of Tibet—*Ibis* 1922: 50 and JBNHS 32: 322), 3400 and 4500 m, more common 4000–4500 m (Bhutan and southeastern Tibet—Ludlow). In winter (November to April) recorded as high as 4600 m in Sikkim and down to 2100 m in southeastern Tibet, but not below 3000 m in the central and western Himalayas, where winter records are very scanty. Prefers drier areas and may winter more commonly on the northern slopes. In summer affects dwarf juniper, dwarf rhododendron and other scrub on steep rocky slopes above timber-line, and boulder-strewn alpine meadows.

EXTRALIMITAL. Adjacent parts of northern Afghanistan (Yate & Scully, 1887, *Jour. Asiat. Soc. Bengal*)—where presumably intergrading with *intermedius*—and southeastern Tibet. The species ranges west to the British Isles, Morocco and the Azores, and east through southern China. Also the hills of the Indian Peninsula and Sri Lanka (1754–1757).

GENERAL HABITS. Keeps singly in the breeding season, in family groups after breeding, and singly or in small flocks of 5 to 12 birds in winter; in this season sometimes in company with other thrushes. Other habits typical of the blackbirds and related thrushes. As a rule wild and wary, taking off while yet a considerable distance away, flying low over the ground and soon curving out of sight.

FOOD. Insects, caterpillars and berries (juniper, wild rose, etc.); once small lizards (RM).

VOICE and CALLS. Song very limited, comprising only repeated mournful whistles very different from those of the European populations. Its rattling alarm or fright call is frequently uttered and appears to serve a territorial function as well (Roberts, pers. comm.). Has a characteristic low *chut-ut-ut* and a rattling alarm-note, less loud, harsh and squeaky than that of *T. m. merula* (Magrath).

BREEDING. Season, May to July. Nest, a bulky structure of dry grass and moss with a little mud in the foundation, lined with fine grass; placed in low

junipers or rhododendrons, on a ledge of rock, under an overhanging bank, on the ground against a boulder, or among the buttress roots of a gnarled tree. Eggs, 3 or 4, pale blue blotched with pale red-brown, similar to those of the European Blackbird but larger and rather more boldly marked. Average size of 2 eggs 33 × 23·4 mm (Baker).

MUSEUM DIAGNOSIS. Distinguished from *intermedius* by larger size and from peninsular subspecies by black plumage. Male often breed in brown female plumage.

Young male. Upperparts, sides of head and neck, chin and throat blackish brown, tips of feathers on mantle blacker, a few ochraceous edges on chin and throat. Rest of underparts evenly barred ochraceous and blackish. Under tail-coverts black with ochraceous edges. Central streaks and edges of median and lesser coverts ochraceous. Wing and tail black. Lower back and rump sometimes barred with ochraceous.

Young female. Like young male but paler brown; greyish brown on rump and upper tail-coverts with paler tips. Mantle feathers with pale shaft-streaks. Wing and tail dark brown (HW).

Young of *maximus* are very variable but show considerably more difference in the sexes than in the nominate subspecies [cf. Witherby, 1938, 2: 140]. Difference between them and juveniles of *merula* very striking, owing to the much narrower shaft-streaks on the upperparts, which are also much paler and end in triangular-shaped marks at tip of feather. No shaft-streaks or markings on head and neck, while below they are less rufous and much darker on breast and throat. Some males have practically no shaft-streaks but the pale V-shaped mark at the tip of the feather is very pronounced (NBK).

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	144–161	25–29	c. 38	107–120 mm (NBK, RM)
♀♀	144–153	25–28		

COLOURS OF BARE PARTS. Iris brown. Bill orange-yellow (♂), dull greenish yellow (♀). Legs and feet black (♂), dark brown (♀).

1753, 1754. *Turdus merula nigropileus* (Lafresnaye)

Merula nigropileus Lafresnaye, 1840, Rev. Zool.: 65 (Neilgherries, restricted to Kalhatti, northern Nilgiri Plateau by Ripley, 1950, JBNHS 49: 50)

Turdus simillimus mahrattensis Whistler & Kinnear, 1932, Jour. Bombay nat. Hist. Soc. 36: 76 (Mahableshwar)

Turdus simillimus spencei Whistler & Kinnear, 1932, Jour. Bombay nat. Hist. Soc. 36: 77 (Jeypore Agency)
Baker, FBI No. 569, Vol. 2: 128

Plate 93, fig. 11

LOCAL NAMES. *Kasturi* (Hindi); *Poda palisa* (Telugu); *Karimkili* (Malayalam).

SIZE. Myna ±; length c. 25 cm (10 in.).

FIELD CHARACTERS. Male dark greyish brown with a black cap; orange-yellow bill, eye-rim and legs.

Female more ashy above and paler generally, with the cap less distinct and brown.

STATUS, DISTRIBUTION and HABITAT. Partial migrant, or resident subject to seasonal movements, chiefly altitudinal. Southern Rajasthan (Mt Abu) and eastern Gujarat (Panchmahals dist.), east in the western Vindhya and Satpuras at least to Seoni (c. 79°30'E), and south along the Western Ghats at least to Belgaum, the Eastern Ghats complex from Orissa (c. 22°N) south at least to the Seshachalam Hills (c. 14°N). All records south of these localities are between November and March, the non-breeding season (Cf. Sálim Ali, 1969, *Birds of Kerala*, p. 386, JBNHS 43: 330 and 38: 288; Koelz, JBNHS 43: 15). Most older records are undated including apparently the type specimen. Breeds in the hills from c. 900 m up to the highest summits. Birds from the northernmost part of the range, and the greater part of the Madhya Pradesh population are migratory, ranging in winter to the Gir Forest (Dharmakumar-sinhji), Farahabad (c. 79°E, JBNHS 36: 385), Maharashtra (Matheran, Konkan in January—Roberts, pers. comm.) and through the Western Ghats and the hills of Kerala and western Tamil Nadu to the Cardamom Hills (JBNHS 36: 76), in the low country up to c. 1000 m. Affects moist-deciduous and evergreen forest, sholas, wooded ravines and broken country. In winter frequents well-shaded areas in plantations, gardens and forest.

MIGRATION. Where a summer (breeding) visitor, e.g. in the higher Western Ghats, arrives in April, departs in October-November. In winter spreads out a good deal in the low country and foothills moving locally with the ripening of various fruits and berries on which it feeds.

GENERAL HABITS. Keeps singly and in pairs in the breeding season; often in scattered pairs or small parties in winter. Feeds on the ground as well as in trees. Largely a terrestrial feeder, hopping about rummaging in the mulch and flicking aside dead leaves for insects and windfallen fruit in the typical thrush manner.

FOOD. Insects, snails, slugs, earthworms, fruit and berries (*lantana*, sandalwood, jamun, wild figs, etc.); also fond of flower-nectar (*Erythrina*, *Salmalia*, etc.).

VOICE and CALLS. Has a melodious song, not unlike that of the Magpie-Robin (1661) but louder and richer, and freely interlarded with perfectly mimicked calls of many other birds, e.g. grey partridge, pied crested and plaintive cuckoos, pariah kite, wood shrike, tailor bird and others. Heard in the early morning and late afternoon till well after sunset in the breeding season. Silent during winter except for the throaty chuckles and shrill *krees*. Alarm-notes, a harsh *churr* and the characteristic throaty quick-repeated *chuck-chuck-chuck*; call-note, a subdued but high-pitched *kree-ee*, frequently uttered.

BREEDING. Season, June to August (monsoon). Nest, a bulky cup of moss, grass and roots with a layer of mud and an inner lining of rootlets and grass; placed in a fork of a small tree or bush between one and seven metres above the ground. Eggs, normally 3, sometimes 4 or 5, pale grey-blue to umber brown boldly blotched with reddish, usually more densely around the larger end. Average size of 50 eggs 27.4 × 20.9 mm (Baker). Both sexes share in nest-building and feeding young. Incubation by female (at least mainly); period undetermined.

MUSEUM DIAGNOSIS. Male has a black cap better defined than in other subspecies. Second primary (as.) longer than seventh. Postnuptial moult complete.

Young male has the upperparts, wings and tail dark sooty blue-grey much as in

the adult; lesser and median coverts tipped with triangular fulvous spots. Underparts dark ashy olive, the feathers broadly edged with blackish; throat, central breast and abdomen with the centres of feathers largely white.

Young Female has the upperparts dull olive-brown, the feathers faintly streaked with fulvous and edged with sooty. Wings, tail and underparts as in adult. Postjuvenile moult of body-feathers, lesser and median coverts.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	126–135	25–28	30–35	91–102 mm
♀♀	116–129		30–33	84–98 mm (HW)

Weight 19 ♂♀ (Apr.-May) 60–94 (av. 74·9) g—SA. 2 ♂♂ 71, 75; 2 ♀♀ 66, 72; 1 ♂? 80 g—SDR.

COLOURS OF BARE PARTS. Iris brown; eye-rim orange; postorbital skin orange-brown, orange-yellow or rich orange corresponding with gape and bill. Gape and bill horny brown with orange patches at gape, nostrils and sides, or brownish orange with dusky tips, or bright orange with dusky tips; mouth orange-yellow. Legs, feet and claws dusky orange-yellow (SA).

1755. *Turdus merula simillimus* Jerdon

Turdus simillimus Jerdon, 1839, Madras Jour. Lit. Sci. 10: 253 (Neilgherries, restricted to Avalanche, higher southern Nilgiri Plateau, by Ripley, 1950, Jour. Bombay nat. Hist. Soc. 49: 50)

Baker, FBI No. 566, Vol. 2: 125

Plate 93, fig. 12

LOCAL NAMES. *Karimkili* (Malayalam); *Karun kūruvi* (Tamil).

SIZE. Myna ±; length c. 25 cm (10 in.).

FIELD CHARACTERS. As in 1753, q.v.

STATUS, DISTRIBUTION and HABITAT. Common resident. The hills of southwestern India from the Brahmagiris and the Biligirirangans south to the Nelliampathis and Palnis where intergrading with *bourdillonii*. Affects evergreen sholas, from c. 1200 m to the top of the hills, lower from October to March when also seen in coffee plantations.

GENERAL HABITS, FOOD and VOICE. As in 1753.

BREEDING. Season, begins in March but is at its height after the onset of the rains; lasts till August. Nest, a substantial cup of moss, grass and lichen with an outer lining of mud and an inner one of grass, placed in evergreen shrubs or small trees, very often on ledges in banks. Normal clutch size 2, occasionally 3, sometimes up to 5. Average size of 50 eggs 29·3 × 21·3 mm (Baker).

MUSEUM DIAGNOSIS. See Key to the Subspecies.

Male: forehead, crown and nape black. Whole upper plumage, wings and tail dark slaty. Underparts paler, more ashy.

MEASUREMENTS and COLOURS OF BARE PARTS. As in 1756.

1756. *Turdus merula bourdillonii* (Seebohm)

Merula bourdillonii Seebohm, 1881, Cat. Bds. Brit. Mus. 5: 251
 (Travancore = Calathoorpolay Patnas, Travancore)
 Baker, FBI No. 568, Vol. 2: 127

LOCAL NAMES. *Karimkili* (Malayalam); *Karun kūrūvi* (Tamil).

SIZE. Myna ±; length c. 25 cm (10 in.).

FIELD CHARACTERS. As in 1753, q.v.

STATUS, DISTRIBUTION and HABITAT. Common resident. The hills of Kerala¹ and western Tamil Nadu from the Nelliampathis and Palnis south to the Ashambu Hills. Affects evergreen sholas from c. 900 m up to the highest summits.

GENERAL HABITS. As in 1753.

FOOD. As in 1753. Also recorded: berries of *Maesa*, *Trema*, *Lantana*, and wild figs, and flower-nectar (*Salmalia*, *Erythrina*, etc.).

VOICE and CALLS. As in 1753.

BREEDING. As in 1753. Average size of 20 eggs 27.6 × 20.5 mm (Baker).

MUSEUM DIAGNOSIS. See Key to the Subspecies. Differs from *simillimus* (1755) in being darker.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	120–124	25–28 }	31–34	96–100 mm
♀♀	119–122	26–28 }		93–98 mm (SA)

COLOURS OF BARE PARTS. Iris dark brown; eye-rim orange-yellow. Bill, legs and feet orange-yellow.

1757. *Turdus merula kinnisi* (Kelaart)

Merula Kinnisi Kelaart in Blyth, 1851, Jour. Asiatic Soc. Bengal 20: 177
 (Newera Elia)
 Baker, FBI No. 567, Vol. 2: 126

Plate 93, fig. 10

LOCAL NAMES. *Kalu kurullā* (Sinhala); *kari-kūrūvi* (Tamil).

SIZE. Myna ±; length c. 25 cm (10 in.).

FIELD CHARACTERS. A dark slaty thrush with orange bill, eye-rim and legs. Sexes alike.

On a casual glimpse may be confused with Black Bulbul, *Hypsipetes m. humii* (1150), but the latter's slimmer build together with markedly forked tail and coral-red bill and legs distinctive.

STATUS, DISTRIBUTION and HABITAT. Resident, subject to seasonal movements; plentiful but locally distributed. The hills of Sri Lanka above c. 900 m, becoming more common in the higher parts of its range. Affects forest and well-wooded tea estates and gardens.

¹ Specimen in BNHS Coll. taken at Valpoi, Goa, on 10.xii.1979 had probably strayed north from its breeding range.

GENERAL HABITS. As in 1753, q.v.

FOOD. Insects and berries, especially of *nillu* (*Strobilanthes*); also flower-nectar.

VOICE AND CALLS. Song, a much reduced blackbird-like series of chuckles and whistles (SDR) usually delivered from the top of a tree. Other notes as in 1753.

BREEDING. Season, two periods, the first beginning second half of March, sometimes February, and lasting till May; the second between August and November. Nest and eggs (c/2, occasionally 3) as in 1753. Average size of 14 eggs 26·6 × 20·6 mm (Baker).

MUSEUM DIAGNOSIS. Plumage, including crown, entirely dark slaty. Female very similar but has the underparts slightly duller and more sullied with brown.

Differentiated from Indian races of *Turdus merula* by smaller size and the greater amount of slaty blue in the plumage.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	104–119	24–26	{ 31–33	85–100 mm
♀♀	105–116		{ 30–33	81–92 mm (HW)

Weight 2 ♂♂ 66, 67 g (SDR).

COLOURS OF BARE PARTS. Iris brown. Bill ♂♀ orange-yellow. Legs and feet orange-yellow (♂), dull orange-yellow (♀).

TURDUS RUBROCANUS Hodgson: GREYHEADED THRUSH

Key to the Subspecies

- | | |
|----------------------------------|-------------------------|
| Paler; head pale grey | <i>T. r. rubrocanus</i> |
| Darker; head brownish grey | <i>T. r. gouldii</i> |

1758. *Turdus rubrocanus rubrocanus* Hodgson

T. (urdus) rubrocanus Hodgson in Gray, 1844, Zool. Misc.: 83 (Nepal), *nom. nud.*

Turdus rubrocanus 'Hodgs.' in Gray, 1846, Cat. Mamms. Bds.

Nepal: 81 (Nepal)

Baker, FBI No. 572, Vol. 2: 132

Plate 93, fig. 16

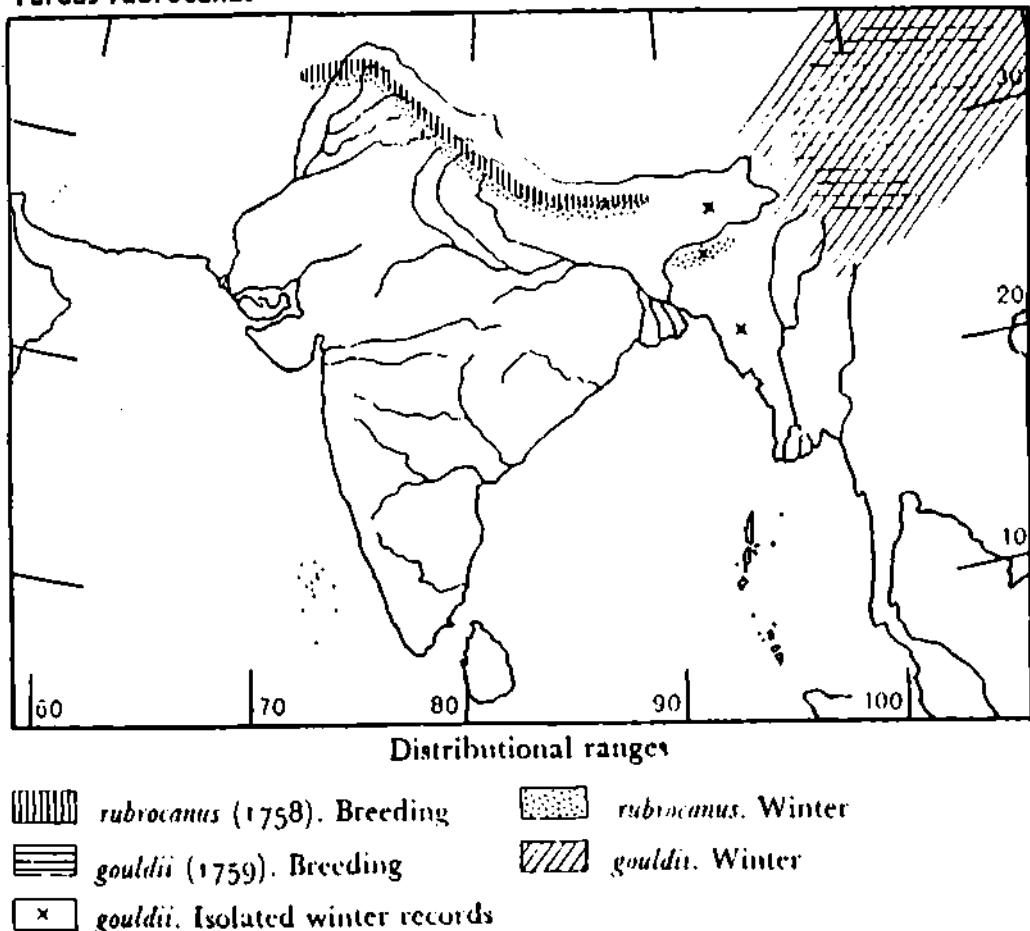
LOCAL NAMES. *Wān kāstūr* (Kashmir); *Lāl kāstūra* (Hindi).

SIZE. Myna +; length c. 27 cm (11 in.).

FIELD CHARACTERS. Male. *Above*, head and neck creamy grey paling to whitish on nape; rest of upperparts chestnut. Wings and tail blackish. *Below*, throat and upper breast whitish; upper belly and flanks chestnut; centre of belly whitish, sometimes with dusky spots; under tail-coverts blackish with broad white shaft-streaks.

Female much duller: head darker and brownish; chestnut paler and margined below with pale greyish.

STATUS, DISTRIBUTION AND HABITAT. Resident, subject to vertical movements, fairly common. The Himalayas from the Safed Koh, Murree and

Turdus rubrocanus

Ladakh east at least to Nepal Valley (Proud, 1955, JBNHS 53: 61; Rand & Fleming, 1957, *Fieldiana*, Zool., 41(1): 162). Two records from Sikkim, January and May (Biswas, Stevens); none from Bhutan, Arunachal Pradesh or southeastern Tibet. Breeds between 2100 and 3300 m, generally prefers higher elevations than *T. boulboul* (1750, q.v.). Winters (October to March) between 1200 and 2600 m, occasionally down to the foothills (Kohat); also recorded in winter from the Garo Hills (Godwin-Austen) and Cachar (Baker, ssp.?). Affects forest, especially fir and horse-chestnut; more open country and orchards in winter.

GENERAL HABITS. Shy, quiet and unobtrusive. Keeps singly or in pairs in the breeding season, in small flocks thereafter, sometimes congregating in large flocks with *T. r. atrogularis*, *T. boulboul* and *T. albocinctus*.

FOOD. Insects and berries (of holly etc.). Also visits rhododendron blossoms for nectar (GD).

VOICE and CALLS. Song recalls Song Thrush's (*Turdus philomelos*); rendered as *yee-bre*, *yee-bre*, *yee-bre—diddiyit*, *diddiyit*, *diddiyit—yip-bru*, *yip-bru* (Magrath); usually uttered from the very top of a tall tree. 'A really fine songster, perhaps the best in the thrush family in India, not excepting *T. boulboul*' (BBO). Call-note, a blackbird-like chuckle.

BREEDING. Season, April to end of July. Nest, a cup of moss, twigs, roots and dead leaves lined with grass, rootlets or pine needles; a considerable quantity of mud is generally present immediately under the lining; the

majority of nests placed between two and three metres above the ground in saplings, or resting against a tree-trunk in a tangle of outgrowing branches; many also built on rock ledges, in banks, or among the roots of a fallen tree, occasionally in holes in rocks or gnarled tree-trunks. Eggs, 2 to 4, more commonly 3, light green covered with reddish brown spots and blotches; similar to eggs of *T. merula* but more boldly blotched. Incubation by female only (Roberts, pers. comm.). Average size of 50 eggs 30·6 × 21·6 mm (Baker).

MUSEUM DIAGNOSIS. See Field Characters.

First-year males have browner wings, primary-coverts and tail.

Young (juvenile). Head and sides of neck ochraceous brown with faint paler centres. Rest of upperparts, lesser, median and greater coverts chestnut-brown with dark tips, faint pale centres on mantle and ochraceous streaks on coverts. Chin and throat cream edged with brown at the sides. Underparts brown with ochraceous centres and blackish tips (more marked in male than in female). Belly albescent. Postjuvenile moult of body-feathers, lesser, median and (?) greater coverts.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	135–144	(1) 30	33	110 mm
♀♀	132–135	—	—	— mm (BB, MD)

Weight 2 ♂ ♂ (October) 84·6, 99·7 g (RAP).

COLOURS OF BARE PARTS. Iris brown; eye-rim yellow. Bill yellow. Legs and feet dusky yellow.

1759. *Turdus rubrocanus gouldii* (Verreaux)

Merula Gouldii Verreaux, 1871, Nouv. Arch. Mus. Hist. Nat. Paris 6: 34

(Szechuan occidental = Paohing)

Baker, FBI No. 573, Vol. 2: 133

Plate 93, fig. 17

LOCAL NAME. *Chiama gunka* (Tibetan).

SIZE. Myna +; length c. 27 cm (11 in.).

FIELD CHARACTERS. As in 1758, q.v.

STATUS, DISTRIBUTION and HABITAT. Occasional or possibly regular winter visitor: common in the Burmese Naga hills. Has straggled to North Lakhimpur (once) and Nepal (once). Recorded in the Khasi and Cachar hills (Baker, ssp.?).

Extralimital. Breeds in the mountains of western China and eastern Tibet. A winter visitor to southeastern Tibet and northern Burma.

GENERAL HABITS. As in 1758.

FOOD. Stomachs examined contained ants, beetles, grasshoppers, larvae and pupae, pond-snails, berries and seeds (Stanford).

VOICE AND CALLS. As in 1758.

MUSEUM DIAGNOSIS. Differs from *rubrocanus* (1758) in being darker. Whole head dark smoke-grey; chestnut of back not so deep, more rusty; centre of belly less whitish.

MEASUREMENTS

	Wing	Tail
♂♀	137-148	104-106 mm (Baker)

COLOURS OF BARE PARTS. As in 1758.

1760. **Kessler's Thrush.** *Turdus kessleri* Przevalski

Turdus Kessleri Przevalski, 1876, Mongol. i Strana Tangut 2: 62, pl. x (Kansu)
Baker, FBI No. 575, Vol. 2: 134

Plate 93, fig. 15

LOCAL NAMES. None recorded.

SIZE. Myna +; length c. 27 cm (11 in.).

FIELD CHARACTERS. Male. A large, striking black-and-tan thrush with yellow bill. *Above*, head, nape and upper back black; scapulars rufous brown; centre of back whitish buff changing to rufous-brown on rump and upper tail-coverts. Wings and tail black. *Below*, throat and breast black. Upper belly whitish buff changing to chestnut on lower parts. Under tail-coverts black margined with chestnut.

Female. *Above*, head, nape, upper back, wings and tail dark brown; scapulars and back grey-brown, rump tinged with tawny. *Below*, throat, upper breast and sides of head dark brown, the ear-coverts with pale shaft-streaks. Rest of underparts grey-brown tinged with tawny on belly.

STATUS, DISTRIBUTION and HABITAT. A straggler or irregular winter visitor to the central and eastern Himalayas. Sight records from Nepal (3450-4325 m), Jan.-Feb. (T. M. Robinson, JBNHS 85: 18-19). One record: a party of four at Changu, 3700 m, Sikkim, 21 December (Meinertzhagen, *Ibis* 1927: 577). A specimen obtained by Mandelli in Tibet close to the Sikkim border, c. 2700 m, in November. Might occur in winter in northern Bhutan or northern Arunachal Pradesh. In winter affects low scrub, especially juniper, and cultivated fields.

EXTRALIMITAL. Breeds in eastern Tibet and western China, in low rhododendron and willow scrub above timber-line between 3600 and 4500 m, mostly above 4000 m, in rocky country. In winter down to c. 2100 m.

GENERAL HABITS. Keeps in flocks in winter, often in company with *Turdus ruficollis* and *T. naumannii*. Pairing takes place in May but the birds do not entirely lose their sociable habits even during the breeding season. Flies low over the ground with ten to fifteen wing-strokes alternated with short glides.

FOOD. In winter chiefly juniper berries (Schäfer).

VOICE and CALLS. Alarm-note, a loud, harsh chuckle similar to that of *T. albocinctus*; call-note, a soft *dug dug*. Song rarely heard, composed of short phrases reminiscent of *T. viscivorus* (Schäfer).

BREEDING. EXTRALIMITAL.

MUSEUM DIAGNOSIS. See Field Characters.

YOUNG. *Above*. Crown and upper back dark brown with pale shaft-streaks; scapulars, back and rump whitish barred with dark brown; wing-coverts tipped with whitish, the lesser and median with pale shaft-streaks. Wings and tail dark brown.

Below. Throat and breast whitish buff heavily spotted with dark brown; belly buff barred with dark brown; under tail-coverts dark brown edged with buff.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
1 ♂	155	26	36	125 mm
1 ♀	150	25	35	118 mm (MD)
8 ♂♂	153–163	25–27	34–38	c. 130–140 mm (Hartert)

COLOURS OF BARE PARTS. Iris brown. Bill (and probably eye-rim) yellow (♂), yellowish brown (♀). Legs and feet brown.

1761. Fea's Thrush. *Turdus feae* (Salvadori)

Merula Feae Salvadori, 1887, Ann. Mus. Civ. Genova (2) 5: 514
(Muleyit Mt., Tenasserim)

Turdus subpallidus Hume, 1888, Stray Feathers 11: 132 (Eastern hills, Manipur)
Baker, FBI No. 583, Vol. 2: 143

Plate 93, fig. 14

LOCAL NAME. *Daokat jadi* (Cachari).

SIZE. Myna ±; length c. 23 cm (9 in.).

FIELD CHARACTERS. Male. *Above*, russet brown. A narrow white supercilium. Lores black, a white spot under the eye. *Below*, throat, sides of head and upper breast grey more or less suffused with a rusty hue; rest of underparts white, under tail-coverts with broad grey-brown margins.

Female. *Above*, like male. *Below*, chin and throat white speckled with brown, and grey of male replaced by fulvous grey.

STATUS, DISTRIBUTION and HABITAT. Winter visitor, 'not rare' in Nagaland and Manipur eastern hills (Hume, Godwin-Austen). Also recorded in Shillong and Cherrapunji (Godwin-Austen), probably North Cachar (Baker, JBNHS 9: 137), Nepal (Inskipps, 1985), Nilgiris and Pt Calimere in Tamil Nadu (Harrap & Redman, JBNHS 86: 461). Frequents the hills above c. 1500 m.

EXTRALIMITAL. Breeds in China; winters in Burma.

MIGRATION. Arrives in winter quarters at the end of October (first date 21 Oct.); remains until early April.

GENERAL HABITS. In winter keeps in flocks, often in company with *T. obscurus*.

FOOD. Insects and berries.

VOICE and CALLS. Unrecorded.

BREEDING. Extralimital.

MUSEUM DIAGNOSIS. See Field Characters.

MEASUREMENTS

	Wing	Bill (from gape)	Tarsus	Tail
1 ♂	127	25	33	94 mm
2 ♀♀	119, 121	24, 25	30	89, 91 mm (Hume)

COLOURS OF BARE PARTS. Iris brown. Bill blackish brown, yellow-brown at gape and on base of lower mandible. Legs and feet brownish yellow.

1762. Dark Thrush. *Turdus obscurus* Gmelin

Turdus obscurus Gmelin, 1789, Syst. Nat. 1: 816 (Siberia = Lake Baikal)
Merula subobscurus Salvadori, 1889, Ann. Mus. Civ. Genova (2) 7: 413 (Karen Hills)
 Baker, FBI Nos. 581 and 582, Vol. 2: 141, 142

Plate 94, fig. 11

LOCAL NAME. *Daokat gashim* (Cachari).

SIZE. Myna ±; length c. 23 cm (9 in.).

FIELD CHARACTERS. Male. *Above*, olive-brown, greyer on nape and sides of head. A broad white supercilium. Lores black. A white spot under the eye. *Below*, chin white, throat slaty grey. Breast and flanks pale fulvous brown or clay colour. Belly white; under tail-coverts white, edged brown at base.

Female. Like male but throat white streaked with brown. Ear-coverts paler, streaked with white.

STATUS, DISTRIBUTION and HABITAT. Common winter visitor to Meghalaya, Nagaland, Manipur and Mizoram; also most parts of Bangladesh *sive* Rashid. Recorded also in the Arunachal foothills (Stevens) and Sikkim (once, Mandelli). Has straggled to Belgaum (March), Nepal (December; May) (JBNHS 80: 52), Pt Calimere, Tamil Nadu (December), and the Andamans (S. Andaman I., March; Maya Bunder, February; Narcondam I., April 1969, 1970). Affects open forest.

Extralimital. Breeds in Siberia from the Yenisey to Kamchatka and Japan. Winters in Taiwan, southern China and the Indochinese countries.

MIGRATION. Arrives in winter quarters in October (earliest date 15), remains until April (latest date 30).

GENERAL HABITS. In winter keeps in flocks of considerable size, sometimes in company with *T. r. ruficollis* and *T. r. atrogularis*, but unlike them does not venture into open country, as a rule keeping to forest. Feeds mostly on the ground—also on berry-laden shrubs—in the mornings and evenings, resting in shady trees during the day.

FOOD. Insects and larvae, snails, berries and vegetable matter.

VOICE and CALLS. Soft pleasant notes, very like Blackthroated Thrush's (1763), uttered while feeding. When approached, the birds fly swiftly up into a nearby tree with a whirr of wings, uttering a thin, pipit-like *zip-zip*.

BREEDING. Extralimital.

MUSEUM DIAGNOSIS. See Field Characters.

Young (immature). Upperparts, lesser and median coverts much as in adult, but all feathers with ochraceous central streaks, most marked on mantle and scapulars which have darker tips; ear-coverts ochraceous with dark tips. Rest of wings, and tail, much as adult. Underparts white, suffused with fulvous on breast and flanks, all feathers, except on belly and under tail-coverts, with dark brown ends, heaviest on breast. Postjuvenile moult of body, lesser, median and part of greater coverts (Whistler, MSS.).

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	120–136	21–23	31–33	84–91 mm
♀♀	116–125 }			

(wing Dementiev, rest Hartert)

Weight 9 ♂♂ (winter) 65–80; 8 ♀♀ (winter) 59–75 g (SDR).

COLOURS OF BARE PARTS. Iris brown. Bill: upper mandible brown, lower yellow at base. Legs and feet yellowish brown to dark fleshy brown.

TURDUS RUFICOLLIS Pallas: REDTHROATED THRUSH

Key to the Subspecies

- Throat black *T. r. atrogularis* ♂
- Throat whitish streaked with black *T. r. atrogularis* ♀
- Throat chestnut *T. r. ruficollis* ♂
- Throat whitish with a rusty tinge *T. r. ruficollis* ♀

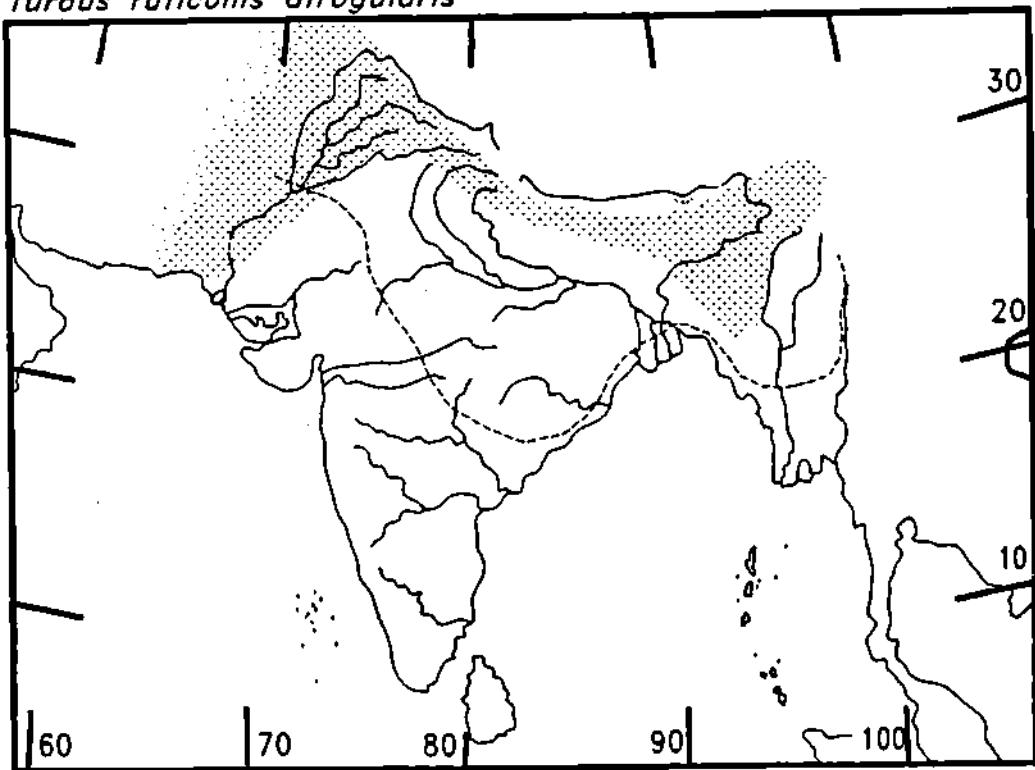
1763. *Turdus ruficollis atrogularis* Jarocki*Turdus atrogularis* Jarocki, 1819, Spis. Ptaków Król. Warszawa: 14 (Poland)
Baker, FBI No. 578, Vol. 2: 137

Plate 94, fig. 13

LOCAL NAMES. *Wanda kastur* (Kashmir); *Chachar* (Nepal); *Mach-reycha* (Bengali); *Daokat gashim* (Cachari).

SIZE. Myna ±; length c. 25 cm (10 in.).

FIELD CHARACTERS. Male. *Above*, grey-brown slightly spotted with dark brown on crown and nape. Lores and a short supercilium black. Ear-coverts grey-brown, sides of neck black. *Below*, throat and breast black (in winter with whitish fringes). Rest of underparts white.Female. *Above*, brown. *Below*, throat streaked dark brown and whitish. A broad breast-band blackish with whitish fringes. Rest of underparts white, upper belly and sides with a few pale brown streaks.STATUS, DISTRIBUTION and HABITAT. Abundant winter visitor.¹ Pakistan from N.W.F.P. through Baluchistan to the Makran Coast, and Sind (in exceptional winters right down to Karachi—Roberts); the Himalayas and adjacent plains from the Indus Valley and Gilgit eastward through Nepal, Sikkim, Bhutan and Arunachal Pradesh; Nagaland, Manipur, Assam and Bangladesh. In the Himalayas generally found up to c. 3000 m, in Nepal to 3800 m and in Sikkim up to 4200 m. Extension into the plains governed by weather conditions. May occur fairly often south to Jhang, Ludhiana, Bharatpur (Rajasthan—SA) and Gorakhpur. Has been recorded as far south as lat. c. 18.5°N. (Anantagiri, Andhra Pradesh (SDR)); once in Kutch (Jakhau, SA). Affects cultivation, grassy slopes, edges of forest, sparsely scrubbed fallow land, stubble fields and pastures.¹ Alleged breeding in Murree hills and Sikkim has not been substantiated by Whistler's investigations.

Turdus ruficollis atrogularis

Main winter range

Extreme winter extension

Extralimital. Breeds in eastern Russia and eastward through the Siberian taiga to the Yenisey. For details see Vaurie, 1959, 2: 396-7.

MIGRATION. Arrives mostly in October (earliest date 9 September) at high elevations, descending as the weather gets colder to the lower valleys and plains where it is most plentiful between January and March. Apparently arrives in the central Himalayas from either or both the west and east as it reaches Nepal rather late in November or December. Numbers vary greatly from year to year and from month to month, depending on weather conditions and food supply. Northward migration takes place in March-April, a few birds remaining until the end of April or even early May. Southward migration from breeding grounds is apparently very leisurely whereas spring migration seems to take place hurriedly (cf. Diesselhorst, 1968).

GENERAL HABITS. A highly gregarious species usually seen in loose flocks of 3 to 30 individuals, or up to 50 before their spring departure. Progresses on the ground in long hops when feeding, flying up into high trees when disturbed. Also picks berries on bushes and trees. Roosts in company in dense-foliaged trees. Consorts freely with other thrushes in large flocks.

FOOD. Insects—grasshoppers, beetles, caterpillars and grubs, white ants, etc.; also earthworms, snails, fruit and berries (*ber* drupes—*Zizyphus*, *Carissa*, scarlet berries of a *Magnolia*, and hips and haws recorded), and flower-nectar. In winter, berries form a major proportion of their diet in mountain areas (Roberts).

VOICE and CALLS. Call-note similar to that of the Song Thrush or

Redwing (a thin *see*). Alarm, chuckle like that of a Blackbird but much softer; a throaty *which-which-which* (SA).

BREEDING. Extralimital. However, specimens ($\sigma^{\prime} \Omega$) collected in Nepal between 20 March and 17 April had mature gonads (Biswas, JBNHS 58: 677).

MUSEUM DIAGNOSIS. See Field Characters.

First-winter male like adult but black replaced by dark brown with white bases and longer white fringes giving a mottled appearance. There is much variation, some birds having the centre of chin and throat more or less white streaked with brown and being indistinguishable from female. Outer greater coverts with small pale tips to outer web (Whistler, MSS.).

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
$\sigma^{\prime}\sigma'$	127-143	22-25	32-35	89-104 mm
$\Omega\Omega$	125-138			

(wing by Dementiev, rest BB, SA)

Weight 8 $\sigma^{\prime}\sigma'$ (Oct.-April) 71.1-94.2; 6 $\Omega\Omega$ (Oct.-April) 72-96 g (RAP, Paludan). 21 $\sigma^{\prime}\Omega$ (Nov.-Mar.) 57-94 (av. 77.1) g—SA. 1 Ω 72 g—SDR.

COLOURS OF BARE PARTS. Iris dark brown. Bill: upper mandible dark horny with yellow on gape and sides; lower mandible yellow with dark horny tip. Legs yellowish- or brownish grey with dusky front, or yellowish grey to horny brown; claws dark horny; soles white.

1764. *Turdus ruficollis ruficollis* Pallas

Turdus ruficollis Pallas, 1776, Reise Russ. Reichs 3: 694 (Dauria)
Baker, FBI No. 577, Vol. 2: 136

Plate 94, fig. 12

LOCAL NAME. *Daokat gajao* (Cachari). See also 1763.

SIZE. Myna \pm ; length c. 25 cm (10 in.).

FIELD CHARACTERS. Male. As in 1763 but black of throat and supercilium replaced by chestnut, and tail rufous except central rectrices. In winter the chestnut feathers are fringed with whitish.

Female as male but chestnut paler and much mottled with white and more or less heavily spotted with black. Very variable. Some have throat and breast cream with a rusty tinge and no spots on breast; others have pectoral spots and a rusty tinge throughout; all have a moustachial line of dark brown spots.

The rufous outer rectrices distinguish both sexes from all other members of the genus, including the Blackthroated Thrush.

STATUS, DISTRIBUTION and HABITAT. Winter visitor to the Himalayas, occasionally from N.W.F.P. (two authentic records; no recent sightings—Roberts), Nepal (specimens in British Mus.; also Fleming & Traylor, 1964: 547), Sikkim, Bhutan and Arunachal Pradesh; the plains of the Brahmaputra, the Garo and Khasi hills, Bangladesh, Nagaland and Manipur. Common in the east, occasional west of Sikkim. Habitat as in 1763.

Extralimital. Breeds in Siberia in the Lake Baikal region, intergrading with *atrogularis* in the Altai and Sayan Mts. Winters east through southeastern Tibet, Burma and northern Yunnan.

MIGRATION. As in 1763.

GENERAL HABITS, FOOD and VOICE. As in Blackthroated Thrush (1763) with which it often consorts, associating freely also with *T. unicolor*, *T. obscurus* and other thrushes in large flocks.

BREEDING. Extralimital.

MUSEUM DIAGNOSIS. See Field Characters. Intermediates between this form and *atrogularis* occur, apparently more often in the western Himalayas (cf. Meinertzhagen, *Ibis* 1927: 576).

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	128-143	22-23	34-35	94-106 mm
♀♀	127-136			

(wing by Dementiev, rest SA)

Weight 2 ♂♂ (summer) 76.3, 78.5; 1 ♀ (summer) 63 g (Dementiev). 1 ♀ (Mar.) 79 g—SA. 1 ♂? (Dec.) 77 g—BB. 1 ♂ 96 g (SDR).

COLOURS OF BARE PARTS. Iris dark brown. Bill: upper mandible black, lower basally dark yellow, distally black. Legs and feet brownish yellow (♂), greyish brown (♀).

1765. Dusky Thrush. *Turdus naumanni eunomus* Temminck

Turdus eunomus Temminck, 1831, Pl. Col. 5, livr. 87, pl. 514 (Japan)
Baker, FBI No. 574, Vol. 2: 133

Plate 94, fig. 9

LOCAL NAME. *Daokat* (Cachari).

SIZE. Myna ±; length c. 23 cm (9½ in.).

FIELD CHARACTERS. A dark thrush with conspicuous white supercilium, rufous wings and squamated breast.

Male. *Above*, crown, nape and upper back blackish brown with rufous-brown margins; rump more rufous. A long whitish supercilium. A large blackish ear-patch. Wings rufous. Tail blackish. *Below*, throat and sides of neck cream colour with a few dark malar specks. Breast and flanks blackish brown with broad white margins giving a scaly aspect. Centre of belly white. Under wing-coverts rufous chestnut, rest of underwing pale rufous.

Female. *Above*, crown, ear-coverts and back grey-brown becoming more rufous-brown on rump. Wing rufous as in male. Throat and sides of neck pale cream speckled with dark brown, especially on the sides. Breast and flanks whitish with scale-like chestnut markings. Centre of belly white.

STATUS, DISTRIBUTION and HABITAT. Irregular winter visitor, rare in the western Himalayas, more frequent in Assam. Recorded from Kohat (once in April—*Ibis* 1909: 222), Lahore, 12 January (J. R. S. Holmes *fide* T. J. Roberts pers. comm.), Islamabad, 28 March (Corfield, 1983), central Nepal

(large flocks in winter and spring—Proud, JBNHS 48: 703), the Dafla Hills, Dibrugarh, Barail Range and Khasi Hills (SF 11: 130) and North Cachar (JBNHS 9: 136). Recorded between 900 and 3000 m. Affects open fields and grasslands, and thinly wooded country.

Extralimital. Breeds in Siberia from the Yenisey river to Kamchatka. Winters in southeastern Asia from Japan and Hopeh south to Taiwan, northern Burma and Yunnan.

MIGRATION. Appears to arrive rather late in autumn (earliest 14 November) or even in mid-winter. Last date 18 April.

GENERAL HABITS. In winter usually keeps in flocks. Feeds mostly on the ground.

FOOD. Insects, snails, berries.

VOICE and CALLS. Alarm-note a rapid *kveveg*. Call-note, a starling-like *spurr*. Also *tacktacktacktack* when going to roost.

BREEDING. Extralimital.

MUSEUM DIAGNOSIS. See Field Characters.

MEASUREMENTS

	Wing	Tail
♂♂	124–134	95–98 mm
♀♀	121–133 }	
(Dementiev)		

Bill (from skull) 24–25; tarsus 32–33 mm (MD)

Weight 3 ♂♂ 78–106; 2 ♀♀ 87, 88 g (Dementiev).

COLOURS OF BARE PARTS. Iris brown. Bill blackish brown, yellow at base of lower mandible. Legs and feet brown.

1766. Fieldfare. *Turdus pilaris* Linnaeus

Turdus pilaris Linnaeus, 1758, Syst. Nat., ed. 10, 1: 168 (Europa = Sweden)
Baker, FBI No. 593, Vol. 2: 155

Plate 94, fig. 15

LOCAL NAMES. None recorded.

SIZE. Myna +; length c. 27 cm (11 in.).

FIELD CHARACTERS. *Above*, head, nape and ear-coverts grey; a few black streaks on crown. Back smoky brown; rump grey. Tail dark brown. *Below*, throat and breast rusty buff with dark brown streaks. Flanks squamated with dark brown. Centre of belly whitish. Sexes alike.

STATUS, DISTRIBUTION and HABITAT. Accidental. One record (undated) from Saharanpur, U.P. (an error in the locality is however not to be excluded). Affects open fields and orchards.

Extralimital. Breeds from Scandinavia and central Europe east to the Lena river. Winters to the Mediterranean countries, Asia Minor, northern Iran and Russian Turkestan.

GENERAL HABITS. A gregarious thrush keeping in large flocks in winter, even nesting in loose colonies. Feeds mostly on the ground, flying into trees when disturbed.

FOOD. Insects, fruit and berries.

VOICE and CALLS. Usual note, a characteristic, loud *chak-chak-chak*.

BREEDING. Extralimital.

MUSEUM DIAGNOSIS. See Field Characters.

MEASUREMENTS

	Wing	Tail
♂♂	137-153	
♀♀	133-148	110-115 mm
(Dementiev)		

Bill (from skull) c. 25; tarsus c. 35 mm (MD)

Weight 7 ♂♂ 86-112; 4 ♀♀ 90-109 g (Dementiev).

COLOURS OF BARE PARTS. Iris brown. Bill in winter orange-yellow with tips of both mandibles blackish brown and most of upper mandible clouded with same. Legs and feet brown.

1767. Redwing. *Turdus iliacus* Linnaeus¹

Turdus iliacus Linnaeus, 1766, Syst. Nat., ed. 12: 292 (Sweden)
Baker, FBI No. 594, Vol. 2: 156

Plate 94, fig. 14

LOCAL NAMES. None recorded.

SIZE. Myna ±; length c. 22 cm (8½ in.).

FIELD CHARACTERS. *Above*, entirely olive-brown; a conspicuous buff supercilium. *Below*, creamy white streaked with dark brown on throat, with paler brown on breast and upper belly. Flanks, under wing-coverts and axillaries rich rufous. Sexes alike.

STATUS, DISTRIBUTION and HABITAT. Irregular winter visitor? Jerdon included it in *Birds of India* 1: 532 on presumptive sight records by Lieut. Trotter in February and March, from near Drosch. Many seen and one collected near Drosch (Major F. Wall, JBNHS 21: 617) on 23rd March in the first decade of this century. However, specimen neither at the British Museum, Tring nor at the BNHS. Significantly not recorded from Afghanistan; fresh evidence needed. Affects open forest and fields.

Extralimital. Breeds in northern Europe and Siberia from Iceland east to the Kolyma river. Winters in western Europe, the Mediterranean countries and the Middle East.

GENERAL HABITS. Those of the genus. Feeds mostly on the ground, flying into trees when disturbed.

FOOD. Insects and berries.

VOICE and CALLS. The only note likely to be heard in winter is a thin *tsee*.

BREEDING. Extralimital.

MUSEUM DIAGNOSIS. See Field Characters.

MEASUREMENTS

	Wing	Tail
♂♂	112-124	
♀♀	108-116	c. 80 mm
(Dementiev)		

Bill (from skull) c. 24 mm; tarsus c. 30 mm (MD)

¹ *Turdus musicus* Linnaeus has been placed on the Official Index of Rejected and Invalid Names (ICZN 20: 199-210, 1959).

Weight 7 ♂♂ 52–65 (av. 59·4); 5 ♀♀ 58·5–72·9 (av. 63·2) g (Dementiev).

COLOURS OF BARE PARTS. Iris brown. Bill: upper mandible dark brown, lower mandible dark at tip, fleshy horny at base. Legs and feet fleshy grey-brown.

1768. Mistle Thrush. *Turdus viscivorus bonapartei* Cabanis

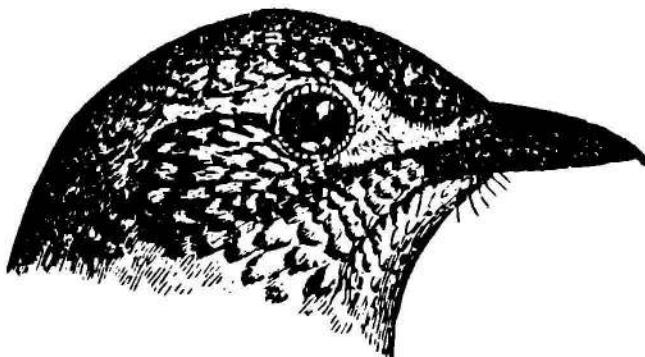
T.(urdus) Bonapartei Cabanis, 1860, Jour. f. Orn. 8: 183 (Himalayas)
Baker, FBI No. 592, Vol. 2: 154

Plate 94, fig. 16

LOCAL NAME. *Techal kăstūr* (Kashmir).

SIZE. Myna +; length c. 28 cm (12 in.).

FIELD CHARACTERS. A large grey-brown thrush with boldly spotted underparts. White under wing-coverts conspicuous in flight. *Above*, grey-brown, flight-feathers more or less edged with white. A pale eye-ring. Rectrices, especially outer ones, tipped with white. *Below*, buff boldly marked with roundish dark brown spots. Sexes alike.



c. 1

STATUS, DISTRIBUTION and HABITAT. Common resident, subject to vertical movements. Pakistan in northern Baluchistan, N.W.F.P., Chitral thence east to Gilgit and along the Himalayas to western Nepal (Fleming & Traylor, 1968). Breeds mostly between 2400 and 3600 m, locally up to 3900 m (Chitral, Lahul) or down to 1800 m (Kashmir, Simla). Winters down to c. 1200 m, occasionally reaching the foothills and adjacent plains (Quetta, Punjab Salt Range, Lahore); also observed at 3300 m at end of November. Affects open forest of fir, deodar, juniper, and pine, sometimes mixed with oak or birch; also dwarf juniper forest above timber-line. Prefers inner drier mountain ranges in Pakistan, avoiding monsoon influenced forest (Roberts). In winter also open grassy hillsides, edges of forest and hill cultivation.

EXTRALIMITAL. Extends to Afghanistan and north through Turkestan to the Sayans and the Angara river. The species ranges west to Sweden, the British Isles and Morocco.

GENERAL HABITS. Keeps singly or in pairs during the breeding season, congregating after the middle of August, flocks of twenty or more then being commonly seen. Moves on the ground in long hops in search of food, flying up into trees when disturbed.

FOOD. Insects and larvae, berries. In Europe this species is the principal disseminating agent of the mistletoe berries.

VOICE and CALLS. Has a loud song given in rapid phrases of 5 or 6 notes, generally uttered from the tops of tall trees. In some populations its song is reminiscent of Tickell's Thrush (Roberts, pers. comm.). Alarm-note, a characteristic rattle, sounding like a splinter of wood drawn over a comb—or harsh *kir-kir-kir* reminiscent of Wood Shrike's (*Tephrodornis*). A subdued *kreee* while flying off.

BREEDING. Season, April to July. Nest, a solid cup of coarse twigs well covered with lichen and moss with a certain amount of clay in the foundation, lined with fine grass and rootlets; placed in saplings or junipers usually close to the trunk, sometimes in the lower branches of trees, between two and five metres above the ground. Eggs 3 to 5, normally 4, pale greenish grey marked over the whole surface with small reddish brown blotches, usually more numerous towards the larger end. Average size of 50 eggs 31.3×22.4 mm (Baker); 3 eggs 33.5×23.3 mm (HW); 3 eggs 34.5×21.8 (BBO). Building of nest and incubation by both sexes; incubation period 14 or 15 days.

MUSEUM DIAGNOSIS. See Field Characters.

Young. *Above*, general colour browner than adult, each feather with a pale ochraceous centre, small on head, narrow on rump and large on rest of upperparts, all with dark brown fringes. *Lesser, median and inner greater coverts* with large central ochraceous streaks. *Below*, as adult but spots smaller. Postjuvenile moult of body-feathers, lesser, median and inner greater coverts.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	162–172	c. 27	36–38	{ (1) 116 mm
♀♀	157–168 }			{ (1) 112 mm

(HW, CBT, Paludan)

Weight 2 ♂♂ (April, July) 107, 125; 3 ♀♀ (April, June) 100–118 g (Paludan).

COLOURS OF BARE PARTS. Iris dark brown. Bill dark brown or yellowish. Legs and feet olive-brown or light yellowish brown; claws blackish to olive-yellow.

1768a. Song Thrush. *Turdus philomelos* (Brehm)

LOCAL NAMES. None recorded.

SIZE. Myna ±; length c. 20–23 cm (8–9 in.)

FIELD CHARACTERS. Smaller than 1768, with browner (less grey) tone to upperparts; wing feathers and tail tip lack whitish edges.

STATUS, DISTRIBUTION and HABITAT. Three reliable reports from the subcontinent: one was mist-netted in Ladakh in 1980; one was seen at Bharatpur in 1981; and one was seen near the Hab dam on the Sind-Baluchistan border in February 1984 (Roberts, 1992).

Extralimital. Western Palaearctic east to southern Russia, northern Iran, and extreme western China; winters south to north Africa, Arabia, and Iran.

GENERAL HABITS, FOOD and VOICE. Not recorded in the subcontinent.

BREEDING. Extralimital.

MUSEUM DIAGNOSIS. See Field Characters. Race uncertain.

Family TROGLODYTIDAE: Wrens

For description see Baker, E. C. S., 1922, FBI 1: 444; Van Tyne, J. & Berger, A. J., 1959: 521; Armstrong, E. A., 1964, article 'Wren' in Thomson, A. L. (ed.), *A New Dictionary of Birds*, London & New York.

Genus TROGLODYTES Vieillot

Troglodytes Vieillot, 1807, Hist. Nat. Ois. Amér. 2: 52. Type, by subsequent designation, *Troglodytes aedon* Vieillot

Bill slender and weak, about half the length of the head. Wing very short and rounded, first primary (as.) about two-thirds the length of second. Tail shorter than wing, of 12 rectrices, slightly graduated. Tarsus and claws long and slender.

TROGLODYTES TROGLODYTES (Linnaeus): WREN

Key to the Subspecies

		Page
A Throat ashy grey.....	<i>T. t. magrathi</i>	138
B Throat sooty brown		
1 Paler	<i>T. t. neglectus</i>	139
2 Darker.....	<i>T. t. nipalensis</i>	140

1769. *Troglodytes troglodytes magrathi* (Whitehead)

Anorthura magrathi Whitehead, 1907, Bull. Brit. Orn. Cl. 21: 19 (Safed Koh)
Baker, FBI No. 460 (part), Vol. 1: 446

LOCAL NAMES. None recorded.

SIZE. Sparrow -; length c. 9 cm (3½ in.).

FIELD CHARACTERS. As in 1770, q.v.

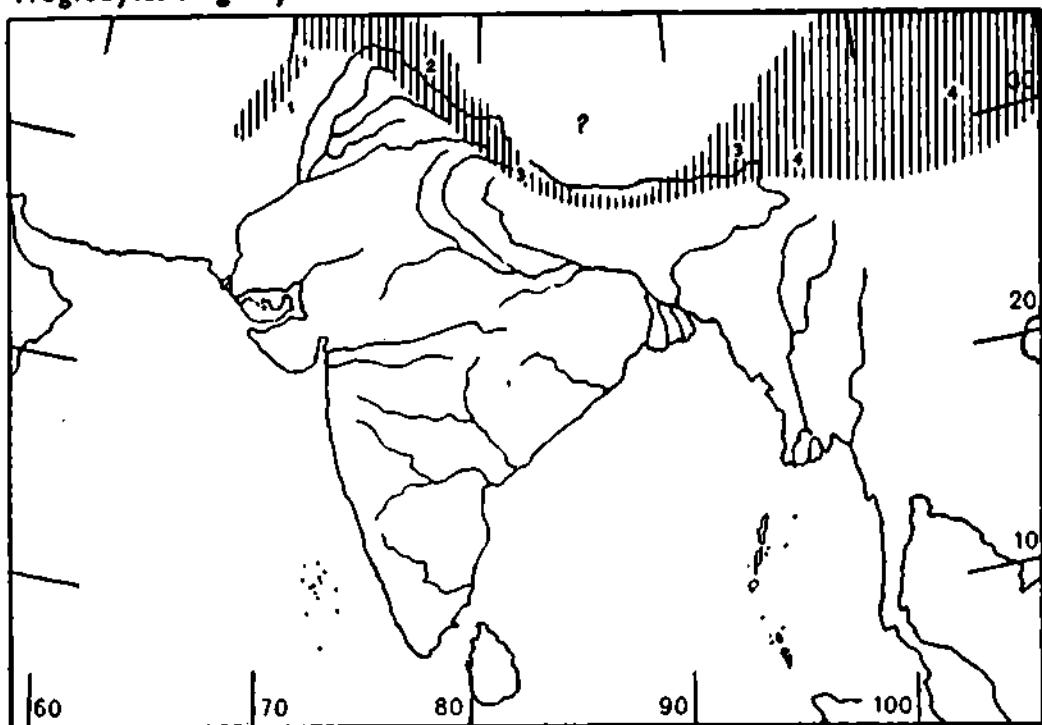
STATUS, DISTRIBUTION AND HABITAT. Resident, fairly common but local. The Safed Koh between 2500 and 3700 m (Whitehead, *Ibis* 1909: 117). Birds from Ziarat, northern Baluchistan (Christison, A.F.P., JBNHS 43: 481) presumably belong to this subspecies. Affects juniper scrub.

GENERAL HABITS, FOOD AND VOICE. As in 1770.

BREEDING. Unrecorded; probably as in 1770.

MUSEUM DIAGNOSIS. 'Differs from *neglectus* (1770) in being almost uniform in colouring above, the barring being scarcely perceptible, and in having the throat ashy grey' (Whitehead). 'A densely banded race, the banding extending upward over the mantle and over the breast, grey-brown above, greyish below with a pale throat, not rufous nor smoky' (Vaurie).

MEASUREMENTS AND COLOURS OF BARE PARTS. Unrecorded.

Troglodytes troglodytes

Distributional ranges 1 *magrathi* (1769) 2 *neglectus* (1770)
 3 *nipalensis* (1771) 4 Extralimital races

1770. *Troglodytes troglodytes neglectus* Brooks

Troglodytes neglectus Brooks, 1872, Jour. Asiatic Soc. Bengal 41: 328 (Kashmir)
 Baker, FBI No. 460, Vol. 1: 446

LOCAL NAMES. None recorded.

SIZE. Sparrow -; length c. 9 cm (3½ in.).

FIELD CHARACTERS. A diminutive, dark rufous-brown bird with short, erect tail. *Above*, rufous-brown narrowly barred with dark brown on wings, lower back and tail. A pale eye-ring. *Below*, paler, somewhat whitish on belly and even more closely barred. Sexes alike.

STATUS, DISTRIBUTION and HABITAT. Common resident, subject to vertical movements. The western Himalayas from N. Baluchistan (Christison, JBNHS 43: 481), N.W.F.P., Baltistan and Ladakh east to Garhwal. Breeds between 2700 and 3900 m, locally down to c. 2400 m (Kashmir). Winters (October to March) from c. 1200 (occasionally), up to at least 3000 m. Affects forest of fir, birch or oak, stunted growth on boulder-strewn ground, rocky nullahs and glacier moraines above timber-line. Partial to piled-stone parapet walls around upland cultivation and shepherds' encampments. In drier areas keeps generally to the proximity of streams.

Extralimital. The species, in numerous geographical races, ranges west to Iceland and Morocco, and east through China to southeastern Siberia, the Aleutian Islands, Alaska and most of temperate North America.

GENERAL HABITS. Solitary and intensely restless. Hops about lithely in low scrub and amongst boulders, creeping in little jerks and starts in and out of crevices and brushwood in search of food, tail always cocked upwards. When disturbed bobs up and down ('curtseys') nervously like a dipper, with wings partly drooped, turning this way and that before vanishing into concealment.

FOOD. Insects and spiders.

VOICE and CALLS. Alarm-notes *tzick-tzick-tzick*, and a harsh scolding *ter-ter-terrrrr*. Song, a cheery high-pitched, rapid and vibrant jumble of notes, somewhat reminiscent of that of *Phylloscopus occipitalis* (1606) and astonishingly loud for so small a bird; uttered from inside cover or from an exposed situation; given regularly till mid July, resumed about September (probably), and freely uttered all winter often in the bleakest surroundings.

BREEDING. Season, May to July. Nest, built largely by the male, a large, globular structure with lateral entrance-hole, of moss, lichen, juniper bark strips, grass or dead leaves, depending on locality, lined with rootlets, fine bast fibres, hair and feathers; placed among the roots of upturned trees, between boulders, in cracks in standing or fallen tree-trunks, in hollows in banks or sometimes in the roof of a derelict stone hut. When placed deep in holes, the dome is usually dispensed with, the nest being merely a loose collection of grass and feathers filling the back of the cavity; the height varies from ground level up to nine metres or so, most nests being within two metres of the ground. Eggs, 4 or 5, sometimes 3 or 6, white with pale rusty red specks, occasionally immaculate. Average size of 60 eggs 16·8 × 12·3 mm (Baker); of 35 eggs 17 × 12·5 mm (BBO).

MUSEUM DIAGNOSIS. Heavily and densely banded but much darker than *magrathi* (1769), smoky brown, including the throat; paler than *nipalensis* (1771).

Young like adult but darker on throat; barring of underparts coarser.

MEASUREMENTS

	Wing	Bill (from feathers)	Tarsus	Tail
♂♀	47–51	c. 11	19–20	26–30 mm (Baker)

Weight 1 ♂ (March) 8 g (Paludan).

COLOURS OF BARE PARTS. Iris dark brown. Bill: upper mandible dark brown, lower light brown. Legs and feet dark brownish flesh.

1771. *Troglodytes troglodytes nipalensis* Blyth

Troglodytes nipalensis 'Hodgson' = Blyth, 1845, Jour. Asiat. Soc. Bengal 14: 589
(Nepal)

Anorthura tibetana Walton, 1905, Bull. Brit. Orn. Cl. 15: 93
(Khamba Jong, Tibet)

Troglodytes troglodytes kinneari Biswas, 1955, Bull. Brit. Orn. Cl. 75: 87
(Thammu, Bhote Kosi Valley, Khumbu, Nepal)
Baker, FBI No. 458, Vol. 1: 445

LOCAL NAME. *Marchek-pho* (Lepcha).

SIZE. Sparrow –; length c. 9 cm (3½ in.).



$\times c. 1$

FIELD CHARACTERS. As in 1770, q.v.

STATUS, DISTRIBUTION and HABITAT. Common resident, subject to vertical movements. The Himalayas from Tehri Garhwal eastward through Arunachal Pradesh. Breeds between 3300 and 3900 m (Garhwal), 3000 and 5000 m (Nepal) and up to 5500 m in adjacent parts of southern Tibet;

between 2700 and at least 4700 m in Sikkim, Bhutan and Arunachal. Common in winter about 3600 m and observed up to 4700 m; occasionally descends as low as 2200 m. Affects rocks and boulders in fir, birch and rhododendron forest near timber-line, juniper and rhododendron scrub above timber-line, and boulder-strewn slopes, screes and moraines above the dwarf scrub zone. Almost entirely absent in the undergrowth in forest such as its European representative commonly patronizes. Here it is replaced by *Pnoepyga albiventer* (1198), a species with very similar habits. The wren in Nepal affects chiefly rocks and boulders which offer a maze of crevices and holes, among which it loves to creep in and out. Where *Pnoepyga* does not occur, however, the Wren may inhabit undergrowth in subalpine conifer forest. In winter also frequents piled-up stone walls in fields and villages, banks and rocky beds of streams, fallen tree-trunks in pine forest, and occasionally deep forest as well as open stony ridges.

Extralimital. Adjacent parts of southern Tibet. For range of the species see 1770.

GENERAL HABITS and FOOD. As in 1770.

VOICE and CALLS. Song as in 1770; said to be similar to, but easily recognizable from that of the European subspecies (Wollaston).

BREEDING. As in 1770. Average size of 17 eggs 17.4×12.7 mm (Baker).

MUSEUM DIAGNOSIS. Banding similar to that of *neglectus* (1770) but general coloration darker, sooty brown; the darkest race of the species.

Young much darker than adult.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	50-59	13-15	19-20	30-33 mm
♀♀	47-53	13-14	19-20	27-31 mm
(NBK, SA, Fleming & Traylor)				

Wing of 29 oo? 45-53 mm (NBK)

Weight 4 ♂♂ (summer) 9.5-10 g; 1 ♀ (August) 8.1 g; 12 juv. 8.5-10 g (GD); 1 ♂ (Sept.) 11 g—SDR; 3 ♀♀ (Nov.) 8, 8, 8 g—SA.

COLOURS OF BARE PARTS. As in 1770.

Family CINCLIDAE: Dippers

For description see Baker, E. C. S., 1924, FBI 2: 1; Van Tyne, J. & Berger, A. J., 1959: 520; Hurrell, H. G., 1964, article 'Dipper' in Thomson, A. L. (ed.), *A New Dictionary of Birds*, London & New York.

Genus *CINCLUS* Borkhausen

Cinclus Borkhausen, 1797, Deutsche Fauna 1: 300. Type, by monotypy,
C. hydrophilus Borkhausen = *Sturnus Cinclus* Linnaeus

Bill almost as long as head, narrow and straight, tip slightly curved and notched. Lower mandible slightly upturned. Nostrils covered by a large membrane. No rictal bristles. Wing short and rounded. Tail very short. Tarsus long, smooth and very strong, with short, strong claws.

Cf. Vaurie, C., 1951, Amer. Mus. Novit., No. 1485: 11-15.

Key to the Species

	Page
Breast white	<i>C. cinclus</i> 142
Breast brown	<i>C. pallasi</i> 145

CINCLUS CINCLUS (Linnaeus): DIPPER

Key to the Subspecies

	Page
A Belly white.....	<i>C. c. leucogaster</i> 142
B Belly brown	
1 Upper belly paler	<i>C. c. cashmeriensis</i> 143
2 Whole belly darker without pale shading where joining white of breast	<i>C. c. przewalskii</i> 145

1772. *Cinclus cinclus leucogaster* ¹ Bonaparte

Cinclus leucogaster 'Eversmann' = Bonaparte, 1850, Conspl. Gen. Av. 1: 252
 (West Siberia)

Baker, FBI No. 478, Vol. 2: 3

LOCAL NAMES. None recorded.

SIZE. Myna ±; length c. 20 cm (8 in.).

FIELD CHARACTERS. As in 1773 but belly white (*v.* chocolate-brown).

STATUS, DISTRIBUTION and HABITAT. Straggler to Darel Valley, Gilgit (one record in July, specimen in British Mus.; cf. SF 10: 262); also Jora Valley, Hazara dist. (Roberts, 1992).

EXTRALIMITAL. Ranges from northern Afghanistan and the northern slopes of the Karakoram Range (Ludlow, *Ibis* 1933: 454) northeastwards through Turkestan and southeastern Siberia to the Sea of Okhotsk.

GENERAL HABITS, FOOD and VOICE. As in 1773.

MUSEUM DIAGNOSIS. Easily distinguished by white belly.

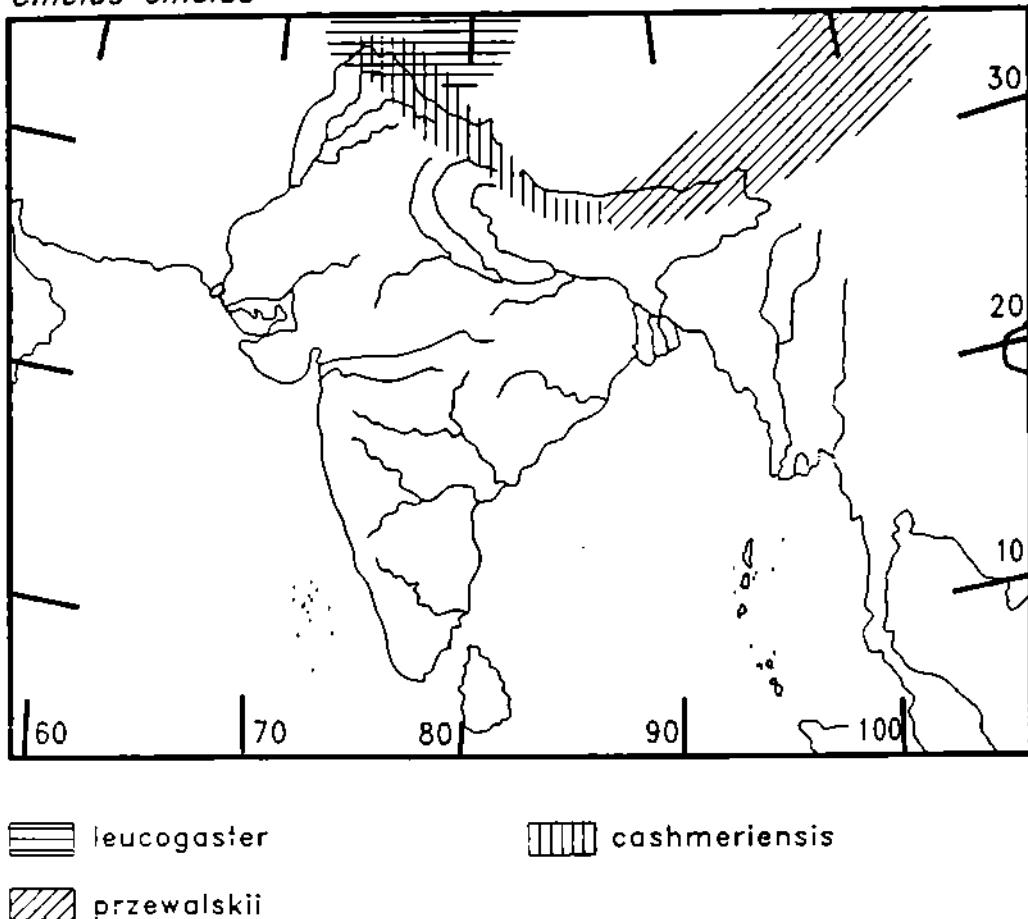
MEASUREMENTS

Wing ♂♂ 80-95; ♀♀ 79-94 mm (Dementiev)

Weight 2 ♀♀ (July, Sept.) 41, 50 g (Paludan).

COLOURS OF BARE PARTS. As in 1773.

¹ Owing to geographic overlapping there are no valid subspecies of *Cinclus cinclus* with dark and light bellied forms occurring in a complicated mosaic throughout Europe and the Soviet Union (THE BIRDS OF THE W. PALEARCTIC Vol. 5, p. 523; 1988). The same may be true for the Himalayan population.

Cinclus cinclus• 1773. *Cinclus cinclus cashmeriensis* Gould

Cinclus cashmeriensis Gould, 1860, Proc. Zool. Soc. London: 494 (Kashmir)
Baker, FBI No. 477 (part), Vol. 2: 2

LOCAL NAMES. *Dungal, Galkar* (Kashmir).

SIZE. Myna ±; length c. 20 cm (8 in.).

FIELD CHARACTERS. A dumpy, stub-tailed, thrush-like bird of swift Himalayan streams. *Above*, head and upper back chocolate-brown. Rest of upperparts slaty with scaly brown markings on back and rump. *Below*, throat and breast white. Belly chocolate-brown with faint white tips to the feathers. Sexes alike.

Colour scheme provides perfect camouflage against background of rocks and rushing water, both at rest and in flight.

STATUS, DISTRIBUTION and HABITAT. Common resident north of the main range, scarce on the southern aspect. The Himalayas from the Kagan Valley, Gilgit, Hunza, Ladakh and Himachal Pradesh eastward to Sikkim. Recorded only from Langtang Khola, c. 3500 m in Nepal (Polunin, JBNHS 52: 895) where *Cinclus pallasi* (1775) ascends to nearly 5000 m; it is however common in adjacent Tibet (Mt Everest region, *Ibis* 1922: 506). Breeds between 3000 and 4800 m and up to 5100 m in southern Tibet, and possibly at lower elevations in Kashmir exceptionally: a specimen collected at c. 2000 m near

Gund, Sind Valley on 6 April (Meinertzhagen) and eggs said by Baker (*Nidification* 1: 437) to have been obtained by A. E. Ward 'close to Srinagar, 1500 m' on 5 April, but doubtfully authentic (*vide* HW). Some birds drift downwards in winter but rarely below 2400 m. Affects swift-flowing streams and torrents, chiefly in the Tibetan facies; also glacial lakes and tarns even though partially frozen. Prefers smaller streams than *C. pallasii*, which it replaces at higher elevations; however the two species may occasionally be seen on the same watercourses where their altitudinal ranges overlap.

Extralimital. Adjacent parts of southern Tibet. The species ranges in the mountains of the Middle East, Morocco, Europe, the Ural Mts., central Asia (*leucogaster*, 1772) and western China.

GENERAL HABITS. Solitary or in widely separated pairs according to the season. Very territorial. Feeds mostly by plunging from a rock amid a stream into the icy water, swimming against the swift current with the help of its wings and walking on the bottom, remaining submerged for a half-minute or more. On emerging floats like a bobbing cork on the surface, sometimes whirled round like a coracle by the rushing current. Jumps on to a stone, shakes off the water from its plumage and resumes its nervous bowing and curtseying—partly flexing and stretching its legs, jerkily turning its head from side to side and cocking its stub tail. Flight direct and swift, with rapid quivering wing-beats low over water, following bends of streams or coasting between the larger boulders, only making a detour overland to avoid an intruder. On alighting usually dips in water close to a boulder and swims up to it. A bird has been observed feeding in a hole in the snow under which a stream flowed.

Display. '... The male nearby stood with its head pointing straight upwards so as to show the white throat and breast to their full extent. He stood high on his legs with them rather apart, and the tail was partly spread and pointed downwards. Both wings were stretched out and whirred rapidly. Thus he faced his mate, and as she moved about he moved so as to present the white patch continually towards her. Occasionally he varied the display by turning the axis of his body parallel to the ground, still with the wings whirring' (Whistler, MS.).

FOOD. Chiefly aquatic insects and their larvae.

VOICE and CALLS. A shrill *dzhit*, *dzhit* uttered in flight. Has a wren-like high-pitched, piercing and lively song in the breeding season, often given also on cold but sunny winter days.

BREEDING. *Season*, April to July. *Nest*, a large globular structure usually made of moss, lined with fine grass or dead leaves and looking like a natural accumulation of flotsam debris; placed in banks overhanging water, in crevices of rocks or among a pile of rocks forming an islet amidst rushing water; sometimes on islets in quite open, exposed situations. *Eggs*, 4 or 5, long pointed ovals, pure white. Average size of 50 eggs 25.9 × 18.5 mm (Baker); of 8 eggs 26.1 × 18.8 mm (BBO).

MUSEUM DIAGNOSIS. See Key to the Subspecies. A rare colour phase occurs in which the throat and breast are entirely brown ('*sordidus*') [two records from Ladakh; more common in southeastern Tibet].

Young. *Above*, slaty with dark brown tips to feathers. All flight-feathers and rectrices tipped with white. *Below*, whitish, the feathers finely tipped with grey. Postjuvenile moult of body-feathers, lesser, median and inner greater coverts.

MEASUREMENTS

	Wing	Tarsus	Tail
♂♀	90–100	27–29	48–56 mm (Baker)

Bill from skull 3 ♂♂ 3 ♀♀ 22 mm (MD)

COLOURS OF BARE PARTS. Iris pale brown. Bill dark brown to blackish brown. Legs leaden in front, dark brown behind; toes leaden, soles pale greyish (Abbott). Gape of nestling lemon- to sulphur-yellow (SA).

1774. *Cinclus cinclus przewalskii* Bianchi

Cinclus przewalskii Bianchi, 1905, Bull. Brit. Orn. Cl. 15: 91

(Den-chu, basin of the Yangtse-kiang)

Cinclus cinclus beicki Meise, 1928, Orn. Monatsb. 36: 138

(Desen-laka, South Tatung Range)

Baker, FBI No. 477 (part), Vol. 2: 2

LOCAL NAME. Daodui-di (Cachari).

SIZE. Myna ±; length c. 20 cm (8 in.).

FIELD CHARACTERS. As in 1773, q.v.

STATUS, DISTRIBUTION and HABITAT. Common resident. N. Bhutan, southeastern Tibet and presumably Arunachal Pradesh (recorded at Lo La and Bimbi La on the border) in Tibetan facies. Breeds above c. 3600 m, up to 4700 m. Winters down to c. 2000 m in Tibet, 2700 m in Bhutan. Habitat as in 1773.

Extralimital. The mountains of western China and eastern Tibet north to Kansu.

GENERAL HABITS, FOOD and VOICE. As in 1773.

BREEDING. As in 1773.

MUSEUM DIAGNOSIS. See Key to the Subspecies. The dark-breasted colour phase ('sordidus') seems to be common in Tibet (Ludlow, *Ibis* 1937: 262).

MEASUREMENTS

Wing 3 ♂♂ 88–93 mm (NBK)

COLOURS OF BARE PARTS. As in 1773.

CINCLUS PALLASII Temminck: BROWN DIPPER

Key to the Subspecies

Paler *C. p. tenuirostris*

Darker *C. p. dorjei*

1775. *Cinclus pallasii tenuirostris* Bonaparte

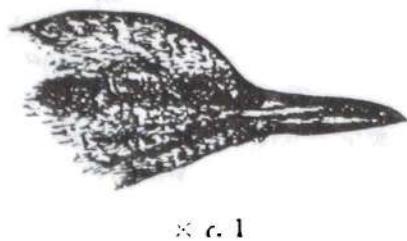
Cinclus tenuirostris 'Gould' = Bonaparte, 1850, Conspl. Gen. Av. 1: 252 (central Asia, restricted to the Himalayas, Simla-Almora area, by Ripley, 1961, Synopsis: 540)

Baker, FBI No. 479, Vol. 2: 4

LOCAL NAMES. *Dungal*, *Galkar* (Kashmir); *Nambong-karriak* (Lepcha).

SIZE. Myna ±; length c. 20 cm (8 in.).

FIELD CHARACTERS. A squat, stub-tailed chocolate-brown thrush-like bird of clear rocky mountain streams, with a conspicuous white eye-ring. Sexes alike.

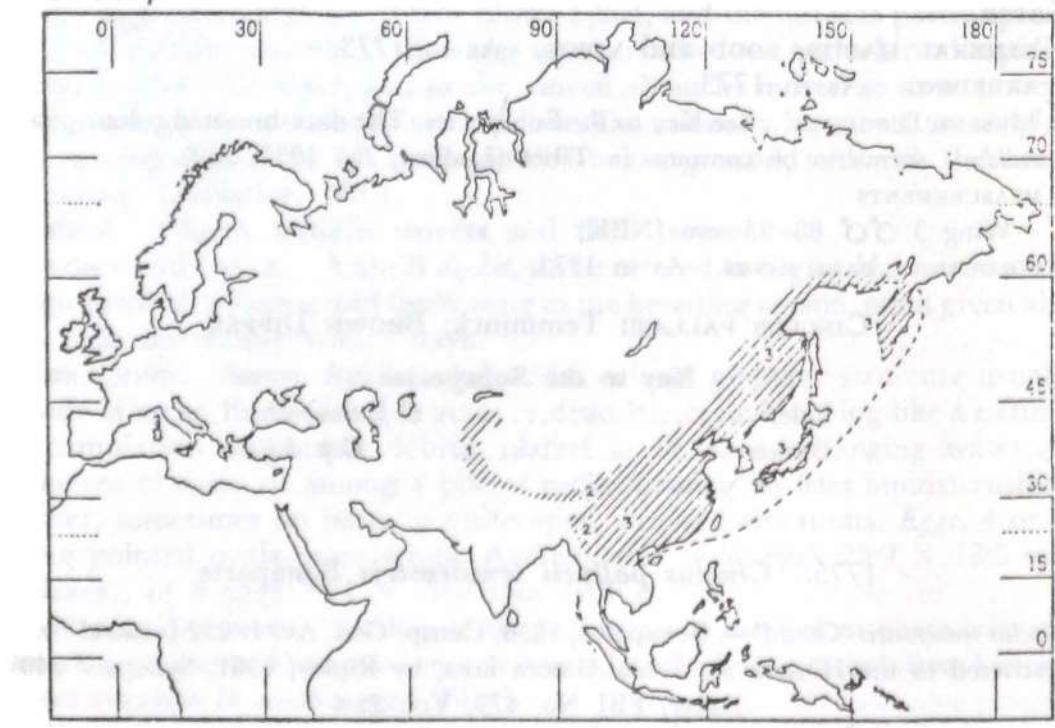


above 4000 m (up to 4950 m, Diesselhorst) in Nepal where *C. c. cashmeriensis* (1773) appears to be largely absent. In Sikkim recorded from the foothills to 2700 m; replaced higher up by *C. cinclus*. Withdraws from upper levels in winter (observed up to 2700 m but probably occurs much higher in Nepal). Affects mountain streams, usually larger and less torrential than those frequented by *C. cinclus*; but in Nepal, where the latter is absent, also occurs along small, rushing glacier torrents as well as on tarns. Has been observed chasing *C. cinclus* at 3900 m (Garhwal) and 3700 m (Lahul).

Extralimital. Adjacent parts of northern Afghanistan and north through Tadzhikistan to the Tien Shan.

GENERAL HABITS. Similar to those of *C. cinclus* (1773, q.v.) and equally intolerant of intruders into its territory. Keeps solitary on rocks amidst rushing torrents, the stumpy tail held partially cocked, and jerked up from time to time. Frequently dives from a floating position with a slight upward spring, like a dabchick, especially on tranquil pools and tarns, apparently doing so more regularly than the whitebreasted species.

Cinclus pallasi



Distributional ranges



1 *tenuirostris* (1775)

2 *dorjei* (1776)

3 *pallasi* (RE)

Display. Very similar to that of *C. cinclus* (1773). 'A dipper was standing on a rock, preening its plumage when its mate arrived. The first bird immediately stretched itself high on its legs, with the tail pointing straight downwards, and the head and neck extended to their full length with the beak pointing to the sky; it stood thus for some time with the wings whirring rapidly' (HW, JBNHS 31: 464).

FOOD. Aquatic insects and larvae.

VOICE and CALLS. A shrill, harsh *dzit-dzit* less shrill than that of *C. cinclus* (Schäfer). 'A full, rich though short song'; somewhat more pleasant than that of the whitebreasted species (Schäfer).

BREEDING. *Season*, December to early August according to altitude. *Nest*, a massive globular structure of green moss and dry grass lined with dry leaves and moss roots; placed in clefts of moss- or fern-covered rocks, on a ledge of cliff or among boulders—sometimes in a hole in a fallen log or in a hollow in the masonry of a bridge—usually within a metre from water. Occasionally behind a waterfall or cascade, the birds having to fly through a curtain of water to reach the nest. When built in holes, the structure may or may not be domed. *Eggs* 4 or 5, white. Average size of 30 eggs 26.7 × 18.9 mm (Baker). Sometimes brood-parasitized by *Cuculus* sp. (JBNHS 64: 561).

MUSEUM DIAGNOSIS. See Key to the Subspecies. One complete annual moult, June to September.

Young. *Above*, grey-brown with numerous whitish spots. All remiges and wing-coverts margined with white. Thin tip of rectrices white. *Below*, all feathers whitish tipped with brown giving the bird a very mottled appearance. Postjuvenile moult of body-feathers, lesser, median and greater coverts.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
4 ♂♂	95–100	24–25	30	57–60 mm
5 ♀♀	91–94	24	27–29	50–55 mm (MD)

Weight 4 ♂♂ (Aug.–Oct.) 69.8–82.6; 2 ♀♀ (July, Dec.) 69, 72 g (GD, RAP).

COLOURS OF BARE PARTS. Iris brown. Bill dark brown or blackish brown. Legs and feet pale leaden in front, black behind; soles whitish to yellowish (Abbott).

1776. *Cinclus pallasii dorjei* Kinnear

Cinclus pallasii dorjei Kinnear, 1937, Ibis: 263 (Sakden, E. Bhutan)

Cinclus pallasii undina Koelz, 1954, Contrib. Inst. Regional Exploration, No. 1: 12
(Bara Pani, Khasi Hills)

Baker, FBI No. 480 (part), Vol. 2: 5

LOCAL NAMES. *Chutia-nakka* (Bhutanese); *Di-dao-bui* (Cachari).

SIZE. Myna ±; length c. 20 cm (8 in.).

FIELD CHARACTERS. As in 1775, q.v.

STATUS, DISTRIBUTION and HABITAT. Common resident, subject to vertical movements. The eastern Himalayas from Chumbi Valley eastward through Bhutan and Arunachal Pradesh; the Cachar and Khasi hills, and Manipur; Chittagong Hill Tracts (Rashid). Breeds between c. 1000 and 4200 m;

reaches the foothills in the non-breeding season. Affects rapid rocky mountain streams.

Extralimital. Northern Burma and southeastern Tibet.

GENERAL HABITS, FOOD and VOICE. As in 1775.

BREEDING. *Season*, mainly December and January, occasionally till July. *Nest and eggs* as in 1775. Average size of 30 eggs 26.7 × 18.9 mm (Baker). Frequently brood-parasitized by *Cuculus canorus*.

MUSEUM DIAGNOSIS. Differs from *tenuirostris* in being darker. Young similar to *tenuirostris* but washed with rufous.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	98–111	22–26	30–33	45–54 mm
♀♀	90–101			
				(NBK, Koelz, SA, BB)

Weight (March) 1 ♂ 70; 2 ♀♀ 66, 68 g—SA.

COLOURS OF BARE PARTS. As in 1776.

Family PRUNELLIDAE: Accentors or 'Hedge Sparrows'

For description see Baker, E. C. S., 1924, FBI 2: 187; Witherby, H. F., et al., 1938, 2: 205; Van Tyne, J. & Berger, A. J., 1959: 527; Thomson, A. L. (ed.), 1964, *A New Dictionary of Birds*, London & New York (article 'Accentor').

Cf. Marien, D., 1951, *Amer. Mus. Novit.*, No. 1482: 1–28

Ripley, S. D., 1952, *Postilla*, Yale Peabody Mus., No. 13: 15, 35–6

Vaurie, C., 1955, *Amer. Mus. Novit.*, No. 1751: 17–25

Genus PRUNELLA Vieillot

Prunella Vieillot, 1816, Analyse nouv. orn.: 43.

Type, by monotypy, *Motacilla modularis* Linnaeus

Laioscopus Gloger, 1841, Handb. in Hilfsh.: 267.

Type, by monotypy, *Sturnus collaris* Scopoli

Bill finely pointed and slightly notched, wide at base and compressed towards the middle. nostrils large, diagonal and covered by a membrane. Rictal bristles few and weak.

Cf. Marien, D., 1951, *Amer. Mus. Novit.*, No. 1482: 1–28

Key to the Species

		Page
A	A white spot at tips of rectrices	
1	Breast grey	<i>P. collaris</i> 149
2	Breast rufous and white	<i>P. himalayana</i> 152
B	No white spot at tips of rectrices	
3	No supercilium	
a	Breast grey	<i>P. immaculata</i> 164
b	Breast rufous	<i>P. rubeculoides</i> 154
4	A prominent supercilium	
c	Throat white with black streaks	<i>P. strophiata</i> 156
d	Throat black	<i>P. atrogularis</i> 161

e Throat buff		
i Breast spotted with brown	<i>P. montanella</i>	164
ii Breast unspotted	<i>P. fulvescens</i>	159

PRUNELLA COLLARIS (Scopoli): ALPINE ACCENTOR

Key to the Subspecies

A Paler and greyer	<i>P. c. rufilata</i>	149
B Darker and browner	<i>P. c. nipalensis</i>	150
C Intermediate between A and B	<i>P. c. whymperi</i>	150

1777. *Prunella collaris rufilata* (Severtzov)

Accentor rufilatus Severtzov, 1879, Isvestia Obsht. Liub. Est. Anthr. Ethnog. Turkest.

Otd. I: 45 (Turkestan)

Baker, FBI No. 621, Vol. 2: 189

LOCAL NAMES. None recorded.

SIZE. Sparrow; length c. 17 cm (6½ in.).

FIELD CHARACTERS. As in 1779, q.v.

STATUS, DISTRIBUTION and HABITAT. Resident, subject to vertical movements. N.W.F.P. from Safed Koh to Chitral, Baltistan, Gilgit and Astor, grading into *whymperi* in Ladakh. Breeds between 3600 and 5000 m, descends in winter to c. 1800 m.¹ Affects stony slopes, cliffs and moraines above timber-line.

EXTRALIMITAL. Adjacent parts of Afghanistan, Chinese and Russian Turkestan north to Ala Tau.

GENERAL HABITS, FOOD and VOICE. As in 1779. Very tame in the presence of humans, typically searching one spot for prolonged periods when foraging (Roberts, pers. comm.).

BREEDING. As in 1779.

MUSEUM DIAGNOSIS. Similar to *whymperi* (1779) but grey-brown of plumage paler and greyer. Chestnut on flanks paler.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	95–105			
♀♀	89–102	c. 17	c. 24	68–71 mm

(Dementiev, Paludan, Marien)

Weight 2 ♂♂ (June) 29, 32; 2 ♀♀ (June) 28, 29 g (Paludan). 1 ♂ (Nov.) 31 g (RAP).

COLOURS OF BARE PARTS. Iris brown to reddish brown. Bill black, base of lower mandible yellow. Legs and feet reddish brown; soles yellow or yellowish.

¹ As the species is a vertical, not a long-distance migrant throughout its range, it may be safe to assume that the Safed Koh breeding population belongs to this subspecies although there are no specimens.

1778. *Prunella collaris whymperi* (Baker)

Laioscopus collaris whymperi Baker, 1915, Bull. Brit. Orn. Cl. 35: 61 (Garhwal)
Baker, FBI No. 620 (part), Vol. 2: 188

LOCAL NAME. *Zanda tsar* (Kashmir).

SIZE. Sparrow; length c. 17 cm (6½ in.).

FIELD CHARACTERS. As in 1779, q.v.

STATUS, DISTRIBUTION and HABITAT. Common resident, subject to vertical movements. The western Himalayas from Kashmir to Kumaon. Breeds between 3600 and 4500 m, descends to c. 1800 m in winter (November to March). Affects stony slopes, rocks and cliffs above timber-line.

GENERAL HABITS, FOOD and VOICE. As in 1779.

BREEDING. Season, June to August. Nest, a substantial compact cup of moss, grass and rootlets lined with moss and hair; placed under boulders or on rock ledges, or deep down between the stones of a glacier moraine. Eggs, 3, blue, unspotted; size c. 23 × 16 mm.

MUSEUM DIAGNOSIS. Darker than *rufilata* (1777) and less rufous than *nipalensis* (1779).

Young. Upperparts much as in adult but browner and duller, the feathers of the mantle edged browner, not so grey; no rufous on the scapulars; rump and upper tail-coverts greyish brown with paler fringes; chin and throat pale grey tinged with buffish, the tips of the feathers dull dark brown giving a speckled appearance; breast, abdomen, flanks, and lower tail-coverts ochraceous buff, brightest on the flanks, streaked with dark brown; wings and tail as in adult, but primary-coverts and greater and median wing-coverts browner, with the tips buffish, not white.

MEASUREMENTS

	Wing	Bill (from skull)	Tail
♂♂	93–102	15–16	62–70 mm
♀♀	91–94	15–16	56–63 mm

(Marien)

COLOURS OF BARE PARTS. Adult as in 1777. Nestling. Bill bright pink with white edges to gape flanges; mouth bright orange-yellow with two black tongue-spots. Juvenile (fledged young). Iris brown. Bill horny, darker above; gape dark pinkish red; mouth orange, two black elongated spots at base of tongue. Legs and feet brown, joints and claws darker.

1779. *Prunella collaris nipalensis* (Blyth)

A. (ccentor) *Nipalensis* 'Hodgson' = Blyth, 1843, Jour. Asiatic Soc. Bengal 12: 958
(Kâchar region of Nepal)
Baker, FBI No. 620 (part), Vol. 2: 188

Plate 95, fig. 1

LOCAL NAMES. None recorded.

SIZE. Sparrow; length c. 17 cm (6½ in.).

FIELD CHARACTERS. Above, head greyish brown speckled with white

around eye. Back streaked with dark brown. Rump and upper tail-coverts rufescent. Wing-coverts blackish brown with white tips forming two wing-bars. Tertiaries tipped with buff or whitish. Tail dark brown, each rectrix with a white or buff, roundish terminal spot. *Below*, chin and centre of throat white finely barred with brown. Sides of throat, breast and centre of belly grey. Flanks rusty with white tips on lower parts. Under tail-coverts dark brown edged with whitish. Sexes alike.



The plain grey breast easily distinguishes this species from *P. himalayana* (1780).

STATUS, DISTRIBUTION and HABITAT. Common resident, subject to vertical movements. W. Nepal, Darjeeling dist., Sikkim, Bhutan and Arunachal Pradesh. Breeds from c. 3700 m up to over 5500 m; in Nepal mostly above c. 4200 m. Observed at 7900 m on Mt Everest (Charles Evans, pers. comm.). Winters from c. 2400 m, seldom 2000 m, up to at least 4800 m. Affects rock-strewn meadows, cliffs, screes and moraines, particularly sunny slopes and open, snow-free patches on ridges; in winter also frequents upland villages.

Extralimital. Extends to northern Yunnan and central Sichuan.

GENERAL HABITS. Keeps in pairs in the breeding season; small loose parties of 4 or 5 birds (adults as well as young) from about the end of July. Flocking much in evidence in the beginning of September when flights of more than 20 birds may be seen. A very confiding bird, hopping about quietly on the ground or on large boulders in search of food.

Display. 'In a small foraging flock, an individual suddenly approached another with tail erect, then turned its back and quivered its wings. In another case only the tail was quivered. The subject of this attention did not react in any apparent way.' The scenes took place at the end of July and early August (Diesselhorst).

FOOD. Insects and small seeds; grit often found in stomachs.

VOICE and CALLS. Call-note, usually uttered when flushed, a rippling, somewhat lark-like *chirriririp*, a low *chit-chittur* when in flocks. Song, similar to that of the central European (nominate) subspecies—a pleasant, varied warble of lark-like quality, uttered from a rock or in flight. Song period is over by the end of July.

BREEDING. Chiefly June and July; occasional fledglings may be seen in August. Single-brooded. *Nest* and *eggs* as in 1778. Three eggs measure 23 × 16, 22 × 16 and 21 × 16 mm (Ludlow).

MUSEUM DIAGNOSIS. Like *whymperi* (1778) but darker, more rufous. Complete moult in August-September.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	96–105		c. 25	{ 63–69 mm
♀♀	93–101 }	15–16		{ 65–67 mm

(Marien, Stres., SA)

Weight 11 ♂♂ (June-Aug.) 31-38.5; 4 ♀♀ (June-Aug.) 29.3-36; 5 juv. 25.5-30.3 g (GD).

COLOURS OF BARE PARTS. As in 1777.

1780. Altai Accentor. *Prunella himalayana* (Blyth)

Accentor Himalayanus? Blyth, 1842, Jour. Asiatic Soc. Bengal 11: 187

(Himalaya range)

Baker, FBI No. 624, Vol. 2: 191

Plate 95, fig. 5

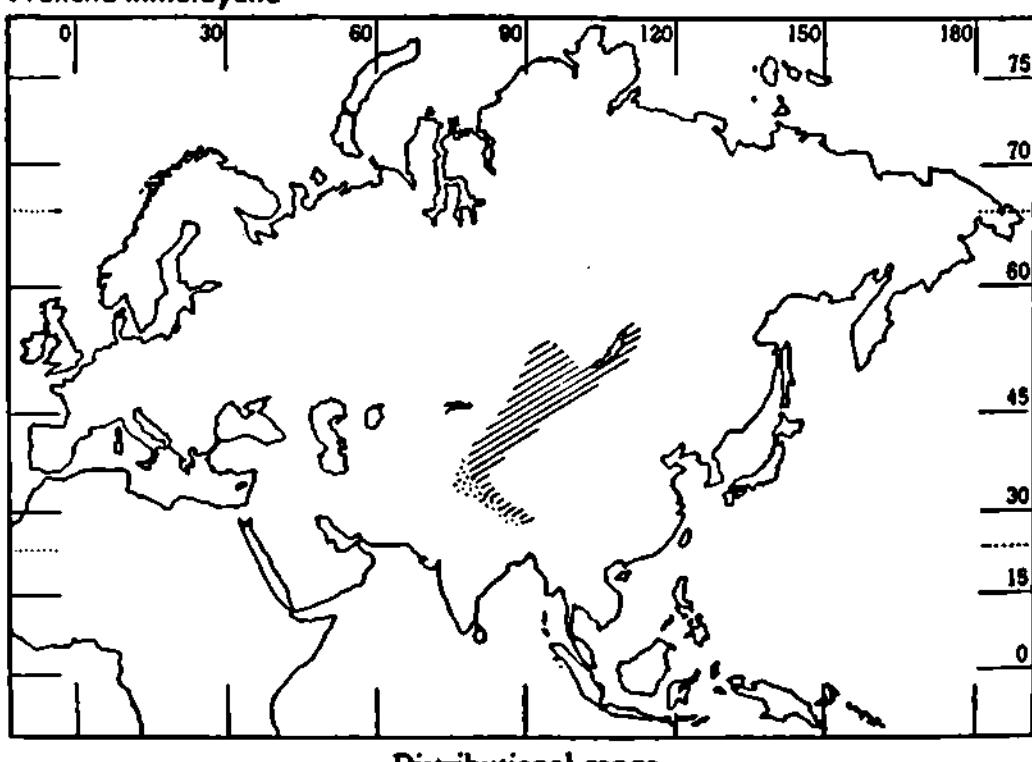
LOCAL NAMES. None recorded.

SIZE. Sparrow; length c. 15 cm (6 in.).

FIELD CHARACTERS. *Above*. Forehead, crown and nape greyish brown with dark streaks; a narrow greyish supercilium extending to nape. Back rufous-brown with dark brown streaks; rump greyish brown. Wings rufous-brown with two narrow white bars; inner remiges tipped with whitish. Tail dark brown with whitish terminal spots. *Below*, chin and centre of throat white, spotted with brown at sides. Breast, upper belly and flanks striped rufous and whitish; centre of belly whitish. Sexes alike.

The white gorget on chin and throat, rufous and whitish striped breast without any grey, and pale supercilium distinguish this species from the Alpine Accentor (*P. collaris*).

Prunella himalayana



Breeding

Winter

STATUS, DISTRIBUTION and HABITAT. Chiefly known as a winter visitor, fairly common, especially in the western Himalayas. Recorded from the Safed Koh, Abbottabad foothills (February), Neelum Valley, Kashmir (March) and Gilgit east to Bhutan; also Arunachal Pradesh in the Miri Hills (*sic* Baker). Observed between 2000 and 4000 m, in the western parts of its range occasionally down to 1500 m, rarely 1000 m (Chamba); between 2800 and 4200 m (Nepal) and above 2400 m, rarely down to 2000 m (Sikkim). May be met with at these elevations from end September till end April, mostly between November and March. Breeding range little known. There is but one summer (July) record within our territory—a specimen in the Humc collection labelled 'Kashmir'. From adjacent areas, Baker received nests from Yatung, Chumbi Valley 4200 m (*Nidification* 2: 165) and Koelz collected 3 specimens in July at Munjan Pass, Hindu Kush (Marien, 1951). Affects bare rocky hillsides, showing a decided preference for the shady side of the hills (Jones, JBNHS 16: 609). In summer appears to prefer stony ground in rather flat areas rather than scree and large boulders (Dementiev).

Extralimital. Ranges north through Turkestan to the Lake Baikal region. Also southeastern Tibet (Chumbi Valley).

GENERAL HABITS. More gregarious than *P. collaris*, being often seen in close-packed flocks of 30 to 100 or more birds, sometimes in company with Alpine accentors (*Prunella collaris*) and Mountain finches (*Leucosticte nemoralis*). Feeds on stony ground and is very inconspicuous while thus engaged. The birds hop about quietly among the stones, dodging in and out of crevices under boulders, often keeping up a low twitter. Flight rapid and finch-like. When disturbed, flocks fly back and forth round the contours of hillsides, rising and falling in disorderly undulations before settling again. When perching in a bare tree-top (in winter quarters) the birds bunch together like starlings at a roost.

FOOD. Insects and small seeds.

VOICE and CALLS. 'Towards the end of their sojourn in the winter quarters an incessant warbling is uttered while searching the ground for food or when perched on a leafless tree' (Jones). Voice similar to that of *Serinus pusillus* (Dementiev). Call-note silvery and very finch-like (HW), also uttered on the wing.

BREEDING. Little known; two nests received by Baker from the Chumbi Valley and one nest found in the Pamirs. *Season*, May to August. *Nest*, a cup of grass more or less mixed with leaves, roots and fibre, lined with wool, placed in a hollow under tussocks. *Eggs*, 4 or 5, blue, unspotted. Average size of 10 eggs 22.2 × 15.7 mm (Baker).

MUSEUM DIAGNOSIS. See Field Characters.

Young. *Above*, similar to adult but paler. Tail without terminal white spots. *Below*, throat slightly mottled greyish brown and buff. Breast ochraceous-buff with dark brown streaks. Rest of underparts cream-buff.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	89-99			{ 54-62 mm
♀♀	88-94 }	14-15	22-26	{ 51-56 mm
				(Marien, MD, SA)
Weight	4 ♂♂ (Nov.) 25.5-29.8;	2 ♀♀ (Nov.) 24.3, 27.1 g		(RAP, SA).

COLOURS OF BARE PARTS. Iris reddish brown or pale claret. Bill blackish brown, gape and base of lower mandible yellowish. Legs and feet yellowish brown to brownish flesh; claws horny brown.

1781. **Robin Accentor.** *Prunella rubeculoides* (Moore)

Accentor rubeculoides 'Hodgson' = Moore, in Horsfield & Moore, 1854, Cat. Bds. Mus. E. I. Co. 1: 361 (Nepal)

Prunella rubeculoides muraria R. & A. Meinertzhagen, 1926, Bull. Brit. Orn. Cl. 46: 99
(Astor)

Baker, FBI No. 626, Vol. 2: 193

Plate 95, fig. 3

LOCAL NAME. *Phoo-ching-pho* (Lepcha).

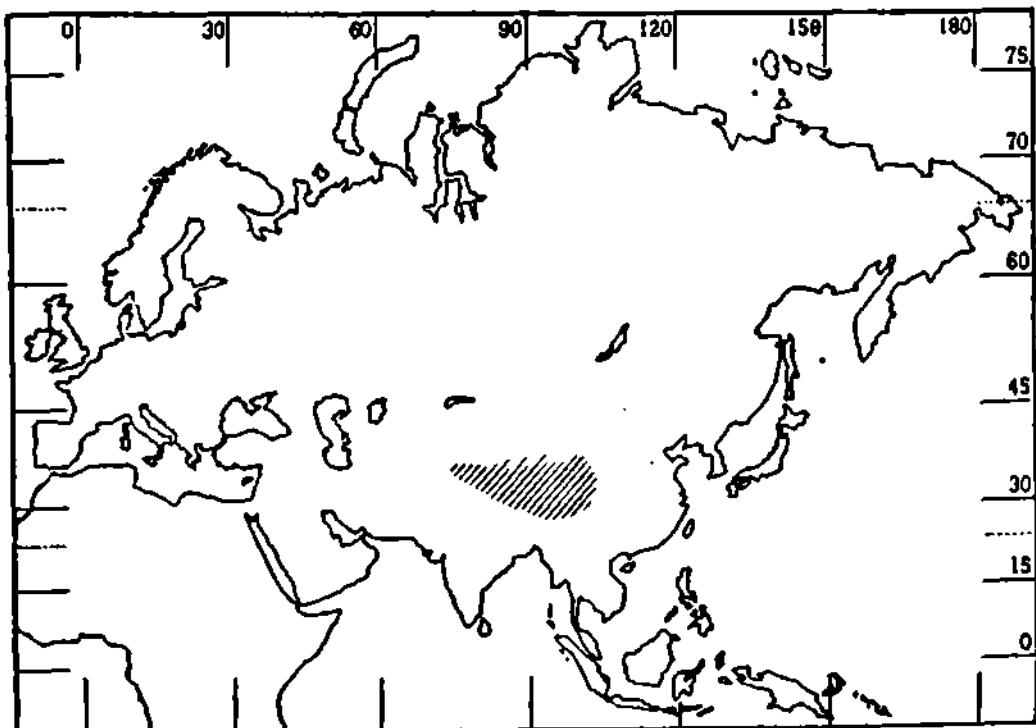
SIZE. Sparrow; length c. 17 cm (6½ in.).

FIELD CHARACTERS. *Above*, head brownish grey. Rest of upperparts pale brown with darker streaks on back and two whitish wing-bars. *Below*, throat brownish grey; breast rufous; belly pale cream, lower flanks streaked with rufous-brown. Sexes alike.

Distinguished from *P. strophiata* (1782-3) by entirely grey head and throat, without supercilium.

STATUS, DISTRIBUTION and HABITAT. Common resident, subject to vertical movements. Occurs in Tibetan Plateau facies from Baltistan (Richmond,

Prunella rubeculoides



Distributional range

1895), Astor and Ladakh east to northern Bhutan and probably Arunachal Pradesh. Breeds between 3600 and 5300 m, locally down to 3000 m (Suru); in eastern Nepal between 4500 and 5000 m. Descends in winter to c. 2700 m (Ladakh), 2500 m (Sikkim), exceptionally lower (Rampur, c. 1000 m, Himachal Pradesh) and Singhik 1200 m (Sikkim). Affects dwarf willows, and furze (*Caragana*) patches in the neighbourhood of streams, tundra-like vegetation and sedge tussocks around lakes, and low scrub in valley bottoms, not ascending far up the flanking slopes. Has a decided liking for wet and swampy areas but in winter also frequents stony and rocky ground in the barest places. In this season also seen in and around upland villages.

Extralimital. Southern Tibet to Sichuan, Kansu and Qinghai.

GENERAL HABITS. Gregarious in winter. Usually fearless and confiding. Met with in small flocks commonly in villages, hopping stiffly on the ground like a sparrow, picking seeds out of animal dung. In summer keeps in pairs more in cover than the Alpine Accentor, and unlike it does not leave its breeding territory for foraging.

Display. Collective displays described by Schäfer (1938): Four males were observed chasing each other through light scrub with bat-like fluttering flight then alighting on a low shrub, sitting silently close to one another and fluttering their low-hanging wings. The same display also noted accompanied by singing. Another display involving ten males took place on the ground, the birds either dancing around or sitting still with hanging, whirring wings 'in highest ecstasy', this performance entirely silent.

FOOD. Insects and small seeds; grit often found in stomachs.

VOICE and CALLS. Usual call, a trilled note similar to that of *P. strophiata* but sharper and more metallic; alarm-note, a bunting-like *zieh-zieh* (Schäfer). Another note or song is described as a pleasant but feeble *tililili* (SA). Song described as 'sweet and short'—a simple, chirping *si-tsi-si-tsi*, *tsütsütsü* (Schäfer). Song period, beginning of April to July.

BREEDING. *Season*, May to August, even early September. Apparently double-brooded. *Nest*, a bulky and compact cup of dry grass and moss thickly lined with hair, fur or feathers; placed on the ground among clumps of sedges or low down in thorny furze bordering streams, occasionally in a hollow in the bank of a stream. *Eggs*, 3 or 4, pale turquoise. Average size of 41 eggs 21.1 × 15.3 mm (BBO), of 60 eggs 19.5 × 14.5 mm (Baker).

MUSEUM DIAGNOSIS. See Field Characters.

Young. *Above*, very dark brown streaked with ochraceous buff; a pale supercilium. Wing as in adult but darker. *Below*, throat mottled whitish and dark brown. Breast and flanks streaked ochraceous and dark brown. Belly cream colour.

Very similar to young of *P. strophiata* but distinguished by unstreaked belly.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	75-86	13-15	23-24	{ 59-69 mm
♀♀	72-79 }			{ 60-65 mm
				(Marien, HW, Stres.)

Weight 4 ♂♂ (July-Sept.) 23.2-25.7; 3 ♀♀ (July-Sept.) 21.2-24.1; 3 juv. 20.5-22.5 g (GD).

COLOURS OF BARE PARTS. Iris pale brown to reddish brown. Bill black. Legs and feet pale reddish brown; claws black.

PRUNELLA STROPHIATA (Blyth): RUFOUSBREASTED ACCENTOR**Key to the Subspecies**

- Darker, more heavily streaked *P. s. strophiata*
 Paler, less heavily streaked *P. s. jerdoni*

1782. *Prunella strophiata jerdoni* (Brooks)

Accentor Jerdoni Brooks, 1872, Jour. Asiatic Soc. Bengal 41: 327 (Kashmir)

Prunella strophiatus sirotensis Koelz, 1939, Proc. Biol. Soc. Washington 52: 67
 (Sirota, Afghanistan)

Baker, FBI No. 629, Vol. 2: 197

LOCAL NAMES. None recorded.

SIZE. Sparrow; length c. 15 cm (6 in.).

FIELD CHARACTERS. General aspect rufous-brown very dark-streaked above, with rufous breast and mottled whitish throat. *Above*, brown streaked with blackish on crown and back. Two pale wing-bars. A conspicuous supercilium, whitish in front, rufous and broader behind eye; cheeks dark brown changing to rufous on ear-coverts. *Below*, throat ashy white streaked with blackish brown; breast rufous; belly whitish with dark brown streaks. Sexes alike.

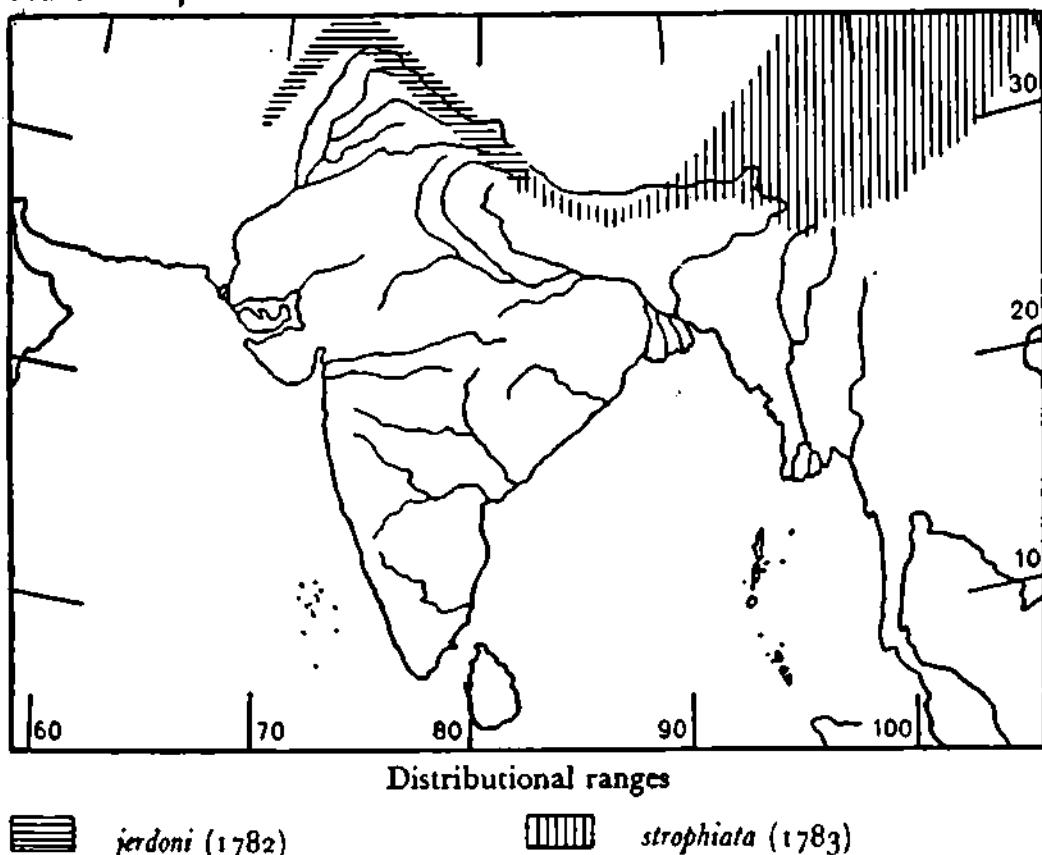
Distinguished from *P. rubeculoides* (1781) by streaked throat and belly and prominent supercilium; from *P. himalayana* (1780) by rufous supercilium, streaked whitish throat, unstreaked rufous breast, and dark brown streaks on belly.

STATUS, DISTRIBUTION AND HABITAT. Common resident, subject to vertical movements. From Barwatin Valley and Sirota (Afghanistan) north through N.W.F.P. to Shandur Pass (Gilgit)¹, thence east along the Himalayas including Kashmir and Ladakh to Kumaon, intergrading with *strophiata* in western Nepal. Breeds from c. 2600 m up to the limit of dwarf scrub (c. 3600 m on Saled Koh, and in Ladakh and Lahul; 4000 m in Garhwal). Descends in winter to 460 m (Margala Hills), seldom lower (Kangra 600 m, Nurpur Shah and Sakesar, Salt Range). Affects fir and birch forest, pine, *kharshu* oak with rhododendron scrub, and juniper, willow and bracken scrub above timber-line. In winter frequents scrub jungle, wooded nullahs and occasionally gardens, and weed undergrowth on deserted village or graziers' encampment sites. Partial to a moister habitat than the Blackthroated accentor's.

Extralimital. Adjacent parts of eastern Afghanistan.

GENERAL HABITS. Behaviour typically hedge-sparrowlike; keeps to the ground and avoids flying in the open. Lives in pairs in the breeding season, otherwise singly or in small parties of two to eight individuals or larger flocks, hopping about quietly and feeding at the base of bushes. Is a great skulker; when disturbed works its way with great speed through the root-stocks and tangles of branches. When flushed dives abruptly to the base of some bush after a hurried hedge-hopping flight. Has the characteristic nervous flicking of wings of the familiar *P. modularis* of Europe.

¹ Shandur Pass (Gilgit) may be a *lapsus* on the part of the local collectors of Biddulph. T. J. Roberts who encamped there in July met only with *Prunella fulvescens*.

Prunella strophiata

■ *jerdoni* (1782) ■■■■■ *strophiata* (1783)

FOOD. Insects and small seeds.

VOICE and CALLS. Song very wren-like (*Troglodytes*) but less loud and interspersed with occasional harsher notes. Alarm-note, a high-pitched chattering *tir-r-t*.

BREEDING. Season, May to August. Nest, a deep cup of weed stems, moss and lichen, lined with fine grass, hair and feathers; placed in dwarf rhododendrons, junipers or other scrubby bushes, or in a lower branch of a conifer, sometimes as high as three metres above the ground. Eggs, generally 4, sometimes 3, rarely 5, turquoise-blue, unspotted. Average size of 40 eggs 19×13.8 mm (Baker), of 19 eggs 18.6×13.8 mm (BBO). Incubation and care of young by both sexes.

MUSEUM DIAGNOSIS. See Field Characters. For distinction from *strophiata* see 1783.

Young. Above, like adult but more rufescent. Supercilium whitish. Below, entirely streaked with blackish, the breast ochraceous buff, the throat and belly whitish. Very similar to the young of *P. rubeculoides* but distinguished by streaked belly.

MEASUREMENTS As in 1783.

Weight 1 ♂ (June) 16 g (Paludan); 1 ♀ (Oct.) 18.7 g (RAP).

COLOURS OF BARE PARTS. As in 1783.

1783. *Prunella strophiata strophiata* (Blyth)

A.(ccentor) strophiatus 'Hodgson' = Blyth, 1843, Jour. Asiat. Soc. Bengal 12: 959
 (Nepal)
 Baker, FBI No. 628, Vol. 2: 196

Plate 95, fig. 2

LOCAL NAME. *Phoo-ching-pho* (Lepcha).

SIZE. Sparrow; length c. 15 cm (6 in.).

FIELD CHARACTERS. As in 1782, q.v. When hopping about, the broad orange-rufous eyebrow is strikingly prominent.

STATUS, DISTRIBUTION and HABITAT. Common resident, subject to vertical movements. The Himalayas from western Nepal eastward through Sikkim, Bhutan and Arunachal Pradesh. Breeds between 3600 and 4200 m (western Nepal), 3800 and 5000 m (eastern Nepal), 3400–4300 m (Bhutan). Winters between 1300 and at least 3600 m. Affects dense rhododendron jungle near timber-line and especially dwarf juniper and rhododendron above this limit; locally also scrubless, boulder-strewn alpine meadows in same habitat as *P. collaris* (Gosainkund, Nepal—Desfayes). In winter (November to March) frequents open scrubby meadowland, bushes in fallow fields near villages or around abandoned cattle sheds, preferring xerophilous scrub to any other vegetation (Schäfer).

EXTRALIMITAL. Southeastern Tibet, northern Burma, Yunnan and the mountains of western China north to Qinghai, Kansu and Shaanxi.

GENERAL HABITS. As in 1782.

FOOD. Insects and larvae, worms, small seeds and some vegetable matter; grit often recorded.

VOICE and CALLS. As in 1782. Alarm-note rendered as *zwitt-zwitt, twitt, twitt* (Schäfer).

BREEDING. As in 1782. Clutch size 3 or 4. Average size of 80 eggs 19·4 × 14·4 mm (Baker).

MUSEUM DIAGNOSIS. Darker than *jerdoni*, more heavily streaked with darker streaks above and on flanks; more rufous supercilium, and darker orange pectoral band.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	62–73	13–15	21–23	55–67 mm
♀♀	60–67			46–67 mm (Marien, SA, NBK)

Weight 11 ♂♂ (summer) 16·7–20·2; 7 ♀♀ (summer) 16·2–19·2; 6 juv. 15·6–19·6 g—GD. 11 ♂♀ (winter) 16·5–20 g—SA.

COLOURS OF BARE PARTS. Iris dark orange-brown. Bill brownish black, or horny brown, paler on commissure at base of upper mandible and at chin. Legs and feet dusky orange-brown; claws horny brown.

PRUNELLA FULVESCENTS (Severtzov): BROWN ACCENTOR**Key to the Subspecies**

Page

A Flank-feathers without brown centres	
1 Upperparts more heavily streaked, breast more ochraceous	P. f. <i>sushkini</i> 160
2 Upperparts less heavily streaked, breast less ochraceous P. f. <i>fulvescens</i>	159
B Flank-feathers with brown centres	P. f. <i>ocularis</i> 161

1784. *Prunella fulvescens fulvescens* (Severtzov)

Accentor fulvescens Severtzov, 1872, Vertik. Turkest. Zhivotn.: 66, 132 (Turkestan)
Baker, FBI No. 630 (part), Vol. 2: 198

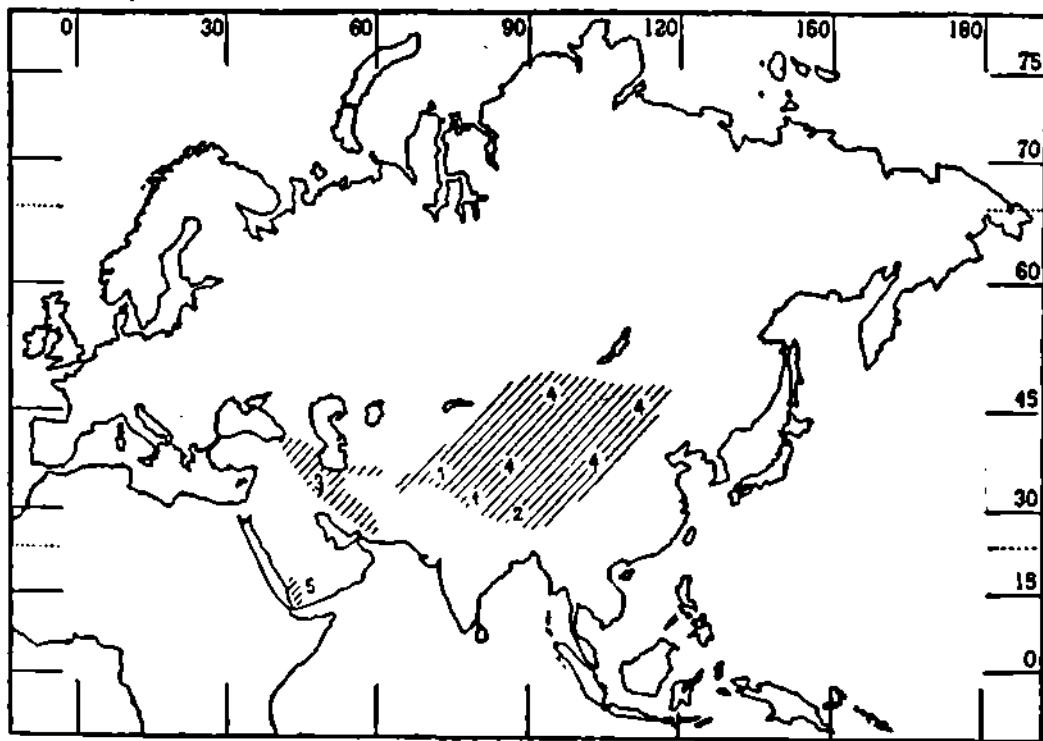
Plate 95, fig. 9

LOCAL NAMES. None recorded.

SIZE. Sparrow; length c. 15 cm (6 in.).

FIELD CHARACTERS. *Above*, pale brown with darker streaks on back. A conspicuous long white supercilium and dark brown 'cheeks'. Two faint whitish wing-bars. *Below*, buffish, more ochraceous on breast. Sexes alike.

STATUS, DISTRIBUTION AND HABITAT. Resident, subject to vertical movements. Shandur plateau (Gilgit), Hunza, Astor, Baltistan and Ladakh to

Prunella fulvescens

■ 1 *fulvescens* (1784) 2 *sushkini* (1785) 3 *ocularis* (1785a)

4, 5 Extrazonal subspecies

Rupshu. In winter in the main valleys of Chitral, Gilgit and Lahul; Quetta (Mashelakh range, 1800 m, 30. iii—Roberts, JBNHS 72: 203–4). Breeds between 3300 and 5100 m. Winters down to c. 1500 m (October to March). Affects Tibetan furz (*Caragana*) on mountain slopes in the same habitat as *P. rubeculoides*, but appears to prefer a drier biotope.

Extralimital. Ranges west to central Afghanistan and north to the Tien Shan. The species extends to the Sayans, Kansu and Sichuan.

GENERAL HABITS. Little recorded. Met with in small flocks up to ten individuals in winter. Feeds on the ground, hopping quietly among bushes and stones. Tame, perches conspicuously on bush tops, fluttering now and then to the ground to pick up food (Roberts, JBNHS 72: 203–4).

FOOD. Unrecorded.

VOICE and CALLS. Little recorded. Song, a short, low warble (Dementiev); period April through June.

BREEDING. Season, May to August. Nest, a cup of grass and fibres lined with wool, hair and vegetable down; placed in low shrubs up to c. 60 cm above the ground; once in a hole in a ruined building (Khunjerab pass—Roberts). Eggs, 3 or 4, blue, indistinguishable from those of *P. rubeculoides*. Average size of 7 eggs 19·2 × 13·9 mm (Osmaston).

MUSEUM DIAGNOSIS. See Field Characters. For distinction from *P. f. sushkini* see 1785. Postnuptial moult complete, September and October.

Young. Above, as adult but a little more rufescent. Supercilium mixed with brown. Ear-coverts not so dark. Below, throat whitish with dusky spots; rest of underparts ochraceous buff, breast streaked with dark brown.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	71–81	13–15 }	c. 20	{ 61–68 mm
♀♀	72–79	13–15 }		59–66 mm

(Marien, Dementiev, MD)

Weight 1 ♂ (Sept.) 20 g (Paludan).

COLOURS OF BARE PARTS. Iris pale brown. Bill black. Legs and feet pale reddish brown.

1785. *Prunella fulvescens sushkini* Collin & Hartert

Prunella fulvescens sushkini Collin & Hartert, 1927, Novit. Zool. 34: 52. New name for *Prunella fulvescens tibetana* Sushkin, *nec Accendor collaris tibetanus* Bianchi

Prunella fulvescens tibetana Sushkin, 1925, Proc. Boston Soc. Nat. Hist. 38: 53
(Khamba-jong, Tibet)

Baker, FBI No. 630 (part), Vol. 2: 198

LOCAL NAMES. None recorded.

SIZE. Sparrow; length c. 15 cm (6 in.).

FIELD CHARACTERS. As in 1784, q.v.

STATUS, DISTRIBUTION and HABITAT. Two winter records: Jomosum, 2800 m, Nepal (Rand & Fleming, 1957: 183) and Sikkim (Mandelli). Probably breeds at very high altitudes in Tibetan facies north of the main range as it does in the Mt Everest region (JBNHS 32: 323). May be expected

in winter in Bhutan and Arunachal Pradesh since the species is common in adjacent Tibet (*Ibis* 1944: 192). Breeds between 3600 and 5000 m; descends in winter to c. 2100 m. Affects Tibetan furze, willows and other low scrub on dry, rocky, boulder-strewn hillsides. In winter also frequents villages.

Extralimital. Southern and southeastern Tibet.

GENERAL HABITS. As a rule very confiding; less secretive than *P. strophiata*, often feeding in the open or perching on rocks or walls. In winter commonly searching food amongst village refuse in the streets, on manure heaps, and on roofs of houses.

FOOD. Insects and seeds.

VOICE and CALLS. Call-note, a bunting-like *ziet, ziet, ziet*; alarm-note, a tinny rattle similar to that of *P. rubeculoides*. Song (heard in January) long-drawn and rattling, 'like a bad, slow Robin Redbreast song' (Schäfer).

BREEDING. As in 1784. Nest building in June at 4270 m in Nepal (Fleming *et al.*, 1984). One nest was found in a deep gap between ration boxes of a Mt Everest expedition camp. Average size of 60 eggs 19.5 × 14.3 mm (Baker).

MUSEUM DIAGNOSIS. Differs from the nominate race (1784) in having the upperparts more heavily streaked and the breast richer ochraceous.

MEASUREMENTS and COLOURS OF BARE PARTS. Unrecorded; probably as in 1784.

1785a. *Prunella fulvescens ocularis* (Radde)

Accentor ocularis Radde, 1884, *Ornis Caucasica*: 244, pl. 14 (Kiz Yurdi Mt., Talych)
Baker, FBI Vol. 8: 626

Plate 95, fig. 7

LOCAL NAMES. None recorded.

SIZE. Sparrow; length c. 15 cm (6 in.).

FIELD CHARACTERS. As in 1784, but with prominent white malar stripes in addition to supercilium.

STATUS, DISTRIBUTION and HABITAT. Accidental. A record from Chaman, northern Baluchistan (JBNHS 31: 711); specimen in BNHS collection. Also Mashelakh plain, north of Quetta—31.iii.1974 (Roberts). Habitat as in 1784.

Extralimital. Breeds from extreme eastern Turkey, Georgia and Armenia southeast to southern Iran, and east along the Elburz Mts to the Kopet Dagh.

GENERAL HABITS, FOOD and VOICE. Unrecorded.

BREEDING. Extralimital.

MUSEUM DIAGNOSIS. Distinguished from *fulvescens* (1784) by darker crown, concolorous with ear-coverts, heavier streaking on back and a fine malar line of brown spots in some individuals. Flank-feathers with dark brown centres.

MEASUREMENTS

Wing 5 ♂♂ 73–77; 1 ♀ 71 mm (Dementiev)

COLOURS OF BARE PARTS. Unrecorded.

PRUNELLA ATROGULARIS (Brandt): BLACKTHROATED ACCENTOR

Key to the Subspecies

- A faint whitish band between bib and breast *P. a. atrogularis*
- No whitish band between bib and breast *P. a. huttoni*

1786. *Prunella atrogularis huttoni* (Moore)

Accentor huttoni Moore, 1854, in Horsfield & Moore, Cat. Bds. Mus. E. I. Co. 1: 360, new name for *A. atrogularis* Hutton, 1849, Jour. Asiatic Soc. Bengal 18: 811 (Simla), nec *A. atrogularis* Brandt, 1844
 Baker, FBI No. 627 (part), Vol. 2: 194

LOCAL NAMES. None recorded.

SIZE. Sparrow; length c. 15 cm (6 in.).

FIELD CHARACTERS. *Above*, brown streaked with darker brown on back. Ear-coverts dark brown. A buff supercilium bordered above with dark brown. Two pale wing-bars. *Below*, chin and centre of throat ('bib') blackish brown. Sides of throat, breast and flanks rich buff, the latter with dark brown streaks. Centre of belly cream-buff. Sexes alike.

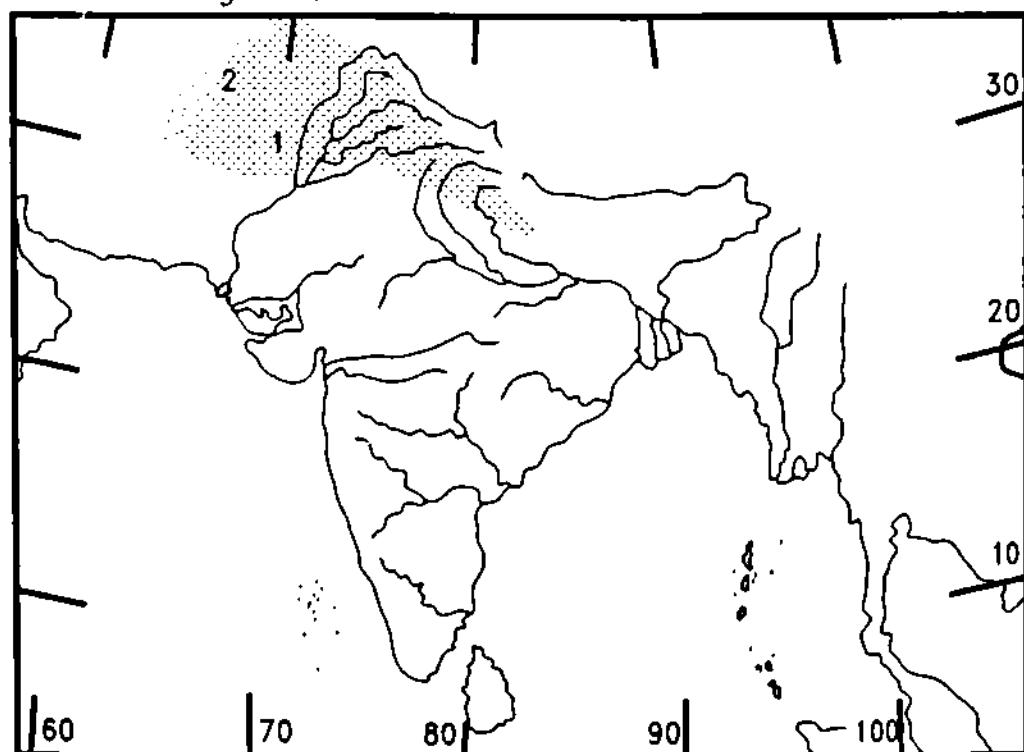
Very similar to *P. fulvescens* but distinguished by blackish bib.

STATUS, DISTRIBUTION and HABITAT. Winter visitor, fairly common locally mainly in the hilly tracts. From Hunza and Baltistan, south to Baluchistan (Quetta, Fort Sandeman, Ziarat), the Salt Range, Bahawalpur (JBNHS 42: 716) and east along the Himalayan foothills in Dehra Dun and NW. Nepal (Fleming *et al.*, 1984); in the hills up to c. 2500 m but mostly below 1800 m. Affects scrub jungle on hillsides, tea gardens, orchards and bushes near cultivation; in the Punjab plains affects sandy semi-desert near cultivation and tufts of *sarpat* grass.

EXTRALIMITAL. Breeds in Turkestan north to the Altai. Moves vertically with the seasons and also reaches Iran and Afghanistan.

MIGRATION. Arrives about the middle of October (earliest 29 September),

Prunella atrogularis



■ Winter

1 huttoni

2 atrogularis

remains until the third week of March (latest 15 April).

GENERAL HABITS. Usually seen singly or in pairs, sometimes in small parties. More a bird of bushes than the very similar *P. fulvescens*, and usually found at lower elevations. Habits similar to those of the well-known *P. modularis* of Europe, but more gregarious. At times associates with *P. strophiata*. Feeds on the ground, shuffling around the base of bushes, nervously flicking its wings. On being disturbed perches freely on bushes and in the lower branches of trees.

FOOD. Insects, ants, small seeds.

VOICE and CALLS. Only note recorded in winter quarters, a soft *trrr*.

BREEDING. Extralimital.

MUSEUM DIAGNOSIS. See Field Characters. For distinction from nominate *atrogularis* see 1787.

MEASUREMENTS

	Wing	Bill (from skull)	Tail
♂♂	70-79	13-15	60-71 mm
♀♀	71-77	12-15	59-68 mm (Marien, NBK)

Tarsus c. 21 mm

Weight 5 ♂♂ (Nov.-Dec.) 17.8-20; 2 ♀♀ (Dec.) 17.1, 19.4 g—RAP.

COLOURS OF BARE PARTS. Iris brown. Bill black. Legs and feet brownish flesh.

1787. *Prunella atrogularis atrogularis* (Brandt)

Accentor atrogularis [sic] Brandt, 1844, Bull. Phys. Acad. Imp. Sci. St. Pétersb. 2, col. 140 (Semipalatinsk)

Baker, FBI No. 627 (part), Vol. 2: 194

Plate 95, fig. 6

LOCAL NAMES. None recorded.

SIZE. Sparrow; length c. 15 cm (6 in.).

FIELD CHARACTERS. As in 1786, q.v.

STATUS, DISTRIBUTION and HABITAT. Scarce winter visitor. Recorded from Gilgit and Punjab (Jhang, Jhelum and Bahawalpur dists.). Habitat as in 1786.

Extralimital. Breeds in the northern Urals. Winters within the winter range of *huttoni* but more commonly in the western parts (Afghanistan).

GENERAL HABITS, FOOD and VOICE. As in 1786.

BREEDING. Extralimital.

MUSEUM DIAGNOSIS. Differs from *huttoni* in being paler and less heavily streaked above, and having a faint whitish band between the black of throat and the buff of breast. Bill and tail average shorter.

MEASUREMENTS

	Wing	Bill (from skull)	Tail
♂♂	71-77	11-14	60-66 mm
♀♀	70-74	11-13	56-62 mm (Marien)

COLOURS OF BARE PARTS. As in 1786.

1787a. Siberian Accentor. *Prunella montanella montanella* (Pallas)

Motacilla montanella Pallas, 1776, Reise versch. Prov. Russ. Reichs 3: 695 (Dauria)
Not in Baker, FBI

Plate 95, fig. 8

LOCAL NAMES. None recorded.

SIZE. Sparrow; length c. 15 cm (6 in.).

FIELD CHARACTERS. Very similar to Blackthroated Accentor but throat buff and breast spotted with black. Back more chestnut-brown.

STATUS, DISTRIBUTION and HABITAT. Straggler. One record: Dras c. 3000 m, Ladakh, 15 April (Meinertzhagen, *Ibis* 1927: 595). Affects bushes and forest edges, especially along streams.

Extralimital. The species breeds in Siberia from the Ural and Sayan Mts east to Anadyr. Winters from Kansu to Korea and Japan.

GENERAL HABITS and FOOD. As in 1786.

VOICE and CALLS. Said to be very similar to those of *P. atrogularis*.

BREEDING. Extralimital.

MUSEUM DIAGNOSIS. See Field Characters.

MEASUREMENTS

Wing ♂♂ 70–74; ♀♀ 65–73 mm

Weight 3 ♂♂ 17–17.7; 1 ♀ 17.5 g (Dementiev).

COLOURS OF BARE PARTS. Iris light brown. Bill blackish, base of lower mandible yellowish. Legs and feet yellowish brown.

1788. Maroonbacked Accentor. *Prunella immaculata* (Hodgson)

Acc.(entor) immaculatus Hodgson, 1845, Proc. Zool. Soc. London: 34

(central and northern regions of the Hills, Nepal)

Baker, FBI No. 625, Vol. 2: 193

Plate 95, fig. 4

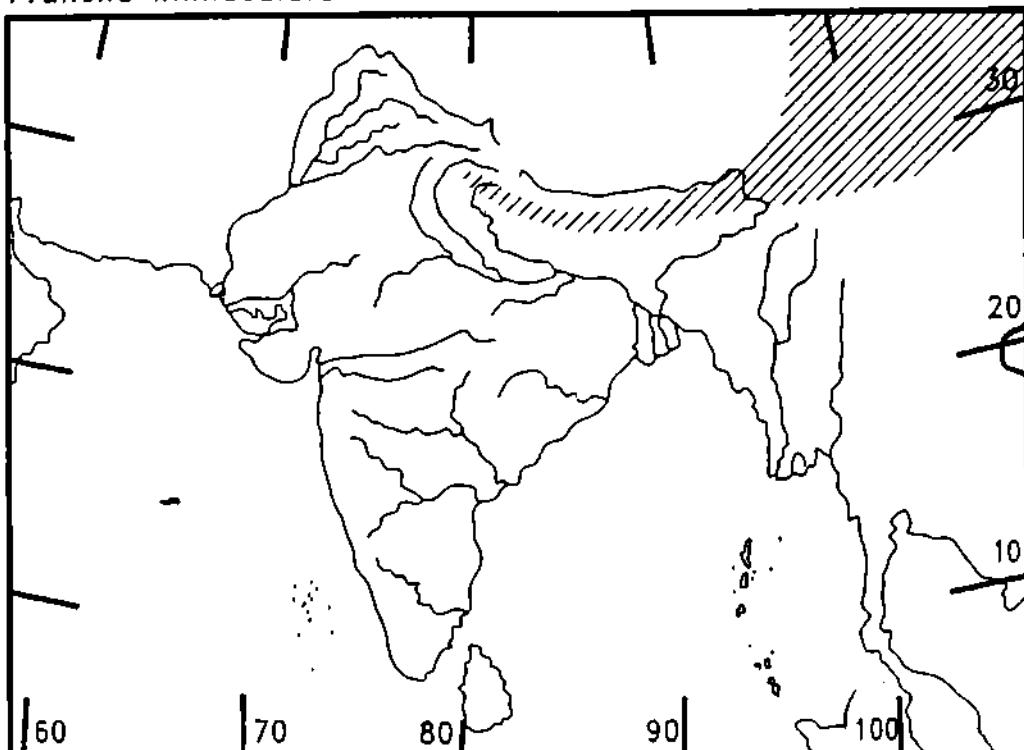
LOCAL NAMES. None recorded.

SIZE. Sparrow; length c. 15 cm (6 in.).

FIELD CHARACTERS. A dark, slaty grey accentor with pale yellow eye, chestnut wings and rufous vent. *Above*, crown and nape slaty, forehead scalloped with white; back and rump rufescent olive-brown and maroon. A large shoulder-patch and edge of wing slaty grey; tertials chestnut. Tail slaty brown. *Below*, throat to belly dark grey; lower flanks, vent and under tail-coverts chestnut; thighs slaty. Sexes alike.

STATUS, DISTRIBUTION and HABITAT. Scarce resident, subject to vertical movements. Garhwal, Nepal,¹ Sikkim, Bhutan and Arunachal Pradesh ('common locally both north and south of the main range in southeastern Tibet'—Ludlow). Breeds between 2900 and 4200 m (southeastern Tibet).

¹ A nest allegedly taken in Ladakh (Baker) was almost certainly misidentified. A supposed sight record from Dutchkut nala, 3900 m, two marches from Astor (Littledale, 1889, JBNHS 4: 115) is certainly erroneous. There are no forests at that altitude in Astor, which eliminates the possibility *ipso facto*.

Prunella immaculata

Distributional range

Winters between 2100 and 3700 m (Nepal, Sikkim, Bhutan), down to 1500 m (Tibet). Affects humid, mossy conifer and rhododendron forest; in winter secondary jungle, edges of clearings with brushwood and fallen tree-trunks, forest margins near harvested terraced fields and boggy nullahs etc.

Extralimital. Extends to northern Yunnan and northern Sichuan.

GENERAL HABITS. Keeps singly or in pairs in summer, in small parties outside the breeding season. The most secretive of all our accentors. Feeds quietly on the ground, close under bushes, seldom venturing into the open. When disturbed dashes out furtively in hurried twisting hedge-hopping flight and disappears in a flash round the next bush. This tactic repeated again and again on being followed. In summer also frequents the tops of conifers 'where it utters an oft-repeated monotonous two-syllabled call' (Ludlow).

FOOD. Insects, pupae, seeds.

VOICE AND CALLS. Call-note, a metallic *zieh-dzit* (Schäfer). Song unrecorded.

BREEDING. Not satisfactorily recorded. Baker describes nests built 'in furze . . . above the tree-limit in the bleakest and barest of hillsides', a rather unlikely habitat for this pre-eminently forest-haunting species. Season, given as about May to July. Eggs (if correctly identified) 3 or 4, blue; average size of 50 eggs 19.5 × 14.6 mm (Baker).

MUSEUM DIAGNOSIS. See Field Characters.

Young. *Above*, head olive-grey, no whitish on forehead. Back rufescent olive, each feather tipped with black; rest of upperparts like adult. *Below*, throat whitish spotted with blackish; breast buff streaked with dark brown; belly and under tail-coverts ochraceous.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	76-87	13-15	22-25	{ 55-59 mm
♀♀	74-81 }			{ 50-59 mm
(Marien, SDR, Stevens, SA)				

Weight 1 ♀ (winter) 19; 2 oo? (winter) 20.5, 22.5 g (SA).

COLOURS OF BARE PARTS. Iris pale yellow in winter but from mid-February onwards, the iris in most birds of both sexes assumes an outer ring of bright orange-brown which in some cases fades immediately after death (Stanford). Bill black. Legs and feet pale brownish flesh or flesh-pink to almost white.

Family PARIDAE: Tits or Titmice

Subfamily PARINAE: True Tits

For description see Witherby, H. F., *et al.*, 1938, 1: 244-5; Van Tyne, J. & Berger, A. J., 1959: 512; Snow, D. W., 1964, article 'Tit' in Thomson, A. L. (ed.), *A New Dictionary of Birds*, London & New York.

Genus MELANOCHLORA Lesson

Melanochlora Lesson, 1839, Rev. Zool. 2: 42. Type, by subsequent designation,
Melanochlora sumatrana Lesson

Wing long and pointed. Nostrils slightly exposed. Bill and feet as in *Parus*.

1789. Sultan Tit. *Melanochlora sultanea sultanea* (Hodgson)

Parus sultaneus Hodgson, 1837, Ind. Rev. 2(1): 31 (central and northern regions of the Hills, Nepal)
Baker, FBI No. 87, Vol. 1: 101

Plate 96, fig. 20

LOCAL NAMES. *Bon-tylia-pho* (Lepcha); *Dao-rajah-gatang-lili* (Cachari).

SIZE. Bulbul; length c. 20 cm (8 in.).

FIELD CHARACTERS. A showy, yellow-crested, black-and-yellow arboreal bird.

Male. Above, forehead, crown and long crest bright yellow; rest of



× c. 1

upperparts black, back with a metallic greenish cast. *Below*, throat black; rest of underparts bright yellow.

Female similar but back blackish olive, throat yellowish olive.

In overhead flight, silhouetted against sky, looks very like a bulbul (*Pycnonotus*). Tail comparatively long and partly spread.

STATUS, DISTRIBUTION and HABITAT. Resident, common east of Darjeeling. The Himalayan foothills from central Nepal (JBNHS 60: 177) east through Darjeeling, Sikkim, Bhutan, Arunachal Pradesh and adjacent plains, thence south through Meghalaya, Nagaland, Manipur, Mizoram, Assam (N. Cachar hills—a party of 7 at 600 m, Jan., 1990—Roberts) and the hills of Bangladesh to the Chittagong region. More common below c. 700 m, but locally up to c. 1900 m. Affects foothills forest, deciduous and evergreen, with a preference for the latter, especially along jungle paths, roads, etc. where growth not too dense; also large trees near cultivation.

Extralimital. Ranges east to northern Thailand and south to Tenasserim. The species extends to Sumatra, Vietnam, Hainan and Fujian.

GENERAL HABITS. Essentially tit-like. Keeps in pairs or small parties of up to ten or so—often in the mixed associations. Hunts for insects in bushes and the foliage canopy of lofty trees, clinging to sprigs and trunks in all manner of acrobatic positions, peering under leaves or into crevices of the bark. Actions slower than other tits'. Flits lightly from branch to branch, the peculiar hovering flight reminiscent of an iora's parachuting display or of wood shrikes (*Tephrodornis*) in a foraging party. The recumbent crest is erected when the bird is excited.

FOOD. Chiefly insects—grasshoppers, mantises, etc., but also fruit and seeds.

VOICE and CALLS. Song, a musical jingling *tew-r-r* usually repeated three times, or *tiriree, tiri*, punctuated by harsh *chur-chur* or *chuchuk* (like a quaker babbler's but louder). Call-note, a rather nasal, short *chick* (like a small woodpecker's) given while foraging in parties, or a shrill *chip-tree-trr*. Alarm-note, a harsh rolling *krikrew* like the alarm-note of some laughing thrush, and a shrill chattering note like a Grey Tit's. A plaintive, high-pitched *pway-pway-pway* is sometimes heard.

BREEDING. Season, April to July. Nest (only a couple described) a thick pad of moss heavily lined with vegetable down; placed in a hollow or crack in a tree-trunk. Eggs 6 to 7, broad ovals, chalky white, scattered all over with brownish red spots and underlying ones of pinkish grey. Average size of 5 eggs from a clutch of seven 19 × 15.3 mm; another clutch of 6 eggs averaged 21.7 × 16.5 mm (Baker).

MUSEUM DIAGNOSIS. See Field Characters.

Young as adult but glistening black replaced by dull brownish black; yellow of underparts paler. Narrow yellow tips to greater wing-coverts; crest shorter.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	103–113	16–18 }	22–26	{ 93–98 mm
♀♀	95–108	15–16 }		{ 85–93 mm

(SA, NBK, BB)

Weight 2 ♂♂ 38, 41; 2 ♀♀ 35, 36.3 g (SDR, RAP, SA).

COLOURS OF BARE PARTS. Iris brown. Bill brownish black. Legs and feet bluish plumbeous; claws horny brown.

PARINAE

Genus PARUS Linnaeus

Parus Linnaeus, 1758, Syst. Nat., ed. 10, 1: 189.

Type, by subsequent designation, *Parus major* Linnaeus

Lophophanes Kaup, 1829, Skizz. Nat. Syst.: 92.

Type, by original designation, *Parus cristatus* Linnaeus

Machlolophus Cabanis, 1851, Mus. Hein. 1: 91.

Type, by subsequent designation, *Parus spilonotus* Bonaparte

Cf. Vaurie, C., 1950, Amer. Mus. Novit., No. 1459: 1-66.

Bill short, conical; nostrils concealed by bristles. Rictal bristles short. Tarsus well developed, scutellated. Wing weak and rounded. Tail shorter than wing.

Key to the Species

	Page
I Crown not black	
A Tail brown	<i>P. dichrous</i> 188
B Tail blue	<i>P. cyanus</i> 179
II Crown black	
C Sides of body yellow	
3 Cheeks white	<i>P. monticolus</i> 177
4 Cheeks yellow	
a Back plain olive	<i>P. xanthogenys</i> 190
b Back spotted with black	<i>P. spilonotus</i> 194
D Sides of body not yellow	
5 No white nuchal patch	<i>P. hypermelas</i> 181
6 A white nuchal patch	
c Outer rectrices entirely white	
i Outer web of remiges white at base	<i>P. nuchalis</i> 175
ii Outer web of remiges not white at base	<i>P. major</i> 168
d Outer rectrices not white	
iii A rufous patch on flanks	
o Tip of wing-coverts white	<i>P. melanolophus</i> 181
oo Tip of wing-coverts not white; black bib covers entire breast	<i>P. rufonuchalis</i> 184
iv No rufous patch on flanks	
o' Belly rufous to dark grey	<i>P. rubidiventris</i> 186
oo" Belly buffy	<i>P. ater</i> 183

PARUS MAJOR Linnaeus: GREY TIT

Key to the Subspecies

	Page
I Upper back greenish	<i>P. m. tibetanus</i> 175
II No greenish in plumage	
A White wedge on inner web of 2nd outer rectrix reduced, about 9 mm long; plumage darker and smokier than 4	<i>P. m. vauriei</i> 174
B White wedge on inner web of 2nd outer rectrix usually over 10 mm	
a White wedge on inner web of 2nd outer rectrix usually over 30 mm	
1 Palest, white edging to tertials broader	<i>P. m. ziaratensis</i> 169
2 Greater coverts mostly blue; outer web of 2nd outer rectrix almost entirely white	<i>P. m. caschmirensis</i> 170

- 3 White wedge on inner web of 2nd outer rectrix between 25 and 35 mm. A black line on outer web of 2nd outer rectrix *P. m. nipalensis* 171
- 4 White wedge on inner web of 2nd outer rectrix between 20 and 28 mm; outer web black; outermost rectrix nearly all white *P. m. stupae* 172
- 5 Darker than 5. Central rectrices and greater coverts mostly black *P. m. mahrattarum* 173

1790. *Parus major ziaratensis* Whistler

Parus major ziaratensis Whistler, 1929, Bull. Brit. Orn. Cl. 50: 7
 (Ziarat, Baluchistan)
 Baker, FBI No. 52 (part), Vol. 1: 76

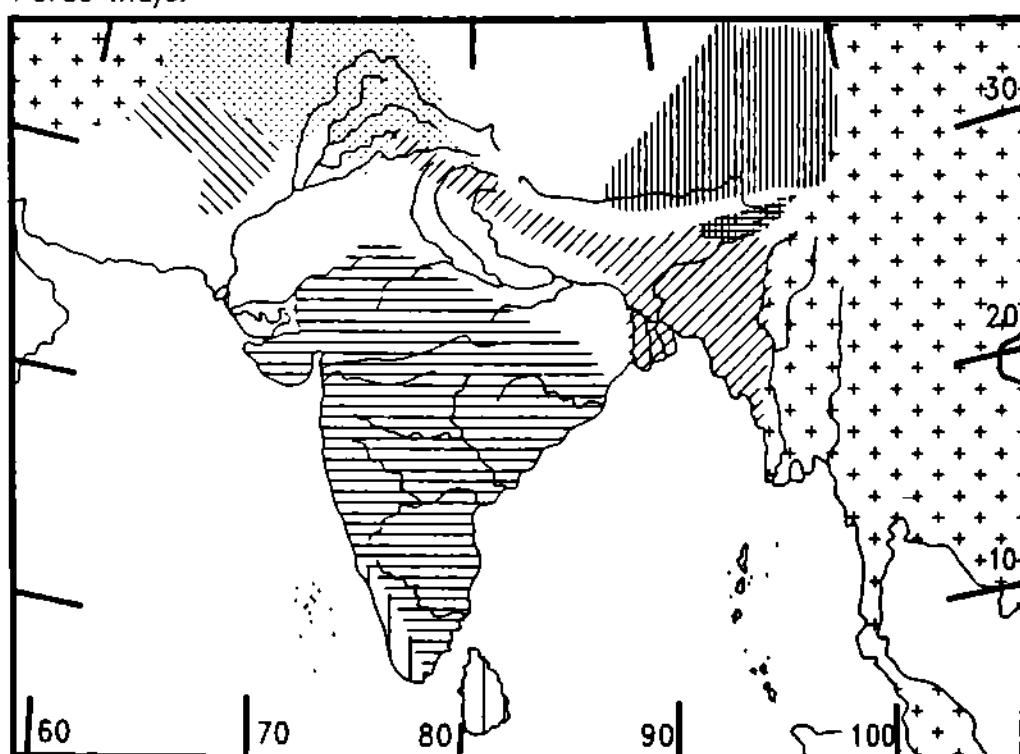
LOCAL NAMES. None recorded.

SIZE. Sparrow ±; length c. 13 cm (5 in.).

FIELD CHARACTERS. As in 1792, q.v.

STATUS, DISTRIBUTION and HABITAT. Common resident, subject to vertical movements. The higher wooded mountains of northern Baluchistan. Affects juniper forest. Descends to the lower valleys in winter when it may be seen in the gardens of Quetta, and perhaps to Sind (JBNHS 66: 25).

Parus major



z _{iaratensis}	c _{aschmirensis}	n _{ipalensis}
v _{auriei}	t _{ibetanus}	s _{tipae}
m _{ahrattarum}	+	Extralimital subspecies

Extralimital. Adjacent parts of Afghanistan to Herat and Kandahar.

GENERAL HABITS, FOOD and VOICE. As in 1792.

BREEDING. As in 1792.

MUSEUM DIAGNOSIS. The palest of Indian Grey Tits. Differs from *caschmirensis* in the paler and bluer grey of upperparts, more conspicuous white edging to tertials, and smaller bill.

MEASUREMENTS

	Wing	Bill (from skull)	Tail
♂♂	70-78	11-12	60-72 mm
♀♀	66-71	11	
(Koelz, HW, CBT)			

Weight 1 ♂ (July) 16; 3 ♀♀ (July) 14-16 g (Paludan).

COLOURS OF BARE PARTS. As in 1792.

1791, 1792. *Parus major caschmirensis* Hartert

Parus major caschmirensis Hartert, 1905, Vög. pal. Fauna 1: 345 (Gilgit)

Parus major declarans Koelz, 1939, Proc. Biol. Soc. Wash. 52: 62
(Jalalabad, Afghanistan)

Baker, FBI No. 53, Vol. 1: 76

LOCAL NAMES. *Ranga tsar*, *Dantiwu* (Kashmir).

SIZE. Sparrow ±; length c. 13 cm (5 in.).

FIELD CHARACTERS. *Above*, crown black; cheeks white; back grey; a whitish patch on nape. Wings dark brown, tertials broadly edged with pale ashy; a white wing-bar. Tail blackish with white outer rectrices. *Below*, throat black continued in a broad black band running down the middle of underparts; flanks ashy. Sexes alike.

STATUS, DISTRIBUTION and HABITAT. Common resident, subject to vertical movements. The western Himalayas from Hazara, Chitral and Hunza east through Ladakh, Kashmir, and Himachal Pradesh (Kulu, Kangra, Lahul) to Kumaon. Breeds between c. 1000 and 1800 m, locally 2400 m; in Chitral, Gilgit and Ladakh up to 3600 m wherever there are a few trees in the valleys. Descends to lower elevations in winter (October to March) and spreads into the plains of northern Punjab. Affects lighter forested areas, edges of cultivation, open hillsides with scattered bushes, gardens, groves, orchards and hedgerows.

Extralimital. NE. Afghanistan (Nuristan—Paludan).

GENERAL HABITS. Usually seen in pairs or in small scattered parties, often in company with various tits, nuthatches, tree creepers, leaf warblers, and other small insectivorous birds. A familiar and sprightly bird, exploring energetically the leaves and branches of trees and bushes, clinging in all manner of acrobatic positions, often hanging to sprigs upside down, and intermittently uttering its cheerful call-notes. When greatly excited, as when chivvying an owl or snake, repeatedly bobs forepart of body vehemently and nervously twitches wings like a *Phylloscopus* while hopping around and swearing at the unwelcome presence. Often descends to the ground and hops about in search of food or nesting material, sometimes even entering bungalow verandas in the quest.

FOOD. Insects, caterpillars, seeds, flower buds and berries. If too large to swallow whole, insects held underfoot and devoured piecemeal. Similarly kernels of hard-shelled seeds hacked out by repeated hammer-blows with the strong conical bill often being wedged first in a bark crevice.

VOICE and CALLS. Ordinary call-note *tsee tsee tsee* given while foraging. Song, a variety of loud and clear whistling notes such as *zwink zwink*, a sawing *weeter-weeter-weeter . . .* and a three-syllabled *wheet-chee-chee* repeated several times (HW). Alarm, a harsh churring note.

BREEDING. Season, early April to July. Nest, a pad of moss lined with wool and hair; placed in a hole in the wall or roof of a building, tree or stump, a roadside bank (a common site), a rat-hole in a sloping hillside or a deserted kingfisher burrow. Eggs, 4 to 6, occasionally up to 9, white, speckled with reddish brown. Average size of 31 eggs 17.5 × 13.4 mm (Osmaston), of 100 eggs 17.2 × 13.4 mm (Baker).

MUSEUM DIAGNOSIS. Paler than *decolorans* but darker than *ziaratensis* (Vaurie). Grey predominates on central rectrices. Blue fringes of greater coverts broad so that coverts appear blue. White wedge on inner web of second outer rectrix very long, 20 to 45 mm, almost always over 30 mm. Outer web of second outer rectrix almost entirely white.

Young. Above, crown dark, dull brown; cheeks dull yellowish white; back washed with olive-green. Below, pale yellow; a narrow dark brown band from chin to lower belly. Wings and tail as in adult.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	72-78	12-13	17-20	60-71 mm
♀♀	68-73	11-13	18-20	56-62 mm (HW)

Weight 17 ♂♂ 14.1-17.1 (av. 15.6); 16 ♀♀ 13.2-16.2 (av. 14.3) g—RAP.

COLOURS OF BARE PARTS. Iris dark brown. Bill black. Legs and feet plumbeous.

1793. *Parus major nipalensis* Hodgson

Parus Nipalensis Hodgson, 1837, Ind. Rev. 2 (1): 31 (Nepal)

Parus major planorum Hartert, 1905, Novit. Zool. 12: 499 (South Punjab)

Baker, FBI Nos. 51, 54 and 55 (part), Vol. 1: 74, 77

LOCAL NAMES. *Rām-gangā* (Bengali); *Bhudder coolee* (Assam).

SIZE. Sparrow ±; length c. 13 cm (5 in.).

FIELD CHARACTERS. As in 1792, q.v.

STATUS, DISTRIBUTION and HABITAT. Common resident, subject to vertical or local movements. The plains of northern Punjab, Kumaon, Nepal and adjacent plains of Uttar Pradesh and Bihar, Sikkim foothills and the whole of Bengal, Bangladesh and Assam [except for the range of *vauriei* (1796)] in the plains and lower hills; also Nagaland and Manipur. In the foothills up to c. 1800 m, in Nepal locally to 2700 m. Affects light forest, especially deciduous, forest edges, groves, cultivation and gardens.

Extralimital. Extends east to central Burma. The species ranges from Scandinavia and Morocco east to southeastern Siberia, Japan, China, the Indochinese countries, Borneo and the Sunda Islands.

GENERAL HABITS. As in 1792.

FOOD. As in 1792. Among stomach contents in an intensively cultivated area in Bihar the following insects identified: predominantly weevils (*Myllocerus discolor*, *Tanymecus* sp. and others); also ants (*Camponotus compressus*, *Oecophylla smaragdina*, *Polyrachis simplex*), tineid and other caterpillars, pentatomid eggs and hemipteron bugs. Young birds fed chiefly on small caterpillars, young crickets (such as *Brachytrypes achatinus*), mole crickets (*Gryllotalpa africana*), and spiders (Mason & Lefroy, 1912).

VOICE AND CALLS. Song of this subspecies recorded as a loud and clear whistled ditty *whee-chichi*, *whee-chichi*, *whee-chickee*, etc. or *wittychi*, *wittychi*, *wittychi*, *wittich*, repeated 3 or 4 times, followed by a few seconds' pause before resumption. Individual and regional variations in song clearly noticeable (SA). 'Vocalizations, however, not identical with those of the European (nominate) subspecies, recalling in part those of the latter, in part those of the Coal Tit [*P. ater*]' (Diesselhorst).

BREEDING. Season, March to June. Nest and eggs, as in 1792. Average size of 100 eggs 17×13.3 mm (Baker).

MUSEUM DIAGNOSIS. A wide band of black along shafts of central rectrices; rest of tail grey. Blue fringes of greater coverts broad so that coverts appear blue. White wedge on inner web of second outer rectrix 12–38 mm, usually over 25 mm. Always a black line on outer web of second outer rectrix.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	63–71	11–12	16–17	55–61 mm
♀♀	59–66 }			53–54 mm (HW, BB)

Weight 8 ♂♂ 12.1–14.5; 4 ♀♀ 12.2–13.7 g (RAP, GD).

COLOURS OF BARE PARTS. As in 1792.

1794. *Parus major stupae* Koelz

Parus major stupae Koelz, 1939, Proc. Biol. Soc. Washington 52: 61 (Sanchi, Bhopal)
Baker, FBI No. 55 (part), vol. 1: 77

Plate 96, fig. 18

LOCAL NAMES. *Rāmachākli* (Gujarati); *Puttani kūrūvi* (Tamil).

SIZE. Sparrow ±; length c. 13 cm (5 in.).

FIELD CHARACTERS. As in 1792, q.v.

STATUS, DISTRIBUTION and HABITAT. Common resident, subject to local movements. Peninsular India from central Rajasthan (Jodhpur, Sambhar Lake) and Gujarat (including the Kathiawar peninsula) east through Madhya Pradesh to Orissa and south through Maharashtra, Karnataka, Andhra Pradesh and Tamil Nadu. Breeds mostly in the hills, spreading to the plains in winter. Affects light deciduous forest, village groves, orchards, etc.

GENERAL HABITS and FOOD. As in 1792.

VOICE and CALLS. Song, a musical whistling *witwit-seesee*, *witwit-seesee*, *witwit* or *titiweesi*, *titiweesi*, *weesi*, etc. repeated three or four times

followed by a break of a few seconds. Kept up more or less throughout the day in the breeding season (SA).

BREEDING. Season, overall February to August, apparently more prolonged in the south where nests have been found in September and even November. Double-brooded. Nest and eggs, as in 1792. Average size of 54 eggs (including *mahrattarum*) 17.5 × 13.6 mm (Baker).

MUSEUM DIAGNOSIS. Differs from *mahrattarum* (1795) in having shorter wing and tail with the outermost rectrices nearly all white. Upperparts brighter and paler, the white edging of tertials much broader. Underparts whiter; black on throat and belly less extensive.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	60-73	10-12	17-19	47-61 mm
♀♀	61-69	11-12	17-20	48-58 mm (SA, Koelz)

Weight 1 ♂ 11.9 g (BB).

COLOURS OF BARE PARTS. Iris brown. Bill black. Legs, feet and claws slaty; soles dirty pale grey.

1795. *Parus major mahrattarum* Hartert

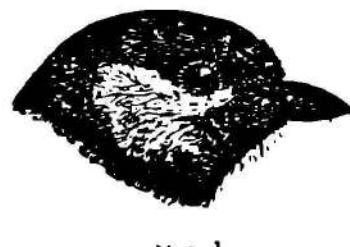
Parus major mahrattarum Hartert, 1905, Novit. Zool. 12: 499 (Ceylon)
Baker, FBI No. 55 (part), Vol. 1: 77

LOCAL NAMES. *Marappottan* (Malayalam); *Sittu-kūrūvi* (Tamil).

SIZE. Sparrow ±; length c. 13 cm (5 in.).

FIELD CHARACTERS. As in 1792, q.v.

STATUS, DISTRIBUTION and HABITAT. Common resident. Kerala from the plains to the highest summits; most abundant around c. 1000 m. Sri Lanka in all zones, generally abundant above c. 600 m, less common and more local in the lowlands. Affects scrub and light deciduous forest.



x c. 1

GENERAL HABITS. Keeps in pairs or family parties, either by themselves or in association with other small insectivorous birds. Moves about restlessly among the foliage of trees, hunting for insects. In this quest the birds cling to sprigs and flowering stems in all manner of acrobatic positions, peering under leaves, probing into blossoms and investigating cracks and crannies in the bark. The members keep in touch with one another by lively cheeping and twittering notes.

FOOD. Beetles, moths, caterpillars and other insects, their eggs and larvae; also flower buds, and kernels of various seeds.

VOICE and CALLS. A chattering and scolding alarm-note. A clear whistling song rendered as *weechichi* and *tisswee* (with other variations). As in 1794 this is repeated 3 or 4 times, then there is a break of 4 or 5 seconds. It continues thus for long periods at a stretch throughout the day, especially in the breeding season (Henry, SA). Call-note, a loud *cheewit*. Alarm-note, a

chattering scold. Young solicit food from their parents in a reedy *dee-dee-dee* (Henry).

BREEDING. Season, in Kerala chiefly February to May; nests have also been found in November. In Sri Lanka chiefly in the first half of the year but many birds breed again in September–November. Nest, a pad of moss, fibres, hair, feathers and soft vegetable down; usually placed in holes in trees at moderate heights, sometimes under bungalow eaves. Holes with a small entrance, through which the birds have to squeeze themselves in, are preferred. Eggs, 4 to 6, white or pinkish white, spotted and speckled with reddish brown. Average size of 54 eggs 17.5 × 13.6 mm (Baker). Both sexes partake in the domestic duties. Brooding bird sits very tight, hissing menacingly when fingers inserted into nest-hole.

MUSEUM DIAGNOSIS. Central rectrices black, a line of grey down the outer web. Blue fringes of greater coverts narrow, so that coverts appear black with blue edges. White wedge on inner web of second outer rectrix 16.5 to 34 mm, usually over 25 mm. Sometimes a black line on white outer web of second outer rectrix. Differs from *stupae* (1794) also in being darker; white edging to tertials narrower; bill heavier. Complete postnuptial moult August to November.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
<i>Sri Lanka</i>				
6 ♂♂	68–73 }	11–12	{ 18–19	59–65 mm
5 ♀♀	66–69 }		{ 17–19	56–58 mm
				(HW)
<i>Kerala</i>				
5 ♂♂, 1 ♀	61–67	11	—	52–57 mm
				(SA)

COLOURS OF BARE PARTS. As in 1794.

1796. *Parus major vauriei* Ripley

Parus major vauriei Ripley, 1950, Postilla, Yale Peabody Mus., No. 1: 2

(Chabua, Northeastern Assam)

Baker, FBI No. 51 (part), Vol. I: 74

LOCAL NAMES. None recorded.

SIZE. Sparrow ±; length c. 13 cm (5 in.).

FIELD CHARACTERS. As in 1792, q.v.

STATUS, DISTRIBUTION and HABITAT. Common resident. Arunachal Pradesh, eastern Assam and the adjacent foothills of the Mishmi and Patkai hills, from the plains to c. 900 m. Affects wet deciduous and sal forest.

GENERAL HABITS, FOOD and VOICE. As in 1792.

BREEDING. As in 1793.

MUSEUM DIAGNOSIS. Differs from *nipalensis* (1793) in having reduced white patches on second outer rectrices and a darker, smokier wash on flanks. Differs from *decolorans* by smaller size.

MEASUREMENTS

1 ♂ (type) Wing 59; bill, from skull, 10·5; tail 53·5 mm

White area on second rectrix (on inner web) 9 mm (SDR)

COLOURS OF BARE PARTS. Unrecorded. Probably as in 1792.

1797. *Parus major tibetanus* Hartert

Parus major tibetanus Hartert, 1905, Vög. pal. Fauna I: 346

(Chaksam in Tsangpo Valley, Tibet)

Baker, FBI No. 56, Vol. 1: 78

LOCAL NAME. *Chi-kiaga* (magpie bird—Tibet).

SIZE. Sparrow ±; length c. 13 cm (5 in.)

FIELD CHARACTERS. As in 1792 but upper back greenish.

STATUS, DISTRIBUTION and HABITAT. Common resident. Southeastern Tibet south to the Chumbi Valley from c. 2900 to 3400 m; also Arunachal Pradesh (?). Affects poplars, willows and thickets of rose and barberry along the banks of rivers; seldom in conifers or dense forest.

Extralimital. Extends to western Sichuan and northern Yunnan.

GENERAL HABITS, FOOD and VOICE. As in 1792.

BREEDING. As in 1792. Four eggs measure c. 18·8 × 13·5 mm (Baker).

MUSEUM DIAGNOSIS. Differs from all other subspecies on the Indian list in having the upper back greenish (cf. 1792 Young).

MEASUREMENTS

	Wing	Bill (from skull)
8 ♂♂	75-77	11-12 mm
3 ♀♀	71-73	(NBK)

COLOURS OF BARE PARTS. Not recorded.

1798. Whitewinged Black Tit. *Parus nuchalis* Jerdon

Parus nuchalis Jerdon, 1844, Madras Jour. Lit. Sci. 13: 131

(Eastern Ghauts)

Baker, FBI No. 58, Vol. 1: 79

Plate 96, fig. 19

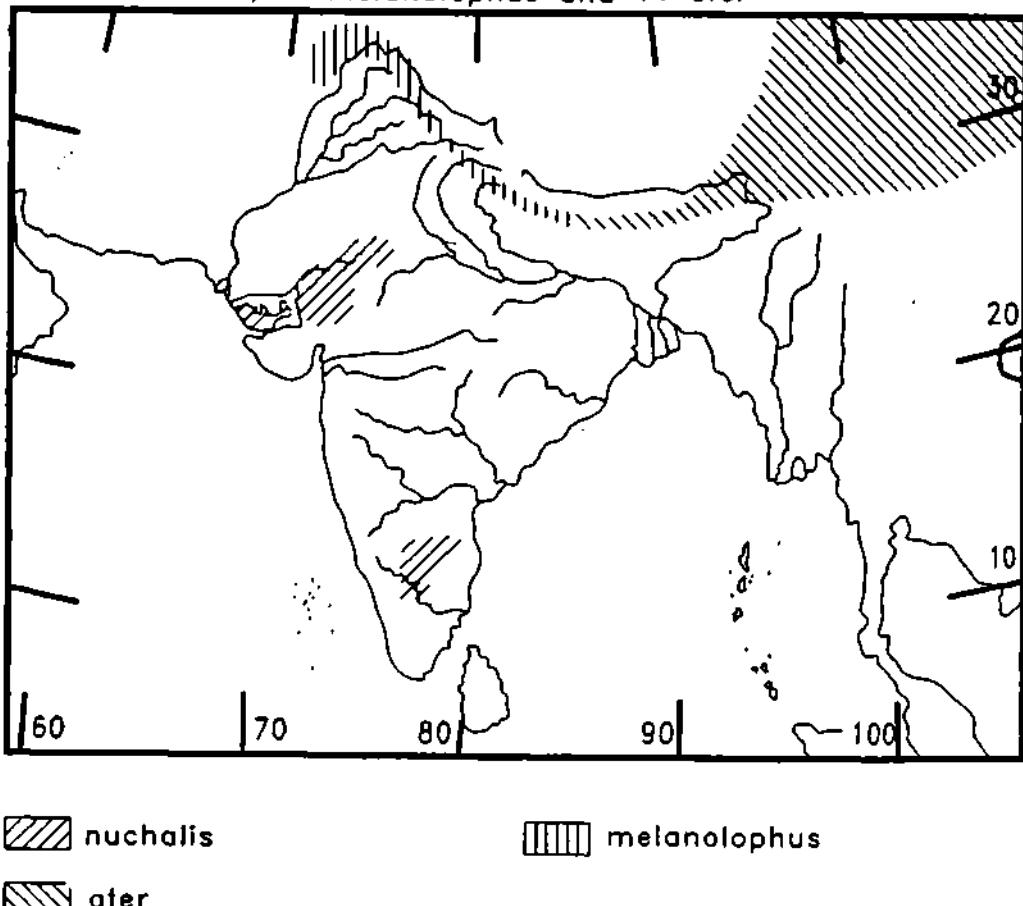
LOCAL NAMES. *Kābāri rāmāchākli* (Gujarat); *Nalla patsa jitta* (Telugu).

SIZE. Sparrow ±; length c. 13 cm (5 in.).

FIELD CHARACTERS. A distinctive piebald black-and-white tit. *Above*, glossy blue-black with a white patch on nape, white wing-pattern and white outer rectrices. *Below*, a broad black band from chin to vent. Cheeks, sides of neck and flanks white, often suffused with yellowish. Sexes alike.

STATUS, DISTRIBUTION and HABITAT. Resident, subject to local movements. Range very restricted and disjunct, comprising: (1) An area in northwestern India covering Kutch (fairly common but patchily distributed), northern Gujarat (Deesa, Palanpur, Mehsana), central and south central Rajasthan (Pali, Jodhpur, Nasirabad, Ajmer, Kishangarh, Jhalawar

Parus nuchalis, *P. melanotophus* and *P. ater*



and Sambhar). (2) An area in southern India where very rare and recorded only once from each of the following localities: Eastern Ghats west of Nellore, Bangalore, and Satyamangala (Biligirirangan Hills). Affects broken, stony, hummocky semi-desert country where well covered with jungle of babool, kandi (*Prosopis*) and pilu (*Salvadora*), and bushes of gugar (*Balsamodendron*), gangi (*Grewia*) and similar species. The occurrence of this species and *P. major* is mutually exclusive.

GENERAL HABITS. Much as in Grey Tit. Met with in pairs or family parties of four or five individuals maintaining contact with one another by clear musical notes. The following observation by Sálim Ali (JBNHS 52: 785) about roosting birds deserves mention: 'Before I first visited Bhuj [Kutch] in August 1943 my cousin Humayun Abdulali gave me the "address" of one of these tits he had been shown about 6 years previously roosting at night in a particular hole in the cross-bar of a particular gate on the circular road round Bhujia Hill. He asked me half jokingly to try and call on his friend should I have the opportunity. On doing so at sunset on August 8 I was astonished to find the tit (same individual or successor?) at home! When peeped at through a chink, the bird swayed its head and neck deliberately from side to side. In the dim light of the hole the white cheeks and streak down the neck heightened the snake-like effect. Three evenings later I visited the roost again at the same time, caught the bird in its hole and marked it with an aluminium ring. This ringed bird was still in occupation of its roost on April 4, 1944 (i.e. 8 months later). I have no knowledge whether

that gate still exists, but it would be interesting to know how much longer this bird continued to sleep there and whether the hole has since been inherited by a successor—for the original occupant can no longer be alive.¹

FOOD. Insects, caterpillars, pupae.

VOICE AND CALLS. Contact-notes between members of a party, a rapid clear musical whistling *tee whi whi* or *tee whi whi whi* (or see *pit pit pit*) of the volume and quality of the Tailor Bird's calls. Besides these the usual joyous harsh 'wheeching' notes of the Great Tit are uttered (SA). Another call (or song) is described as a fine bold *whew, whew, whew, whew, whew* uttered rapidly with the last note high (R. M. Adam).

BREEDING. *Season*, May to August; in Kutch breeding was in full swing in July and August (SA). *Nest*, a rough pad of soft fibres, wool, cotton and hair (in one case containing a tangle of sewing thread with a needle attached!); placed in holes in trees about one or two metres above the ground. *Eggs*, undescribed; clutch size and incubation period unknown. On one occasion three young were seen with their parents. Care of young by both parents.

MUSEUM DIAGNOSIS. See Field Characters. Breeding birds have the underparts suffused with yellow. This colour fades to pure white in museum skins. Complete postnuptial moult in September. Young as adult but black duller (brownish), not glossy.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
9 ♂♂	65–71	11–13 }	17–19	{ 48–55 mm
4 ♀♀	67–68	11–12 }		{ 49–53 mm (SA)

COLOURS OF BARE PARTS. Iris dark brown. Bill black. Legs and feet slaty plumbeous.

1799. Greenbacked Tit. *Parus monticolus monticolus* Vigors²

Parus monticolus Vigors, 1831, Proc. Zool. Soc. London: 22
(Himalayan Mountains = Simla)

Parus monticolus lepcharum R. & A. Meinertzhagen, 1926, Bull. Brit. Orn. Cl. 46: 97
(Gangtok, Sikkim)
Baker, FBI No. 59, Vol. 1: 80

Plate 96, fig. 17

LOCAL NAMES. *Chichin kothi* (Paharia); *Sarak-chak-pho* (Lepcha); *Daosi-whet* (Cachari).

SIZE. Sparrow ±; length c. 13 cm (5 in.).

FIELD CHARACTERS. *Above*, crown and sides of neck black; nuchal patch and cheeks white. Back yellowish olive; rump grey. Wing bluish with two white wing-bars and white tips to tertials. Tail bluish, tip of outer rectrices and outer web of outermost rectrix white. *Below*, throat and a broad band down the middle of belly black. Rest yellow. Sexes alike.

¹ The gate was dismantled c. 1950.

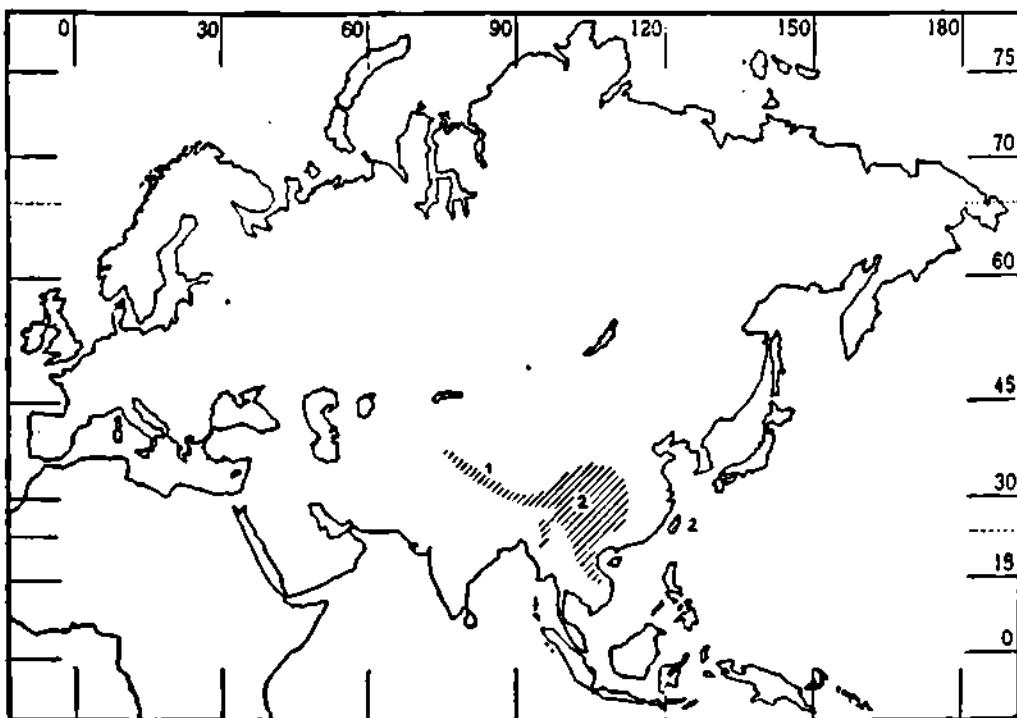
² See also Paynter, R. A., JBNHS 59: 954 for western limit of *yunnanensis*.

Very similar in pattern to the Grey Tit but distinguished by olive back, yellow underparts and double wing-bar.

STATUS, DISTRIBUTION and HABITAT. Resident, subject to vertical movements, locally common. The Himalayas south of the main range from Swat, N.W.F.P. (Paynter, JBNHS 59: 954) eastward through Nepal, Sikkim and Bhutan to Arunachal Pradesh, thence south through Nagaland, Manipur and the Khasi Hills (breeding?). Breeds between 1500 and 2700 m (Murree), 1600–2800 m (Kashmir), 1500–3600 m (from Nepal eastwards), in Sikkim down to 1200 m. Reaches the foothills in winter (October to March) when recorded from Peshawar, the Jhelum portion of the Salt Range (JBNHS 59: 962), the plains of northern Punjab, Dehra Dun, the Jalpaiguri duars and Bhutan foothills; in Nepal not observed below 1200 m but recorded as high as 3900 m in the cold season (BB). Affects many types of forest: light deciduous, oak or deodar, secondary jungle, scrub pastureland, orchards and cultivation. Also dense forest as well as the neighbourhood of populous hill-stations (Murree). On the whole appears to prefer a wetter zone than *P. major*. The two species tend to replace each other altitudinally, *P. monticolus* inhabiting a higher zone. However, in northern Swat (Kalam) and on the southern slopes of the Murree Hills, *P. major* and *P. monticolus* often consort together in mixed foraging flocks (Roberts, pers. comm.). In the eastern Himalayas, *P. monticolus* occupies an intermediate zone between *P. m. tibetanus* and the lowland subspecies of the Grey Tit (*nipalensis*, 1793, q.v.).

Extralimital. The species extends to Kansu, Shaanxi, Hupeh and Vietnam; also Taiwan.

Parus monticolus



Distributional ranges

1 *monticolus* (1799) 2 Extralimital subspecies

GENERAL HABITS. Keeps in pairs in the breeding season, otherwise in small parties up to 15 or 20 individuals sometimes by themselves, usually in mixed company with small babblers, flycatchers, warblers and suchlike insectivorous birds. One of the mainstays of the Himalayan hunting parties. Hunts energetically amongst the foliage of trees, clinging to sprigs sideways or upside down. Occasionally also feeds on the ground though less so than the Grey Tit. Aggressive and agonistic behaviour consists of rapidly bobbing or dipping vehemently, turning excitedly from side to side, flicking wings and tail, as two rivals, a few centimetres apart, approach one another in sidelong hops, facing this way and that, with occasional angry chirrups. Actual physical contact seldom results (SA).

FOOD. Insects, flower buds, fruit and berries.

VOICE and CALLS. A loud and pleasant whistling song *whitee* (or *wheetee*), *whitee, whitee...* repeated four to six times with variations such as *whichy-whichy* etc. (SA). Also a rather musical *pling pling pling* followed by a double note *tee-eurp* (SDR). Song period, early February to end May (Proud). Call-note, *teacher* or *sit here* and many other notes rendered as *te-te-whee*, *ti-ti-tee-ty*, *whit whit whit*, etc. Calls differ from those of the Grey Tit, the second note rising at the end, whereas it drops in parts in *P. major* (Roberts, pers. comm.).

BREEDING. Season, March to July. Nest, differs in no way from that of *P. major*, nesting sites and materials being similar. Nests have been found in holes at heights up to 7 m, but are usually under 3 m, in tree-trunks, stumps, posts, roadside parapets, rocky banks as well as in walls and under roofs of houses. Eggs, 4 to 8, generally 5 to 7, differing from those of the Grey Tit in being rounder, more obtuse, and more heavily marked. Average size of 40 eggs 16.7 × 13.1 mm (Baker).

MUSEUM DIAGNOSIS. See Field Characters.

Young similar to adult but glossy black replaced by sooty black; white of wing and ear-coverts tinged with yellow; mantle duller.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	65-71			{ 54-57 mm
♀♀	63-70 }	11-12	18-19	{ 53-56 mm
				(BB, Rand & Fleming, RM)

29 ♂♀ Wing 61-72 mm (Stres., SA)

Weight 24 ♂♂ 12-16.8; 14 ♀♀ 12.3-15.3 g (RAP, GD).

COLOURS OF BARE PARTS. Iris dark brown. Bill black. Legs and feet plumbeous.

PARUS CYANUS Pallas: YELLOWBREASTED BLUE TIT

Key to the Subspecies

- | | |
|-------------------------|----------------------------|
| Breast white | <i>P. c. tianschanicus</i> |
| Breast yellow | <i>P. c. flavipectus</i> |

1800. *Parus cyanus flavipectus* Severtzov

Parus flavipectus Severtzov, 1872, Vertik. Turkest. Zhivotn.: 133
 (Turkestan, probably Ferghana, *vide* Vaurie, 1957, Amer. Mus. Novit., No. 1833: 15)
 Not in Baker, FBI

Plate 96, fig. 15

LOCAL NAMES. None recorded.

SIZE. Sparrow \pm ; length c. 13 cm (5 in.).

FIELD CHARACTERS. *Above*, pale bluish ashy, darker on back with a dark line through eye and around nape. Wings blue with a white bar and white tips to tertials. Tail blue with white tips and white outer rectrices. *Below*, throat pale ashy; breast pale yellow; belly white with a blackish median band from breast to vent. Sexes alike.

STATUS, DISTRIBUTION and HABITAT. Straggler or occasional breeder.¹ Five juveniles obtained on 26 July 1902 at Shost, c. 3000 m, Chitral (Fulton, H. T., JBNHS 16: 47). There were 'numbers' in dense scrub of stunted willow, juniper and birch in the river bed.

EXTRALIMITAL. Extends from northeastern Afghanistan north to the Kirghiz Range.

GENERAL HABITS. Typical of tits. Hunts in low bushes especially near water.

FOOD. Insects.

VOICE and CALLS. Unrecorded.

BREEDING. EXTRALIMITAL.

MUSEUM DIAGNOSIS. See Field Characters.

YOUNG. *Above*, centre of crown dark grey surrounded by whitish. Line through eye and around nape dark grey-brown. Back olive-grey. Wing and tail as in adult. *Below*, entirely pale yellow.

MEASUREMENTS

Wing 8 ♂♂ 63–68; 4 ♀♀ 61–64 mm (Dementiev)

COLOURS OF BARE PARTS. Probably as in 1800a.

1800a. *Parus cyanus tianschanicus* (Menzbier).

Cyanistes cyanus var. *tian-schanicus* Menzbier, 1844, Bull. Soc. Zool. France 9: 276
 (Tien Shan)

Baker, FBI No. 60, Vol. 1: 81

LOCAL NAMES. None recorded.

SIZE. Sparrow \pm ; length c. 13 cm (5 in.).

FIELD CHARACTERS. Similar to *flavipectus* (1800) but underparts white, no yellow on breast.

STATUS, DISTRIBUTION and HABITAT. Vagrant. One record: Misgar (Hunza), 20 October 1930 (Ludlow, *Ibis* 1933: 450). Affects bushes, especially near water.

EXTRALIMITAL. Ranges north to the Altai and east to Manchuria and Amurland.

¹ The species is subject to sporadic extensions of its breeding range and may have bred in the area where collected.

GENERAL HABITS and FOOD. As in 1800.

VOICE and CALLS. Unrecorded.

BREEDING. Extralimital.

MUSEUM DIAGNOSIS. See Field Characters.

MEASUREMENTS

Wing 5 ♂♂ 65–68; 3 ♀♀ 64–66 mm.

Weight 2 ♂♂ 12, 12·2; 1 ♀ 13·7 (Dementiev).

COLOURS OF BARE PARTS. Iris brown. Bill slaty horn. Legs and feet plumbeous.

1801. Blackbibbed Tit. *Parus hypermelas* (Berezovski & Bianchi)

Poecile hypermelaena Berezovski & Bianchi, 1891, Aves Exped. Potanini: 112, pl. 2, fig. 2 (Shensi and the border of Kansu)

Baker, FBI No. 62, Vol. 1: 82 [= *P. palustris poecilopsis* (Sharpe)]

LOCAL NAMES. None recorded.

SIZE. Sparrow –; length c. 11 cm (4 in.).

FIELD CHARACTERS. *Above*, crown and nape black; lores, ear-coverts and sides of neck white. Rest of upperparts olive-grey. *Below*, throat black, rest whitish tinged with fulvous on flanks. Sexes alike.

STATUS, DISTRIBUTION and HABITAT. Resident on Mt Victoria, Burma, between 2500 and 3000 m (Stresemann & Heinrich, 1940). Also in southeastern Tibet in the Ygrong Range 3900 m (Kongbo, Ludlow, *Ibis* 1951: 554). May occur in the Mizo or Manipur hills adjacent to the Chin Hills, and in Arunachal Pradesh. Affects pine forest (Mt Victoria) or mixed forest (Tibet).

Extralimital. Breeds in the mountains of western China north to Kansu and Shaanxi.

GENERAL HABITS, FOOD and VOICE. Unrecorded.

BREEDING. Extralimital? *Season*, about March and April. *Nest*, placed in holes in trees.

MUSEUM DIAGNOSIS. See Field Characters.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
5 ♂♂	59–67	{ (1 ♂) 11	15	52 mm
3 ♀♀	56–61			

(Wing by Stres., rest MD)

COLOURS OF BARE PARTS. Unrecorded.

1802. Crested Black Tit. *Parus melanolophus* Vigors

Parus melanolophus Vigors, 1831, Proc. Zool. Soc. London: 23
(Himalayan Mountains = Simla-Almora area)

Baker, FBI No. 63, Vol. 1: 83

Plate 96, fig. 12

LOCAL NAMES. *Pintsakön, Täjdär tsar* (Kashmir).

SIZE. Sparrow –; length c. 11 cm (4 in.).

FIELD CHARACTERS. A small, slaty, black-crested tit. *Above*, crown, crest and sides of neck black; cheeks and nuchal patch white. Rest of upperparts slaty. Two rusty white wing-bars (or rows of spots). *Below*, throat and breast black; belly slaty, a rufous patch on flanks. Under tail-coverts rufous. Sexes alike.

The erect black crest, and pure white cheek- and nape-patches give it a distinctive appearance.

The double wing-bar distinguishes it from the very similar *P. rubidiventris* (1804) which, moreover, has the black on underparts more extensive. The Coal Tit (1803), which does not occur within the range of the present species, has a fulvous belly and no rufous on flanks.

STATUS, DISTRIBUTION and HABITAT. Common resident, subject to vertical movements. N.W.F.P. from Safed Koh to Chitral, Gilgit, Astor, Baltistan, Murree and Kashmir eastward through Himachal Pradesh, Garhwal and Kumaon to extreme western Nepal (Fleming & Traylor, 1961; also an old specimen in British Mus.). Breeds from c. 2000 m to timber-line (3300 m in Kashmir, 3600 m in the eastern parts). In winter (October to March) occurs down to the foothills (c. 600 m) but probably does not entirely forsake the higher elevations. Affects oak, coniferous or mixed forest, but shows a preference for conifers—fir, pine and deodar.

Extralimital. Adjacent parts of northeastern Afghanistan.

GENERAL HABITS. A sociable little tit found in most mixed foraging parties of other tits, goldcrests, leaf warblers, tree creepers, etc.; in winter gathers in flocks of up to 80 individuals in the Murree Hills (Roberts, pers. comm.). A sprightly bird, hunting restlessly in the high canopy of trees in typical tit fashion, flitting from bough to bough, examining every twig, peering into crevices or pecking at the scales of a fir cone. Occasionally descends to the ground to pick seeds among pine needles and debris.

FOOD. Chiefly insects; also seeds and berries. Frequently comes into hillstation gardens to pick the seeds from ripe sunflower heads.

VOICE and CALLS. Members of a party continually utter their call-notes to keep in touch; most common are *te-tewy* and a thin *zee-zee*; also a plaintive *tyu-tyu* slowly repeated. Song, some short clear whistles rapidly repeated three or four times after short intervals, variously rendered as *want you—, need you—, deed you—, kin-ka-jou—*, etc. (Magrath and others).

BREEDING. Season, chiefly May and June, a few birds starting in early April. Nest, mostly made of moss, the cup warmly lined with fur and hair; usually placed in holes in trees within a couple of metres above the ground, occasionally up to ten metres, sometimes in holes in walls of occupied houses or even in the ground. Eggs, 4 to 10, generally 5 or 6, white, with rusty red blotches and specks often forming a zone around the larger end. Average size of 100 eggs 17.7 × 11.7 mm (Baker). Both sexes take part in all the domestic chores. Brooding bird very reluctant to leave nest; may utter snake-like hisses from the bottom of its cavity.

MUSEUM DIAGNOSIS. See Field Characters. (For a note on taxonomy see Paynter, R. A., 1962, JBNHS 59: 951–2).

Young similar to adult but black of head and breast duller and the white faintly washed with yellow. Upperparts dull greyish olive. Slaty of underparts replaced by fulvous white.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	60-68	c. 11	c. 17	{ 41-46 mm
♀♀	58-66 }			{ 40-46 mm
				(RAP, Paludan, MD)

Weight 23 ♂♂ 8-9.8; 12 ♀♀ 7-9.5 g (RAP, Paludan).

COLOURS OF BARE PARTS. Iris brown. Bill black. Legs and feet plumbeous.

1803. Coal Tit. *Parus ater aemodius* Hodgson

P.(arus) aemodius Hodgson, 1844, in Blyth, Jour. Asiatic Soc. Bengal 13: 943 (Nepal)
Baker, FBI No. 64, Vol. 1: 84

Plate 96, fig. 10

LOCAL NAMES. None recorded.

SIZE. Sparrow -; length c. 10 cm (4 in.).

FIELD CHARACTERS. A small, black-crested tit with white cheeks. *Above*, crown, crest and sides of neck black; cheeks and a nuchal patch white. Back dark grey. Two whitish wing-bars (rows of spots). *Below*, throat black, rest of underparts fulvous buff. Sexes alike.

Distinguished from *P. rubidiventris* (1804) by double wing-bar, lack of rufous patch on flanks, and fulvous (not slaty) belly. The very similar *P. melanolophus* (1802) of extreme western Nepal and westward, also with double wing-bar, is distinguished by rufous flanks and slaty belly.

STATUS, DISTRIBUTION AND HABITAT. Common resident, subject to vertical movements. The Himalayas from Garhwal (Reed, JBNHS 76: 281), east at least to western Bhutan, and southeastern Tibet (Arunachal Pradesh?). Breeds from c. 2500 m, mostly above 2800 m and up to 3600 m; in eastern Nepal between 3500 and 4200 m (BB, GD). Recorded in winter between 1800 and 3600 m. Affects conifer forest; in Nepal also noted in the *Abies-Betula* facies.

EXTRALIMITAL. Extends to northern Yunnan and Sichuan. The species ranges from Morocco and the British Isles to Kamchatka, Japan and Taiwan.

GENERAL HABITS. Much as in *P. melanolophus* (1802). Usually hunts in mixed flocks among the tops of conifers moving from tree to tree in loose follow-my-leader fashion. Observed in company with *P. dichrous*, *P. rufonuchalis*, *Certhia familiaris*, *Regulus* and various leaf warblers (*Phylloscopus*). May be seen in parties throughout the summer. A hardy species, often being the only one to enliven the snow-draped coniferous forests in the depth of winter.

FOOD. Insects.

VOICE AND CALLS. The birds keep up a thin cheeping *tsi, tsi* as they search the foliage (SA). Also a call of two notes, the second lower in pitch. Ordinary call-note said to be very different from that of the nominate European subspecies (GD).

BREEDING. Little known. Season, apparently May and June, possibly later

(see Diesselhorst, 1968). *Nest* (one described, FBI 1: 84), a pad of fur in a hole in a tree. *Eggs*, described as 'indistinguishable from those of the European Coal Tit [white, speckled with reddish brown]; measuring about 17·9 × 12·9 mm' (Baker).

MUSEUM DIAGNOSIS. See Field Characters.

Young. *Above*, black of adult replaced by dull, dark brown; no crest. Back more olive. *Below*, throat greyish with an olive tinge. Rest of underparts paler and more yellowish than in adult.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	58–62	9–10	16–18	40–42 mm
♀♀	55–61			

(SA, Rand & Fleming, Stevens)

Weight 6 ♂♂ 7·7–8·9; 7 ♀♀ 7·2–8·4 g (RAP, GD). 1 ♂ (Sept.) 11 g (SDR).

COLOURS OF BARE PARTS. Iris brown. Bill black. Legs and feet plumbeous blue; claws horny brown.

1804. Simla Black Tit. *Parus rufonuchalis* Blyth

Parus rufonuchalis Blyth, 1849, Jour. Asiatic. Soc. Bengal 18: 810 (range beyond Simla)

Parus rufonuchalis blanchardi Meinertzhagen, 1938, Bull. Brit. Orn. Cl. 58: 95
(N.W. side of Gardez Forest, Afghanistan)

Baker, FBI No. 66, Vol. 1: 85

Plate 96, fig. 11

LOCAL NAMES. *Pintsakön, Täjdär tsar* (Kashmir).

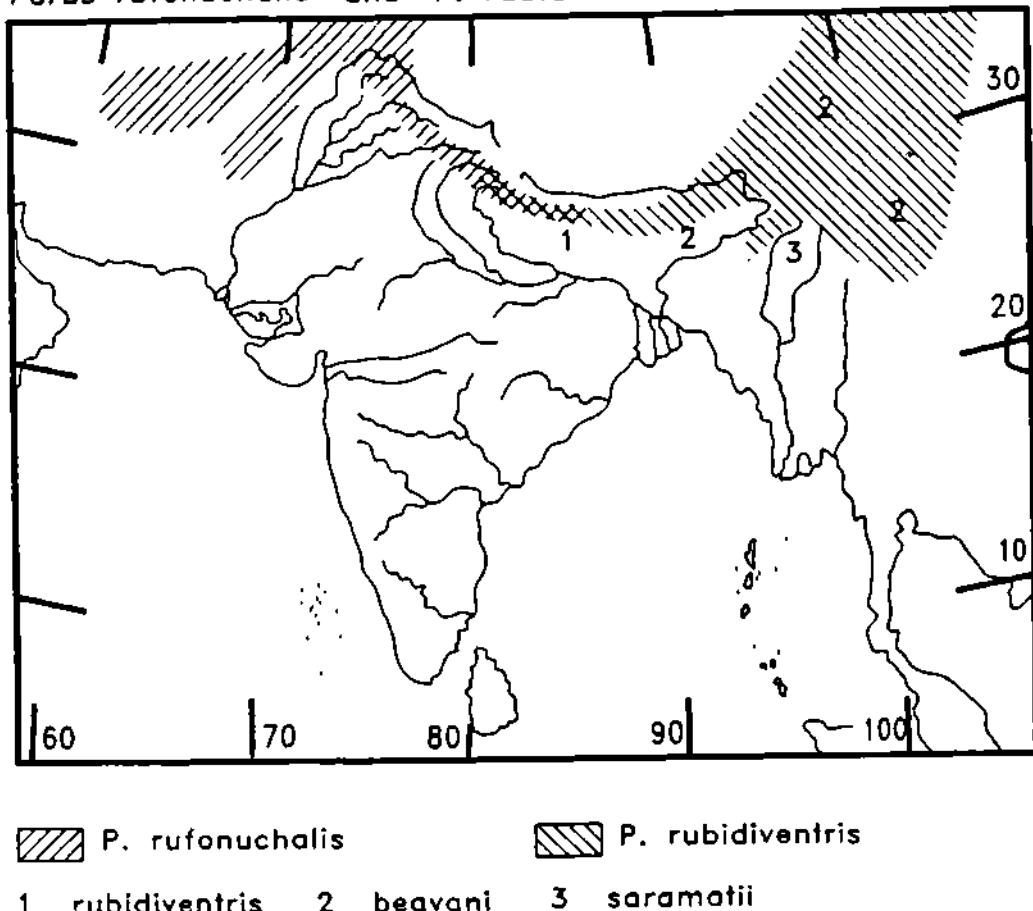
SIZE. Sparrow ±; length c. 13 cm (5 in.).

FIELD CHARACTERS. *Above*, crown, crest and sides of neck black; cheeks white; nuchal patch white or tinged rufous near back. Rest of upperparts grey. No wing-bars. *Below*, throat, breast and upper belly black; lower belly grey. Under tail-coverts and a patch on flanks rufous. Sexes alike.

Distinguished from the very similar *P. melanolophus* (1802) by absence of wing-spots and more extensive black of underparts.

STATUS, DISTRIBUTION and HABITAT. Common resident, subject to vertical movements. From northern Baluchistan (Ziarat, Loralai) north through N.W.F.P. to Chitral, Gilgit, Astor and Baltistan, thence east through Kashmir to Garhwal and Kumaon (JBNHS 60: 176). Fairly common in Nepal (Fleming *et al.*, 1984). Breeds between 2700 and 3600 m, occasionally descending to c. 1500 m in winter, exceptionally to the foothills—parties of 4 or 5 individuals stray down to 500 m in the Margalla Hills, Islamabad in Oct./Dec./Jan. (Roberts pers. comm.). Affects fir, pine, mixed oak and spruce forest and, in drier country (such as Baluchistan, N.W.F.P. and north of the main range) also juniper forest or scrub. Also visits thickets of dwarf willows and birch along nullahs.

Extralimital. Ranges west to western Afghanistan and north through Turkestan to the Tien Shan.

Parus rufonuchalis and *P. rubidiventris*

GENERAL HABITS. Much as in *P. melanolophus* (1802). One of the commonest tits of high elevations, occurring in most mixed hunting parties. Has regular hammering places on branches to which it takes seeds of drupes and berries to hack out the kernels. See also 1805.

FOOD. Insects and seeds.

VOICE and CALLS. Call-notes, a loud, cheery *gypsie-bee*, *gypsie-bee*, a mellow *pipit-snippet* and some little twittering and reeling notes (HW). Song, a musical double whistle *whi-whee* usually repeated four times, the first syllable short, the second long (SA). Alarm-note, *trrr* similar to that of *P. major*.

BREEDING. Season, chiefly May and June. Nest, a pad of moss lined with wool and hair; placed deep down in holes, seldom less than c. 30 cm from the entrance, often considerably more. The holes are usually in the ground, in a steep bank, under a large stone or the spreading roots of a tree, sometimes in a cleft or hollow in a trunk or stump within a metre from the ground (*P. melanolophus* more often chooses a hole in a tree-trunk). Eggs, 4 to 6, white, speckled with reddish brown—similar to those of the Grey Tit but rather feebly marked. Average size of 11 eggs 17.6 × 12.9 mm (Baker); of 5 eggs 18 × 13 mm (HW). Both parents feed the young.

MUSEUM DIAGNOSIS. See Field Characters and Key to the Subspecies.

Young, similar to adult in pattern but black replaced by dull sooty. Rufous tinge almost absent from nuchal patch; back and abdomen suffused with olive; axillaries and under tail-coverts pale buff.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	71-78			
♀♀	74-75 }	12-13	19-20	51-56 mm (HW)

Wing ♂♂ 74-80, average about 76 mm (Vaurie)

Weight 13 ♂♂ 12.3-14.7; 8 ♀♀ 11.4-12.4 g (RAP).

COLOURS OF BARE PARTS. Iris brown. Bill black; mouth fleshy, slaty anteriorly. Legs and feet plumbeous.

PARUS RUBIDIVENTRIS Blyth: RUFOUSBELLIED CRESTED TIT

Key to the Subspecies

		Page
A	Nuchal patch partly tinged rufous, abdomen rufous .	P. r. rubidiventris
B	Nuchal patch not tinged with rufous	
1	Back slaty, abdomen grey washed with rufous	P. r. beavani
2	Back buffy-olive, abdomen dark olive-grey	P. r. saramati

1805. *Parus rubidiventris rubidiventris* Blyth

P.(arus) rubidiventris Blyth, 1847, Jour. Asiatic Soc. Bengal 16: 445
(Nepal and Sikkim, restricted to Kathmandu Valley by Ripley, 1961, Synopsis: 550)
Baker, FBI No. 65, Vol. 1: 84

Plate 96, fig. 13

LOCAL NAMES. None recorded.

SIZE. Sparrow -; length c. 10 cm (4 in.).

FIELD CHARACTERS. As in 1804 but belly rufous.

STATUS, DISTRIBUTION and HABITAT. Common resident, subject to vertical movements. Tehri Garhwal and Kumaon to east-central Nepal. Has strayed once to Simla. Breeds between 3000 and 4100 m; descends to c. 2400 m in the cold season. Affects pure coniferous forest or mixed conifer and birch; it is also a characteristic bird of the rhododendron zone. For nesting purposes however avoids the treeless scrub zone which it visits in the non-breeding season.

GENERAL HABITS. May be seen in parties of adult individuals throughout the summer, often in company with *P. dichrous*, *Aegithalos iouschistos*, *Aethopyga ignicauda* and leaf warblers; parties are met with oftener than pairs or singles, this posing the question whether the species is territorial or not (GD). Forages mostly among the tree-tops but also descends to bushes.

FOOD. Insects and seeds.

VOICE and CALLS. Among the common utterances of the species (see 1804), also a clear *tui twi*, a rattling *djübdjübdjübdjüb* or *djilldjilldjill* . . . and some fine goldcrest-like contact calls (GD); also a most characteristic vibrating note, something like the twanging of a low-pitched guitar string (Smythies). Song period mid March to mid June (Proud).

BREEDING. As in 1804.

MUSEUM DIAGNOSIS. Similar to *rufonuchalis* (1804) above, but grey mantle more weakly tinged with olive; rufous on nuchal patch paler, black of underparts less extensive and belly rufous; it is also smaller.

MEASUREMENTS

Wing ♂♂ 67–71 (av. c. 69) mm—Vaurie

Weight 7 ♂♂ (May–Sept.) 11–13·1; 4 ♀♀ (May–Sept.) 11–12 g—GD.

COLOURS OF BARE PARTS. Iris brown. Bill black. Legs and feet plumbeous.

1806. *Parus rubidiventris beavani* (Jerdon)

Lophophanes Beavani 'Blyth' = Jerdon, 1863, Bds. India 2: 275

(Mount Tonglo, Sikhim)

Baker, FBI No. 67, Vol. 1: 86

LOCAL NAME. *Lih tasso* (Lepcha).

SIZE. Sparrow —; length c. 10 cm (4 in.).

FIELD CHARACTERS. As in 1804, q.v.

Distinguished from *P. ater* (1803) by absence of wing-bars.

STATUS, DISTRIBUTION and HABITAT. Common resident, subject to vertical movements. Eastern Nepal from the Khumbu region (Biswas, JBNHS 60: 176) east through Darjeeling dist., Sikkim, Bhutan and probably Arunachal Pradesh, between 2700 and 4200 m, descending in winter to c. 2200 m. Affects fir, pine and juniper forest as well as rhododendron scrub above timber-line; in winter also in oak forest.

Extralimital. Southeastern Tibet, northern Yunnan and north to Tsinghai and Shaanxi.

GENERAL HABITS, FOOD and VOICE. See 1804 and 1805.

BREEDING. As in 1804.

MUSEUM DIAGNOSIS. Differs from subspecies *rufonuchalis* (1804) and *rubidiventris* (1805) in lacking the olive tinge on mantle, and having a white nuchal spot; cheeks pale buff rather than white; grey of abdomen washed with rufous..

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	67–75	c. 10	20–21	45–52 mm
♀♀	57–69	—	—	46–47 mm (SA, Stevens, Mayr)

Wing ♂♂ 63–70 (av. 67) mm—Vaurie

Weight 16 ♂♂ 11·6–13·1; 9 ♀♀ 10·5–12·3 g (RAP, GD). 1 ♂, 1 o? 11, 10 g (Sept.)—SDR.

COLOURS OF BARE PARTS. Iris brown. Bill black. Legs and feet brownish plumbeous; claws horny brown.

1806a. *Parus rubidiventris saramatii* Ripley

Parus rubidiventris saramatii Ripley, 1961, Jour. Bombay nat. Hist. Soc. 58: 282

(Mount Saramati, Naga Hills)

Not in Baker, FBI

LOCAL NAMES. None recorded.

SIZE. Sparrow -; length c. 10 cm (4 in.).

FIELD CHARACTERS. As in 1804, q.v.

STATUS, DISTRIBUTION and HABITAT. Resident. Nagaland at c. 3600 m in heavy rhododendron forest.

Extralimital. Adjacent parts of Burma.

GENERAL HABITS, FOOD and VOICE. As in 1805.

BREEDING. Unrecorded.

MUSEUM DIAGNOSIS. Differs from *beavani* (1806) in having the underparts deep olive-grey washed with drab, more particularly on centre of belly and under tail-coverts. Upperparts buffy olive rather than blue-grey. Differs from *rufidiventris* (1805) in having the upperparts greyish buffy olive, rather than olive-brown, the grey with a faint isabelline cast, more pronounced on rump. Abdomen deep olive-grey instead of rufous.

MEASUREMENTS

	Wing	Bill (from skull)	Tail
1 ♂	66	10	{ 48 mm
1 ♀	65 }		{ 46 mm (SDR)

COLOURS OF BARE PARTS. 'Legs and feet black.' Probably not different from 1806.

PARUS DICHROUS Hodgson: BROWN CRESTED TIT

Key to the Subspecies

- | | |
|--------------|-----------------------|
| Paler..... | <i>P. d. kangrae</i> |
| Darker | <i>P. d. dichrous</i> |

1807. *Parus dichrous kangrae* (Whistler)

Lophophanes dichrous kangrae Whistler, 1932, Bull. Brit. Orn. Cl. 53: 20
(Koti State, near Simla)

Baker, FBI No. 68 (part), Vol. 1: 87

LOCAL NAMES. None recorded.

SIZE. Sparrow -; length c. 12 cm (4½ in.).

FIELD CHARACTERS. As in 1808, q.v.

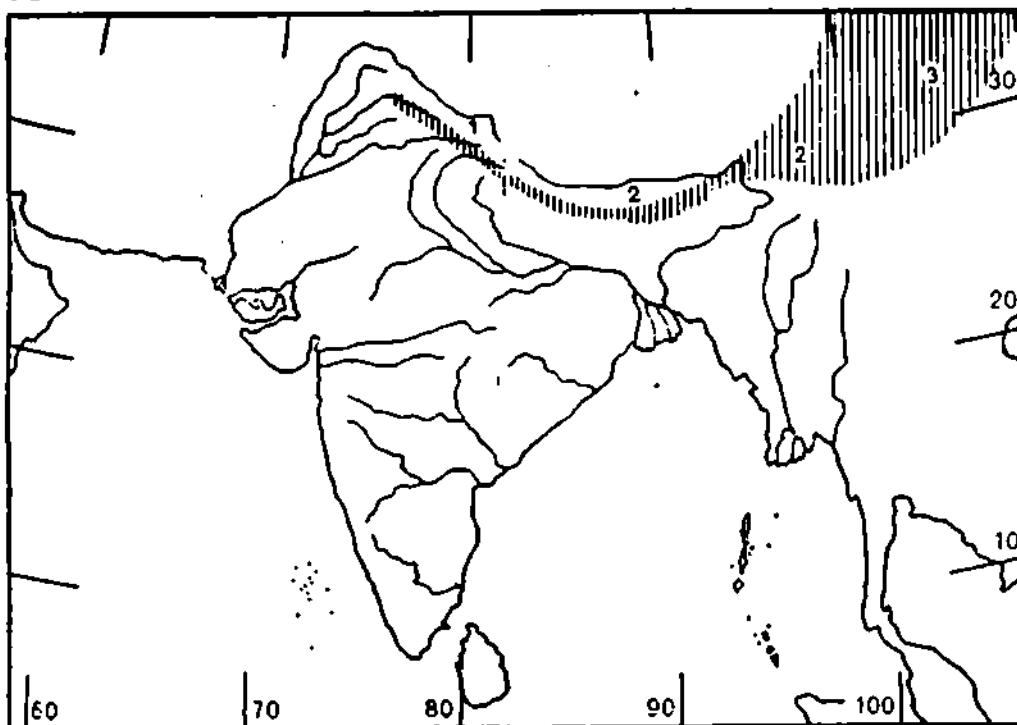
STATUS, DISTRIBUTION and HABITAT. Uncommon resident. The western Himalayas from extreme eastern Kashmir east to Naini Tal and Kumaon. Breeds between 2400 and 3300 m. Affects principally oak forest, mixed oak and fir, and also pine forest.

GENERAL HABITS, FOOD and VOICE. As in 1808.

BREEDING. Season, April to June. Nest, composed of moss, lined with fur, hair and a few feathers; placed in holes in tree-trunks and stumps about three to six metres above the ground. Eggs, 5, broad obtuse ovals, pure white, densely spotted with reddish. Average size of 9 eggs 17·1 × 12·8 mm (Baker). Both sexes take part in all domestic chores. Incubation period undetermined.

MUSEUM DIAGNOSIS. Similar to nominate *dichrous* (1808) but paler throughout.

MEASUREMENTS and COLOURS OF BARE PARTS. As in 1808.

Parus dichrous

Distributional ranges

1 *kangrac* (1807) 2 *dichrous* (1808)

3 Extralimital races

1808. *Parus dichrous dichrous* Hodgson

P.(arus) dichrous Hodgson, 1844, in Blyth, Jour. Asiatic. Soc. Bengal 13: 943
(Nepal, restricted to central Nepal by Biswas, 1955, Bull. Brit. Orn. Cl. 75: 88)

Parus dichrous izzardi Biswas, 1955, Bull. Brit. Orn. Cl. 75: 88

(Thammu, Bhote Kosi Valley, Khumbu, Nepal)

Baker, FBI No. 68 (part), Vol. 1: 87

Plate 96, fig. 9

LOCAL NAMES. None recorded.

SIZE. Sparrow -; length c. 12 cm (4½ in.).

FIELD CHARACTERS. A plain grey and buff crested tit. *Above*, crown, pointed erect crest, and back brownish grey. A conspicuous whitish collar, interrupted on back. *Below*, throat greyish fulvous, rest of underparts brownish buff. Sexes alike.

Rather similar in general effect to Yellownaped Yuhina (1368).

STATUS, DISTRIBUTION and HABITAT. Fairly common resident. The Himalayas from western Nepal east through Arunachal Pradesh, from 2700 m up to timber-line, in eastern Nepal up to 4100 m, descending to 2200 m in winter. Affects chiefly deciduous forest, especially oak, rhododendron and birch, and also mixed fir and rhododendron.

Extralimital. Extends to central Yunnan and western Sichuan. The species ranges north to Tsinghai and Shensi.

GENERAL HABITS. Sociable as other tits; small parties may still be seen in May. Often seen in company with other tits (*P. ater*, *P. rubidiventris*, *Aegithalos*, etc.) and leaf warblers, usually no more than a pair or so in every hunting party. Keeps to low or moderate heights in bushes and trees; also feeds on the ground.

FOOD. Chiefly insects.

VOICE and CALLS. A characteristic, thin and high-pitched call-note rendered as *zai*; also some goldcrest-like contact-calls (GD). Voice quite unlike that of the European *P. cristatus* (GD, MD).

BREEDING. As in 1807.

MUSEUM DIAGNOSIS. Darker than *kangrae*. Postnuptial moult complete in July and August.

Young differs from adult in the shorter crest, the tips of which are darker than the rest of the feathers. Upperparts darker; underparts paler and less uniform cinnamon-buff.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	65-74	c. 10	c. 20	48-51 mm
♀♀	65-70	—	—	47-50 mm (SA, Stevens, Mayr)

Weight 10 ♂♂ 12-14; 8 ♀♀ 11.2-13.5 g (GD, RAP). 1♂, 1♀ 12, 12 g (SDR).

COLOURS OF BARE PARTS. Iris orange-brown to crimson. Bill black. Legs and feet bright blue-grey; claws horny brown.

PARUS XANTHOPENYS Vigors: YELLOWCHEEKED TIT

Key to the Subspecies

	Page
A Uppertuarts olive-green. Male and female crest black, ventral median stripe black	<i>P. x. xanthogenys</i> 190
B Uppertuarts duller. Male as in A; female crest black, ventral stripe greyish olive	<i>P. x. aplonotus</i> 192
C Uppertuarts duller than B, more green. Male as in A and B; female polymorphic: either as A or B, or with both crest and ventral stripe greyish olive	<i>P. x. travancoreensis</i> 193

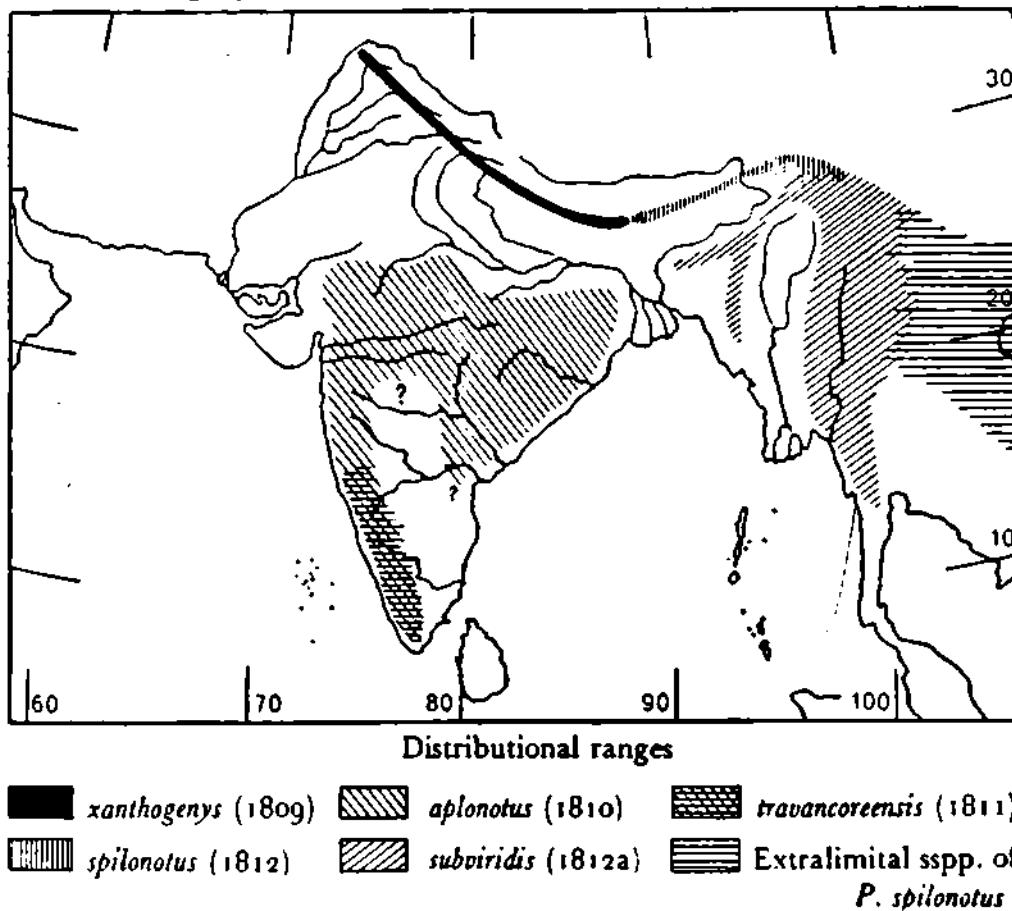
1809. *Parus xanthogenys xanthogenys* Vigors

Parus xanthogenys Vigors, 1831, Proc. Zool. Soc. London: 23
(Himalayan Mountains, restricted to Murree by Baker, 1923, Handlist: 9)
Baker, FBI No. 75, Vol. 1: 91

LOCAL NAMES. None recorded.

SIZE. Sparrow ±; length c. 14 cm (5½ in.).

FIELD CHARACTERS. A sprightly black and yellow crested tit. *Above*, crown, pointed upstanding crest, and a band behind eye black; a few crest-feathers tipped with yellow. A long yellow supercilium joining prominent yellow nape-patch. Back olive-green. Wings black spotted with yellow and black on shoulder, and with a white longitudinal patch. Tertiaries

Parus xanthogenys and *P. spilonotus*

broadly tipped and edged white. Tail blackish slate with white outer edge and white tips. *Below*, bright yellow with a broad black median band from chin to vent. Sexes practically alike.

The erect black crest, yellow supercilium and spotted wing easily identify this species. For distinction from *spilonotus* see 1812.

STATUS, DISTRIBUTION and HABITAT. Common resident, subject to vertical movements. The outer Himalayas, formerly¹ from Murree east to eastern Nepal (Manebhanjan—Rand & Fleming, 1957). A specimen in British Mus. labelled Darjeeling (Seeböhm coll.). Breeds between 1500 and 2100 m, in Nepal up to 2400 m, occasionally descending to 1200 m in winter. Has straggled to the Salt Range in the cold season. Range disjunct from that of the peninsular races. Affects *ban* oak jungle (*Quercus incana*), *Ilex* and pine forest or subtropical evergreen bush jungle usually with at least a few trees. Also visits gardens, but is more a forest bird than *P. major* and not often seen near houses. Rather capricious in its choice of habitat and may be absent in large tracts of apparently suitable forest.

Extralimital. Species endemic to Pakistan and India. Replaced eastwards by the closely related *P. spilonotus* (1812).

¹ Since Hugh Whistler's specimens collected in 1926 from Murree and Rev. E. A. Storrs Fox's record in 1932–35 (JBNHS 39: 354), the few subsequent records are for winter only, thereby suggesting that the bird no longer resides in the Murree Hills but merely straggles to the foothills in winter (Roberts pers. comm.).

GENERAL HABITS. Similar to other tits, foraging in mixed parties in the non-breeding season, but also reported to be less gregarious than other tits, being oftener seen solitary or in pairs.

FOOD. Insects and some vegetable matter; mulberries, raspberries, etc.; spiders.

VOICE AND CALLS. Calls very distinct from those of other tits. When in parties, a contact note like *tyuji tyuja* is uttered; when approaching nest, a loud *towit, towit*; also a chattering alarm-note. Song rendered as *teetween twit-teetween* (Magrath); also a clear whistling *wicheewee-wicheewee-wichi*, repeated two or three times (SA). Song period January to September, chiefly March-April (Proud).

BREEDING. Season, March to June. Nest, a pad of moss with a central cup lined with fur; almost always in holes in trees, from ground level up to about six metres; occasionally between roof and ceiling of hill-station bungalows. Eggs, 4 or 5, similar to those of *P. major* but the markings fewer and finer. Average size of 40 eggs 17.9 × 13.2 mm (Baker). Building, incubation and care of young by both sexes. Incubation period undetermined.

MUSEUM DIAGNOSIS. See Field Characters and Key to the Subspecies. *P. spilonotus* (1812) is distinguished by black streaks on back, and yellow forehead.

Female has a shorter crest and slightly narrower ventral band. Postnuptial moult complete. Moult period apparently very extended, individuals being still in moult towards the end of October.

Young similar to adult but crest shorter, white on tertials washed with yellow, black of lower parts duller and narrower.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	67-76			
♀♀	65-72 }	12-13	18-19	{ 50-60 mm 50-54 mm
(HW, BB, Rand & Fleming)				

Weight 11 ♂♂ 13.7-16.9; 9 ♀♀ 12.9-15.9 g (RAP, GD).

COLOURS OF BARE PARTS. Iris dark brown. Bill black, sometimes horny on tip. Legs, feet and claws bluish slaty.

1810. *Parus xanthogenys aplonotus* Blyth

P.(arus) aplonotus Blyth, 1847, Jour. Asiatic Soc. Bengal 16: 444 (Mountains of central India, restricted to Chaibasa, Singhbhum, Bihar, by Whistler & Kinnear, 1932, Jour. Bombay nat. Hist. Soc. 35: 519-21)

Baker, FBI No. 76 (part), Vol. 1: 92

LOCAL NAMES. None recorded.

SIZE. Sparrow ±; length c. 14 cm (5½ in.).

FIELD CHARACTERS. Male practically as in 1809; spots on wing white. Female has the ventral median band greyish olive instead of black.

STATUS, DISTRIBUTION and HABITAT. Widespread and fairly common resident in the Peninsula, chiefly on the elevated plateau and hills, uncommon or absent in the coastal plains. Eastern Gujarat, southern Rajasthan (Mt Abu, Jhalawar), the whole of Madhya Pradesh (including

Gwalior), southern Bihar, Orissa, south in the Eastern Ghats to the Krishna river and in the Western Ghats to Mahableshwar. Affects well-wooded country, generally more so than *P. major*.

GENERAL HABITS. Like other tits forages in small parties or pairs most often in company with other small insectivorous species such as white-eyes, nuthatches and leaf warblers. Prefers the leafy canopy of trees but will descend lower on occasion. Searches energetically for insects among the crevices of the bark, hopping about and peering under the leaves, clinging to sprigs sideways or upside down and in all manner of acrobatic positions.

FOOD. Insects, grubs, ants, spiders, fruit and berries.

VOICE and CALLS. Members of a party keep up a joyous *chee chee* while hunting for food. Song, a clear whistling *cheewit-pretty-cheewit* (and variations) uttered with crest erect and wings drooping at the sides, while moving through the branches; notes more musical than of most other tits (SA). Song and display commence in January, accompanied by dispersal of females—E. Ghats (Trevor Price, JBNHS 76: 418).

BREEDING. Season, April to August, in the south apparently beginning later and lasting till October. Nest and eggs as in 1809. Average size of 60 eggs (including those of *travancoreensis*) 17·9 × 13·5 mm (Baker).

MUSEUM DIAGNOSIS. Like *xanthogenys* (1809) but upperparts duller olive-green. Yellow of ear-coverts and sides of neck paler. Greater and median wing-coverts tipped with white instead of yellow. In the female, median band on underparts olive instead of black.

Young resemble their respective adults. Black markings less glossy. White tips of greater and median coverts washed with yellow. Rectrices narrower, with the white tips smaller and less pure white. A complete postjuvenile moult.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	70–78	11–13	18–20	52–60 mm
♀♀	66–71			49–53 mm (HW, SA)

Weight 2 ♂♂ 14·1, 15·2 g (Roonwal). 2 ♂♂ 14·8, 16·5; 1 ♀ 16, oo ? 14·4–19 g (SDR).

COLOURS OF BARE PARTS. Iris brown. Bill black; mouth pinkish (gape and mouth bright yellow in juvenile). Legs and feet slaty blue; claws darker.

1811. *Parus xanthogenys travancoreensis* (Whistler & Kinnear)

Machlolophus xanthogenys travancoreensis Whistler & Kinnear, 1932, Jour. Bombay nat. Hist. Soc. 35: 520 (Mynall, Travancore)

Machlolophus xanthogenys xanthonotus Koelz, 1939, Proc. Biol. Soc. Washington 52: 63
(Londa, Bombay Presidency)

Baker, FBI No. 76 (part), Vol. 1: 92

Plate 96, fig. 22

LOCAL NAME. *Pacha-marapottam* (Malayalam).

SIZE. Sparrow ±; length c. 14 cm (5½ in.).

FIELD CHARACTERS. As in 1810. Female sometimes with crown and crest olive instead of black, in addition to the ventral band.

STATUS, DISTRIBUTION AND HABITAT. Common resident. The Sahyadris or Western Ghats from southwestern Maharashtra (South Konkan) south through western Karnataka (Malnaad), Kerala and western Tamil Nadu, between 900 and 1500 m; in the Nilgiris occupies a lower zone than *P. major* which is found mostly above 1800 m (Jerdon). Affects evergreen biotope—open forest, mixed bamboo jungle, cardamom sholas, coffee plantations, etc.

GENERAL HABITS. As in 1803. The itinerant foraging parties of which the Yellowcheeked Tit is a regular member are commonly composed, among others, of *Sitta frontalis*, *Culicicapa ceylonensis*, *Alcippe poioicephala*, *Aegithina tiphia*, *Pycnonotus ictericus*, *Hemipus picatus*, *Tephrodornis gularis*, *Pericrocotus flammeus*, *Phylloscopus occipitalis* and *P. nitidus*.

FOOD. Insects: cockroaches, grubs, caterpillars; insects' eggs, spiders, berries (*Rubus*), etc. Flying ants occasionally taken in air. Frequently visits the flowers of *Salmania* trees for nectar. See also 1810.

VOICE AND CALLS. As in 1810.

BREEDING. Season, June to October. Nest and eggs as in 1809.

MUSEUM DIAGNOSIS. Like *aplonotus* (1810) but upperparts duller, more saturated green. Yellow of underparts duller and more washed with olive-green. White tips to rectrices smaller. Size slightly larger.

Female apparently polymorphic. Phase (a) similar to male with crown, eye-streak and ventral band black. (b) Similar to male with crown and eye-streak black but ventral band dull olive-green. (c) Similar to male but crown and crest dull greenish olive with darker centres and shafts; eye-streak and ventral band dull greenish olive, hardly darker than the rest of underparts (HW).

Young. Male has crown and ventral band black, whereas female has the crown black and the ventral band dull olive-green. Young female not polymorphic but black crown can be followed by greenish olive crown of adult form (c).

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	71–82	12–14	19–20	54–62 mm 51–57 mm
♀♀	68–76			

(HW, SA, Koelz)

COLOURS OF BARE PARTS. Iris brown. Bill ♂ horny black, ♀ horny brown; mouth pink. Legs and feet bluish grey. Juvenile, gape yellow; commissure and tip of lower mandible whitish; mouth yellowish pink; rest as in adult.

PARUS SPILONOTUS Bonaparte: BLACKSPOTTED YELLOW TIT

Key to the Subspecies

- Male greyer, less yellow on flanks; female with dull olive-yellow ventral band *P. s. subviridis*
- Male brighter yellow on flanks; female with black ventral band *P. s. spilonotus*

1812. *Parus spilonotus spilonotus* Bonaparte

P.(arus) spilonotus 'Blyth' = Bonaparte, 1850, Conspl. Gen. Av. 1: 228, new name for *P. xanthogenys* Blyth, 1847, Jour. Asiat. Soc. Bengal 16: 444, *nec P. xanthogenys* Vigors, *supra* (Himalaya, restricted to N. Cachar by Baker, 1922, FBI 1: 89)

Cf. Paynter, R. A., 1962, JBNHS 59: 952-3

Baker, FBI No. 73, Vol. 1: 89

Plate 96, fig. 14

LOCAL NAME. *Muchetink pho* (Lepcha).

SIZE. Sparrow ±; length c. 14 cm (5½ in.).

FIELD CHARACTERS. As in 1809, q.v., but forehead and lores yellow. Back streaked with black.

STATUS, DISTRIBUTION and HABITAT. Resident, subject to vertical movements, scarce and locally distributed. Extreme eastern Nepal in the Mai Valley (Stevens, JBNHS 29: 725; Fleming & Traylor, 1964, *Fieldiana* 35: 548), Darjeeling dist., Sikkim, Bhutan and Arunachal Pradesh to the Mishmi Hills (Ali & Ripley, 1948). Noted in summer between 1600 and 2400 m, in winter down to 1400 m and, exceptionally, at 3700 m (Meinertzhagen). Affects light, mixed forest and neighbourhood of cultivation.

Extralimital. Northern Burma.

GENERAL HABITS, FOOD and VOICE. As in 1812a.

BREEDING. As in 1812a.

MUSEUM DIAGNOSIS. For distinction from Yellowcheeked Tit (1809) see Field Characters. Reasons for keeping it specifically distinct from *P. xanthogenys* are discussed by Paynter, loc. cit. *supra*. The two species do not appear to intergrade.

For distinction from subspecies *subviridis* see 1812a, under Museum Diagnosis.

MEASUREMENTS

	Wing	Bill (from feathers)	Tarsus	Tail
♂♂	71-84	c. 11	c. 18	58-63 mm (Mayr, MD)

Weight 2 ♂♂ 18·3, 19·4 g (RAP).

COLOURS OF BARE PARTS. Iris brown. Bill dark plumbeous horny. Legs and feet bluish plumbeous.

1812a. *Parus spilonotus subviridis* Blyth

Parus subviridis Blyth (ex Tickell MS.), 1855, Jour. Asiat. Soc. Bengal 24: 267
(Tenasserim)

Baker, FBI No. 74, Vol. 1: 91

LOCAL NAMES. None recorded.

SIZE. Sparrow ±; length c. 14 cm (5½ in.).

FIELD CHARACTERS. As in 1812, q.v.

STATUS, DISTRIBUTION and HABITAT. Resident, locally common. Nagaland, Manipur and in the Cachar, Khasi and Mizo hills. Breeds above 1500 m. Affects light forest of oak, pine, rhododendron and other evergreens.

Extralimital. The Chin Hills south to Mt Victoria, northern Burma to

northern Yunnan and northern Thailand. The species extends to Vietnam and through southern China to Fujian.

GENERAL HABITS. Keeps in pairs or small parties, usually in mixed company. Frequents the higher trees but also descends to bushes. Not so restless as *P. major* but still active, energetic and assuming the same acrobatic attitudes while hunting for food amongst the foliage.

FOOD. Chiefly insects; also berries and some vegetable matter.

VOICE and CALLS. Song, a loud and spirited whistling syllabified as *did-he-do-it did-he-do-it no-he-didn't* (Baker), usually uttered from the tops of trees.

BREEDING. Season, end of March to end of June. Nest, a pad of moss, chips of bracken leaves, fur, hair or wool, usually placed in holes in trees; in stone walls only when tree-holes are wanting. Eggs, 4 to 6, rarely 7, similar to those of *P. major* (1792)—white speckled with reddish brown—but larger and more boldly blotched. Average size of 60 eggs 17·6 X 14·1 mm (Baker).

MUSEUM DIAGNOSIS. Male similar to *spilonotus* (1812) but greyer, less yellow on flanks. Black edge of feathers of upperparts more extensive.

Female has black of underparts (median stripe) replaced by dull olive-yellow, just darker than the rest of the underparts. Mantle less marked with black than in female *spilonotus*.

Young. *Above*, crown dull black; back duller and black parts not sharply defined. Edges of tertials greenish white instead of bluish white. Black on coverts replaced by brown and the spots creamy white. *Below*, black portions duller and browner; rest of underparts dirty cream yellow.

MEASUREMENTS

	Wing	Bill (from feathers)	Tarsus	Tail
♂♀	72-78	10-11	c. 22	c. 58 mm (Baker)

Weight 1 ♂ 18 g (SDR).

COLOURS OF BARE PARTS. As in 1812.

Genus SYLVIPARUS Burton

Sylviparus Burton, 1836 (1835), Proc. Zool. Soc. London: 153.

Type, by monotypy, *Sylviparus modestus* Burton

Very close to *Parus*. Differs from it in having proportionately shorter, smaller bill and very slightly forked, almost square, tail.

SYLVIPARUS MODESTUS Burton: YELLOWBROWED TIT

Key to the Subspecies

- | | |
|------------------------------|-------------------------|
| Darker and duller | <i>S. m. modestus</i> |
| Paler and brighter | <i>S. m. simlaensis</i> |

1813. *Sylviparus modestus simlaensis* Baker

Sylviparus modestus simlaensis Baker, 1917, Bull. Brit. Orn. Cl. 38: 8 (Simla)
Baker, FBI No. 71, Vol. 1: 88

LOCAL NAMES. None recorded.

SIZE. Sparrow —; length c. 9 cm (3½ in.).

FIELD CHARACTERS. As in 1814, q.v.

STATUS, DISTRIBUTION and HABITAT. Resident, subject to vertical movements, locally common. The western Himalayas from Ladakh (Leh) and western Kashmir (Srinagar and Pir Panjal) east to Kumaon (Vaurie, 1965). Altitudinal distribution imperfectly known. Recorded in summer at c. 2100 m (northern slopes of Pir Panjal) and from 3000 to 3600 m (Ladakh). Very uncommon in winter (October to March) between c. 1200 and at least 2400 m from Kashmir to Simla. In summer noted to frequent willows (Ladakh) and apricot orchards (Sutlej Valley). In the cold season observed in *ban* oak forest, deciduous jungle and gardens.

GENERAL HABITS, FOOD and VOICE. As in 1814.

BREEDING. Unknown.

MUSEUM DIAGNOSIS. Like *modestus* (1814) but paler and brighter, more yellowish, above and below.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
1 ♂	57	18	16	35 mm (HW)

COLOURS OF BARE PARTS. Iris dark brown. Bill, legs and feet plumbeous.

1814. *Sylviparus modestus modestus* Burton

Sylviparus modestus Burton, 1836 (1835), Proc. Zool. Soc. London: 154 (*apud* Montes Himalayensis = Nepal *vide* Baker, 1920, Handlist: 8)

Sylviparus saturatior Rippon, 1906, Bull. Brit. Orn. Cl. 16: 87 (Mt Victoria)
Baker, FBI No. 70, Vol. 1: 88

Plate 96, fig. 21

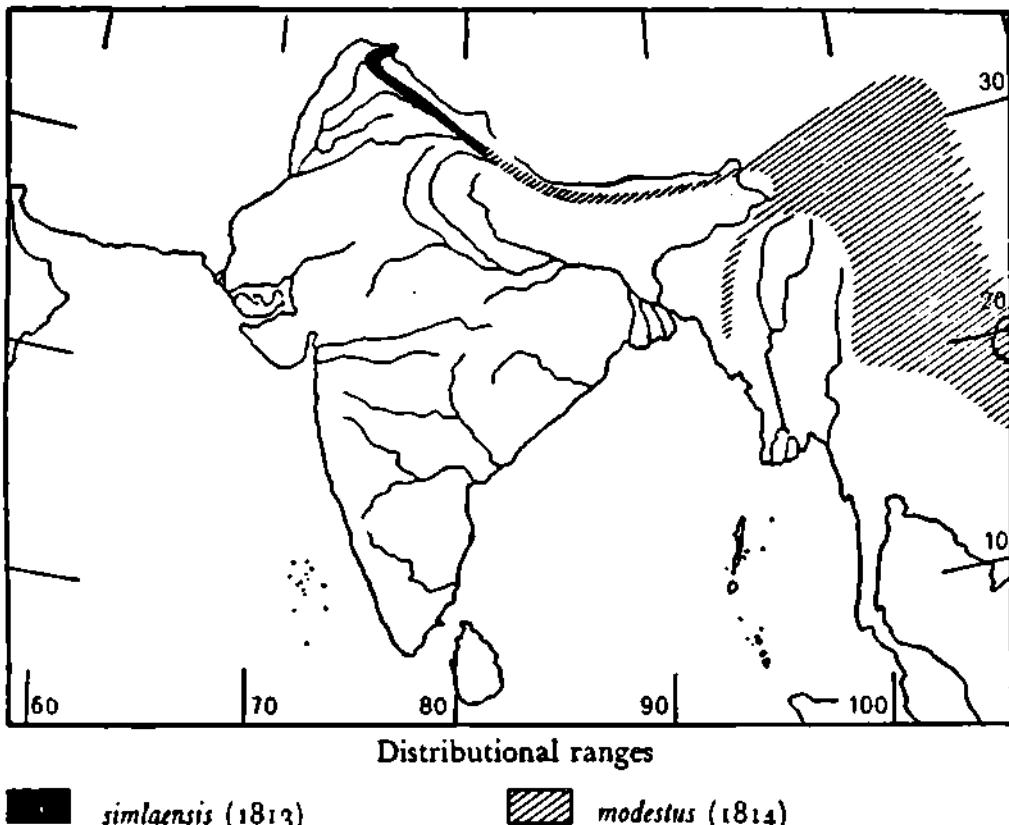
LOCAL NAMES. None recorded.

SIZE. Sparrow —; length c. 9 cm (3½ in.).

FIELD CHARACTERS. A small olive-green bird easily mistaken for a leaf warbler. *Above*, olive-green with a pale eye-ring. A short tuft-like crest often raised. A short, bright yellow supercilium but not always visible in the field; more clearly seen when the diminutive crest is erected in agitation or courtship. *Below*, paler, olive-buff. Sexes alike.

STATUS, DISTRIBUTION and HABITAT. Fairly common resident, subject to vertical movements. The Himalayas from Nepal east through Arunachal Pradesh (Ludlow, *Ibis* 1944: 68), thence south through Nagaland, Manipur, Cachar (eastern Barail Range) and Meghalaya (?). Recorded in summer between 2100 m (Lhalung—Ludlow) and 3200 m (Bigu—GD), in autumn up to 4200 m (central Nepal—Smythies). In winter, noted between 1500 and 2900 m. In summer affects fairly open oak and rhododendron forest, mixed deciduous and conifer forest, mossy broad-leaved forest, and scrub near timber-line. In winter, noted in heavy rhododendron and evergreen jungle, and bushes on hillsides.

Extralimital. The Chin Hills of Burma, southeastern Tibet (south of the main range) and east through Sichuan and Yunnan to northern Vietnam;

Sylviparus modestus

also the mountains of Fujian. Another subspecies (*klossi*) in Vietnam.

GENERAL HABITS. Quiet and unobtrusive. Usually found in the mixed hunting parties of Redheaded and Greenbacked tits, sivas, yuhinas, creepers, goldcrests and leaf warblers, from the last of which it is difficult to distinguish. In summer oftener met with singly or in small parties of its own. Frequents the tops and foliage canopy of trees as well as bushes, moving about busily, clinging to leaves and sprigs in acrobatic positions like a tit, or flitting restlessly among the foliage, nervously flicking its wings like a leaf warbler (SA). 'In appearance and habits very like a *Phylloscopus*' (Proud). '... indeed I procured my first specimen under the impression that I was shooting a willow warbler, though once known it may be identified with fair certainty' (HW).

FOOD. Insects, ants, grubs, caterpillars and occasionally some vegetable matter. On one occasion 'seemed to feed almost entirely on the pupae of the *Tortrix* moth or something similar which are found in the curled-up leaves' (Proud).

VOICE AND CALLS. Call-notes, a weak, very high-pitched *psit* or buzzy *tzee*, *tzee* (Fleming) and a curious grating *churr* (Smythies). 'The note very much resembles that of the British Blue Tit' (A. E. Jones). Song, a thin shrill *zee-zi zee-zi zee-zi* uttered endlessly in April (Proud); a high squeaking *tee* repeated 5–8 times in a 5-second period (Fleming). Song period early March to end of May.

BREEDING. Unknown until recently described from Central Nepal, c. 2400 m (R. L. Fleming, Jr., 1973, JBNHS 70 (2)). Season, April-May. Nest, a thick pad of squirrel fur and brown moss in a tree-hole (rhododendron, maple)

between half and 6 metres from ground, with narrow vertical entrance slit. Eggs, 4–6, white without noticeable markings; unmeasured as broken in removal. A male shot on 5 April (Bhutan) had fully mature gonads (8 × 5 mm) and was evidently breeding (SA). Not yet fully fledged young recorded on 11 May. (Also see *J. f. Orn.* 132: 89–92).

MUSEUM DIAGNOSIS. Differs from *simlaensis* in being darker and duller, less yellowish.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	57–64	8–9	15–17	{ 35–41 mm
♀♀	54–62 }			{ 33–39 mm
(BB, Stres., SA, Stevens, NBK)				

Weight 8 ♂♂ 6·1–8·5; 6 ♀♀ 6·2–7·8 g (RAP, GD). 3 ♂♂ (Feb.-Mar.) 6–7; 4 ♀♀ (Feb.-Mar.) 6–7 g (SA, BB).

COLOURS OF BARE PARTS. Iris dark brown. Bill: upper mandible dark horny, bluish slaty on base and greyish white on the sides of its anterior half; lower mandible bluish slaty with a dark tip. Legs, feet and claws bluish slaty.

Subfamily REMIZINAE: Penduline Titmice

For description see *A New Dictionary of Birds*, 1964, pp. 823–4

Genus CEPHALOPYRUS Bonaparte

Cephalopyrus Bonaparte, 1854, Compt. Rend. Acad. Sci. Paris 38: 62.

Type, by monotypy, *Aegithalus flammiceps* Burton

Bill short and straight, very pointed. Tail and wings short; first primary (as.) very short. Tarsus in front covered with transverse scales. A hole-nester.

CEPHALOPYRUS FLAMMICEPS (Burton): FIRECAPPED TIT

Key to the Subspecies

- Paler, more yellowish; orange colour more extensive *C. f. flammiceps*
- Darker, more olive; orange colour less extensive *C. f. olivaceus*

1815. *Cephalopyrus flammiceps flammiceps* (Burton)

Aegitalus [sic] *flammiceps* Burton, 1836 (1835), Proc. Zool. Soc. London: 153 (*apud* Montes Himalayensis, restricted to Mussoorie by Whistler, 1924, Bull. Brit. Orn. Cl. 45: 15)

Baker, FBI No. 949 (part), Vol. 2: 545

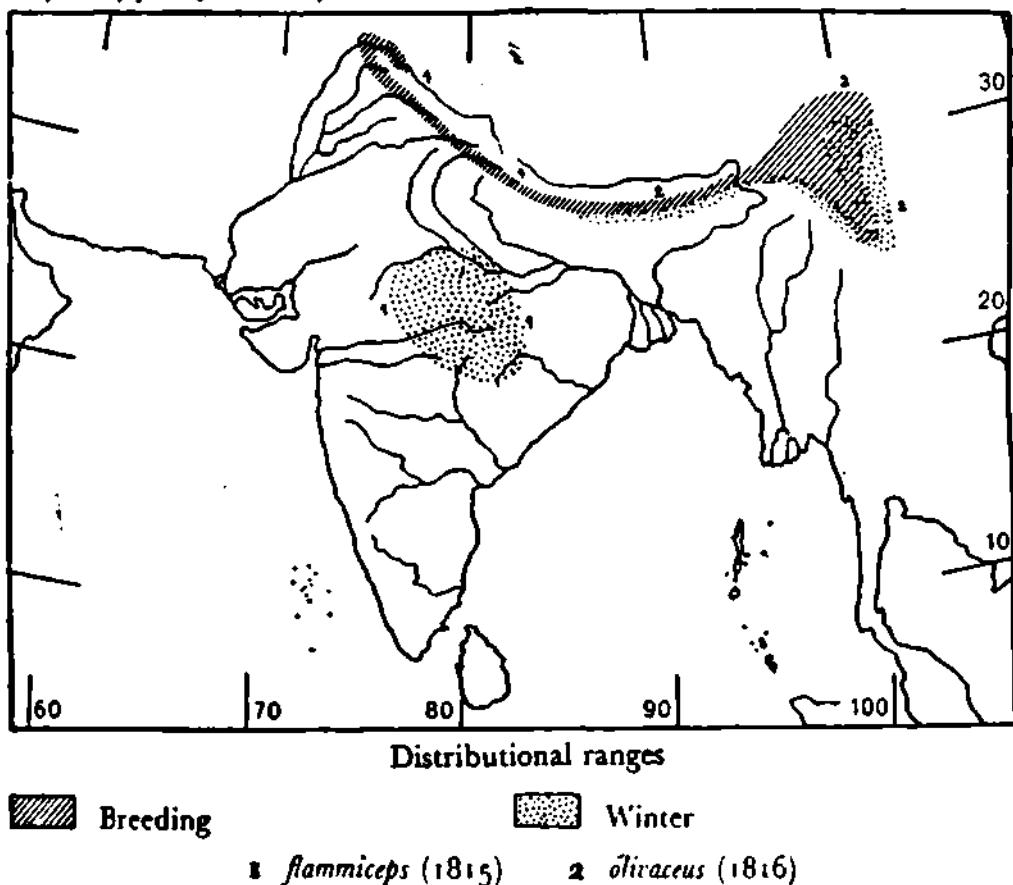
Plate 96, fig. 6

LOCAL NAMES. None recorded.

SIZE. Sparrow –; length c. 9 cm (3½ in.).

FIELD CHARACTERS. A dumpy short-tailed bird, reminiscent of a flower-pecker.

Male (summer). Above, forecrown bright orange-scarlet. Rest of upper-parts yellowish olive. Wings brown with two yellow wing-bars, the lower

Cephalopyrus flammiceps

broader and more prominent. *Below*, chin and throat bright orange-scarlet paling to saffron yellow on breast and pale yellow on belly.

Winter plumage duller; no orange on crown, which is yellowish olive; underparts yellowish white with a yellower tinge on throat and breast.

Female. *Above*, olive, yellow on forehead and yellowish on rump. A broad yellow wing-bar. *Below*, pale yellowish olive, centre of belly cream-buff. Winter plumage duller; no yellow on forehead.

Male in breeding plumage unmistakable. Otherwise very similar to *Sylviparus* but distinguished by yellow on wing.

STATUS, DISTRIBUTION and HABITAT. Summer visitor to the western Himalayas, locally common. Gilgit, Baltistan, Ladakh and Hazara dist. (Kagan and the northern part of the Murree hills), east to Garhwal (Dehra Dun). Breeds between 2000 and 3300 m; in Kashmir observed as high as 3500 m in dwarf willows. Affects poplars, willows, oak forest, orchards, mixed forest of hazel, elm and walnut just below the silver fir zone, wooded hillsides or dense jungle. Winters in central India from Etawah and Kanpur to Raipur, Nagpur and Sehore. Observed once in Ambala in December; 2 specimens collected in Bharatpur, E. Rajasthan, in January (SA).

Extralimital. Has strayed once to Afghanistan.

MIGRATION. Arrives on breeding grounds in April. Passage in the foothills mostly in the second half of March and early April, unnoticed in autumn. Recorded in winter quarters from the middle of October to March, once as late as 15 May.

GENERAL HABITS. In the non-breeding season keeps in small hunting

parties, usually of its own, sometimes in company with various leaf warblers. On migration larger parties of up to 20 or 30 birds may be met with. Flits restlessly about the tops of trees, working the blossoms, catkins or old seedcases after the manner of redpolls or tits, clinging upside down and sideways to the extremity of small twigs to examine the foliage. Flicks wings nervously like a leaf warbler. Movements and habits very similar to those of leaf warblers and also of *Sylviparus*, *Dicaeum* and *Zosterops*.

FOOD. Chiefly insects, also leaf- and flower-buds. Has been observed eating the exudation from petioles of banyan leaves.

VOICE and CALLS. Song described as a faint twittering reminiscent of that of *Zosterops* but more sustained; also like a feeble version of song of Goldfronted Serin (*Serinus pusillus*)—HW.

BREEDING. Season, early April to June. Nest, a mere pad of fine strips of dry grass, sometimes mixed with a few soft feathers; placed in a hole in a tree-trunk or branch, from near the ground up to 15 metres or so, generally between 6 and 12 metres. Eggs, normally 4, pale blue-green, unmarked. Average size of 40 eggs 14·6 × 11 mm (Baker). Building of nest by female, invariably escorted by singing male. Period, and share in incubation, unrecorded. Feeding of young by both parents, sanitation apparently by female alone. Female sits very close, and if disturbed 'puffs' or hisses at the intruder after the manner of tits (Jones).

MUSEUM DIAGNOSIS. For distinction from *olivaceus* see 1816.

Young. Upperparts dull olive tinged with brown. Bar on median coverts dull yellowish, less distinct than in adult. Underparts sullied white irregularly tinged with yellow. Postjuvenile moult of body-feathers and at least some coverts.

Adult undergoes a moult of body-feathers in February. Postnuptial moult complete. Adult in fresh winter plumage at end of August.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♀	58-64	9-10	13-15	30-33 mm (SA, MD)

COLOURS OF BARE PARTS. Iris brown. Bill brownish plumbeous. Legs and feet plumbeous.

1816. *Cephalopyrus flammiceps olivaceus* Rothschild

Cephalopyrus flammiceps olivaceus Rothschild, 1923, Novit. Zool. 30: 263
(Vicinity of Tengyueh)

Cephalopyrus flammiceps saturatus Whistler, 1924, Bull. Brit. Orn. Cl. 45: 15
(Sikkim)

Baker, FBI No. 949 (part), Vol. 1: 545

LOCAL NAMES. None recorded.

SIZE. Sparrow —; length c. 9 cm (3½ in.).

FIELD CHARACTERS. As in 1815, q.v.

STATUS, DISTRIBUTION and HABITAT. Very little recorded. Apparently rare and very locally distributed. Known only from specimens taken in winter in Sikkim and Bhutan between 300 and 2300 m, and in the Jalpaiguri and Buxa duars. One specimen from E. Nepal in British Museum; recently sighted

near Chedang Kund, 2745 m in April, on the slopes of Ganesh Himal (Fleming *et al.*, 1984).

Extralimital. Recorded from northern Yunnan, northern Sichuan and southeastern Tibet (Ludlow, *Ibis* 1944: 205).

GENERAL HABITS, FOOD and VOICE. As in 1815.

BREEDING. Unrecorded. Two males collected in Bhutan (at c. 2300 m) 7 and 9 March had mature gonads, evidently ready to breed (SA).

MUSEUM DIAGNOSIS. Upperparts darker, more olive-green than in nominate *flammiceps* (1815). Orange patch on forehead of male smaller; orange of underparts more reduced and breast more greenish, less yellowish. Female also more greenish on breast.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
2 ♂♂	59, 60	10, 10	15, 16	32, 35 mm (SA)

Weight 2 ♂♂ 7, 7 g (SA).

COLOURS OF BARE PARTS. Iris dark brown; eye-rim plumbeous. Bill, legs and feet plumbeous-slate; mouth yellow, plumbeous anteriorly.

Genus REMIZ Jarocki

Remiz Jarocki, 1819, Spis. Ptaków Król. Warszawa: 21. Type, by subsequent designation, *Parus pendulinus* Cuvier = *Motacilla Pendulinus* Linnaeus

Cf. Dementiev, G. P., 1935, *L'Oiseau*: 82-5.

Vaurie, C., 1957, *Amer. Mus. Novit.*, No. 1853: 4-6.

Genus characters similar to those of *Cephalopyrus*; differs mainly in building a hanging nest.

1817. Penduline Tit. *Remiz pendulinus coronatus* (Severtzov)

Aegithalus coronatus Severtzov, 1872, Vertik. Turkest. Zhivotn.: 136, pl. 9, fig. 3
(Khodzhent, Turkestan)

Baker, FBI No. 86, Vol. 1: 100

Plate 96, fig. 7

LOCAL NAMES. None recorded.

SIZE. Sparrow -; length c. 10 cm (4 in.).

FIELD CHARACTERS. A small buffish tit with a conspicuous blackish band through eye and round the crown. *Above*, crown whitish. Forehead, a broad band through eye, ear-coverts and around nape brownish black; this nuchal band very variable in extent, sometimes covering most of the crown. Upper back whitish followed by a transverse chestnut band. Rest of back clay-colour. A dark chestnut patch on wing with a buff lower edge. Flight-feathers and rectrices broadly edged with white. *Below*, throat white continued as a collar on sides of neck and upper back. Rest of underparts cream-buff suffused with dark rufous on breast and flanks. Female similar but nuchal band narrower.

STATUS, DISTRIBUTION and HABITAT. Winter visitor in small numbers to the plains of the Indus east to Lahore, Bahawalnagar, Bahawalpur (Punjab),

and south to Thatta dist. in Sind; mainly confined to riverain tracts of the Indus and its tributaries. A possible breeder in Ladakh (Changchenmo, c. 4900 m), where obtained on 1 June with testes much swollen. 'It is more than likely that they were breeding in the abundant thick scrub in the dry river-bed' (Meinertzhagen, *Ibis* 1927: 415). Affects tamarisk-acacia scrub jungle along rivers, and sheesham trees (*Dalbergia*) along canal banks and in forest plantations. During migration may occur in gardens, orchards or bushes on hillsides.

Extralimital. Extends north through Turkestan to the Sayans and the upper Yenisey. The species ranges west to Spain and east through southern Siberia to Amurland and northern China.

MIGRATION. A short-range migrant. Within our limits migrates through N.W.F.P. (Peshawar, Kohat) in the second half of March and first week of April. Autumn passage unnoticed. Recorded in winter quarters from September (earliest 19 Sept.) to March (latest 20 March).

GENERAL HABITS. In winter usually seen in parties of from 2 to 40 individuals, sometimes in company with white-eyes. Hunts in the foliage of trees and bushes, clinging upside down and sideways to the leaf clusters and sprigs in the typical manner of tits.

FOOD. Small insects and their larvae; also seed heads of Reed Mace (*Typha*) in river barrage seepage zones.

VOICE AND CALLS. A mousy cheeping note constantly uttered as it moves about—*swee . . . swee* etc. (SA), resembling that of *Dumetia* or *Zosterops*.

BREEDING. Season, end of May and June. Nest, a pouch-shaped pendant structure of very soft vegetable down intricately woven, or felted, with a protruding, spout-like entrance near the top; generally hung from the end of a branch, often over water, at heights of one to five metres or so. For details see Dementiev. Eggs 5 to 9, white, unmarked.

MUSEUM DIAGNOSIS. See Field Characters.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	50-54	10-11	13	{ 40-44 mm
♀♀	52-54 }			{ 39-43 mm

(HW, MD)

COLOURS OF BARE PARTS. Iris brown. Bill dark brown with pale-coloured edges. Legs and feet dark slate.

Subfamily AEGITHALINAE: Longtailed Titmice

For description see *A New Dictionary of Birds*, 1964, p. 823

Genus AEGITHALOS Hermann

Aegithalos Hermann, 1804, Obs. Zool.: 214. Type, by monotypy,

Pipra? europaea Hermann = *Parus caudatus* Linnaeus

Aegithaliscus Cabanis, 1851, Mus. Hein. 1: 90. Type, by original designation,

Parus erythrocephalus Vigors = *Psaltria concinna* Gould

Bill very short and stout; culmen strongly curved; nostrils hidden by small feathers. First primary (as.) well developed but shorter than half the length of second. Tail longer than wing, much graduated. Plumage very soft.

Key to the Species

		Page
A Throat white	<i>A. niveogularis</i>	209
B Centre of throat not white		
1 Centre of throat silvery with slaty base to feathers	<i>A. iouschistos</i>	210
2 Centre of throat black		
a Crown rufous contrasting with slaty back	<i>A. concinnus</i>	204
b Crown brownish clay grading into greyish olive of back	<i>A. leucogenys</i>	207

AEGITHALOS CONCINNUS Gould: REDHEADED TIT

Key to the Subspecies

A Supercilium mixed black and white	<i>A. c. manipurensis</i>	206
B Supercilium white		
1 Smaller and darker; back slaty	<i>A. c. rubricapillus</i>	206
2 Larger and paler; back grey	<i>A. c. iredalei</i>	204

1818. *Aegithalos concinnus iredalei* (Baker)

AEGithaliscus concinna iredalei Baker, 1920, Bull. Brit. Orn. Cl. 41: 8, new name for
Parus erythrocephalus Vigors, 1831, nec *P. erythrocephalus* Linnaeus
 (Himalayas, restricted to Simla)
 Baker, FBI No. 77 (part), Vol. 1: 93

Plate 96, fig. 4

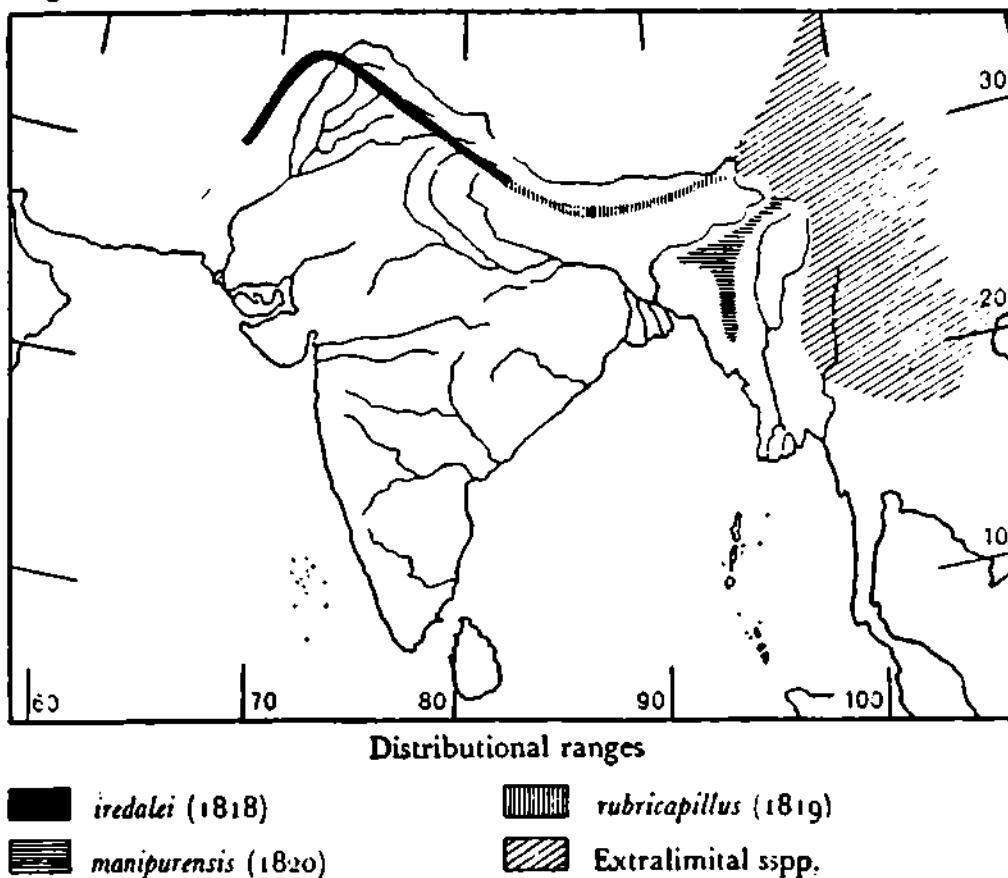
LOCAL NAMES. None recorded.

SIZE. Sparrow -; length c. 10 cm (4 in.).

FIELD CHARACTERS. *Above*, crown rufous-chestnut; supercilium white; lores to ear-coverts black; eye yellowish white. Back grey; wings brown with a darker shoulder-patch. Tail brown with white outer edge and tips. *Below*, chin and sides of throat white; centre of throat black. Rest of underparts ochraceous buff. Sexes alike. Young birds have white throat.

STATUS, DISTRIBUTION and HABITAT. Common resident, little seasonal movements. Pakistan from Hazara district, thence east along the outer Himalayas through the Murree hills, the Jhelum Valley (but not in the Valley of Kashmir), Kishtwar, Jammu (?) and Himachal Pradesh (Chamba and Kulu) to western Nepal (Fleming & Traylor, 1961; Rand & Fleming, 1957) grading into *rubricapillus* in Nepal. Breeds between 1400 and 2400 m, wandering in winter down to 900 m or up to 2900 m. Affects bushes and trees in open forest, especially oak woods. Also visits gardens. Near Ziarat frequents juniper forest.

GENERAL HABITS. Very sociable, restless and fussy; invariably found in flocks, often associated with *Zosterops*, leaf warblers, tree creepers, and other tits. Frequents bushes as well as the canopy of trees, actively investigating leaves and twigs, hanging upside down or clinging sideways, seldom remaining still for a second and 'flowing on' rapidly in straggly follow-my-leader fashion from tree to tree. Very confiding, often ignoring the presence

Aegithalos concinnus

of an observer. Breeding birds pair off in March but parties may be seen throughout the nesting season. Unlike tits of the genus *Parus* which often roost in holes, this species favours a sheltered branch in a bush, along which birds huddle together in the manner of parrotbills or munias.

FOOD. Chiefly insects; also tiny seeds and fruits. Particularly fond of wild raspberries (*Rubus*).

VOICE and CALLS. Call-notes, a soft *trr-trr-trr* or *tz-tz-tz* continually uttered while foraging; also some little, almost bell-like notes. Alarm-note a rustling *prrri-prrri* usually taken up by every member of the party.

BREEDING. *Season*, end of March to May, occasionally June. Single-brooded. *Nest*, a small upright oval structure very like that of the Longtailed Tit (*A. caudatus*), about 10 to 15 cm in its long axis, with the entrance on the side near the top; made of green moss mixed with lichen, rootlets, scraps of bark and vegetable down, all bound together with cobweb, especially cocoons, perfectly camouflaged in its surroundings. It is densely lined with feathers and suspended between several twigs or wedged into a fork, usually in a low bush or stunted oak within easy hand reach; occasionally higher: once built in a clump of fir cones some 12 metres up in the tree. *Eggs*, 3 to 8, generally 4 to 6, white to pale lilac-white, with tiny pinkish red freckles disposed in a dense ring around the larger end, sparse elsewhere. Unmarked eggs have been found. Average size of 100 eggs 13.9 x 10.6 mm (Baker). Share of the sexes in the nesting duties, and incubation period, unrecorded.

MUSEUM DIAGNOSIS. See Field Characters. Differs from *rubricapillus* (1819) in being larger (cf. weight), and in having the back greyer and the crown paler.

Young similar to adult but crown paler; chin and throat white, rest of underparts paler with a pectoral line of indistinct black spots. Postjuvenile moult complete. Postnuptial moult complete, about August-September.

MEASUREMENTS

Wing ♂♂ 53-57; ♀♀ 49-52 mm (Rand & Fleming)

Weight 2 ♂♂ 8.5, 9; 3 ♀♀ 6.7-7 g (RAP).

COLOURS OF BARE PARTS. As in 1819.

1819. *Aegithalos concinnus rubricapillus* (Ticehurst)

AEGithaliscus concinna rubricapillus Ticehurst, 1925, Bull. Brit. Orn. Cl. 46: 22 (Sikkim)
Baker, FBI No. 77 (part), Vol. 1: 93

LOCAL NAME. *Pyiong-samyi* (Lepcha).

SIZE. Sparrow -; length c. 10 cm (4 in.).

FIELD CHARACTERS. As in 1818, q.v.

STATUS, DISTRIBUTION and HABITAT. Common resident, subject to seasonal movements. Nepal (where grading into *iredalei*) eastward through Sikkim, Darjeeling dist., Bhutan and Arunachal Pradesh. Breeds between 1400 and 2700 m, possibly up to 3200 m, wandering in winter up to 3600 m (Sikkim) or down to 600 m (Bhutan foothills). Affects light deciduous forest and secondary growth of brambles etc.; sometimes deodar or pine forest.

Extralimital. Adjacent areas of southeastern Tibet. The species ranges north to Kansu, east to Zhejiang, Taiwan, Guangdong and northern Vietnam.

GENERAL HABITS, FOOD and VOICE. As in 1818.

BREEDING. As in 1818.

MUSEUM DIAGNOSIS. Differs from *iredalei* (1818) in having the crown darker, the back more slaty, and in being smaller (cf. weight).

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	47-55	7-8	16-17	48-53 mm
♀♀	45-52			43-50 mm

(BB, Stevens, SA, Rand & Fleming)

Weight 5 ♂♂ 6-6.9 (av. 6.5); 5 ♀♀ 5.6-7.1 (av. 6.4) g (RAP). 5 ♂♂ (summer) 5.5-6.9; 2 ♀♀ (summer) 5.8, 7 g (GD). 15 ♂♀ (winter) 5-7.5 (av. 5.8) g—SA.

COLOURS OF BARE PARTS. Iris yellowish white. Bill black. Legs and feet dull orange-brown or brownish yellow; claws pale horny or brownish horny.

1820. *Aegithalos concinnus manipurensis* (Hume)

AE.(githaliscus) manipurensis (Hume), 1888, Stray Feathers 11: 254

(Eastern hills, Manipur)

Baker, FBI No. 78, Vol. 1: 94

Plate 96, fig. 5

LOCAL NAMES. None recorded.

SIZE. Sparrow -; length c. 10 cm (4 in.).

FIELD CHARACTERS. As in 1818, q.v.

STATUS, DISTRIBUTION and HABITAT. Resident, locally common. Meghalaya, Nagaland, Manipur, and in the Cachar, Khasi and Mizo hills. Breeds above c. 1500 m. Affects bushes in mixed or pine forest, and secondary growth.

Extralimital. The Chin Hills of Burma.

GENERAL HABITS, FOOD and VOICE. As in 1818.

BREEDING. As in 1818. Average size of 19 eggs $13\cdot1 \times 10\cdot4$ mm (Baker).

MUSEUM DIAGNOSIS. Differs from *nubricapillus* in having the supercilium mixed black and white (*v.* pure white) and the abdomen darker, separated from black of throat by a white band.

MEASUREMENTS As in 1819, perhaps a little smaller. Wing 2 ♂♂ 48, 49 mm (Stres.).

Weight 2 ♂♂ 5·5, 7; 1 ♀ 5·5 g (SDR).

COLOURS OF BARE PARTS. As in 1818.

1821. Whitecheeked Tit. *Aegithalos leucogenys* (Moore)

Orites leucogenys Moore, 1854, in Horsfield & Moore, Cat. Bds. Mus. E. I. Co. 1: 374 ('woods above Balu Chughur' = Bharowal above Bala Chaquar Serai, northeast Afghanistan, *vide* Whistler, 1944, JBNHS 44: 516)
Baker, FBI No. 83, Vol. 1: 97

Plate 96, fig. 1

LOCAL NAMES. None recorded.

SIZE. Sparrow —; length c. 10 cm (4 in.).

FIELD CHARACTERS. *Above*, crown fulvous brown. A broad black band from lores and around eye to nape. Eye pale straw colour. Back olive-grey. Wings brown, darker at shoulder. Tail brown with white outer edge. *Below*, sides of throat and cheeks white; chin and centre of throat ('bib') black. Rest of underparts pale cinnamon-buff. Sexes alike.

Distinguished from *A. concinnus* by absence of white supercilium.

STATUS, DISTRIBUTION and HABITAT. Imperfectly known. Resident, subject to vertical movements; local and uncommon. From Chitral south to Ziarat (N. Baluchistan) and east through Gilgit and Baltistan to the Sind Valley (Kashmir); in N.W.F.P. east to Attock. Breeds between 1600 and 2600 m, in Chitral up to 3600 m (Fulton, JBNHS 16: 46). In winter descends locally to 450 m (Attock). Affects bushes in forest, ilex scrub (Swat), tamarisk bushes along rivers (N.W.F.P.) and juniper forest (Ziarat).

Extralimital. Adjacent parts of eastern Afghanistan.

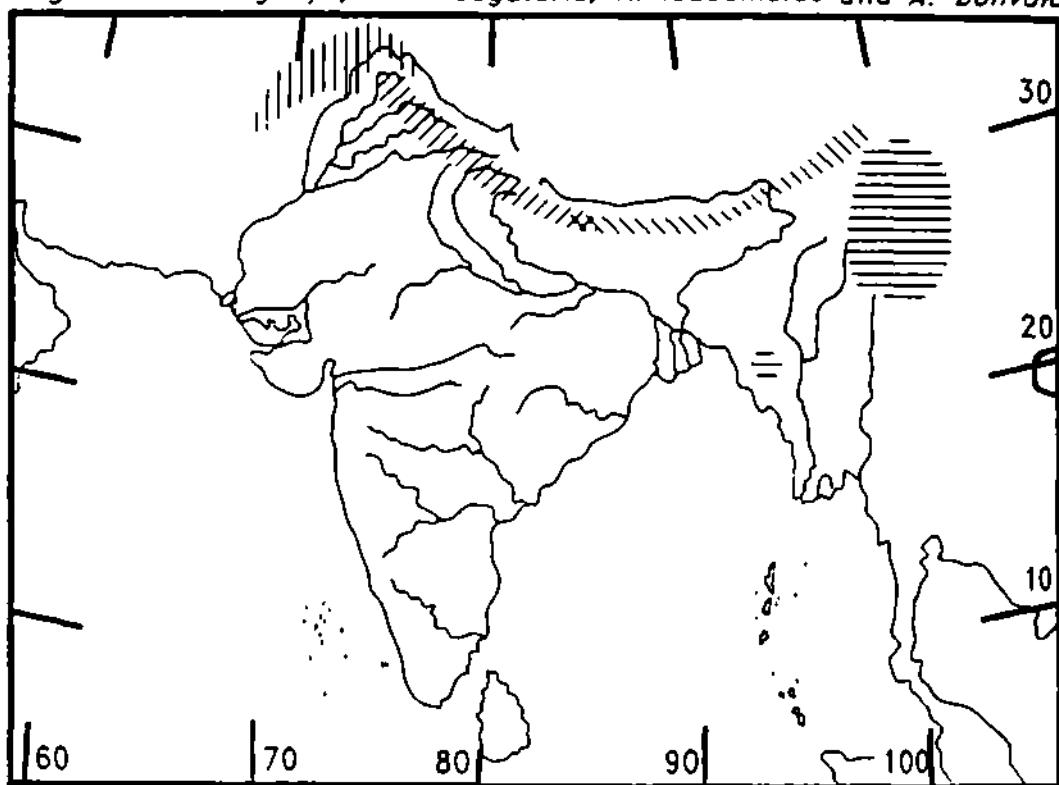
GENERAL HABITS. Those of the genus (cf. 1818). Keeps in parties of 6 to 12 individuals, usually in company with other tits and creepers etc. moving from tree to tree.

FOOD. Chiefly insects and their eggs and larvae.

VOICE and CALLS. Call-note *prit-t-t* continually uttered while foraging (Whitehead). Also *üt*, *üt* and a weak churring alarm-note (Paludan).

BREEDING. Season, end of March to May. Nest, an upright oval ball measuring about 11 by 8 cm, with a lateral entrance-hole towards the top; made of moss and grass leaves bound with cobweb and densely lined with

Aegithalos leucogenys, *A. niveogularis*, *A. iouschistos* and *A. bonvaloti*



[Hatching] <i>niveogularis</i>	[Vertical lines] <i>iouschistos</i>
[Horizontal lines] <i>bonvaloti</i> (SE. Range imperfectly known)	[Diagonal lines] <i>leucogenys</i>

feathers; usually placed near the top of an oak bush between one and three metres or so above the ground. Eggs, 5 to 8, white, sometimes with a faint zone of pinkish red spots round the large end; they measure about 14.7 x 9.9 mm (Whitehead).

MUSEUM DIAGNOSIS. See Field Characters. Bill stouter and more strongly curved on culmen than in *A. niveogularis* (1822).

Young similar to adult but crown paler, cheek-band cream instead of white, black of throat replaced by dull pinkish brown with dusky bases to the feathers; an indistinct pectoral band of blackish streaks.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	57-59	c. 8	c. 17	{ 53-57 mm
♀♀	52-55			{ 49-52 mm
				(Paludan, MD, CBT)

Weight 4 ♂♂ 6.5-7.4; 3 ♀♀ 6.1-7 g (RAP). 5 ♂♂ (breeding) 6-8; 4 ♀♀ (breeding) 6-7 g—Paludan.

COLOURS OF BARE PARTS. Iris pale straw. Bill black. Legs and feet pinkish brown; claws brown.

1822. Whitethroated Tit. *Aegithalos niveogularis* (Gould)

Acanthiparus niveogularis Gould, 1855, Bds. Asia 2 (7), pl. 67
 (North India, restricted to northern Punjab by Vaurie, 1957,
 Amer. Mus. Novit., No. 1853: 20)
 Baker, FBI No. 84, Vol. 1: 98

Plate 96, fig. 2

LOCAL NAMES. None recorded.

SIZE. Sparrow —; length c. 10 cm. (4 in.).

FIELD CHARACTERS. *Above*, forehead and forecrown white, diffusing into buffy brown on hindcrown and nape. A broad black eye-stripe, the two bands partially meeting on nape. A narrow buffish brown band across upper back; rest of back grey. Wings greyish brown with dark brown shoulders. Tail greyish brown with narrow white outer edge. *Below*, throat and sides of neck white forming a collar interrupted on back. A brown band across breast. Belly vinaceous buff. Sexes alike.

The white throat and forehead, and black eye-stripe, help to identify the species.

STATUS, DISTRIBUTION and HABITAT. Uncommon resident, subject to vertical movements. The western Himalayas from Kagan Valley eastward through Kashmir, Himachal Pradesh (Duala Dhar, Kulu, Simla), Garhwal and NW. Nepal (Dolpo — Fleming *et al.*, 1984). Breeds in the Kagan Valley between 2700 and 3300 m, in Garhwal up to 3600 m, descending in winter to c. 1800 m. Affects deciduous forest of birch, cherry or oak, mixed forest of birch and silver fir or spruce and deodar; also dwarf willows and rhododendrons at timber-line.

GENERAL HABITS. Those of the genus (cf. 1818). Hunts in small parties, up to 20 birds together, 19/vi (Roberts), often in company with leaf warblers, *Parus dichrous* and *Alcippe vinipectus*, working energetically through bushes and foliage of trees.

FOOD. Chiefly insects.

VOICE and CALLS. While foraging, a frequently uttered high-pitched *wee* reminiscent of the Goldfinch.

BREEDING. Season, May to early July. Nest, an oval or pear-shaped purse, similar to that of the Redheaded Tit, with a lateral entrance-hole near the top; made of moss and cobweb, covered with lichen and copiously lined with feathers; placed in a fork in bushes between one and three metres up, or suspended to branches of trees (fir etc.) up to nine metres or so above the ground. Eggs, white, rather feebly spotted pink at the larger end, varying in size between 14·3 × 11·2 and 14 × 10·8 mm (Baker). Clutch size and other details of breeding biology unknown.

MUSEUM DIAGNOSIS. See Field Characters. Bill longer, straighter and more slender than in *A. leucogenys* (1821).

This species differs from *A. iouschistos* (1823) not only by colour pattern but also by its larger size and length of bill, and colour of the iris.

Young similar to adult but throat pinkish white, pectoral band darker and more conspicuous, and rest of underparts more buff, less pink.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♀	60-65	9-11	18	52-58 mm (Vaurie, MD)

COLOURS OF BARE PARTS. Iris dark brown (Abbott) or reddish brown (HW). Bill black. Legs and feet orange-brown or yellowish brown.

1823. **Rufousfronted Tit. *Aegithalos iouschistos iouschistos* (Hodgson)**

P.(arus) iouschistos Hodgson, 1844, in Blyth, Jour. Asiat. Soc. Bengal 13: 943
(Nepal)

Baker, FBI No. 85, Vol. 1: 99

Plate 96, fig. 3

LOCAL NAMES. None recorded.

SIZE. Sparrow -; length c. 10 cm (4 in.).

FIELD CHARACTERS. *Above*, forehead and a broad medial coronal band buff, more ochraceous on forehead and nape. A broad black eye-stripe. Eye yellow. Sides of neck ochraceous buff; rest of upperparts grey. Wing with a darker shoulder-patch. Tail with narrow white outer edge. *Below*, centre of throat silvery white, the base of feathers and chin blackish. Malar stripe, sides of throat and rest of underparts rufous-cinnamon. Sexes alike.

Roundish silvery throat-patch, broad greyish 'centre parting' on crown, and ferruginous underparts identify the species.

STATUS, DISTRIBUTION and HABITAT. Common resident, subject to erratic seasonal movements. The Himalayas from central Nepal (Proud, JBNHS 50: 362; Fleming & Taylor, Fieldiana 53: 185) east through Arunachal Pradesh (Ludlow, Ibis 1944: 68).¹ Occurs between 2700 and 3600 m at all seasons, descending to c. 2400 m during cold spells. Affects low, scrubby deciduous trees and bushes, shrubby undergrowth of rose, barberry, holly oak and bamboo in conifer and mixed forest; also visits dense evergreens after the breeding season. Appears to be more plentiful in the drier zone.

Extralimital. Southeastern Tibet and southwestern Sichuan.

GENERAL HABITS. Keeps in pairs when breeding, otherwise in parties up to 30 individuals by themselves or in company with *Parus rubidiventris*, *P. dichrous* and other insectivorous species, however not in the same localities with *Aegithalos concinnus* (GD). Forages in the crowns of high trees as well as in bushes.

FOOD. Insects and their eggs and larvae. Also some vegetable matter.

VOICE AND CALLS. Constantly utters a short sharp note as it flits from twig to twig.

BREEDING. Season, from circumstantial evidence, May to July. Nest, a ball lined with feathers studded outside with lichens, entrance hole at the side. Both parents feed young (Fleming *et al.*, 1984). Eggs, unknown.

MUSEUM DIAGNOSIS. See Field Characters.

Young similar to adult but underparts including throat paler cinnamon.

¹ An allied species, *P. bonvaloti sharpei*, occurs on Mt Victoria from 2500 m to the summit, down to 2100 m in winter, and may be expected in the high ranges of Manipur and Nagaland.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♀	53–60	9–10	17–19	45–53 mm
				(Vaurie, Stres., SA, MD)

Weight 3 ♂♂ (May) 6·5–7·5 g (GD). 3 ♂♂ (winter) 7, 7, 7 g—SA.

COLOURS OF BARE PARTS. Iris lemon-yellow. Bill black. Legs and feet yellow- or orange-brown to dark brown.

Family SITTIDAE: Nuthatches and Wall Creepers

Subfamily SITTINAE: Nuthatches

For description see Baker, E. C. S., 1922, FBI 1; 120–1; Witherby, H. F., *et al.*, 1938, 1: 240–1; Van Tyne, J. & Berger, A. J., 1959: 513; Hans Löhrl, 1964, article 'Nuthatch' in Thomson, A. L. (ed.), *A New Dictionary of Birds*, London & New York.



Whitetailed Nuthatch (1834)

Genus SITTA Linnaeus

Sitta Linnaeus, 1758, Syst. Nat., ed. 10, 1: 115.

Type, by monotypy, *Sitta europaea* Linnaeus

Bill a little longer than the head, straight, horizontally compressed towards the tip, which is neither notched nor toothed. Nostrils partly hidden by bristles and feathers;

no rictal bristles. Wings long, about twice the length of tail; first primary (as.) short. Tail short and square. Tarsus short covered anteriorly with transverse scales; hallux with claw longer than middle toe, and longer than tarsus.

Key to the Species

		Page
I	Upperparts with bright blue or purplish blue	
A	Tips of wing-coverts white	<i>S. formosa</i> 227
B	No white on upperparts	<i>S. frontalis</i> 228
II	Upperparts ashy; size large, tarsus over 21 mm	<i>S. tephronota</i> 226
III	Upperparts slaty or bluish slaty; size medium; tarsus under 20 mm	
C	Crown black	<i>S. leucopsis</i> 221
D	Crown more or less slaty	
1	Middle pair of rectrices partly white	<i>S. himalayensis</i> 223
2	No white on middle pair of rectrices	
a	Under tail-coverts rufous	<i>S. europaea cashmirensis</i> 212
b	Under tail-coverts partly white	
i	Breast ashy	<i>S. europaea nagaensis</i> 215
ii	Breast rich chestnut (♂) or fawn colour (♀)	<i>S. castanea</i> 216

SITTA EUROPAEA Linnaeus: COMMON NUTHATCH

Cf. Deignan, H. G., 1945, *Bull. U. S. Nat. Mus.*, No. 186: 315-317; Vaurie, C., 1950, *Amer. Mus. Novit.*, No. 1472: 2-9; Voous, K. H. & Van Marle, J. G., 1953, *Ardea* 41, Extra No.: 1-68.

Key to the Subspecies

A	Under tail-coverts rufous	<i>S. e. cashmirensis</i>	212
B	Under tail-coverts white tipped with chestnut		
1	Breast ashy	<i>S. e. nagaensis</i>	215
2	Breast ashy washed with buff	<i>S. e. sinensis</i>	214

1824. *Sitta europaea cashmirensis* Brooks

Sitta Cashmirensis Brooks, 1871, Proc. Asiat. Soc. Bengal: 209 (Kashmir)
Baker, FBI No. 114, Vol. 1: 128

Plate 97, fig. 4

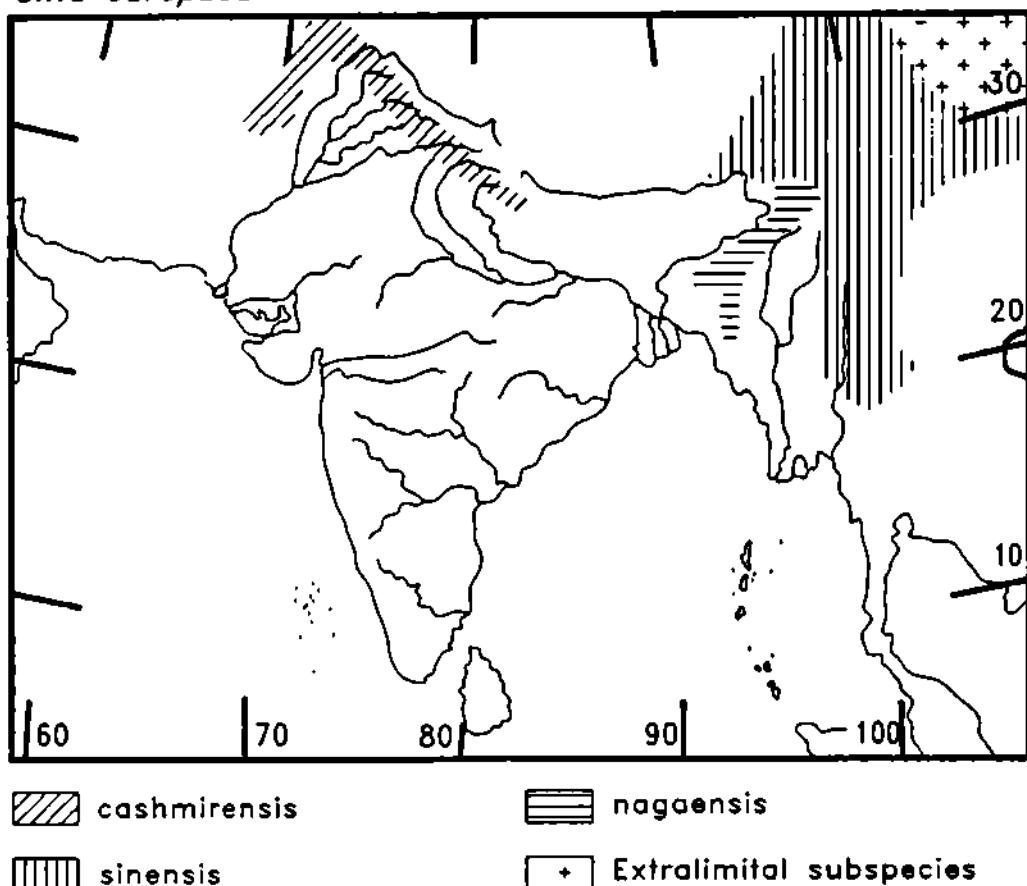
LOCAL NAMES. None recorded.

SIZE. Sparrow -; length c. 12 cm (4½ in.).

FIELD CHARACTERS. *Above*, bluish slaty. A black band from lores through eye to nape. Tail, when expanded, blackish with white subterminal spots. *Below*, sides of head and chin whitish grading to cinnamon on breast, darker (chestnut) on flanks and vent. Female similar to male but paler below.

For distinction from *S. castanea* and *S. himalayensis*, see 1827 and 1834.

STATUS, DISTRIBUTION and HABITAT. Common resident, subject to vertical movements. N.W.F.P. from Shingar and the Takht-i-Sulaiman (N. Baluchistan, Christison, JBNHS 43: 479) north to Chitral, thence east through Kagan Valley, Murree hills (Gallis) [accidental], the Pir Panjal and Kashmir to the Liddar Valley and NW. Nepal (Dolpo, Jumla, Mugu,

Sitta europaea

Humla)—Fleming *et al.*, 1984.¹ Breeds between 2100 and 3000 m locally down to c. 1800 m (Kashmir), and up to 3300 m in Chitral. Descends more regularly to c. 1800 m in winter. Affects forest of pine, deodar and fir, mixed forest and deciduous groves of poplar, walnut, etc.

Extralimital. Adjacent parts of Afghanistan. For range of the species see 1825.

GENERAL HABITS. Outside the breeding season generally found in twos or threes among the roving parties of tits, warblers and tree creepers. Hunts energetically on tree-trunks and larger branches, climbing without the aid of its tail (unlike woodpecker), progressing in little spurts in all directions up or down or around horizontal branches, sometimes creeping jerkily along their undersides. Keeps to a lower stratum than *S. leucopsis* and may often be observed foraging on the ground.

FOOD. Insects, seeds and nuts; grit often found in stomachs. Extracts kernels from hard-shelled seeds or nuts by wedging them into a hollow or crevice ('socket') on a branch and hacking them open by persistent hammer-blows of the strong pointed bill (SA).

VOICE and CALLS. Ordinary call-note, a pleasant, rippling trill; a harsh alarm-note 'recalling in miniature the scream of a jay' (HW).

BREEDING. Season, end of April to end of June. Nest, placed in hollows in trees, often a woodpecker hole, the entrance of which is reduced with

¹ Breeding record by Whymper at Naini Tal 4500 feet (Baker, *Nidification I*: 95) pertains to *S. castanea*.

plastered wet mud to a diameter just large enough for the bird to scrape through; lining material not described but birds have been observed to take fine flakes of bark from the trunks of trees. 'The Nuthatch works with meticulous care and little jerky movements, pecking at the mud ["trowelling"] incessantly, most of the time with its head downwards' (HW). As a rule the masonry work is not prominent, but at times may take the form of a protruding short cone; the plastering occasionally extends for some distance around the hole, filling up any little depressions and smoothing them off. Chipped pieces of masonry showed small seeds within (Bates & Lowther). The masonry is often of terracotta hardness and not easily broken with the fingers whilst at other times it is quite friable and comes away easily. The nest-hole may be at any height from two to nine metres or more above the ground. Eggs, 5 to 7, white, marked with reddish spots and small blotches. Average size of 50 eggs 19.7 × 14.4 mm (Baker).

MUSEUM DIAGNOSIS. See Field Characters and Key to the Subspecies.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	82-86	21-23	17-18	42-44 mm
♀♀	81-86	20-23		

(Paludan, Vaurie, Voous, MD)

Weight 7 ♂♂ (March-July) 17.2-18.3 (av. 17.6); 4 ♀♀ (March-July) 18.9-21 (av. 19.7) g—Paludan. 8 ♂♂ (Oct.-Dec.) 17.8-18.6; 6 ♀♀ (Oct.-Dec.) 17.8-18.8 g (RAP).

COLOURS OF BARE PARTS. Iris dark brown. Bill blackish plumbeous, basal half of lower mandible horny grey; mouth fleshy livid. Legs and feet dark brown or horny plumbeous.

1825. *Sitta europaea sinensis* Verreaux

Sitta sinensis Verreaux, 1871, Nouv. Arch. Mus. Hist. Nat. 6(1870): 34 (montagnes du Thibet chinois, restricted to Kiukiang by Hartert & Steinbacher, 1933, Vög. pal. Fauna, Ergänzungsb.: 168).

Sitta montium La Touche, 1899, Ibis: 404 (Kuatun, northwestern Fukien).
Sitta europaea obscura La Touche, 1921, Bull. Brit. Orn. Cl. 42: 31 (Milati, southeastern Yunnan). Not *Sitta tephronota obscura* Zarudny & Loudon, 1905.

Sitta europaea nebulosa La Touche, 1922, ibid. 42: 55. New name for *S. e. obscura* La Touche, preoccupied.

Sitta (europaea) tibetosinensis Kleinschmidt & Weigold, 1922, Abh. Ber. Mus. Dresden 15, No. 3: 10 (Atentze = Atuntze, now Tehtsin side Vaurie, 1959: 526; northwestern Yunnan).

Sitta europaea delacouri Deignan, 1938, Jour. Washington Acad. Sci. 28: 371 (Doi Suthep, northwestern Thailand).

Sitta europaea konyboensis (sic) Kinnear, 1940, Bull. Brit. Orn. Cl. 60: 57, corrected to *kongboensis*, 1940, ibid.: 74 (Molo, 11,000 ft, SE. Tibet).
Not in Baker, FBI

LOCAL NAMES. None recorded.

SIZE. Sparrow -; length c. 12 cm (4½ in.).

FIELD CHARACTERS. As in *cashmirensis* but underparts greyish buff, lower flanks chestnut.

STATUS, DISTRIBUTION and HABITAT. Common resident in extreme south-eastern Tibet on the northern slopes of the main range between 2800 and 3300 m. May occur in Arunachal Pradesh in the Tsangpo Bend area. Affects holly oak, deciduous and pine forest.

Extralimital. Northern Burma, Yunnan and Sichuan east to Fujian. The species ranges north to Yakutia and west across Siberia and the Middle East to Morocco and the British Isles.

GENERAL HABITS and FOOD. As in 1824.

VOICE and CALLS. Alarm-note, a loud 'chitter' resembling the note of the British Greensinch, in no way resembling the corresponding call of the European subspecies (Stanford).

BREEDING. Probably as in 1824.

MUSEUM DIAGNOSIS. Differs from *cashmirensis* (1824) in having the underparts grey strongly washed with buff, the lower flanks chestnut and the under tail-coverts white tipped with chestnut. Differs from *nagaensis* by the buff wash on breast.

MEASUREMENTS

	Wing	Bill (from skull)	
♂♂	76-89	19-20	mm
♀♀	74-88	19-21	mm

(Kleinschmidt & Weigold, Mayr, NBK)

COLOURS OF BARE PARTS. Iris brown. Bill greyish black, grey-blue at base of lower mandible. Legs and feet plumbeous grey.

1826. *Sitta europaea nagaensis* Godwin-Austen

Sitta nagaensis Godwin-Austen, 1874, Proc. Zool. Soc. London: 44 (Naga Hills)
Baker, FBI No. 113, Vol. 1: 127

Plate 97, fig. 1

LOCAL NAME. *Daomojo-gophu* (Cachari).

SIZE. Sparrow -; length c. 12 cm (4½ in.).

FIELD CHARACTERS. As in 1825 but underparts ashy. Flanks chestnut.

STATUS, DISTRIBUTION and HABITAT. Common resident. The Patkai Range, Nagaland, Manipur, and the Cachar and Khasi hills. Breeds between 1400 and 2600 m; occasionally up to 2800 m. Affects mixed deciduous and evergreen forest, coniferous, and light deciduous forest.

Extralimital. Adjacent parts of Burma (Kachin and Chin hills south to Mt Victoria). An apparently isolated population in the high hills of southern Vietnam has been linked to this subspecies.

GENERAL HABITS and FOOD. As in 1824.

VOICE and CALLS. Song, a loud, clear, rapid piping or trilling, similar to that of the European subspecies but softer and less full or sometimes near identical. Call-note, a peculiar drawn-out nasal *tjäb* (Heinrich).

BREEDING. Season, March to June. Nest, a pad of fur and scraps of bark placed in a tree-hole as in 1824. Eggs, as in 1824; average size of 8 eggs 18·6 × 13·8 mm (Baker).

MUSEUM DIAGNOSIS. Differs from *montium* by the pure ashy colour of underparts.

MEASUREMENTS

Wing 10 ♂♂ 75-81; 2 ♀♀ 72, 75 mm (Stresemann)

Weight 2 ♀♀ 13.5, 16.5 g (SDR).

COLOURS OF BARE PARTS. Iris dark brown. Bill blackish grey at base of lower mandible. Legs and feet greenish brown.

SITTA CASTANEA Lesson: CHESTNUTBELLIED NUTHATCH

Cf. Whistler, H. & Kinnear, N. B., 1936, JBNHS 35: 521-2

Ripley, S. D., 1959, *Postilla*, Yale Peabody Mus., No. 42: 1-11

Key to the Subspecies

	Page
A Bill heavier; under tail-coverts with a broad white subterminal band	
1 Paler; underparts of male cinnamon-brown	S. c. <i>almorae</i> 216
2 Darker; underparts of male chestnut-brown	S. c. <i>cinnamoventris</i> 217
3 Male as in 2; female darker	S. c. <i>koelzi</i> 219
B Bill finer; under tail-coverts ashy with narrow pale subterminal band; females pinker	
4 Male darker; bill shorter	S. c. <i>castanea</i> 219
5 Male paler; bill longer	S. c. <i>prateri</i> 221

1827. *Sitta castanea almorae* Kinnear & Whistler

S.(itta) castaneoventris almorae Kinnear & Whistler, 1930, Bull. Brit. Orn. Cl. 51: 27

(Valley of Ramganga between Almora and Pethora)

Baker, FBI No. 111 (part), Vol. 1: 125

LOCAL NAME. *Siri* (Hindi).

SIZE. Sparrow -; length c. 12 cm (4½ in.).

FIELD CHARACTERS. Male. *Above*, bluish slaty. A black band from lores to upper back; a prominent white malar patch. Expanded tail shows black rectrices with white subterminal spots. *Below*, chin white, rest of underparts chestnut. Under tail-coverts white and chestnut.

Female similar but underparts cinnamon.

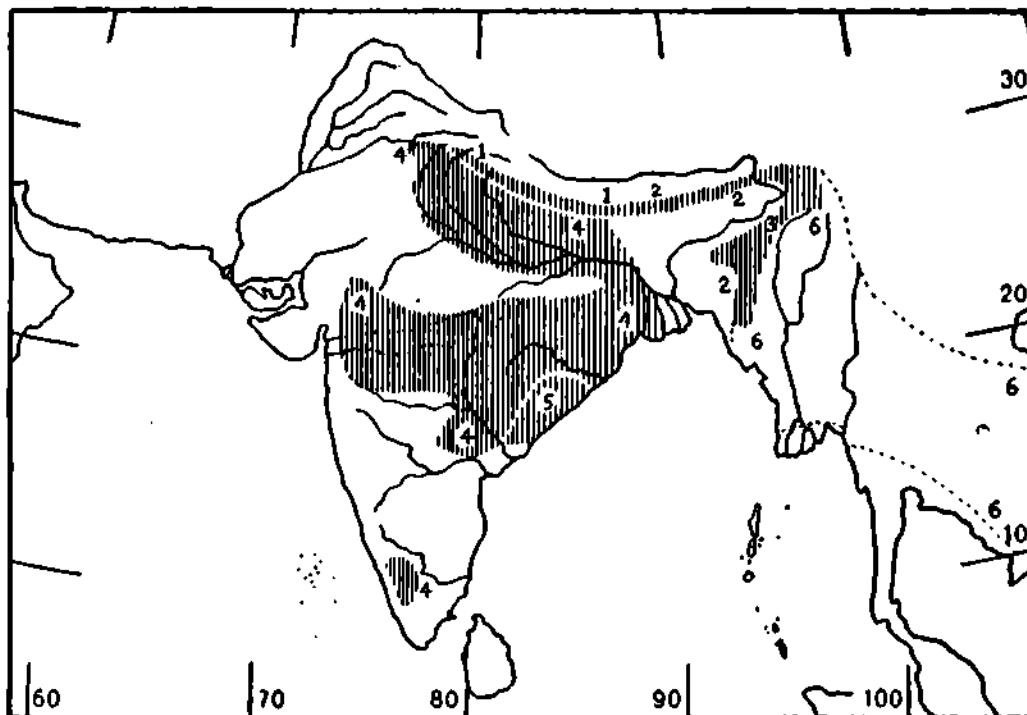
Male easily distinguished from both Common and Whitetailed Nuthatches (1824, 1834) by the rich chestnut underparts and well-defined white malar patch. Female distinguished from the Common Nuthatch by better defined cheek-patch and white on under tail-coverts; *S. himalayensis* has the throat and breast ochraceous buff, not dull cinnamon, the black eye-stripe shorter, and white base of tail.

STATUS, DISTRIBUTION and HABITAT. Common resident. The western Himalayas from Murree foothills (Roberts), Chakrata (western U.P.) east to central Nepal, between c. 300 and 1500 m at all seasons. Affects deciduous woods and long-needle pine forest *Pinus roxburghii*.

GENERAL HABITS and FOOD. As in 1828.

VOICE and CALLS. Very different from that of the European Nuthatch (GD); see 1828 for description. Song period in Nepal January to April with a resumption from August to October (Proud).

BREEDING. As in 1828. Average size of 30 eggs 19.4 × 14.8 mm (Baker).

Sitta castanea

Distributional ranges 1 *almorae* (1827) 2 *cinnamoventris* (1828)
3 *koelzi* (1829) 4 *castanea* (1830) 5 *prateri* (1831) 6 Extralimital races

MUSEUM DIAGNOSIS. Bill heavy. Underparts in male cinnamon-brown. Under tail-coverts ashy grey with broad white subterminal patches and cinnamon fringes. Both sexes differ from *cinnamoventris* in being paler.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	81-87	21-24	{ 18-20	40-44 mm
♀♀	78-85		{ 18-19	40-48 mm (HW, BB)

Weight 8 ♂♂ 17.4-20.9; 5 ♀♀ (Oct.-Nov.) 19.9-20.5; 2 oo? (Oct.-Nov.) 20, 20.9 g (RAP, GD).

COLOURS OF BARE PARTS. Iris dark brown to reddish brown. Bill: upper mandible black with bluish slaty on base; lower mandible bluish slaty with black anterior quarter. Legs and feet slaty horny; claws horny; soles grey-white to white.

1828. *Sitta castanea cinnamoventris* Blyth

Sitta cinnamoventris Blyth, 1842, Jour. Asiat. Soc. Bengal 11: 459 (Darjeeling)
Baker, FBI No. 111 (part), Vol. 1: 125

LOCAL NAMES. *Sidhi-phiip* (Lepcha); *Chor-parki* (Bengali).

SIZE. Sparrow -; length c. 12 cm (4½ in.).

FIELD CHARACTERS. As in 1827, q.v.

STATUS, DISTRIBUTION and HABITAT. Common resident. The eastern Himalayas from eastern Nepal east through Arunachal Pradesh, in the Garo,

Khasi and Mizo hills, Manipur and the hills of Bangladesh to the Chittagong Hill Tracts (see map, above). Occurs at all seasons, in Nepal from the terai to c. 1800 m, optimum zone 600–1500 m; in Sikkim between 600 and 1700 m; in Bhutan up to 1600 m but mostly below 1000 m. Also occurs in the northern half of the plains of the Jalpaiguri district. South of the Brahmaputra occurs from the base of the hills to 1800 m. Affects chiefly deciduous forest.

Extralimital. The species ranges east to Vietnam.

GENERAL HABITS. Keeps in pairs or loose family parties, usually among the roving bands of small insectivorous birds; often seen in company with the Velvetfronted Nuthatch which, however, it treats as a competitor and invariably chases off if on the same or a nearby branch. Starts near the bottom of the main trunk, clinging to the bark and running up with the agility of a mouse; works upwards, spiralling irregularly, sometimes turning around to explore some crevice head down, hammering energetically with the bill from time to time; then it works over and along the main boughs and finally the thinner branches towards the top of the tree where it seems equally at home among the end twigs. Movements and behaviour strongly reminiscent of both a small woodpecker and a tit. Occasionally feeds on the ground. (See also 1824.)

FOOD. As in 1830—*insects, grubs, seeds, nuts, etc.*

VOICE AND CALLS. A quiet *ti-ti-ti* continually uttered while foraging; also a fairly loud, prolonged *tsiip*. Alarm, a loud, raucous note (Lister). Male's breeding call is a single loud and clear whistle *chwhee* repeated about once in two or three seconds (SA). Male has also a very distinct warbling or undulating whistle lasting a third of a second (Roberts pers. comm.). Song period January to April with a resumption in August to October (Proud).

BREEDING. *Season*, chiefly April-May. *Nest*, a layer of moss and pieces of bark covered with a thick pad of fur of small rodents; usually placed in a hole in a tree, sometimes in a wall. The entrance, whether in tree or wall, is reduced in size with masonry. 'So addicted are the birds to this masonry work that often when the hole selected was already small enough, the walls outside and inside would be plastered and just a coat put around the natural entrance' (Baker). The birds are usually very persistent and often repair any damage to the masonry within a few minutes after the intruder has left. *Eggs*, 5 to 7 white with reddish specks scattered over the whole surface. Average size of 60 eggs 19·8 × 14·1 mm (Baker).

MUSEUM DIAGNOSIS. Bill heavy. Underparts in male chestnut-brown. Under tail-coverts fringed with chestnut.

Differs from *almorae* in being darker; from *castanea* in having a blunter, heavier and longer bill, crown concolorous with back, and under tail-coverts white with ashy bases and chestnut fringes; underparts of male a brighter, redder chestnut.

Young as adult, sex for sex, but underparts not so richly coloured.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	81–86	19–22	18–21	38–45 mm
♀♀	77–83	18–22	17–20	38–41 mm (HW, SA)

Weight 2 ♂♂ 20, 22; 2 ♀♀ 20, 20·5 g (SA, RAP).

COLOURS OF BARE PARTS. Iris brown. Bill: upper mandible black except ridge of culmen (for about 10 mm posteriorly) which is pale plumbeous; lower mandible pale plumbeous except tip and commissures which are black. Legs and feet plumbeous; claws brown.

1829. *Sitta castanea koelzi* Vaurie

Sitta europaea koelzi Vaurie, 1950, Amer. Mus. Novit., No. 1472: 5

(Patkai Hills, Assam-Burma border)

Baker, FBI No. 111 (part), Vol. 1: 125

LOCAL NAME. *Dao-mojo-gajao* (Cachari).

SIZE. Sparrow -; length c. 12 cm (4½ in.).

FIELD CHARACTERS. As in 1827, q.v.

STATUS, DISTRIBUTION and HABITAT. Resident. The Patkai range, Nagaland and North Cachar, from the edge of the plains to c. 1500 m. Affects deciduous and semi-evergreen forest.

GENERAL HABITS, FOOD and VOICE. As in 1828.

MUSEUM DIAGNOSIS. Adult male not separable from *cinnamoventris*. Female differs by richer cinnamon of underparts, and by being darker above.

MEASUREMENTS and COLOURS OF BARE PARTS. As in *cinnamoventris* (1828).

1830. *Sitta castanea castanea* Lesson

Sitta castanea Lesson, 1830, Traité d'Orn.: 316 (Bengale)

Baker, FBI No. 110 (part), Vol. 1: 123

Plate 97, fig. 3

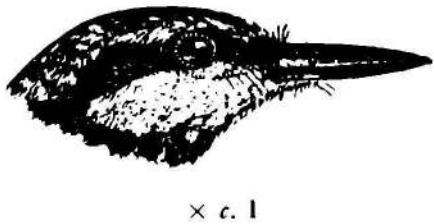
LOCAL NAMES. *Kathaipel zad-chad* (Gujarati); *Siri* (Hindi); *Chor-parki* (Bengali).

SIZE. Sparrow -; length c. 12 cm (4½ in.).

FIELD CHARACTERS. As in 1827, q.v.

STATUS, DISTRIBUTION and HABITAT. Resident, common but locally distributed. Practically all India roughly east of a line from Ferozepore in Punjab (c. 30°N., 75°E.) to Nasik in Maharashtra (c. 20°N., 74°E.). Eastward along the terai and through the

Gangetic Plain to Bihar (Darbhanga, Rajmahal Hills) and southern Bengal (Nadia, c. 23°N., 88°E.). Southward (presumably) more or less throughout the Peninsula including eastern Rajasthan, Madhya Pradesh, Maharashtra, Orissa and Andhra (excepting range of *prateri*, 1831, q.v.) in the appropriate biotope. South of c. 16°N. has been recorded in southern Karnataka (Antarsante, Bandipur, Biligirirangan Hills, Coorg), Tamil Nadu (Nilgiri Hills), and Kerala (Wynaad and Palghat Hills). Not yet recorded from large intervening areas. Affects light forest, mango topes and groves near villages, roadside trees, etc. in deciduous plateau and foothills country; avoids coastal areas.



T. R. Bell's 1905 sight record for Sind (see *Ibis*, 1922) is incredible. It was doubted by the observer himself, and should be discarded (see Abdulali, JBNHS 49: 303-4).

GENERAL HABITS. As in 1828. Usually met with in mixed hunting parties, often with *Picoides nanus*. Keeps largely to the tops of lofty trees.

FOOD. Insects, grubs, seeds and nuts. Among stomach contents in an intensively cultivated tract in Bihar, the following insects have been identified: Ants (*Cremastogaster subnuda*—Formicidae), weevils (*Myllocerus discolor*, *Tanymecus* sp.—Curculionidae), beetles (*Mesomorpha villiger*—Tenebrionidae), and remains of various other small coleoptera, jassids, tabanids, noctuids and hemipterons—in addition to spiders (Mason & Lefroy, 1912).

VOICE and CALLS. A mousy, quick-repeated double note *chilp-chilp* (SA). Also a tremulous whistle and a shrill squeak resembling that of the musk shrew (*Suncus*). Song, a loud clear whistling *whee* quickly repeated four or five times thus *wheewheewheewheewheewhee*.

The sound of hammering on bark often betrays its whereabouts.

BREEDING. Season, February to May in the north, April to September in Andhra Pradesh. Nest, placed in a hollow in a tree from near the ground up to at least nine metres. The cavity is almost invariably lined with bits of fine bark and dry leaves. As in other subspecies, the hollow is walled up with a plaster of wet mud, brought in blob by blob, leaving a tiny round aperture just large enough for the bird to scrape through. The cement is reinforced with resin assiduously collected from a nearby babool (*Acacia arabica*) or suchlike tree, and kneaded and pummelled into position by repeated jabs of the bill (Gill, SA). The masonry often attains a thickness of nearly 5 cm and dries to terracotta hardness. Some plastering around the aperture is in evidence even when originally of appropriate size. Eggs, normally 4 or 5, white to pale pink marked with reddish spots, specks and minute blotches, more so towards the large end. Average size of 60 eggs 17×16.5 mm (Baker). Incubation by both sexes (Baker). However, according to Gill (JBNHS 29: 110) the female 'never leaves the eggs till they are hatched; she is fed assiduously by the male'. Period of incubation 11 or 12 days.

MUSEUM DIAGNOSIS. Bill fine and short. Underparts in male deep chestnut, darker than in *cinnamomeensis*. Under tail-coverts ash-grey with chestnut fringes. See Key to the Subspecies.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	72-82	18-21 }	17-19	{ 36-42 mm
♀♀	71-78	18-20 }		{ 35-41 mm
				(HW, SA)

Weight 1 ♂ 12 g (Roonwal).

COLOURS OF BARE PARTS. Iris brown. Bill: upper mandible black, lower grey at base; mouth pale pink. Legs and feet dark brown; soles pale yellow.

1831. *Sitta castanea prateri* Whistler & Kinnear

Sitta castanea prateri Whistler & Kinnear, 1936, Jour. Bombay nat. Hist. Soc. 35: 522
 (Anantagiri, Vishakhapatnam Dist.)
 Baker, FBI No. 110 (part), Vol. 1: 123

LOCAL NAMES. None recorded.

SIZE. Sparrow -; length c. 12 cm (4½ in.).

FIELD CHARACTERS. As in 1827, q.v.

STATUS, DISTRIBUTION and HABITAT. Common resident. The Eastern Ghats in Orissa and Andhra Pradesh from Jeypore (c. 19°N.) southward to the Godavari river, at c. 900 to 1000 m. Affects deciduous forest.

GENERAL HABITS, FOOD and VOICE. As in 1830.

BREEDING. As in 1830.

MUSEUM DIAGNOSIS. Differs from *castanea* (1830) in having a longer bill, and the under tail-coverts ash-grey with narrow pale subterminal band and chestnut fringes. Underparts of male similar to *cinnamoventris* (1828) and paler than in *castanea*. Underparts of female more pink than in *cinnamoventris*.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	77-83	21-22 }	17-19	{ 40-43 mm
♀♀	75-78	20-22 }		38-41 mm (HW)

Weight 3 ♂♂ 14, 14·5, 16·3; 1 ♀ 12; 12 oo? 15·6-18·2 g (SDR).

COLOURS OF BARE PARTS. As in 1830.

SITTA LEUCOPSIS Gould: WHITECHEEKED NUTHATCH

Key to the Subspecies

Breast buffish white..... *S. l. leucopsis*

Breast rufous *S. l. przewalskii*

1832. *Sitta leucopsis leucopsis* Gould

Sitta leucopsis Gould, 1850, Bds. Asia 2 (1), pl. 46 (Himalayas)
 Baker, FBI No. 117, Vol. 1: 130

Plate 97, fig. 6

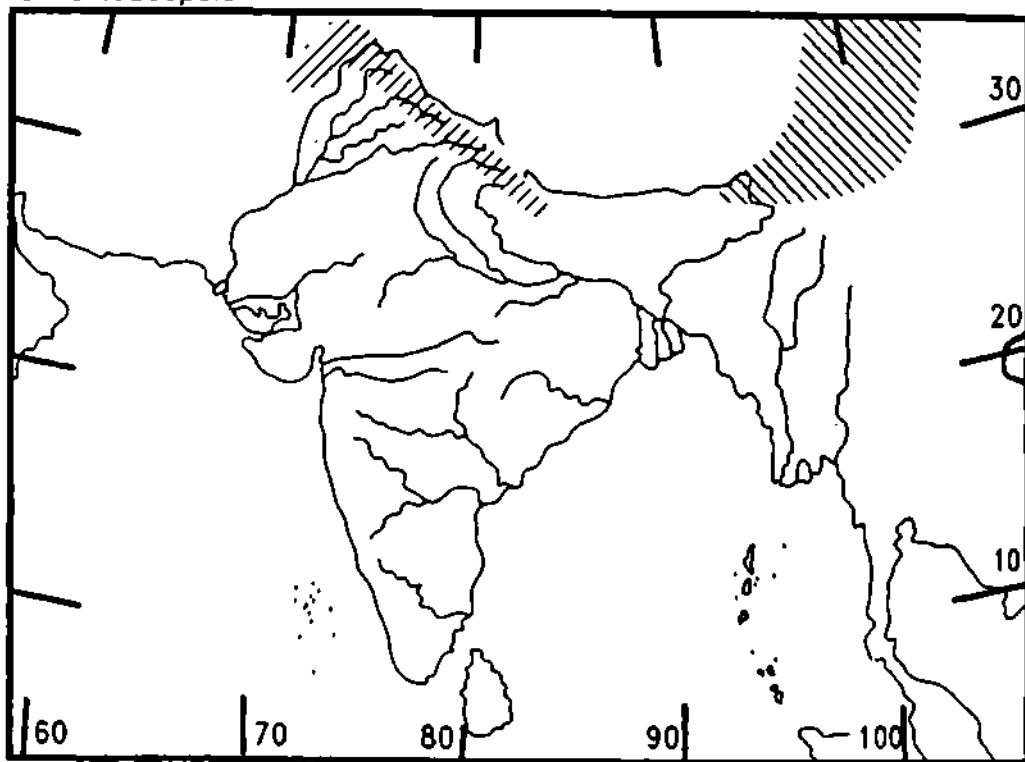
LOCAL NAMES. None recorded.

SIZE. Sparrow -; length c. 12 cm (4½ in.).

FIELD CHARACTERS. *Above*. Crown and sides of nape black; sides of head, including broad supercilium, white. Rest of upperparts dark bluish slaty. Expanded tail shows black outer rectrices with a white subterminal spot on the three outer pairs and a narrow white streak along the outer edge of the outermost. *Below*, buffish white. Lower flanks and under tail-coverts rich chestnut.

The white of face extending above the eye, bordered above by the black of crown, identifies the species.

STATUS, DISTRIBUTION and HABITAT. Common resident, subject to vertical

Sitta leucopsis

movements. N. W. F. P. from the Safed Koh to Chitral, Gilgit, Baltistan, and the Murree hills and eastward along the Himalayas to Garhwal (JBNHS 28: 143 and 53: 320), NW. Nepal as far east as Suli Gad river in Dolpo district (Fleming *et al.*, 1984); from c. 2100 m to timber-line (c. 3300 m), optimum zone 2400–3000 m. Descends in winter locally to 1800 m. Affects forests of pine, fir and deodar, occasionally mixed forest.

Extralimital. Adjacent parts of eastern Afghanistan. Range disjunct from that of the western China population.

GENERAL HABITS. As in other members of the genus but keeps to the tops of the taller conifers (mostly) and smaller branches and is therefore difficult to see. Its presence is usually detected by its peculiar call-note (q.v.). Sometimes perches on the highest twig of a dead tree, flicking its wings and jerking from side to side. Sometimes catches insects on the wing (N. Jamdar).

FOOD. Insects and seeds (of *Pinus excelsa*, *P. gerardiana*, etc.).

VOICE AND CALLS. Ordinary call-note, incessantly uttered while foraging, a curious plaintive squeak, or 'wailing bleat of a small kid', rendered as *quair-quair* (HW) or *pain*, pronounced like the French word for bread (Whitehead). It is a characteristic sound of the conifer forest and often the only sign of the bird's presence. Also a common double-note like *bawain bawain* of the same quality as above (Magrath).

BREEDING. Season, end of April to early July. Nest, a pad of moss, grass and a few leaves, lined with fur; placed in holes or crevices in trees shattered by lightning, generally at great heights—from 6 to 30 metres above the ground—exceptionally in a hole in the ground below a root (Whitehead). No masonry is used to reduce entrance-hole. Eggs, 4 to 8, pinky white with

numerous reddish spots; similar to those of *Sitta europaea* but more delicately marked. Average size of 75 eggs 18 × 13·8 mm (Baker).

MUSEUM DIAGNOSIS. See Field Characters and 1833. Postnuptial moult complete, July to October.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	74–79	(one) 22 }	18–19	39–40 mm
♀♀	73–75	(one) 21 }		

(Paludan, MD)

Weight 10 ♂♂ 13·5–15·9; 3 ♀♀ 14·7–15·1 g (Paludan, RAP).

COLOURS OF BARE PARTS. Iris brown. Bill blackish, base of lower mandible whitish or pale grey. Legs and feet greenish brown.

1833. *Sitta leucopsis przewalskii* Berezovski & Bianchi

Sitta Przewalskii Berezovski & Bianchi, 1891, Ptitsi Kansus.

Puteshest. G. N. Potanina:

119 (Mindsheu dist., upper Hwangho R., eastern Tsinghai, China)
Not in Baker, FBI

LOCAL NAMES. None recorded.

SIZE. Sparrow –; length c. 12 cm (4½ in.).

FIELD CHARACTERS. As in 1832 but breast rufous (*v.* buffish white).

STATUS, DISTRIBUTION and HABITAT. May occur in northern Arunachal Pradesh in the Tsangpo Bend area (see Extrazonal, below). Affects chiefly conifer forest.

Extrazonal. Southeastern Tibet west to Tse (c. 94°30'E. long.) at c. 2800–3000 m (Ludlow, *Ibis* 1951: 555) and the mountains of western China north to Qinghai and Kansu.

GENERAL HABITS, FOOD and VOICE. Probably as in 1832.

BREEDING. Unrecorded; probably as in 1832.

MUSEUM DIAGNOSIS. Differs from *leucopsis* (1832) in being rufous on breast and abdomen rather than buffish white. Bill much weaker, thinner and shorter, averaging 17 mm in four adults as against 21 in a long series of nominate *leucopsis*. Wing length averages about 4 mm shorter (Vaurie).

MEASUREMENTS

	Wing	Bill (from skull)	Tail
♂♂	76–81	21–22	39–45 mm
♀♀			{ 40–44 mm (Vaurie)

COLOURS OF BARE PARTS. Unrecorded.

SITTA HIMALAYENSIS Jardine & Selby: WHITETAILED NUTHATCH

Key to the Subspecies

- Eye-stripe extending on to shoulder *S. h. himalayensis*
- Eye-stripe not extending on to shoulder *S. h. australis*

1834. *Sitta himalayensis himalayensis* Jardine & Selby

Sitta himalayensis Jardine & Selby, 1835, Ill. Orn. 3, pl. 144
 (Himalaya Mts. = Simla side Meinertzhangen)
 Baker, FBI No. 108 (part), Vol. 1: 122

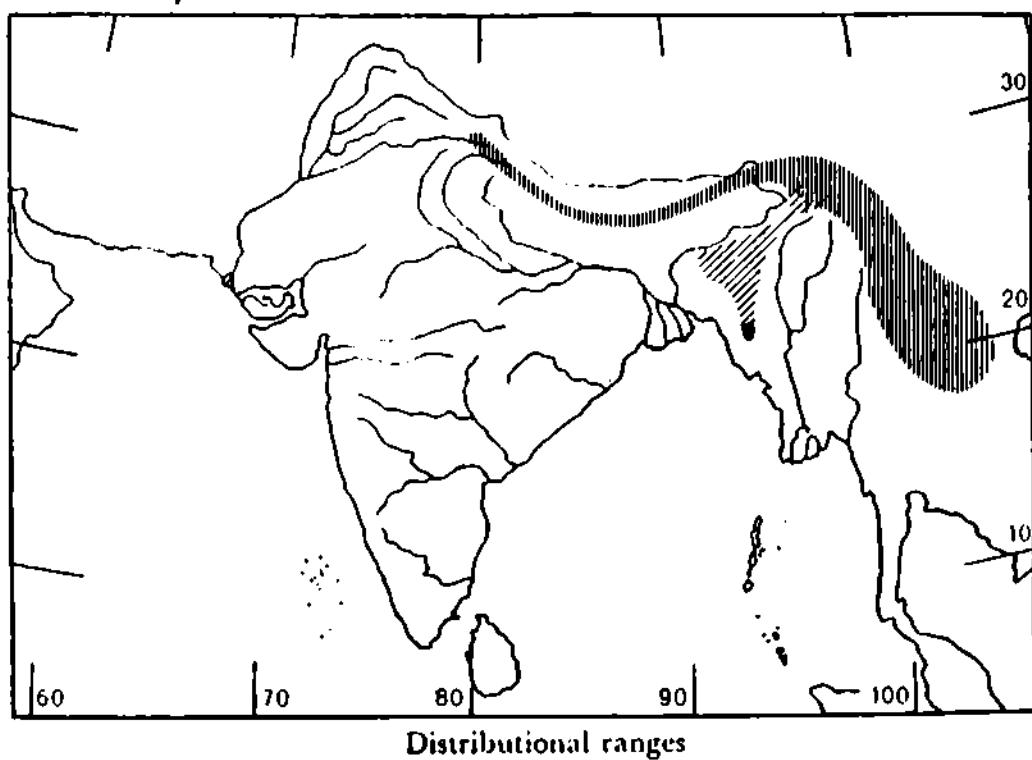
Plate 97, fig. 2

LOCAL NAME. *Siddyi-phiip* (Lepcha).

SIZE. Sparrow -; length c. 12 cm (4½ in.).

FIELD CHARACTERS. *Above*, bluish slaty. A black eye-stripe from lores to nape. A white patch at base of tail. Expanded tail shows black rectrices with white spots. *Below*, throat buff shading to ochraceous on breast and deep rufous on lower parts. A white patch under wing visible in flight.

Distinguished from other nuthatches by the white patch at base of tail; from the Assam subspecies (1835) by longer eye-stripe, extending on to shoulder.

Sitta himalayensis

████████ *himalayensis* (1834)

████████ *australis* (1835)

██████ *victoriae* (RE)

STATUS, DISTRIBUTION and HABITAT. Common resident, subject to seasonal movements. The Himalayas from Chamba c. 76°E. (replaced by *S. europaea* west of this locality) eastward through Arunachal Pradesh. Breeds between 1500 and 3000 m, in eastern Nepal and Sikkim up to 3300 or 3400 m, overall optimum zone 1800–2700 m. In Sikkim noted as low as 950 m in winter. Affects deciduous or evergreen broad-leaved forest, chiefly oak and rhododendron; shows a preference for mossy forest.

Extralimital. Ranges east to Yunnan and the northern Indochinese countries.

GENERAL HABITS. Keeps in pairs or scattered parties, often among the mixed hunting bands of tits and small babblers. Appears to forage mostly on the mossy branches, much less on trunks (Diesselhorst). Creeps jerkily along the upper or under side of moss-covered boughs or up and around tree-trunks with astonishing agility, prying into crevices in the bark or under the moss in search of insects, presently flying off to another tree nearby to resume the hunt. Occasionally found in low shrubs.

FOOD. Mainly insects; also kernels of nuts and seeds. The nut is fixed in a suitable hollow or 'socket' in a branch and hacked open by determined hammer-blows of the pointed bill.

VOICE and CALLS. The birds maintain contact with one another by a feeble mousy *chip-chip*. In the breeding season, a clear, spirited, tit-like whistling song *wheet-wit-wit-wit-wit* quickly repeated six to eight times, uttered by male with neck partially upstretched, from a perch in a tree (SA). Song period February to May (Proud).

BREEDING. Season, mid March to early May. Nest, a hole in a tree, usually an oak, between 1 and 15 metres above the ground, lined with moss or rhododendron leaves. Where the hole is too large, the entrance is reduced to suit the size of the bird by masonry work with wet clay. Eggs, 4 to 7, white densely covered with dark red spots and small blotches, generally more numerous at the larger end where they may form an ill-defined ring. Average size of 25 eggs 18.6 x 13.4 mm (Baker).

MUSEUM DIAGNOSIS. See Field Characters; also for distinction from the Assam subspecies *australis*; §

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	69-77	15-19	17-21	35-42 mm
♀♀	68-76			33-40 mm
(Vaurie, BB, NBK, SA)				

Weight 13 ♂♂ 14-17; 10 ♀♀ 14.3-16 g (RAP, GD). 4 ♂♂ (winter) 12-16; 4 ♀♀ (winter) 12-15 g—SA.

COLOURS OF BARE PARTS. Iris brown. Bill: upper mandible blackish brown, lower pale plumbeous with horny brown tip. Legs, feet, claws, pale horny brown; soles greyish white.

1835. *Sitta himalayensis australis* Koelz

Sitta himalayensis australis Koelz, 1951, Jour. Zool. Soc. India 3: 29
(Tekhubarna, Naga Hills, Assam)

Sitta himalayensis lushaiensis Koelz, 1952, Jour. Zool. Soc. India 4: 37
(Hmuntha, Lushai Hills)

Baker, FBI No. 108 (part), Vol. 1: 122

LOCAL NAMES. None recorded.

SIZE. Sparrow —; length c. 12 cm (4½ in.).

FIELD CHARACTERS. As in 1834, q.v.

STATUS, DISTRIBUTION and HABITAT. Fairly common resident in Nagaland, Manipur and in the Cachar and Mizo (Lushai) hills, above c. 1700 m. Affects moist, broad-leaved evergreen forest.

Extralimital. Adjacent hills of Burma.

GENERAL HABITS, FOOD and VOICE. As in 1834.

BREEDING. Unrecorded; probably as in 1834.

MUSEUM DIAGNOSIS. Differs from *himalayensis* (1834) in having a shorter post-ocular stripe (not extending on to the shoulder). Rufous of underparts fading to white on centre of throat and chin.

MEASUREMENTS

Wing 5 ♂♂ 72–76; 5 ♀♀ 71–76 mm (Koelz)

Weight 1 ♂ 15; 1 ♀ 14 g (SDR).

COLOURS OF BARE PARTS. Iris brown. Bill black, base of lower mandible grey. Legs and feet dark greenish brown or dark yellowish brown.

1836. Eastern Rock Nuthatch. *Sitta tephronota tephronota* Sharpe

Sitta tephronota Sharpe, 1872, Ann. Mag. Nat. Hist. 10: 450
(Kokand, Ferghana, Central Asia)
Baker, FBI No. 116, Vol. 1: 129

Plate 97, fig. 5

LOCAL NAMES. None recorded.

SIZE. Sparrow ±; length c. 15 cm (6 in.).

FIELD CHARACTERS. A comparatively large rock-inhabiting nuthatch. *Above*, ashy grey. A black eye-stripe from lores to nape. Outer edge of tail and tips of outer rectrices pale buff. *Below*, throat, sides of head and neck, and breast creamy white grading to pinkish buff on lower belly and flanks. Sexes alike.

STATUS, DISTRIBUTION and HABITAT. Fairly common resident, subject to vertical movements. Baluchistan from the Shingar Range southwest to Nushki and Kalat, and possibly through the ranges of central Makran as the species occurs in Iranian Baluchistan. Affects rocky valleys with broken cliffs and jumbles of boulders especially where there are streams, from c. 300 m in winter to c. 2500 m in summer.

Extralimital. Extends north to the Tien Shan and southern Transcaspia. The species ranges west to Armenia.

GENERAL HABITS. Usually solitary or widely separated pairs; after breeding in family parties of 5 or 6, or maybe two such parties together. An extraordinarily active bird, jerkily clambering about on almost every type of rock face, however perpendicular and precipitous, in search of insects lurking within the unevennesses.

FOOD. Insects and seeds.

VOICE and CALLS. Call-note, *pit-pit-pit*. Song, a rapidly repeated *twei-twei-twei-twei* (Roberts); also has a chattering though pleasing call (Williams).

BREEDING. Season, February to June. Nest, a remarkable structure of clay like a little oven protruding from the substrate 'much like a woman's breast'. In some cases comparatively small (c. 30 cm in diameter); in others the clay portion may cover as much as three square feet (a third of a square metre).

Foundation of one nest examined measured c. 75 × 45 cm. The point of the mud entrance is sometimes prolonged in the shape of a cone sticking out of the cliff-face for about 15 cm, at the end of which is the actual entrance-hole, 35 mm or so in diameter. The nest is lined with fur of small mammals and feathers. Feathers and other bright objects such as elytra of beetles are sometimes stuck into the clay outside (Williams, JBNHS 33: 599). The structure is usually shaded from the sun by overhanging rock. As a rule it is not built high up on the rock-face, often near the entrance of a deep cleft, and quite often within easy hand reach. The clay plaster is usually laid on over crevices or in shallow angles of rocks and frequently also 'against holes in trees, which were invariably furnished with the same masonry inside and outside while often feathers were used to decorate the bark of the trunk all round the nest' (Barnes *apud* Baker, *Nidification* 1: 99; also Murray *apud* Ticehurst, JBNHS 31: 695). Eggs, normally 4, white, spotted and blotched with light chestnut to chestnut-brown with secondary markings of pale pinkish lavender, sometimes absent. Differ from those of other nuthatches in being larger, glossier, more sparsely and boldly spotted. Average size of 50 eggs 21·1 × 16·6 mm (Baker).

MUSEUM DIAGNOSIS. See Field Characters. Postnuptial moult complete, from the middle of July to the middle of October, occasionally later.

First-winter plumage not distinguishable with certainty from that of adult. Postjuvenile moult of body-feathers, lesser and median wing-coverts, takes place at the same time as the postnuptial moult of adults.

MEASUREMENTS

	Wing	Bill (from skull)
♂♂	85–90	26–27 mm
♀♀	85–88	26–29 mm

(Vaurie, southern Afghanistan)

1 ♀ Tarsus 25; tail 50 mm (MD)

Weight 3 ♂♂ (August) 33–35; 3 ♀♀ (August) 31–32 g (Paludan, northern Afghanistan).

COLOURS OF BARE PARTS. Iris dark brown. Bill black, livid at base of lower mandible. Legs and feet grey.

1837. Beautiful Nuthatch. *Sitta formosa* Blyth

Sitta formosa Blyth, 1843, Jour. Asiatic Soc. Bengal 12: 938 (Darjeeling)
Baker, FBI No. 118, Vol. 1: 131

Plate 97, fig. 8

LOCAL NAMES. *Tishe kuyi gumbo* (Lepcha); *Dao-mojo-gadeba* (Cachari).

SIZE. Sparrow ±; length c. 15 cm (6 in.).

FIELD CHARACTERS. A large, showy, black and blue nuthatch. *Above*, crown and upper back black with brilliant blue and lilac streaks. Wing black with blue outer edge and shoulder, white bars and white edge to tertials. Scapulars and rump pale blue. Tail blue with black shaft-lines; expanded tail shows black rectrices with white subterminal spots. *Below*, sides of head buffish white with dark ear-coverts. Chin and upper throat creamy white grading to rufous-clay on lower parts. Sexes alike.

In flight a white patch on the black underwing conspicuous from below.

STATUS, DISTRIBUTION and HABITAT. Resident, subject to vertical movements, rare and locally distributed. Sikkim, Bhutan (?), the Dafla, Abor and Mishmi hills, Nagaland, Manipur, the Cachar and Khasi hills, and the Chittagong Hill Tracts. Recorded in summer between 1500 and 2100 m (2400 fide Inglis), and in winter between 330 and 2000 m. Affects deep forest.

Extralimital. Extends east to northern Vietnam.

GENERAL HABITS. Little known. Keeps in pairs or small family parties of 4 or 5 usually high up in lofty trees. Actions and behaviour characteristic of the genus, but slower, resembling those of a woodpecker as when clambering about the branches or hammering away on the bark. Flight fast.

VOICE and CALLS. A typical nuthatch call though less harsh than that of *S. europaea* and lower pitched than almost any other nuthatch's.

BREEDING. Season, April to June. Nest, a hollow in a tree between c. 2 and 8 metres above the ground, lined with some leaves, chips of bark and fur of small mammals. Entrance-hole reduced with clay masonry when too large. Eggs, clutch size apparently 4 to 6, like large eggs of *S. castanea* (1828). Average size of 6 eggs 21.1 × 15.6 mm; of 20 eggs, including 4 small addled ones, 20.8 × 15.3 mm (Baker).

MUSEUM DIAGNOSIS. See Field Characters.

MEASUREMENTS

	Wing	Bill (from feathers)	Tarsus	Tail
♂♀	114–118	c. 17	c. 21	58–60 mm (Baker)
1 ♀	98	23 (from skull)	20	52 mm (MD)

COLOURS OF BARE PARTS. Iris brown. Bill black, white at base of lower mandible. Legs and feet olive-brown.

1838. Velvetfronted Nuthatch. *Sitta frontalis frontalis* Swainson

Sitta frontalis Swainson, 1820, Zool. Ill. (1), pl. 2 (Ceylon)

Sitta corallina Hodgson, 1836, Jour. Asiat. Soc. Bengal 5: 779 (Nepal)

Sitta frontalis simplex Koelz, 1939, Proc. Biol. Soc. Washington 52: 63
(Londa, Bombay Presidency)

Baker, FBI No. 119, Vol. 1: 132

Plate 97, fig. 7

LOCAL NAMES. *Mākhmāli zad-chad* (Gujarat); *Dao-mojo-buku-gajao* (Cachari); *Pasai edukira kūrūvi* (Tamil); *Tandan kili* (Malayalam); *Panu-kurulla* (Sinhala).

SIZE. Sparrow –; length c. 10 cm (4 in.).

FIELD CHARACTERS. A small purplish blue nuthatch with velvety black forehead, red bill, orange-yellow orbital skin and yellow eye.

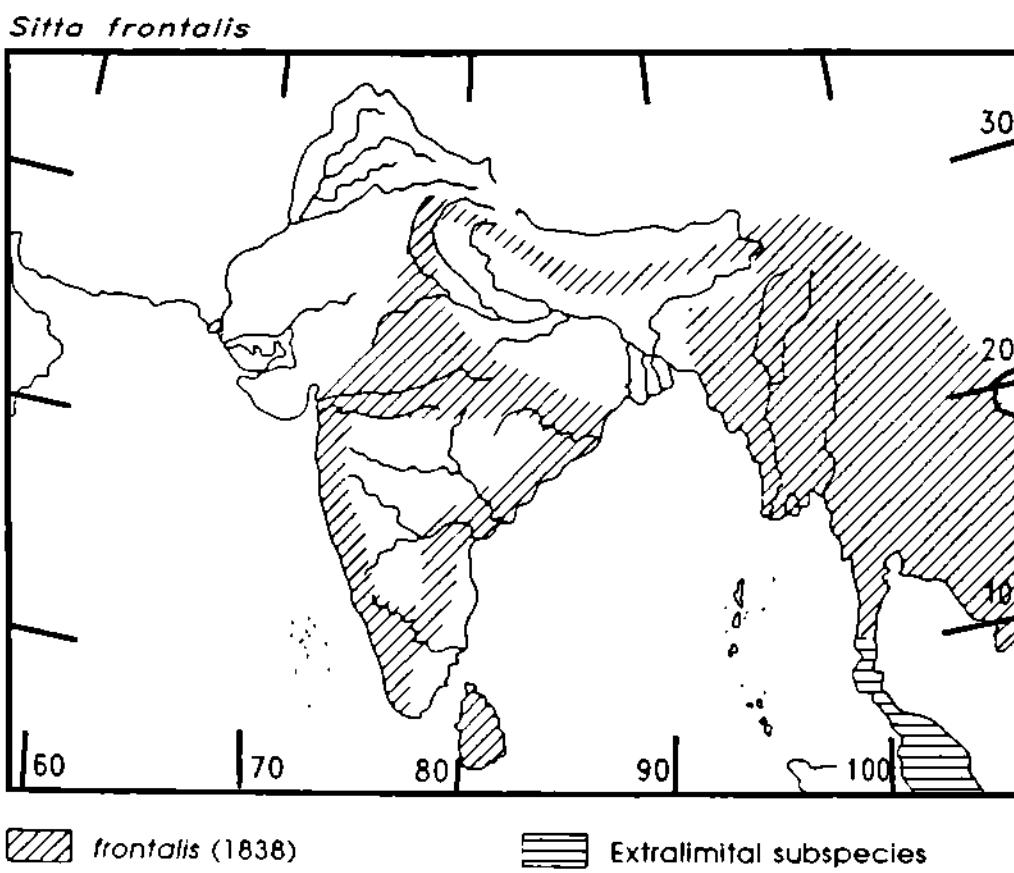
Male. *Above*, forehead and a long supercilium black. Rest of upperparts purplish blue. Expanded tail shows black rectrices with greyish terminal band. *Below*, ear-coverts lavender. Chin and centre of throat white grading to drab brown more or less suffused with lavender on lower parts.

Female similar but without the black supercilium.

STATUS, DISTRIBUTION and HABITAT. Resident, locally abundant. Widely distributed in the better wooded and hilly portions of India and Bangladesh, roughly east and south of a line from Dehra Dun in U. P. (*c.* 30°N., 78°E.) to Navsari in Gujarat (*c.* 21°N., 73°E.). Eastward along the lower Himalayas (including Nepal, Sikkim and Bhutan) through Arunachal Pradesh; thence south through Assam, Meghalaya, Nagaland, Manipur, Mizoram and Bangladesh to the Chittagong Hill Tracts. Bengal and southward through the Peninsula to Andhra, Kerala and Tamil Nadu; and Sri Lanka. From plains level to *c.* 1500 m, locally to *c.* 2200 m in the Himalayas, and the peninsular and Sri Lanka hills. Common in the Eastern and Western Ghats complexes (including Nilgiri and Palni hills), and fairly common locally elsewhere in the appropriate evergreen and moist-deciduous biotope. Avoids arid areas. Affects rather open broad-leaved forest and mixed bamboo jungle, evergreen sholas, shade-trees in tea, coffee and cardamom plantations, etc. Also mangrove forest (*Sonneratia apetala* etc.) in the Khulna Sunderbans.

Extralimital. Ranges east through Burma, the Indochinese countries, Hainan, southern Sumatra and Java. Other subspecies in Malaysia, Borneo and the Philippines.

GENERAL HABITS. Similar to those of other nuthatches. Keeps in pairs or small parties sometimes up to a dozen individuals, usually in mixed hunting associations often including *Sitta castanea*. Hunts on the moss-covered branches of large trees, creeping jerkily up and down or around them with the agility of a mouse, inspecting little nooks and crannies and hammering



■ *frontalis* (1838)

■ Extralimital subspecies

away at the bark like a woodpecker. Vigorously flaps wings on tree trunks to flush insects (Trevor Price, JBNHS 76: 418). Also forages in brushwood and on fallen logs but does not seem to visit the ground. Sometimes will cling back downwards on the underside of a branch and scuttle along thus with astonishing celerity.

FOOD. Insects and their larvae.

VOICE and CALLS. A rapid series of loud high-pitched cheeping whistles; often the latest diurnal bird-call to be heard after dusk, even after the last Grey Junglefowl has ceased to crow.

BREEDING. Season, April to June in the north, January to May in the south and in Sri Lanka. Nest, a hole in a branch or trunk of a tree between one and twelve metres above the ground, lined with moss, fur and feathers. Size of entrance reduced with masonry work if too large, but hole chosen usually so small as to even require enlarging. Eggs, 4 or 5 in the north, 3 to 4 in the south, like small, rather richly marked eggs of *S. castanea*, some of them with large red blotches and more like tit's eggs. Average size of 50 eggs 17.2×13.2 mm (Baker).

MUSEUM DIAGNOSIS. See Field Characters. Contrary to the normal condition in nature (Bergmann's Rule, see Vol. 1: xliv) Himalayan birds in this case are smaller than south Indian and Sri Lankan examples.

Young, like adult but black frontal band not so broad nor so pure black. Ear-coverts less lilac, more brownish. Chin and throat duller. Under tail-coverts edged with rusty brown.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	70-82			
♀♀	69-80	15-16	15-17	{ 37-45 mm 35-44 mm
(HW, Koelz, SA, BB, Mukherjee)				

Weight 13 ♂♂ 11-14.5; 4 ♀♀ 10-13.4; 5 oo? 8.5-13.4 g (RAP, GD, SDR).

COLOURS OF BARE PARTS. Iris yellow; eye-rim orange-yellow to orange-red. Bill coral-red, tip of upper mandible brown; palate coral-red. Legs and feet pinkish brown; soles orange-yellow. Young. Iris brown. Bill black, pink at gape and nostrils; mouth coral-red.

Subfamily TICHODROMADINAE: Wall Creepers

For description see Baker, E. C. S., 1922, FBI 1: 441 (Genus *Tichodroma*); Hans Löhrl, 1964, article 'Nuthatch' in Thomson, A. L. (ed.), *A New Dictionary of Birds*, London & New York.

Genus *TICHODROMA* Illiger

Tichodroma Illiger, 1811, Prodromus: 210. Type, by monotypy, *Certhia muraria* Linnaeus

Cf. Vaurie, C., 1957, Amer. Mus. Novit., No. 1858: 1-8

Bill very long, slender, slightly curved, longer than head, with long, narrow nostrils. Wing very large, rounded; first primary (as.) about half the length of second; second and third primaries falling short of tip of wing. Tail of twelve soft rectrices. Tarsus smooth; hind claw longer than its toe.

1839. Wall Creeper. *Tichodroma muraria nepalensis* Bonaparte

T.(ichodroma) nepalensis Bonaparte, 1850, Conspl. Gen. Av. 1: 225 (Central Asia)
Baker, FBI No. 457, Vol. 1: 441

Plate 97, fig. 9

LOCAL NAMES. *Dewal gaiyuk* (Pushtu); *Lamba dider* (Kashmir); *Suppuotsu* (Cham-ba); *Sag-gorsa-lamdong-pho* (Lepcha).

SIZE. Sparrow; length c. 17 cm (6½ in.).

FIELD CHARACTERS. Winter. *Above*, crown pale brown; a white eyering. Back ashy. Wings blackish brown with bright crimson shoulder and outer edge, the primaries with round white spots very conspicuous in flight. Tail comparatively short, blackish brown with grey tip, the outer rectrices mostly white. *Below*, throat and upper breast white; rest of underparts dark slaty.



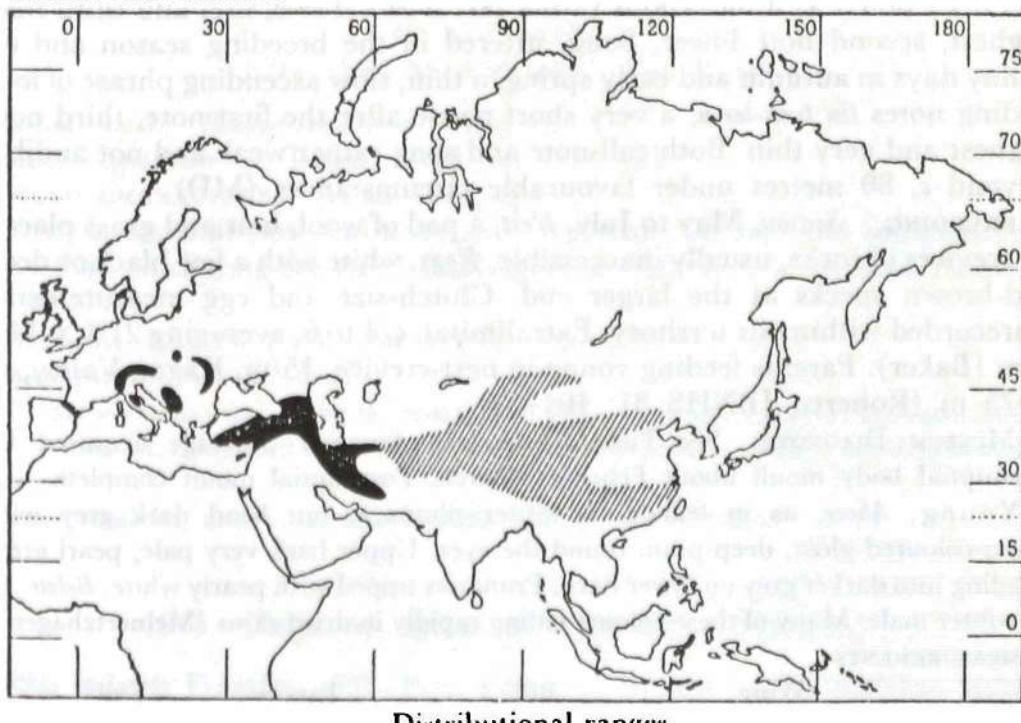
c. 1

Summer. Crown ashy like back. Throat and upper breast black. Sexes practically alike, though female more brownish grey on crown.

At a distance, general appearance and actions confusingly like Rock Nuthatch, both when creeping up a rock face and on the wing. At close range easily identified by unique crimson wings continually flicked while climbing.

STATUS, DISTRIBUTION and HABITAT. Resident, subject to vertical movements and winter wanderings. Fairly common but sporadic. From the Sased Koh north to Chitral, Gilgit and Hunza, thence east through Ladakh,

Tichodroma muraria



Distributional ranges



nepalensis (1839)



muraria (RE)

Kashmir and along the Himalayas through Arunachal Pradesh. Breeds mostly above 3300 m, possibly down to c. 2700 m locally, and up to permanent snow-line (young bird obtained in July at 6400 m in Ladakh—Meinertzhagen). In winter (October to March or early April) commonly reaches the foothills in suitable country, and sometimes wanders considerable distances into the plains (Salt Range, Lyallpur, Lahore, Fatehpur Sikri, Dehra Dun, Etawah, Ghazipur, Delhi, etc.). Affects gorges and vertical cliffs, especially near streams or small cascades; in winter also visits earth cliffs, concrete walls, buildings and archaeological ruins, and boulders in river-beds.

Extralimital. Extends to Transcaspia, Altai, Hopeh and Fujian. Nominate race from Iran to the Alps and the Pyrenees.

GENERAL HABITS. Solitary or in pairs. Seldom seen away from cliffs although it has been noted paying regular visits to the wooden walls of a Kashmir houseboat, and once observed climbing the trunk of a tree. On vertical cliffs, climbs in jerky zigzag spurts continually flicking its crimson wings and poking its long bill into small crannies for insects and spiders. Now and again will let go its hold and tumble through space to explore the scarp lower down, or loop off and fly to another cliff, where active hunting is forthwith resumed. Unlike nuthatches, will often fly high over a valley or forest when moving to a distant hunting-ground. Flight undecided and very hoopoe-like due to broad, rounded wing-tips, also reminiscent of a large butterfly, with alternated flappings and pauses. 'Occasionally attempts to take an insect on wing' (HW).

FOOD. Chiefly spiders, also diptera, beetles and other insects and larvae.

VOICE and CALLS. Recorded within our limits only as 'a plaintive cheeping noise' (A. B. Aitken). A very silent bird. In the Alps its call-note has been noted as a melodious rather fast *ti-oo-ü ti-oo-ö*, first and third note highest, second note lower. Song, uttered in the breeding season and on sunny days in autumn and early spring, a thin, slow ascending phrase of four sliding notes *tiu tueh-tee-ü*, a very short pause after the first note, third note highest and very thin. Both call-note and song rather weak and not audible beyond c. 80 metres under favourable circumstances (MD).

BREEDING. Season, May to July. Nest, a pad of wool, hair and grass placed in crevices of rocks, usually inaccessible. Eggs, white with a few black or deep red-brown specks at the larger end. Clutch-size and egg measurements unrecorded within our territory. Extralimital: c/4 to 6, averaging 21.3 × 14.9 mm (Baker). Parents feeding young in nest-crevice, 15/vi, Kagan Valley, at 3475 m (Roberts, JBNHS 81: 404–5).

MUSEUM DIAGNOSIS. See Field Characters. Summer plumage acquired by prenuptial body moult about February–March. Postnuptial moult complete.

Young. *Above*, as in female in winter plumage, but head dark grey with plum-coloured gloss, deep plum round the eyes. Upper back very pale, pearl grey, shading into darker grey on lower back. Primaries tipped with pearly white. *Below*, as in winter male. Many of these colours fading rapidly in dried skins (Meinertzhagen).

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	100–115	26–30	22–26	53–58 mm
♀♀	92–104			57–60 mm

(SA, MD, Rand & Fleming)

Weight 6 ♂♂ 13-19 g (Paludan, RAP, SA). 2 ♀♀ 16.5, 18 g (SA). 3 juv. 18.2-19.2 g (GD).

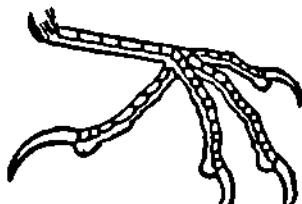
COLOURS OF BARE PARTS. Iris dark brown. Bill black, lower mandible white at base. Legs and feet blackish brown.

Subfamily SALPORNITHINAE: Spotted Creepers

For description see below, under Genus *Salpornis*

Genus SALPORNIS Gray

Salpornis Gray, 1847, Proc. Zool. Soc. London: 7. Type, by original designation, *Certhia spilonota* Franklin



× c. 1

Bill longer than head, slender, curved, laterally compressed. Nostril exposed. No rictal bristles. Wing long and pointed, first primary (as.) very small. Tail nearly square, of 12 soft rounded rectrices. Tarsus thick, short, covered in front with transverse scales. Claws sharp and much curved.

SALPORNIS SPILONOTUS (Franklin): SPOTTED GREY CREEPER

Key to the Subspecies

Upperparts greyer *S. s. rajputanae*

Upperparts darker, underparts more heavily marked .. *S. s. spilonotus*

1840. *Salpornis spilonotus rajputanae* R. & A. Meinertzhagen

Salpornis spilonotus rajputanae R. & A. Meinertzhagen, 1926, Bull. Brit. Orn. Cl. 46: 83 (Sambhur)

Baker, FBI No. 456 (part), Vol. 1: 439

LOCAL NAME. *Rākhodi thad-chad* (Gujarat).

SIZE. Sparrow -; length c. 13 cm (5½ in.).

FIELD CHARACTERS. As in 1841, q.v.

STATUS, DISTRIBUTION and HABITAT. Resident. Central and southeastern Rajasthan (including the Aravalli Hills) from Sambhar to Mt Abu. Habitat as in 1841.

GENERAL HABITS, FOOD and VOICE. As in 1841.

BREEDING. As in 1841.

MUSEUM DIAGNOSIS. Like *spilonotus* (1841) but upperparts greyer, ground colour hair-brown, markings not so intense black. Underparts paler, sandier and less heavily marked.

MEASUREMENTS and COLOURS OF BARE PARTS. As in 1841.

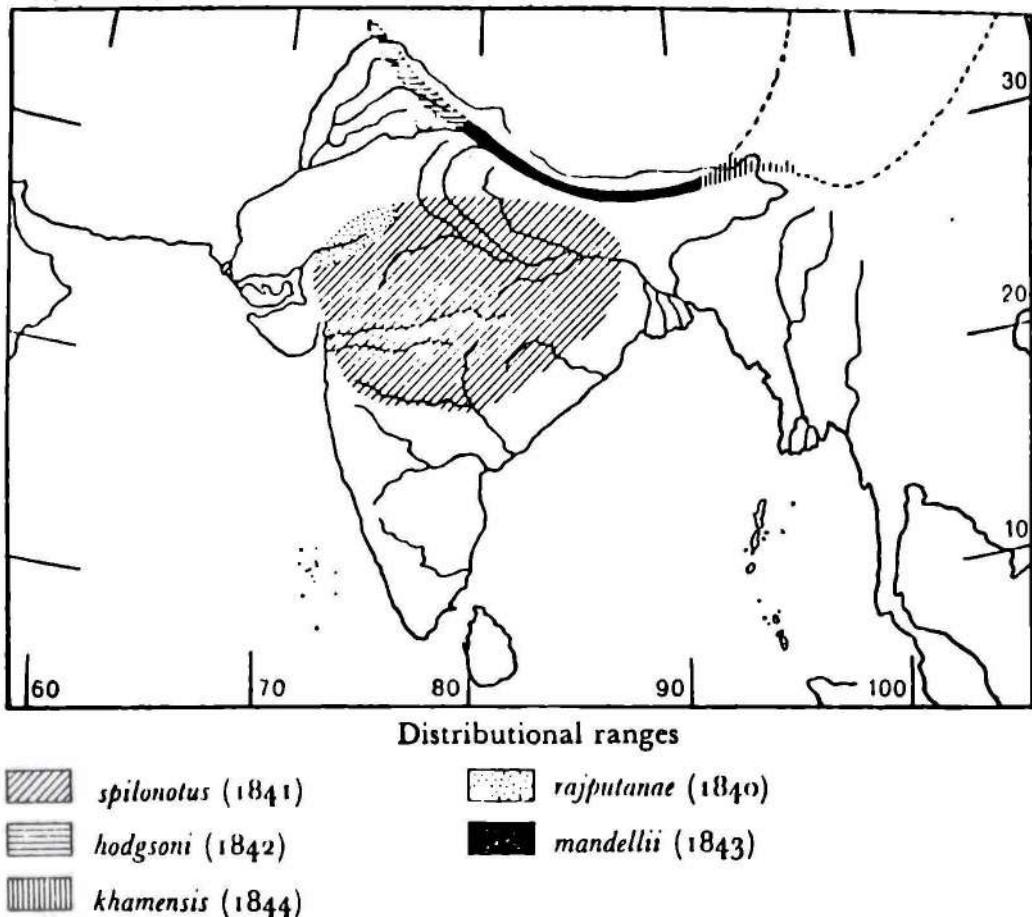
1841. *Salpornis spilonotus spilonotus* (Franklin)

Certhia spilonota Franklin, 1831, Proc. Zool. Soc. London: 125 (Vindhyan Hills)

Baker, FBI No. 456 (part), Vol. 1: 439

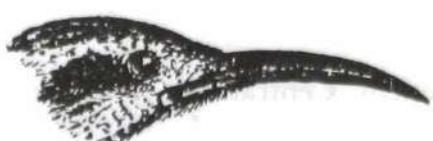
Plate 97, fig. 14

LOCAL NAMES. None recorded.

Salpornis spilonotus and *Certhia familiaris*

SIZE. Sparrow -; length c. 13 cm (5½ in.).

FIELD CHARACTERS. A mottled brown bird with slender, longish curved bill, reminiscent of both tree creeper and nuthatch. *Above*, entirely dark brown spotted with white. A white supercilium and dark ear-coverts. Tail barred brown and white. *Below*, throat white, rest of underparts fulvous spotted and barred with dark brown. Sexes alike.



× c. 1

STATUS, DISTRIBUTION and HABITAT. Resident; on the whole scarce and patchily distributed, but not uncommon locally. The central Indian Peninsula from Gurgaon (near Delhi), Gonda (U. P.) and the 'Bihar terai' (Hume) east to Manbhumi, south through eastern Madhya Pradesh (Bastar dist.) roughly to the Godavari river (Sironcha, Ahmednagar) and west to Khandesh, Rajpipla and Deesa. Affects fairly open deciduous forest of *Acacia*, teak, etc. and mango groves, in the plains and hills.

Extralimital. Other subspecies in Africa south of the Sahara.

GENERAL HABITS. Usually met with singly or in pairs, sometimes in mixed company. Has a preference for trees with deep-fissured bark such as tendu (*Diospyros* sp.), babool (*Acacia nilotica*) and khair (*A. catechu*) for its foraging. Flutters and clammers rapidly up the trunks and branches 'with a vivacity

and ease reminding one of a Wall Creeper' (Babault). 'Resembles a nuthatch more than a creeper as it works the branches backwards and forwards instead of ascending the tree in the jerky spiral so characteristic of *Certhia*' (Newnham, JBNHS 13: 194). First alights near the base of a tree-trunk rapidly creeping up to and along the upper branches, clinging to them upside down merely stopping now and again to investigate a crevice, and soon flying off to an adjacent tree. When alighting on a tree-trunk 'tumbles' on to it with wings open, rather like a quail pitching into grass, in contrast to a woodpecker which sweeps gracefully upwards with wings closed before clinging to the bole (SA).

FOOD. Insects and spiders.

VOICE and CALLS. A feeble whistling song of the volume and timbre of a sunbird's, of about five seconds' duration, *chichichi-chi-chiu-chiu-chiu* (SA).

BREEDING. *Season*, March to May. *Nest*, a deep cup fixed in a crotch of a thin leafless acacia or suchlike tree, or on a slender branch at its junction with a vertical shoot, some 3 to 5 metres above the ground. Composed of leaf-stalks, bits of leaves, lichen and chips of bark, lined with soft spider egg-bags, and cemented exteriorly with cobwebs, cocoons, caterpillar frass and vegetable down, perfectly camouflaged against the bark of supporting branches and practically invisible from below. Inside diameter of cup c. 45 mm, thickness of wall c. 12 mm, depth of cup c. 45 mm. Nest very strong though soft and pliant in the hand, 'almost as flabby as if it was jelly'. *Eggs*, 2 or 3, pale greenish grey with dark brown specks and paler secondary blotches, specially at the large end. Two eggs measure 19.5 × 13 and 19 × 13 mm (SA); average size of 6 eggs '16.9 × 13 mm' (Baker). Incubation by both sexes; period unrecorded.

MUSEUM DIAGNOSIS. Differs from *rajputanae* (1840) in being darker.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
2 ♂♂	90	25, 26	17	52, 53 mm
3 ♀♀	87-89	24-28	17	49-51 mm (SA)

Weight 1 o? 14 g (SA).

COLOURS OF BARE PARTS. Iris dark brown. Bill horny brown, lower mandible flesh colour. Legs and feet bluish black.

Family CERTHIIDAE : Tree Creepers

For description see Baker, E. C. S., 1922, FBI 1: 428; Van Tyne, J. & Berger, A. J., 1959: 516; Ferguson-Lees, I. J., 1964, article 'Treecreeper' in Thomson, A. L. (ed.), *A New Dictionary of Birds*, London & New York.

Genus CERTHIA Linnaeus

Certhia Linnaeus, 1758, Syst Nat., ed. 10, 1: 118. Type, by subsequent designation, *Certhia familiaris* Linnaeus

Bill as long or nearly as long as the head, slender and curved downwards. Nostrils long and narrow. Tarsus scutellated. Toes and claws very long.

CERTHIIDAE

Key to the Species

		Page
A	Tail distinctly barred	<i>C. himalayana</i>
B	Tail not barred	
1	Throat white	
a	Breast white, lower flanks earthy brown	<i>C. familiaris</i>
b	Breast buff, lower flanks ferruginous	<i>C. nipalensis</i>
2	Throat earthy brown or rufous brown	<i>C. discolor</i>
		242

CERTHIA FAMILIARIS Linnaeus: TREE CREEPER

Key to the Subspecies

A	Lower flanks distinctly tinged with rufous	<i>C. f. mandellii</i>	237
B	Lower flanks not (or faintly) tinged with rufous		
1	Upperparts pale brown	<i>C. f. hodgsoni</i>	236
2	Upperparts very dark rusty brown	<i>C. f. khamensis</i>	238

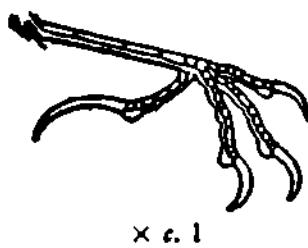
1842. *Certhia familiaris hodgsoni* Brooks

Certhia Hodgsoni Brooks, 1872, Jour. Asiatic Soc. Bengal 41: 74 (Cashmir)
Baker, FBI No. 450, Vol. 1: 434

LOCAL NAMES. None recorded.

SIZE. Sparrow -; length c. 12 cm (5 in.).

FIELD CHARACTERS. *Above*, fulvous brown spotted with whitish on crown and back; a white supercilium. A short wing-bar and an oblique buff band across wing. Tail longish, pointed, brown, unbarred. *Below*, white. Sexes alike.



Distinguished from *C. himalayana* by unbarred tail.
STATUS, DISTRIBUTION and HABITAT. Uncommon resident. The western Himalayas from Gilgit, Astor and Murree east through Kashmir to Lahul, from c. 2100 m up to timber-line. Apparently less common in Kashmir than *himalayana* but the two doubtless often confused in the field. Affects forests of pine, deodar, fir and mixed birch and fir.

EXTRALIMITAL. The species extends from western Europe to Japan. Also cold and temperate conifer forests of North America.

GENERAL HABITS. Solitary, sometimes in twos or threes, usually in mixed hunting parties of tits and other small birds. Creeps up tree-trunks in short jerky spurts, searching the crevices and bark for insects—sometimes drops or slithers lower, in 'reverse gear' and works up again. After working up to near the top, flies off to another tree, alighting on the trunk near its base and scuttling upward in the same way. Occasionally also on moss-covered rocks.

FOOD. Insects and spiders.

VOICE and CALLS. Undescribed. Extralimital: call-note a thin *tsee*; song, a very thin, short phrase on a descending scale.

BREEDING. Little recorded. Season, May and June. Nest (undescribed) placed in cracks in tree-trunks or behind loose outflanking bark, from 3 to 12 metres above the ground. Eggs, 5 or 6, white stippled with reddish specks,

more numerous at the larger end. Average size of 25 eggs 15.8×11.9 mm (Baker). Care of young by both parents.

MUSEUM DIAGNOSIS. Differs from *mandellii* (1843) in being much paler, less rufous above and in lacking rufous tinge on vent and lower flanks.

MEASUREMENTS

	Wing	Tarsus	Tail
♂♀	63-66	c. 17	60-61 mm (Baker)

Bill from skull 16-20 mm

Weight 3 ♂♂ (Nov.-Dec.) 7.6-9.9 g (RAP).

COLOURS OF BARE PARTS. As in 1843.

1843. *Certhia familiaris mandellii* Brooks

Certhia Mandellii Brooks, 1874, Jour. Asiatic Soc. Bengal 42: 256 (Sikkim)
Baker, FBI No. 448 (part), Vol. 1: 433

Plate 97, fig. 10

LOCAL NAMES. None recorded.

SIZE. Sparrow -; length c. 12 cm (5 in.).

FIELD CHARACTERS. As in 1842 but darker; spots rufous, rump ferruginous.

Distinguished from *C. himalayana* by absence of barring on tail; from *C. discolor* by white throat and breast; from *C. nipalensis* by white breast and earth-brown lower flanks (*v.* buff breast and ferruginous flanks).

STATUS, DISTRIBUTION and HABITAT. Common resident, subject to vertical movements. The Himalayas from Kulu to extreme western Arunachal Pradesh (Tawang), replaced at higher altitudes in Bhutan by the next subspecies. Occurrence south of the Brahmaputra doubtful (cf. Baker, *Nidification* 1: 413); also said to have been obtained from Shillong (Hume) and Nagaland (Godwin-Austen) [SF 11: 85. No extant specimens.]. Breeds from c. 2700 m up to timber-line (4200 m in eastern Nepal) mostly above 3300 m. Recorded in winter between 1700 m (Sikkim) and 3600 m (Nepal). Presumably not above 3000 m in Bhutan. Affects forests of fir, deodar, birch and rhododendron. Occurs in pure coniferous as well as in pure birch forest.

GENERAL HABITS, FOOD and VOICE. As in 1842.

BREEDING. Nest with chicks in May in W. Nepal, 3250 m (J. H. Cox, JBNHS 86: 452-3).

MUSEUM DIAGNOSIS. Differs from *hodgsoni* in being darker, more rufous brown above and in having the vent and lower flanks tinged with rufous.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	63-70	15	17	55-57 mm
♀♀	63-66	13	17	55 mm (SA, NBK)

Weight 3 oo? adult (summer) 9-10; 4 juv. 9.2-10.2 g (GD). 2 ♂♂ (July) 9.3, 9.3 g (RAP).

COLOURS OF BARE PARTS. Iris brown. Bill: upper mandible horny brown, lower pinkish flesh. Legs, feet and claws horny brown.

1844. *Certhia familiaris khamensis* Bianchi

Certhia khamensis Bianchi, 1903, in Sharpe, Handl. Gen. Sp. Bds. 4: 355, 360
 (Kansu . . . upper Mekong = Kham, upper Mekong)
 Baker, FBI No. 449, Vol. 1: 434

LOCAL NAMES. None recorded.

SIZE. Sparrow -; length c. 12 cm (5 in.).

FIELD CHARACTERS. As in 1842, q.v.

STATUS, DISTRIBUTION and HABITAT. Bhutan, presumably above 3500 m (specimens from Wangdo Chu and Lamthang, NW. Bhutan, 3500, 4150 m Sept. [SDR coll.]); Arunachal in the Pachakshiri region between 2900 and 4000 m (Ludlow, *Ibis* 1944: 176). Status and habitat as in 1843.

Extralimital. Extends to northern Yunnan and northern Sichuan. For range of species see 1842.

GENERAL HABITS, FOOD and VOICE. As in 1842.

BREEDING. Unrecorded.

MUSEUM DIAGNOSIS. Like *mandellii* but upperparts darker and less rufous. Belly, flanks and under tail-coverts pale smoke colour instead of rufous.

Young greyer than adult, less rusty, especially on rump.

MEASUREMENTS

Wing 9 ♂♂ 68–72 mm; bill from skull 17–18 mm (NBK)

Weight 2 oo? (Sept.) 8·5, 10 g (SDR).

COLOURS OF BARE PARTS. Iris brown, dark brown. Bill: upper mandible black, lower whitish flesh. Legs and feet brown to dark brown.

CERTHIA HIMALAYANA Vigors: **HIMALAYAN TREE CREEPER**

Key to the Subspecies

	Page
A Palest, more greyish above	<i>C. h. taeniura</i> 240
B Darker and browner above	<i>C. h. times</i> 238
C Darker than B, more buffy below	<i>C. h. himalayana</i> 241
D Darkest, more blackish above with sharply defined streaks; barring on tail blacker and more distinct	<i>C. h. infima</i> 241

1845. *Certhia himalayana times* Meinertzhagen

Certhia himalayana times Meinertzhagen, 1922, Bull. Brit. Orn. Cl. 42: 141 (Gilgit)
 Baker, FBI No. 444 (part) and 445 (part), Vol. 1: 430, 431

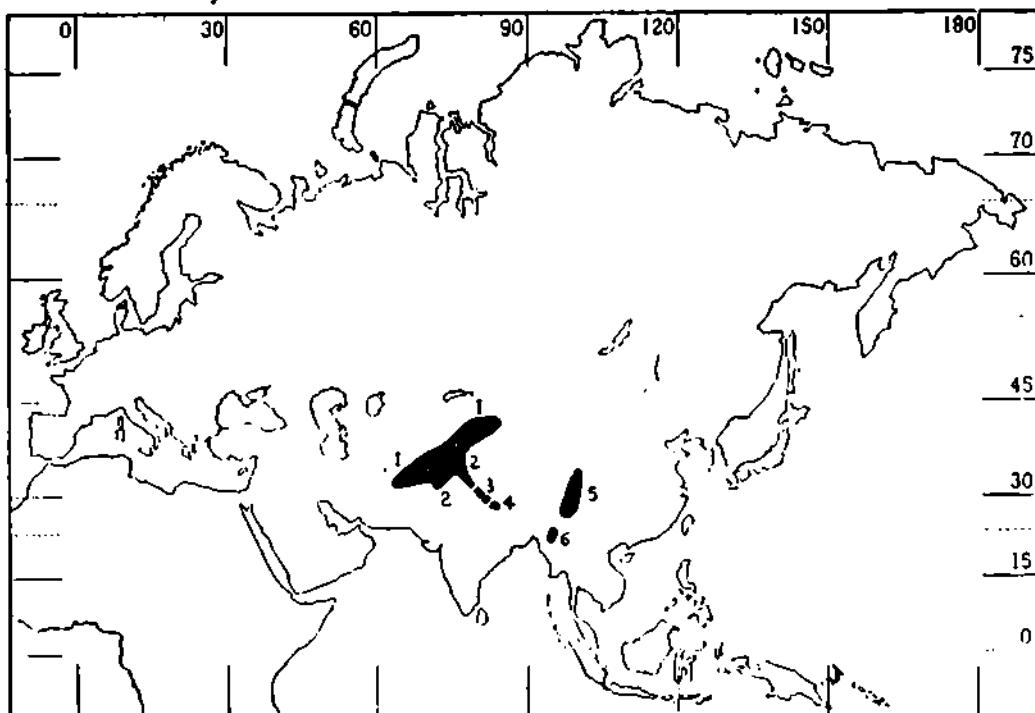
LOCAL NAME. *Koel dider* (Kashmir).

SIZE. Sparrow -; length c. 12 cm (5 in.).

FIELD CHARACTERS. Above, brown mottled with pale grey. Supercilium whitish. A short whitish bar and an oblique buff band on wing, conspicuous in flight. Tail longish, pointed, pale brown distinctly barred with dark brown. Below, chin and throat white grading to buffish on belly and smoky on flanks. Sexes alike.

At close range distinguished from *C. familiaris* by barred tail. Long curved bill a helpful character in identification.

STATUS, DISTRIBUTION and HABITAT. Altitudinal and short-range migrant. From Ziarat north through N.W.F.P. to Chitral and Hunza, thence east

Certhia himalayana

Distributional ranges 1 *taeniura* (1846) 2 *limes* (1845)
 3 *himalayana* (1847) 4 *infima* (1848) 5 *yunnanensis* (RE) 6 *riponi* (RE)

through Gilgit, Astor and Baltistan to Skardu, and from Murree to eastern Kashmir. Breeds from c. 2100 m, locally 1800 m, up to timber-line, optimum zone 2400–3000 m. Affects forests of pine, fir, deodar and juniper. In winter (end October to end March or early April) found mostly below 1800 m (occasionally up to c. 2400 m) down to the foothills and into the plains of the Indus south to Bahawalpur (Chachran, Harunabad, Bhong). In this season frequents orchards, village groves, roadside avenues, and sheesham trees in forest plantations and Canal Bungalow compounds, even where these are isolated far amidst treeless semi-desert tracts.

Extralimital. Eastern Afghanistan.

GENERAL HABITS. Those of the genus, cf. 1842. May be seen in small family parties after breeding. Habitually follows mixed species foraging parties even in the breeding season and in winter quarters (Roberts, pers. comm.). Works up the tree-trunks and along larger boughs like a nuthatch, starting from the base and climbing in short spurts, investigating the crevices in the bark. Having attained a fair height, immediately flies off to another tree, again starting at the bottom and jerking its way upward directly or in irregular spirals. Normally avoids thin branches with no roughnesses in the bark for tiny insects to lurk. Occasionally seen foraging on stone retaining walls in winter.

VOICE AND CALLS. Call-note, a very high-pitched but weak long-drawn squeak. Song, a loud, vigorous and very rapid *tiss, yip yip yip yip yip* (Alexander); lasting c. two seconds, rising in tone and increasing in speed, and then falling away at the end (Roberts). May be heard throughout the year, more lustily in the breeding season.

BREEDING. Season, early April to June. Nest, loosely made of twigs, dry grass or assorted materials and lined with feathers; usually placed behind the loose bark of a large tree, sometimes in cracks or crevices of trees split by lightning, from near the ground up to 15 metres or so, usually rather low down. Eggs, 4 or 5, white profusely marked all over with reddish brown freckles, forming an indistinct zone around the large end. Average size of 34 eggs $15\cdot8 \times 12\cdot2$ mm (Baker). Both sexes build the nest, which takes a couple of weeks to complete. Incubation apparently by female alone; male feeds female on nest. Incubation period 13 or 14 days; care of young by both parents; young leave the nest in about three weeks (Dodsworth, JBNHS 20: 463-71).

MUSEUM DIAGNOSIS. Intermediate between *taeniura* and *himalayana*; upperparts not so rufous as in *himalayana* but not so grey as in *taeniura*; crown almost as dark as in *himalayana*, but underparts paler.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	73-74	23-25 }	15-16	{ 68-69 mm
♀♀	66-72	18-21 }		{ 60-66 mm (MD, HW)

Weight 2 ♂♂ (May) 8, 9; 3 ♂♂ (Oct.-Dec.) 9·1-10·3; 4 ♀♀ (Nov.-Dec.) 7·8-8·5; 2 oo? 8·5, 9 g (RAP, Paludan). 7 oo? (Mar.-Apr.) 8-10 g (SA).

COLOURS OF BARE PARTS. Iris brown. Bill: upper mandible dark brown, lower pale flesh, brown at tip. Legs and feet brown to fleshy brown.

1846. *Certhia himalayana taeniura* Severtzov

Certhia taeniura Severtzov, 1872 (1873), Vertik. Turkest. Zhivotn.: 138
(Chimkent, Turkestan)
Baker, FBI No. 445 (part), Vol. 1: 431

LOCAL NAMES. None recorded.

SIZE. Sparrow -; length c. 12 cm (5 in.).

FIELD CHARACTERS. As in 1845, q.v.

STATUS, DISTRIBUTION and HABITAT. Straggler. One April record in Ladakh (Dras, 3000 m—Meinertzhangen), in stunted willows.

Extralimital. Extends to western Afghanistan and through Turkestan to the Tien Shan.

GENERAL HABITS, FOOD and VOICE. As in 1845.

BREEDING. Extralimital.

MUSEUM DIAGNOSIS. Differs from *taeniura* in being paler and greyer.

MEASUREMENTS

	Wing	Bill (from skull)
♂♂	69-72 }	22-25 mm
♀♀	64-68 }	

(Dementiev)

COLOURS OF BARE PARTS. As in 1845.

1847. *Certhia himalayana himalayana* Vigors

Certhia Himalayana Vigors, 1832 (1831), Proc. Zool. Soc. London: 174
 (Himalayan Mountains, restricted to Kumaon or Garhwal by Meinertzhagen,
 1922, Bull. Brit. Orn. Cl. 42: 140)
 Baker, FBI No. 444 (part), Vol. 1: 430

Plate 97, fig. 11

LOCAL NAMES. None recorded.

SIZE. Sparrow -; length c. 12 cm (5 in.).

FIELD CHARACTERS. As in 1845, q.v.

STATUS, DISTRIBUTION and HABITAT. Fairly common resident, subject to vertical movements; from eastern Kashmir east to Kumaon, breeding between 1500 and 3600 m (timber-line), optimum zone 2000-3000 m. Winters from c. 2100 m, mostly below 1400 m, down to the foothills and adjacent plains (Ambala district). Affects forests of spruce, pine, deodar and rhododendron. Generally avoids pure oak forest, where it is replaced by *C. discolor*.

GENERAL HABITS, FOOD and VOICE. Occasionally flutters off the bark to take an escaping moth in the air. Song, 'a loud but squeaky rapid chi-chi . . . chiu-chiu-chiu (or tsi-tsi . . . tsiu-tsiu-tsiu) of the volume and quality of the tsee-tsee flight-song of Redwinged Bush Lark (*Mirafra erythroptera*)'—SA.

BREEDING. As in 1845.

MUSEUM DIAGNOSIS. Upperparts more rufous than in *limes*, underparts darker.

MEASUREMENTS and COLOURS OF BARE PARTS. As in 1845.

1848. *Certhia himalayana infima* Ripley

Certhia himalayana infima Ripley, 1950, Proc. Biol. Soc. Washington 63: 106
 (Tikapur, Kailali District, Western Nepal)
 Baker, FBI No. 444 (part), Vol. 1: 430

LOCAL NAMES. None recorded.

SIZE. Sparrow -; length c. 12 cm (5 in.).

FIELD CHARACTERS. As in 1845, q.v. See Museum Diagnosis.

STATUS, DISTRIBUTION and HABITAT. Resident, subject to vertical movements. Eastern Kumaon (where intergrading with *himalayana*) and western Nepal east to c. 81°31' long.¹ Two Hodgson specimens from Nepal in Brit. Mus. Occurs from c. 2500 m (October) down to the terai in winter. Summer distribution and habitat probably as in 1847.

GENERAL HABITS, FOOD and VOICE. As in 1845.

BREEDING. Feeding nestlings in May at c. 2740 m, W. Nepal (J. H. Cox, JBNHS 86: 453).

MUSEUM DIAGNOSIS. Differs from *himalayana* by being conspicuously darker, more blackish on the upper surface. This race has sharply defined narrow streaks of buffy white on the head, nape and upper back. The rufous colour on the tips of the feathers

¹ The range of the species appears to be discontinuous in the Himalayas (see map, p. 239). The nearest populations occur in northern Burma (*yunnanensis*) and on Mt Victoria between 2300 and 3000 m (*ripponi*). Both may be expected in adjacent areas of India.

CERTHIIDAE

of the lower back is stronger and darker than in *himalayana*. On the tail also the barring is more blackish as well as stronger and more distinct. There is no size difference.

MEASUREMENTS and COLOURS OF BARE PARTS. As in 1845.

CERTHIA DISCOLOR Blyth: SIKKIM TREE CREEPER

Key to the Subspecies

- | | |
|----------------------------------|---------------------------|
| Paler, more fulvous above | <i>C. d. discolor</i> |
| Darker, less fulvous above | <i>C. d. manipurensis</i> |

1849. *Certhia discolor discolor* Blyth

C. (erthia) discolor Blyth, 1845, Jour. Asiat. Soc. Bengal 14: 580 (Darjeeling)
Baker, FBI No. 451, Vol. 1: 435

Plate 97, fig. 13

LOCAL NAMES. *Sūlsūli* (Paharia); *Saddyer-pho* (Lepcha); *Chuā sorāi* (Assam).

SIZE. Sparrow —; length c. 12 cm (5 in.).

FIELD CHARACTERS. *Above*, dark brown streaked with fulvous. Super-cilium fulvous. A short bar and an oblique buff band across wing. Rump ferruginous. Tail rufous-brown. *Below*, throat and breast earth-brown to tawny brown. Belly paler, greyish to buffish. Under tail-coverts ochraceous. Axillaries white. Sexes alike.



x c. 1

Easily identified by its dark throat. All other creepers have a white throat.

STATUS, DISTRIBUTION and HABITAT. Fairly common resident, subject to vertical movements and winter wandering. The Himalayas from Nepal (about Kali Gandaki river—Fleming *et al.*, 1984) east through Arunachal Pradesh. Obtained in the breeding season from 1800 to 2700 m, and in winter from 300 to 2700 m in Nepal and from 700 to 3600 m in Sikkim. Affects mossy oak and rhododendron forest. Prefers broad-leaved forest but also frequents conifers.

GENERAL HABITS. Those of the genus.

FOOD. Insects and spiders.

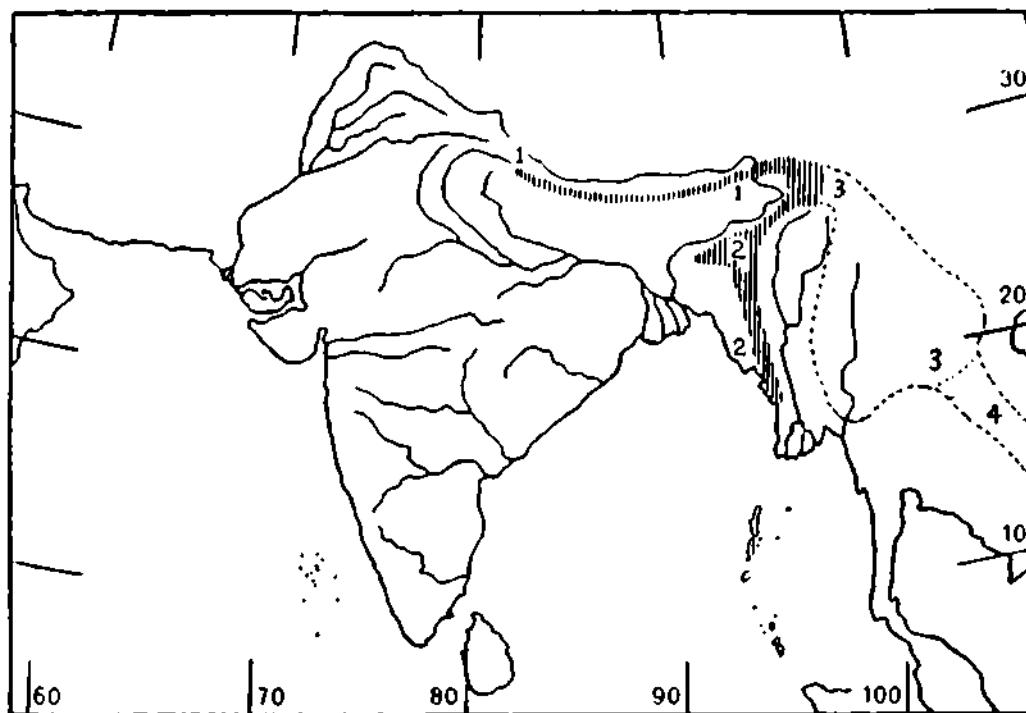
VOICE and CALLS. Little recorded. Call, a sharp, quick-repeated *chip-chip-chip-chip* (SA). Song said to be 'typically tree creeper's'; see also 1850. Song period, early February to May (Proud).

BREEDING. Season, March to May (from circumstantial evidence). Nest and eggs undescribed.

MUSEUM DIAGNOSIS. See Field Characters. For distinction from *manipurensis* see 1850.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	67–76	17–20	17–20	73–82 mm
♀♀	64–72	16–18	17–18	73–77 mm
(SA, Rand & Fleming, MD)				

Certhia discolor

Distributional ranges

1 *discolor* (1849) 2 *manipurensis* (1850)

3, 4 Extralimital subspecies

Weight 7 ♂♀ (Mar.) 10–11; 3 ♂♂ (Oct.) 10–11 g—SA. 2 ♂♂ 10·4, 10·5; 2 ♀♀ 9·6, 10·6 g (GD).

COLOURS OF BARE PARTS. Iris brown. Bill: upper mandible dark brown, lower whitish, yellowish white or pinkish white; gape inside fleshy. Legs and feet pale brown.

1850. *Certhia discolor manipurensis* Hume

Certhia manipurensis Hume, 1881, Stray Feathers 10: 151 (Eastern Hills, Manipur)

Certhia victoriae Rippon, 1906, Bull. Brit. Orn. Cl. 16: 87 (Mount Victoria)

Baker, FBI No. 452, Vol. 1: 437

LOCAL NAMES. *Dao-mojo* (Cachari); *Inrui-m-jet* (Naga); *Voh-ti-ti-ling* (Manipur).

SIZE. Sparrow —; length c. 12 cm (5 in.).

FIELD CHARACTERS. As in 1849, q.v.

STATUS, DISTRIBUTION and HABITAT. Resident, locally common. Nagaland (Godwin-Austen), Manipur, and probably the Khasi and Cachar hills (Baker, JBNHS 17: 791 and 13: 563; cf. also *Nidification* 1: 413).¹ Occurs between c. 900 and 2300 m (on Mt Victoria from 1400 to 3000 m but more frequent in the lower part of its zone). Affects mostly deciduous forest, occasionally pine woods.

¹ Records from Khasi and Cachar hills not supported by specimens; however no other tree creeper seems to occur south of the Brahmaputra.

Extralimital. The Chin Hills and south to the Arakan Yomas. The species extends east through Burma to Yunnan, Laos and Vietnam.

GENERAL HABITS and FOOD. Those of the genus.

VOICE and CALLS. Song described as a loud sharp double-note repeated several times *titja titja . . . titja*—(Heinrich); also rendered as a shrill *duwee-teet, duwee-teet* (Smythies).

BREEDING. Season, chiefly April and May. Nest, a pad of fibres, moss, rootlets and a few feathers placed in cracks or shallow holes in trees c. 2 to 4 metres above the ground. Eggs, apparently 3 or 4, differing from those of *himalayana* and *familiaris* in being more densely marked with deeper red-brown, tiny blotches and freckles. Average size of 11 eggs 15.9 × 12.3 mm (Baker).

MUSEUM DIAGNOSIS. Like *discolor* (1849) but dark feathers of upperparts blacker with less fulvous. Chin, throat and upper breast reddish fulvous; belly and flanks more tinged with fulvous.

MEASUREMENTS

	Wing	Bill (from feathers)	Tarsus	Tail
♂♀	66-71	15-16	17-18	65-68 mm
Wing ♂♂ 67-73; ♀♀ 64-69 mm (Stres.—Mt Victoria)				

Weight 1 ♂ 11; 1 ♀ 10 g (SDR).

COLOURS OF BARE PARTS. As in 1849.

1851. Nepal Tree Creeper. *Certhia nipalensis* Blyth

C.(erthia) nipalensis 'Hodgson' = Blyth, 1845, Jour. Asiatic Soc. Bengal 14: 581
(Nepal)

Certhia Stoliczkae Brooks, 1874, Jour. Asiatic Soc. Bengal 42: 256 (Sikkim)
Baker, FBI No. 455, Vol. 1: 438

Plate 97, fig. 12

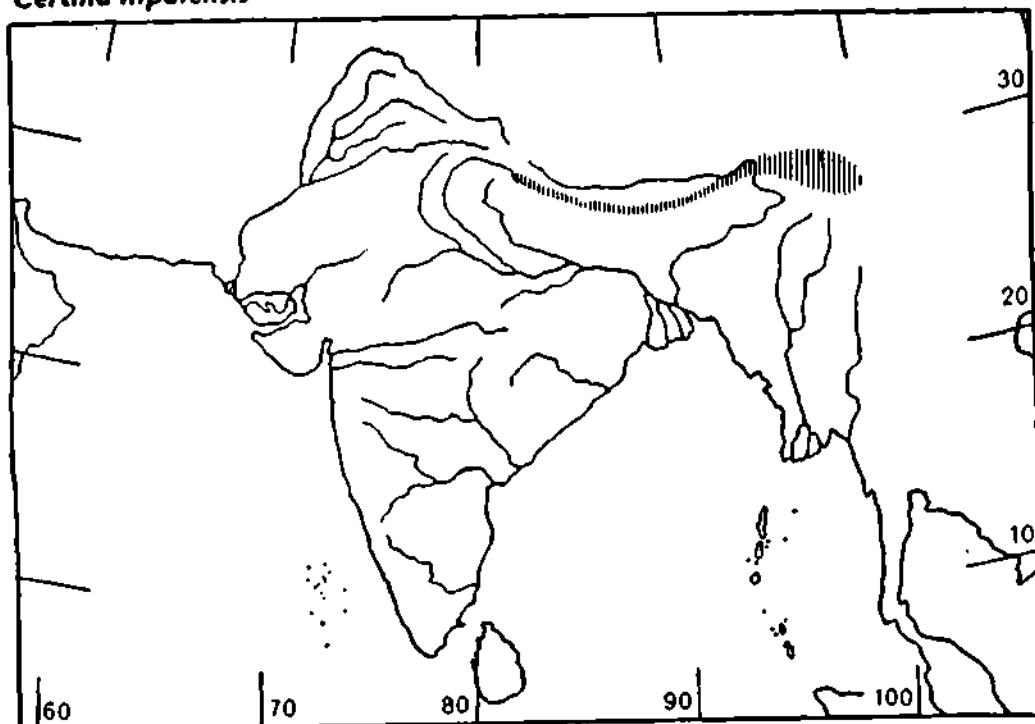
LOCAL NAMES. None recorded.

SIZE. Sparrow —; length c. 12 cm (4½ in.).

FIELD CHARACTERS. *Above*, crown and upper back very dark brown streaked with fulvous. A very broad, buff supercilium. Mantle rusty brown with dark scale-like markings. Rump rusty. Wing marked with a buff wingbar and buff oblique band. Tail brown, unbarred. *Below*, throat whitish. Breast and centre of belly cream-buff. Flanks tawny-olive, rusty on lower part. Sexes alike.

Short, straight bill a helpful character in identification. Distinguished from *discolor* by whitish throat; from *himalayana* by unbarred tail; from *familiaris* by buff breast and tawny flanks (v. white and greyish).

STATUS, DISTRIBUTION and HABITAT. Resident, subject to vertical movements, apparently uncommon. Western Nepal from c. 81° long. (Fleming & Taylor, 1961) east along the Himalayas through Sikkim, Bhutan and Arunachal Pradesh (Ludlow, *Ibis* 1944: 177). Possibly also the hills of North Cachar (Baker, loc. cit.) but no specimens extant. Recorded in summer between 2700 and 3500 m and in winter between 1500 and 3500 m. Affects oak forest and mixed deciduous and conifer forest.

Certhia nipalensis

Distributional range

Extralimital. Ranges east to northern Burma and southeastern Tibet (Pome).

GENERAL HABITS. Keeps singly or in pairs, often among the roving parties of tits, nuthatches and other creepers (Fleming, Stanford). According to Meinertzhagen seldom in hunting parties. Seems to keep to more rotten and mossy trees than other tree creepers, seldom ascending high up into the branches. Movements slow and more deliberate.

FOOD. Insects.

VOICE and CALLS. Unrecorded. A very silent bird, thus difficult to locate.

BREEDING. Unknown. Season, about May.

MUSEUM DIAGNOSIS. See Field Characters.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	66-76	14-17	18-20	75-81 mm
♀♀	66-71			69-76 mm
(Rand & Fleming, NBK, Mayr, MD, SA)				

Weight 2 ♂♂ (May-June) 11.5, 11; 2 ♀♀ (May-June) 11, 11 g (GD). 1 ♂ (Feb.) 12; 1 ♀ (Nov.) 10 g (SA).

COLOURS OF BARE PARTS. Iris brown. Bill: upper mandible black, lower pinkish white. Legs and feet brown.

Family MOTACILLIDAE: Pipits and Wagtails

For description see Baker, E. C. S., 1926, FBI 3: 254; Van Tyne, J. & Berger, A. J., 1959: 528; Voous, K. H., 1964, article 'Wagtail' in Thomson, A. L. (ed.), *A New Dictionary of Birds*, London & New York.

Key to the Genera

	Page
Upper plumage streaked; tail comparatively shorter <i>Anthus</i>	246
Upper plumage unstreaked; tail comparatively longer <i>Motacilla</i>	277

Genus ANTHUS Bechstein

Anthus Bechstein, 1805, Gen. Naturg. Deutsch. 2: 247, 302, 465.

Type, by subsequent designation, Selby, 1825, *Alauda pratensis* Linnaeus

Oreocorys Sharpe, 1885, Cat. Bds. Brit. Mus. 10: 622.

Type, by monotypy, *Heterura sylvana* Hodgson

Cf. Hall, B. P., 1961, 'The Taxonomy and Identification of Pipits', *Bull. Brit. Mus. Nat. Hist.*, Zoology Vol. 7, No. 5: 245-89.

Key to the Species

	Page
I Rectrices pointed; dark shaft-line on breast-feathers dividing to form a triangle at tip	<i>A. sylvanus</i>
II Rectrices not pointed; no shaft-lines on breast-feathers	
A Hind claw not exceeding hind toe in length	
a Pale tip of inner web of penultimate rectrix very small	
1 Pale tips of rectrices white	
i Upper plumage brown, boldly streaked	<i>A. trivialis</i>
ii Upper plumage greenish, finely streaked	<i>A. hodgsoni</i>
2 Pale tips of rectrices pale rufous	<i>A. similis</i>
b Pale tip of inner web of penultimate rectrix large, about one-third length of feather	<i>A. nilghiriensis</i>
B Hind claw exceeding hind toe in length	
c Sides of body plain or with obsolete streaks only	
3 General colour of underparts sandy or buff	
iii Breast spotted or streaked	
o White pattern on second outer rectrix a triangle <i>A. godlewskii</i>	263
o' White pattern on second outer rectrix a narrow white streak	<i>A. novaeseelandiae</i>
iv Breast unstreaked	<i>A. campestris</i>
4 Underparts vinous	<i>A. spinolletta</i>
d Sides of body with coarse dark streaks	
5 Axillaries yellow	<i>A. roseatus</i>
6 Axillaries whitish more or less tinged with brownish or yellowish	
v Throat and breast cinnamon	<i>A. cervinus</i>
vi Throat buffish	<i>A. pratensis</i>

ANTHUS HODGSONI Richmond: INDIAN TREE PIPIT

Cf. Ripley, S.D., 1948, JBNHS 47: 622-7

Biswas, B., 1961, JBNHS 58: 452-3

Key to the Subspecies

Back distinctly streaked	<i>A. h. hodgsoni</i>
Back obsoletely streaked	<i>A. h. yunnanensis</i>

1852. *Anthus hodgsoni hodgsoni* Richmond

Anthus trivialis hodgsoni Richmond, 1907, in Blackwelder, Res. in China, (2): 493, new name for *Anthus maculatus* Jerdon, 1864, Bds. India 3: 873. [Type locality from 1863, ibid. 2: 228 (Calcutta)], nec *Anthus maculatus* Vieillot

Anthus maculatus berezowskii Zarudny, 1909, Orn. Monatsb. 17: 41 (SW. Kansu)
Baker, FBI Nos. 1186 and 1187, Vol. 3: 281, 282

Plate 98, fig. 8

LOCAL NAMES. *Musarichi* (Hindi); *Dhan chidi* (Gujarati); *Muchassi* (Bengali); *Ambal-serwi* (Munda); *Liku jitta* (Telugu); *Pulkurūvi* (Tamil).

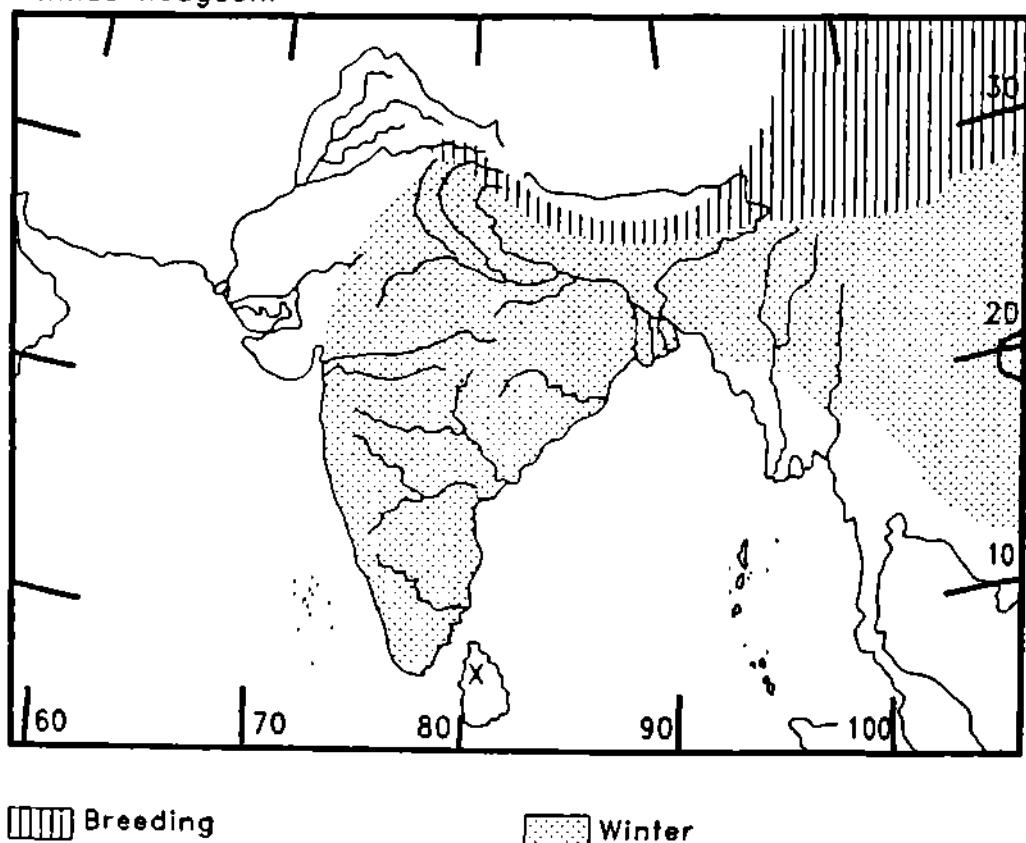
SIZE. Sparrow ±; length c. 15 cm (6 in.).

FIELD CHARACTERS. Above, greenish brown streaked with darker brown. Supercilium, double wing-bar, and outer rectrices whitish. Below, whitish to buff boldly streaked with dark brown on breast and flanks. Sexes alike.

Very similar to *A. trivialis* and not easily distinguishable from it in the field though in *trivialis* the upperparts are browner (v. greenish) and the streaks on the underparts bolder; call-notes apparently identical. *A. pratensis* has finer streaks on breast and different call-notes.

STATUS, DISTRIBUTION and HABITAT. Common summer (breeding) visitor to the Himalayas and winter visitor to the foothills and practically the entire Indian Peninsula. In summer from Dharamsala, Kangra and Kulu (Whistler, JBNHS 31: 474 and *Ibis* 1926: 735) east along the Himalayas to Burma, breeding c. 2700 to timber-line and in the scrub zone above it: in Kulu up to

Anthus hodgsoni



[Vertical Hatching] Breeding

[Diagonal Hatching] Winter

3300 m, in central and eastern Nepal up to 4500 m (Smythies), in Sikkim and Arunachal Pradesh up to c. 4000 m. Affects grass and bracken-covered slopes, rocky ground and glades in open forest of oak, fir, pine, etc., abandoned cultivation and scrub with isolated trees; also dwarf juniper or other scrub just above timber-line. Winters from c. 2000 m, occasionally 2500 m (Nepal), down to the foothills and in most of the Indian Peninsula, west to Kangra and Mt Abu, Bharatpur (Rajasthan), east throughout Assam and Bangladesh, and south to the Ashambu Hills (southern tip of the Peninsula) and in Sri Lanka (Hoffmann, JBNHS 86: 15). In the south winters mostly in the hills up to the summits—common in coffee and cardamom plantations—and, unlike *A. trivialis*, does not seem to occur outside the evergreen woodland or in the lowlands. In the north commonly found in the plains in mango groves and suitable wooded biotope.

Extralimital. Ranges north and east to Kansu, Korea and Japan. Winters south to the Philippines and the Indochinese countries. Probably breeds on Mt Victoria (Stresemann & Heinrich, 1940).

MIGRATION. Occurs in winter quarters from September to early May (Himalayas) or mid October to mid April (southern India). Noted on migration up to 5000 m (Mt Everest).

GENERAL HABITS. Keeps singly or in pairs in summer when very territorial; in loose flocks in the non-breeding season. Runs about on the ground in search of food, flying up into trees when disturbed. Flight jerky and undulating, characteristic of all pipits and wagtails.

FOOD. Insects and their larvae, grass- and weed seeds and other vegetable matter; grit. Insects identified among stomach contents in an intensively cultivated tract in Bihar included a large proportion of weevils (especially *Tanymecus* and *Mylocerus* spp.) and other coleopterous and hemipterous remains (Mason & Lefroy, 1912).

VOICE AND CALLS. Song lark-like in character sometimes similar to that of *A. trivialis*, sometimes remarkably different, with a harsher and more wheezy tone (GD); almost invariably uttered on the wing, the bird rising a short distance in the air on quivering wings from a tree-top and volplaning back to its perch with wings and tail outspread. Song period mid March till third week of June (Proud, GD). Call-note, a single *tseep* from time to time, especially in flight, and continually repeated when alarmed (near nest).

BREEDING. Season, May to end of July. Two broods are reared though not all birds appear to be double-brooded. Nest, a cup of moss and dry grass lined with fine grass and a few hairs, placed on the ground usually under a tuft of grass occasionally under a boulder. Eggs, normally 4, less often 3 or 5, dark brown densely spotted with darker colour, occasionally pale grey blotched with dark grey-brown. Average size of 120 eggs 21.4 x 15.8 mm (Baker).

MUSEUM DIAGNOSIS. Above, olive-green with green edges to wing and tail and blackish streaking on head and mantle varying from very light to heavy. Below, white with dark, broad, well-defined streaking variable in extent. Hind claw short and curved. First three primaries longest and subequal, the fourth 1-4 mm shorter. Second, third and fourth primaries emarginated. Tail-pattern slightly off-white, with the pattern on the second outer rectrix in the form of a small spot or triangle near the tip, sometimes extending about 25 mm up the shaft.

Green edges to wings and green on upperparts distinguish *hodgsoni* from all other pipits except *A. roseatus* in autumn plumage. The two species can best be

distinguished by the hind claw which is short and curved in *hodgsoni* and longer and weaker in *roseatus*. In addition *roseatus* has a distinctive tuft of lemon-yellow in the axillary region; it is usually a larger bird with a longer bill, darker legs and less clear white underparts (B. P. Hall).

Differs from subspecies *yunnanensis* (1853) in being prominently streaked on back. Fourth primary in *hodgsoni* usually less than 1 mm shorter than third, in *yunnanensis* usually 1–3 mm shorter.

Spring moult of body-feathers, some wing-coverts and central rectrices in March-April. Postnuptial moult complete about August.

Young, like adult but more heavily streaked on mantle and underparts, the streaks wider as well as more extensive

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	79–90	13–16 }	20–22	{ 53–68 mm
♀♀	77–85	14–16 }		{ 50–67 mm
Hind claw 8–9 mm				
			(BB, B. P. Hall, Stres.)	
♂♀	78–93	—	—	55–69 mm
				(SDR, Stres., SA)

Weight 10 ♂♂ (summer) 20–22·6; 2 ♂♂ (Sept.) 23·5, 24; 7 ♀♀ (summer) 20–23 g (GD, RAP). 8 ♂♀ (winter) 18–23 g (SA). 1 ♀ (winter) 20 g (Roonwal).

COLOURS OF BARE PARTS. Iris hazel-brown. Bill: upper mandible dark horny brown, lower pale flesh colour; gape yellow; mouth yellow and pink. Legs and feet yellowish brown; claws horny brown.

1853. *Anthus hodgsoni yunnanensis* Uchida & Kuroda

Anthus maculatus yunnanensis Uchida & Kuroda, 1916, Annot. Zool. Jap. 9: 134
(Yunnan)

Anthus hodgsoni inopinatus Hartert & Steinbacher, 1933, Vög. pal. Fauna,
Ergänzungsband, (2) 138 (Boatassin, Sachalin)
Baker, FBI No. 118, Vol. 3: 283

LOCAL NAMES. As in 1852.

SIZE. Sparrow ±; length c. 15 cm (6 in.).

FIELD CHARACTERS. As in 1852, q.v.

STATUS, DISTRIBUTION and HABITAT. Common winter visitor in the same range as nominate race (1852), including the Himalayas west to Simla, in Nepal up to 2800 m (Rand & Fleming, *Fieldiana* 41: 187). Affects cultivation with isolated trees, open forest and jungle.

Extralimital. Breeds in southern Siberia from the Petchora river to Kamchatka and Japan.

MIGRATION. As in 1852.

GENERAL HABITS, FOOD and VOICE. As in 1852.

BREEDING. Extralimital.

MUSEUM DIAGNOSIS. Differs from *hodgsoni* (1852) in having the streaks on back obsolete. Moults apparently as in 1852.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	81–90	13–15	20–22	{ 51–66 mm
♀♀	77–86 }			{ 52–62 mm
Hind claw	8–9 mm			
		(BB, SA, B. P. Hall, Rand & Fleming)		
♂♀	81–90	—	—	57–64 mm (SDR)

Weight 16 ♂♂ (winter) 19·4–24·6; 11 ♀♀ (winter) 17–26·3 g (RAP, GD).

COLOURS OF BARE PARTS. Iris dark brown. Bill: upper mandible horny with fleshy on base; lower mandible fleshy with horny tip. Legs and feet horny fleshy; claws horny; soles fleshy white.

ANTHUS TRIVIALIS (Linnaeus): TREE PIPIT

Key to the Subspecies

- Upperparts more earth-brown, less olive; bill broader at base *A. t. haringtoni*
- Upperparts more olive-brown; bill narrower at base *A. t. trivialis*

1854. *Anthus trivialis trivialis* (Linnaeus)

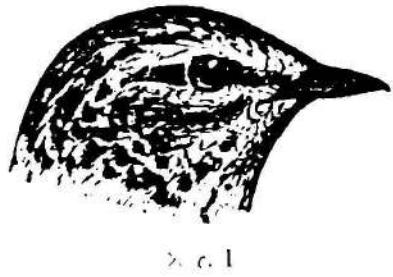
Alauda trivialis Linnaeus, 1758, Syst. Nat., ed. 10, 1: 166 (Sweden)
Baker, FBI No. 1184, Vol. 3: 279

Plate 98, fig. 9

LOCAL NAMES. *Fanfouduni* (Maldivian); other names as in 1852.

SIZE. Sparrow ±; length c. 15 cm (6 in.).

FIELD CHARACTERS. As in 1852 but upperparts brown, and streaks on breast finer.

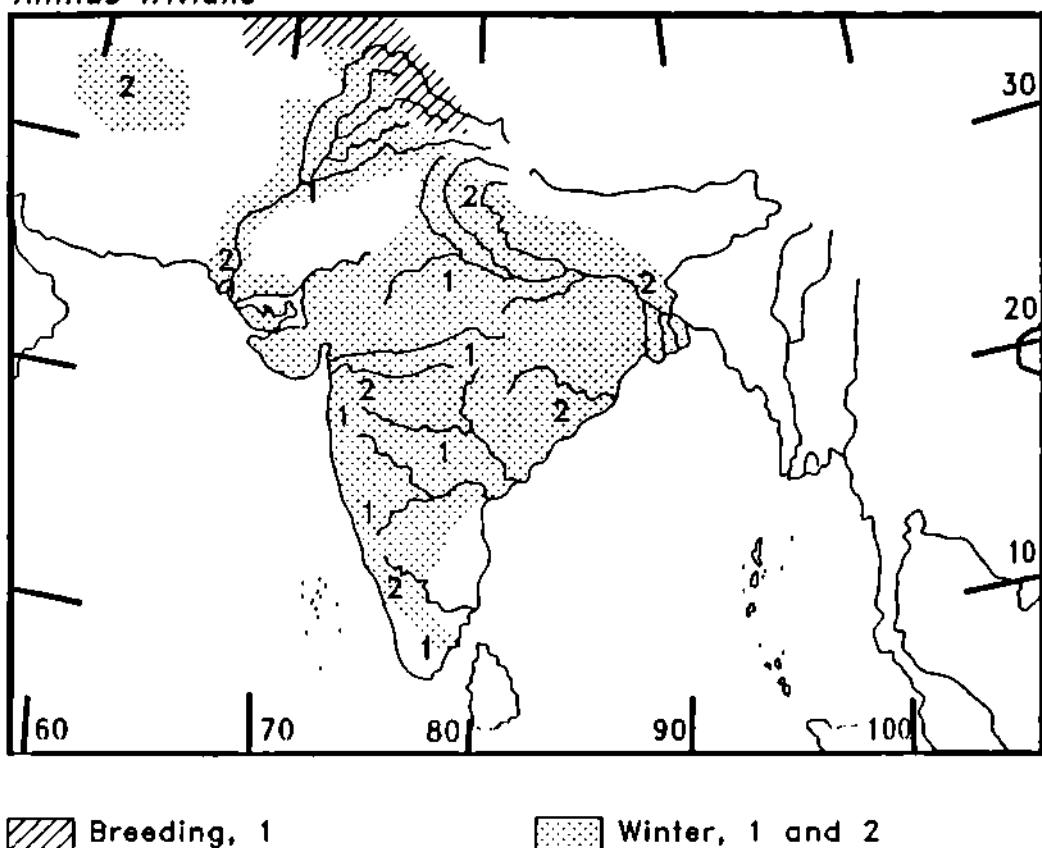


STATUS, DISTRIBUTION and HABITAT. Common winter visitor. The greater part of the Indian Peninsula from the Himalayan foothills up to c. 1400 m (Jammu to Central Nepal but rare) east to the Brahmaputra, west to Sind and south to the Nilgiri hills. A December record for the Maldives Islands (Phillips, JBNHS 60: 581), possibly regular

winter visitor there. Affects cultivation, stubble fields, shady country roads, and open country with a few trees. More a bird of the lowlands than *A. hodgsoni* and prefers more open ground.

Extralimital. Breeds from the Mediterranean countries north to the limit of trees and east to Yakutia. Replaced in eastern Asia by *Anthus hodgsoni*. Winters in Afghanistan, southern Iran, the Mediterranean countries and Africa south to the Transvaal.

MIGRATION. Recorded as a common passage migrant in most of Pakistan (Makran coast, northern Baluchistan, Sind, Punjab) and the western Himalayas (Gilgit, Ladakh, Kashmir and N.W.F.P.). Passes through Nepal in small numbers in April (Fleming & Traylor 1968, Diesselhorst 1968). Old

Anthus trivialis

Breeding, 1

Winter, 1 and 2

records from Darjeeling in April and Sikkim in September. Spring passage from mid March to early May; autumn passage from end of August to October. Occurs on winter grounds from mid September to mid April.

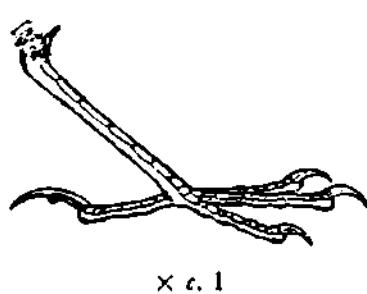
GENERAL HABITS AND FOOD. As in 1855.

VOICE AND CALLS. A very silent bird in winter. An occasional *tseep* may be heard.

BREEDING. Extralimital.

MUSEUM DIAGNOSIS. *Above*, light brown to olive-brown with clear streaking on head and mantle. *Below*, white or light buff with streaking on upper breast dark and well-defined, changing on lower breast to sparse, narrow streaks. Hind claw short and curved. First three primaries longest and equal, fourth commonly about 5 mm shorter than third in European birds (*v.* 1–2 mm shorter in *haringtoni*). Second and third emarginated, fourth slightly emarginated in European birds, more clearly in Indian birds. Tail-pattern slightly off-white with the pattern on the second outer rectrix a small spot, triangle or streak near the tip of inner web. Rectrices usually rather pointed (B. P. Hall).

Differs from *A. hodgsoni* in lacking the greenish tinge on upperparts and in having finer breast-streaks. Differs from *A. pratensis* in having a stouter bill and a distinctive short, curved hind claw. Stout bill and unstreaked upper tail-coverts distinguish



× c. 1

A. trivialis from the young *A. cervinus* and *A. gustavi*. Short legs, clear streaking and pointed wing distinguish it from *A. similis*. For distinction from subspecies *haringtoni* see 1855.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	82-95 }	13-15	{ 20-22	50-68 mm
♀♀	80-90 }		{ 19-21	51-65 mm

Hind claw 8-10 mm

(HW, Koelz, B. P. Hall)

Weight 12 ♂♂ (Sept.-Oct.) 20-25; 7 ♀♀ (Sept.-Oct.) 17-21 g (Paludan, BB, RAP). 4 ♂♂ (Apr.) 19-22; 3 ♀♀ (Apr.) 20-22 g (Paludan, GD).

COLOURS OF BARE PARTS. Iris brown. Bill: upper mandible and tip of lower horny brown, rest of lower mandible flesh colour; mouth pale pink. Legs and feet brownish flesh.

1855. *Anthus trivialis haringtoni* Witherby

Anthus trivialis haringtoni Witherby, 1917, Bull. Brit. Orn. Cl. 37: 44
(Gittidas, Kaghan Valley)

Anthus hodgsoni burzil Koelz, 1939, Proc. Biol. Soc. Washington 52: 75
(Burzil Pass, edge of the Deosai Plain, Kashmir)
Baker, FBI No. 1185, Vol. 3: 280

LOCAL NAMES. As in 1852.

SIZE. Sparrow ±; length c. 15 cm (6 in.).

FIELD CHARACTERS. As in 1854, q.v.

STATUS, DISTRIBUTION and HABITAT. Summer (breeding) visitor to Chitral, Swat, Gilgit, Baltistan, Hazara, Kashmir and possibly Ladakh (Meinertzhagen, *Ibis* 1927: 402) to Lahul (Koelz, loc. cit.). Breeds between c. 2700 and 3900 m, locally 4200 m (Baltistan), on grassy slopes with scattered trees or bushes near or above timber-line. Winters mostly in central India south to northwestern Andhra Pradesh (Utnur—Sálim Ali, JBNHS 36: 910), northern Karnataka (Londa—Koelz, ibid. 43: 36) and Pt Calimere, Tamil Nadu (Sugathan *et al.*, JBNHS 84: 207). Bahawalpur, Pakistan (February. Wintering or on passage?—Sálim Ali, ibid. 42: 728). In this season affects groves of large trees, open deciduous forest, stubble fields and fallow land.

EXTRALIMITAL. Extends to central (?) Afghanistan (Paludan) and Turkestan north to the Tien Shan. For range of the species see 1854.

MIGRATION. No ringing data. Occurs on breeding grounds from April to September; in winter quarters from September (earliest 10) to April (latest 22). Spring passage in northwestern India from about 20 March to mid April, autumn passage from early September to mid October.

GENERAL HABITS. Typical of tree pipits. Keeps singly or in pairs in summer, in small loose flocks in winter. Feeds on the ground, wagging the

¹ A study of the distribution and ecology of *A. trivialis* and *A. hodgsoni* where the ranges of the two appear to meet would certainly bring to light some interesting facts about their relationships.

tail up and down, less vehemently than wagtail. When disturbed flies up into the branches of trees. Flight undulating, very like a wagtail's.

FOOD. Insects and grass- and weed seeds. A flock observed eating nectar from flowers of *Erythrina suberosa* just prior to emigration (end March), the specimens collected being excessively fat (SA).

VOICE AND CALLS. Call-note, a single *tseep* chiefly given in flight; this also repeated persistently and monotonously when bird alarmed at intruder's proximity to its nest. Song: in breeding season male sings from perch on tree-top or prominent rock—a rapid, rather lark-like *chikchikchik . . . chia-chia-chia-wich-wich-wich*. This frequently followed by an upward spring in a narrow arc, the bird volplaning steeply, wings stiffly outstretched and motionless, legs dangling and tail cocked far forward—accompanied by a prolonged *tsee-tsee-tsee . . .*, back to the same or a different perch, the *tsees* slowing down towards the end.

BREEDING. Season, May to end of July. Nest, a cup of grass stems lined with finer grass and a few hairs placed in a little depression under a tuft of grass, under a stone on a hillside or protected by a bush or weed. Eggs, 3 or 4, pale pinkish red, blotched or freckled with darker red and purple brown with pale lavender secondary blotches. For further details see *Nidification* 3: 139. Average size of 30 eggs 21.2 × 16 mm (Baker); of 3 eggs 19.3 × 15.2 (BBO).

MUSEUM DIAGNOSIS. Differs from nominate race (1854) in the more earthy, less olive-fulvous brown of the upperparts, paler fulvous of breast and flanks, slightly heavier streaking of the breast and broader, deeper bill. Colour of upperparts and amount of buff on underparts very variable. Some Himalayan birds are very greyish above in fresh plumage but when a little worn, as in May, they are indistinguishable from European birds in similar state. Most Indian birds in fresh plumage are quite unlike *trivialis*; in worn plumage the only difference is that of bill shape (HW). See 1854 for specific distinction.

Spring moult of body-feathers, central rectrices, tertials and most coverts except primary. Postnuptial moult complete. Fresh autumn and spring plumage alike, but worn spring dress greyer above and paler fulvous below.

Young, much as adult but edges of feathers of upperparts paler buffish brown, making the streaking more conspicuous on underparts, streaks almost confined to throat and pectoral region; flanks and under tail-coverts suffused with buff. Postjuvenile moult of body-feathers, lesser, median and inner greater coverts, tertials and central rectrices.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	83-94	14-16	20-22	{ 54-66 mm
♀♀	83-91	14-16 }		{ 54-63 mm

Width of bill at nostrils 5-5.5 mm

Hind claw 7-9 mm

(B. P. Hall, NBK, HW)

Weight 1 ♂ (October) 21; 3 ♀♀ (October) 23-25; 1 ♀ (June) 24 g (Paludan).

COLOURS OF BARE PARTS. Iris brown. Bill: upper mandible and tip of lower horny brown; rest of lower mandible flesh colour; mouth pale pink. Legs and feet brownish flesh.

1856. Meadow Pipit. *Anthus pratensis* (Linnaeus)*(Alauda) pratensis* Linnaeus, 1758, Syst. Nat., ed. 10, 1: 166 (Sweden)*Anthus pratensis enigmaticus* Zarudny, 1909, Orn. Monatsb. 17: 56
(Taschkent, Turkestan)

Baker, FBI No. 1185a, Vol. 8: 661

Plate 98, fig. 5

LOCAL NAMES. None recorded.

SIZE. Sparrow ±; length c. 15 cm (6 in.).

FIELD CHARACTERS. *Above*, olive-brown streaked with dark brown. Two pale wing-bars. Outer edge of tail white. *Below*, buff with dark brown streaks on sides of throat, breast and flanks. Sexes alike.

Very similar to tree pipits but generally more buffish. In the field only distinguishable by call-notes (q.v.).

STATUS, DISTRIBUTION and HABITAT. Scarce winter visitor to N.W.F.P. (Bannu and Kohat—*Ibis* 1909: 242; JBNHS 18: 684), the Vale of Kashmir (one record: *Ibis* 1927: 403) and Ferozepore (*Ibis* 1869: 355). Affects grassy farming areas.*Extralimital*. Breeds in Europe from the Ob river to France and the British Isles. Winters in the Mediterranean and Middle East countries, NW. India being the easternmost limit of its winter range.

MIGRATION. Recorded within our limits from 12 January to 19 March.

GENERAL HABITS. In winter usually seen in small loose flocks, often in company with *A. spinolletta*, feeding on lawns, and in meadows and lucerne fields.

FOOD. Insects and their larvae, spiders, occasionally weed seeds.

VOICE and CALLS. When flushed usually utters some thin notes very similar to the Water Pipit's *ist* but given in series of 3 or 4 (MD).

BREEDING. Extralimital.

MUSEUM DIAGNOSIS. *Above*, olive-brown with clear streaking on head and mantle. *Below*, white or light buff with spotting on breast dark and well defined, changing on lower breast and flanks to sparse streaks. Hind claw fairly long and weak. First three primaries longest and equal, fourth usually less than 1 mm shorter, occasionally 2 mm. Second, third and fourth emarginated. Tail-pattern white with a small triangle, spot or streak near tip of second outer rectrix. Primaries and rectrices sometimes rather pointed (B. P. Hall).For distinction from *A. trivialis* see 1854.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	74-86	14-16	20-23	51-60 mm
♀♀	73-84			49-56 mm
Hind claw 9-15 mm				

(B. P. Hall, Dementiev)

Weight 8 ♂♂ 16-19.5; 4 ♀♀ 15.7-18 g (Dementiev).

COLOURS OF BARE PARTS. Iris dark brown. Bill dark brown, brownish flesh at base. Legs and feet pale brown.

ANTHUS NOVAESEELANDIAE Gmelin: PADDYFIELD PIPIT

Key to the Subspecies

		Page
A	Darker, more heavily streaked and larger; wing usually over 88 mm, tarsus usually over 28 mm	<i>A. n. richardi</i> 255
B	Paler, less heavily streaked and smaller, wing usually under 88 mm, tarsus usually under 28 mm	
1	Palest and less heavily streaked	<i>A. n. waitei</i> 256
2	Intermediate	<i>A. n. rufulus</i> 257
3	Darkest and more heavily streaked	<i>A. n. malayensis</i> 259

1857. *Anthus novaeseelandiae richardi* Vieillot

Anthus Richardi Vieillot, 1818, Nouv. Dict. d'Hist. Nat. 26: 491 (France)
Baker, FBI No. 1193, Vol. 3: 288

Plate 98, fig. 1

LOCAL NAMES. *Rügail, Chārčāri* (Hindi); *Suriam, Serwi, Chanchir* (Chota Nagpur); *Gurapa-modi-pitta* (Telugu); *Pulla purake, Nettai-kali* (Tamil); *Chatuppan, Varamban* (Malayalam); *Gomaritta* (Sinhala).

SIZE. Sparrow; length c. 17 cm (6½ in.).

FIELD CHARACTERS. A strikingly long-legged pipit similar to *A. n. rufulus* (1859, q.v.) but larger.

STATUS, DISTRIBUTION and HABITAT. Widespread but local and erratic winter visitor; common from Bengal eastwards, uncommon in the Indian peninsula. Recorded from the Nepal terai (Rand & Fleming 1957) and the Kathmandu Valley (Scully); south in the Peninsula to Kerala, Tamil Nadu and Sri Lanka (plentiful in the lowlands). In India normally east of a line Fatehgarh to Goa but also recorded in Kohat (Whitehead, *Ibis* 1909: 243); eastwards through Bengal, Bhutan, Assam, Manipur and Bangladesh. Also the Andaman Islands (Hume). Affects cultivation, stubble fields, bare hillsides and sandy areas; shows a marked preference for damp grassy ground—jheel margins etc.

Extralimital. Breeds from western Siberia east to Korea and the Sea of Okhotsk.

The species *novaeseelandiae* ranges through China, the Indochinese countries, Malaysia, Indonesia, the Philippines, New Guinea, Australia, New Zealand and Africa south of the Sahara. Only the Palaearctic subspecies are regular migrants and winter in southern China, the Philippines and Indochinese countries.

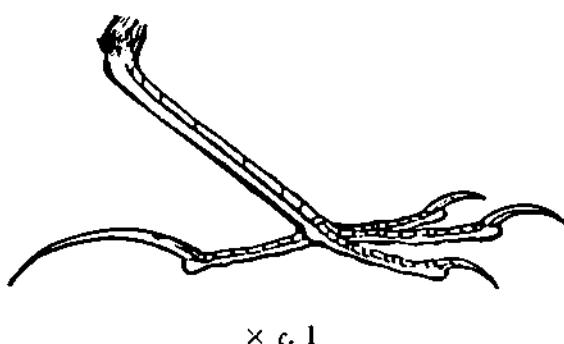
MIGRATION. Occurs in winter quarters from October (earliest 10 Oct.) to April or early May (latest 22 May).

GENERAL HABITS. As in 1859.

FOOD. Beetles and other insects and larvae.

VOICE and CALLS. Usual note a loud, rapid and harsh *treep* ('r-r-rüüp'—Witherby), apparently unlike that of resident subspecies (1859, q.v.). A soft double chirp strongly reminiscent of the note of a bunting (Brooks).

BREEDING. Extralimital.



MUSEUM DIAGNOSIS. Differs from the resident Indian subspecies in being larger with a longer tarsus. (See Measurements.)

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	89-102	16-21}	28-33	{ 63-78 mm
♀♀	86-97	15-19}		{ 62-72 mm
Hind claw ♂♂	14-27			
	♀♀	14-19 mm		

(HW, SA, B. P. Hall, SDR)

Weight 1 ♂, 1 ♀ Bhutan (Sept.) 27, 27 g—SDR.

COLOURS OF BARE PARTS. Iris brown. Bill horny brown, paler on lower mandible except tip; mouth yellow to pale flesh. Legs, feet and claws brownish flesh; soles chrome-yellow. Legs and feet not so fleshy in colour as those of *A. n. rufulus* and *A. godlewskii*, but are more yellowish, particularly the soles (Brooks).

1858. *Anthus novaeseelandiae waitei* Whistler

Anthus rufulus waitei Whistler, 1936, J. Bombay nat. Hist. Soc. 38: 766

(Jhelum, Punjab)

Baker, FBI No. 1195 (part), Vol. 3: 290

LOCAL NAMES. *Rūgail*, *Chārcharī* (Hindi); *Dhān chidi* (Gujarati).

SIZE. Sparrow ±; length c. 15 cm (6 in.).

FIELD CHARACTERS. As in 1859, q.v.

STATUS, DISTRIBUTION and HABITAT. Fairly common resident, subject to local movements; mostly a summer visitor to the Himalayan foothills. Pakistan from Kohat and Punjab to Quetta and Sind, and northwestern India east to U. P. from the Himalayan foothills (up to c. 1000 m, locally 1800 m, exceptionally 3000 m—Whistler, *Ibis* 1925: 189), south through Haryana, Uttar Pradesh, Rajasthan, Gujarat and Madhya Pradesh to the Narbada river. Affects grassland, drying up lake margins (Roberts), stubble fields, abandoned land and marshy ground.

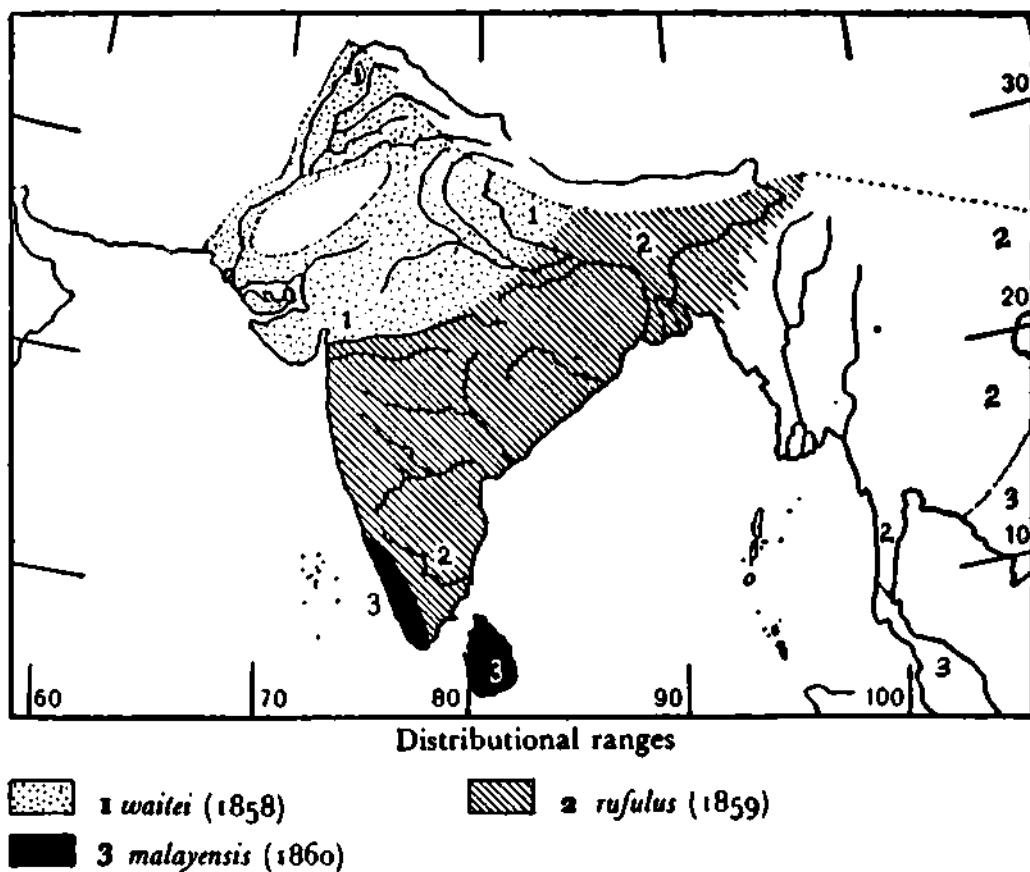
Extralimital. Has been obtained at Kandahar in summer.

GENERAL HABITS, FOOD and VOICE. As in 1859.

BREEDING. Season, March to end of July. Nest and eggs, as in 1859.

MUSEUM DIAGNOSIS. Differs from *rufulus* (1859) in being paler, greyer and less heavily streaked both above and below. Differs from *richardi* by smaller size and shorter tarsus.

May be confused with first-winter birds and some adults of *A. campestris* which have

Anthus novaeseelandiae

retained some spotting on breast and have the same tail-pattern and wing-formula; *campestris* is identified by relatively short tarsus, long wing, shorter and more curved hind claw and finer bill. The fact that measurements overlap and are ambiguous makes it difficult to identify all juveniles of *A. campestris*, *A. novaeseelandiae* and *A. godlewskii* with certainty (B. P. Hall). In winter quarters *A. campestris* is usually gregarious whereas *A. novaeseelandiae* is solitary or in pairs (Roberts pers. comm.).

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	76–86	16–17	25–28	51–58 mm
♀♀	75–82	15–17	24–27	49–56 mm
Hind claw ♂♂	11–17;	♀♀ 12–15 mm		

(B. P. Hall)

COLOURS OF BARE PARTS. As in 1859.

1859. *Anthus novaeseelandiae rufulus* (Vieillot)

Anthus rufulus Vieillot, 1818, Nouv. Dict. d'Hist. Nat. 26: 494 (Bengal)
Baker, FBI No. 1195 (part), Vol. 3: 290

Plate 98, fig. 2

LOCAL NAMES. *Rūgail, Chārčāri* (Hindi); *Suriam, Serwi, Chanchir* (Chota Nagpur); *Gurapa-modi-pitta* (Telugu); *Pulla purake, Nettai-kali* (Tamil).

SIZE. Sparrow ±; length c. 15 cm (6 in.).

FIELD CHARACTERS. An exact miniature of *richardii* (1857, q.v.) and usually shorter on the legs. *Above*, dark brown marked with fulvous. Tail dark brown with white outer rectrices conspicuous in flight and when alighting. *Below*, buff streaked with brown on breast. Sexes alike.

A. campestris usually has unstreaked underparts though some individuals are lightly streaked on breast. Call-notes very different.

STATUS, DISTRIBUTION and HABITAT. Common resident, subject to local movements. India east and south of the range of *waitei* (excepting Kerala), the Nepal Valley, terai and duns, Jalpaiguri duars, Bhutan foothills to c. 1800 m, Bangladesh and NE. India. In Nepal breeds locally up to c. 2100 m. Withdraws from higher levels in winter when occurring from c. 1000 m down. Passes through in Sikkim and Nepal in autumn below c. 2000 m (see Diesselhorst, 1968: 361). Affects open grass and stony country, fallow fields, low dry crops, edges of cultivation, roadsides and, locally, village grazing grounds.

Extralimital. Ranges east through Burma, Thailand, northern Vietnam and southern China. For range of species see 1857.

GENERAL HABITS. Keeps in pairs or small loose flocks according to season. Feeds on the ground, running about briskly and moving its tail up and down in the manner of wagtails; flight also similarly undulating. Perches freely on bushes and tufts of grass.

FOOD. Insects and their larvae. Identified among stomach contents are weevils (*Myllocerus* sp.), ants (*Phidole malinsi*, *Cremastogaster subnuda*), termites (*Termes* sp.), Hemipterous bugs, spiders, weed seeds, grass blades and other vegetable matter (Mason & Lefroy, 1912).

VOICE and CALLS. Song consists of a wheezy trill or feeble *tseep* notes uttered as the bird rises in the air in an ascending succession of dipping curves; when arrived at the highest point dives to earth in an abrupt curve with stiff, partly extended wings (HW). Also described as a series of five to twenty *clink* notes often given in flight (Nichols). Ordinary call-note a thin high-pitched *pipit* or *tseep-tseep* (SA). Concern for nest and young expressed by a feeble *tsip-tsip-tsip* etc. as parent flies flutteringly a few metres above intruder, sailing down to the ground on stiff half-closed wings and upturned tail looking like a child's paper aeroplane. This manoeuvre repeated again and again.

BREEDING. Season, the dry months from November till the break of rains in June in the south, March to July in the north, occasionally till September (Bengal). Nest, a cup of grass and grass roots neatly lined with fine grass and hair, sometimes partly domed; usually placed among roots of grass tufts, tangles of weeds, etc. in a fallow field or grazing land, often in a small depression such as a sunbaked hoof-print of cattle. Eggs, 3 or 4, usually 3 in the south, pale grey or buff marked with blackish brown speckles and secondary ones of grey. Average size of 125 eggs 20·2 × 15·4 mm. Brood-parasitized by *Cuculus canorus*. Building of nest and care of young by both sexes. Parents usually approach the nest through a tunnel in the grass, 30 to 60 cm long. Injury-feigning by female flushed from nest has been observed.

MUSEUM DIAGNOSIS. Hind claw medium or long, comparatively weak and often rather straight. First three primaries (as.) longest and subequal, with the fourth

slightly shorter. Fifth primary about 7–10 mm shorter than fourth. Second, third and fourth emarginated. White pattern on inner web of second outer rectrix usually in the form of a narrow streak up more than half the shaft, only slightly wider at the tip.

Differs from *richardi* (1857) in being paler and smaller; from *waitei* (1858) in being darker and browner; from *malayensis* (1860) in being less rufous and less heavily streaked. Some individuals of *A. campestris* have a streaked breast but can usually be identified by shorter hind claw.

A partial moult takes place haphazardly throughout the non-breeding season (B. P. Hall). A complete postnuptial moult in August and September (GD, HW).

Young has scalloped plumage, with rather darker and heavier spotting on breast than adult.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	78–88	15–17	24–28	54–65 mm
♀♀	74–85	15–17	25–26	51–66 mm
Hind claw ♂♂	10–18	♀♀ 11–16 mm		

(HW, BB, B. P. Hall)

Weight 9 ♂♂ (March–Sept.) 20·1–22·7; 6 ♀♀ (March–Sept.) 17·4–22 g (GD, SDR).

COLOURS OF BARE PARTS. Iris brown. Bill: upper mandible dark horny, paler on edges and tip; lower mandible fleshy with yellowish tinge on base and smoky on tip. Legs and feet yellowish fleshy; claws horny; soles pale yellow.

1860. *Anthus novaeseelandiae malayensis* Eyton

Anthus Malayensis Eyton, 1839, Proc. Zool. Soc. London: 104 (Malaya)

Baker, FBI Nos. 1195 (part) and 1196, Vol. 3: 290, 292

LOCAL NAMES. *Chatuppan*, *Varamban* (Malayalam); *Nettai-kāli* (Tamil); *Gomaritta*, *Panu-kūrūlla* (Sinhala).

SIZE. Sparrow ±; length c. 15 cm (6 in.).

FIELD CHARACTERS. As in 1859, q.v.

STATUS, DISTRIBUTION and HABITAT. Common resident. Kerala and Sri Lanka, in the plains and hills up to c. 1800 m (Kerala) and 2100 m (Sri Lanka). Affects ploughed and stubble fields, sparse grass-covered fallow land, neighbourhood of backwaters and irrigation tanks, grazing grounds and grassy slopes and summits of hills, particularly where sheet rock and boulders occur. More or less replaced by *A. nilghiriensis* in the hills though both species may be seen side by side.

EXTRALIMITAL. Malaysia, Sumatra, Java, Borneo and the southern Indo-chinese Peninsula. For range of the species see 1857.

GENERAL HABITS and FOOD. As in 1859.

VOICE and CALLS. Utters a sharp *twit*, *twit-tit* in flight (Henry). For description of song see 1859.

BREEDING. Season, November to May in Kerala, January to July in Sri Lanka, with a peak in April–May. Apparently single-brooded. Nest and eggs, as in 1859. For details see also Phillips, 1950, *Ceylon Jour. of Sci.* 24: 76–8.

Female only appears to build the nest while male keeps watch, but the latter may assist in incubation (Phillips).

MUSEUM DIAGNOSIS. Differs from *rufulus* (1859) in being darker and more heavily streaked. Postnuptial moult complete, August to October.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	77-87	16-18	24-28	51-62 mm
♀♀	74-84	16-18	24-28	50-60 mm

Hind claw ♂♂ 12-18; ♀♀ 12-18.

(HW, B. P. Hall, SA)

COLOURS OF BARE PARTS. Iris brown. Bill: upper mandible and tip of lower horny brown, rest of lower mandible pale flesh colour; gape yellow; mouth orange-yellow, bright yellow or yellow and pink, varying with age. Legs and feet brownish yellow, claws dusky.

ANTHUS CAMPESTRIS (Linnaeus): TAWNY PIPIT

Key to the Subspecies

- Darker and larger; wing mostly over 90 mm *A. c. campestris*
Paler and smaller; wing mostly 90 mm or under *A. c. kastschenkoi*

1861. *Anthus campestris campestris* (Linnaeus)

Alauda campestris Linnaeus, 1758, Syst. Nat., ed. 10, 1: 166 (Europa = Sweden)
Anthus campestris griseus Nicoll, 1920, Bull. Brit. Orn. Cl. 41: 25

(Tischan, Turkestan)

Baker, FBI Nos. 1197 (part) and 1198, Vol. 3: 292, 293

Plate 98, fig. 3

LOCAL NAMES. *Chillu* (Hindi); *Dhan chidi* (Gujarati).

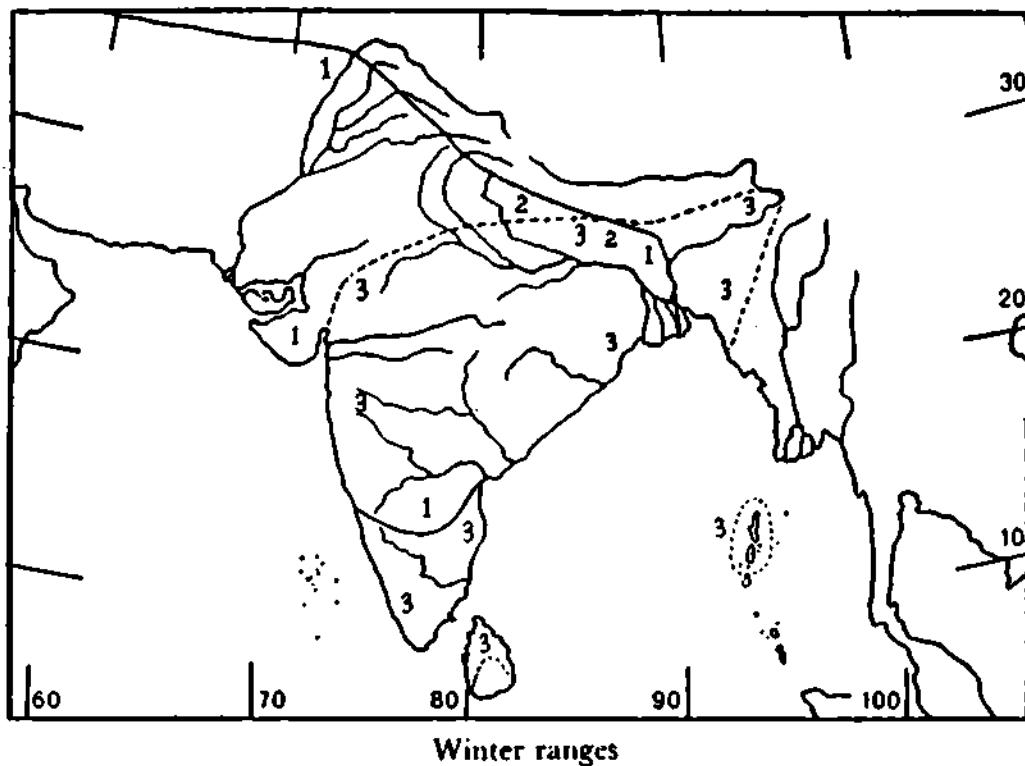
SIZE. Sparrow ±; length c. 15 cm (6 in.).

FIELD CHARACTERS. *Above*, pale brown, lightly streaked. Outer rectrices white. *Below*, plain whitish buff, sometimes with dark streaks on breast. Sexes alike.

Absence of streaking on underparts distinguishes this species from *A. novaeseelandiae*. Some individuals however may have a streaked breast; best identified by call-notes (q.v.). *A. similis* is a larger bird with a relatively longer tail and different call-notes.

In flight silhouette easily confused with Greynecked Bunting (2050) with which it is often associated.

STATUS, DISTRIBUTION and HABITAT. Winter visitor, widespread and locally very common. Pakistan from Kohat and Punjab south through Sind (JBNHS 66: 26) and Baluchistan, and the greater part of the Indian Peninsula east to the Brahmaputra river in Bangladesh (Rashid, 1967) and south to Londa near Belgaum (Koelz, JBNHS 43: 22) and the Kolar district, extreme southeastern Karnataka (Sálim Ali, JBNHS 43: 587); in the north to base of the hills in Kangra, Simla and Dehra Dun. One specimen from Nepal. Affects open, sparsely scrubbed stony country, semi-desert, fallow land, pastures and ploughed fields.

Anthus campestris and *A. godlewskii*

Solid line : 1 *A. c. campestris* (1861) 2 *A. c. kastschenkoi* (1862)

Broken line : 3 *A. godlewskii*

Extralimital. Breeds from Mongolia, Turkestan and northeastern Afghanistan west to France and Morocco. Winters in the Middle East countries, northeastern and northern Africa.

MIGRATION. No ringing data. Arrives in winter quarters mostly in September; two records in July and one on 19 June (Sambhar) are exceptional. Remains till mid April (latest 14 May). Common on passage in the plains of northwestern India and Pakistan. There is but one record from the ranges to the north, Gilgit 8 March.

GENERAL HABITS. Keeps singly, in scattered twos and threes, or loose flocks. Feeds on the ground; frequently jumps up a few centimetres to take an insect from a herb.

FOOD. Insects (weevils, *Tanymecus indicus* identified) and weed-seeds.

VOICE and CALLS. Not recorded within our limits. Extralimital, a distinctive sparrow-like *tseeirp* or *tsirlui* usually uttered in flight.

BREEDING. Extralimital.

MUSEUM DIAGNOSIS. *Above*, light or tawny brown, indistinctly streaked on head and mantle in adult. *Below*, pale buff with little or no spotting on breast in adult. Hind claw short to medium, curved and moderately strong. First three primaries (as.) longest and subequal, the fourth slightly shorter; fifth about 10 mm shorter than fourth. Second, third and fourth emarginated. White pattern on second outer rectrix usually in the form of a long narrow streak up the shaft, only slightly wider at the tip; sometimes reduced to a short streak near tip.

Young has scalloped plumage, distinctly streaked above and on breast.

MOTACILLIDAE

Plainer back and plain breast of most specimens identify this species. However, first-winter birds and some adults which have retained some spotting on breast are not easily distinguishable from some *A. novaeseelandiae* which have a similar wing formula and tail-pattern. Best guides to identification are the relatively short tarsus and long wing of *A. campestris*, and its shorter and more curved hind claw and finer bill.

Moult very variable. A spring moult of body-feathers, tertials, median coverts, sometimes all greater and lesser coverts, central rectrices or whole tail. A haphazard winter moult of some body-feathers, wing-coverts, innermost secondaries and central rectrices. Some birds, both adult and young, arrive in winter quarters before the moult is completed. Postjuvenile moult includes body-feathers, most wing-coverts except primary, usually tertials and central rectrices.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	88-101	18-20	25-28	61-76 mm
♀♀	82-91	17-20	24-26	59-69 mm

Hind claw ♂♂ 10-13; ♀♀ 9-14 mm, rarely over 11 mm

(B. P. Hall, HW)

Weight 12 ♂♀ (Mar.-Apr.) 17-22 (av. 19) g—SA. 2 ♂♂ (Sept.) 22, 25; 2 ♀♀ (Sept.-Oct.) 19, 23.5 g—Paludan, Afghanistan.

COLOURS OF BARE PARTS. Iris dark brown. Bill: upper mandible dark brown, lower pinkish flesh. Legs and feet yellowish flesh; claws dusky.

1862. *Anthus campestris kastschenkoi* Johansen

Anthus campestris kastschenkoi Johansen, 1952 (1944), Jour. f. Orn. 92: 147
(Novosibirsk, West Siberia)

Baker, FBI No. 1197 (part), Vol. 3: 292

LOCAL NAMES. None recorded.

SIZE. Sparrow ±; length c. 15 cm (6 in.).

FIELD CHARACTERS. As in 1861, q.v.

STATUS, DISTRIBUTION and HABITAT. Winter visitor in Uttar Pradesh and Bihar. Habitat as in 1861.

Extralimital. Breeds in western Siberia.

GENERAL HABITS, FOOD and VOICE. As in 1861.

MUSEUM DIAGNOSIS. Differs from nominate race (1861) in being paler and smaller.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	85-92	17-18	25-26	55-65 mm
♀♀	80-87	16-17	23-26	54-61 mm

Hind claw ♂♂ 8-13; ♀♀ 8-10 mm

(B. P. Hall)

COLOURS OF BARE PARTS. As in 1861.

1863. Blyth's Pipit. *Anthus godlewskii* (Taczanowski)

C.(ichlops) thermophilus Hodgson, in Gray, 1844, Zool. Misc.: 83, *nomen nudum*
Anthus striolatus Blyth, in Gray, 1846, Cat. Mamms. Bds. Nepal: 77, *nomen nudum*, as
 a synonym of *Anthus rufescens* Temminck

A.(nthus) striolatus Blyth, 1847, Jour. Asiat. Soc. Bengal 16: 435 (Darjeeling)
Corydalla (A.) thermophilus 'Hodgson' = Jerdon, 1863, Bds. India 2: 233 (name only)
Agrodroma Godlewskii Taczanowski, 1876, Bull. Soc. Zool. France: 158 (Argun
 River, south Dauria)

Cf. Kinnear, N. B., in Ludlow & Kinnear, 1944, *Ibis* 86: 364
 Baker, FBI No. 1194, Vol. 3: 289

LOCAL NAMES. *Chillu* (Hindi); *Pulla puraki* (Tamil); see also 1859.

SIZE. Sparrow ±; length c. 15 cm (6 in.).

FIELD CHARACTERS. Not distinguishable from *A. novaeseelandiae* (1857 and 1859, qq.v.) unless in the hand, but see Voice and Calls. Distinguished from *A. campestris* by streaked breast.

STATUS, DISTRIBUTION and HABITAT. Widespread and locally common winter visitor. NE. India, Bangladesh and most of the Indian Peninsula west to Fatehgarh (near Agra) and Udaipur (southeastern Rajasthan), and south to Nellore, Karnataka (up to 750 m in the hills) and Kerala (uncommon in southern India). Also Sri Lanka (Phillips, *Spolia Zeylanica* 28: 188; JBNHS 51: 937) and Andaman Islands (one record). Reported nesting in 'Assam' (JBNHS 10: 3, 16: 72 and 17: 962, SF 11: 236, FBI 3: 290 and *Nidification* 3: 145), on high ridges between 1600 and 2000 m. Baker states that he 'never found *A. n. rufulus* breeding on these high ridges though the bird was exceedingly common on the lower hills and up to 5000 feet' (1500 m). Data require confirmation. Specimens have been obtained at Sadiya on 5 June (Hume coll.), and Tezu on 20 July (Stevens). These records fall within the migration period of the species, but may be an indication of not too distant breeding grounds. In winter affects dry paddyfields, grass and fallow land and edges of cultivation. On migration prefers swampy land.

EXTRALIMITAL. Breeds in eastern Asia from central Mongolia to eastern Manchuria south to Ala Shan and Tibet. Breeding range apparently complementary to that of *A. campestris*.

MIGRATION. Autumn passage recorded from August to the end of October in southeastern Tibet, Bhutan, Sikkim and Nepal (see Diesselhorst, 1968); on Mt Everest up to 6000 m. Occurs in winter quarters from early September to 20 July in 'Upper Assam' (Stevens, JBNHS 23: 267) to end of April or early May. A specimen has been collected in the Sutlej Valley in June (Hume coll.).

GENERAL HABITS and FOOD. As in 1861. Display described in *Nidification* 3: 146; very similar in general pattern to that of *A. n. rufulus* (1859), q.v.

VOICE and CALLS. Indistinguishable in voice and behaviour from *A. n. richardi* (Schäfer); different from voice of *A. n. rufulus* and peculiarly harsh (Diesselhorst). 'Rises with a loud and discordant note; and by the note alone it is easy to distinguish this species, so utterly unlike is it to that of any other pipit' (Brooks, SF 1: 359).

BREEDING. See Baker, *Nidification* 3: 145 for data possibly pertaining to this species.

MUSEUM DIAGNOSIS. *Above*, tawny brown clearly streaked on head and mantle.

Below, pale buff, the upper breast streaked with dark brown. Hind claw of medium length and comparatively weak. First three primaries (as.) longest and subequal, fourth slightly shorter; fifth about 10 mm shorter than fourth; second, third and fourth emarginated. White pattern on second outer rectrix a triangle, broad at the tip and usually about 15 mm, occasionally reduced further but always retaining a triangular shape rather than appearing as a streak along the shaft.

A haphazard winter moult and a partial spring moult similar to those of *richardii* (1857).

Young has scalloped plumage. Spotting on breast slightly denser and darker than in adult but less well-defined.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	90-97	16-18	25-28	62-70 mm
♀♀	84-93	16-18	24-27	59-69 mm
Hind claw ♂♂ 11-17; ♀♀ 11-17 mm, rarely over 14 mm				(B. P. Hall, NBK)

Weight 1 ♂ (Sept.) 24.7; 4 ♀♀ (Sept.) 25.1-30.5; 2 ♀♀ imm. (Sept.) 22.7, 24.9 g (GD).

COLOURS OF BARE PARTS. Iris dark brown. Bill flesh colour, dusky on upper mandible and tip of lower; gape and mouth bright yellow or pinkish flesh. Legs and feet yellowish.

1864. Redthroated Pipit. *Anthus cervinus* (Pallas)

Motacilla cervina Pallas, 1811, Zoogr. Rosso-Asiat. 2: 511 (Siberia)
Baker, FBI No. 1199, Vol. 3: 294

Plate 98, fig. 6

LOCAL NAME. *Lâl galâ chillu* (Hindi).

SIZE. Sparrow ±; length c. 15 cm (6 in.).

FIELD CHARACTERS. *Above*, pale brown, heavily streaked with dark brown. A buffish supercilium and double whitish wing-bar. Outer rectrices white. *Below*, creamy buff streaked with dark brown on breast, sides of neck and flanks, the throat either whitish or with some pinkish clay colour. In spring, males have the supercilium, throat and upper breast pinkish clay with little or no streaking on breast. Sexes alike.

A. roseatus in summer plumage has a more conspicuous whitish supercilium, vinaceous buff throat, this colour extending to upper belly. *A. trivialis*, *A. hodgsoni* and especially *A. pratensis* are confusingly similar to *A. cervinus* in autumn plumage and are not distinguishable in the field except maybe by their call-notes.

STATUS, DISTRIBUTION and HABITAT. Very scarce passage migrant, mostly in the northwest: Lower Sind from 27 October to 20 November and 4 March to 4 May (fairly common—Ticehurst, *Ibis* 1923: 10), Borit lake, Hunza, 3 November (D. Mallon), Punjab Salt Range, November and March (Roberts); Baroda (Gujarat) 18 November (Sálim Ali, JBNHS 52: 777); Gilgit 1500 m, 21 and 22 October and Kiswand 20 June (Biddulph,

specimens in Brit. Mus.); also Gilgit in May and December (Biddulph, *Ibis* 1882: 270); Sutlej Valley in June (Hume, SF 2: 241, specimen in Brit. Mus.); Manipur in April (Hume, SF 11: 237); central Nepal 5100 m in December (belated migrant?) [Rand & Fleming 1957]; Maldives Islands in December and probably earlier as an autumn passage migrant (Phillips, JBNHS 60: 582). A winter visitor to the Andaman and Nicobar islands (Hume & Davison, Osmaston). Other records should be regarded as mislabeled (e.g. Sikkim in July) or misidentified. Affects low grass on wet ground, and stubble fields.

Extralimital. Breeds in the tundra from northern Scandinavia to the Chukotski Peninsula. Winters in the northern half of Africa and in lower Burma, the Indochinese countries, Hainan, Borneo, Celebes, and the Philippines.

GENERAL HABITS. Usually seen in small, loose flocks on damp or marshy ground. Does not perch on bushes or trees.

FOOD. Insects.

VOICE and CALLS. A hoarse *tee-ez*, a clear *pee-ez* and a soft *teu* (Witherby).

MUSEUM DIAGNOSIS. See Field Characters. Birds lacking rufous tinge on throat are easily distinguished from other small-size pipits by dark centres on upper tail-coverts. For details of plumage see B. P. Hall, 1961.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	83-90	14-15	21-22	49-56 mm
♀♀	79-87			47-55 mm
				(B. P. Hall, CBT)

Tail of one ♂ 65 mm (SA)

COLOURS OF BARE PARTS. Iris brown. Bill horny brown, yellowish at base, darker at tip. Legs and feet fleshy brown; soles pale yellow.

1865. Vinaceousbreasted Pipit. *Anthus roseatus* Blyth

Anthus roseatus Blyth, 1847, Jour. Asiat. Soc. Bengal 16: 437 (Nepal)

Anthus pelopopus G. R. Gray, 1846, Cat. Mamms. Bds. Nepal: 154 (Nepal)

[*nomen nudum*]

Baker, FBI No. 1200, Vol. 3: 295

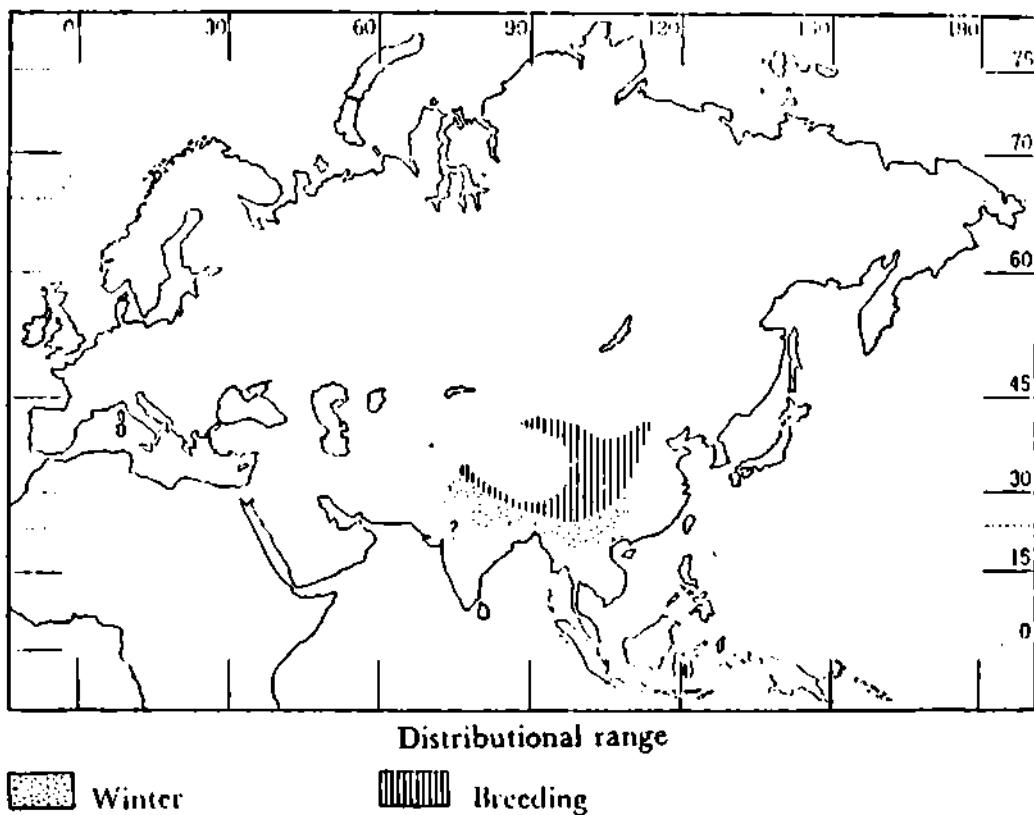
Plate 98, fig. 7

LOCAL NAMES. None recorded.

SIZE. Sparrow ±; length c. 15 cm (6 in.).

FIELD CHARACTERS. Summer plumage. *Above*, grey with dark brown streaks. A distinct buff supercilium. Wings brown with greenish edges and two pale wing-bars. Tail brown with whitish outer edges. *Below*, throat and breast a delicate pink or vinaceous buff with a few faint streaks on breast. Rest of underparts buffish, the flanks streaked with dark brown. Sexes alike.

Autumn plumage. *Above*, olive-brown instead of grey. Supercilium often tinted yellow. *Below*, vinaceous on throat and breast fainter, the breast heavily streaked.

Anthus roseatus

Immature birds lack any vinaceous colour and are indistinguishable from *A. hodgsoni*.

STATUS, DISTRIBUTION AND HABITAT. A very common summer (breeding) visitor to the Himalayas from the Sased Koh, Baltistan and Ladakh (Deosai plain) east through Sikkim, Bhutan and Arunachal Pradesh. Breeds above timber-line up to 4200 m, in Nepal 5300 m. Affects alpine meadows and boulder-strewn grassy slopes, especially about patches of melting snow and on marshy or sodden ground. Winters in the foothills (up to c. 1500 m) and in the northern parts of Pakistan (south to Sutlej-Indus confluence), India (south to Sirsa [Haryana], Gwalior [northern M. P.] and central Bihar). Kathiawar (Bhavnagar, 21°46'N., 72°14'E.—Dharmakumarsinhji, JBNHS 50: 175). Bengal, and the whole of Bangladesh, Assam, Nagaland and Manipur. In winter largely a bird of marshes, jheels and rice-fields.

Extralimital. Breeds in the mountains of western China north to Shaanxi and Kansu and west to the Tarim Basin. Winters south to southern China and the northern Indochinese countries.

MIGRATION. Arrives in winter quarters in October, leaves in early April, a few being still seen in early May in the foothills. May be seen on summer grounds until November.

GENERAL HABITS. Keeps in pairs in the breeding season, otherwise in small loose flocks; young birds start flocking in the beginning of September.

FOOD. Insects, seeds (probably from berries); grit.

VOICE AND CALLS. Call-note, usually uttered when rising, a single or double note similar to that of *A. pratensis* (Schäfer), softer and less shrill than that of *A. spinolella*. Alarm-note near nest, a single, repeated mournful squeak (Whistler). Song, usually uttered during song-flight, given in two parts, a

twittering phrase while rising followed by a long series of pleasant fading notes *tsuli-tsuli-tsuli* . . . as the bird descends slowly towards the ground on outstretched, quivering wings; more musical and more varied than that of *A. spinolletta* and reminiscent of the Woodlark's (Desfayes); also said to be reminiscent of that of the Redwinged Bush Lark. Song regularly given from top of prominent rocks, in which case only the first twittering part is given (Schäfer). Song period, beginning of May to end of July (Proud, GD).

BREEDING. Season, end of May to August, sometimes September. Nest, a cup of grass lined with finer grass and some hair placed in a little depression apparently scraped by the bird, under a rock or a tuft of grass. Eggs, 4, sometimes 3, grey or brownish buff, very densely and finely speckled with shades of colour ranging from sepia to chocolate-brown. Average size of 100 eggs 22×15.6 mm (Baker). Female with well-incubated eggs gives distraction display when nest intruded upon (Roberts). Sometimes brood-parasitized by cuckoos, e. g. *Cuculus saturatus*.

MUSEUM DIAGNOSIS. Axillaries lemon-yellow. First four primaries (as.) longest and subequal. Second, third and fourth emarginated. Tail-pattern slightly off-white, pattern on second outer rectrix confined to a medium or small triangle near tip. Complete postnuptial moult in August-September. A moult of body-feathers, tertials, innermost greater coverts and central rectrices between December and March.

Young, similar to adult in autumn but browner above and less heavily streaked below, with no streaking on the abdomen. Postjuvenile moult of body-feathers, lesser, median and ? greater coverts.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	84-96	15-17 }	22-24	{ 57-69 mm
♀♀	79-87	15-16 }		{ 52-64 mm

(B. P. Hall, BB, Stres.)

Weight 9 ♂♀ (Mar.-Apr.) 17-20 g—SA. 13 ♂♂ (July-Sept.) 19-25; 6 ♀♀ (July-Sept.) 19-23 g (GD, SDR).

COLOURS OF BARE PARTS. Iris dark brown. Bill blackish. Legs and feet brownish flesh.

ANTHUS SIMILIS JERDON: INDIAN ROCK PIPIT

Key to the Subspecies

		Page
A	Palest and greyest, markings on breast fainter	<i>A. s. decaptus</i> 267
B	Darker, markings on breast more distinct	<i>A. s. jerdoni</i> 269
C	Darker and more rufous than both A and B	<i>A. s. similis</i> 270
D	Darkest above, underparts cinnamon rather than buff	<i>A. s. travancoriensis</i> 271

1866. *Anthus similis decaptus* Meinertzhagen

Anthus sordidus decaptus Meinertzhagen, 1920, Bull. Brit. Orn. Cl. 41: 23
(Rud-i-Taman, East Persia)

Baker, FBI No. 1192, Vol. 3: 287

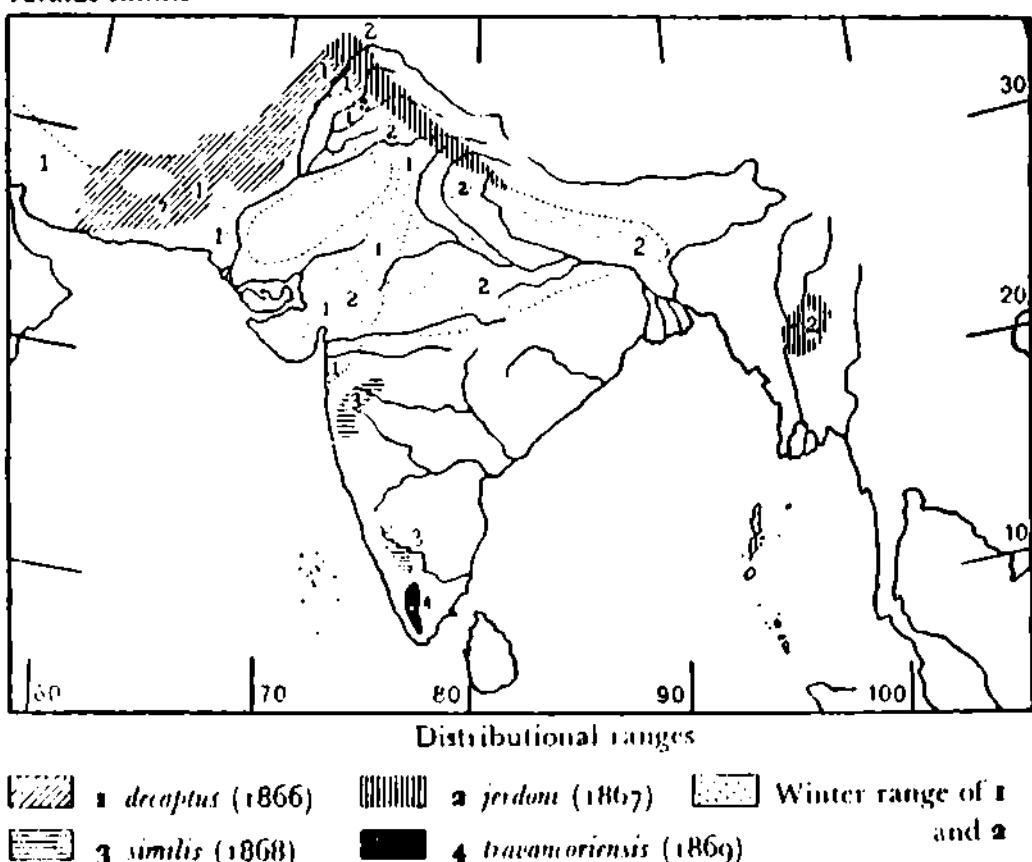
LOCAL NAMES. None recorded.

SIZE. Bulbul; length c. 20 cm (8 in.).

FIELD CHARACTERS. As in 1867, q.v.

STATUS, DISTRIBUTION and HABITAT. Common summer (breeding) visitor to the hills of Baluchistan (Chagai, Kalat and presumably the central Makran Range, Quetta district), N. W. F. P. throughout the lower hills, and western Punjab in the Salt Range. Breeds mostly above c. 1400 m and up to 2900 m, on open grassy slopes, sometimes fairly steep, with boulders, stones or shale. Winters in the lower valleys and foothills, extending to the Makran Coast (scarce), Karachi, Gujarat, Khandesh, western Madhya Pradesh, Rajasthan and Haryana. In this season frequents grassy plains, open low scrub jungle, dry watercourses, fallow land and grassy canal banks.

Anthus similis



Extralimital. Extends west to the Zagros Mts of Iran. The species also occurs in Lebanon, southern Arabia and Africa south of the Sahara.

MIGRATION. Occurs on summer grounds from the beginning of April to mid September.

GENERAL HABITS, FOOD and VOICE. As in 1867.

BREEDING. As in 1867. Nest, well-roofed, fortuitously concealed, placed on sandy bed in a grass clump (Roberts, JBNHS 77: 19). Clutch size normally 3 or 4, occasionally 5. Average size of 30 eggs 23.3 x 16.6 mm (Baker).

MUSEUM DIAGNOSIS. Differs from *jerdoni* (1867) in being paler and greyer; markings on throat and breast fainter, less numerous and paler.

MEASUREMENTS

	Wing	Bill (from skull)	Tail
♂♂	94-105	c. 20	{ 80-91 mm
♀♀	95-101		{ 80-87 mm (HW, SA)

Weight 1 ♂ (March) 31 g (Paludan).

COLOURS OF BARE PARTS. As in 1867.

1867. *Anthus similis jerdoni* Finsch

Anthus jerdoni Finsch, 1870, Trans. Zool. Soc. London 7 (4): 241

(Kotegurh, northwest Himalaya)

Baker, FBI No. 1191, Vol. 3: 286

LOCAL NAMES. None recorded.

SIZE. Bulbul; length c. 20 cm (8 in.).

FIELD CHARACTERS. A large, pale brown, long-tailed pipit. *Above*, pale brown lightly streaked on head and back. A distinct buff supercilium. Wings and tail darker, the latter with whitish outer edge. *Below*, throat whitish, rest of underparts pinkish buff with faint brown streaks on breast, sometimes entirely wanting. Sexes alike.

Very similar to *A. campestris* and *A. n. rufulus*, which are both markedly smaller, but with breast more fulvous in tone (Roberts). *A. n. richardi* is distinctly streaked with dark brown above and is higher on the legs. *A. sylvanus* is much darker and boldly streaked above.

STATUS, DISTRIBUTION and HABITAT. Common summer (breeding) visitor and partly resident, subject to vertical movements. The western Himalayan foothills from N. W. F. P. (Chitral) east to Almora, breeding between c. 600 and 1800 m, occasionally higher. Affects dry grassy and stony slopes. Winters mostly below c. 900 m, south to Gujarat and Madhya Pradesh, and east in the western Nepal terai, Bihar, northern Bengal, Sikkim foothills and northwestern Bangladesh. In winter frequents grassy plains, sparsely scrubbed country, fallow land, wheat-fields and sand dunes, etc.

EXTRALIMITAL. A disjunct population occurs in dry central Burma.

MIGRATION. See 1866. Noted in winter quarters from 5 September to 5 April.

GENERAL HABITS. Keeps singly or in pairs feeding on the ground, rising suddenly from near one's feet if unnoticed and flying to an exposed rock, mound or shrub. When flushed among standing crops, leaps a few metres up in the air and leisurely hovers in aimless zigzags before descending again into the crops a short distance away. This behaviour also frequently indulged in before sunset without provocation, and apparently just for fun. If followed up runs swiftly along the ground, taking cover behind a tuft of grass or a clod. Apparently does not wag tail. Flight rapid, strong and undulating.

FOOD. Insects and berries.

VOICE and CALLS. Call-note, a soft *plip . . . plip* reminiscent of that of *A. n. richardi* but louder and clearer. Only a single note repeated at short intervals, sometimes higher, sometimes lower in tone (Osmaston). Display flight accompanied by a very characteristic song comprising short-spaced

melodious phrases *chirrit-chirrit-tweeweek* during a wide undulating circuit achieved by upward flapping and swooping glides (Roberts, pers. comm.).

BREEDING. Season, April to August. Nest, a shallow cup of coarse grass lined with finer grass and occasionally a small amount of hair, placed on the ground in the shelter of a tuft of grass often roofed over with bent grasses, stone or small bush. Eggs, 3 or 4, pale grey-brown to pale green heavily marked with dark brown or grey-brown spots and blotches. Average size of 40 eggs 22.7×16.6 mm (Baker).

MUSEUM DIAGNOSIS. First four primaries (as.) longest and subequal, fifth not more than 8 mm shorter than the fourth and usually under 5 mm shorter. Second to fifth emarginated. Tail-pattern dusky white or buff; pattern on inner web of second outer rectrix limited to a small triangle near tip. Hind claw short, curved and strong.

A complete moult about August; apparently no spring moult. Differs from *decaptus* (1866) in being darker and having more distinct spotting on breast. For distinction from *similis* see 1868.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	97–105	19–21	28–30	$\left\{ \begin{array}{l} 80–91 \text{ mm} \\ 80–88 \text{ mm} \end{array} \right.$
♀♀	95–99			(HW, SA)

COLOURS OF BARE PARTS. Iris dark brown. Bill dark brown. Legs and feet flesh colour.

1868. *Anthus similis similis* Jerdon

Anthus similis Jerdon, 1840, Madras Jour. Lit. Sci. 11: 35 (Jalna, restricted by Whistler & Kinnear, 1934, JBNHS 37: 99, *vide* Jerdon, 1847, Ill. Ind. Orn., pl. 45)

Anthus cockburniae Oates, 1890, Fauna Brit. India, Bds. 2: 305 (Nilgiri hills)
Baker, FBI No. 1190 (part), Vol. 3: 285

Plate 98, fig. 4

LOCAL NAMES. None recorded.

SIZE. Bulbul; length c. 20 cm (8 in.).

FIELD CHARACTERS. As in 1867, q.v.

STATUS, DISTRIBUTION and HABITAT. Uncommon resident, range disjunct. The Western Ghats near Poona (JBNHS 37: 98–99), possibly Jalna (Jerdon, loc. cit. *supra*—undated but birds were displaying), south to western Karnataka in the Biligirirangan and Bababudan hills, and Tamil Nadu in the Nilgiri hills. A December record from Ahmednagar (Maharashtra) but subspecific identity uncertain, specimen not in existence. Affects grassy hillsides with boulder and sheet rock outcrops and stubble fields etc. from c. 1000 m up to the highest plateaux.

GENERAL HABITS, FOOD and VOICE. As in 1867.

BREEDING. Season, April to August. Nest and eggs, as in 1867. Average size of 10 eggs 22.8×17 mm (Baker).

MUSEUM DIAGNOSIS. Differs from *jerdoni* (1867) in being darker. Underparts darker, richer and more rufous. Markings on breast more numerous and better

defined. Tail-pattern rufous instead of rufous-white. Edges of coverts more rufous. For distinction from *travancoriensis* see 1869.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	90-96	19-21	26-28	72-79 mm
♀♀	89-90			70-75 mm
Hind claw	9-11 mm			

(B. P. Hall, HW)

COLOURS OF BARE PARTS. As in 1869.

1869. *Anthus similis travancoriensis* Ripley

Anthus similis travancoriensis Ripley, 1953, Postilla, Yale Peabody Mus., No. 17: 2
(Road to Muthukuzhi, Ashambu Hills, Travancore-Cochin State)
Baker, FBI No. 1190 (part), Vol. 3: 285

LOCAL NAME. *Paranirangan* (Malayalam).

SIZE. Bulbul; length c. 20 cm (8 in.).

FIELD CHARACTERS. As in 1867, q.v.

STATUS, DISTRIBUTION and HABITAT. Uncommon resident. Kerala and western Tamil Nadu from the Ashambu hills north probably to the Palni hills (cf. JBNHS 44: 405). Affects grassy and stony hillsides with rocky outcrops above c. 1000 m.

GENERAL HABITS, FOOD and VOICE. As in 1867.

BREEDING. Season, chiefly April and May. Nest and eggs, as in 1868.

MUSEUM DIAGNOSIS. Differs from *similis* (1868) in being uniformly darker above and below. Underparts cinnamon rather than buff. Edgings of outer rectrices darker, tawny olive rather than wood-brown. A larger area of dark brown on inner web of second outer rectrix.

MEASUREMENTS. As in 1868.

COLOURS OF BARE PARTS. Iris hazel brown. Bill: upper mandible dark horny brown, lower pale flesh-colour; gape yellow; mouth pinkish yellow. Legs and feet yellowish brown; claws horny brown.

1870. Nilgiri Pipit. *Anthus nilghiriensis* Sharpe

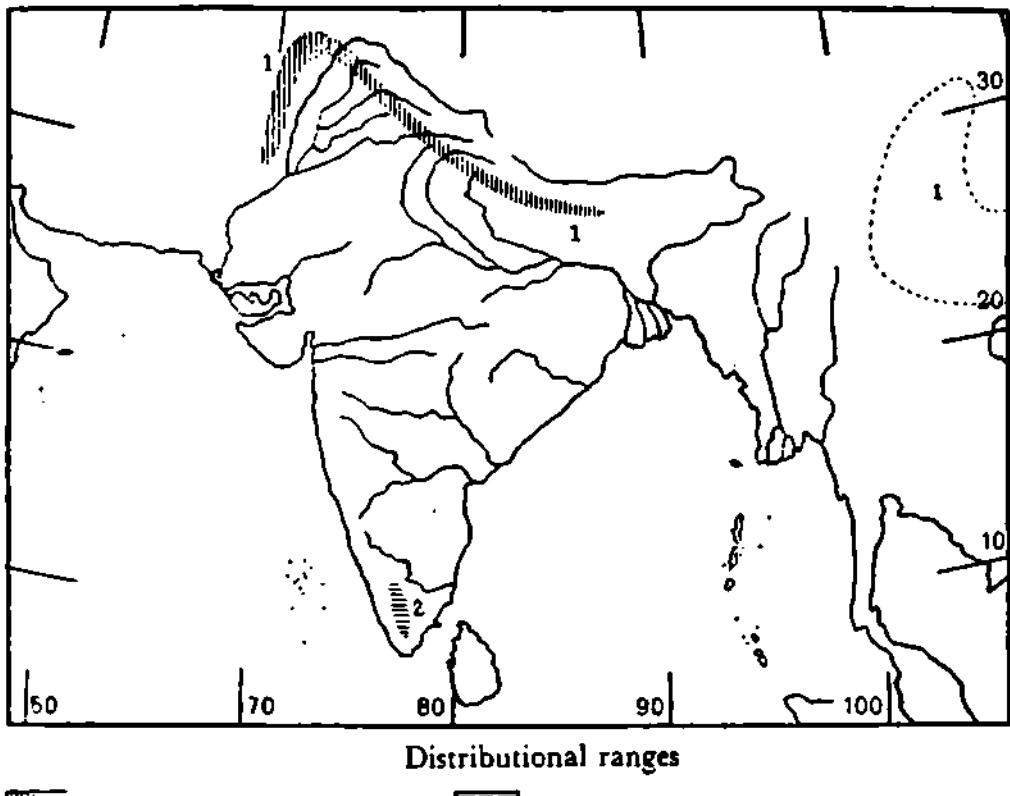
Anthus nilghiriensis Sharpe, 1885, Cat. Bds. British Mus. 10: 550
(Hills of Southern India = Nilgiri Hills)
Baker, FBI No. 1189, Vol. 3: 283

Plate 98, fig. 11

LOCAL NAME. *Pullolian* (Malayalam).

SIZE. Sparrow ±; length c. 17 cm (6½ in.).

FIELD CHARACTERS. A dark, medium-sized pipit. Above, tawny olive with broad dark brown streaks. A buff supercilium. Tail dark brown, outer edge buffish. Below, buff streaked with dark brown on breast, upper belly and flanks. Sexes alike.

Anthus nilghiriensis and *A. sylvanus*

The distinct dark streaks extending to upper belly and flanks identify this pipit in its restricted range.

STATUS, DISTRIBUTION AND HABITAT. Fairly common resident in the hills of Kerala and western Tamil Nadu. Breeds above c. 1500 m in the Nilgiris, Palnis and High Range, and at about 1000 m in the Ponmudi hills. Affects open downs and hilltops covered with short grass. 'Coffee land a favourite haunt; rarely seen outside green woodland' (Betts, JBNHS 50: 225).

GENERAL HABITS. Keeps singly or in pairs. When flushed flies up onto nearest bush or tree.

FOOD. Insects and small seeds.

VOICE AND CALLS. Unrecorded.

BREEDING. Season, April to July. Nest, a cup of coarse grass and grass-blades lined with finer grass and fine grass stems, placed among the roots of short grass, either on open hillsides or on some bank, well screened by grass or weeds. Eggs, 2 or 3, grey-white finely speckled with grey or grey-brown, sometimes with small blotches. Average size of 30 eggs 22.1×16.1 mm (Baker).

MUSEUM DIAGNOSIS. First four primaries (as.) subequal, the fifth 1-2 mm shorter. Second to fifth emarginated. Rectrices rather pointed. Tail-pattern buff, pattern on second outer rectrix a tapering triangle up the shaft, third outer rectrix with a small triangle at tip.

Young, like adult but dark markings on upperparts rather more pronounced and extending to rump and upper tail-coverts. Throat and sides of neck more spotted.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	76-81	15-17 }		
♀♀	73-82	14-16 }	24-27	{ 53-66 mm 52-67 mm
Hind claw ♂♀ 9-13 mm				(B. P. Hall, SA)

COLOURS OF BARE PARTS. Iris brown. Bill blackish brown, paler at base of lower mandible. Legs and feet pale reddish fleshy; claws darker brown.

ANTHUS SPINOLETTA (Linnaeus): WATER PIPIT

Key to the Subspecies

- Spotting on underparts blacker and more distinct *A. s. japonicus*
 Spotting on underparts paler brown and less distinct *A. s. coutellii*

1871. *Anthus spinoletta coutellii* Audouin

Anthus Coutellii Audouin, 1828, in Savigny, Descr. Egypte, Ois. 23, pl. 5: 360
 (Egypte)

Anthus blakistoni Swinhoe, 1863, Proc. Zool. Soc. London: 90
 (Yangtze River, China)

Baker, FBI Nos. 1201 and 1202, Vol. 3: 297, 298

Plate 98, fig. 10

LOCAL NAMES. None recorded.

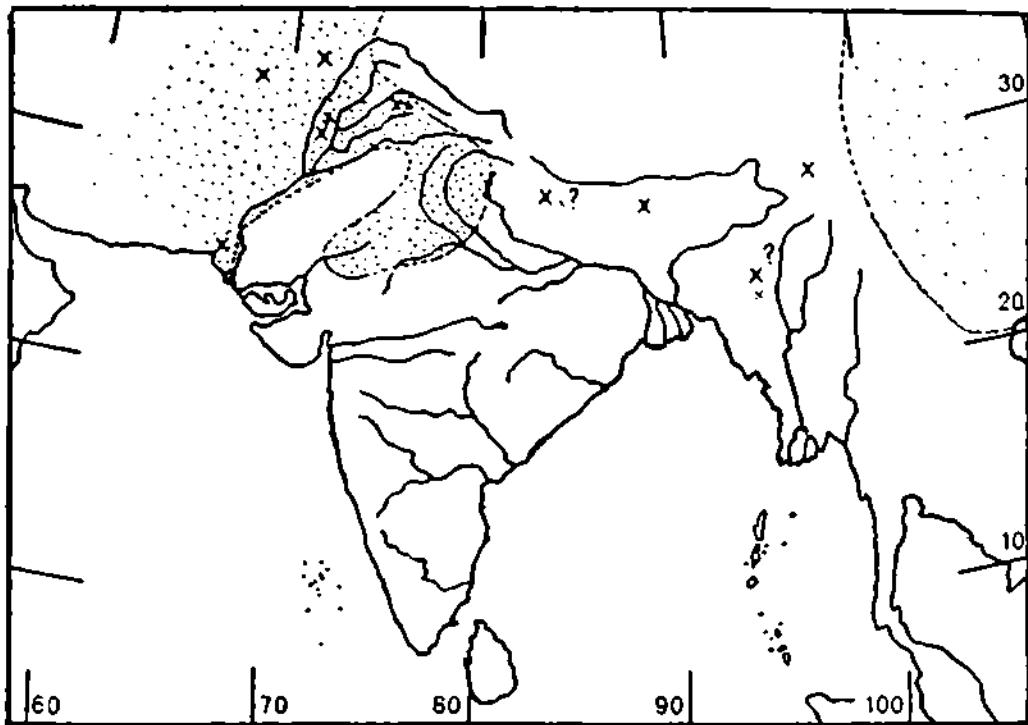
SIZE. Sparrow ±; length c. 15 cm (6 in.).

FIELD CHARACTERS. *Above*, fulvous brown indistinctly streaked on back and crown. Whitish supercilium and double wing-bar. Tail blackish brown with white outer edge. *Below*, whitish with brown streaks on breast in autumn and winter, or unstreaked and flushed with pinkish in spring and summer. Legs blackish. Sexes alike.

In autumn and winter, distinguished from other small-sized pipits by blackish legs and less boldly streaked underparts. See also call-notes. *A. roseatus* in spring plumage is darker and greyer above with distinct and darker streaks on flanks, and has yellowish brown legs.

STATUS, DISTRIBUTION and HABITAT. Common winter visitor to Pakistan; from Gilgit and Kashmir south to Sind and Baluchistan (Chagai and the Makran coast), and to northwestern India east in the foothills and plains to Uttar Pradesh (Simla district, Etawah) and south through eastern Rajasthan (to Jodhpur, Mt Abu). Affects damp ground, marshes, grassy margins of jheels, ponds, canals, rice-fields and other irrigated cultivation.

EXTRALIMITAL. Breeds in the alpine zone in the Caucasus and mountains of northern Iran, and in central Asia from the Pamirs north to the Sayans, Transbaikalia and northern Mongolia. Winters in China, the Middle East and Egypt. The species breeds in the mountains of central and southern Europe, on rocky coasts of the British Isles and Scandinavia, in the mountains of eastern Siberia, the tundra of North America and the alpine zone of western North America.

Anthus spinoletta

■ Winter range of *cossoidii* (1871) X Isolated winter records of
□ Normal winter range of *japonicus* (1872)

MIGRATION. First birds arrive in winter quarters in early October but most arrive in November and depart in March (latest 24 March).

GENERAL HABITS. Usually met with in small loose flocks, sometimes singly, feeding on the ground along the edge of water or in wet fields, frequently in association with Yellow Wagtails. Does not perch on trees or bushes.

FOOD. Insects.

VOICE and CALLS. Call-note, a single or double unmusical *ist* (or *tsi*) uttered in flight.

BREEDING. Extralimital.

MUSEUM DIAGNOSIS. See Field Characters. First four primaries (as.) longest and subequal. Second, third and fourth emarginated. Tail-pattern white; pattern on second outer rectrix usually confined to a small triangle near tip. A moult of body-feathers, tertials, median and inner greater coverts, and central rectrices from January to March.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	88-96	16-18	23-24	{ 59-66 mm
♀♀	83-90 }			{ 56-61 mm

(B. P. Hall)

Weight 1 ♀ (October) 18.7 g (RAP).

COLOURS OF BARE PARTS. Iris brown. Bill dark brown, fleshy at base of lower mandible. Legs and feet blackish.

1872. *Anthus spinolella japonicus* Temminck & Schlegel

Anthus pratensis japonicus Temminck & Schlegel, 1847, in Siebold, Fauna, Jap., Aves, pl. 24: 59 (Japan)
Baker, FBI No. 1203, Vol. 3: 299

LOCAL NAMES. None recorded.

SIZE. Sparrow ±; length c. 15 cm (6 in.).

FIELD CHARACTERS. As in 1871, q.v.

STATUS, DISTRIBUTION and HABITAT. Uncommon winter visitor to Pakistan (Kohat, Bannu, and the plains of the Indus south to Karachi), Nepal (Hodgson specimen in British Mus.; a record from Pokhara, western Nepal—Fleming *et al.*, 1984), Darjeeling (Brooks, SF 8: 485, specimen in Brit. Mus.) and Manipur (Hume, SF 11: 238, no specimen extant). Habitat as in 1871.

Extralimital. Breeds in eastern Siberia, winters mostly in China.

MIGRATION. Earliest record 4 December, latest 4 April.

GENERAL HABITS, FOOD and VOICE. As in 1871.

MUSEUM DIAGNOSIS. Differs from *coutellii* in being darker and having sharply defined black spots on breast and flanks; these also present in spring though more sparse. White in tail often more extensive.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	86-91	15-17	22-25	54-62 mm
♀♀	79-88			53-60 mm

(B. P. Hall)

COLOURS OF BARE PARTS. Iris brown. Bill dark brown, yellow-brown at gape and base of lower mandible. Legs and feet brown (paler than in *coutellii*); claws dark brown.

1873. Upland Pipit. *Anthus sylvanus* (Hodgson)

H.(eterura) sylvana Hodgson, 1845 (Aug.), Proc. Zool. Soc. London: 33
(central region . . . Nepal)

H.(eterura) sylvana Hodgson in Blyth, 1845 (after August), Jour. Asiat. Soc. Bengal 14: 556 (Nepal)

Oreocorys sylvanus oreinus Koelz, 1954, Contrib. Inst. Regional Exploration, No. 1: 21
(Kotla, Kangra District, Punjab)
Baker, FBI No. 1204, Vol. 3: 299

Plate 98, fig. 12

LOCAL NAMES. None recorded.

SIZE. Bulbul -; length c. 17 cm (6½ in.).

FIELD CHARACTERS. Above, heavily streaked with pale brown and dark rufous brown. A whitish supercilium. Outer edge of tail whitish. Below, chin whitish, a short, black malar streak. Rest of underparts fulvous with dark brown shaft-streaks. Sexes alike.

STATUS, DISTRIBUTION and HABITAT. Resident, subject to vertical movements. In Pakistan it is rather local and confined to southeastern slopes in

the Murree hills. From the Sulaiman Range north to Swat and lower Kagan Valley and east along the Himalayas to Nepal and Sikkim (Fleming *et al.*, 1984). Breeds between c. 1200 and 3000 m, locally down to 900 m (Kangra), optimum zone 1200–2400 m. Withdraws from upper levels in winter (highest record 2500 m) but does not descend below c. 900 m (HW). A specimen from Etawah, U. P., mislabeled? Affects steep grassy slopes interspersed with bushes or broken up by rocky ground, abandoned terrace cultivation and open pine forest (*Pinus roxburghii*) where there is abundant grass.

Extralimital. Range apparently disjunct. The species occurs again in southern China from Yunnan and Sichuan through Guangxi, Kiangsi, Fujian and Zhejiang (Cheng, 1958).

GENERAL HABITS. Keeps singly or in pairs, feeding on the ground, now and then standing quietly in a fairly erect position on a little eminence. Flicks tail quite sharply, unlike the slow wagging of other pipits (Jones).

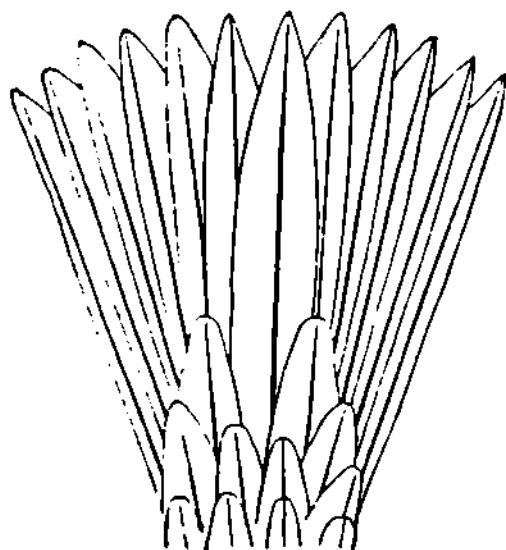
FOOD. Unrecorded.

VOICE and CALLS. Has a 'sawing' song of two notes repeated a half-dozen times, the stress on the first syllable: *seetyu-seetyu* . . . or the reverse, with stress on second note *tyu-see* . . . (MD, BBO), very distinctive for the species (TJR). Long-drawn, not unpleasant but monotonous whistling *wichee-wichee-wichee* . . . repeated in series of 3 to 15, curiously reminiscent of a saw being sharpened with a file (SA). Ventriloquial and difficult to locate. Also a slow, raspy song *feer-cheeee* or *purrrr-tseeee* repeated 7 or 8 times, sounding like a squeaky gate (Fleming *et al.*, 1984). Song usually given from a boulder or other eminence; sometimes from a tree. During occasional display flights utters 5 or 6 rather rapid but sweeter call-notes (Roberts). Song period mid February to early September, chiefly April to July (Proud).

BREEDING. Season, April to July. Nest, a cup of coarse grass roughly lined with finer grass, well concealed below a tuft of grass or under a stone. Eggs, 3 to 5, very similar to those of *A. similis*, white to pale grey, covered with numerous freckles and small blotches of grey-brown, reddish brown or purple-brown with underlying grey blotches. Average size of 30 eggs 22·6 × 17·5 mm (Baker). Once found brood-parasitized by *Cuculus canorus*.

MUSEUM DIAGNOSIS. The fine shaft-streaks on abdomen and those on breast dividing to form a triangle, the heavy bill and pointed rectrices, identify this species. By wear plumage becomes darker above, due to loss of pale fringes; underparts become dingy white and shaft-lines more conspicuous. A complete moult apparently takes place in September-October.

Young, like adult but dark brown centres on upperparts rounded, broader and edged with pale fulvous. Underparts as adult but whitish with very little fulvous.



Tail from above, \times c. 1

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	78-84			
♀♀	74-80	16-18	24-25	{ 59-70 mm 56-69 mm
Hind claw ♂♀	8-11 mm			

(B. P. Hall, BB)

COLOURS OF BARE PARTS. Iris dark brown. Bill: above horny black, below pale reddish horny or reddish flesh. Legs and feet dark flesh.

Genus MOTACILLA Linnaeus

Motacilla Linnaeus, 1758, Syst. Nat., ed. 10, 1: 184.

Type, by tautonymy, '*Motacilla*' = *Motacilla alba* Linnaeus

Dendronanthus Blyth, 1844, Ann. Mag. Nat. Hist. 13: 116.

Type, by monotypy, *Motacilla indica* Gmelin

Bill long and slender; edges of both mandibles smooth except for a small notch in the upper. Rictal bristles fairly well developed. Tarsus in front slightly scutellated.

Key to the Species

Page

I	No yellow in plumage		
A	Centre of forehead black	<i>M. maderaspatensis</i>	300
B	Forehead white.....	<i>M. alba</i>	292
II	Some yellow in plumage		
C	Yellow reduced to a faint wash	<i>M. indica</i>	277
D	Underparts bright yellow		
1	Back black or grey		
a	Head yellow	<i>M. citreola</i>	286
b	Head grey	<i>M. cinerea</i>	290
2	Back olive.....	<i>M. flava</i>	280

1874. Forest Wagtail. *Motacilla indica* Gmelin

Motacilla indica Gmelin, 1789, Syst. Nat. 1: 962

(India, ex Sonnerat, restricted to Malabar by Ripley, 1961, Synopsis: 574)

Baker, FBI No. 1183, Vol. 3: 276

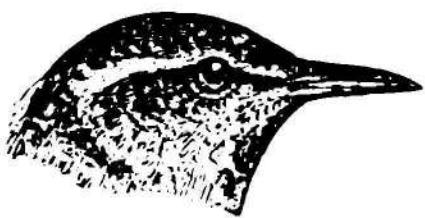
Plate 98, fig. 15

LOCAL NAMES. *Khānjān* (Bengali—all wagtails); *Kodikāl vālāti* (Tamil); *Uz-hallajitta* (Telugu); *Kāttuvālkūlukki* (Malayalam); *Gomarita* (Sinhala).

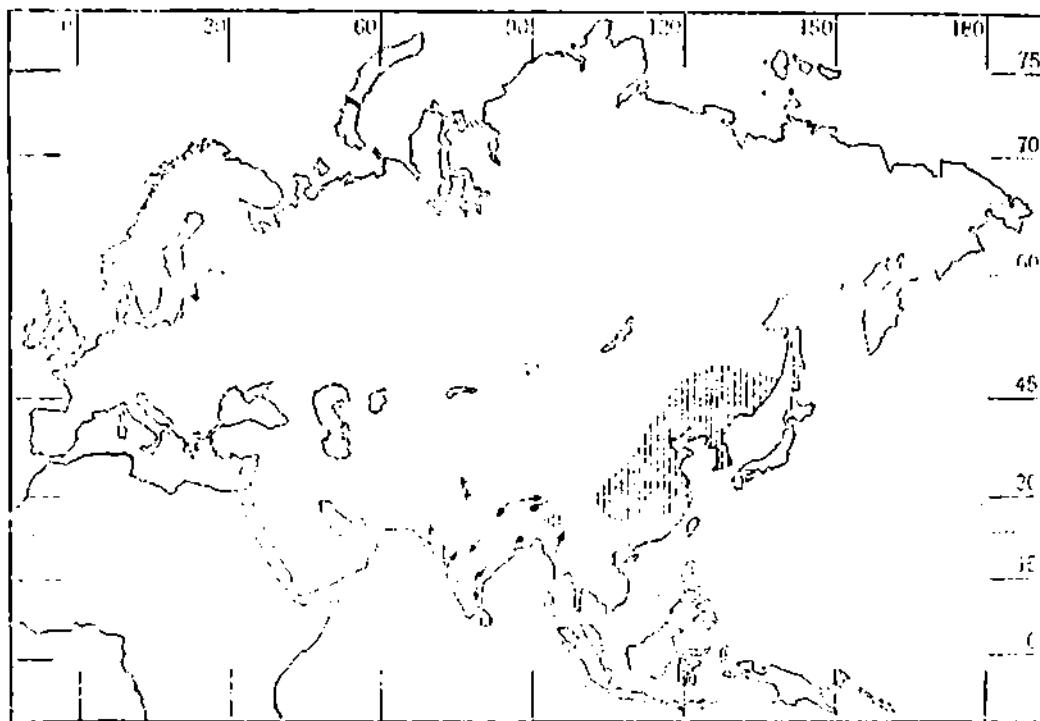
SIZE. Sparrow; length c. 17 cm (6½ in.).

FIELD CHARACTERS. Above, olive-brown. A pale supercilium and eye-ring.

Wings blackish brown with large yellowish spots or patches forming two prominent bands across the coverts. Upper tail-coverts blackish brown. Tail dark brown with the outer rectrices white. Below, white washed with very pale yellow. A blackish brown collar across lower throat and a second interrupted band on breast. Sexes alike.



x c. 1

Motacilia indica

[...] Winter

[Nest] Breeding

[Migratory] Passage records

[Single bird] Stragglers

On the ground looks very like a pipit. The double gorget on breast and whitish double wing-bands are diagnostic.

STATUS, DISTRIBUTION and HABITAT. Mostly a local and capricious winter visitor. Sri Lanka in all forested zones; from Mahabaleshwar to Goa, Karnataka, Kerala, Andhra Pradesh and Tamil Nadu, from foothills to c. 2100 m; northern Bengal, Cox's Bazaar, Bangladesh and in the Khasi and Cachar hills (mostly above c. 1000 m), Tripura, Nagaland and Manipur; Andaman Islands. Also Nepal (Chitwan) and Sikkim.

Breeds in North Cachar (Laisung stream above c. 1500 m. Detailed description of nest and eggs by Baker, *Nidification* 3: 136-8, tallies exactly with that of Neufeldt, 1961, JBNHS 58: 559). For possible breeding in Burma see JBNHS 34: 913. In China the species breeds as far south as southwestern Sichuan and Guizhou (Cheng, 1958).

In winter affects evergreen and deciduous forest. Favourite haunts are well-shaded coffee and cardamom plantations, footpaths through forest and glades or clearings in mixed bamboo jungle. In summer (in Assam) frequents streamsides, glades and tracks in deep evergreen forest.

Extralimital. Breeds in eastern Asia from the Ussuri region south through Korea, Manchuria and China to Guizhou and southwestern Sichuan. Winters mostly in southern China, the Indochinese countries, Sumatra, Java and Borneo.

MIGRATION. Arrives in August/September; leaves in April (latest 1 May). Passage in Nepal, 30.x (JBNHS 81: 705), Sikkim (spring and autumn, earliest 9.ix), N. Bihar (Oct.), W. Bengal (Sept., Mar./Apr.—ibid. 82: 532), Andhra Pradesh (E. Ghats, Sept./Oct., April, singles—ibid. 76: 418), Tamil

Nadu (Chingleput, Sept./Oct., April; Pt Calimere, mid Oct. to third week in January; not in spring—ibid. 70: 569), Maharashtra (Feb., Mar., April; once Oct.). Has straggled to Kutch (Dec.-Jan., ibid. 65: 225, 67: 333), Gujarat (Jasdan, Oct./Nov., ibid. 86: 453), Simla (Koteghar—April), and Suru Valley (August), Pakistan (Thatta dist., Sind—Dec., ibid. 75: 218). A bird ringed in Kerala (*c.* 9°N., 76°E.) on 25.ii.1963 was recovered two months later, on 25 April at Tiddim in the Chin Hills of Burma (*c.* 23°N., 93°E.)—2400 km northeast.

GENERAL HABITS. Usually met with singly in well-wooded country, sometimes in loose pairs or small parties. Forages mostly on the ground, running about quietly on shady forest paths or the mulch-covered floor. Stops short now and again to sway its tail and hind part of body laterally in a very characteristic manner. When disturbed flies up silently, or with the usual *pink* note, into an overhanging branch where it sits wagging its tail slowly up and down and pivoting the hind end from side to side. Descends to the ground to resume foraging immediately its suspicion is allayed. Is much more arboreal than other wagtails. A good deal of its food is procured in trees, the bird running along horizontal boughs and up and down at a steep angle with astonishing celerity. Roosts in company with other wagtails in reed-beds and sugarcane fields.

FOOD. Ants and other insects; spiders. Nestlings are fed on spiders, small grasshoppers, butterflies, beetles, cicadas, snails, molluscs and worms (Neufeldt).

VOICE and CALLS. Call-note, a characteristic finch-like *pink* or *pink-pink* reminiscent of the Crested Bunting. Song, a disyllabic *tsi-fee* repeated four or five times, somewhat like the song of the Great Tit (Neufeldt). For details on song see Hoffmann, A., 1952. 'Über den Gesang der Indischen Baumstelze, *Dendronanthus indicus* (Gmelin)'. *Bonner Zool. Beitr.*, 1-2, 3: 11-16.

BREEDING. Season, May (Assam) or June (Amurland). Nest, a small, neat cup of soft twigs, leaves, fine grass and rootlets compactly matted together with shredded moss and cobweb, lined with hair and moss-roots and draped outside with lichen matching that growing on the supporting branches, thus effectively effacing the structure. It is placed on a horizontal bough (or in a crotch) of a small tree, usually by a stream, some 2 or 3 metres above the ground. Eggs, 4 (in Assam), very similar to those of the Chaffinch, grey with a lilac tinge, marked with a few large purple-brown blotches and more numerous secondary ones. Average size of 13 eggs 19.1 × 13.9 mm (above notes by Baker). Building of nest by female alone, accompanied by male. Incubation by female, fed by male at nest; period 13-15 days. Care of young by both parents. For further details of breeding (in Amurland) see Neufeldt, I., 1961, JBNHS 58: 559-79.

MUSEUM DIAGNOSIS. See Field Characters. Hind claw curved and almost as short as on the other toes. A prenuptial moult of body-feathers and central rectrices (HW). Postnuptial moult complete.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	79-83	16-18	23-24	69-77 mm
♀♀	76-82	16-17	c. 22	68-71 mm
20 ♂♀	78-86 (av. 83.1) mm			(SA, HW, Koelz)

Weight 15 ♂♀ (winter) 14-17 g—SA.

COLOURS OF BARE PARTS. Iris brown. Bill horny brown, paler at base of lower mandible; mouth yellowish pink. Legs, feet and claws horny black. Nestling: gape orange-yellow; tongue yellow with a grey fringe near base.

MOTACILLA FLAVA Linnaeus: YELLOW WAGTAIL

Cf. John, T. M. & George, J. C., 1966, *Pavo* 4: 1-14 and 58-64 for physiological studies.

Key to the Subspecies

		Page
A	Head white	<i>M. f. leucocephala</i> 285
B	Head yellow	<i>M. f. lutea</i> 283
C	Head olive-green with yellow supercilium	<i>M. f. taivana</i> 285
D	Head black	<i>M. f. melanogrisea</i> 284
E	Head grey	
1	Supercilium vestigial or lacking	<i>M. f. thunbergi</i> 280
2	Supercilium complete	
a	Ear-coverts pale grey mixed with white; a white malar streak	<i>M. f. beema</i> 282
b	Ear-coverts dark grey; no malar streak	<i>M. f. simillima</i> 281

1875. *Motacilla flava thunbergi* Billberg

(*Motacilla*) *Thunbergi* Billberg, 1828, *Synops. Faun. Scand.* 1 (2): 50 (Lapland)
Baker, FBI No. 1176, Vol. 3: 269

LOCAL NAMES. *Pilkyā* (Hindi); *Matano pilakyo* (Gujarati); *Charattalayan vālkūluki* (Malayalam); *Fansouduni* (Maldivian).

SIZE. Sparrow, with a long tail; length c. 17 cm (6½ in.).

FIELD CHARACTERS. *Above*, head, nape and ear-coverts dark slate-grey, sometimes with a trace of a white supercilium. Back olive. Wings brown with two yellowish bars. Tail dark brown with white outer edge. *Below*, bright yellow from chin to under tail-coverts. Winter plumage duller, with the grey on head mixed with olive. Sexes more or less alike.

STATUS, DISTRIBUTION and HABITAT. Widespread and common winter visitor. Pakistan (Punjab, Sind, N.W.F.P. and Baluchistan) and India from the plains of the Ganges south through Kutch to Kanyakumari (Cape Comorin), Sri Lanka and the Maldives (sight only), and east through Bengal, NE. India and Bangladesh; Andamans and Nicobars. Abundant passage migrant in the Himalayas west of Simla and south to Quetta, and in northwestern India. Rare in Nepal in April and early May (terai and Valley—Proud, 1955). Affects pastures and moist grassy ground especially along riversides and on jheel margins.

Extralimital. Breeds from Scandinavia to northwestern Siberia. Winters mostly in Africa south of the Sahara.

MIGRATION. A. E. Jones's observations at Simla suggest that the migrating hordes of Yellow Wagtails which are such a feature in Punjab fly

directly over the Himalayan ranges by night (HW). First migrants arrive by the end of August (Quetta); autumn passage mostly in September and October, spring passage from end of March (southern Sind) to early May (latest 13 May—N.W.F.P.). Arrival in Sri Lanka end of September, latest seen early May.

Four birds ringed in Kerala in December and January, 1962–4, were recovered 4 to 16 months later in the Kazakh and Kirghiz Republics of the U.S.S.R., at map distances of between 3700 and 4200 km north. For details see JBNHS 60: 461, 736; 61: 451, 693.

GENERAL HABITS, FOOD and VOICE. As in 1876. Among the stomach contents in Bihar were found caterpillars and small beetles, chiefly Hydrophilidae (Water Scavengers); also spiders (Mason & Lefroy, 1912).

BREEDING. Extralimital.

MUSEUM DIAGNOSIS. See Field Characters and Key to the Subspecies.

Immature (first-year) birds cannot be identified with absolute certainty.

For details of plumages see Ticehurst, 1922, JBNHS 28: 1087. Distinguished from *M. cinerea* by the hind claw which is less curved and longer than hind toe.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	81–85	15–16	23–24	71–77 mm
♀♀	70–80		22–25	70–71 mm

(HW, SA)

Weight 13 ♂♀ (winter) 14–17 g—SA. 1 ♂ 17·3; 1 ♀ 16·8; 1 o? 13·6 g (*thunbergi*?—Bangladesh)—RAP.

COLOURS OF BARE PARTS. As in 1876.

1875a. *Motacilla flava simillima* Hartert

Motacilla flava simillima Hartert, 1905, Vög. pal. Fauna: 289 (Kamchatka)
Baker, FBI No. 1176a, Vol. 8: 660

LOCAL NAMES. As in 1875.

SIZE. Sparrow, with a long tail; length c. 17 cm (6½ in.).

FIELD CHARACTERS. Spring plumage as in *thunbergi* but white supercilium well marked (as in *beema*) and ear-coverts very dark. Breast usually marked with blackish spots. Winter plumage not differentiable.

STATUS, DISTRIBUTION and HABITAT. Common winter visitor to Kerala (Sálim Ali, JBNHS 38: 762 and *Birds of Kerala*: 400; Primrose, JBNHS 40: 502; cf. also JBNHS 60: 411–12), Sri Lanka (Phillips, SZ 28, part 2: 189) and the Andaman Islands (Vaurie, 1959). Recorded on passage from Bharatpur, Rajasthan, between 17 March and 9 April (JBNHS 60: 413). Habitat as in 1875.

Extralimital. Breeds in Kamchatka. Winters in the Indochinese countries, Malaya, Indonesia and Philippines.

GENERAL HABITS, FOOD and VOICE. As in 1876.

MUSEUM DIAGNOSIS. See Field Characters and Key to the Subspecies. 'Indistinguishable in winter plumage from *beema* except [doubtfully] by its longer and straighter (less curved) hind claw' (H. Johansen, pers. comm.).

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
2 ♂♂	78, 83 }	14, 16	{ 24 (1)	69 mm
2 ♀♀	78, 78 }		{ 23 (1)	66, 67 mm

(HW, Phillips)

COLOURS OF BARE PARTS. Iris brown. Bill horny brown, paler (yellowish) on commissure and at base of lower mandible; mouth pale yellowish pink. Legs, feet and claws blackish brown; soles yellow.

1876. *Motacilla flava beema* (Sykes)

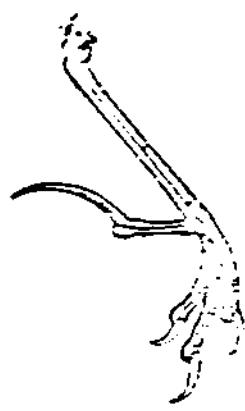
Budytis Beema Sykes, 1832, Proc. Zool. Soc. London: 90 (Dukhun)
Baker, FBI No. 1175, Vol. 3: 267

LOCAL NAMES. As in 1875.

SIZE. Sparrow, with a long tail; length c. 17 cm (6½ in.).

FIELD CHARACTERS. *Above*, head pale bluish grey with a prominent white supercilium and a white malar streak. Rest of plumage as in 1875.

Sexes more or less alike, but upperparts of female brown with a strong olive-green wash except on head. Underparts paler yellow than in male. Winter plumage similar but duller.



Tarsus showing well
curved nail claw.

STATUS, DISTRIBUTION and HABITAT. Abundant and widespread winter visitor. Pakistan from Punjab to Sind, where more common than *thunbergi* (T.J.R.), Nepal Valley, and India from the plains of the Ganges south to Andhra Pradesh, Kerala (in the hills up to c. 1500 m), and east through Bangladesh to Burma border; also Nicobar and Maldive islands. Breeds in Ladakh and possibly northern Kashmir between c. 3600 and 4500 m (cf. Baker, *Nidification* 3: 134; Meinertzhagen, *Ibis* 1927: 404). Abundant passage migrant in the western Himalayas, N.W.F.P. and northern Baluchistan (spring). Habitat as in 1875.

Extralimital. Breeds in the central Palaearctic from the Volga to Baikalia. Winters also in eastern Africa south to Kenya and Uganda.

MIGRATION. Periods as in 1875. A bird ringed on 2 February 1963 in Kerala was recovered on 10 May of the same year near Kabul, 2800 km north, presumably on passage.

GENERAL HABITS. Usually seen in small loose flocks often intermixed with other subspecies; occasionally, during the migration season, in more or less compact aggregations of several hundred individuals. Forages on the ground, preferably on moist pastures or waterlogged grassland (irrigated lawns in urban areas), commonly in attendance on grazing live stock. Trips lightly or in short runs in and out among the animals' feet, the birds sometimes leap-frogging over one another or flying ahead in their eagerness to head off the insects disturbed in the grass. Stops intermittently and wags its tail up and down in the typical manner. In some localities, e.g. around the coastal backwaters in Kerala, the squelchy newly-cut paddyfields virtually ripple

with hundreds upon hundreds of Yellow Wagtails (mainly the subspecies *beema*, *thunbergi* and *simillima*), the birds running about and feeding on the wet mud, flying up in loose rambling flocks now and again and re-settling close to the reapers at work. Roosts at night along with other wagtails, often in phenomenal numbers, in reed-beds and sugarcane fields, sometimes commuting to and from distances up to 30 km or more. The returning parties of birds coalesce to mill around above the roost site at sunset like a dense swarm of bees, before dropping into the reeds like flurries of falling leaves. For description of one such typical roost see Sálim Ali, JBNHS 59: 294-6. Flight undulating, as characteristic of the family, a few rapid flaps followed by a shallow dip with wings closed.

FOOD. Insects. Identified items include flies (muscids), pentatomid bugs (*Cydnus nigritus*), tenebrionid and elatrid beetles (*Mesomorpha villiger*, *Heteroderes* sp.) and weevils (*Myllocerus* sp.)—Mason & Lefroy, 1912.

VOICE AND CALLS. Call-note uttered chiefly when taking off and in flight, a high-pitched *wizzie* or *weesp* (or a double *weesp-weesp*), characteristic of the species. Song undescribed.

BREEDING. Season, chiefly June. Nest, a cup of grass and rootlets lined with wool and placed among the roots of grass tussocks. Eggs, about 4, white more or less tinged with grey, densely stippled with pale grey or pale reddish brown. Average size of 40 eggs 19.5 × 14.8 mm (Baker).

MUSEUM DIAGNOSIS. See Key to the Subspecies. Supercilium of male often includes a few yellow feathers, occasionally numerous enough to make the supercilium appear yellow. Distinguished from other races by pale grey head, prominent supercilium, white chin and malar streak, and pale grey-and-white ear-coverts. In winter plumage difficult to distinguish from *simillima* and *thunbergi* but darker ear-coverts of latter usually suggestive. For details of plumages see Ticehurst, JBNHS 28: 1087.

Spring moult of body-feathers, lesser, median and some greater coverts, central pair of rectrices and some secondary remiges from January to April. A complete moult from July to September.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	78-84	15-16	22-25	67-73 mm
♀♀	77-88		22-23	67-71 mm (HW, CBT)

Wing 20 ♂♀ 76-85 (av. 79.9) mm—SA.

Weight 12 ♂♀ (winter) 14-21 (av. 17.3) g—SA. 8 ♂♂ 15.3-16.8 (av. 16.2); 2 ♀♀ 13.4, 14.5 g—Dementiev.

COLOURS OF BARE PARTS. Iris brown. Bill horny brown, paler at base of lower mandible, gape dull lemon-yellow; mouth yellowish pink. Legs, feet and claws horny brown.

1877. *Motacilla flava lutea* (Gmelin)

Parus luteus Gmelin, 1774, Reise d. Russ. 3: 101 (Astrakhan)
Not in Baker, FBI

LOCAL NAMES. None recorded.

SIZE. Sparrow, with a long tail; length c. 17 cm (6½ in.).

FIELD CHARACTERS. As in 1876 but most of head yellow without distinct supercilium.

STATUS, DISTRIBUTION and HABITAT. Winter visitor to India south to Sri Lanka (Vaurie, 1965). Habitat as in 1875.

Extralimital. Breeds between the lower Volga and the Irtysh rivers. Winters chiefly in eastern Africa from the Equator south to Transvaal.

MIGRATION. Presumably as in 1875.

GENERAL HABITS, FOOD and VOICE. As in 1876.

BREEDING. Extralimital.

MUSEUM DIAGNOSIS. See Key to the Subspecies.

MEASUREMENTS

Wing 28 ♂♂ 77–85 (av. 80·3) mm—Dementiev.

COLOURS OF BARE PARTS. As in 1876.

1878. *Motacilla flava melanogrisea* (Homeyer)

Budytes melanogriseus Homeyer, 1878, Jour. f. Orn. 26: 128 (India)
Baker, FBI No. 1180, Vol. 3: 272

Plate 98, fig. 17

LOCAL NAME. *Pilā māmolā* (Urdu).

SIZE. Sparrow, with a long tail; length c. 17 cm (6½ in.).

FIELD CHARACTERS. As in 1875 but head black, no supercilium. Sexes more or less alike but upperparts of female brownish grey tinged with olive-green, head darker. Underparts yellowish white, often with dark spots in the pectoral region. In winter plumage not distinguishable from other subspecies.

STATUS, DISTRIBUTION and HABITAT. Common winter visitor to Pakistan and India from the foothills east to the western Nepal terai and Varanasi, and south to Sind, where it is the most plentiful subspecies (T.J.R.), Kerala (JBNHS 60: 412) and northern Andhra Pradesh (JBNHS 36: 909); vagrant to Sri Lanka. Passage migrant in Baluchistan (Chagai, Quetta, Makran coast) and western Himalayas. Habitat as in 1875.

Extralimital. Breeds in Russian Turkestan.

MIGRATION. As in 1875. Earliest date (Kutch) 30 Aug. A bird observed as late as 22 June near Sukkur, Sind (JBNHS 66: 26).

MUSEUM DIAGNOSIS. See Key to the Subspecies. For details of plumages see Ticehurst, JBNHS 28: 1086.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♀	75–85	16–18	23–24	64–76 mm (CBT, SA)

Weight 19 ♂♀ (winter) 14–17 (av. 15·7) g—SA.

COLOURS OF BARE PARTS. Iris brown. Bill horny brown, paler at base of lower mandible; gape dull lemon-yellow; mouth yellowish pink. Legs, feet and claws dark slate.

1879. *Motacilla flava leucocephala* (Przevalski)

Badytes leucocephala Przevalski, 1887, Zap. Imp. Acad. St. Pétersb. 55: 85 (Altai)
Baker, FBI No. 1178, Vol. 3: 270

LOCAL NAME. *Pilkyā* (Hindi).

SIZE. Sparrow, with a long tail; length c. 17 cm (6½ in.).

FIELD CHARACTERS. As in 1876, but easily distinguishable by the almost pure white crown and ear-coverts.

STATUS, DISTRIBUTION and HABITAT. Scarce passage migrant (possibly winter visitor, but see Migration below). Recorded mostly from Punjab (Pakistan) [cf. *Ibis* 1916: 75; JBNHS 24: 189 and 40: 561; *Ibis* 1940: 335–7 and 732; JBNHS 59: 963]; also observed near Delhi (JBNHS 62: 304–5). Winter quarters, if within our limits, unknown. Habitat as in Greyheaded Yellow Wagtail (1875).

EXTRALIMITAL. Breeds in northwestern Mongolia, perhaps northern Dzungaria and occasionally in the Kirghiz steppes (Vaurie). Winter quarters unknown.

MIGRATION. All published records fall between 11 April and 10 May and all but one in the Rawalpindi district. Subsequent sight records in 1970s and 1980s from Islamabad, Rawalpindi and Attock during late April and early May (Roberts, pers. comm.). Birds were observed in flocks up to 20 individuals, or singly among other subspecies.

GENERAL HABITS, FOOD and VOICE. As in 1876, q.v.

BREEDING. EXTRALIMITAL.

MUSEUM DIAGNOSIS. Whole head to the nape white with a faint grey shadow on the ear-coverts and posterior part of the crown.

MEASUREMENTS and COLOURS OF BARE PARTS unrecorded.

1880. *Motacilla flava taivana* (Swinhoe)

Badytes taivana Swinhoe, 1863, Proc. Zool. Soc. London: 274, 334 (Formosa)
Baker, FBI No. 1177, Vol. 3: 270

Plate 98, fig. 16

LOCAL NAME. *Pilkyā* (Hindi).

SIZE. Sparrow, with a long tail; length c. 17 cm (6½ in.).

FIELD CHARACTERS. Above, olive-green. A broad yellow supercilium. Lores and ear-coverts blackish. Below, deep yellow. Sexes more or less alike.

STATUS, DISTRIBUTION and HABITAT. Winter vagrant. Two records: Howrah, Bengal; western Bhutan, 4850 m Sept. (SDR coll.).

EXTRALIMITAL. Breeds in southeastern Siberia and Sakhalin Islands. Winters in Taiwan, southern China, the Indochinese countries, Malaysia and Indonesia east to Celebes (Sulawesi).

GENERAL HABITS, FOOD and VOICE. As in 1876.

MUSEUM DIAGNOSIS. See Field Characters. Flanks, and often breast, washed with dull greenish.

MEASUREMENTS

Wing ♂♂ 78–84; ♀♀ 77–82. Tail 65–74 mm (Dementiev, Baker)

Weight 1 ♂ 19 g (SDR).

COLOURS OF BARE PARTS. As in 1876.

MOTACILLA CITREOLA Pallas: YELLOWHEADED WAGTAIL

Key to the Subspecies

Page

A Back grey		
a Darker; a black hind-collar between yellow head and upper back	<i>M. c. citreola</i>	286
b Paler; black hind-collar usually absent	<i>M. c. werae</i>	287
B Back black or mixed with black	<i>M. c. calcarata</i>	288

1881. *Motacilla citreola citreola* Pallas

Motacilla citreola Pallas, 1776, Reise Russ. Reichs 3: 696 (Siberia)
Baker, FBI No. 1181 (part), Vol. 3: 273

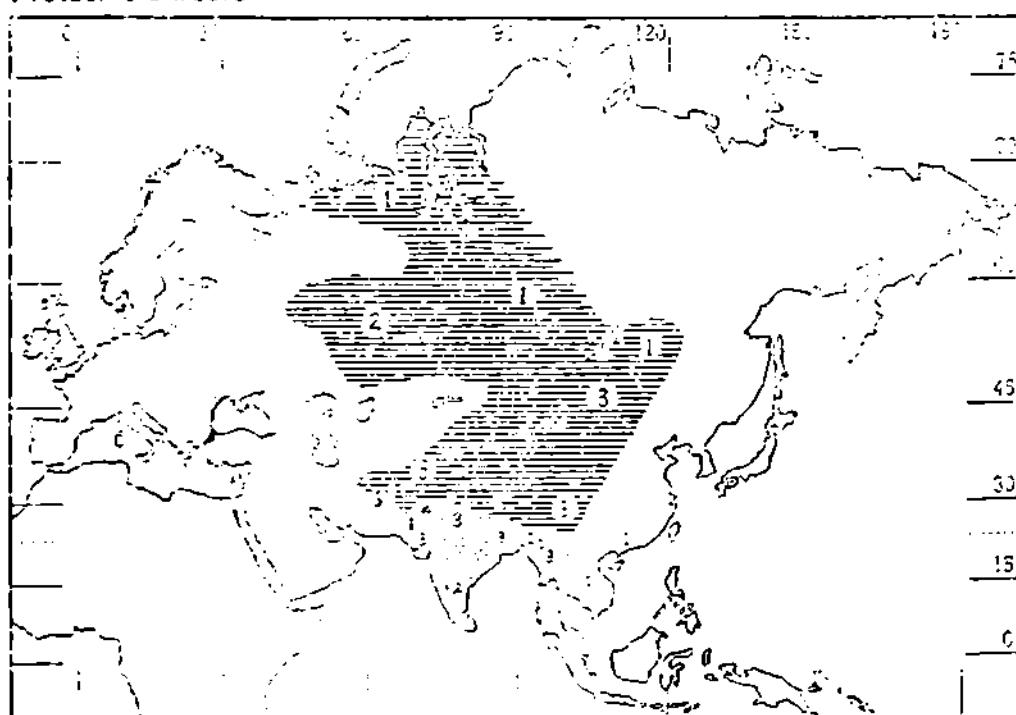
Plate 98, fig. 20

LOCAL NAMES. *Pilkyā*, *Pāni-ka-pilkyā* (Hindi); *On munda* (Chota Nagpur); *Tooni* (Assam).

SIZE. Sparrow, with a long tail; length c. 17 cm (6½ in.).

FIELD CHARACTERS. As in 1883 but back grey instead of black; plumage phases variable and confusing, and subspecific identification especially in winter often unreliable.

STATUS, DISTRIBUTION and HABITAT. Fairly common winter visitor. Pakistan [Kohat and the Punjab foothills south through Sind, and very

Motacilla citreola

Distributional ranges

Breeding

Winter

1 *citreola* (1881)

2 *werae* (1882)

3 *calcarata* (1883)

locally in Baluchistan (Hab Valley)], and India from the Himalayan foothills including the Nepal terai east through NE. India and Bangladesh, south at least to northern Karnataka and Point Calimere, Tamil Nadu (JBNHS 60: 412); sight records from Sri Lanka (ssp.? cf. Phillips, SZ 28, part 2: 189). Habitat as in 1883.

Extralimital. Breeds in Siberia from the Pechora river east to the Khatanga river and south to Transbaikalia. Winters east through the Indochinese countries and southern China.

MIGRATION. Arrives in winter quarters in September (earliest 5 Sept.), leaves in April and early May (latest 15 May). A passage migrant in northern Baluchistan and western Himalayas.

GENERAL HABITS, FOOD and VOICE. As in 1883.

BREEDING. Extralimital.

MUSEUM DIAGNOSIS. Adult male. Back, including rump and upper tail-coverts grey. Generally a black hind-collar separating yellow head from upper back. For details of plumages see Ticehurst, JBNHS 28: 1082-4.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	81-88	15-17	23-27	{ 71-84 mm
♀♀	83-84			{ 79-80 mm

Hind claw 10-12 mm; median toe and claw 20-22 mm

(CBT, BB, Rand & Fleming)

Weight 1 ♂ (Nov.) 18.2; 1 ♀ (Nov.) 17.9 g (BB).

COLOURS OF BARE PARTS. Iris very dark brown. Bill, legs and feet black.

1882. *Motacilla citreola werae* (Buturlin)

Budytès citreola werae Buturlin, 1907, Orn. Monatsb. 15: 197

(Sura Valley, Simbirsk, southeastern Russia)

Baker, FBI No. 1181 (part), Vol. 3: 273

LOCAL NAMES. As in 1881.

SIZE. Sparrow, with a long tail; length c. 17 cm (6½ in.).

FIELD CHARACTERS. As in 1883 but always grey-backed, rarely with black hind-collar (cf. 1881). Subspecies not differentiable in the field.

STATUS, DISTRIBUTION and HABITAT. Winter visitor, locally common. Pakistan in Kohat, Bannu, Punjab and Sind (occasionally in full breeding plumage in April—Roberts, pers. comm.), and India from the Himalayan foothills south to N. Karnataka (Londa, Koelz), Kerala and Hyderabad (SA) and east through NE. India and Bangladesh. Habitat as in 1883.

Extralimital. Breeds in southwestern Siberia from the Ob river to the Volga.

MIGRATION. Arrives in winter quarters in September, leaves in March-April (extreme dates 5 September and 17 May). Common on passage in northern Baluchistan (February to early May, not observed in autumn); also in the western Himalayas (Kashmir, Gilgit). Two ring recoveries to date give an indication of the pattern of local movements within the country. A bird ringed in Rajasthan (Bharatpur, 27°13'N., 77°32'E.) on 4 October 1962 on

autumn passage was recaptured in Kerala (9°20'N., 76°38'E.) on 13 January 1964. Another example (ssp.?) ringed near Calcutta (c. 22°N., 89°E.) on 25 May 1963 on late spring passage was recaptured in Kerala (same coordinates) on 29 November 1963, presumably on return from its breeding grounds.

GENERAL HABITS, FOOD AND VOICE. As in 1883.

BREEDING. Extralimital.

MUSEUM DIAGNOSIS. Similar to nominate *citreola* [1881] but paler. Adult males grey above, yellow parts paler and not, or only slightly, tinged with grey on flanks. Averages smaller.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	75-86	15-17	23-26	{ 69-75 mm
♀♀	72-79 }			— mm

(HW, NBK, Koelz)

Weight 2 ♂♂ 16, 19 g (Dementiev).

COLOURS OF BARE PARTS. Iris brown. Bill horny brown, paler at base of lower mandible; gape dull lemon-yellow; mouth yellowish pink. Legs, feet and claws horny brown.

1883. *Motacilla citreola calcarata* Hodgson

Motacilla (Budytus) calcarata Hodgson, 1836, *Asiat. Res.* 19: 190 (Nepal)
Baker, FBI No. 1182, Vol. 3: 274

LOCAL NAMES. *Ledor dobbai*, *Peench kāni* (Kashmir); *Pilkyā*, *Pāni-kā-pilkyā* (Hindi); *Pān pillākh* (Bihar mirshikars); *On munda* (Chota Nagpur); *Tooni* (Assam).

SIZE. Sparrow, with a long tail; length c. 17 cm (6½ in.).

FIELD CHARACTERS. Male. *Above*, head rich lemon-yellow. Back and rump jet black. Wings dark brown with white edgings to coverts and tertials. Tail dark brown with white outer edges. *Below*, rich lemon-yellow, sides of breast black. In winter the back is dark grey more or less mixed with black.

Female variable: either similar to male or with yellow of head paler; many individuals with dark greyish crown and mantle, yellow forehead, supercilium and ear-coverts, the last more or less streaked with grey.

First-year birds of both sexes have whitish underparts. Males may be found breeding in this plumage.

STATUS, DISTRIBUTION AND HABITAT. Common summer (breeding) visitor from Baluchistan through N.W.F.P. to Chitral, east through Kashmir, Gilgit, Baltistan, Ladakh, Lahul, Spiti and southern Tibet (Mt Everest, JBNHS 32: 325) north of the main range. Breeds mostly between 3000 m and 4600 m; in the Kagan Valley down to 2600 m, in Chitral to 1800 m and in Kashmir to 1500 m. Affects sedges and grassy margins of lakes, streams, water-meadows, bogs and irrigated ploughed land. Winters in Pakistan (Indus plains south to Sind) and northern India (a few in the Nepal Valley) south to Kutch, Madhya Pradesh, Bengal and east through Bangladesh to Burma. In winter frequents marshes, squelchy grassy margins of tanks and jheels, unlike other wagtails feeds in the middle of large lakes on emergent vegetation (Roberts) and irrigated rice-fields, etc.

Extralimital. Breeding range extends west to eastern Iran, north on the Tibetan plateau to southern Qinghai and Inner Mongolia, and east to Sichuan. Winters from Southern Afghanistan to Burma.

MIGRATION. Arrives on breeding ground in April, remains until September. Autumn passage in September and October, in Punjab noted as early as the beginning of August. Spring passage March to early May. Extreme dates in winter quarters 5 September and 9 May.

GENERAL HABITS. Typical of the genus, but is essentially a marsh-inhabiting or water wagtail. Gregarious in winter. Keeps in scattered pairs or parties, sometimes large flocks, usually in association with Yellow and other wagtails, seldom away from damp or marshy ground. Often seen on tanks and jheels tripping lightly over floating lotus leaves and partly submerged vegetation in search of insect food. Sometimes springs up in the air and launches fluttering sallies in pursuit of escaping midges etc. Runs about briskly with sprightly mincing steps, stopping now and again and wagging the tail up and down. Undulating flight and other habits as of other wagtails.

FOOD. Insects and larvae; tiny molluscs.

VOICE and CALLS. Call-note *chiz-zit*. Song undescribed.

BREEDING. *Season*, May to August. *Nest*, a compact cup of dry grass, rootlets and moss lined with wool or hair, placed on the ground in tufts of grass, at the foot of a bush or under a stone. *Eggs*, normally 4, sometimes 3 or 5, greenish grey heavily spotted and speckled with grey or olive-grey. Average size of 80 eggs (Ladakh) 20.9 × 15.1 mm, of 60 eggs (Kashmir) 20.1 × 14.5 mm (BBO), of 80 eggs 20.7 × 15.6 mm (Baker). Sometimes brood-parasitized by *Cuculus canorus*. Building of nest, incubation and care of young by both sexes. Incubation period undetermined.

MUSEUM DIAGNOSIS. Distinguished from other subspecies by black back; under-parts darker and richer yellow. Tarsus longer than in the other two races; also longer than in the Yellow wagtails. For details of plumages see Ticehurst, JBNHS 28: 1082-5.

Young. *Above*, rich brown. Supercilium buffish surmounted by a broad, nearly black line. *Below*, buffish brown, whitish on vent and throat, with a black moustachial line running down each side to the spotted pectoral band.

A spring moult of body-feathers, tertials, median coverts, part of lesser or greater coverts and central rectrices in February and early March. Postnuptial moult complete. Adult plumage not acquired in the first spring; first-summer birds distinguished from adults by less bright yellow, a yellowish olive-brown crown, and darker less yellow ear-coverts.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	80-88	18-19	26-28	{ 68-84 mm
♀♀	77-81 }			{ 66-80 mm
				(CBT, Paludan, BB)

Weight 13 ♂♀ (Mar.-Apr.) 15-21 (av. 18.1) g—SA. 7 ♂♂ (June-July) 15-19; 2 ♀♀ (June-July) 18, 23; 2 ♀♀ (Sept.) 15, 16 g (Paludan). 1 ♂ (Nov.) 18.2; 1 ♀ (Nov.) 17.9 g (BB).

COLOURS OF BARE PARTS. Iris dark brown. Bill, legs and feet black.

1884. Grey Wagtail. *Motacilla cinerea cinerea* Tunstall*Motacilla cinerea* Tunstall, 1771, Orn. Brit.: 2 (England)*Parus Caspicus* Gmelin, 1774, Reise d. Russ. 3, pl. 20, fig. 2: 104
(Enzeli [Pahlevi] Gilan, northern Iran)*Motacilla Melanope* Pallas, 1776, Reise Russ. Reichs 3: 696
(Dauria, Transbaicalia)

Baker, FBI No. 1174, Vol. 3: 265

Plate 98, fig. 19

LOCAL NAMES. *Khak dobbai* (Kashmir); *Balkatara* (Punjab); *Haldiyā bālimāhi* (Assam); *Mudi-tippudu-jitta* (Telugu); *Vazhikulukki* (Malayalam).

SIZE. Sparrow, with a long tail; length c. 17 cm (7 in.).

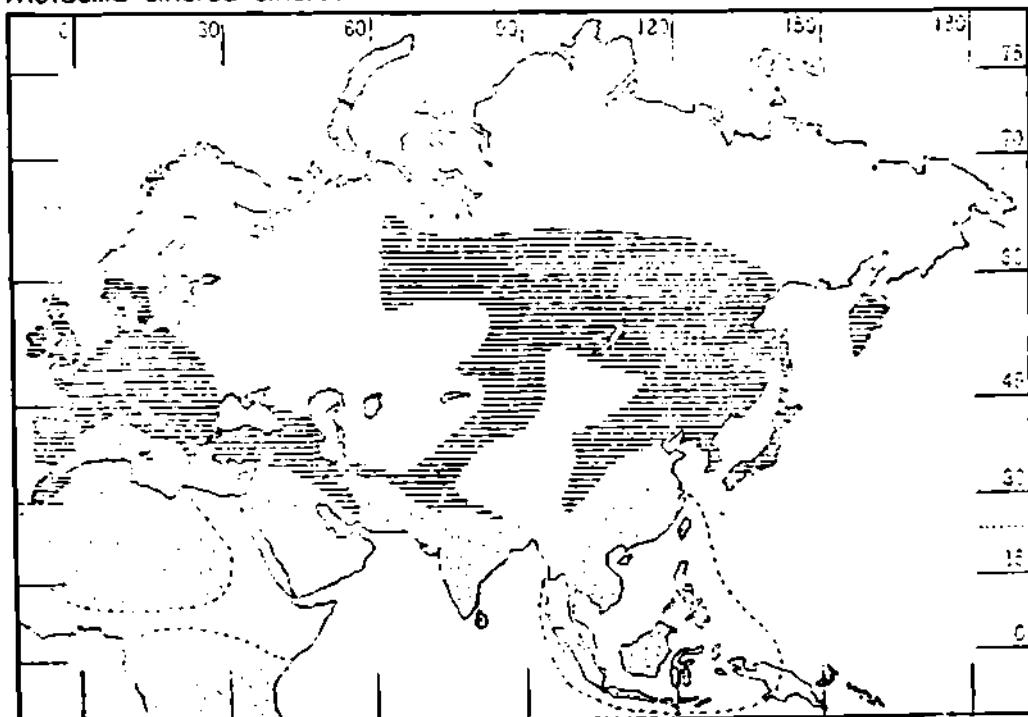
FIELD CHARACTERS. Male (summer). *Above*, head and back grey. A white supercilium. Upper tail-coverts greenish yellow. Wings dark brown with whitish margins to tertials showing as a prominent V on back. Tail blackish brown with white outer edges. *Below*, throat black with a white malar streak. Rest of underparts bright yellow.

Male in winter has a buffish throat, paler yellowish underparts (brighter yellow on vent) and V on back indistinct.

Female has a buff throat (mottled with black in summer) and paler underparts. Sexes indistinguishable in winter.

STATUS, DISTRIBUTION and HABITAT. Common summer (breeding) visitor to the ranges of Pakistan from northern Baluchistan to Chitral, thence east through Gilgit, Baltistan, Ladakh and Kashmir to central Nepal. Breeds

Motacilla cinerea cinerea



Breeding



Winter

M. c. cinerea (1884)

between 2100 and 2900 m (Quetta), 1800–2400 m (Safed Koh), 1800–3900 m (western Himalayas), up to 3960 m (Chilas, Gilgit—Roberts), locally down to 1200 m (Kulu) and between 2100 and 4300 m (Nepal). Winters in the foothills, sparsely up to c. 1500 m, in Nepal, Sikkim and Bhutan to 2000 m, and south throughout the Indian Peninsula and Sri Lanka, Pakistan (N.W.F.P. foothills, Indus Plains and Makran coast), Bangladesh, Assam, Arunachal foothills, Nagaland and Manipur; also the Maldives, Andaman and Nicobar islands. Common in winter in the plains as well as at all elevations in the peninsular hills. Winter population largely augmented by palaearctic migrants. In summer affects rapid mountain streams especially those with rocky banks and boulders. In winter also placid rocky streams and trickles in the plains and foothills; also particularly attracted to forest plantations (TJR). Rock pools in dry stony river beds.

Extralimital. Breeds in mountainous regions of the Palaearctic from Kamchatka, Japan, Kansu and probably Sichuan (specimens in U.S. Nat. Mus. collected in July) west to the British Isles and Morocco. Other subspecies in Atlantic islands. Winters in the Mediterranean region, Africa south to Congo and Kenya, the Middle East, Turkestan, southern China, Taiwan, the Indochinese countries, Indonesia including West Irian, and the Philippines.

MIGRATION. First winter visitors arrive in the Peninsula about the end of August (earliest 21 August, Kerala, 22 August, Berar). Departure mostly in April, a few birds remaining until early May (latest and rather exceptional, 22 May, Kerala). Passage noted in northern Baluchistan (Chagai) and throughout the Himalayas including Sikkim, Bhutan and Arunachal Pradesh. Several birds observed at c. 4400 m in Chamba in August. For a summary of observational data on migration up to 1923, see Whistler, H., JBNHS 29: 287. For records of attachment to specific winter quarters and clockwork punctuality of return to the same in autumn (September)—in one case for at least five consecutive years after ringing—see JBNHS 47: 160; 48: 185.

GENERAL HABITS. Keeps singly at all seasons, sometimes in separated pairs, but during winter numbers may gather at sunset to roost in trees, dense patches of tamarisk or reeds, or sugarcane fields, occasionally (rare) in company with other wagtails. A pure communal roost may hold up to 40 or 50 individuals but never such large congregations as, e.g. of Yellow wagtails. Is fond of running about and feeding at streamlets and trickles across forest paths or alongside hill roads. The bird often keeps flying ahead at disturbance from an oncoming car and resettling a hundred metres further to be supplanted again almost immediately, and again and again. At the end of its beat it veers off into the forest and circles back to the starting-point. Sometimes captures midges in the air by springing up from a rock beside a stream, turning and twisting in the pursuit with remarkable agility and returning to the base. The long tail is vehemently wagged up and down as the bird pauses between short zigzag runs or upon alighting after a flight. Flight undulating, typical of the family.

Display. In the breeding season the male constantly launches himself a few metres up in the air and descends at a tangent on fluttering wings some distance away uttering a pretty little song—a rapid *chi-chi-chi-chi-chi-chi*.

FOOD. Chiefly insects, including butterflies occasionally; tiny molluscs.

VOICE and CALLS. Call-note a sharp *chi-cheep, chi-cheep* uttered in flight. Song quite strident as it needs to be heard above mountain torrents where it nests (TJR); rendered as *piti, pi-iti, pititi* (Bates & Lowther); see also Display (above).

BREEDING. Season, end April to end July. Nest, a cup of dry grass and weeds lined with hair and wool, placed in banks, stone walls or among boulders, occasionally in a clump of weeds. Eggs, 4 or 5, rarely 6, whitish profusely marked with pale grey or pale reddish brown stippling, so finely and evenly distributed over the whole surface that the egg appears uniform grey. Average size of 100 eggs 19×14.2 mm (Baker), of 15 eggs 18.2×14.1 mm (BBO). Building of nest, incubation and care of young by both sexes. Incubation period unrecorded.

MUSEUM DIAGNOSIS. See Field Characters and Key to the Species. Distinguished from *M. flava* (all races) by the hind claw which is much curved and shorter than hind toe.

Young. Above, as winter adult but tinged brown. Rump and upper tail-coverts duller. Median and greater coverts with pale tips. Below, dull buffy white, whitish on belly. Under tail-coverts pale buffy yellow. Postjuvenile moult of body-feathers, lesser, median and greater coverts, tertials and central rectrices.

A spring moult of body-feathers, median, inner greater coverts, tertials and tail.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	81-87	15-17	18-22	{ 88-98 mm
♀♀	78-84 }			80-97 mm
(HW, BB, SA, Rand & Fleming)				

Weight 34 ♂♀ (Sept.-Oct.) 13-20 (av. 16.3) g—SA. 7 ♂♂ (March-June) 14-16; 6 ♀♀ (March-June) 14-16 g (Paludan). 1 o? 15 g (SDR).

COLOURS OF BARE PARTS. Iris brown. Bill horn grey; mouth greyish pink. Legs and feet brownish flesh.

MOTACILLA ALBA Linnaeus: WHITE WAGTAIL

Cf. John, T. M. & George, J. C., 1966, *Pavo* 4: 1-14 and 58-64 for physiological studies.

Key to the Subspecies

		Page
A	Back black	
1	Ear-coverts black	<i>M. a. alboides</i> 297
2	Ear-coverts white	<i>M. a. leucopsis</i> 298
B	Back grey	
3	A black streak through eye	<i>M. a. ocularis</i> 299
4	No black streak through eye	
a	Ear-coverts black	<i>M. a. personata</i> 295
b	Ear-coverts white	
i	Chin white	<i>M. a. baicalensis</i> 299
ii	Chin black	<i>M. a. dukhunensis</i> 293

1885. *Motacilla alba dukhunensis* Sykes

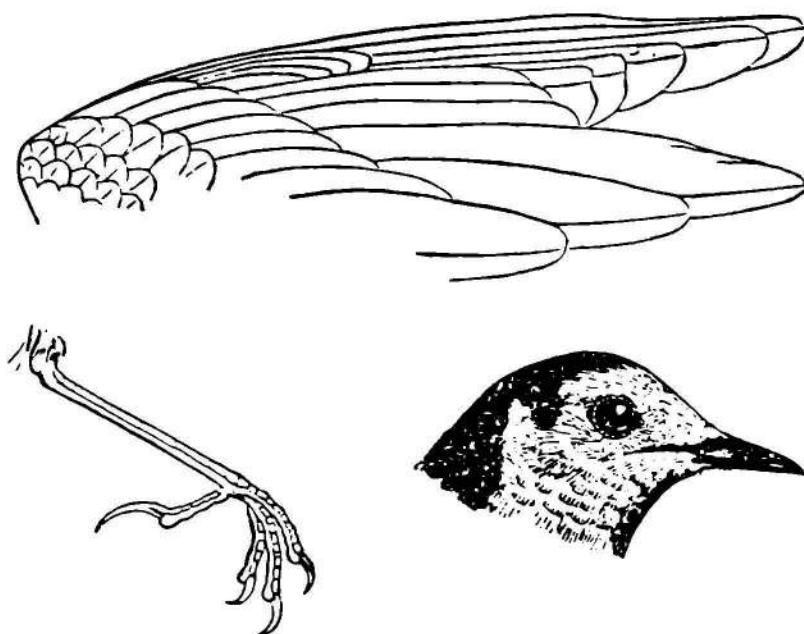
Motacilla Dukhunensis Sykes, 1832, Proc. Zool. Soc. London: 91 (Dukhun)
Baker, FBI No. 1166, Vol. 3: 257

Plate 98, fig. 14

LOCAL NAMES. *Peenchkāni*, *Dobbai* (Kashmir); *Balkatara* (Punjab); *Dhobān* (Hindi); *Khātriāni* (= 'women dyer', Gujarati); *Nachangōl* (Bhil); *Khānjānā* (Chota Nagpur, Bengal); *Bālimāti*, *Tiposi* (Assam); *Vella vālkūlukki* (Malayalam).

SIZE. Bulbul; length c. 18 cm (7 in.).

FIELD CHARACTERS. An unmistakable slim black, white and grey bird with a long tail constantly wagged up and down.



Head, foot, and wing, $\times c. 1$

Male adult, winter. *Above*, forehead, round eyes and sides of head white. A large black patch on hind crown and nape. Back and rump ashy. Wings brown, coverts and tertials broadly margined with white. Tail blackish brown with white outer rectrices. *Below*, white with a large crescent-shaped black patch on breast. Sides of breast and flanks ashy. Sexes practically alike.

In spring and summer the chin, throat and breast are black.

Distinguishable at all seasons from the confusingly similar *personata* (1886) by white ear-coverts (*v.* black).

STATUS, DISTRIBUTION and HABITAT. Widespread and common winter visitor. Pakistan in the plains and foothills (in Punjab up to c. 1000 m, in Baluchistan 1800 m), Nepal (up to 1500 m) and the Himalayan foothills south through the Indian Peninsula to Karnataka and Andhra Pradesh, rare in Kerala and Tamil Nadu (in the hills up to c. 1500 m), regular in Sri Lanka; also Bangladesh (all parts), Assam, Nagaland (?) and Manipur. Affects open country in the vicinity of rivers, streams, tanks, flooded lawns, maidans, paddy- and wheat-fields, compounds and suburbs and is even partial to roadside verges far from water (TJR).

Extralimital. Breeds in western Siberia from the Yenisey to the Ural Mts. The species ranges over the whole of Eurasia from the Chukchi Peninsula, Japan and China west to Morocco, the British Isles and Iceland, and winters from the southern parts of the breeding range south to the Congo, Kenya, Arabia, the Indochinese countries and the Philippines.

MIGRATION. Passage observed in northern Baluchistan, N.W.F.P. and from Gilgit and Kashmir east to Sikkim. Autumn passage, end of September and October (earliest 13 Sept.); northward movements noted from the middle of February until the end of April (last date 5 May in Kangra). Waves of passage migrants observed both in autumn and spring on the coast of Maharashtra (Bombay). Two birds banded in Kutch (*c.* 22°N., 69°E.) on 16 and 17 March 1961 were recovered in the U.S.S.R., one at Kirov (*c.* 58°N., 49°E.) in June/July 1961, the other near Volgograd (*c.* 49°N., 49°E.) on 11.vii.1961, at distances of *c.* 4200 and 3600 km northwest.¹

GENERAL HABITS. Keeps singly, in pairs or in small loose flocks. Large numbers gather in the evenings to roost in reed-beds, sugarcane, tamarisks or leafy trees. Roost sites often traditional, e.g. Karachi airport, still the venue of thousands in winter despite increased air traffic and flood lights (Roberts). Feeds almost exclusively on the ground, walking or running with quick mincing steps, darting here and there for tiny insects, often fluttering into the air for flying prey. May often be seen perching on roof-tops, and is commonly active on urban playing fields regardless of cricket and other games in progress. Tail vigorously wagged up and down when alighting and between short pauses when feeding. Flight very undulating, as of the family. Much competition for feeding territory noticeable at migration stop-overs and on first arrival in autumn. Two rivals, some 30 cm apart, will run parallel to one another for a metre or so, both in the same direction or passing one another in opposite directions, turning about at the end and repeating the tactic. From time to time one will spring up vertically, obviously with intention to attack. Its adversary will leap up in the same way as if to ward off the attack. Now and again one of the combatants will move away from the invisible barrier as if tired of the game, but will presently change its mind and return to the sparring. This patrolling may be continued for many minutes at a time, seldom with any actual clinch, and the whole manoeuvre may be renewed periodically.

FOOD. Chiefly insects. Specifically identified among stomach contents are ants, *Phidole malinsi*, *Camponotus compressus* (Formicidae); *Rhyssenus germanus* (Aphodiinae); water scavengers, *Hydrophilus* sp. (Hydrophilidae); beetles, *Scleron orientale* (Coleoptera), bugs, *Chrysocoris alba* (Pentatomidae); small molluscs (*Hydrobia* sp.); and oat grains (Mason & Lefroy, 1912); also a variety of other insects and larvae—bionid flies, small caterpillars, weevils and other small beetles including Carabidae.

VOICE AND CALLS. Ordinary call-note a sharp *chi-cheep* usually uttered in flight.

BREEDING. Extralimital.

MUSEUM DIAGNOSIS. Distinguished from *personata* (1886) by white ear-coverts in all plumages; for other subspecies see Key.

¹ These probably belonged to nominate *alba*, hitherto considered extralimital, being so far westward of the known range of *dukhunensis* (see above). In immature and winter plumages, as mostly seen in India, the two subspecies cannot be separated.

Prenuptial moult from January to March, involving body-feathers, tertials, lesser, median and all except two or three greater coverts, and central rectrices.

Young. Upperparts and lesser coverts grey tinged with brown, rump darker slate, upper tail-coverts blackish. Broad supercilium, cheeks and ear-coverts dull white. Median coverts tipped with whitish, greater coverts brown with whitish outer edges and tips. Postjuvenile moult of body, lesser, median and inner half of greater coverts.

First-winter male like adult but crown more or less mixed with grey. White of forehead not so pure or so extensive. Ear-coverts often tipped with grey. First-winter female like male but no black in crown. Forehead white sullied with grey to almost no white at all.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	87-96	15-16	{ 23-25	82-96 mm
♀♀	83-92 }		{ 20-22	81-93 mm
(HW, CBT, SA, BB, Rand & Fleming)				

Weight 2 ♀♀ (Oct., Nov.) 16.5, 20.4 g (BB). 17 ♂♀ (Dec.-Feb.) 18-24 (av. 20.2) g—SA. 4 ♂♂ (March-April) 23-27, 4 ♀♀ (March-April) 19-25, 16 ♂♂ (Sept.-Oct.) 19-25.5 g (Paludan).

COLOURS OF BARE PARTS. Iris brown. Bill brownish black; mouth yellow and greyish pink, or greyish pink. Legs, feet and claws brownish black.

1886. *Motacilla alba personata* Gould

Motacilla personata Gould, 1861, Bds. Asia 4, pl. 63 (Bengal)
Baker, FBI No. 1168, Vol. 3: 259

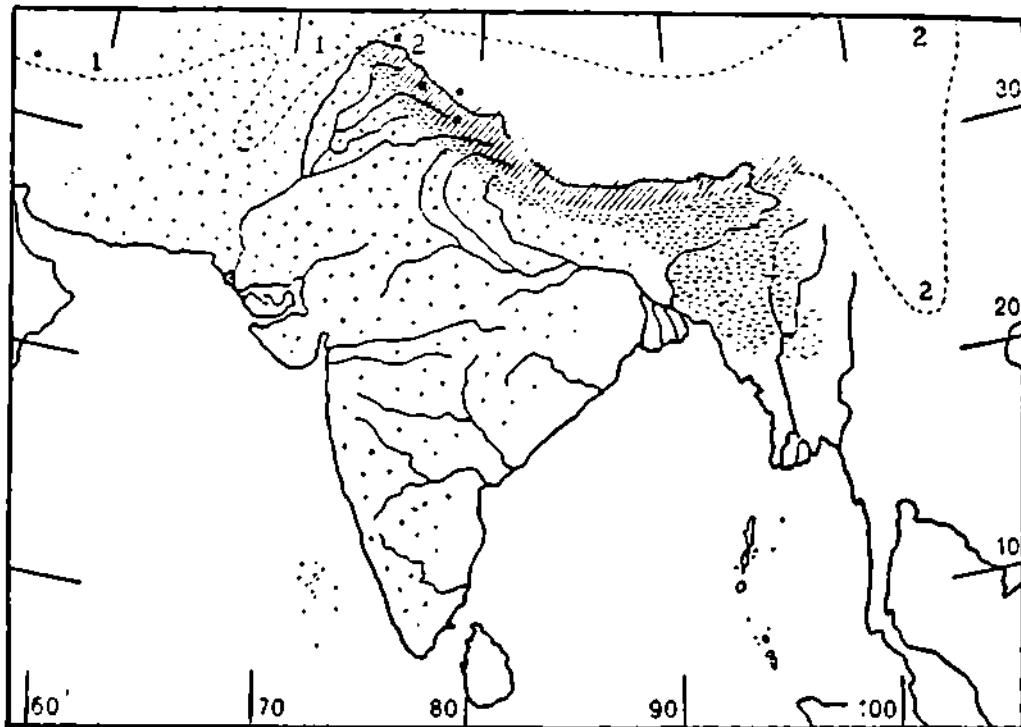
Plate 98, fig. 13

LOCAL NAMES. *Buyachin* (Hunza); elsewhere as in 1885.

SIZE. Bulbul; length c. 18 cm (7 in.).

FIELD CHARACTERS. As in 1885 but ear-coverts and sides of neck black; no interruption between black of throat and black of nape. White on head limited to forehead, a small area around the eye and a short supercilium. White on wing more extensive. Sexes alike.

STATUS, DISTRIBUTION and HABITAT. Fairly common summer (breeding) visitor and partial migrant in northern Baluchistan, N.W.F.P. (Kurram and Kagan valleys, Chitral), Hunza, Gilgit, Baltistan and sporadically eastwards in Ladakh (Shushal—Osmaston, *Ibis* 1925: 700), Kashmir (Liddar Valley, JBNHS 19: 992), Kulu (perhaps exceptional at low altitude, cf. Whistler, JBNHS 22: 282 and 31: 473). Recorded at Manangbhot, central Nepal in July at c. 3500 m (Lowndes, JBNHS 53: 35). Hybridizes or intergrades with *alboides* in Nuristan (Paludan), Hunza, Gilgit, Astor, Sind Valley and Pir Panjal. Breeds from c. 800 m upwards in the Kurram Valley, between 900 and 2700 m in the Kagan Valley, 1500-3600 m in Chitral, at c. 2700 m in the Liddar Valley, 4300 m in Ladakh, and 1350 m in Kulu. In summer affects streamsides in open country. Winters mostly in northern Punjab, India and Bangladesh (everywhere less common than *dukhunensis*; scarce in extreme

Motacilla alba

Distributional ranges

- [■] 1 *personata* (1886). Winter
- [■] 2 *alboides* (1887). Winter
- [▨] 3 *alboides*. Breeding
- [●] Sporadic breeding of 1 within range of 2
- 1 beyond broken line, breeding and partial migrant
- 2 within broken line, breeding and partial migrant

south), in the foothills up to c. 1500 m (Nepal and western Himalayas). In winter frequents ploughland, watercourses, lawns, etc.

Extralimital. Breeds also in Afghanistan and Turkestan.

MIGRATION. Much as in 1885. First autumn migrants arrive in the foothills at the end of August. On passage noted as high as 5500 m.

GENERAL HABITS, FOOD AND VOICE. As in 1885.

BREEDING. As in 1887. Breeding side by side with *M. maderaspatensis* described, Whistler, JBNHS 29: 282. Average size of 45 eggs 20·1 × 15·2 mm (Baker).

MUSEUM DIAGNOSIS. Grey back in conjunction with black ear-coverts and sides of neck connecting black of nape to that of throat easily identify this subspecies in summer plumage. In winter similar to *alboides* but mantle paler.

Young like that of *dukhunensis* but cheeks and ear-coverts dark grey; not distinguishable from young of *alboides*.

MEASUREMENTS

	Wing	Bill (from skull)	Tail
♂♂	90–98	16–18	93–102 mm
♀♀	87–95	16–17	84–100 mm (Paludan, CBT)

Weight 15 ♂♂ (March–July) 21–29; 14 ♀♀ (March–July) 22–28 g (Paludan).

COLOURS OF BARE PARTS. As in 1885.

1887. *Motacilla alba alboides* Hodgson

(*Motacilla*) *Alboides* Hodgson, 1836, *Asiat. Res.* 19: 191 (Nepal)

Motacilla alba albula Koelz, 1954, *Contrib. Inst. Regional Exploration*, No. 1: 20
(Bara Pani, Khasia Hills)

Baker, FBI No. 1171, Vol. 3: 262

LOCAL NAMES. *Tangzhenfleu* (Lepcha); elsewhere as in 1885.

SIZE. Bulbul; length c. 18 cm (7 in.).

FIELD CHARACTERS. As in 1886 but back and rump black (*v.* grey).

STATUS, DISTRIBUTION and HABITAT. Common summer (breeding) visitor, vertical and short-range migrant. Breeds from Gilgit (rare) and eastwards commonly in Baltistan, 2500 m, Ladakh from the lowest levels up to 4500 m, Kashmir above c. 1500 m, Lahul and Spiti 3900 m, Sutlej Valley 2500–2800 m (Waite, JBNHS 45: 539), Garhwal 3600 m (Lavkumar, ibid. 53: 326), Kumaon (Walton, JASB 1900: 163), central Nepal 3600 m (Lowndes, JBNHS 53: 35), eastern Nepal, apparently only in the alpine zone, 4000–4500 m (Biswas, ibid. 58: 449; Diesselhorst, 1968), Mt Everest region 3600–4200 m (*Ibis* 1922: 516), Sikkim and Chumbi Valley from c. 2700 m up to nearly 5000 m (Hingston, JBNHS 32: 325; Sálim Ali, *Birds of Sikkim*: 307), Bhutan 2400–3000 m (Ludlow, *Ibis* 1937: 516), Arunachal Pradesh and southeastern Tibet (ibid. 1944: 362). Affects river beds, rocky streams and wet fields. Winters mostly below c. 1500 m (a few individuals up to c. 2700 m), in the eastern parts extending to the plains of northern Bihar, northern Bengal, Assam, Nagaland, Manipur and Bangladesh (all parts—Rashid).

Extralimital. Breeds in adjacent parts of southern Tibet (northern limits unknown), Sichuan and Yunnan south to northern Vietnam. Winters south to Tenasserim, Thailand and Cambodia.

GENERAL HABITS, FOOD and VOICE. As in 1885.

Display. ‘The male shuffles round the hen with the tail and wing nearest the latter spread out and sloped downwards’ (HW).

BREEDING. *Season*, May to early August. *Nest*, a cup of dry grass, roots and leaves lined with hair, wool or feathers, placed under a boulder, among roots of bushes or in heaps of flotsam on river islands or banks, occasionally in holes in walls or under the eaves of houses. *Eggs*, 4 to 6, white tinged with grey marked with numerous brownish grey specks. Average size of 80 eggs 21·3 × 15·5 mm (Baker), of 10 eggs 21·9 × 15·6 mm (BBG). Building of nest, incubation and care of young by both sexes.

MUSEUM DIAGNOSIS. See Key to the Subspecies. Differs from *personata* in having the back and rump black. Female similar to male but black of back more or less mixed with grey. Postnuptial moult complete in August and September. Other moults as in 1885.

First-winter male. Uppertars and lesser coverts sooty black edged or mixed with grey; often shows more white on throat than adult. First-winter female like male but upperparts and lesser coverts dark ashy grey, somewhat darker on crown.

Young not distinguishable from that of *personata*. From *dukhunensis* distinguishable by more white in wing-coverts, darker ear-coverts, chin and throat sullied with dusky brown.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	90–105	18–19	23–25	87–97 mm
♀♀	87–95 }			84–94 mm

(HW, BB)

Weight 15 ♂♂ (Aug.–Nov.) 22–26·1; 10 ♀♀ (Aug.–Nov.) 20·1–23·7 g (GD).

COLOURS OF BARE PARTS. Iris dark brown. Bill black; mouth blackish in male, fleshy or blackish livid in female. Legs and feet black (HW).

1888. *Motacilla alba leucopsis* Gould*Motacilla leucopsis* Gould, 1838 (1837), Proc. Zool Soc. London: 78 (India)
Baker, FBI No. 1173, Vol. 3: 264LOCAL NAMES. *Dhobān* (Hindi); *Khānjanā*, *Gara chanchir* (Chota Nagpur); *Bālimāti*, *Tiposi* (Assam); *Tangzhenfleu* (Lepcha).

SIZE. Bulbul; length c. 18 cm (7 in.).

FIELD CHARACTERS. As in *albooides* (1887) black back but ear-coverts and sides of neck white. Distinguishable from *personata* (1886) by black back (v. grey), white sides of neck and white upper throat; *dukhunensis* has a grey back and black chin and throat.STATUS, DISTRIBUTION and HABITAT. Common winter visitor. Assam, Nagaland, Manipur, Bangladesh and Bengal west through Bihar to eastern Uttar Pradesh and central Nepal (possibly Simla, cf. Beavan, *Ibis* 1868: 73, as '*luzoniensis*'); in the terai, duars and foothills up to c. 1500 m, in the hills south of the Brahmaputra up to c. 1000 m. Also Andaman Islands. Affects dry river-beds, streams, ponds, roads and cultivation.

EXTRALIMITAL. Breeds in western and northern China, Korea and Amur-land. Winters in southern China and Indochinese countries.

MIGRATION. Occurs in winter quarters chiefly from mid September to the beginning of April. Common on passage at high altitudes in southern Tibet and eastern Himalayas from the middle of August to the middle of September (Ludlow, Diesselhorst); on Mt Everest up to 5300 m.

GENERAL HABITS, FOOD and VOICE. As in 1885.

BREEDING. EXTRALIMITAL.

MUSEUM DIAGNOSIS. See Field Characters. Female as male but upperparts dark slaty usually mixed with some black (sometimes without any black or nearly as black as male).

First-winter male. Crown usually black, sometimes mixed with dark grey. Mantle and lesser coverts dark slate-grey, mixed or not with black to sooty black, fringed with dark grey. Flight-feathers and primary-coverts browner than in adult, greater coverts browner and only narrowly edged with white (retained from young).

First-winter female. Above brownish slate-grey. Crown like back or darker. Forehead less pure white than in adult or first-winter male.

Young as *dukhunensis* but rump blackish with narrow brown fringes. Median coverts white, grey at base and dark along shafts.

Plumages very variable. Those that resemble the grey-backed forms may be distinguished by the browner tinge of upperparts, darker rump and lesser coverts and large amount of white in median and greater coverts (HW).

MEASUREMENTS

	Wing	Bill (from skull)	Tail
♂♂	87-96	17-18	{ 85-93 mm
♀♀	85-91		{ 82-92 mm
Weight 5 ♂♂ (Sept.-Oct.)	20.2-27 g (GD).		(HW, BB)

COLOURS OF BARE PARTS. As in 1887.

1889. *Motacilla alba ocularis* Swinhoe

Motacilla ocularis Swinhoe, 1860, Ibis: 55 (Amoy, China)
Baker, FBI No. 1170, Vol. 3: 261

LOCAL NAMES. As in 1888.

SIZE. Bulbul; length c. 18 cm (7 in.).

FIELD CHARACTERS. As in Indian White Wagtail (1885), i.e. grey back and white sides of head, but easily distinguished from it by black streak through eye.

STATUS, DISTRIBUTION and HABITAT. Uncommon winter visitor to Assam, Nagaland, Manipur, Bangladesh and west to Harike lake ($31^{\circ}12'N.$, $75^{\circ}12'E.$) Punjab (rare) [JBNHS 86: 246]. Habitat as in 1888.

Extralimital. Breeds in Siberia from the Yenisey to Chuckchi Peninsula. Winters in southeastern Asia.

MIGRATION. Noted as common on passage in the Nepal Valley in March-April and October.

GENERAL HABITS, FOOD and VOICE. As in 1885.

BREEDING. Extralimital.

MUSEUM DIAGNOSIS. Dark eye-streak, present in all plumages, identifies this subspecies.

MEASUREMENTS

	Wing	Bill (from skull)	Tail
♂♂	92-101	16-18	{ 93-99 mm
♀♀	88-94		{ 86-95 mm

(HW)

COLOURS OF BARE PARTS. As in 1885.

1890. *Motacilla alba baicalensis* Swinhoe

Motacilla baicalensis Swinhoe, 1871, Proc. Zool. Soc. London: 363
(Eastern Asia = Lake Baikal)
Baker, FBI No. 1169, Vol. 3: 260

LOCAL NAMES. None recorded.

SIZE. Bulbul; length c. 18 cm (7 in.).

FIELD CHARACTERS. As in Indian White Wagtail (1885), i.e. grey back and white sides of head, but chin and upper throat white at all seasons. Not distinguishable in winter.

STATUS, DISTRIBUTION and HABITAT. Uncommon winter visitor. 'Assam' (Baker), Bangladesh (all parts *vide* Rashid), Madhupur (Bihar), Sikkim, Bengal duars (Roonwal, *Rec. Indian Mus.* 41: 298), Nepal (Proud, JBNHS 53: 67) and probably farther west in the plains of northern India. According to Roonwal (*loc. cit.*) 'in the Indian Museum there are a number of well-preserved skins of *baicalensis* (\geqslant *personata*) from as far west as Kashgar, Gilgit and Ladakh, and also from Simla and Sikkim'. Cf. also extralimital winter range and migration. Habitat as in 1885.

Extralimital. Breeds in Mongolia and Transbaikalia. Winters in the Indochinese countries, southern China and in Afghanistan and southeastern Iran.

MIGRATION. Recorded on passage in Nepal both in March-April (latest 30 April) and in September (Proud, Biswas, Polunin, Diesselhorst), and presumably throughout the Himalayas (cf. Roonwal, above).

GENERAL HABITS, FOOD and VOICE. As in 1885.

BREEDING. Extralimital.

MUSEUM DIAGNOSIS. See Field Characters. White in wing-coverts more extensive than in *dukhunensis*, about as in *personata*. In winter plumage doubtfully differentiable from *dukhunensis*; larger size and larger amount of white in wing, especially median coverts, may be helpful characters.

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	93-100	16-18	c. 24	88-98 mm
♀♀	86-94 }			88-94 mm

(HW, Roonwal)

Weight 2 ♀♀ (Sept.) 22.8, 23.5 g (GD).

COLOURS OF BARE PARTS. As in 1885.

1891. Large Pied Wagtail. *Motacilla maderaspatensis* Gmelin

(*Motacilla*) *maderaspatensis* Gmelin, 1789, *Syst. Nat.* 1: 961

(India = Madras *vide* Whistler & Kinnear, 1933, JBNHS 36: 842)

Motacilla maderaspatensis kangrae Koelz, 1939, *Proc. Biol. Soc. Washington* 52: 75

(Badhwar, Kangra District, Punjab)

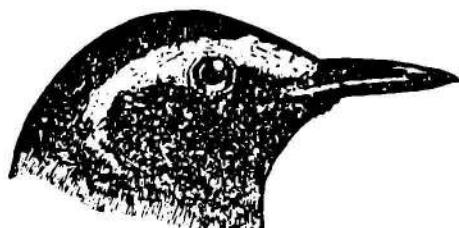
Baker, FBI No. 1172, Vol. 3: 263

Plate 98, fig. 18

LOCAL NAMES. *Māmūlā*, *Bhuin māmūlā*, *Khānjān* (Hindi); *Nachangōl*, *Hata rowē* (Chota Nagpur); *Bālimāhi*, *Tipochi* (Assam, all wagtails); *Khongrangchak* (Manipur, all wagtails; regarded as an incarnation of Durga); *Sakala sarela-gādu* (Telugu); *Vannathi kūrūvi*, *Kulatthu kūrūvi* (Tamil); *Välukunukki pakshi* (Malayalam).

SIZE. Bulbul; length c. 21 cm (8½ in.).

FIELD CHARACTERS. A large black-and-white wagtail. *Above*, black with a conspicuous white supercilium from lores to nape, a large white band on wing and white outer rectrices. *Below*, throat and breast black, rest of underparts white, ashy on flanks. Sexes alike but female sometimes duller and browner. Summer and winter plumages alike.



x c. 1

Colour-pattern very similar to Magpie-Robin, but prominent white supercilium diagnostic.

The black-backed races of *M. alba* have a less extensive white patch on wing and an entirely white forehead; in *maderaspensis* the black of crown projects in a point over forehead to base of bill.

STATUS, DISTRIBUTION and HABITAT. Common resident. The entire Indian Peninsula from the Himalayan foothills (Kohat, Salt Range and Punjab to Sikkim and Bengal duars; curiously absent from Sind) south through Kutch to Kanyakumari; lower Bengal and adjoining parts of Bangladesh. Sight records from Sri Lanka in recent years (JBNHS 86: 15). In the Himalayan foothills up to c. 900 m (Sikkim) and locally 1500 m (Garhwal, Kulu) or 1700 m (Nepal—Diesselhorst); in the hills of southern India up to 2200 m. Affects watercourses, preferably smooth-running rocky streams, and also dammed irrigation tanks, pools, masonry wells, and occasionally neighbouring rice paddies and lawns. In northern Punjab where perennial streams or irrigation canals are absent, frequents all lake shores (Roberts).

GENERAL HABITS. Usually in pairs which hold together throughout the year. In winter may gather in flocks to roost in tamarisks or reeds in company with other wagtails and swallows. Feeds along the water's edge in typical wagtail manner, vigorously wagging its tail up and down during short stops. Often perches on roof-tops.

Display. As observed by SA: The male of a pair flies down to ground on hovering wings, singing lustily, his plumage fluffed out flaunting the contrasting colours. Lands in front of female, raises open both wings vertically back to back with only the tips quivering and breast-feathers fully puffed. Approaches female thus, with stiff mincing steps. She responds by a slight crouch and opening out of wings at the armpits, shivering them as in food-begging. Copulation ensues. Male with upraised wings continues to sing during the act and for several seconds after coming off female's back. Wings now lowered, but body-feathers still loosely fluffed. (Birds disturbed by passer-by.)

A probable sequence of the above described by another observer (Kirkpatrick, JBNHS 52: 602). After copulation on a flat roof-top [with the same preliminaries as above] the male moves away a few centimetres and suddenly springs upward in the air for a metre or so with a single rapid wing-beat. He slowly sinks back to the roof like a puff-ball on stiffly outspread wings, rump and belly feathers fluffed out, tail slightly spread and thrown well over back, legs dangling stiffly below, and the bird singing loudly all the time. As soon as he touches down he sidles up with a stiff mincing gait to the responsive female and copulation is repeated.

FOOD. Stomachs examined contained small beetles (Tridactylinae and others), locusts, dragonflies, snails and small seeds. To capture Tridactylinae beetles in sand, the birds often work in pairs and systematically search the sand. When the insect is spotted there is a swift rush, and a jet of sand is shot into the air as the prey is seized (Hingston).

VOICE and CALLS. Call-note, a loud *chiz-zit*, deeper and louder than that of *M. alba*, chiefly uttered in flight. Song, a clear high-pitched jumble of loud pleasant whistling notes somewhat reminiscent of Magpie-Robin's; sometimes also given by both sexes as a demonstration of anger or alarm on an intruder's approach to the nest. Song period in Nepal January to October, chiefly April to July (Proud). In breeding season often sings at dusk (Roberts).

BREEDING. *Season;* in the north March to May or June, rarely till September or October. In the south the season begins as soon as the rivers drop to dry-season level about the end of December and continues until the break of the rains in June (Betts). *Nest,* a rough collection of roots, coarse grass, scabs of dry algae and miscellaneous rubbish, in the centre of which is a neat cup lined with hair, wool, etc. Almost invariably placed in the vicinity of water, under bridges, in holes in walls or buildings, in hollows of stranded tree-trunks or among the roots of grass tufts growing out of rock overhanging streams; frequently in close proximity to nest of Wiretailed Swallow. A pair has been known to occupy a disused dipper's nest; another to place nest in a river ferry-boat in constant use. *Eggs,* normally 4, sometimes 3, rarely 5, greyish white with brown specks all over, denser round the large end, darker and browner than those of *M. alba*. Average size of 100 eggs 21.9 × 16.2 mm (Baker). Building of nest and care of young by both sexes. Incubation period undetermined.

MUSEUM DIAGNOSIS. See Field Characters. Unlike *M. alba*, summer and winter plumages are alike. First-winter male and female alike, duller (browner) than adults. A complete moult about September; no spring moult. Female may have the upperparts dark sooty grey (cf. Whistler, JBNHS 38: 759).

MEASUREMENTS

	Wing	Bill (from skull)	Tarsus	Tail
♂♂	91–103 (107)	19–20	27–28	93–107 mm
♀♀	88–103	18–20	26–28	90–103 mm (HW, BB, SA, Koelz)

Weight 2 ♂♂ 30, 30; 1 ♀ 26; 1 o? 36 g (GD, BB, Roonwal).

COLOURS OF BARE PARTS. Iris dark brown. Bill black; mouth slaty black. Legs and feet blackish. In nestling gape pale yellow, mouth orange.

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PLATES

Synopsis numbers in brackets (SE) = Species Extralimital

PLATE 90

- 1 *Erythropygia galactotes*, Rufous Chat (1641)
- 2 *Phoenicurus erythronotus*, Eversmann's Redstart (1669)
- 3 *Phoenicurus ochruros rufiventris*, Black Redstart (1672)
- 4 *Phoenicurus ochruros phoenicuroides*, Black Redstart (1671)
- 5 *Phoenicurus caeruleocephalus*, Blueheaded Redstart (1670)
- 6 *Phoenicurus phoenicus*, Redstart (1673)
- 7 *Phoenicurus hodgsoni*, Hodgson's Redstart (1674)
- 8 *Phoenicurus frontalis*, Bluefronted Redstart (1675)
- 9 *Phoenicurus schisticeps*, Whitethroated Redstart (1676)
- 10 *Phoenicurus erythrogaster*, Güldenstädt's Redstart (1678)
- 11 *Phoenicurus auroreus*, Daurian Redstart (1677)
- 12 *Rhyacornis fuliginosus*, Plumbeous Redstart (1679)
- 13 *Hodgsonius phoenicuroides*, Hodgson's Shortwing (1680)
- 14 *Cinclidium leucurum*, Whitetailed Blue Robin (1681)
- 15 *Cinclidium frontale*, Bluefronted Robin (1682)
- 16 *Saxicoloides fulicata*, Indian Robin (1720)
- 17 *Saxicoloides f. cambaiensis*, Indian Robin (1717)
- 18 *Cercomela fusca*, Brown Rock Chat (1692)
- 19 *Chaimarrornis leucocephalus*, Whitecapped Redstart or River Chat (1716)



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PLATE 91

- 1 *Copsychus malabaricus*, Shama (1665)
- 2 *Copsychus m. albiventris*, Shama (1668)
- 3 *Grandala coelicolor*, Hodgson's Grandala (1683)
- 4 *Copsychus saularis*, Magpie-Robin (1661)
- 5 *Enicurus scouleri*, Little Forktail (1684)
- 6 *Enicurus schistaceus*, Slatybacked Forktail (1686)
- 7 *Enicurus immaculatus*, Blackbacked Forktail (1685)
- 8 *Enicurus maculatus*, Spotted Forktail (1688)
- 9 *Enicurus leschenaulti*, Leschenault's Forktail (1687)
- 10 *Cochoa viridis*, Green Cochua (1691)
- 11 *Cochoa purpurea*, Purple Cochua (1690)
- 12 *Myiophonus blighi*, Ceylon Whistling Thrush (1727)
- 13 *Myiophonus horsfieldii*, Malabar Whistling Thrush (1728)
- 14 *Myiophonus caeruleus*, Blue Whistling Thrush (1729)

PLATE 83



PLATE 92

- 1 *Saxicola macrorhyncha*, Stoliczka's Bush Chat (1693)
- 2 *Saxicola torquata*, Collared Bush Chat (1697)
- 3 *Saxicola t. przewalskii*, Collared Bush Chat (1696)
- 4 *Saxicola insignis*, Hodgson's Bush Chat (1694)
- 5 *Saxicola caprata*, Pied Bush Chat (1701)
- 6 *Saxicola jerdoni*, Jerdon's Bush Chat (1704)
- 7 *Saxicola leucura*, Whitetailed Bush Chat (1699)
- 8 *Saxicola ferrea*, Dark-grey Bush Chat (1705)
- 9 *Oenanthe oenanthe*, Wheatear (1708)
- 10 *Oenanthe isabellina*, Isabelline Chat (1706)
- 11 *Oenanthe xanthopyrryna*, Redtailed Chat (1707)
- 12 *Oenanthe deserti*, Desert Wheatear (1710)
- 13 *Oenanthe pleschanka*, Pleschanka's Chat (1715)
- 14 *Oenanthe alboniger*, Hume's Chat (1714)
- 15 *Oenanthe finschii*, Barnes's Chat (1711)
- 16 *Oenanthe monacha*, Hooded Chat (1713)
- 17 *Oenanthe picata*, Pied Chat (1712)



PLATE 93

- 1 *Monticola rufiventris*, Chestnutbellied Rock Thrush (1724)
- 2 *Zoothera citrina*, Orangeheaded Ground Thrush (1733)
- 3 *Zoothera c. cyanotus*, Orangeheaded Ground Thrush (1734)
- 4 *Monticola solitarius*, Blue Rock Thrush (1726)
- 5 *Monticola cinclorhynchus*, Blueheaded Rock Thrush (1723)
- 6 *Turdus unicolor*, Tickell's Thrush (1748)
- 7 *Monticola saxatilis*, Rock Thrush (1722)
- 8 *Turdus boulboul*, Greywinged Blackbird (1750)
- 9 *Turdus albocinctus*, Whitecollared Blackbird (1749)
- 10 *Turdus merula kinnisi*, Blackbird (1757)
- 11 *Turdus m. nigropileus*, Blackbird (1753)
- 12 *Turdus m. simillimus*, Blackbird (1755)
- 13 *Turdus merula*, Blackbird (1752)
- 14 *Turdus feae*, Fea's Thrush (1761)
- 15 *Turdus kessleri*, Kessler's Thrush (1760)
- 16 *Turdus rubrocanus*, Greyheaded Thrush (1758)
- 17 *Turdus r. gouldii*, Greyheaded Thrush (1759)



PLATE 94

- 1 *Zoothera wardii*, Pied Ground Thrush (1731)
- 2 *Zoothera spiloptera*, Spottedwinged Ground Thrush (1737)
- 3 *Zoothera sibirica*, Whitebrowed Ground Thrush (1732)
- 4 *Zoothera mollissima*, Plainbacked Mountain Thrush (1739)
- 5 *Zoothera marginata*, Lesser Brown Thrush (1746)
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- 10 *Turdus dissimilis*, Blackbreasted Thrush (1747)
- 11 *Turdus obscurus*, Dark Thrush (1762)
- 12 *Turdus ruficollis*, Redthroated Thrush (1764)
- 13 *Turdus r. atrogularis*, Blackthroated Thrush (1763), ssp of 1764
- 14 *Turdus iliacus*, Redwing (1767)
- 15 *Turdus pilaris*, Fieldfare (1766)
- 16 *Turdus viscivorus*, Mistle Thrush (1768)



PLATE 95

- 1 *Prunella collaris*, Alpine Accentor (1779)
- 2 *Prunella strophiata*, Rufousbreasted Accentor (1783)
- 3 *Prunella rubeculoides*, Robin Accentor (1781)
- 4 *Prunella immaculata*, Maroonbacked Accentor (1788)
- 5 *Prunella himalayana*, Altai Accentor (1780)
- 6 *Prunella atrogularis*, Blackthroated Accentor (1787)
- 7 *Prunella fulvescens ocularis*, Radde's Accentor (1785a), ssp of 1784
- 8 *Prunella montanella*, Siberian Accentor (1787a)
- 9 *Prunella fulvescens*, Brown Accentor (1784)
- 10 *Montifringilla blanfordi*, Blanford's Snow Finch (1955)
- 11 *Montifringilla davidiana*, Pere David's Snow Finch (1956)
- 12 *Montifringilla adamsi*, Tibet Snow Finch (1952)
- 13 *Montifringilla nivalis*, Snow Finch (1951)
- 14 *Montifringilla taczanowskii*, Mandelli's Snow Finch (1953)
- 15 *Leucosticte nemoricola*, Hodgson's Mountain Finch (2000)
- 16 *Montifringilla ruficollis*, Rednecked Snow Finch (1954)
- 17 *Leucosticte brandti*, Brandt's Mountain Finch (2003)
- 18 *Montifringilla theresae*, Bartailed Snow Finch (SE)



PLATE 96

- 1 *Aegithalos leucogenys*, Whitecheeked Tit (1821)
- 2 *Aegithalos niveogularis*, Whitethroated Tit (1822)
- 3 *Aegithalos iouschistos*, Rufousfronted Tit (1823)
- 4 *Aegithalos concinnus*, Redheaded Tit (1818)
- 5 *Aegithalos c. manipurensis*, Redheaded Tit (1820)
- 6 *Cephalopyrus flammiceps*, Firecapped Tit (1815)
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- 8 *Remiz p. nigricans*, Penduline Tit (RE)
- 9 *Parus dichrous*, Brown Crested Tit (1808)
- 10 *Parus ater*, Coal Tit (1803)
- 11 *Parus rufonuchalis*, Simla Black Tit (1804)
- 12 *Parus melanolophus*, Crested Black Tit (1802)
- 13 *Parus rubidiventris*, Rufousbellied Crested Tit (1805)
- 14 *Parus spilonotus*, Blackspotted Yellow Tit (1812)
- 15 *Parus cyanus flavipectus*, Yellowbreasted Blue Tit (1800)
- 16 *Parus c. tianschanicus* (RE)
- 17 *Parus monticolus*, Greenbacked Tit (1799)
- 18 *Parus major*, Grey Tit (1794)
- 19 *Parus nuchalis*, Whitewinged Black Tit (1798)
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PLATE 97

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- 3 *Sitta castanea*, Chestnutbellied Nuthatch (1830)
- 4 *Sitta europaea cashmirensis*, Common Nuthatch (1824)
- 5 *Sitta tephronota*, Eastern Rock Nuthatch (1836)
- 6 *Sitta leucopsis*, Whitecheeked Nuthatch (1832)
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- 18 *Paradoxornis guttaticollis*, Whitethroated Parrotbill (1252)
- 19 *Paradoxornis ruficeps*, Greater Redheaded Parrotbill (1247)
- 20 *Paradoxornis atrosuperciliaris oatesi*, Lesser Redheaded Parrotbill (1245)
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PLATE 98

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