LARK BUNTING - CALAMOSPIZA MELANOCORYS

Taxonomy: Kingdom: Animalia Phylum: Chordata Class: Aves Order: Passeriformes Family: Passerellidae Genus: Calamospiza Species: C. melanocorys

Habitat:

Biomes: Lark Buntings are endemic to the grasslands and shrubsteppe of North America—they occur nowhere else. When breeding, they are most likely to be found in large areas of native grassland vegetation, especially wheatgrass, blue grama grass, needle-and-thread grass, and big sagebrush. Lark Buntings live among many species of prairie vegetation, including red triple-awn grass, four-winged saltbush, cottonthorn hornbush, and green-plumed rabbitbrush, all plants in which the birds may nest. Lark Buntings avoid bare ground when nesting (Horned Larks are often found there), preferring shortgrass and taller habitats. They usually nest at the base of a small shrub or cactus, so pure grassland is usually not suitable for breeding habitat. Heavily grazed shortgrass habitats, prairie dog towns, and recently burned fields are not generally used. Wintering and migrating Lark Buntings usually occur in flocks, sometimes with other sparrows, in many types of open habitats, including dry lake beds (playas) at times. Across large areas of their wintering range, abundant natural food is available chiefly where erratic summer rains have fallen. This unpredictability means that Lark Buntings are nomadic during winter, and they frequently show up in human-modified habitats such as cattle feedlots and weedy roadside edges.

Distribution:

In US: The lark bunting is the most prevalent of the passerine species found in the grasslands of North America. Their breeding habitat is prairie regions in central Canada and the mid-western United States. These birds migrate in flocks to winter southern Texas, Arizona and the high plateau of northern Mexico in the fall.

In Other Countries: ^^^^^^^

Holistic Description: North America is home to many handsome sparrows, but Lark Buntings are among the most striking: breeding males are velvety black with snow-white wing coverts and fine white edges to the innermost flight feathers (the tertials). Females, immatures, and nonbreeding males are sandy brown but also have white in the wing, most apparent when the birds are flying. In their preferred grassland habitats, they feed among other sparrows or with quail, often near road edges and often in flocks.

Species Richness: NO SUBSPECIES

Population Dynamic: There has been a decrease in population with the loss of natural prairie habitat.

Evolution and Systematics:

Evolution: Skeletal remains, Shelter Cave, Dona Ana Co., NM, 12,500–10,000 yr before present. Incomplete upper mandibles dating to late Pleistocene Jones fauna (26,700–29,000 yr before present).

Systematics: On an 1833 trip west with Thomas Nuttall, collected first specimen on plains of Platte River in w. Nebraska. First described as Fringilla bicolor. Nomenclature revised to Calamospiza melanocorys. Calamospiza is a monotypic genus endemic to Great Plains of North America. This genus has no close allies.

Number of Species: NO SUBSPECIES

Number of Genera: NO SUBSPECIES

Physical Characteristics:

Size and Length: Length: 5.5-7.1 in (14-18 cm) Weight: 1.3-1.5 oz (35.3-41.3 g)

Wingspan: 9.8-11.0 in (25-28 cm)

Coloration: Breeding males are an unmistakable black with white wing patches. Nonbreeding males, as well as females and immatures, are brownish above, pale with brown streaking below, with extensive white in the upperwing coverts and small white tips to the inner tail feathers. The bill is a distinctive pale blue-gray.

General Body Features: A heavyset sparrow with a very large, conical bill, and a compact, robust body. The bill and overall shape are reminiscent of a grosbeak or bunting.

Special Features of the Body: In many of the species, both the male and the female are primarily brown which allows them to blend in with the grass. If males have other distinguishing markings, the marks are usually yellow and/or black, like the markings on the meadowlark and dickcissel.

Special Features of the Head and Sensory Organs: NONE

Dentition: BEAK/LAMELLAE/GIZZARD

Special Features of the Limbs and Digits: Most of the songbirds have small feet used for perching on grass or twigs.

Any Special Internal Anatomy: They are highly nomadic from year to year, a behaviour which appears to have evolved to track favourable habitat conditions across a changing landscape. Lark Buntings also time nesting to coincide with peak

abundance of grasshoppers, a major component of their diet. Nest-site selection is linked to minimizing heat stress for eggs and nestlings, as well as for the dark-plumaged incubating male.

Sexual Dimorphisms: Adult male in Alternate plumage is uniformly black with highly contrasting white wing-patch. Tail short and tipped white. Bill blue-gray. Basic-plumaged male resembles female, but chin black, with black extending to belly feathers where partially hidden by whitish feather edgings. Female in Alternate plumage grayish brown above, darkly streaked; white wing-patch as in male, but wing patch smaller, interrupted, and tinged with buffy. Underparts white, streaked on breast and sides with dusky. Female in Basic plumage less grayish brown, paler markings, and more strongly tinged with buff.

Differences Between Juvenile Stage and Adult: Juvenile resembles female but is buffier overall; buffy edges on neck- and back feathers give a scaly impression; and has more extensive streaking on underparts.

Behavior:

Diurnal, Nocturnal, or Crepuscular: Diurnal

Activity: Males sing in flight or from a perch in a taller shrub, fence, or utility wire. Singing males are most evident in flight: they ascend rapidly, then glide earthward, with most of the song given as they slowly descend. Males arrive on the breeding grounds earlier than females and begin to establish territories where suitable nesting sites (shade-providing plants) are plentiful. At this time, before the arrival of the females, males frequently deliver a flight-song containing more pauses and harsh notes than the song they give later in the season. This different song seems to indicate aggression toward other males, as the males establish individual territories. Males that clash early in the nesting season also communicate aggression by flicking their wings, ruffling the feathers, or contorting the body. Because the birds' territories are relatively small and thus close together, some observers have assumed that Lark Buntings are colonial nesters that don't hold individual territories, but this is not the case. Females also show aggression toward other females that enter their territory, and in a few cases, observers have seen Lark Buntings chase sparrows that approached the nest too closely. Once young hatch, the parents forage away from the territory. After breeding, Lark Buntings gather into flocks that migrate, both diurnally and nocturnally, southward toward wintering areas. Most are observed in open lowland areas, but they have been seen at elevations in the Rockies as high as 12,900 feet during migration.

Locomotion: Generally hops when foraging on ground. Walks and runs, also uses a unique gallop in high-speed ground pursuits of prey. Typically uses a reverse thrust-wing movement immediately before alighting. Ordinary flight is a low, gliding motion, overtopping weeds and bushes.

Communication and Perception: In spring and summer, males sing two different songs, both composed of repeated notes—given either slowly and distinctly or more rapidly, as trills. Songs are delivered in distinct phrases and can last up to 8 seconds. Males arrive on the breeding territory, ahead of the females; they tend to sing an "aggressive flight song," marked by harsher notes and by pauses between phrases. As males establish territories and pairs form, males switch to singing a sweeter, faster song, from a perch or in flight.

Home Range: Three territorial phases noted in reproductive cycle. (1) Preterritorial phase occurs during first weeks of arrival. Small groups of males perform communal Flight Displays, then forage in groups ≥200 m apart, an average of 5.8 min ± 1.3 SD. (2) In territorial phase (or mate-attraction phase), males mostly solitary and confine their activities to a circumscribed area. Males spend time foraging or performing Flight Displays spontaneously for mate attraction or in response to con-specific intrusion, always landing in its territory. (3) In mated phase, males less aggressive toward conspecific males. This phase, which covers most of breeding season, has led many observers to believe that territory does not exist

Degree of Sociality: Social and gregarious during migration and on wintering grounds. Simultaneous in movements; stragglers never observed remaining behind after a flock departs.

Level of Aggression: Aggressive Song Flight often given communally with as many as 5 or 6 males displaying simultaneously; 89% involving male-male interactions, which persist beyond territorial phase of breeding season. Individual males extremely responsive to ASF and even from a distance will begin their own ASF, continuing it while flying toward an individual that initiates such behavior. In ASF involving >2 males, individuals usually <5 m apart and occasionally make contact. Song becomes particularly loud and harsh at height of these encounters

Migration: Medium-distance migrant.

Predators:

Predators: Accipiter Hawks, Large Falcons, Harriers, Loggerhead Shrike, Merlin, Owls, Meadowlarks, Coachwhip, Magpied, Snakes, Coyotes.

Anti-Predator Defenses: Female gave a series of Alarm Calls at a Western Meadowlark puncturing a nestling, then dove at it; succeeding in chasing it away; injured nestling was dragged from nest by female. Both male and female Lark Buntings actively defended a nest against thirteen-lined ground squirrel.

Diet and Nutrition:
Adult Diet: Like other sparrows, Lark Buntings feed on seeds, invertebrates, and some fruits. They likely eat more insects than seeds from spring through autumn: studies in Colorado indicate that about two-thirds of the summer diet is composed of invertebrates. Young are fed mostly insects. Foraging Lark Buntings take seeds while feeding on the ground or strip seeds from grasses and other plants, much in the manner of other sparrows. In pursuit of insects, Lark Buntings are agile and versatile predators, stalking, then chasing them down on foot, pursuing them in flight (females more so than males), and gleaning them from vegetation. One study found that females foraging on the ground moved more quickly than males. Their diet includes seeds of many grasses and forbs, cactus fruit, grains, and leaves, as well as spiders, ants, grasshoppers, flies, beetles, bees, wasps, caterpillars, moths, leafhoppers, and many other invertebrates.
Juvenile Diet: Invertebrates, Araneida, Hemiptera, Lepidoptera
Special Adaptations for Getting Prey: In Colorado, prey-capture tactics include hawking (capturing prey in air), 37.8%; gleaning (capturing prey in vegetation while in or near vegetation), 3.8%; and stalking (capturing prey on the ground), 58.4%. When foraging, female buntings move more rapidly than males, covering more ground in a direct path; males forage more in one place and move forward slowly.
Reproduction:
Mode of Reproduction: Monogamous
Mating System: Complicated and highly variable mating system. Monogamy predominant; polyandry suspected. Polygyny occurs in certain high-density areas.
Mating Season:
Courtship: Once noticed, male directs Flight Songs toward female and increases display rate 3 times. Length of Song Flight shortens as much as 38%, with male often landing near female; 11% of PSF displays are given in presence of females; Perched Song given infrequently during interactions. Initially paired individuals spend considerable time together on territory with almost complete absence of Song Flight by male.
Territoriality: HOME RANGE
Mating: Male hops by female, drops onto his tarsi, then bobs up and down; occasionally advances and copulates with female holding grass stems in her bill. While holding grass stems, female occasionally goes into a Precopulatory Display. Copulation begins during nest construction; often repeated until clutch completion. Copulation can occur 8–10 times/h
Nest Placement: The female selects the site for the nest, normally a small depression at the base of a shrub, cactus, or large grass clump that will provide cover and shade. She indicates her preference by scraping the site with her feet. Nests are built on the ground by both sexes.
Nest Description: The nest is a loose cup formed of grass stalks, fine roots, leaves, and stems, lined with fine-blade grasses or hair. The nest's upper rim is even with surrounding ground or just above it. Nests measure about 3.7 inches across, with the interior of the cup 3 inches across and 1.5 inches deep; the height of the nest varies from about 1.5 to 3 inches.
Egg-Laying: Clutch Size: 2-5 eggs Number of Broods: 1-2 broods Egg Length: 0.8-1.0 in (2-2.5 cm) Egg Width: 0.6-0.7 in (1.5-1.8 cm) Incubation Period: 10-12 days Nestling Period: 7-9 days Egg Description: Unmarked light blue.
Hatching and Incubation/Gestation: Helpless with sparse gray down.
Development: Naked, with sparse downy neossoptiles from 1 to 8 mm in length, most prominent on superciliary and occipital elements of capital tract; saddle and posterior elements of dorsal tract; and humeral, femoral, alar, and ventral tracts. ALTRICIAL.
Parental Care: Brooding by both adults begins on hatching day, with only female brooding (at half the earlier rate) the last 2 d of nest period. Both adults feed nestlings. During early nestling stage, male occasionally brings food to female and she feeds young. Adult will often remove food item, crush from 5 to 10 s, then present to same nestling. Crushing routine may be repeated.
Lifespan: Up to 4.84 years.
Conservation:
Official Federal Status: Least Concern
Special Statuses in Individual States: NONE
Threats: Lark Buntings are still fairly common, but their numbers have fallen by an estimated 86% since 1970, according to Partners in Flight. They are designated as a Common Bird in Steep Decline, with an estimated global breeding population of 10 million and a Continental Concern Score of 12 out of 20. If current rates of decline continue, the species will lose another half of its population by 2033. Extensive habitat changes to North America's prairies and shrubsteppe (breeding habitat) and to desert grasslands (wintering habitat) may be responsible for Lark Bunting declines. Lark Buntings can nest successfully in altered habitats, but at lower densities than in intact grassland or sagebrush. Lark Buntings have been found to increase in

numbers in lands planted back to native grasses under the Conservation Reserve Program, although the species' nomadic behavior makes it difficult to precisely evaluate the effect of the program. Lark Buntings may be affected by pesticides used on agricultural fields. Lark Buntings and other grassland birds drink water from stock tanks, but may fall in and drown (one 1979 report found remains of 25 Lark Buntings in a single tank).

Conservation Efforts: ^^^^^^^

Extra Facts:

1. Breeding males have an impressive song flight: they ascend rapidly, then glide earthward, with most of the song given as they slowly descend. This is similar to the displays of some Eurasian lark species (especially the Eurasian Skylark), and is the reason the buntings have "lark" in their common name, despite being unrelated taxonomically.
2. Lark Buntings have interesting domestic arrangements. Pairs often nest close to one another in a loose "colony," much as Dickcissels do. Most are monogamous, but some males breed with multiple partners (a mating system known as polygyny). In other areas, when males outnumber females, unmated males seem to serve as "nest helpers," bringing food to young at the nest.
3. Lark Buntings sing from a perch or in a flight display, and they appear to be unique among birds in having two different flight-song types. The main song, sometimes given in flight, is a series of notes, delivered in distinct phrases, that differ in both pitch and speed. The other flight song is heard mostly from rival males; it contains harsh, low notes, pauses, and sharp whistles.
4. An observer in Kansas during the Dust Bowl year of 1937 noted that while other wildlife all but vanished, Lark Buntings actually increased and nested successfully. These birds may be able to survive periods of drought without drinking water, taking moisture from grasshoppers and other insects, their chief food during summer.
5. The oldest recorded Lark Bunting was a male, and was at least 4 years, 10 months old when he was found in Arizona, the same state where he had been banded.

Notable Species: NONE