

UPLAND SANDPIPER - BARTRAMIA LONGICAUDA

Taxonomy: Kingdom: Animalia Phylum: Chordata Class: Aves Order: Charadriiformes Family: Scolopacidae Genus: Bartramia Species: B. longicauda

Habitat:

Biomes: Upland Sandpipers nest in grasslands and are most numerous in native prairies in the Great Plains. They also nest in pastures, both grazed and ungrazed, and in agricultural fields, especially fallow fields, but sometimes hay or other crop fields. Some even nest in road edges. Minimal woody vegetation and minimal bare ground are prominent features of these grassland habitats. In Alaska and northwestern Canada Upland Sandpipers are scarce, nesting in upland tundra, mountain meadows, and elevated ridges in wetlands and floodplains. In eastern North America, where the species is declining, blueberry barrens, peatlands, and airports have small populations. During migration, this species frequents airfields, agricultural fields, and pastures, but migrants can also turn up in unusual places such as on beaches or ballfields, especially when grounded by foul weather. In South America, the species spends the winter in grasslands called pampas or llanos, or in pastures or croplands, especially alfalfa and other feeds. As deforestation has progressed, Upland Sandpipers now frequent grasslands in Andean regions of Colombia and Ecuador as well. During migration and on wintering grounds, they use habitats with shorter vegetation than those used for nesting.

Distribution:

In US: They breed from eastern Alaska south east of the Rocky Mountains through Montana to northern Oklahoma and then northeast to Pennsylvania, New England and extreme southern Quebec and Ontario. There are also local breeding populations in northeast Oregon and west central Idaho. They winter in northeastern Argentina, Uruguay and southern Brazil. It is an extremely rare vagrant to the South Pacific, with one record each from Australia and New Zealand.

In Other Countries: Canada, Argentina, Uruguay, Brazil, Australia, New Zealand, Greenland, Iceland, British Isles, Europe.

Holistic Description: The elegant, enigmatic Upland Sandpiper paces across grassland habitats like a tiny, short-billed curlew throughout the year: prairies, pastures, and croplands in summer; and South American grasslands in winter. Unlike most other North American shorebirds it avoids wetlands, instead hunting grasshoppers and other insects with jerky steps and quick jabs at prey. Male Upland Sandpipers often perch on fence posts early in the breeding season and perform memorable flight songs over their territories, often joined by their mates.

Species Richness: NO SUBSPECIES

Population Dynamic: The numbers of these birds increased as forests were cleared in the early 19th century, but declined sharply in the late 19th century due to hunting. They are now regularly present in Midwestern North America but populations are scattered in the east. Loss of prairie habitat is a concern. Also, livestock grazing has been found to reduce the number of nests in a field. Controlled burns may benefit this species as they feed on low-growing plants that are more easily spotted after a fire.

Evolution and Systematics:

Evolution: Only 2 records: from the Pleistocene of Kansas. Also, Brodkorb named a new fossil species, Bartramia umatilla, based on a single carpometacarpus from the Pliocene of Oregon.

Systematics: Plumage does not vary across the species' range, but females that breed in w. North America and winter in w. and s. South America average larger than females that breed in e. North America and winter in ne. South America. No subspecies have been described, but three scientific names Vieillot provided in 1816-Totanus variegatus, T. melanopygus, and T. campestris-are junior synonyms of Bartramia longicauda.

Number of Species: NO SUBSPECIES

Number of Genera: NO SUBSPECIES

Physical Characteristics:

Size and Length: Length: 11.0-12.6 in (28-32 cm) Weight: 3.4-8.0 oz (97-226 g)

Wingspan: 18.5 in (47 cm)

Coloration: Adults and young are marbled golden brown and blackish above. They are white below, with dark streaks and chevron-shaped markings on the breast and sides. The throat is white and they have a white eyering.

General Body Features: A shorebird with unusual proportions: long legs, a long, thin neck, small dovelike head, large eye, and thin, straight bill. The tail and the wings are long.

Special Features of the Body: Shorebirds are designed, or adapted, to survive in open habitats. Their brown, rust, black, and white plumage makes them less conspicuous to predators. Their bi-coloration, dark on the back and lighter on the belly, further camouflages them from predators. Their light bellies blend in against the light sky when seen from below. When observed from above, by a falcon for example, their dark backs blend in with the beach or mudflat below

Special Features of the Head and Sensory Organs: Plovers are visual feeders and have large eyes so they can see their prey. Their bills are highly adapted tools for finding food. Some species will probe for invertebrates in mud or water, poking their bills up and down in rapid succession like a sewing machine until they feel something to eat. Others have bills perfectly adapted to swishing through the water to filter food from the water column.

Dentition: BEAK/LAMELLAE/GIZZARD

Special Features of the Limbs and Digits: Shorebirds have long legs for wading. Their long toes give them the stability they need for their seemingly endless walking and running along the water's edge and in soft mud.

Any Special Internal Anatomy: Up to 50 percent of a migrating sandpiper's body weight is deposited as fat. This fat provides the energy for long distance flight. Not only used for finding food, bills are used for preening as well. A special oil gland located at the base of their tails helps to keep their feathers dry. The birds spread the oil from this gland with their bills or the backs of their heads when preening themselves. The oil repels water from the feathers, keeping them warm and dry

Sexual Dimorphisms: Female body mass: 121-246 g; males generally smaller, 112-179 g

Differences Between Juvenile Stage and Adult: Juveniles resemble adults, but have a pale head without the contrast between dark crown and the rest of head, as seen in adults. Feathers of upperparts have prominent pale margins and dark subterminal bars that are lacking in adults.

Behavior:

Diurnal, Nocturnal, or Crepuscular: Diurnal

Activity: One of the signature sounds of the American prairie is the flight call of displaying Upland Sandpipers, in which the male rises up on fluttering wings and circles above the territory, giving a sputtering whistled song. On landing, the male raises his wings above his back and calls. Once paired, male and female often display together in the same way, tracing a large circle in the sky before plummeting in unison straight downward, landing together gracefully and suddenly. Males also display to females on the ground, lowering the body, cocking up the long tail, inflating the throat, and producing a staccato rattle as he runs toward the female. Although males do display over a territory, this species is not especially territorial and often tolerates others of its species on the territory while nesting, though some males or pairs do drive away single males. In some areas, nests are so close together that the birds almost appear colonial. After hatching, small flocks begin to form even before young have fully fledged. In many parts of the range, breeding adults forage and rest together in small groups. Both adults incubate the eggs, but chick care is little studied. In most cases, adults remain with the young for about one week, but in some cases, just one parent remains with the young thereafter. Their mating system is unclear: the birds pair up in a monogamous fashion, but studies have found evidence of two females laying eggs in a single nest; as well as evidence of multiple males fathering the eggs in a single brood.

Locomotion: States walking behavior is plover-like, with a "nervous way of running for a short distance, stopping suddenly to peck on the ground and then dubiously running again". Adults, and even young birds sometimes "teeter", the body moving up and down $<10^\circ$ while head remains stationary. Such movements are not as vigorous or prolonged as in Spotted Sandpiper. Has two flight strokes; long stroke produces a swift, strong flight that is typical of sandpipers; flutter stroke, reminiscent of hovering Willet or American Kestrel, is made with cupped wings, held rigidly and vibrating rapidly through a small arc below horizontal plane of bird. MIGRATION IS LONG STROKE.

Communication and Perception: Displaying males sing a somber, trilling whistle that first ascends in pitch, then descends in a pure tone, often called a "wolf whistle" but having an ethereal musical quality. Males often sing at night, and females also sing on occasion. The most commonly heard calls are rapid, fluttering series of three or more tu or pip notes, all on the same pitch, given by birds in flight, in contact, or under stress.

Home Range: Rarely nests alone, often in loose colonies, where it can reach higher densities. Found that patterns of nest aggregation are caused by females preferentially settling near relatives, creating a semi-colonial nesting arrangement.

Degree of Sociality: Tends to be social and non-territorial, year-round. Most breeding adults feed communally. Semi-colonial nesting may occur where habitat diversity is appropriate, high, and reticulated, so that feeding, loafing, nesting, raising broods, and forming fall flocks can all occur in same relatively small area.

Level of Aggression: Most frequent interactions occur early in breeding season, on communal feeding grounds, before nest sites are established. Paired males and sometimes both members of a pair will drive off single birds, presumed to be males, within 5 m. At end of interactions, including physical contact, those birds that do not fly away resume feeding. Interactions between paired males, either on communal feeding grounds or near nesting areas, are rare, brief, and with no apparent winners. No aggression directed at mates. For a few days after young hatch, brooding parent will drive other adults away.

Migration: Long-distance migrant. Often migrates in flocks at night, and these flocks probably include one or more family groups. Up to 50 percent of a migrating sandpiper's body weight is deposited as fat. This fat provides the energy for long distance flight.

Predators:

Predators: Coyote, Badger, Raccoon, Striped Skunk, Mink, Red Fox, House Cat, Dog, American Crow, Golden Eagle, Northern Goshawk, Sharp-shinned Hawk, Cooper's Hawk, Northern Harrier, American Kestrel, Snowy Owl

Anti-Predator Defenses: On an exposed nest in Saskatchewan the appearance or cry of a passing crow would cause the sitting bird to partially close her eyes and crouch until she was invisible to Pittman. In Yukon, adults with young drove off arctic ground squirrels and parents called to young to "freeze" instantly, low to the ground, in response to Sharp-shinned Hawk, Northern Goshawk, or Golden Eagle. Adults fly at American Kestrels when they pass over. A pair with young, unable to see the predator, nonetheless responded to alarm calls, flew several hundred meters, and circled a coyote. When approached by humans, parents with young run from the brood and then fly, giving alarm calls; non-displaying adults stand near brood, and other adults may join brood, giving alarm calls. When chicks are caught, attending adults land nearby and feign injury in manner of a Killdeer.

Diet and Nutrition:

Adult Diet: Upland Sandpipers eat mostly insects, which they pick from the ground or low vegetation as they walk. Among their known prey are grasshoppers, crickets, weevils, billbugs, cutworms, leaf beetles, click beetles, May beetles, larvae of many sorts of flies (horsefly, crane fly, sawfly), moths, ants, and bugs. In addition to insects, they eat centipedes, millipedes, snails, spiders, ticks, and earthworms. Upland Sandpipers also consume seeds of grasses, weeds, and forbs, as well as wheat, rye, and berries. Upland Sandpipers sometimes congregate in recently burned fields that have an abundance of grasshoppers. Migrants in the East sometimes appear in recently plowed potato fields to eat grubs, and these fields may also attract plovers and sandpipers of many species.

Juvenile Diet: INSECTS

Special Adaptations for Getting Prey: Long-billed shorebirds probe in the mud, opening just the tip of their bills. This helps them pick out their food without getting a mouthful of mud in the process!

Reproduction:

Mode of Reproduction: Monogamous

Mating System: Typically monogamous, although Casey et al. have documented evidence of extra-pair paternity in 58 family groups. Typically, pairs arrive together on breeding grounds or form on breeding grounds about 14 d before nest initiation. Sex ratio unknown; there may be extra males, because removal studies in spring in Alberta showed that single adults and the third member of a trio were males. At other times, male performs tail-up display, his body level, his head held slightly up, and his tail cocked above his back at a slight angle. He approaches female on the ground at a fast walk or run with his gular pouch puffed out, uttering a low, throaty rattle. He runs 5–10 m, stops, and gives a low whistle. Receptive females allow the male to approach and copulate, whereas unreceptive females run off 1–2 m and continue feeding. Males also gave this display to an adult on the ground and to one chick.

Mating Season: March to May

Courtship: Courtship includes aerial display and display on ground. Flight display includes flutter stroke and Long Mellow Whistle, completed by landing and giving whistle with wings raised perpendicularly before adjusting them over back. Flight display is rarely completed.

Territoriality: HOME RANGE, LITTLE KNOWN ABOUT INTERSPECIFIC TERRITORIALITY

Mating: Copulation occurs on the ground. Displays such as those mentioned above need not precede copulation and need not betray intent. During copulation, male, using his wings for balance and appearing to hover over female, places his feet squarely on her back. Female crouches and slightly levels her body. Estimated time for copulation ranges from 5 s to 15s. Following copulation, both birds may preen and then usually resume feeding.

Nesting: Nests are set on the ground in dense vegetation, in native prairie, upland tundra flats, mountain meadows, or dry, ungrazed grasslands. Nests consist of scrapes on the ground that are sometimes lined with grasses, leaves, and twigs; some nests are concealed by overhanging grasses. Males usually begin the process by using the feet and breast to clear the space, and the female completes the scrape and provides lining, usually during egg-laying. Nests measure about 4.5 inches across and 1.7 inches deep.

Egg-Laying: Egg Shape: Oval to sub-elliptical Egg Length: 45mm Egg Width: 32.5mm Egg Mass: 19-31g Egg Color: Ground colors vary from light pinkish cinnamon, pale pinkish buff, cartridge buff, pale olive buff, creamy buff, greenish white, to pale stone. Almost evenly spotted, varying from dark brown to reddish brown with small underlying spots of ecru drab, pale drab gray, and lilac. Clutch Size: 4 eggs Incubation Period: 21-29 days

Hatching and Incubation/Gestation: Downy and active, capable of leaving nest and feeding themselves almost immediately after hatching.

Development: Wet and downy at hatch; upon drying, precocial. Chicks are top-heavy, slow, and clumsy for several days after hatching

Parental Care: Week-old sandpipers are extremely active in pursuit of their own food. In Oregon mountain valleys, both adults sometimes stayed with brood until at least 8 d after young flew.

Lifespan: Up to 8.9 years in the wild.

Conservation:

Official Federal Status: Least Concern

Special Statuses in Individual States: NONE

Threats: According to the North American Breeding Bird Survey, the population of Upland Sandpiper was stable between 1966 and 2015, with a moderate increase in the last decade of that period. Partners in Flight estimates the global breeding population at 750,000 and rates the species an 11 out of 20 on the Continental Concern Score, indicating it is a species of low conservation concern. However, population declines in some parts of the United States and Canada have led to Upland Sandpiper being listed as a species of concern in nearly two dozen states and provinces. This species was once so abundant that market hunters of the 1800s shipped them eastward by the thousands, in railroad boxcars. The Migratory Birds Convention Act in Canada in 1917 and the Migratory Bird Treaty Act in the United States in 1918 slowed but did not stop the hunt, but by World War II, market hunting of the species had ended. Although hunting continues in some migratory corridors and probably on parts of the wintering grounds, a larger problem is the loss of their habitat to agriculture, as well as the shift in agriculture toward practices that employ pesticides and leave less residual crop, both in the Great Plains and in the llanos and pampas of South America.

Conservation Efforts: ^^^^

Extra Facts:

1. Upland Sandpipers have given taxonomists plenty to work on: The birds were thought to be in the plover family until 1973, when they became Upland Sandpipers. Other names include Bartramiana Tattler and Bartramiana Sandpiper. German natural historian Johann Matthäus Bechstein first named the species *Tringa longicauda* (named for its long tail) in 1812. The following year, Alexander Wilson, not having seen Bechstein's description, named it *Tringa bartramia*, in honor of his teacher, pioneering naturalist John Bartram. In 1831, French natural historian René Primevère Lesson created a new genus for this distinctive species, *Bartramia*. Its scientific name has remained *Bartramia longicauda* ever since, even though its English name has changed three times.
2. Upland Sandpiper's association with native prairie is so strong that scientists consider it to be an "indicator species," along with Sprague's Pipit and Baird's Sparrow, that can indicate the quality a habitat. Thus, the absence of these three birds in a patch of prairie would indicate to biologists that there is likely a problem with the habitat.
3. The Upland Sandpiper begins southward migration rather early, in mid-July. It spends up to 8 months of the year in its winter home in South America, during the austral summer.
4. In several Northeastern and Midwestern states, the majority of nesting Upland Sandpipers live on the grounds of airports, where the short grass does a passable imitation of their natural prairie habitat.
5. The oldest recorded Upland Sandpiper was at least 8 years, 11 months old, and lived in New York.

Notable Species: NONE