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***Bartramia longicauda*** - (Bechstein, 1812)

Upland Sandpiper

**Spanish Common Names:** Zarapito Ganga, Batit?an>

**French Common Names:** Maub?re des champs

**Other Common Names:** Ma?r?ico-do-Campo

**Unique Identifier:** ELEMENT\_GLOBAL.2.102059

**Element Code:** ABNNF06010

**Informal Taxonomy:** Animals, Vertebrates - Birds - Shorebirds



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Kingdom	Phylum	Class	Order	Family	Genus
Animalia	Craniata	Aves	Charadriiformes	Scolopacidae	Bartramia

**Genus Size:** A - Monotypic genus

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Concept Reference



## Conservation Status

## Distribution

## Ecology &amp; Life History

**Basic Description:** A medium-sized shorebird.

**General Description:** Ranges from 27.9-32.5 cm in size and is the most terrestrial of North American shorebirds. The sexes are outwardly alike; females average slightly larger than males (Forbush 1925, Prater et al. 1977). Breeding adults are overall scaly-brown in appearance above with a long slender neck, small rounded head, and relatively long tail. The upper neck is buff-streaked brown with sharply defined V-shaped markings becoming more barred on the lower breast and flanks. The throat and abdomen are white. The eye is large with a dark iris. The bill is short, slightly decurved and dusky at the tip. The tail feathers are barred, dark brown with outer tertials pale orange-brown basally, tipped with white. Legs and feet are yellow-grey (Forbush 1925, Roberts 1955, Prater et al. 1977). Adults captured at the nest may be sexed by wing chord and tail length. This method of sex determination is estimated to be 88.3% accurate for mated pairs (Peterson 1983).

Downy young are a fine, mixed pattern of black, white and buff yellowish-brown above. A black stripe runs from the base of the bill over the top of the head. There is a band of buff or yellowish-brown across the upper breast. The sides of the head, chin and underparts are generally white (Forbush 1925).

Juveniles resemble adults, but the upperparts are darker and scaller with the buffy color of the neck, breast and wings much deeper and the streaks of the foreneck and breast less distinct. The wing coverts have clear buffy edges and dark submarginal lines. The scapulars are uniformly dark with narrow, defined buff-white fringes. The tail feathers are notched with pale buff. Following the first prenuptial molt the young become indistinguishable from adults (Forbush 1925, Hayman et al. 1986).

Winter plumage is similar to that of the breeding adult, but paler (Forbush 1925).

**VOCALIZATIONS:** The unique vocalizations include a rapid, liquid "quip-ip-ip-ip" series of alarm notes and a penetrating "whip- whee-ee-you" windy whistle (Johnsgard 1981).

**NESTS:** The nest is a shallow depression in the ground approximately 10-13 cm in diameter and five cm deep, lined with pieces of dry grass (Bent 1929). Nests are usually well hidden, frequently by vegetation that hangs over the nest hiding it from above (Johnsgard 1981). The eggs are cinnamon to pale olive-buff or greenish-white in color, spotted with brown and underlying spots of ecru or pale grey. Clutch size is normally four eggs, sometimes three, and rarely five (Bent 1929).

**Diagnostic Characteristics:** The behavioral habit of momentarily holding wings straight up when alighting (Forbush 1925) and the distinctive calls are diagnostic (Johnsgard 1981).

**Reproduction Comments:** Courtship is exhibited in spectacular soaring displays while ascending in great circles high into the sky accompanied by a long, drawn-out "whip-whee-ee-you" whistle, and in low over-the-ground flight on stiff, quivering wings (Buss and Hawkins 1939). On the ground, the male will sometimes approach the female, raising his tail and running towards her while giving a short, guttural whistle (Ailes 1976). This pre-copulatory behavior is sometimes followed by mating.

Initial nesting activity, which is thought to be somewhat synchronous (Higgins and Kirsch 1975), begins two to three weeks after spring arrival in breeding areas, from mid-April to early May (Forbush 1925, Buss and Hawkins 1939, Ailes 1980). The maximum period between the earliest initiated nests and the latest hatched nests in North Dakota (Higgins and Kirsch 1975), Wisconsin (Ailes 1980), and Massachusetts (White and Melvin 1985) ranged from eight to ten weeks. Some late nesting, or renesting, due to early nest failure may occur (Ailes 1980).

Clutch size is normally four eggs, sometimes three, and rarely five (Bent 1929). Eggs layed mostly May-June (late April to early June in Virginia). Incubate eggs an average of 24 days (Higgins and Kirsch 1975), with extremes of 21-28 days reported by some investigators (Johnsgard 1981). Both sexes incubate. Chicks are precocial and leave the nest within 24 hours after hatching (Ailes 1980). Broods are tended by one (Ailes 1980) or both adults (Buss 1951) until the young attain adult weight and are capable of flight at 30-34 days (Buss and Hawkins 1939, Ailes 1980). Ailes (1980) reported that adults with young in Wisconsin utilized brood-rearing fields within a short distance of the nesting site for several weeks following hatching. In contrast, Buss (1951) found that adults with young in the Yukon Territory required a large home range, up to 3.2 km in diameter. Family groups tend to stay together at least until postbreeding migration.

Estimates of nesting success in Northern Plains states range from 63% (Lindmeier 1960) to 100% (Lokemoen and Duebbert 1974). Using the Mayfield (1961) method to determine seasonal nest success rates, Buhnerkempe and Westemeier (1988) calculated nest success in Jasper County, Illinois to be 48%.

The time elapsed between arrival and departure from breeding areas has been observed to be as brief as 100 days (Higgins and Kirsch 1975) and as long as 165 days (Buss and Hawkins 1939). Higgins and Kirsch (1975) correlated the average, frost-free period with dates of first nest initiation and final departure from breeding areas in North Dakota and Wisconsin, and suggested that some breeding ground activities may be directly or indirectly related to temperature at northern latitudes. Buss (1951) correlated the timing of fall migration in the Yukon with decreasing numbers of available insects.

Data obtained from marked birds in Kansas suggest that upland sandpipers first breed when they are one year old (D. Bowen, pers. comm.). The natural longevity is not known. The longest known survival of a banded bird is five years (Clapp et al. 1982).

### Ecology Comments

Tend to be loosely colonial while breeding (Bowen 1976), often occupying the same nesting fields in successive years (Buss and Hawkins 1939, Ailes 1980). Density varies from 0.6-6.1 ha/nest in loosely spaced "colonies" (Harrison 1979). Nest territories are generally grouped and consist of a nesting site, plus a loafing and feeding area near or adjacent to the nest territory which is shared communally (Buss and Hawkins 1939). In the central portion of the range in North Dakota, breeding densities of up to 20 pairs/mi squared (2.59/km squared) have been recorded (Stewart and Kantrud 1972). Limited studies on home ranges of breeding birds; in Wisconsin, one female occupied 85.6 hectares and one male occupied only 8.5 hectares (Ailes and Toepfer 1977).

Studies by Bowen (1976) and Ailes (1980) suggest that adults may exhibit some degree of site faithfulness, although Ailes (1980) found that none of the 61 young he banded returned to their natal grounds the following year. In nonbreeding season, solitary or in small scattered groups.

**Non-Migrant:** N

**Locally Migrant:** N

**Long Distance Migrant:** Y

**Mobility and Migration Comments:** Arrives in northern breeding areas in April-May, departs by September (Bent 1929). Peak spring migration through the U.S. mid-Atlantic states occurs in April. Rare spring and fall migrant in Puerto Rico (Raffaele 1983).

**Palustrine Habitat(s):** Bog/fen

**Terrestrial Habitat(s):** Cropland/hedgerow, Grassland/herbaceous, Old field

**Habitat Comments:** BREEDING: Restricted primarily to extensive, open tracts of short grassland habitat. Nest in native prairie, dry meadows, pastures, domestic hayfields, short-grass savanna, plowed fields, along highway rights-of-way and on airfields, and (in the north) peatlands and scattered woodlands near timberline (Forbush 1925, Higgins et al. 1969, AOU 1983, Osborne and Peterson 1984, Godfrey 1986). Nesting is also known to occur in dry patches of wet meadows (Stewart 1975, Herman et al. 1984) and in blueberry (*VACCINIUM* spp.) barrens (J. Albright, pers. comm.). A survey of nesting habitats in Wisconsin (White 1983) suggests that upland sandpipers favor a level topography with a minimum of tall vegetation edges and proportionately high acreages of agricultural crops which duplicate prairie grasslands in terms of structure.

Preferred habitat includes large areas of short grass for feeding and courtship with interspersed or adjacent taller grasses for nesting and brood cover; in the northeastern U.S., airfields currently provide the majority of suitable habitat, though grazed pastures and grassy fields also are used (Carter 1992). Nests on ground among grasses; sometimes along prairie sloughs (Terres 1980).

The quality of a particular habitat is best indicated by the total number of birds present during May and June. Observations by Buss and Hawkins (1939) suggest a delicate distinction between acceptable and unacceptable sites. A slight change in an accepted field may cause it to become unacceptable, i.e., heavy or early grazing, standing water, burning, and manuring may reduce or exclude nesting from fields accepted the previous year. Abandoned fields with invading shrubs and trees may sometimes exclude upland sandpipers (Laughlin and Kibbe 1985), although at a site in Massachusetts, they nest in fields with scattered shrubs and one to two m tall pine trees (*PINUS* spp.) (White and Melvin 1985).

Airports and airfields offer excellent habitat for breeding colonies, providing level expanses of short grass fields attractive to upland sandpipers. Nesting surveys in the mid-1980s in Ohio (Osborne and Peterson 1984) and in Massachusetts (White and Melvin 1985) showed that airport habitats in these states were utilized over all other habitats with respect to the number of sites and number of individuals per site. The short grassy strips along runways and taxiways are used for feeding, loafing, nesting, brood-rearing and pre-migratory flocking. Upland sandpipers are believed to pose little threat to aircraft at airports because of their small size, typical behavioral patterns, and tendency to remain mostly on the ground. Flight is usually low and direct (White and Melvin 1985).

Vegetation height is an important factor in the selection of nesting sites (Kirsch and Higgins 1976). Nesting studies by Ailes (1980)

in Wisconsin recorded 54% of nests in cover between 25-40 cm in height, not exceeding 70 cm at the time of egg hatching. In North Dakota nesters were found in cover between 15.5-30.8 cm in height, and appeared to avoid cover over 61.5 cm (Kirsch and Higgins 1976). White and Melvin (1985) reported that vegetation surrounding six active nests located on a Massachusetts airfield ranged from 8.0-25.0 cm in height.

Agricultural land use patterns and farming practices influence the choice of nesting sites. In central Wisconsin, Ailes (1980) found that idle fields and hayfields accounted for the majority of nesting habitats. Nesting studies in North and South Dakota indicated the majority of nests were in ungrazed grasslands of medium density with abundant ground litter (Higgins et al. 1969). A five-year survey (1969-74) of intensively cultivated areas in the prairie pothole region of east-central North Dakota recorded 57% of nests in untilled habitats, which comprised only 7% of the total study area (Higgins 1975). In Illinois, Buhnerkempe and Westemeir (1988) reported that sandpipers selected stands of grass and forbs for nesting and avoided fields of uniform grass and legumes.

In North Dakota, Kirsch and Higgins (1976) recorded their lowest mean nest densities in annually tilled croplands and their highest mean nest densities in native grasslands the second season after a prescribed burn. Seeded grass/legume mixtures generally grew too tall and dense. Kirsch and Higgins (1976) found that the majority of North Dakota nests were located in either thin, uniform vegetative cover or in scattered clumps of fairly dense cover characterized by standing stubble fields, moderately grazed pastures, mowed areas with heavy regrowth, brush clumps with some understory vegetation, and undisturbed vegetation on poor soils. Residual vegetation from the previous growing seasons accounted for 25% of the cover at 54% of sandpiper nests.

Upland sandpipers use grassy fields of low vegetation height for feeding and brood rearing. Ailes (1980) observed 66% of adults with young in Wisconsin in grazed pastures, 13% in ungrazed pastures, and 11% in hayfields. Ailes (1980) found a large percentage of adults with young in Wisconsin in heavily grazed fields with vegetation ranging from zero to ten cm in height. Buhnerkempe and Westemeir (1988) reported that, in Illinois, they selected brood habitats of wheat stubble fields, recently hayed legumes, old redtop meadows (*AGROSTIS* spp.), and moderately grazed pastures. A South Dakota grasslands management study showed habitat use (nesting was not documented) to be highest in recently burned fields with short, open, new growth and no litter or old growth (Huber and Steuter 1984).

Upland sandpipers accept a variety of native and introduced grasses (Buss and Hawkins 1939). Timothy (*PHLEUM* spp.), bluegrass (*POA* spp.), needlegrass (*STIPA* spp.), bluestem (*ANDROPOGON* spp.), quackgrass (*AGROPYRON* spp.), Junegrass (*KOELERA* spp.), and brome grass (*BROMUS* spp.) are among the grasses associated with nesting fields (Buss and Hawkins 1939, Meanley 1943, Buss 1951, Higgins et al. 1969, Kirsch and Higgins 1976, Ailes 1980).

**NON-BREEDING:** Very rarely in migration along shores and mudflats (AOU 1983). On wintering grounds in South America, have been observed in pastures of remote estancias (Wetmore 1927), harvested and burnt-over canefields, football fields, airfields (Haverschmidt 1966), and on sandy beaches where the vegetation is open or recently burned (Spanns 1978).

Changes in land use and agricultural practices may be critical to the limited numbers (White 1988). In the province of Cordoba, Argentina, where the greatest numbers have been reported to date, native espinal (scrub trees) have been converted to dairy farms planted in pasture and alfalfa. Upland sandpipers possibly prefer the drier climate and planted grasses to historically utilized wetter, native grasslands found farther south and southeast (White 1988).

**Adult Food Habits:** Invertivore

**Immature Food Habits:** Invertivore

**Food Comments:** Feed almost exclusively on insects, especially grasshoppers and crickets (Orthoptera), weevils (Coleoptera), and other small invertebrates gathered from or close to the ground (Terres 1980). Occasional seeds of weeds, grasses and waste grains, including wheat, are also consumed (McAtee and Beal 1912, Forbush 1925, Ehrlich et al. 1992). Obtains food from ground.

**Adult Phenology:** Circadian

**Immature Phenology:** Circadian

**Length:** 31 centimeters

**Weight:** 190 grams

**Economic Attributes**

**Management Summary**



Population/Occurrence Viability

U.S. Invasive Species Impact Rank (I-Rank)

Not yet  
assessed  
Not yet  
assessed

