

LONG-BILLED CURLEW

Numenius americanus

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Management Status: Federal: None
California: Species of Special Concern (CDFG, 1998)

General Distribution:

The Long-billed Curlew breeds from south-central British Columbia, southern Alberta, southern Saskatchewan, and southern Manitoba (formerly) south to east-central California (Siskiyou, Modoc, Lassen counties, irregularly south to the vicinity of Big Pine in Inyo County; McCaskie, 1978; Small, 1994), central Nevada, central Utah, central New Mexico, northern Texas, and east to southwestern North Dakota, northwestern South Dakota, north-central Nebraska, and southwestern Kansas. Formerly, the species bred east to northwestern Iowa, Wisconsin, and Illinois. The winter range extends from southwestern British Columbia (rarely) to California, southern Arizona (rarely), northern Mexico, southern Texas, southern Louisiana, southern Alabama, and coastal South Carolina south to southern Mexico and southern Florida, and irregularly south to Costa Rica (AOU, 1998; Zeiner et al., 1990).

The winter range in California includes the San Joaquin Valley, the Imperial Valley, portions of the West Mojave, and (locally) coastal estuaries (Garrett and Dunn, 1983). Non-breeding individuals occasionally summer in the winter range (AOU, 1998).

Distribution in West Mojave Planning Area:

The Long-billed Curlew is primarily a migrant and winter visitor in the WMPA. One near Lancaster 19 June 1983 may have remained through the summer (K.L. Garrett, pers. comm). The largest winter flocks have been found in alfalfa fields east of Lancaster. Fields at 90th Street East and Avenue F have been a favored location in recent years. Other areas of occurrence are Piute Ponds and Rosamond Lake on Edwards Air Force Base, Lancaster Sewage Ponds, East Cronese Lake, and Harper Lake.

Natural History:

The Long-billed Curlew is the largest North American shorebird (length 23 in., 58 cm, wingspan to 40 in., 1.0 m, Terres 1980). By virtue of its size and its very long, decurved bill, it is almost unmistakable. Confusion with the Whimbrel (*Numenius phaeopus*) is possible, but the Long-billed Curlew is considerably larger, lacks distinct headstripes, has a longer, more smoothly curved bill, and warmer cinnamon-buff plumage. It is distinguished from the other "long billed" curlews of the world (which are allopatric) by its cinnamon wing-linings. The Marbled Godwit (*Limosa fedoa*), a large sandpiper with remarkably similar plumage, is smaller and has a long, slightly recurved bill.

Both of the recognized subspecies occur in California. Breeders in northern California are *N. a. parvus*, the smaller, shorter-billed, more northern subspecies (AOU, 1957; Garrett and

Dunn, 1983). Based on what is known of the winter distribution of the subspecies, it is likely that most of the birds in southern California in winter are *N. a. americanus*, although *parvus* occurs in mixed flocks with *americanus*. Short-billed *parvus* may be mistaken for Whimbrels (Garrett and Dunn, 1983). Age and gender variation in size and bill length makes field identification of subspecies problematic. Grinnell and Miller (1944, p. 141) stated that "in California there is no practicable way of separating available specimens into two racial categories."

The Long-billed Curlew's extraordinary bill, which is longer on females, is used to probe into muddy or sandy substrates or to grab prey from the surface. Curlews often wade belly-deep and forage in submersed mud. Food items on the Pacific coast include mud crabs (*Hemigrapsus oregonensis*), ghost shrimp (*Callinassa californiensis*), mud shrimp (*Upogebia pugettensis*), gem clams (*Gemma gemma*), and insect pupae (Stenzel et al., 1976). Inland, curlews eat insects, worms, spiders, crayfish, berries, snails, and small crustaceans (Bent, 1929).

The Long-billed Curlew is a solitary or loosely colonial nester. In California, nests are usually near lakes or marshes (Grinnell and Miller, 1944). The nesting season extends from mid-April to September, and is heralded by advertisement flights and vocal displays (Johnsgard, 1981). The nest is a shallow depression lined with grass, other plant material, and debris. Both adults incubate four eggs (rarely five) for 27-28 days. Both adults attend the young. First flights occur at 32-45 days (Johnsgard, 1981; Baicich and Harrison, 1997).

The species is gregarious in migration and winter. Wedge-shaped flocks move through the deserts in July, August, and September. Most wintering birds depart by early May; a flock of 32 at the Lancaster Sewage Ponds on 21 May 1981 was quite late (K.L. Garrett, pers. comm.). Migrating flocks are seen during daylight hours (Small, 1994).

Habitat Requirements:

Long-billed Curlews are birds of open habitats: upland shortgrass prairies, wet meadows, grasslands, and, in winter, agricultural fields, saltwater marshes with tidal channels, intertidal mudflats, and coastal estuaries. At all seasons, flat or gently rolling terrain is characteristic of curlew habitat. Fitzner (1978) reported that birds in southeastern Washington needed little or no direct water on the breeding grounds - diet seemed to satisfy their hydric requirements. Breeding habitat in northern California has been characterized as wet meadow habitat and "grasslands with lakes or marshes nearby" (Small, 1994). In eastern Washington, Fitzner (1978) reported an average nesting density of 1 pair/250 acres (1 km²).

In the WMPA, migrant and wintering Long-billed Curlews use agricultural (alfalfa) fields, sewage ponds, shallow wetlands (e.g., Piute Ponds), and shallow marshes and adjacent fields (e.g., Harper Lake). Garrett and Dunn (1981) describe wintering habitat in inland California as "agricultural fields and grasslands."

Population Status:

In 1929, Arthur Cleveland Bent wrote, "The last of the great open prairies are disappearing; and with them are going the curlews...and a host of other birds that cannot stand the encroachments of agriculture" (Bent, 1929 p. 98). Since then, the breeding range has continued to retract; Long-billed Curlews no longer breed in several midwestern states where they formerly bred (Johnsgard, 1981).

While Bent (1929) stated that the species was still quite common in California in the non-breeding season, Grinnell and Miller (1944) describe a winter range in the state that is "not now anywhere as large as prior to 1900."

The largest winter flocks in interior California occur in the Central and Imperial valleys, and are associated with agricultural habitats. The Salton Sea (south) Christmas Bird Count often has the national high count of Long-billed Curlews; 4,490 in 1987 is the highest total of any count in North America in the last ten years (*American Birds* 42:1137, 1988).

Garrett and Dunn (1981) called the species a fairly common fall transient and winter visitor in the Antelope Valley. Long-billed Curlews have been recorded on 16 of 18 Christmas Bird Counts in the Lancaster area, 1979-1996. Data indicate a perhaps insignificant decline in the last 9 years, but census effort in the habitat may be highly variable from year to year. The largest number recorded on a Lancaster Christmas Bird Count was 207 on 15 December 1984. The largest flock known to occur in the WMPA is one of 450 in an alfalfa field northeast of Lancaster on 22 October 1981 (Los Angeles County Museum of Natural History unpubl. data).

Small migrant flocks are observed annually in the Harper Lake area (E.A. Cardiff, pers. comm.). It is likely that other lakebeds and playas (e.g., East Cronese Lake, Rosamond Lake) throughout the WMPA are at least sporadically used by migrant Long-billed Curlews.

Threats Analysis:

Although once considered a "fine game bird" because of its size and the ease at which it could be decoyed, the Long-billed Curlew is no longer hunted (Bent, 1929). The greatest threat to the species throughout its range is change in agricultural practices (Tate, 1981). The Long-billed Curlew is a High Priority Species on the National Audubon Society's "WatchList" (Carter et al., 1996) and was formerly a candidate for Federal Endangered Species status (Zeiner et al., 1990).

In the WMPA, the greatest threats to Long-billed Curlew are the loss of alfalfa fields to urbanization and changes in agricultural practices dictated by economics (i.e., the rising cost of water for irrigation; Tate, 1981).

The marsh at Harper Lake, a BLM Area of Critical Environmental Concern, existing mainly because of adjacent agriculture run-off, has dried up as alfalfa farming has ceased in the valley. This migratory stopover may soon be eliminated.

Biological Standards:

The occurrence of Long-billed Curlews in the WMPA is directly correlated with the presence of agricultural alfalfa. As alfalfa farming decreases due to urbanization and agricultural economics, it is likely that Long-billed Curlew sightings will become less frequent and of fewer birds. Management for the species in the WMPA must include the maintenance of alfalfa farming on a scale suitable to provide foraging and roosting areas for large winter flocks.

The preservation and enhancement of shallow marshes (e.g., Harper Lake, Piute Ponds), while important for myriad reasons including the conservation of many bird species, likely will not compensate for the loss of alfalfa fields that currently provide winter habitat.

Literature Cited:

American Ornithologists' Union. 1957. Checklist of North American Birds, 5th ed., Washington, D.C.

- American Ornithologists' Union. 1998. Checklist of North American Birds, 7th ed., Washington, D.C.
- Baicich, P. and C. Harrison. 1997. A Guide to the Nests, Eggs, and Nestlings of North American Birds, 2nd ed., Academic Press, San Diego, California.
- Bent, A.C. 1929. Life Histories of North American Shorebirds. Part 2. Bull. U.S. Natl. Mus. 146.
- California Department of Fish and Game, Natural Diversity Data Base. 1998. Special Animals. Biannual publication, Mimeo., 44 pp.
- Carter, M., G. Fenwick, C. Hunter, D. Pashley, D. Petit, J. Price, and J. Trapp. 1996. For the Future, WatchList 1996. Nat. Audubon Soc. Field Notes 50:238-240.
- Fitzner, J.N. 1978. The ecology and behavior of the long-billed curlew (*Numenius americanus*) in southeastern Washington. Ph.D. Diss., Washington State Univ., Pullman, Washington.
- Garrett, K. and J. Dunn. 1981. The Birds of Southern California, Status and Distribution. Los Angeles Audubon Society, Los Angeles, California.
- Garrett, K. and J. Dunn. 1983. The identification of curlews, genus *Numenius*. West. Tanager 49:1-2, Los Angeles Audubon Society, Los Angeles, California.
- Grinnell, J. and A.H. Miller. 1944. The Distribution of the Birds of California. Pacific Coast Avifauna No. 27. Artemisia Press. Lee Vining, California.
- Johnsgard, P. 1981. The Plovers, Sandpipers, and Snipes of the World. Univ. Nebraska Press, Lincoln, Nebraska.
- McCaskie, G. 1978. Southern Pacific coast region. Amer. Birds 32:1206-1211.
- Small, A. 1994. California Birds, Their Status and Distribution. Ibis Publishing Co., Vista, California.
- Stenzel, L.E., H.R. Huber, and G.W. Page. 1976. Feeding behavior and diet of the long-billed curlew and Willet. Wilson Bul. 88(2):314-322.
- Tate, J., Jr. 1981. The Blue List for 1981: the first decade. Amer. Birds 35:3-10.
- Terres, J.K. 1980. The Audubon Society Encyclopedia of North American Birds. Alfred A. Knopf, New York, New York.
- USDI, Bureau of Land Management, 1997. California Desert District Resource Area files.
- Zeiner, D.C., W.F. Laudenslayer, K.E. Mayer, M. White. 1990. California's Wildlife, Volume II, Birds. Department of Fish and Game, Sacramento, California.