

Continued breeding range expansion of the Burrowing Owl in Florida

*Range of *Athene cunicularia floridana* moves northward into appropriate habitat*

William D. Courser

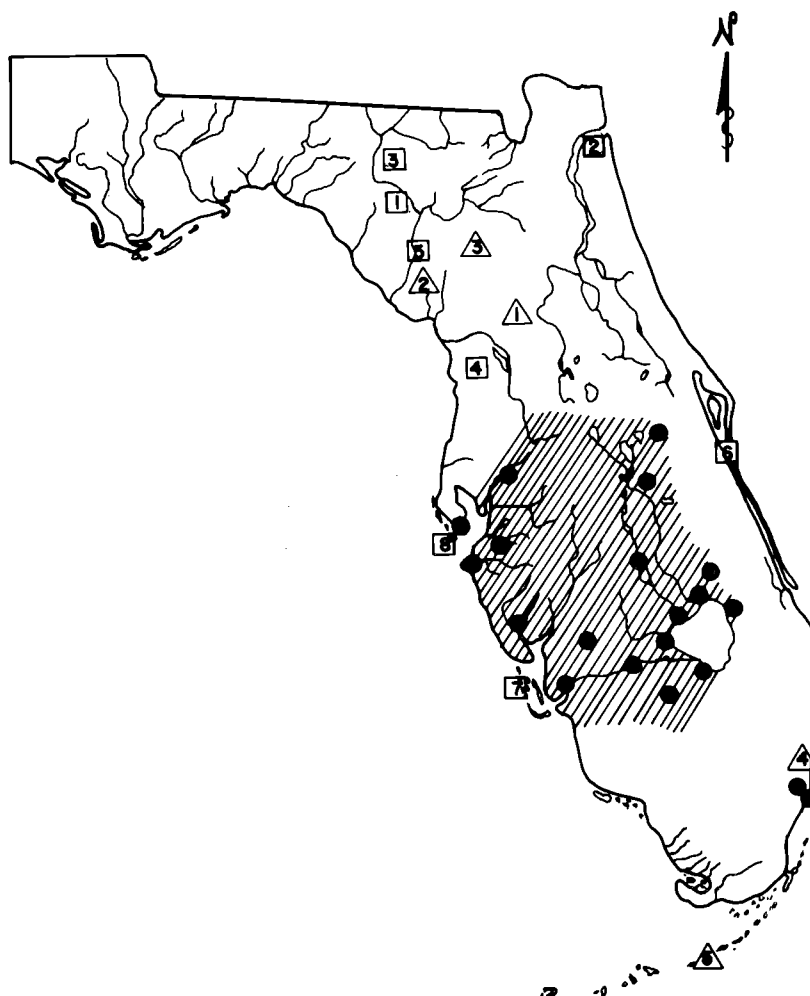
THE BURROWING OWL, *Athene cunicularia*, is found only in the New World. In North America, the western subspecies, *A. c. hypugaea*, breeds west of the Mississippi River from southern Canada into Mexico. The Florida subspecies, *A. c. floridana*, first recorded in Florida by N. B. Moore near Sarasota Bay in 1874 (Ridgway, 1874), generally breeds in the central and southern parts (Fig. 1) of the peninsula (Sprunt, 1954). With the advent of large scale clearing of formerly forested areas in north-central Florida, the Burrowing Owl expanded its breeding range northward. Neill (1954) reported the extension of the owl's range north to Ocala (Triangle 1) and northwest into Hernando County. Ligon (1963) reported a further breeding range expansion north to Gainesville and Chiefland (Triangles 2 and 3) and south, even into the Keys (Triangles 4 and 5).

Since Ligon's (1963) paper, the Burrowing Owl has been recorded farther north into previously unoccupied parts of north-central Florida. Reports (Ogden, 1974; Kale, 1975) have documented the presence of adults with juveniles in Lafayette and Duval Counties (Squares 1 and 2). Stevenson first saw Burrowing Owls in Lafayette County in 1971 (Ogden, 1971). The owls successfully nested two years in a row at the Duval location, an old airport (Kale, 1976). Clyde Nichols (pers. comm.) found Burrowing Owls in Suwannee County (Square 3) in the fall of 1976. The owners of that land report that two to three owls have been in their pastures for at least four years. There is one earlier record of "apparent nesting" in Suwannee County (Stevenson, 1966). In 1973, I observed several pairs in Citrus County (Square 4). Several observers (Ogden, 1972; and 1974) have indicated that the

number of Burrowing Owls has been increasing in Gilchrist (Square 5) and Alachua Counties, areas in and near which Ligon (1963) and Stevenson (1965) reported range expansion. Kale (1974) reported successful nesting in Brevard County (Square 6). There have also been

increasing records of owls nesting on islands or near water. These include an island near Ft. Myers (Square 7 — Stevenson, 1967), Satellite Beach in Brevard County (Matchett, 1973) and Tierra Verde, Pinellas County (Square 8 — Kale, 1976). The owl continues to nest in the Keys (Robertson, 1968 and Kale, 1975) and has been increasing in number (Ogden, 1976).

THE NEW SITES IN Citrus, Duval and Suwannee County are all in open areas of low grass. The species expansion is thus a continuing occupation of land opened by clearing as noted by Ligon (1963). With the Burrowing Owl's ability to wander outside of its breeding range (Sykes, 1974 *et al.*) monitoring should be continued to determine the establishment of the species in appropriate areas farther north.



Burrowing Owl range expansion in Florida since approximately 1954.

Literature Cited

- American Ornithologists' Union. 1957. Check-list of North American birds. Lord Baltimore Press, Baltimore. 691 p. • Kale, II, H. W. 1974. The spring migration: April 1 - May 31, 1974. Florida Region. *Am. Birds* 28: 790-794. • _____. 1975. The spring migration: April 1 - May 31, 1975. Florida Region. *Am. Birds* 29:839-843. • _____. 1976. The spring migration: April 1 - May 30, 1976. Florida Region. *Am. Birds* 30:828-832. • Ligon, J. D. 1963. Breeding range expansion of the Burrowing Owl in Florida. *Auk* 80:367-368. • Matchett, W. 1973. Burrowing Owls (*Speotyto cunicularia*) in Brevard County. *Fla. Naturalist* 46:28. • Neill, W. T. 1954. Notes on the Florida Burrowing Owl. *Fla. Naturalist* 27:67-70. • Ogden, J. C. 1971. The nesting season: June 1 - August 15, 1971. Florida Region. *Am. Birds* 25:846-851. • _____. 1972. The nesting season: June 1 - August 15, 1972. Florida Region. *Am. Birds* 26:848-852. • _____. 1974. The nesting season: June 1 - July 31, 1974. Florida Region. *Am. Birds* 28: 892-896. • _____. 1976. The nesting season: June 1 - July 31, 1976. Florida Region. *Am. Birds* 30:945-948. • Ridgway, R. 1874. Discovery of a Burrowing Owl in Florida. *Amer. Sportsman* 4:216-217. • Robertson, W. B. 1968. The spring migration: April 1 - May 31, 1968. Florida Region. *Aud. Field Notes* 22:516-520. • Sprunt, A. 1954. Florida Bird Life. Coward-McCann, Inc. and National Audubon Society. New York, N.Y. 527 p. • Stevenson, H. M. 1965. The winter season: December 1 - March 31, 1964. Florida Region. *Aud. Field Notes* 19:371-374. • _____. 1966. The nesting season: June 1 to August 15, 1966. Florida Region. *Aud. Field Notes* 20:561-565. • _____. 1967. The nesting season: June 1 to August 15, 1967. Florida Region. *Aud. Field Notes* 21:558-561. • Sykes, P. W. 1974. Florida Burrowing Owl collected in North Carolina. *Auk* 91:636-637.

— 305 West Pinehurst, Spring Hill, FL
33512.

BREEDING RANGE EXPANSION

First Arctic Tern colony in the contiguous western United States

An 825 mile southeastward extension of the Pacific coast
breeding range of *Sterna paradisaea*

David A. Manuwal, Philip W. Mattocks, Jr.,
and Klaus O. Richter

WHILE STUDYING BIRD use of dredged material islands in 1977, we discovered a colony of Arctic Terns on Jetty Island, Everett harbor, Snohomish County, Washington (48°5'N, 122°30'W). The nearest known colony was on Tracy Arm, south of Juneau, Alaska, 825 miles to the northwest (Gabrielson and Lincoln 1959, *Birds of Alaska*). Open sandy or gravelly sites for the nesting of Arctic Terns are uncommon between southeastern Alaska and Puget Sound. The many natural islands here are usually tree-covered or rocky. Islands of dredged material, however, often provide excellent habitat for tern nesting in other areas (Soots and Parnell 1975, Sea Grant UNC-SG-75-27 North Carolina State University).

We visited Jetty Island June 9, July 21, and August 30, 1977 and estimated the population to be seven pairs. In 1978 our coverage was slightly more thorough and after censusing on May 27, June 10 & 28, and July 3, 7, 13, 15, we estimated the population to be ten pairs. These estimates were based on the numbers of nests found (3 in 1977, 7 in 1978) and the number of territorial adults observed at each of the several nesting areas. At the north end of the island the birds occupy a Vel-

vet Grass (*Holcus lanatus*)/bare ground habitat, while near the middle they occupy a Large-headed Sedge (*Carex macrocephala*)/bare ground habitat.

Clutch size for the two years combined was 2.9 (n = 10). In 1978, egg-laying was noted to be distinctly asynchronous, as we observed free-flying young, flightless chicks, and incubating adults all on July 13. Fledglings were routinely fed while on log rafts adjacent to the island. These rafts provided a safe environment from rats and other potential predators.

JETTY ISLAND WAS CREATED between 1894 and 1903, and at 81 hectares at high tide during 1977 is the largest dredged material island in Puget Sound. Siltation of the nearby Snohomish River has prompted subsequent dredging in 1916, 1921, 1938, 1945, and 1969 (Parks 1973 unpubl. report, Port of Everett). The island is relatively flat; slightly

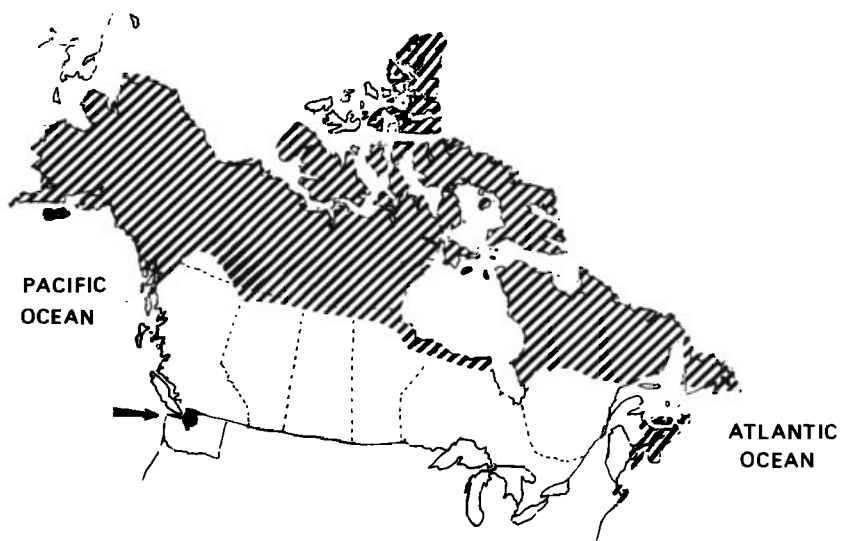


Fig. 1. Known distribution of breeding Arctic Terns in North America showing location of new colony (arrow).