California Wildlife Habitat Relationships System

California Department of Fish and Wildlife California Interagency Wildlife Task Group

WESTERN GULL Larus occidentalis

Family: LARIDAE Order: CHARADRIIFORMES Class: AVES

B220

Written by: T. Harvey Reviewed by: S. Bailey Edited by: C. Polite

DISTRIBUTION, ABUNDANCE, AND SEASONALITY

Abundant, yearlong resident of coastal California, including San Francisco Bay and the Channel Islands. Occupies coastal islands, cliffs, harbors, bays, river mouths, and garbage dumps. Nearly 85% of the California population breeds on the Farallon and Channel Islands. Populations have increased along the coast of California in response to establishment of numerous dumps (which now are being phased out), and commercial fishing.

SPECIFIC HABITAT REQUIREMENTS

Feeding: Forages over open water using aerial dives; on the water surface feeds by dipping. Also forages in intertidal areas for invertebrates, on nesting islands for small avian prey (auklets, petrels, gull chicks, and eggs), and scavenges in a variety of habitats, including dumps, harbors, beaches, and near fishing boats. Foods at the Farallon and Channel Islands included anchovies, rockfish (Sebastes), Pacific sauries (Coloabis saira), midshipmen (Porichthys), cephalapods, euphausids, and offal (Ainley and Sanger 1979, Hunt et al. 1979).

Cover: Requires protected areas, such as offshore rocks, islands, or remote beaches for roosting at night.

Reproduction: Nests in a wide variety of habitats affording protection from terrestrial predators, including coastal rocks or islands, steep mainland cliffs, and occasionally human-made structures such as salt pond dikes, bridges, or anchored boats. On offshore islands, prefers flat or gradually sloping areas for nest site. Occupies nesting areas up to 6 mo prior to egg laying, and engages in courtship and mating behavior near the nest site. Nest is constructed in a depression on the ground, among vegetation or rocks, or on a ledge, and consists of a loose, bulky arrangement of seaweed, other vegetation, debris, or feathers.

Water: Most water needs probably met by food. However, capable of drinking salt water (Schmidt-Nielsen 1959, 1975).

Pattern: Always associated with marine or estuarine habitats. Requires protected islands or rocky cliff areas for nesting.

SPECIES LIFE HISTORY

Activity Patterns: Yearlong, diurnal activity; highly mobile.

Seasonal Movements/Migration: After nesting, subadult tends to disperse southward, where a milder climate and proximity to dumps contribute to survival during winter. Adult moves north or south after breeding.

Home Range: No data found, but probably forages up to tens of miles away from colonies.

In San Francisco Bay, may fly more than 8 km (5 mi) from roost to feeding sites at dumps.

Territory: Inter-nest distances have been reported from 16-24 m (53-79 ft) at Moss Landing (Pierotti 1976, Harvey 1982). Minimum distances as short as 1.5 m (5 ft) were found on the Farallon Islands (Coulter 1973). A territory may be occupied in consecutive years by the same adults.

Reproduction: Breeds colonially from early April through August. Nesting is more synchronized among members, and a colony begins later, in northern California (Sowls et al. 1980). Clutch size 1-4; averages of 2.4 (Harper 1971) to 3.0 (Pierotti 1976) reported. Hatching success has varied from 47-84%, and fledging success from 36-90% (Harper 1971).

Niche: Eggs and chicks are preyed upon by adults, but adults have few predators. Increase in gull populations in California in recent decades has resulted in greater predation on smaller seabird species, as well as displacement of smaller seabirds from nesting habitat.

Comments: This species hybridizes extensively with the glaucous-winged gull in the northern part of its range (Sowls et al. 1980). High concentrations of DDT residues in individuals in southern California apparently have caused feminization of males, and a decline in numbers of breeding males (Sowls et al. 1980).

REFERENCES

- Ainley, D. G., and G. A. Sanger. 1979. Trophic relations of seabirds in the northeastern Pacific Ocean and Bering Sea. Pages 95-122 in J. C. Bartonek and D. N. Nettleship, eds. Conservation of marine birds of North America. U.S. Dep. Inter., Fish and Wildl. Serv. Wildl. Research Rep. No. 11.
- Costello, D. F. 1971. The world of the gull. Lippincott Co., Philadelphia PA. 157pp.
- Coulter, M. C. 1973. Breeding biology of the western gull (Larus occidentalis) on Southeast Farallon Island. M. S. Thesis, Trinity Coll., Oxford Univ., Oxford, U.K. 76pp.
- Devillers, P., G. McCaskie, and J. R. Jehl, Jr. 1971. The distribution of certain large gulls (Larus) in southern California and Baja California. Calif. Birds 2:11-26.
- Gabrielson, I.N., and S. G. Jewett. 1940. Birds of Oregon. Oregon State Coll., Corvallis. 650pp.
- Guiguet, C. J. 1957. The birds of British Columbia (5). Gulls, terns, jaegers, and skuas. Brit. Col. Prov. Mus., Vancouver Handb. No. 13. 42pp.
- Harper, C. A. 1971. Breeding biology of a small colony of western gulls (Larus occidentalis wymani) in California. Condor 73:337-341.
- Harvey, T. E. 1982. The ecology of three larids breeding in the Elkhorn Slough saltponds. M. A. Thesis, San Francisco State Univ., San Francisco, CA. 130pp.
- Hunt, G. L., Jr., R. K. Pitman, M. Naughton, K. A. Winnett, A. Newman, P. R. Kelly, and K. T. Briggs. 1979. Distribution, status, reproductive ecology and foraging habits of breeding seabirds. Pages 1-399 in summary of marine mammal and seabird surveys of the Southern California Bight area, 1975-1978. U. S. Dep. Inter., Bur. Land Manage., Los Angeles. Publ. PB-81-248-205.
- Pierotti, R. 1976. Sex roles, social structure, and the role of the environment in the western gull. M. A. Thesis, Calif. State Univ., Sacramento. 139pp.
- Schmidt-Nielsen, K. 1959. Salt glands. Sci. Amer. 200:109-116.
- Schmidt-Nielsen, K. 1975. Animal physiology: Adaptation and environment. Cambridge Univ. Press, New York. 699pp.
- Scott, J. M. 1971. Interbreeding of the glaucous-winged gull and western gull in the Pacific Northwest. Calif. Birds 2:129-133.
- Sowls, A. L., A. R. DeGange, J. W. Nelson, and G. S. Lester. 1980. Catalog of California seabird colonies. U.S. Dep. Inter., Fish and Wildl. Serv., Wash. DC. Biol. Serv. Program FWS/OBS-80/37. 371pp.

Zeiner, D.C., W.F.Laudenslayer, Jr., K.E. Mayer, and M. White, eds. 1988-1990. California's Wildlife. Vol. I-III. California Depart. of Fish and Game, Sacramento, California. Updates are noted in accounts that have been added or edited since original publication.