

**California Wildlife Habitat Relationships System**  
**California Department of Fish and Wildlife**  
**California Interagency Wildlife Task Group**

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OSPREY

*Pandion haliaetus*

Family: ACCIPITRIDAE  
B110

Order: FALCONIFORMES

Class: AVES

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#### DISTRIBUTION, ABUNDANCE, AND SEASONALITY

Breeds in northern California from Cascade Ranges south to Lake Tahoe, and along the coast south to Marin Co. Regular breeding sites include Shasta Lake, Eagle Lake, Lake Almanor, other inland lakes and reservoirs, and northwest river systems. Breeding population estimated in 1975 at 350-400 pairs in northern California (Henny et al. 1978); numbers apparently increasing in recent years. An uncommon breeder along southern Colorado River, and uncommon winter visitor along the coast of southern California (Garrett and Dunn 1981). Associated strictly with large, fish-bearing waters, primarily in ponderosa pine through mixed conifer habitats.

#### SPECIFIC HABITAT REQUIREMENTS

**Feeding:** Preys mostly on fish; also takes a few mammals, birds, reptiles, amphibians, and invertebrates. Requires open, clear waters for foraging. Uses rivers, lakes, reservoirs, bays, estuaries, and surf zones. Swoops from flight, hovers, or perches to catch fish near surface of water.

**Cover:** Uses large trees, snags, and dead-topped trees in open forest habitats for cover and nesting.

**Reproduction:** Nests on platform of sticks at the top of large snags, dead-topped trees, on cliffs, or on human made structures. Nest may be as much as 71 m (250 ft) above ground. Occasionally nests on ground. Nest usually within 400 m (1312 ft) of fish-producing water, but may nest up to 1.6 km (1 mi) from water (Airola and Shubert 1981). Needs tall, open-branched "pilot trees" nearby for landing before approaching the nest, and for use by young for flight practice. Nest tree averaged 172 cm (68 in) dbh (range 76-206 cm; 30-81 in dbh) in northern California. Nest height averaged 41 m (135 ft) (Airola and Shubert 1981).

**Water:** Clear, open waters required for foraging. Some individuals bathe (Bent 1937).

**Pattern:** Uses large snags and open trees near large bodies of water.

#### SPECIES LIFE HISTORY

**Activity Patterns:** Yearlong, diurnal activity.

**Seasonal Movements/Migration:** Arrives on nesting grounds mid-March to early April. Migrates south along coast and western slope of Sierra Nevada in October to Central and South America.

**Home Range:** Travels up to 8-10 km (5-6 mi) from nest to fishing areas (Garber 1972, French and Koplín 1977).

**Territory:** In Montana, Flath (1972) observed that an area of 230 m<sup>2</sup> (1700 ft<sup>2</sup>) around nest site was defended against Canada geese. In Florida, nests and immediate vicinity were defended; nests were as close as 20 m (66 ft) from each other (Ogden 1975). Pair defends nest, sometimes violently, when young present (Call 1978).

**Reproduction:** Breeds March to September. Clutch size 1-4 eggs, usually 3. Colonial nesting common. Young breed first at 3 yr. Pesticides caused reproductive failure in past (Garber 1972), but reproductive success has increased since early 1970's (Airola and Shubert 1981).

**Niche:** Bald eagles and gulls compete with osprey for food, often stealing osprey catch.

## REFERENCES

- Airola, D. A., and N. Shubert. 1981. Reproductive success, nest site selection, and management of ospreys at Lake Almanor, California. *Cal-Neva Wildlife Trans.* 1981:79-85.
- Bent, A. C. 1937. Life histories of North American birds of prey. Part 1. U.S. Natl. Mus. Bull. 167. 409pp.
- Brown, L., and D. Amadon. 1968. Eagles, hawks and falcons of the world. 2 Vols. Country Life Books, London. 945pp.
- Call, M. W. 1978. Nesting habits and survey techniques for common western raptors. U. S. Dep. Inter., Bur. Land Manage., Portland, OR. Tech. Note No. 316. 115pp.
- Flath, D. L. 1972. Canada goose-osprey interactions. *Auk* 89:446-447.
- French, J. M., and J. R. Koplín. 1977. Distribution, abundance, and breeding status of ospreys in northwestern California. Pages 223-240 in J. C. Ogden, ed. north American Osprey Research Conf. U.S. Natl. Park Serv. Trans. and Proc. Series 2. 258pp.
- Garber, D. P. 1972. Osprey study, Lassen and Plumas counties, California, 1970-71. Calif. Dep. Fish and Game, Sacramento. Wildl. Manage. Br. Admin. Rep. 72-1. 33pp.
- Garrett, K., and J. Dunn. 1981. Birds of southern California. Los Angeles Audubon Soc. 408pp.
- Grinnell, J., and A. H. Miller. 1944. The distribution of the birds of California. *Pac. Coast Avifauna* No. 27. 608pp.
- Henny, C. J., J. Collins, and W. Deibert. 1978. Osprey distribution, abundance and status in western North America II: the Oregon population. *Murrelet* 59:14-25.
- Jackman, S. M., and J. M. Scott. 1975. Literature review of twenty three selected forest birds of the Pacific Northwest. U.S. Dep. Agric., For. Serv., Reg. 6, Portland OR. 382pp.
- Koplín, J. R., ed. 1971. Osprey workshop: Summary of research findings and management recommendations. *Cal-Neva Wildl.* 1971:114-122.
- Ogden, J. C., ed. 1977. Transactions of the North American osprey research conference. U.S. Dep. Inter., Natl. Park Serv., Wash. DC. Trans. and Proc. Ser. 2. 258pp.
- Remsen, J. V., Jr. 1978. Bird species of special concern in California. Calif. Dept. of Fish and Game, Sacramento. Wildl. Manage. Admin. Rep. No. 78-1. 54pp.
- Zarn, M. 1974b. Osprey, *Pandion haliaetus carolinensis*. U.S. Dep. Inter., Bur. Land Manage., Wash. DC. Tech. Note No. 254. 41pp.