

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

---

BUFFLEHEAD

*Bucephala albeola*

Family: ANATIDAE

Order: ANSERIFORMES

Class: AVES

B103

Written by: S. Granholm

Reviewed by: D. Raveling, D. Airola

Edited by: R. Duke

#### DISTRIBUTION, ABUNDANCE, AND SEASONALITY

The bufflehead is a common winter resident of coastal and northeastern California and, occasionally, of the Central Valley. It prefers coastal estuarine waters (salt ponds, lagoons, bays) and lacustrine habitats (lakes, ponds). Common October to April along northern coast and in northeastern California (except in severe winters). Uncommon to locally common in lowlands and foothills, and east of Sierra Nevada crest. Fairly common November to April throughout southern California and locally common along the coast. Rare through summer in the Cascades, breeding in Lassen Peak area. A few nonbreeding stragglers sometimes remain through summer elsewhere, mainly along the northern California coast and Salton Sea (Cogswell 1977, McCaskie et al. 1979, U.S. Fish and Wildlife Service 1979, Garrett and Dunn 1981).

#### SPECIFIC HABITAT REQUIREMENTS

**Feeding:** Feeds primarily on small invertebrates, mainly crustaceans and mollusks in saltwater, and aquatic insects and gastropods in freshwater (Erskine 1972). Aquatic insects are especially important on breeding grounds, and form almost the entire diet of young until about half grown. Also eats some fish, and seeds and other parts of aquatic plants. Dives for food, often over tidal flats, and pursues prey underwater or gleans from bottom; only rarely feeds by submerging head (Palmer 1976). Usually feeds in water 1.3 to 4.5 m (4-15 ft) deep (Johnsgard 1975b).

**Cover:** Sleeps and rests on the water, often well offshore. Seldom comes ashore, except for female during the nesting season.

**Reproduction:** Only a small population breeds in California. Nests in tree cavities, usually near water. Prefers unaltered flicker holes, but also uses those of pileated woodpeckers, seldom uses holes enlarged by decay. Uses nest boxes in northeastern California. Nest usually 1 to 6.6 m (3-20 ft) above the ground, and ranges from 0.6 to 27 m (2-90 ft). Most nests are within 75 m (248 ft) of water, but some are as far as 350 m (1150 ft). Usually nests near a small lake or pond bordered by open forest, or in dense forest with many snags. Waters bordered by extensive stands of emergent or floating vegetation seldom used. Female may brood small ducklings on shore (Palmer 1976).

**Water:** No additional data found.

**Pattern:** Uses coastal estuarine waters and lacustrine habitats. Requires a suitable tree cavity for nesting, near a small lake or pond bordered by forest.

#### SPECIES LIFE HISTORY

**Activity Patterns:** Yearlong, diurnal activity. Most overland migration, however, is at night

(Palmer 1976).

**Seasonal Movements/Migration:** Except for the small breeding contingent, the California wintering population migrates north to breeding grounds, mostly in Canada and Alaska, and is absent from May to September.

**Home Range:** No information found.

**Territory:** Rather than defending a territory, the drake just defends an area around his mate, but this results in the spacing of breeding pairs (Erskine 1972). In British Columbia, nests were about 100 m (330 ft) apart, and not less than 38 m (125 ft), except that in 3 cases a tree held 2 nests simultaneously (Erskine 1972). Ponds smaller than 1 ha (2.5 ac) generally were not used for nesting. Each female with young defended a brood territory, but the sizes were not estimated.

**Reproduction:** In California, nests or young have been reported in May and June (Cogswell 1977). Monogamous, solitary nester, although 2 nests occasionally found in the same tree. Clutch size usually 6-11, most often 9. Single-brooded, and incubates for 28-33 days. Precocial young tended by female only, but early broods may be accompanied by the male as well. Attains flight at 50-55 days, but may be abandoned long before that. Breeds first at 2 yr (Palmer 1976). A dominant female may adopt or capture a brood from a subdominant female, occasionally increasing brood size to 30 (Erskine 1972).

**Niche:** Drake sometimes defends territory against other species of ducks. Most competition for nest cavities is from flickers and starlings, but mountain bluebirds, tree swallows, and flying squirrels also compete for nest sites. In 4 instances, Barrow's goldeneye has killed buffleheads attempting to use their nests. There are 5 records of nests containing eggs of buffleheads and eggs of common or Barrow's goldeneyes. Predation on nests is infrequent, and most predation probably is on flightless young. Relatively few taken by hunters (Palmer 1976). Tends to frequent shallow lakes with few or no fish. Planting fish in mountain lakes may reduce habitat quality, as does removing snags.

## REFERENCES

- Bellrose, F. C. 1976. Ducks, geese, and swans of North America. 2nd ed. Stackpole Books, Harrisburg, PA. 544pp.
- Cogswell, H. L. 1977. Water birds of California. Univ. California Press, Berkeley. 399pp.
- Erskine, A. J. 1972. Buffleheads. Can. Wildl. Serv., Ottawa. Monogr. Ser. No. 4. 240pp.
- Garrett, K., and J. Dunn. 1981. Birds of southern California. Los Angeles Audubon Soc. 408pp.
- Johnsgard, P. A. 1975b. Waterfowl of North America. Indiana Univ. Press, Bloomington. 575pp.
- McCaskie, G., P. De Benedictis, R. Erickson, and J. Morlan. 1979. Birds of northern California, an annotated field list. 2nd ed. Golden Gate Audubon Soc., Berkeley. 84pp.
- Palmer, R. S., ed. 1976. Handbook of North American birds. Vol. 2. Yale University Press, New Haven, CT. 521pp.
- Palmer, R. S., ed. 1976. Handbook of North American birds. Vol. 3. Yale University Press, New Haven, CT. 560pp.
- U. S. Fish and Wildlife Service. 1979. Concept plan for waterfowl wintering habitat preservation: California coast. U.S. Dep. Inter., Fish and Wildl. Serv., Portland, OR. 234pp.