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

WOOD DUCK *Aix sponsa*
Family: ANATIDAE Order: ANSERIFORMES Class: AVES
B076

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DISTRIBUTION, ABUNDANCE, AND SEASONALITY

An uncommon yearlong resident, occurring mainly in Central Valley, and in Coast Ranges of central California. More widespread and common in winter, occasionally moving south (Brown et al. 1979). Inhabits lacustrine and slow-moving riverine habitats bordered by trees or other tall vegetation, and preferably by emergent vegetation as well. Prefers aquatic habitats bordered by deciduous trees such as willows, cottonwoods, and oaks (Grinnell and Miller 1944). Fall concentrations highest in Butte Sink, and in lakes bordered by oak woodlands (Cogswell 1977). Reservoirs less suitable, especially in nesting season (Naylor 1960). Formerly more common, now an uncommon breeder in California, April to August, mainly in inner Coast Ranges near, and north of, San Francisco Bay, but also locally throughout northern and central California, excluding northeastern plateau, but including eastern Cascades and Sierra Nevada south to Lake Tahoe. Very few breeding records in southern California. From September to April, uncommon to rare (locally common) in central Coast Ranges south to Alameda and Santa Clara cos., fewer in interior lowlands of central and northern California and rare in southern California, where mainly found in coastal counties (Cogswell 1977, McCaskie et al. 1979, Garrett and Dunn 1981).

SPECIFIC HABITAT REQUIREMENTS

Feeding: Primarily herbivorous, feeding on seeds, stems, and leaves of aquatic plants, seeds of trees and shrubs, waste grains, grasses, forbs, and berries. Landers et al. (1977) found breeding females ate large amounts of invertebrates. In Missouri, invertebrates made up 79% of diet of females during laying, 54% before laying, and 43% after laying; and composed about 1/3 of diet of males, spring through autumn (Drobney and Fredrickson 1979). Acorns particularly favored and sought, preferably, in flooded woodlands, but also on ground, if undergrowth is lacking (Bellrose 1976), and directly from trees (Johnsgard 1975b). Takes food from water surface and subsurface, but does not tip-up frequently, also forages ashore usually in wooded habitats, but sometimes in agricultural fields. Best foraging habitat is in water less than 46 cm (18 in) deep (McGilvrey 1968). Young feed largely on insects during early weeks, and on vegetation thereafter (Hocutt and Dimmick 1971).

Cover: When not breeding, roosts on quiet waters, sheltered by trees, shrubs, or tall emergent vegetation; swamps, ponds, coves of lakes, flooded woodlands, and open water. Often roosts in large flocks. In mid-day, rests ashore, or in water.

Reproduction: Nests in cavities in trees, pileated wood pecker nest-cavities, or old, rotted flicker cavities (Palmer 1976). Suitable nest boxes and other artificial structures accepted readily (Bellrose et al. 1964, Bellrose 1976, Griffith and Fendley 1981). Nests preferably near, or over, water, but may be up to 350 m (1150 ft) away (Gilmer et al.1978). Cavities may be 0.6-20 m (2-65 ft) above ground, but those over 9 m (30 ft) preferred (Bellrose 1976). Most suitable cavities in trees with dbh 61-91 cm (24-36 in), but some in trees as small as 41 cm (16 in) dbh (Bellrose et al. 1964, McGilvrey 1968). Ideal habitat for brood-rearing and

summer molt is quiet water providing overhanging wooded vegetation, or dense emergent vegetation, small passages of open water, submerged vegetation (providing invertebrate food); and perches (Palmer 1976).

Pattern: For nesting, requires trees bordering a quiet aquatic habitat with emergent vegetation. In nonbreeding season, aquatic habitat may be bordered by any tall vegetation, but trees preferred.

SPECIES LIFE HISTORY

Activity Patterns: Yearlong, diurnal activity; feeds mostly early and late in day.

Seasonal Movements/Migration: Nonmigratory over most of California range, but breeding populations east of Sierra Nevada and Cascades absent in fall and winter, and sparse wintering population of southern California mostly is absent April to August. Some shift from higher to lower elevations in winter (Naylor 1960).

Home Range: Summer home ranges of flightless broods in Ohio were 0-5.6 km (0-3.5 mi) along a river, and 0-12.8 km (0-8 mi) for fledged broods (Stewart 1958). Home ranges of breeding males in Minnesota averaged 202 ha (500 ac) and those of unpaired males, 526 ha (1300 ac) (Gilmer 1971). In Minnesota, breeding females remained within 1 km (0.6 mi) of the nest during 70% of their time away (Gilmer et al. 1978).

Territory: Does not defend a breeding territory, but male defends mate from other males (Palmer 1976).

Reproduction: In California, breeds from April to August (Cogswell 1977). At least temporarily monogamous, but same male may not fertilize all of a given female's clutches in a season. Solitary nester, but lack of territoriality may permit high nest densities, especially in nest boxes. Clutch usually 9-14; larger sets frequently result from communal laying by several females. Communal nesting may be by females of all ages, and by females that additionally raise own brood. Usually single-brooded, but occasionally double-brooded. Most reported incubation periods from 27-35 days. Precocial young tended by female alone, and first fly at 8-9 wk, but may become independent at 5-6 wk. A few breed at 1 yr, but most unsuccessful until following season.

Niche: Competitors for nest cavities include starlings, squirrels, bees, hornets, screech-owls, and kestrels (McGilvrey 1968). Raccoons are important predators on eggs and setting females, and fox squirrels, minks, opossums, and rats eat many eggs. Predators on ducklings include minks, fish, snakes, bullfrogs (McGilvrey 1968). Nest boxes have allowed populations to increase in many areas, and they provide better protection from weather and predators than many natural cavities (Palmer 1976). Grabill (1977) and Heusmann et al. (1977) discussed methods to reduce starling use of nestboxes. The decline of nesting in California probably results from destruction and disturbance of riparian woodlands, and predation by humans and domestic animals on young (Cogswell 1977). Adults are killed by hunters.

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