

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

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GADWALL

*Anas strepera*

Family: ANATIDAE

Order: ANSERIFORMES

Class: AVES

B085

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#### DISTRIBUTION, ABUNDANCE, AND SEASONALITY

A common yearlong resident in many parts of the state, particularly interior valleys, wetlands, ponds, and streams. Most abundant in winter. Feeds and rests in freshwater lacustrine and emergent habitats, and to a lesser extent, estuarine and saline emergent habitats, and nests in nearby herbaceous and cropland habitats. In Central Valley, common (locally very common) November to February and uncommon to fairly common remainder of year. Less common in winter along coast, and in Coast Range foothills of central and southern California. In northeastern California and east of Sierra Nevada, usually common March to early November, and some years locally abundant September to December (Cogswell 1977). By contrast, McCaskie et al. (1979) reported lower densities throughout northern California, and only irregular occurrence along coast in summer; they implied local occurrence along entire northern California coast. In Imperial Valley and along Colorado River, fairly common October to March, and uncommon (locally fairly common) through summer (Cogswell 1977, Garrett and Dunn 1981). Occurs in mountains in smaller numbers, as a spring and fall migrant in northern California, and perhaps year-round in southern California. Breeds commonly on northeastern plateau and east of Sierra Nevada, but sparsely elsewhere in California summer range.

#### SPECIFIC HABITAT REQUIREMENTS

**Feeding:** In fall and winter, eats leaves and stems of aquatic plants (especially submergents), including grasses, sedges, pondweeds, and algae. Also eats seeds and cultivated grains, but only 2-4% of diet is animal matter (Palmer 1976, Paulus 1982). Aquatic invertebrates, especially insects, mollusks, and crustaceans, important foods of breeding adults (Serie and Swanson 1976), and are predominant foods of young ducklings, which become mostly herbivorous by 3 wk (Sugden 1973). Gleans surface or subsurface waters, often tips up, but rarely dives. Feeds more often in open water than other dabblers (Palmer 1976), usually in shallow water, fresh, alkaline, or brackish. Rarely, feeds in nearby grass or cultivated grain fields.

**Cover:** Typically rests in day and roosts at night on open water, in same areas used for feeding, or at distance (Palmer 1976). Flightless, molting adults prefer larger bodies of water over small ones, and escape by diving and swimming.

**Reproduction:** Usually nests on a well-drained site amidst dense, low herbaceous vegetation, 20-38 cm (8-15 in) high, but often in taller grasses or sometimes on damp ground, or even floating vegetation (Palmer 1976). Often nests on islands, usually surrounded by open water rather than emergent vegetation. In Alberta, large numbers nested on artificial islands (Giroux 1981). In Alberta, 63 nests averaged 37 m (123 ft) from water (Keith 1961); nests usually within 45 m (150 ft) of water, and often within a few m. Often breeds near alkaline or brackish waters, as well as fresh (Palmer 1976). Generally avoids waters surrounded by woods or dense brush, but will use clumps of brush as nesting cover. Drake

usually waits for mate on bare shoreline, or on a rock or log. Broods prefer larger bodies of water, with deep channels for escape.

Water: No additional data found.

Pattern: Prefers to nest in dense herbaceous habitats near suitable shallow-water feeding areas.

## SPECIES LIFE HISTORY

Activity Patterns: Yearlong, mostly diurnal activity, but will switch to nocturnal feeding under hunting pressure (Palmer 1976). In Louisiana, fed all hours of night and day in winter (Paulus 1982). Migrates night and day.

Seasonal Movements/Migration: Majority of population that winters in California migrates to breeding grounds in northern continental U.S., Canada, and Alaska. Individuals that breed in northeastern California mostly winter elsewhere in California or Mexico. Individuals breeding elsewhere in California apparently nonmigratory, or at least the species is present year-round.

Home Range: Breeding ranges of 5 pairs in Utah averaged 27 ha (67 ac), and varied from 14-35 ha (34-87 ac), and overlapped (Gates 1962). In North Dakota, breeding home ranges were "several hundred acres"; pairs and incubating females regularly flew 1.6-4.8 km (1-3 mi) from nesting island to mainland ponds to feed and loaf (Duebbert 1966). In Utah, 13 broods moved 0.43-1.85 km (0.26-1.15 mi) after hatching, averaging 0.90 km (0.56 mi) (Gates 1962). In Manitoba, a brood moved 0.39 km (0.24 mi) in 4 days (Evans et al. 1952).

Territory: Nonterritorial where nesting in high densities, as on islands (Palmer 1976). In lower nesting densities, drakes aggressively defend territories (Harris 1954). In North Dakota, drakes defended areas centered around mates, rather than defined territories (Dwyer 1974).

Reproduction: In California, nests April to July (Cogswell 1977). Usually monogamous, but sometimes female changes mates during a single nesting cycle, and a tendency toward promiscuity in high density nesting. Often nests solitarily, but a tendency toward colonial breeding, especially on islands. Clutch size usually 8-12, rarely 7-16 (Harrison 1978). Single brooded. Incubation usually 24-26 days, ranging 22-29. Precocial young usually tended by hen only, but a drake may accompany for a few days. First fly at about 48-52 days, and become independent at that time, or earlier. Usually breed first as yearlings, but some not until following yr (Palmer 1976).

Niche: Nests are parasitized by lesser scaups, white-winged scoters, and redheads, but at a fairly low rate (Johnsgard 1975b). Crows, ravens, and gulls cause a high proportion of nest failures; other nest predators include foxes, minks and jaegers. Agricultural practices destroy many nests, and heavy grazing destroys nesting cover.

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