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

NORTHERN SHOVELER *Anas clypeata*
Family: ANATIDAE Order: ANSERIFORMES Class: AVES
B084

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DISTRIBUTION, ABUNDANCE, AND SEASONALITY

Fairly common or common, winter resident (late August to early May) and migrant in much of California, and rare in summer, nesting rarely. Prefers shallow, freshwater lacustrine habitats bordered by emergent wetlands in Central Valley, coastal slope lowlands, and interior southern California. On some salt ponds, brackish lacustrine, estuarine, and saline emergent habitats, and parts of Salton Sea, very common September to early May, uncommon to fairly common through summer, and breeds rarely. Only 2 recent nesting records in southern California. In northeastern California, on lacustrine and emergent habitats, very common September to November and March to April; common in mild winters, and fairly common in summer, breeding. According to McCaskie et al. (1979) rare year-round, but occasionally breeds in mountains of northern California.

SPECIFIC HABITAT REQUIREMENTS

Feeding: Specializes on phyto- and zooplankton, including algae, crustaceans, and insect larvae, strained from water with its spatulate bill (Bellrose 1976, Cogswell 1977). Also eats seeds and other parts of aquatic plants, mollusks, aquatic insects, other macroinvertebrates, and small fish. Studies of gut contents do not adequately sample microscopic foods of shovelers, and thus are misleading, but breeders probably depend heavily on zooplankton. Feeds actively in deep and shallow waters (Bellrose 1976), including sewage ponds; water may be fresh, alkaline or saline, and may be clear or muddy. Usually feeds by immersing part or all of head, but occasionally tips up, and rarely filters bottom sediments or mud. Usually does not feed on land. Often feeds cooperatively in groups.

Cover: In midday, rests on mud or sand beside water (Palmer 1976). Flightless, molting adults use lacustrine waters bordered by emergent wetlands. Broods hide in emergent vegetation, especially when young.

Reproduction: Very few breed in California. Although drawn mostly from studies in other areas, the information below probably is applicable to California breeders. Usually nests on dry site near water, in low grass, often providing little concealment for nest. Also uses taller grasses, hayfields, meadows, and marshes of bulrushes, and saltgrass. Rarely nests in "weedy patches" or beside woody vegetation (Bellrose 1976). In Alberta, some pairs nested on artificial islands (Giroux 1981). Most nests 23-60 m (75 200 ft) from water, but some within a few ft of water, or up to 1.6 km (1 mi) away (Bellrose 1976). At Tule and Klamath Lake refuges in Siskiyou Co., 10 of 35 nests were over 45 m (50 yds) from water (Miller and Collins 1954). Nest site usually near large marshy area with open, shallow water (Palmer 1976).

Water: No additional data found.

Pattern: For nesting, requires dry, grassy site near aquatic feeding area, usually in shallow water with marshy borders.

SPECIES LIFE HISTORY

Activity Patterns: Yearlong, diurnal activity. Most active early and late in day. Probably migrates both night and day.

Seasonal Movements/Migration: Nearly all California wintering population migrates northward to breeding grounds in northern continental U.S., Canada, and Alaska, and is absent from mid-May to mid-August.

Home Range: Breeding home ranges studied by Poston (1969, 1974) each contained a core area, usually a pond where the pair spent most of its time, plus 3-13 peripheral ponds and a nest-site. In an Alberta prairie pothole habitat, 8 breeding home ranges averaged 31 ha (76 ac), and varied from 9-52 ha (20-128 ac) (Poston 1974).

Territory: Each breeding drake defends a territory, including some water and some land, where he feeds, rests, and waits for his mate; the pair also copulates on the territory (Palmer 1976). Some authors have characterized this species as highly territorial, while others found mate defense, but no evidence of territoriality (Johnsgard 1975b). Poston (1969) found extensive overlap of home ranges, and some were completely within boundaries of others. In Manitoba, 10 territories averaged 2.9 ha (7.2 ac), and varied from 1.3-5 ha (3.2-12.4 ac), before egg-laying; and they averaged 0.89 ha (2.2 ac), and varied from 0.10-1.5 ha (0.25-3.8 ac), during egg-laying and incubation (Seymour 1974).

Reproduction: In California, nests March to July (Cogswell 1977). Pair formation begins in winter and continues through spring. Monogamous, solitary breeder. Clutch size usually 8-12, sometimes 7-14 (Harrison 1978). Single-brooded. Incubation usually 25-27 days, but reported as little as 21. Precocial young usually tended by female alone, but sometimes drake accompanies for a few days. Young fly first at 52-60 days, and become more independent at that time. First breeds as yearling (Palmer 1976).

Niche: Probably competes very little with other dabbling ducks, because of highly specialized bill. Nests parasitized by redheads and lesser scaup, and shovelers have laid eggs in nests of mallards, American wigeons, cinnamon teals, and redheads (Johnsgard 1975b). Bellrose (1976), summarizing many studies, reported mammals destroyed almost twice as many nests as did avian predators; major predators were skunks, ground squirrels, crows, magpies, and gulls. Weasels sometimes kill ducklings.

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