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

WILLET *Tringa semipalmata*
Family: SCOLOPACIDAE Order: CHARADRIIFORMES Class: AVES
B168

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DISTRIBUTION, ABUNDANCE, AND SEASONALITY

Abundant in nonbreeding season (July through April) in estuarine habitats, saline emergent wetlands, and salt ponds along the entire California coast. Intertidal mudflats are a very important winter feeding habitat, where the willet is among the most common of the large shorebirds. It is less common in this season on sandy marine shores, at the Salton Sea, parts of the Central Valley, and other inland habitats (Cogswell 1977). Uncommon to locally common breeder from April to August on wet meadows in Modoc, Lassen, and Plumas cos. Has bred as far south as Lake Tahoe, and may do so south through Mono Co. Small numbers remain on the coast in the breeding season, but do not nest.

SPECIFIC HABITAT REQUIREMENTS

Feeding: Feeds by a peck-probe method. In estuarine habitats, takes a wide variety of invertebrate prey, principally small crustaceans and mollusks. Fish, polychaete worms, and larval and pupal dipteran insects also are taken (Stenzel et al. 1976), and fish eggs have been recorded in the diet (Atteberry 1952). At inland areas, mud-burrowing insects and crustaceans are important prey (Cogswell 1977).

Cover: In estuarine habitats, roosting areas are needed during high tide period when mudflats are submerged. Roost-sites typically are surrounded by, or adjacent to, water and include the upper reaches of saline emergent wetlands, salt ponds and associated dikes, low islets or breakwaters, and occasionally nearshore upland fields.

Reproduction: Nests in fresh emergent wetlands, and wet meadows, usually close to open water such as ponds or lakes. The nest is a grass-lined hollow, about 16 cm (6.5 in) in diameter; frequently located in short grass near, or on, a mound in a low part of a marsh (Cogswell 1977). Nests in saline emergent wetland on the Atlantic coast, but not in California.

Water: No additional data found.

Pattern: Nests in wet meadows. Most nonbreeders feed day or night during ebb, low, and flood tides in coastal estuaries with extensive intertidal mudflats. During high tide, roosts nearby in saline emergent wetland, salt ponds, dikes, or upland fields. On non-tidal shores, feeding may be primarily diurnal.

SPECIES LIFE HISTORY

Activity Patterns: Yearlong, diurnal activity. When feeding intertidally, also feeds at night; may fly several miles between feeding grounds and high tide roosts.

Seasonal Movements/Migration: In fall migration, arrives at coastal estuaries in late June, and population reaches a peak in late July and August. At Bolinas Lagoon, population was

fairly stable from late August to mid-April (Page et al. 1979). After mid-April, numbers decline markedly as departure for breeding grounds begins. Present on northeastern California breeding grounds from April to August.

Home Range: In coastal Virginia, nest density varied from 4-8 to 24.8 nests/ha (1.6-3.2 to 10/ac) (Howe 1982). The distance from roosts to intertidal feeding areas may be as little as 1000 m (3300 ft) (Kelly and Cogswell 1979), or several miles.

Territory: Defends separate nesting and feeding territories (Howe 1982). In winter, may possess feeding territories. Vogt (1938) mapped 2 territories of approximately 53 x 76-91 m (175 x 250-300 ft) in New Jersey. In Virginia, the mean distance between neighboring nests (N = 69 nests) was 32 m (107 ft), but some were only 3.6 m (12 ft) apart (Howe 1982). Male performs most of the nest defense. Vogt (1938) reported pairing before establishing territory. Tomkins (1965) described noisy courtship behavior in prenesting flocks in Georgia/South Carolina salt marshes.

Reproduction: Breeding season mid-April to September, with a peak in May and June. Monogamous, semicolonial nester, and pair may mate for life (Howe 1982). Mean clutch size 4 eggs, and incubation period 22-24 days (Tomkins 1955). Both members of a pair share incubation. A second clutch of eggs is produced if first is destroyed. Precocial young usually leave nest within 12 hr of hatching; led by both parents to feeding areas away from nest territory. After chicks are 2 wk old, female leaves. Chicks first fly at approximately 28 days (Howe 1982). Does not breed until 2 yr old (Palmer 1967).

Niche: !n coastal Virginia salt marsh, major nest predators were red foxes, raccoons, and fish crows (Howe 1982). Human visitation to nesting grounds may attract mammalian predators. In New Jersey, Burger and Shisler (1978) found a significant association of nest placement on, or near, spoil piles created in a 20 ha (49 ac) salt marsh by ditching for mosquito control, but no association with proximity to open water, or vegetation.

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Life history accounts for species in the California Wildlife Habitat Relationships (CWHR) System were originally published in: Zeiner, D.C., W.F.Laudenslayer, Jr., K.E. Mayer, and M. White, eds. 1988-1990. California's Wildlife. Vol. I-III. California Depart.

of Fish and Game, Sacramento, California. Updates are noted in accounts that have been added or edited since original publication.