## Table 5 *(continued)*

| Species | Status(1) | Seasonal Occurrence (2) | Habitat Use (3) | Current Abundance | Recent Trends in Numbers or Use of Estuary | Comments |
|---|---|---|---|---|---|---|
| **Western sandpiper** | --- | R-W, M-Sp, F | IM, RS, SM, BM, FM, FH, FW, SP, LP, AL | Abundant | 475,000-700,000 in Bay during spring. | Most abundant shorebird in estuary. |
| **Black-necked stilt** | --- | R-Su, W | IM, SM, BM, FM, DM, FH, FW, SP, LP | Common | 8,000-12,000 in Bay during fall; mostly in South Bay salt ponds. | The increasing South Bay breeding population is threatened by introduced predators. |
| **Alameda song sparrow** | FC2, SSC | R-Yr | SM | Rare | Habitat stable, except at Coyote Creek. | Conversion of South Bay salt marshes has greatly reduced available habitat. |
| **Tricolored blackbird** | FC2, SSC | R-Yr | BM, FM, FH, FW, LP, GR, AL | Common | Steep population decline throughout range. Several colonies in Fremont eliminated in past decade. | Nests in freshwater marsh; Central Valley population declined nearly 90% during 1930-1980. |
| **MAMMALS**<br>**Salt marsh wandering shrew** | FC1, SSC | R-Yr | SM, DM | Rare | Stable, except where marsh erosion & conversion occurring. | One of the most endangered species in the estuary basin. |
| **Salt marsh harvest mouse** | FE, SE | R-Yr | SM, BM, DM | Rare | Great seasonal and annual population fluctuations. | Only 760 acres of diked habitat available in South Bay; 6,000 acres of tidal marsh in North Bay. Vulnerable to flooding/genetic isolation. |
| **Harbor seal** | --- | R-Yr | OW, IM, RS, SM, BM | Common | Population stable at about 300-500; more than 350 used two South Bay haulout sites in 1990. | Recent study detected PCB and DDT in tissue. |
| **Red fox** | FC2, ST, IN | R-Yr | SM, BM, FM, FN, GR, CS, MC, AL | Uncommon | Population increasing since arrival in Bay Area in early 1980s. | Major predator on bayshore nesting birds, especially rails and terns. |
| **AMPHIBIANS & REPTILES**<br>**California tiger salamander** | FC2, SSC | R-Yr | FM, FH, WS | Uncommon | Populations small, isolated and declining. | Loss of vernal pools is a major cause of population decline. |
| **California red-legged frog** | FC2, SSC | R-Yr | BM, FM, DM, FH, RW, LP, GR, BF | Uncommon | Populations small, isolated and declining. | May be extirpated from the Delta. Still occurs at a few locations in Bay Area. |
| **Giant garter snake** | FC2, ST | R-Yr | FH, LP, GR, WS | Uncommon | Populations small, isolated and declining. | Loss of sloughs & marshes in Central Valley & Delta, possibly pesticides, cause for decline. |
| **San Francisco garter snake** | FE, SE | R-Yr | SM, LP | Rare | Populations small, isolated but stable during past decade. | Loss of major prey, the red-legged frog, due to habitat conversion and introduced bullfrog. |
| **Western pond turtle** | FC | R-Yr | FM, DM, FH, FW, RW, LP, GR | Uncommon | Population greatly reduced, but probably stable. | Loss of riparian vegetation and natural shorelines in Delta cause of decline. |

(1) Key to Status Listings:
FE: Federal Endangered
FT: Federal Threatened
SE: State Endangered
ST: State Threatened
FC: Candidate for Federal threatened /endangered listing
SSC: Calif. Dept. of Fish & Game species of special concern
SBS: U. S. Fish & Wildlife Service sensitive bird species
HA: Harvested species
MC: Federal management concern

(2) Seasonal Occurence:
R–Resident
M–Migrant
Sp–Spring
Su–Summer
F–Fall
W–Winter

(3) Wetland Habitats:
OW–open water
IM–intertidal mudflat
RS–rocky shore
SM–salt marsh
BM–brackish marsh
FM–fresh marsh
DM–diked marsh
FH–other freshwater habitat
FW–farmed wetlands
RW–riparian woodland
SP–salt pond
LP–lakes &ponds

Upland Habitats:
GL–grassland
AL–agricultural land
UR–urban land
CS–coastal scrub
BF–broad-leaved forest
MC–mixed chaparral
WS–oak woodland

*From data in Harvey et al., 1992*

## Table 5

*Status and Trends of Selected Wildlife Species of the Bay/Delta Estuary*

| Species | Status(1) | Seasonal Occurrence (2) | Habitat Use (3) | Current Abundance | Recent Trends in Numbers or Use of Estuary | Comments |
|---|---|---|---|---|---|---|
| **BIRDS**<br>**Common loon** | SSC, MC, SBS | R-W, M-Sp, F | SM, BM, LP | Common | 1984-89: 21-83 birds in Oakland<br>1975-89: 10-40 birds in Marin | Recent declines on west coast. Human disturbance during breeding, oil spills and lake acidification causes of decline throughout range. |
| **Eared grebe** | --- | R-W, M-Sp, F | OW, FM, SP | Abundant | >40,000 in estuary | Abundant on salt ponds; sporadic nesting in South Bay at seasonal marsh/ponds. |
| **Double-crested cormorant** | SSC | R-Yr | OW, RS, SM, BM, FM, DM, SP, LP | Common | Breeding population in Bay increasing over past 5 yrs.; 1989-90 = 1,185 nesting pairs. | Nests on bridges & other manmade structures; large colonies on S.F.-Oakland and Richmond-San Rafael bridges. |
| **Great blue heron** | --- | R-Yr | IM, RS, SM, BM, FM, DM, FH, OTHERS | Common | 160 nesting pairs in many habitats. | Adversely affected by human disturbance, loss of nesting trees, and possibly pesticides. |
| **Black-crowned night heron** | --- | R-Yr | IM, SM, BM, FM, FH, FW, SP | Common | At least 1,500 pairs nesting; greatest number in North Bay. | Abnormal embryos and crushed eggshells in some nests suggest contaminant-related reproductive problems. |
| **Western gull** | --- | R-Yr | OW, IM, RS, SM, BM, SP | Abundant | 1,690 breeding pairs in 1990. | Population increasing; nesting on rocky shore and bridges. |
| **California gull** | SSC | R-Yr | OW, IM, RS, BM, FH, FW, SP, LP | Common | 2,221 breeding pairs in 1990. | Began nesting in Bay in 1981. Today most abundant nesting seabird. Nests at salt ponds. |
| **Caspian tern** | SBS | R-Su | OW, SM, BM, FM, SP, LP | Common | 1,409 nesting pairs in 1989-90. | Red fox predation in South Bay cause for nesting failure. |
| **California least tern** | FE, SE | R-Su | OW, SM, SP | Uncommon | Started nesting in Bay in 1967. Recent average nesting population = 74 pairs. | Red fox & other predators caused total nesting failure of Oakland Airport population in 1990. |
| **Tundra swan** | --- | R-W | OW, DM, FW, LP | Common | About 12,000 birds wintered in Delta in 1990. | Delta is most important wintering area in Pacific Flyway; population increasing. |
| **Northern pintail** | HA | R-Su, W | SM, BM, FM, DM, FW, SP, LP, AL | Common | 97,000 birds wintered in estuary in 1990; 10% of 1977 population. | In early 1980s, drought in northern prairie caused massive population drop; now rebounding. |
| **Canvasback** | HA | R-W, M-Sp, F | OW, SM, BM, FM, SP, LP, GR | Common | During 1980s, wintering population declined, then increased to 40,000. | 10-15% of U.S. wintering population occurs in estuary; affected by wetland loss in northern prairie. |
| **Greater scaup** | HA | R-W, M-Sp, F | BM, FM, SP, LP | Common | In 1990, 150,000 wintered in estuary, an increase from preceding decade. | Most abundant diving duck in estuary; 50% occur in North Bay; Statewide population increasing. |
| **Swainson's hawk** | FC, ST, SSC, SBC | R-Su | RW, GR, WS, AL | Uncommon | Statewide population is 550, 78% in Central Valley, 9% in Delta. | Conversion of grasslands to ag. & urban, also pesticides caused massive decline. Population stable past 10 years. |
| **American peregrine falcon** | FE, SE | R-Su, W M-Sp, F | SM, BM, FM, RW, CS, MC | Uncommon | During past 20 years, local population up by tenfold. 10-20 birds in estuary region. | Estuary population increasing; however, no successful reproduction has occurred. |
| **California clapper rail** | FE, SE | R-Yr | SM, BM | Rare | During past decade, population declined from 1,500 to 300-500; 90% occur in South Bay. | Red fox predation a major threat; high mercury concs. in eggs. |
| **Snowy plover** | FC2, SSC, SBS, BMC | R-Yr | IM, SP, AL | Uncommon | Breeding population has declined from 1970 levels; now about 200-350 winter in estuary. | Red fox predation & habitat loss major threats; soon may be listed as threatened. |
| **Long-billed curlew** | FC, SSC | R-W, M-Sp, F | IM, SM, BM, FM, DM, FH, FW, SP, LP, GR | Uncommon | Fall population as high as 2,300; fewer in winter. | Uses seasonal wetlands, especially in Central Valley. Population declining due to ag. conversion in Great Basin. |