Animals of the Refuge at the Visitor Center

Upland Animals

Birds

Anna's Hummingbird (*Calypte anna*)
Diet: Feeds on nectar, water, spiders, and tree sap
Size: 3 1/2" - 4" in length
Description: Male has a deep rose red head and throat; female's throat has reddish flecks; both have grayish underparts washed with green.
Did You Know? This is the only hummingbird in this area that does not migrate.

Barn Owl (*Tyto alba*)
Diet: Small mammals
Size: 14" - 20" in length
Description: Pale face with dark eyes; heart-shaped outline around the face; rusty brown upper parts; underparts vary from white to cinnamon.
Did you know? The Barn Owl nests and roosts in dark cavities in buildings, cliffs, and trees in the upland, they hunt at night for small mammals in the salt marsh.

Barn Swallow (*Hirundo rustica*)
Migratory: Migrates to South America in the winter.
Diet: Insects
Size: 5 3/4" - 7 3/4" in length
Description: Iridescent blue back, with a cinnamon colored belly and throat. Most distinctive is a long, deeply forked tail.
Did you know? The Barn Swallow builds its open cup shaped nest under bridges, or on building walls with mud collected from the salt marsh and mudflats. These birds drink, eat, and bathe while flying.

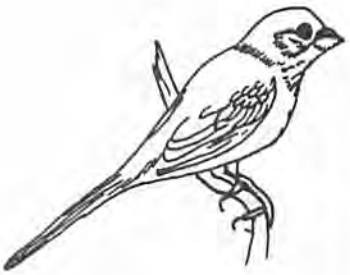
Black Phoebe (*Sayornis nigricans*)
Diet: Insects
Size: 7" - 8" in length
Description: Head and upper part of breast are black, belly and under tail are white; sharp color break between breast and belly; head is darker than the body.
Did you know? This bird frequently pumps and spreads its tail while perched.

Cliff Swallow (*Hirundo pyrrhonota*)
Migratory: Breeds in the spring and summer in North America. Migrates south in the fall to winter in South America, from Paraguay to coastal and southeast Brazil.
Diet: Insects and berries
Size: 5 ½" in length
Description: Identified by its square tail with buff orange colored rump and blackish throat.
Did you know? The Cliff Swallow nests in colonies, building gourd shaped mud nests with a small tunnel entrance. They typically build these nests under bridges or on cliff sides.

Northern Harrier (*Circus cyaneus*)
Diet: Males prey more on birds, while females eat more mammals. This raptor has been reported to drown waterfowl.
Size: 16 ½" in length, 42" wing span
Description: Obvious white rump patch. Male has grey back, throat and breast, white belly marked with brown, tail with black bars. Female is brown-streaked on breast; brown above.
Did you know? The Northern Harrier flies close to the ground searching for its prey in the upland, salt marsh and salt pond habitats.

Peregrine Falcon (***Falco peregrinus***)
Federal Status: Delisted in the Fall 1999 from Endangered Species Status. The Peregrine Falcon made a comeback after being listed as an endangered species due to the use of DDT, a pesticide that accumulated in the food chain and weakened eggshells.
Diet: small to medium sized birds
Size: 16" - 20" in length
Description: A powerful raptor with a black "helmet" head; long, pointed wings, mostly brown in color.
Did you know? The Peregrine Falcon is the fastest bird in the world. It can reach speeds of up to 200 miles per hour, diving from above to kill its prey. They hunt for prey in the upland, salt marsh and salt pond habitats. **(For more information see Endangered Species: What You Need to Know! p. 2)**

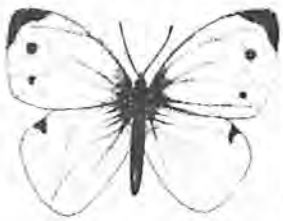
Red-tailed Hawk (*Buteo jamaicensis*)
Diet: Rodents
Size: 22" in length
Description: Broad and fairly rounded wings. Although their plumage is extremely variable most adults have a dark bar on the leading edge of the underwing, contrasting with paler wing linings; they have a reddish under tail.
Did you know? The red-tailed Hawk makes a large platform style nest in a tall tree or along a cliff. They are one of the most common and widespread of the Buteo class. They hunt for prey in the upland and salt marsh.



Song Sparrow (*Melospiza melodia*)
Diet: Seeds and insects
Size: 6 1/4" in length
Description: Long rounded tail, pumped in flight; Broad, grayish eyebrow and broad dark stripe bordering whitish throat; Upperparts usually streaked; Breast is also heavily streaked, with lines converging at a central spot; Legs and feet are pinkish.
Did you know? The song sparrow is widespread throughout the United States and can live in many different types of habitats including, marshes, desert scrubs, and in your own backyard!

Turkey Vulture (*Cathartes aura*)
Diet: Carrion (dead animals) and refuse
Size: 27" in length
Description: Seen from below, two-toned wings (flight feathers dark silver _ grey, linings black). In flight, wings are often held in an upward, shallow "V", seldom flapping, usually rocking from side to side.
Did you know? Evidence suggests that the Turkey Vulture finds its food by sight and scent. They will virtually eat any dead animal down to the size of a tadpole.

Insects



Cabbage White Butterfly (*Artogeia rapae*)
Diet: Plants in the mustard family
Size: 1 5/8" - 2" wingspan
Description: White with black markings; female has two black spots on forewing; male has one black spot.
Did you know? It can be found in all but the most extreme environments. It is ubiquitous!

Dragonfly (*Suborder: anisoptera*)
Diet: other insects
Size: 1" - 3 ½ " in length
Description: Two pairs of multi-veined wings which are usually out-stretched, even in rest; males have three terminal abdominal appendages, and females only have two terminal dorsal appendages.
Did You Know? Dragonflies often fly in tandem, and the male usually carries the female on its appendages. They are seen near ponds and marshes.

Monarch Butterfly (*Danus Plexippus*)
Migratory: In the fall they fly to areas in South America and Mexico, returning north in the spring.
Diet: Milkweed
Size: 4 1/8" - 4 5/8" wing span
Description: Large orange wings with black borders; included in the borders of the upper wings are small white circular markings; wings are attached to its solid black body.
Did You Know? The larva of this species are poisonous to birds and they advertise their presence with yellow, black, and white vertical bands along its body in order to remind predators of the last time they ate its kind they vomited.

Narrow-winged Damselfly (*Suborder: zygoptera*)
Diet: small insects
Size: 1" - 2" in length
Description: Clear slender wings; body is a variety of colors; male is more brightly colored than the female.
Did you know? Damselflies lay their eggs in the water of ponds and marshes. The nymphs develop in the water until their skin splits and the adult fly emerges and flies away.

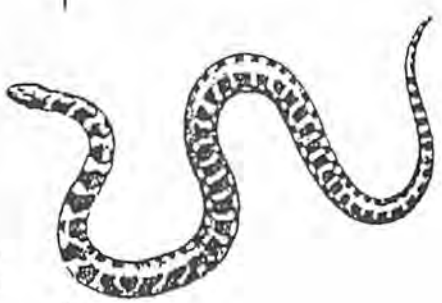
Mammals

Blacktail Jackrabbit (*Lepus californicus*)
Diet: Grasses, nuts, and seeds
Size: 17" - 21" in length
Description: Brown fur with a black colored tail.
Did you know? The Blacktail Jackrabbit has long ears that help keep it cool during the hot weather.

California Ground Squirrel (*Spermophilus citellus*)
Diet: Nuts, seeds, fruit, grasses, some insects, and carrion
Size: 9" - 11" in length (head to tail tip)
Description: Brown fur; long bushy tail; short ears.
Did you know? The California Ground Squirrel lives in burrows that it digs itself. It is found on hillsides and on salt pond levees. It is eaten by owls, hawks, and foxes.

Reptiles

Gopher Snake (*Pituophis melanoleucus*)
Diet: Mice, rats, gophers, squirrels, rabbits and birds
Size: 36" - 100" in length
Description: Yellow or cream in color; brown, black, or reddish-brown markings on its back.
Did you know? The gopher snake is similar in markings and actions of the rattle snake, but it is harmless to humans. They hunt in the upland and in th salt marsh.



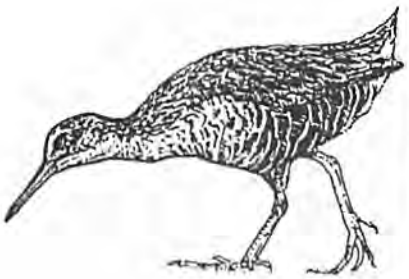
Western Fence Lizard (*Sceloporus occidentalis*)
Diet: Insects and spiders
Size: 2 1/4" - 3 ½ " in length
Description: Black, grey, or brown lizards with blotched patterns; undersides have blue patches on the throat and belly of the male; female lacks throat patches and her belly patches are not as bright as the males.
Did you know? This lizard got its name because it was commonly seen sitting on fence posts.

Salt Marsh, Slough and Mudflat Animals

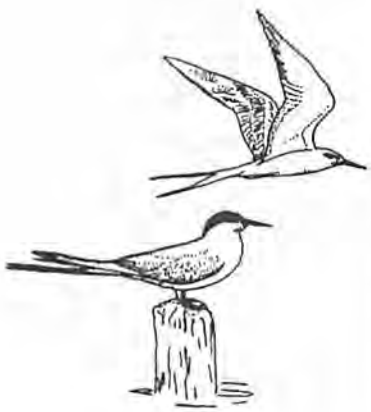
Birds

American Avocet (see salt pond birds)

Black-necked Stilt (see salt pond animals)



California Clapper Rail (*Rallus longirostris obsoletus*)
Federal Status: Endangered
Diet: Crustaceans, insects, frogs, worms, small mammals, and cordgrass
Size: 14" - 16 ½ " in length
Description: Grayish edges on brown back feathers; olive wing tints; gray cheeks; cinnamon undersides.
Did you know? The California Clapper Rail has a very distinctive call that is a series of ten or more dry kek kek kek notes, which accelerate and then slow. They predominantly call at dusk and dawn. They live in the salt marsh and are often found feeding in the mudflats. **(For more information see Endangered Species: What You Need to Know! on p. 2)**



Forster's Tern (*Sterna forseri*)
Migratory: Migrates along the coast of Southern California to South America in the winter season.
Diet: Aquatic invertebrates and insects
Size: 14 ½ " in length and 31" wing span
Description: Grey bird with silvery primaries; black beak with black coloring at tip; orange legs and feet. Long, deeply forked gray tail with white outer edges; black eye patches not joined at nape.
Did you know? Forster's Terns tend to be quarrelsome with birds of other species, sometimes attacking them viscously to protect its nest. They can be seen hovering and diving for fish in the salt ponds and sloughs.

Great Blue Heron (*Ardea herodias*)
Diet: Small vertebrates and aquatic vertebrates (spears fish and flips them upwards, catching them in midair)
Size: 46" in length and 72" wing span
Description: Large, gray-blue heron; black stripe extends above eye; white foreneck is streaked with black; yellow bill.
Did you know? This heron has one of the widest ranges of any North American Heron and is one of the largest wading birds in California. They feed in the salt marsh, slough, and mudflats.

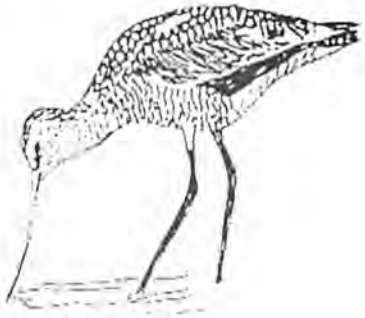
Great Egret (*Casmerodius albus*)
Diet: Small vertebrates and aquatic invertebrates
Size: 39" in length and 51" wing span
Description: Large white heron; heavy yellow bill; blackish legs and feet; breeding adults have long plumes which trail from back and extend beyond the tail.
Did you know? This bird stalks its prey slowly and methodically, and you can often see the great egret hunting in the uplands, salt marsh, mudflats, and sloughs.

Long-billed Curlew (*Numenius americanus*)
Migratory: Migrates south to salt marshes and beaches in South America from its summer home in the northern part of the United States on wet and dry uplands.
Diet: Insects, worms, burrow dwelling crustaceans, and other marine invertebrates
Size: 33" in length
Description: Cinnamon brown above, buff below; very long, strongly downcurved bill; cinnamon buff wing linings.
Did you know? This bird can be recognized by its musical call that mimics an ascending cur-lee sound. They can be found feeding in the mudflats.

Long-billed Dowitcher (*Limnodromus scolopaceus*)
Migratory: Migrates south from the northern part of the west coast beginning in mid July. Juveniles generally migrate in September when strong enough to travel.
Diet: Aquatic insects, mollusks, crustaceans, seeds, and plants
Size: 11" - 12" in length
Description: Winter plumage's, grayish; breeding adult is entirely reddish below; heavily spotted foreneck; both have a whitish rump patch; thin gray or red edges on wings with red tips.
Did you know? These birds have been nicknamed "the sewing machine" because, when they feed, their long beaks probe the mudflats in the same active motion as a sewing machine needle.

Mallard (*Anas platyrhynchos*)
Migratory: Mallards are migratory birds that migrate south from regions as far north as Alaska; however, they are found in locations throughout the United States all year long.
Diet: Aquatic plants and aquatic invertebrates
Size: 23" in length
Description: Dull brown body; white tail; white underwings; bright blue speculum with both sides bordered in white; male can be identified by his metallic green head and neck
Did you know? Mallards are seasonally monogamous, switching mates each year. They nest and raise their young in the salt marsh. They are a "puddle duck" that feeds with its tail in the air and head underwater in the slough.

Marbled Godwit (*Limosa fedoa*)
Migratory: Migrates in the winter from the southern most region of the United States to northern regions of South America. This bird spends its summers in the northern mid-western areas of Canada and the United States.
Diet: Insects, worms, burrowing crustaceans, and other aquatic invertebrates
Size: 18" in length
Description: Tawny-brown colored body marbled with black and other shades of brown; long bicolored bill, usually upcurved; in flight, cinnamon wing linings and cinnamon on primaries are distinctive.
Did you know? In the late summer the Marbled Godwit spends 60% of its time feeding in preparation for its long migration to South America.



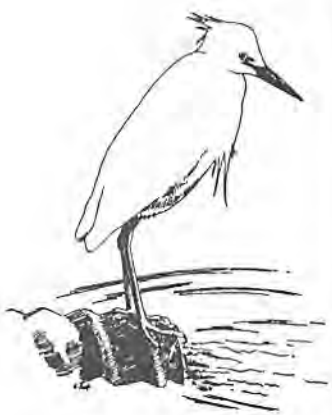
Marsh Wren (*Cistothorus palustris*)
Diet: Aquatic insects and snails
Size: 5" in length
Description: Brown crown, bold white eye line, black triangle on upper back, streaked with white, underparts mostly white.
Did you know? You can hear Marsh Wrens singing their distinctive song day and night, which is a series of loud, rapid, reedy notes, combined with liquid rattles. Call sounds like a lawn sprinkler (whish, whish).

Northern Harrier (see upland birds)

Northern Pintail (*Anas acuta*)
Diet: Aquatic vegetation and phytoplankton
Size: Male is 26" in length, female is 20" in length
Description: The male has a chocolate brown head and white neck with a dark stripe down the back. Black central tail feathers extend to form a "pintail". Female is mottled brown, paler on head and neck.
Did you know? When feeding, this dabbling duck "tips over" for its meal (plant matter) showing off its long tail feathers. They are found feeding in the slough.

Northern Shoveler (*Anas clypeata*)
Diet: Phytoplankton, snails, clams, and aquatic insects
Size: 19" in length
Description: Male has green head, white breast, and brown sides; female is a mottled brown and has a grayish bill tinged with orange on cutting edges; both male and female show blue forewing patch.
Did you know? Northern Shovelers have a spatulate bill that is actually longer than their head! They are found feeding in the sloughs, mudflats, and salt ponds.

Pied-billed Grebe (*Podilymbus podiceps*)
Diet: Aquatic insects, snails, fish and frogs
Size: 13 ½" in length
Description: Small, stalky brown bird with a black ring around its stout whitish bill, black chin and throat, pale belly.
Did you know? Grebes spit up pellets of undigested materials, such as bones, like owls do. They are found feeding in the slough, mudflats, and salt marsh.



Snowy Egret (*Egretta thula*)
Migratory: In the summer, post breeding wanderers reach far north into Oregon, Nebraska, the Great Lakes and Atlantic Canada.
Diet: Fish, insects, and other aquatic organisms
Size: 22"-26" high
Description: White feathers, black bill, black legs with bright yellow feet. Fluffy plumes curve upward from the back of the head and neck.
Did you know? Their yellow feet are commonly called "golden slippers." They are used as lures to attract fish in the slough. They roost and nest in trees, shrubs, and tule.

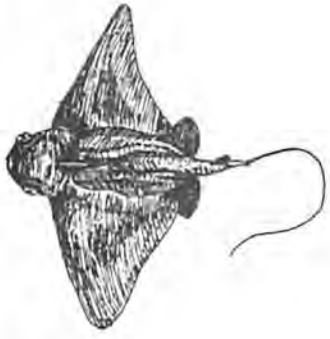
Western Sandpiper (*Calidris mauri*)
Migratory: Migrate throughout the West but winter primarily near the coast.
Diet: Insects and small aquatic life
Size: 6"-7" in length
Description: Black legs, drooped bill at tip. In summer, back and crown are rusty, in fall plumage is gray above.
Did you know? The parent Western Sandpiper will sometimes pretend it has a broken wing, and drag itself away from the nest to distract a predator from its young. They are found in large flocks feeding in the mudflats.

White-tailed Kite (*Elanus Caeruleus*)
Diet: Rodents, large insects, birds, snakes, lizards, and frogs
Size: 16" in length, 42" wing span
Description: Long pointed wings; long tail; white underparts and mostly white tail; black feathered shoulders.
Did you know? This is the only North American kite that hovers over its potential prey while hunting and then dives downward to catch it. They hunt over the salt marsh and uplands.

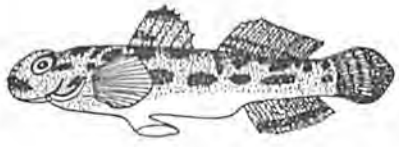
Willet *(Catoptrophorus semipalmatus)*
Migratory: Winters in the southern US to Brazil
Diet: Crustaceans, worms, small mollusks, and insects probed from the sand or mud with the long beak.
Size: 14"-17" tall
Description: In flight striking black and white wing pattern. At rest, when the banded wings cannot be seen, this large wader is non-descript; gray above; legs bluish grey.
Did you know? The Willet's call is derived from its loud ringing call of pill-will-willet.

Fish

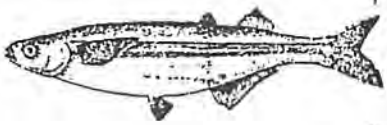
Bat Ray (*Myliobatis caliornica*)
Diet: Snails, abalones, and worms
Size: up to 4' in length
Description: Square head is elevated above wings: color is dark brown to olive or black above, white below; tail is long and whiplike.
Did you know? Female bat rays may live to be 24 years old.



Bay Goby (*Lepidogobius lepidus*)
Diet: Phytoplankton and zooplankton
Size: 6" in length
Description: Tan to olive; brown molting and speckles; snout rounded; large scales.
Did you know? Bay Goby's stay near the bottom of the water near the mud and sand in the slough.



Leopard Shark (see open bay fish)

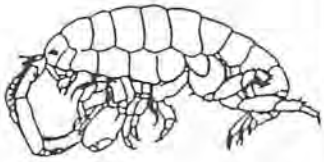


Topsmelt (*Atherinops affinis*)
Diet: Zooplankton and phytoplankton
Size: 14 ½" in length
Description: Green from above, silver from below, with a bright silver side stripe.
Did you know? These fish swim in large schools.

Insects

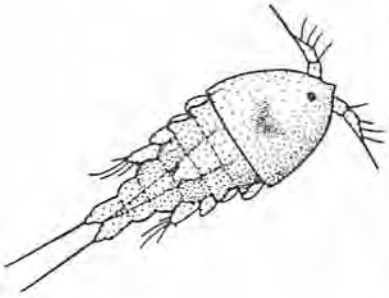
Western Pygmy Blue Butterfly (*Brephidium exilis*)
Diet: Salt bush, tumbleweed, and goosefoot.
Size: 0.2" - 0.3" in length
Description: The pygmy blue has brown wings with a white fringe and blue near its body.
Did you know? This is the smallest butterfly in North America and is often seen around Australian salt bush in the salt marsh.

Invertebrates



Amphipods (*Amphipoda*) © Hedgpeth, p. 81
Diet: Detritus, decomposed plants and animals
Size: microscopic
Description: A crustacean with laterally flattened body; 7 pairs of leg like appendages.
Did you know? In order to protect themselves from predators amphipods are often found hiding in the mud under stones and detritus. They are found in the slough and mud in the salt marsh and mudflats.

Clams (*Lamellibranchia spp.*)
Diet: Phytoplankton
Size: extremely variable in size 0.1" - 3" in length
Description: A neutrally colored flesh-like animal enclosed in a hard protective shell.
Did you know? Clams have two openings in its shell to filter water in order to obtain food. Uses its muscular foot to burrow in the mud.



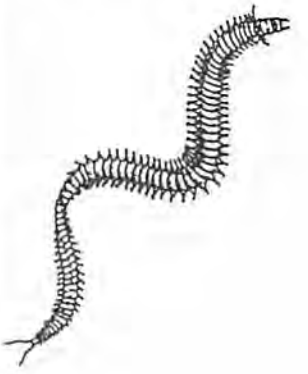
Copepod (*Copepoda*)
Diet: algae, bacteria, and detritus (decomposed plants and animals)
Size: microscopic
Description: Crustacean; elongated body that lacks a carapace; 4 - 6 pairs of legs; females have two laterally located egg sacs near the posterior end of their body.
Did you know? Copepods are food for many larger animals such as fish and birds; thus, they play an active role in the food chain. They are found in shallow waters and mudflats of the slough.

Crabs (*Brachyura*)
Diet: Detritus and plankton
Size: Extremely variable in size 1" and greater
Description: Entire cephalothorax is covered by a carapace or hard shell; it has five pairs of legs; 1st pair of legs are claws; two antennas and solid black eyes.
Did you know? Crabs shed their shells as the grow. They burrow in the mud and feed upon detritus and plankton.

Ghost Shrimp (see open bay invertebrates)

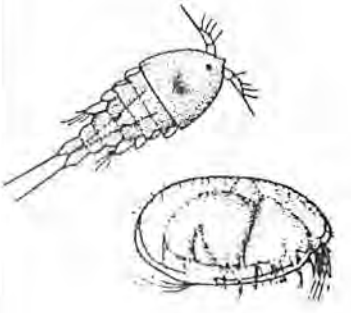
Mussels (*Filibranchia*)
Diet: Detritus and plankton
Size: Up to 3" long
Description: A mollusc (soft body in hard shell) that lacks head and tentacles.
Did you know? Mussels are a bivalve that lives on mudflats attached to rocks and the roots of cordgrass by strong threads excreted by a special gland. They feed and breathe by filtering water through extensible tubes called siphons; a large mussel filters 10 gal (38 liters) of water per day.

Polychaetes (*Polychaeta*) © p. 60
Diet: Mud and sand digesting the organic material and passing the mineral sediments in a long coiled earth wormlike casting.
Size: Up to 9' in length
Description: Segmented worms. All possess an array of bristles on their many leg-like parapodia. The name polychaete, in fact, means "many bristles".
Did you know? Polychaetes are one of the numerous species of worms living in the mud along the side of the slough and on the muddy Bay bottom. They are known by many names: lugworms, clam worms, bristle worms, and feather duster worms. Their multiple names reflect the wide variety of body forms found in this group, unlike the earthworms that have the same general appearance.



Snails (*Gastropod*)
Diet: Diatoms, algae, plant materials, and clams.
Size: Extremely variable in size, 0.1" - 1" in length
Description: Has a single coiled shell and a distinct head and tentacles.
Did you know? Crawls slowly in the mud in shallow water feeding on diatoms scraped off the mud with its tongue.

Zooplankton *(various species)*
Description: Drifting animals primarily amphipods, copepods, ostracods, krill, and jellyfish.
Did you know? Zooplankton can be as small as 0.001" (ostracod) and larger than 6' (certain species of jellyfish).



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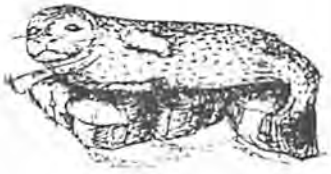
Mammals



Harbor Seal (*Phoca vitulina*)
Diet: Eats one large meal a day consisting of fish, shellfish, and squid.
Size: up to 6' in length, weighing up to 375 lbs.
Description: The rounded, fusiform body is covered by a coat made of thick, short hairs that range from nearly white with dark spots to black or dark brown with white rings. The dorsal surface is usually more densely covered with spots or rings than the ventral surface.
Did you know? Harbor Seals swim through the sloughs hunting for fish and shellfish. They haul out in the salt marsh to give birth and to raise their pups. The largest breeding ground in the south bay is in Mowry Slough. Mowry Slough is closed to boaters from March 15 - June 15 to protect the newborn pups.

Salt Marsh Harvest Mouse (*Reithrodontomys raviventris*)
Federal Status: Endangered
Diet: Pickleweed
Size: 2 1/2"- 3 1/2" long
Description: Upperparts of mouse are a rich brown which contrasts with the lighter-colored fur of its belly. Salt marsh mouse closely resemble the more common western harvest mouse (*R. meglotis*)
Did you know? Endangered species found only in the salt marshes of the Bay. Feeds exclusively on pickleweed. Land development, excessive freshwater discharge from sewage treatment plants, diking, and flooding have altered much of the salt marshes that the salt marsh harvest mouse depends on. **(For more information see Endangered Species: What you Need to Know! on p.2)**

SALT POND ANIMALS

Birds

American Avocet *(Recurvirostra americana)*
Migratory: Common summer resident to open wetlands of Western and North East sections of California; winter in southern San Francisco Bay.
Diet: Tiny crustaceans, insects, and even seeds from water.
Size: 16"-20" in length
Description: A large, slim shorebird with a very slender, upturned bill. The striking white-and-black pattern is unique. In breeding plumage, the head and neck are pinkish tan; in winter this is replaced with pale grey.
Did you know? This is one of the very few birds in the world with a long, upturned bill. They sweep their bill from side to side through shallow water when feeding on invertebrates. They nest on levees and islands in and around salt ponds.

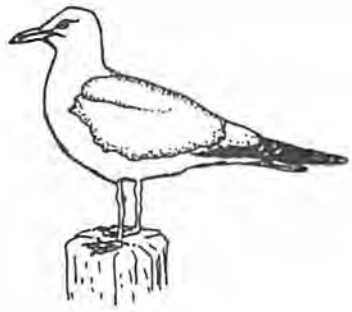
Black Necked Stilt (*Himantopus Mexicanus*)
Migratory: Mostly a summer resident throughout California but also spends winters in south San Francisco Bay.
Diet: Brine flies and shrimp, crayfish, snails, few fish, tadpoles, and some seeds
Size: 14" in length
Description: Male has a glossy black back and bill; white underparts; red or pink legs; female is similar but has a browner back.
Did you know? In hot environments, these birds transport water by soaking their ventral feathers in water and carrying it back to an incubating egg or chick in order to increase the nests humidity. This process is called "Belly Soaking," and in a single day over 100 trips can occur depending on necessity.

California Gull (*Larus californicus*)
Migratory: Spends Summers inland and North of Summer home that is on the coast of Northern California and South.
Diet: Invertebrates and vertebrates, worms, mice, other birds, bird eggs, garbage, crabs, and fish.
Description: Adult has white head; heavily streaked with brown in winter; dark eye; yellow bill with red and black spots; greenish-yellow legs; dark grey wing tips.
Did you know? This gull takes four years to reach maturity. It begins its life with dark brown feathers and tanish-brown beaks and feet. As the gull matures into its second year, its feathers darken and feet are a light pink. By its third year its feathers are grey and brow, its beak is more yellow and feet are grey. By its fourth year it is considered an adult and does not undergo any further change of outward appearances.

Long-billed Dowitcher (see salt marsh, slough, and mudflat birds)

Pied-billed Grebe (see salt marsh, slough, and mudflat birds)

Ring Billed Gull (*Larus Delawensis*)
Migratory: Breeds inland and North in the Summer; moves South and to the coast in the Winter.
Size: 17 ½ " in length and 48" in width
Description: Adult has pale gray mantle; white head with brown speckles (depending on the season); white underparts; yellow bill with black subterminal ring; pale eyes; yellowish legs; black wingtips with a white spot on edges.
Did you know? The ring billed gull is a 3 year gull, who begins its life mostly brown with a black bill, dark eyes, and light brown feet. By its first year it is a combination of black, gray, and brown, with a light brown bill, lighter eyes, and brown legs. By its third year it is considered to maintain adult physical characteristics.



Ruddy Duck (*Oxyura jamaicensis*)
Migratory: Spends summers inland and North of its summer home located in coastal regions from Northern California and South. Although, it may be seen in the San Francisco area all year long.
Diet: Aquatic insect larvae, snails, other invertebrates, and aquatic vegetation
Size: 15" in length
Description: Chunky, thick necked duck with a large head; broad brown bill; long stiff tail feathers; male has white cheeks; female has light brown cheeks with brown single stripe. Both male and female have a brown crown and brown mottled feathers; breeding male has a blue bill, black crown and rusty colored feathers.
Did you know? When alarmed these ducks tend to dive rather than fly. They can be found on salt ponds during the winter.

Western Sandpiper (see salt marsh, slough, and mudflat birds)

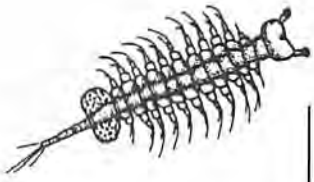
Western Snowy Plover (*Charadrius alexandrinus*)
Federal status: Threatened
Diet: Insects, worms, crustaceans, mollusks, and fish
Size: 6 1/4" in length
Description: Pale tan above; thin dark bill; grayish legs; dark ear patch and white underparts.
Did you know? Female leaves her young in he first 6 days after they hatch with the male who stays with the young for 29 to 47 days. **(For more information see Endangered Species: What You Need to Know! on p. 2.)**

Willet (see salt marsh, slough, and mudflat birds)

Insects

Brine Fly (*Ephydra cinerea*)
Diet: Algae
Size: 1/8" in length
Description: Opaque gray
Did you know? Brine flies are generally considered to be beneficial because they reproduce in great numbers and are excellent food for birds.

Invertebrates



Brine Shrimp (*Artemia salina*)
Diet: Algae
Size: 1/4" - 1/2" in length
Description: Females are distinguishable by a dark egg sac while males have a pair of claspers by their heads.
Did you know? Breathes with gills, located on each of its 22 legs.

Open Bay Animals

Birds

Brown Pelican (*Pelicanus occidentalis*)
Federal Status: Delisted 12/17/09
Diet: Anchovies and other fish
Size: 48" in length and 84" wing span
Description: Stocky bird; Dark Brown body; long flat bill; head whitish in adults with brown on hind neck during breeding season.
Did you know? They catch fish by diving bill first into the water. An endangered species, the Brown Pelican population declined due to DDT and DDE, pesticides that are now banned in the United States.

Double-crested Cormorant (*Phalacrocorax auritus*)
Diet: Feed primarily on fish which they catch by swimming underwater to depths of up to 30 ft.
Size: 27" in length
Description: A large black water bird with an orange-yellow throat pouch. Breeding plumage has tufts of white feathers above and behind eyes.
Did you know? These birds are found feeding in the open Bay and the Pacific Ocean. They are also seen roosting on small islands and wooden posts in the salt pond.

Fish

Leopard Shark (*Triakis semifasciata*)
Diet: A variety of fishes and invertebrates
Size: Up to 7' long
Description: Gray above with black spots and crossbars on back and sides, white below.
Did you know? The Leopard Shark prefers sandy and rock-strewn flat bottoms near rocky reefs.

Northern Anchovy (*Engraulis mordax*)
Diet: Zooplankton and phytoplankton
Size: 7" in length
Description: Blue to greenish coloring above, silvery below. Adult has a silver side stripe.
Did you know? Travels in schools and lives near the shore. It is eaten by other fish, birds, and marine mammals. The Northern Anchovy is the most common species of anchovy in the Pacific Ocean.

Topsmelt (see salt marsh, slough, and mudflat fish)