

# DPR Brown Bag Lunch Series

# Endangered Species and Pesticides

California Endangered Species Protection Project

Jan. 25, 2017, 11:45 a.m.  
Sierra Hearing Room, CalEPA  
1001 I Street, Sacramento



**Guest Speaker:**  
**Polo Moreno**  
A DPR Environmental Scientist, Moreno has worked in the Endangered Species Program since 1989.

**Delta Smelt**  
*(Hypomesus transpacificus)*  
Status - Federal: Threatened State: Threatened



Water diversion for agricultural and urban use has been the single greatest factor in the smelt's decline. Disturbance of its habitat by water diversions and drought has also left the delta smelt vulnerable to introduced species that have taken hold in the delta region. Dozens of introduced species of zooplankton, mollusks and crustaceans are thriving in the absence of their natural

**Delta Smelt**



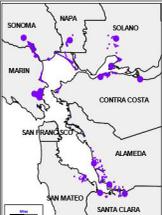
**Salt Marsh Harvest Mouse** (*Reithrodontomys raviventris*)  
Status -- Federal: Endangered ; California: Endangered



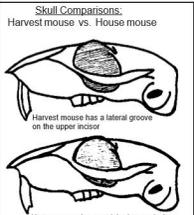
The delta smelt is a small translucent fish. The female is large enough to breed. It spends its entire life in the Sacramento-San Joaquin River Delta. The smelt adapted to the brackish water of the delta. It is entirely dependent on the river for its survival. Only one year, a single

This rodent prefers tidal and diked coastal salt marshes characterized by dense stands of pickleweed (*Salicornia* sp.). Grasslands adjacent to pickleweed marsh are also used, but only when new growth affords suitable cover. Some daily movement of individuals from pickleweed marsh to higher grassland occurs in spring and summer, or otherwise as pickleweed cover affords escape from predators.

**Salt Marsh Harvest Mouse**



**Skull Comparisons:**  
Harvest mouse vs. House mouse



Harvest mouse has a lateral groove on the upper incisor.  
House mouse has a notched upper incisor.

**Behavior**  
Salt Marsh Harvest mice are primarily nocturnal, however, some crepuscular activity has also

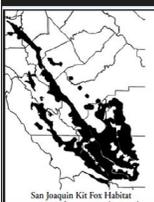
**San Joaquin kit fox** (*Vulpes macrotis mutica*)  
Status - Federal: Endangered; California: Threatened



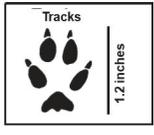
The San Joaquin kit fox is distinguished by its small size (four to six pounds), large ears, long legs, buffy tan color and black-tipped tail. The kit fox primarily lives in the flatlands of California's Central Valley; south of Contra Costa County.

**Biology** - Kit foxes spend most of the day in their soft, sandy burrows and leave hunting for the twilight and nighttime hours. They feed primarily on ground squirrels, kangaroo rats, desert cottontails, mice, insects, carrion and ground-nesting birds. Kit foxes appear to survive without drinking water, an adaptation to desert conditions, --

**San Joaquin kit fox**



**Tracks**



1.2 inches

- obtaining all their water in the form of preformed and metabolic water from their prey.

The foxes are capable of breeding at age one, but may not breed their first year. Reproductive females clean and enlarge natal or pupping dens in September and October. Mating occurs in late December or early January. Litters of three to five are born in late February or early March. During nursing the female is rarely seen hunting, it is thought that the male does most of the hunting. Pups emerge from their den at one month of age, and may already be weaned.

**Characteristics** - The San Joaquin kit fox has a small (20 in.), slender (5 lbs.) body. Its ears are large (3.25 in.). It has a long (12 in.), bushy, black-tipped tail. Its legs are long and slender. The feet are small, with much hair between the pads. The coat is light in color: tan in summer and pale gray in winter.

**Distribution** - Kit foxes were once widely distributed on the valley floor and the adjacent low foothills of the San Joaquin Valley. Today, its range has been reduced (see map) to some regions of the following counties: Alameda, Contra Costa, San Joaquin, Fresno, Kings, Madera, Merced, San Benito, Stanislaus, Tulare, Monterey, Kern, San Luis Obispo, Santa Barbara, and Ventura.

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