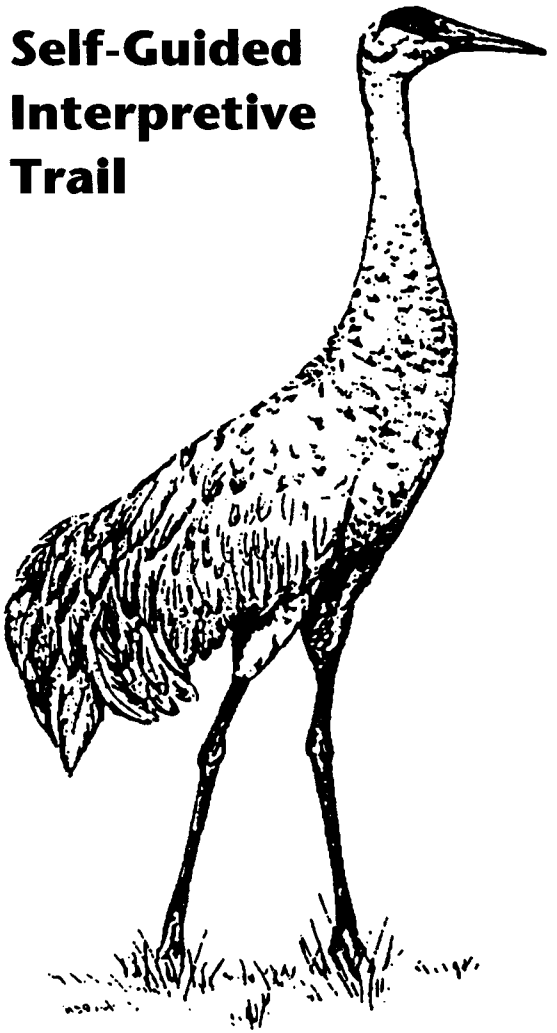
PIXLEY National Wildlife Refuge

Self-Guided Interpretive Trail



Sandhill Crane

INTRODUCTION

Welcome to the Pixley National Wildlife Refuge which is owned by the U.S. Government and managed by the U.S. Fish and Wildlife Service. The refuge was established in 1959 to provide wetland habitat for migratory waterfowl and shorebirds. Since the passage of the Endangered Species Act in 1973, the refuge also provides habitat for the endangered San Joaquin Kit Fox, Blunt-nosed Leopard Lizard, and Tipton Kangaroo Rat.

This pamphlet and 1.5 mile walking trail were developed jointly by the Kern National Wildlife Refuge Complex and the Tulare County Audubon Society. Numbered posts along the trail correspond to information in this pamphlet. Interpretive panels provide additional information.

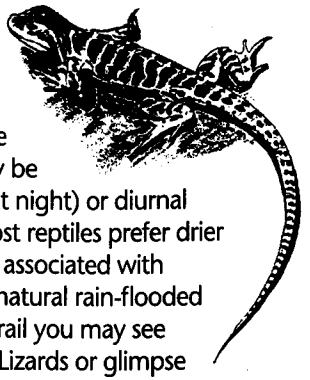
Please stay on the trail and throw litter in the trash can. Smoking is not allowed nor are fires. Contact the Kern/Pixley National Wildlife Refuge (661-725-2767) or the Tulare County Audubon Society (559-686-7390) with comments.

1. NATURAL HISTORY

The Pixley National Wildlife Refuge is located in the Southern San Joaquin Valley along what was once the shoreline of the historic 800,000 acre Tulare Lake. The lake has since disappeared because of the building of dams on the rivers and the diversions of water to agriculture and development. The average rainfall is less than 10 inches per year which classifies the area as a desert.

Much of the native vegetation consisted of bunch grasses on the upland sites. These have been replaced by exotic plants introduced by European settlers in the 19th century. The animal life has also changed. Tule Elk, Pronghorn Antelope and Grizzly and Black Bears once roamed the refuge as well as the entire valley. These animals disappeared entirely as the land was developed for towns, industry and agriculture, leaving only the smaller endangered species and other wildlife which now inhabit the area.

2. REPTILES AND AMPHIBIANS



Reptiles (lizards and snakes) and amphibians (frogs and toads) that are found on the refuge may be either nocturnal (active at night) or diurnal (active at day). While most reptiles prefer drier habitats, amphibians are associated with managed wetlands and natural rain-flooded vernal pools. Along the trail you may see California Side-blotched Lizards or glimpse the speedy Blunt-nosed Leopard Lizard. Harmless California Kingsnakes and Pacific Gopher Snakes may also be seen. Amphibians are more commonly seen during spring rains. You may hear the deep bellow of a bullfrog or the peep of a Pacific Tree Frog during the early morning or late evening which, during the summer, is the best time to see reptiles and amphibians. They are inactive in the winter but may be seen in the warmer part of the day in the spring and fall.

3. RIPARIAN HABITAT

Deer Creek which borders the south, southwest side of the refuge is the only riparian habitat here. Native willow and cottonwood trees and shrubs make use of the seasonal water that flows through Deer Creek. This creates a "greenbelt" of vegetation which benefits a variety of wildlife including rodents and birds. Yellow and Wilson's Warblers, Bullock's Orioles and Blue Grosbeaks appear in the Spring. Yellow-rumped Warblers and White-crowned and Golden-crowned Sparrows are present in the Winter. Hawks and owls are frequent visitors to this riparian habitat.

4. FUTURE WETLANDS

The Central Valley Project Improvement Act will provide for 310 more acres of wetlands beyond this levee. The area will be developed into marsh habitat which will support ducks, shorebirds, cranes and other wetland inhabitants.

5. BIRDS OF PREY

The wide open spaces combined with the wetland, upland and riparian habitats provide important hunting grounds for birds of prey. Red-tailed Hawks fly high, Northern Harriers fly low, and White-tailed Kites hover in search of rabbits, ground squirrels, rodents and birds. American Kestrels frequently perch on wires or posts and an occasional Golden Eagle will appear on the refuge.

The variety of small prey on the refuge provide food for Great Horned Owls, Barn Owls, and Burrowing Owls which are most likely to be seen at dawn or dusk.

6. GRASSLANDS

Grasslands comprise the majority of the land area and are an important part of the ecology of the refuge. Many of the grasses are introduced. They provide habitat for endangered Tipton Kangaroo Rats, San Joaquin Kit Foxes, and Blunt-nosed Leopard Lizards. These grasslands also provide nesting areas for Western Meadowlarks, Killdeer, and Burrowing Owls as well as open spaces for birds of prey to hunt for food.

Cattle are used to graze the grasslands to control non-native grasses, promote native vegetation, provide open habitat and reduce the chance of fire. Vernal pools are found in some low-lying areas, and, during the Spring Equinox, they are ringed with bright golden flowers.

7. ATRIPLEX

Atriplex or saltbush are native shrubs that are common on alkaline and salty soils. These plants grow from 1 to 6 feet tall and may or may not have numerous thorns. Since there are no large animals such as sheep, cattle, deer or antelope that would feed on these shrubs, they are left to grow and

spread. Besides adding some structure to the surrounding grasslands, these shrubs provide an extremely important source of cover and food for quail, small birds, rabbits and a variety of small mammals.

8. ENDANGERED SPECIES

The San Joaquin Kit Fox, the Tipton Kangaroo Rat, and the Blunt-nosed Leopard Lizard are the three Endangered species found on Pixley Refuge. Loss of habitat to agriculture and development is the main reason for their endangered status. The refuge provides managed habitat for their survival. All three live in burrows with the kangaroo rat and the kit fox being nocturnal while the lizard is active during the day. All three will eat insects. The kangaroo rats also eat grasses and seeds and the kit fox eats small rodents and birds. The lizards may be seen sunning themselves on the trail or dry patches of ground. The best chance to see the kangaroo rats and kit foxes is early morning or late evening when there is some light in the sky.

9. BURROWING ANIMALS

A variety of burrowing animals inhabit the refuge including large animals like coyotes and badgers to smaller ground squirrels and kangaroo rats. These animals use burrows to escape predators and the summer heat. The burrows of these ground dwellers not only provide protection, they also furnish habitat for other species such as Burrowing Owls, Blunt-nosed Leopard Lizards and San Joaquin Kit Foxes. Burrows are common along roads, levees and in upland areas on the refuge.

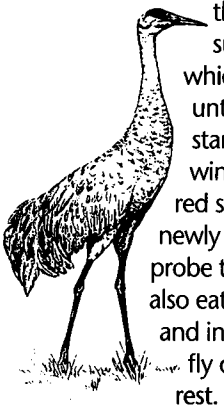
Burrowing animals are important because they turn and mix large quantities of soil, fertilizing it with their waste. They also disperse seeds which help maintain the plant communities in the area.

10. MITIGATION AREA

Approximately 215 acres of the refuge is known as "mitigated land." This land was established to help replace lands lost due to wetland development and may never be modified. This mitigated area is important as it stays as an undisturbed ecosystem full of native plants and animals. It also provides habitat for many upland species such as Coyotes, Burrowing Owls, and Jack Rabbits.

11. SANDHILL CRANES

The overall number of Sandhill Cranes has declined because of the loss of habitat in their range. Thus, the refuge is very important to the survival of the over 4000 Sandhill Cranes which winter here from late September and until mid-March. These magnificent birds stand 3 to 4 feet tall with a 6 to 7 foot wingspan. They have gray plumage with a red skin patch on the head. They feed in newly planted or harvested grain fields and probe the ground for roots and tubers. They also eat seeds, mice, small birds, lizards, frogs, and insects. After feeding in fields, the cranes fly onto the refuge for the night to feed and rest. Their burbling trumpeting can be heard for miles and is truly awe-inspiring as large flocks fly overhead. The best time to see them is in the morning or at dusk as they fly into the refuge.



12. WATER MANAGEMENT

Proper management of water is essential to providing suitable habitat for the wetland dependent species that utilize the refuge. Water is provided both by pumping from wells and delivery of surface water via Deer Creek. Water is moved through the refuge via a system of ditches and pipelines and water levels are controlled by a series of gates and water control structures.

Water is not present in the wetlands all year. The timing of fall flood up and spring draw downs as well as summer irrigations determines the types of food plants and vegetation that are produced. The water levels maintained in fall and winter help determine what species of birds may use the habitat. On average, the water depth is maintained

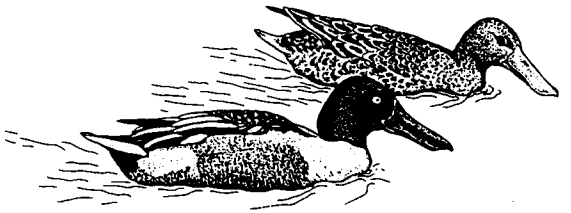
at between 5" and 10" deep which is optimum feeding depth for many duck species. Shallower depths along edges provide feeding areas for shorebirds and wading species.

13. WATER BIRDS

The wetlands and surrounding areas provide feeding and resting habitat for migratory waterfowl and shorebirds. Different types of wetland vegetation and varying water levels provide mudflats and shallow and deeper water for these birds when they arrive in the fall until they depart in the spring. Ducks, including Mallard, Pintail, Wigeon, and Cinnamon and Green-winged Teal are among those that frequent the open water areas as do American Coots.

Mudflats and shallow water areas are favored by shorebirds like Avocets, Black- necked Stilts, Long-billed Dowitchers, and Western Sandpipers. Long-legged birds including Great Blue Herons, Sandhill Cranes and three species of white egrets can be seen on the mudflats and in deeper water, as well as on the levees surrounding the wetlands.

The elevated viewing platform provides an excellent observation point to view many of these birds as well as other wildlife.



CONCLUSION

The management of the Kern/Pixley National Wildlife Refuge Complex and the Tulare County Audubon Society hope you have enjoyed your visit to the Pixley National Wildlife Refuge. This and all other refuges provide much needed habitat for wildlife of all kinds to survive so we may enjoy their presence on earth.