### REFUGE SIGNS AND THEIR MEANING



**REFUGE BOUNDARY** — authorized entry only



**PUBLIC HUNTING AREA** — area behind this sign open to hunting



**NO HUNTING ZONE** — area behind this sign closed to all hunting



**STEEL SHOT ZONE** — steel shot must be used for all hunting

**U.S. FISH and WILDLIFE** Department of the Interior



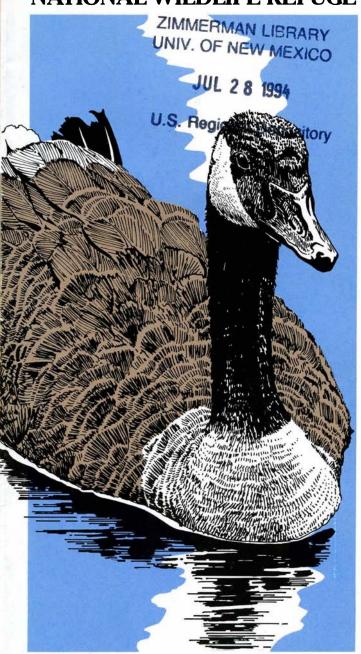




#### June 1994

# 1 49, 44/2: Q 4/2/994 PAM FILE QUIVIRA

#### NATIONAL WILDLIFE REFUGE

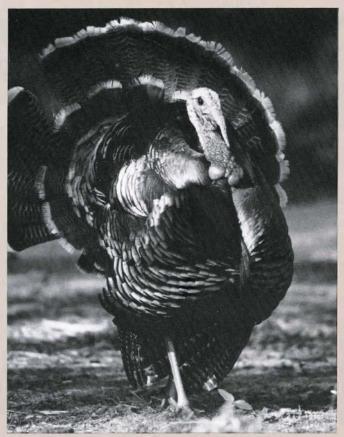


STAFFORD, KANSAS

## A BIRDER'S PARADISE

Located where the relatively lush vegetation of the east blends into the more arid grasslands of the west, the Refuge supports numerous and varied plant communities, which attract birds common to both eastern and western North America. Over 250 species of birds have been observed on the Refuge.

Fall flights of thousands of Canada geese, ducks, and other migratory birds, such as sandhill cranes and shorebirds, pass through the Refuge from September to December. Endangered whooping cranes may make a brief visit as they move along the flyway, and bald and golden eagles winter on the Refuge from November until March. The number of ducks and geese can swell to over 100,000, until severe weather drives



Wild turkey strutting. Photo by Dave Hilley, USFWS



Whitetailed deer in marsh. Photo by Dave Hilley, USFWS

them southward to winter along the Gulf Coast and in Mexico. During March and April, the Refuge becomes a staging area for over 300,000 ducks, geese, American white pelicans, gulls, and other migrants enroute to traditional nesting grounds in the prairie potholes of the north central United States and Canada.

Summer residents include Swainson's hawks and Mississippi kites, while northern harriers, American kestrels, and red-tailed hawks are common throughout the year. Ringnecked pheasants and bobwhite quail often can be seen in Refuge grasslands and in grain fields. Look for wild turkey along the edge of tree groves and shelter belts where they often seek food and cover.

Common nesting species on the Refuge include snowy plovers and American avocets, while black-necked stilt and white-faced ibis nests have been recorded in recent years. In addition, a colony of endangered interior least terns use the salt flats on the north end of the Refuge as nesting habitat.

Birdwatchers can pick up a Refuge bird list containing more detailed information at the Refuge headquarters.

Other wildlife frequently seen on the Refuge include white-tailed deer, black-tailed prairie dogs, beaver, raccoons, badgers, and coyotes.

#### **HISTORY**



Located in south central Kansas, Quivira National Wildlife Refuge (NWR) lies in the transition zone of eastern and western prairies. In 1955, the Migratory Bird Commission approved purchase of land to create Quivira NWR, and, by 1969, the last of the Refuge's 21,820 acres had been purchased. The name "Quivira" comes from an

Indian tribe living in the area when the Spanish explorer, Coronado, visited in 1541. In quest of gold, treasures, and the fabled "Seven Cities of Cibola," Coronado found, instead, fertile grasslands, abundant wildlife, and small agricultural villages of Indians.



## WILDLIFE AND MANAGEMENT



The Refuge is managed primarily to provide migratory waterfowl with food, water, and protection. Other migratory birds, endangered species, and wildlife, such as deer and pheasants, also benefit from habitat management programs. For example, cooperative farming, in which local farmers grow crops on Refuge lands, cultivates nearly

1,200 acres of winter wheat and milo, a portion of which is left in the field for wildlife.

Habitat management programs include a high-intensity, short-duration cattle grazing program and deliberate, well-planned burns to improve grasslands for wildlife nesting and cover. Additionally, 21 miles of canals and numerous water control structures divert water to over 30 wetlands ranging in size from 10 to 1,500 acres and totaling over 5,000 acres of marshlands.

Set aside as an example of the original prairie that met the early settlers, the 362-acre Santana Research Natural Area contains stabilized sand dunes and a century-old grove of cottonwoods planted as part of a homestead requirement.



Sandhill cranes on "Little Salt Marsh." Photo by Dave Hilley, USFWS



Mallards landing. Photo by Dave Hilley, USFWS

For untold years, the ancient Big and Little Salt Marshes have attracted thousands of migrating waterfowl, providing them with food, cover, and a place to rest during exhausting flights between breeding and wintering areas. Indians and early settlers hunted the waterfowl in these marshes, and, shortly after the turn of the century, commercial hunting provided wagonloads of waterfowl to Kansas City restaurants and other eastern points. With the decline of commercial hunting came the establishment of hunting clubs whose acquisition of private lands helped preserve valuable waterfowl habitat from further development. Moreover, these clubs worked to improve the habitat —

among their attempts is the channel permitting Rattlesnake Creek to flow directly into Little Salt Marsh. Additional canals were dug later, providing the entire area with a more dependable water supply. Today, these marshlands remain a major stopover for thousands of migrating birds.