



Giant bird faces giant problems of survival

By Ron Jurek

The California condor, *Gymnogyps californianus*, is North America's largest land bird. Its broad, black and white wings spread nine feet from tip to tip. This giant among birds has for centuries awed people who have watched it soar over its mountain and grassland domain. But the growing pressures of civilization now threaten the condor's existence. In 1983, fewer than 20 condors remained in the wild.

Early explorers found the condor from the Pacific Northwest to northern Baja California. In prehistoric times the species was even more widespread, occurring farther east in Texas, northern Mexico and even Florida. Today, condors exist only in a horseshoe-shaped area of valleys, foothills and mountains bordering the south end of California's Central Valley. The area covers parts of San Luis Obispo, Santa Barbara, Ventura, Los Angeles, Kern and Tulare counties.

The condor is one of seven species of vultures of the New World. Although slightly smaller than the Andean condor of western South America, the California condor is four times as heavy as the common turkey vulture and has almost twice the wingspread.

Weighing 20 pounds or more, the California condor appears ponderous on the ground or when taking flight. But, once airborne, it soars more smoothly and steadily than any other bird that shares its skies. A master glider, it cruises high overhead or rapidly along ridges. Circling upward in thermals or in mountain air currents, the condor gains altitude for its long glides. Alternately circling and gliding, the condor may

travel more than 50 miles in less than an hour with almost no need to flap its wings.

The condor combines keen eyesight with its ability to cruise over vast areas to locate carrion, its only food. The condor cannot kill its prey. Unlike hawks and eagles, condors do not have the strong grasping talons needed to capture live animals.

Dead cattle, deer and sheep now make up most of the condor's diet. More than a century ago, tule elk and pronghorn antelope were major food sources. Condors also formerly fed on beached whales, seals and other animals of California's coast.

The condor's nearly featherless head and neck and its strong beak used for opening and tearing the carcass are adaptations to this carrion-feeding existence.

Unlike more familiar bird species, condors have a low reproduction rate, raising no more than one young a year. The long time required by the parents to hatch and raise a young bird to independence may extend well into the following breeding season, frequently causing the parents to forgo breeding that year.

Condors are monogamous. Once paired, the male and female stay together for life. The female produces only one egg in each nesting attempt. However, if the egg breaks or is eaten by a predator, or if a chick dies, there may be time left in the February through May breeding season for the female to lay a replacement egg. The 4½-inch-long egg is laid on bare ground on a cliff nest and both parents take turns incubating it for two months, until it hatches.

In the next five or so months after hatching, the chick rapidly gains weight, feeding only on the parents' regurgitated carrion. Usually by September or October, the adult-size young condor has left the nest cave but remains around the nest for two or three more months, still dependent on the parents for food. By winter, the juvenile condor has joined the parents in flights to the feeding areas, becoming increasingly independent over the next several months.

The young condor is mostly black. Its gray head will not develop color until the bird approaches adulthood. Its lining of feathers under each wing will develop some white mottling, or will become quite white, but the bold, white wing patch characteristic of the adult will form later. By six years of age, the condor will have developed the pinkish-orange head and the long, triangular, white underwing patches.

The bright red eye and white feet and legs also contrast with the black feathers. Several more years may pass before the adult breeds for the first time. Condors probably live for decades in the wild, as they do in captivity.

No single cause adequately accounts for the decline of the condor population. Contributing factors may be illegal shooting, poisoning, accidents at power lines, disturbances or predation at nest sites, and loss of local food supplies.

In the past, the condor has been a ceremonial and religious symbol of Native Americans; the target of curious, suspicious or malicious persons; and the source of rare eggs for collectors. It is now the object of study and protection by those who want to ensure its survival.

Although protected as a nongame species since 1905, the condor population has declined despite many protective

efforts. Prior to 1950, studies by the U.S. Forest Service, National Audubon Society and the University of California, Berkeley, led to establishment of the Sisquoc and Sespe condor sanctuaries. Studies by several cooperating organizations and government agencies documented a continuing decline in the condor population since 1963.

By 1970, the species had been listed as endangered under both state and federal law. Since then, key habitats have been acquired by governmental agencies and private organizations and nine critical habitat areas have been identified. Agency protection efforts have been guided by the 1975 and 1980 condor recovery plans, developed by an interagency recovery team.

In 1979, the California Department of Fish and Game, U.S. Fish and Wildlife Service, U.S. Forest Service, Bureau of Land Management and Audubon Society signed a cooperative agreement to intensify condor conservation programs. Tied to the agreement, a research center run by the U.S. Fish and Wildlife Service and Audubon Society began in 1980 to implement field activities, such as trapping condors for radio telemetry and captive propagation. The DFG joined in the center's work in 1982. By 1983, the San Diego and Los Angeles zoos were developing a captive population of condors.

Using techniques that have successfully helped other endangered species and attempting to identify and solve the particular problems faced by the condor, many agencies, organizations and individuals are cooperating in the last-ditch effort to save this magnificent bird. #

