

NATURAL RESOURCES

Our Rare and Extinct Animals

Space-age civilization has speeded up an ancient slow process of nature: extinction of a species. Many animals are in grave peril of vanishing forever, including the bald eagle.

See Front Cover

By BARBARA TUFTY

► FOR BILLIONS of years, strange and wondrous creatures have slowly evolved on this planet, lived through their span of lives, and then died—some never to be seen again.

From the first life-sparked protein molecule in the sea, living creatures have evolved from one-celled protozoa to algae and fish, then to lungfish which during the Devonian era gulped a breath of air and pushed themselves onto land. Reptiles, birds, insects, mammals and eventually man have filled this planet with a procession of creatures marvelous indeed in their complex organisms and specialized appendages designed for survival.

Some of earth's early forms of life have survived, even to today, with much the same shape and function they had millions of years ago. The hard-backed tortoise still lumbers between land and sea as it did eons ago; and the slow spiral of the snail has not changed pace since the first dawn of life.

Some animal species have survived the rigors of centuries of living by changing their size or habits, as the horse, which once was tiny as a dog. And some have completely disappeared, leaving only their bones behind to indicate they once lived and moved upon this earth—the dinosaurs, woolly mammoths and more recently, the dodo bird, great auk and passenger pigeon.

Leisurely Creation

For eons, new species were created or became extinct in a slow leisurely manner that Darwin termed natural selection, or the survival of the fittest. It sometimes took thousands of years for a new animal species to be tried out in the workshop of the world. If a species had the right appendages and reactions for maintaining the chemical processes of growth, energy and reproduction, it survived; if not, it expired.

But today, man with his busy mind, hands and technology has upset that slow process. The pattern of life now depends not so much on the survival of the fittest as on the survival of the luckiest.

As civilization expands, and man conquers the earth and looks more to outer space, he builds roads through mountains, cities on the plains, and rocket-launching stations on marshes and deserts. He levels forest lands, drains swamps, pollutes and diverts rivers—constantly changing the wilderness where animals can best live, evicting them to other areas where they cannot survive, or forcing them to change their habits and way of life.

Then too, man's weapons have progressively become far more forceful and overpowering. Where once he used bare hands, clubs, arrows or spears against animals, now he holds precision guns or uses ingenious traps and lethal poisons, dropping death from his safe cowardly compartments of airplanes, cars and jeeps in a ruthless orgy of slaughter.

Taken for Granted

Like sunsets, music and many another thing, animals are often taken for granted. Man's destiny may never be changed by another symphony by Henry Cowell, the splendor of an evening sky, the poignant cry of a loon on a northern lake or a coyote on a prairie—but it can be vastly enriched.

Encased in steel and concrete cities, many jet-aged Americans may ask: "What's the use of a trumpeter swan? a quail? an ivory-beaked woodpecker?" The same senseless questions might be asked of them: "What's the use of a bowling alley? a drive in a car? a television show?" Indeed, what is the "use" of man? Without him, the sun would continue blazing, the earth would turn in its orbit. Another species of animal, perhaps the insect, would take his place of dominance over the world.

Yet man, stupidly perhaps but often deliberately, continues to banish certain species from the earth, disrupting the balance of nature that may in the long run disrupt him.

Many Already Extinct

The passenger pigeons used to be so numerous that they eclipsed the sun for nearly an hour by their flight across the land. These streamlined gentle birds, with iridescent feathers, were shot, trapped, sold, eaten, thrown to the hogs and left to rot in such quantities that now not one remains.

The last of the great auks, which some claimed "swam like a fish, walked like a penguin and flew like a stone," was clubbed to death in 1844. These comic but gracefully swimming birds used to inhabit the rocky coasts of northeastern America in such large numbers that fishermen considered it unnecessary to stock up on food, they were so sure of fresh meat and eggs from the birds.

Other North American animals that have vanished forever include the Merriam elk, the Labrador duck, the Carolina parakeet and that bright-eyed favorite of New England, the heath hen.

Many animals now being threatened with extinction have played vital parts in American history. That old temperamental grizzly bear, *Ursus horribilis*, was once the powerful curse of early hunters and pioneers, and source of many marvelous legends. This largest and fiercest carnivore of the conti-



Fish and Wildlife Service

RAPIDLY DIMINISHING—The tiny kit fox, which lives on the northern Great Plains from Wyoming to southern Canada, is one of many rapidly-diminishing American animals. The kit fox is buffy gray in color and less than a yard long from nose tip to tail.

ment used to growl and grumble through the western half of North America, but now he can be found only in a few wilderness areas of Montana, Wyoming, Idaho and Washington state and in the mountains and foothills of parts of Canada, as well as in that momentary wilderness, Alaska.

Grizzly Protected

Immortalized on the state flag of California, the silver-tipped bear has not been seen in that state since 1922. Where once man had to be protected from the fearless bear, now the grizzly has to be protected from man.

Another American symbol is threatened with extinction—the proud American bald eagle (*Haliaeetus leucocephalus*). It took the early Continental Congress 12 years to decide that this should be its national emblem. Described by Ben Franklin as a “coward, robber, and of bad moral character,” Old Baldy is revered by some as being highly symbolic of the U.S.—strong, swift, majestic, free and native to North America.

Once undisputed king over the skies of the entire United States, this golden-eyed predator is now succumbing to the indignities of poacher guns and chemical pesticides that may be rendering him sterile. Only recently Congress passed a law forbidding shooting of *all* eagles in an effort to save Old Baldy; and recent reports on pesticide deaths are staying the wanton use of these chemicals. Latest count this year shows the bald eagle population less than 5,000, with most of them in Alaska.

Condor Cleans Country

Like the vulture and the burying beetle, the huge California condor keeps the countryside clean by eating flesh off carcasses—he never preys upon live animals. One of the largest soaring land birds in the United States, this creature ranged throughout the continent thousands of years ago until the white man came. An easy target for hunters, the condor was driven westward where he sustained himself for a while on livestock carcasses during the early cattle era.

When cattlemen began devising methods of taking better care of livestock, many a condor starved to death. Disease, poisons, oil and uranium prospecting on private lands, and a sensitive shyness that withdraws him from man's activities have all lessened his ranks drastically. Only about 60 of these prehistoric black birds with naked bright orange heads are now left, confined to a 100-mile region in the mountains and foothills around the southern San Joaquin Valley in California.

Only a Few Left

Many other American animals have been pushed to only a few numbers. The great white heron, the wood duck, the kit fox are only a few on the long list, as well as the bighorn sheep, flamingo, ivory-billed woodpecker, coyote, manatee, walrus, wolf and the musk ox.

Yet as man has power to destroy, so also has he power to save.

Swift positive actions by little known individuals and better known institutions

have combated ignorant and greedy man, saving many wildlife species from extinction—for instance, the trumpeter swan seen on the front cover and the whooping crane.

Largest waterfowl in the world, with an extraordinary beauty of pure white plumage and jet black bill and feet, the trumpeter swan was irresistible to frontiersmen and trappers. By 1900 its resonant trumpeting call was heard no longer, and it was considered extinct. But about 1919 a few surviving pairs were spotted, and a campaign was started to help them survive. A wilderness marsh of some 15,000 acres in southwest Montana was set aside for them and proved a turning point in their survival.

Latest count says there are now 604 in the states west of the Rocky Mountains, with 1,500 more in Alaska and Canada. Early this summer, ornithologists gleefully reported the birth of four new baby chicks in South Dakota—the first hatched east of the Rockies in 80 years.

Save Whooping Crane

The idea of saving the whooping crane has captured the imagination of the whole country. Once numbering more than 2,000, this tallest bird native to North America came close to extinction when its ranks were depleted to 14 in 1938. Many people rose to action: laws were passed forbidding their shooting, and areas were set aside for feeding and resting. A wintering area was created near the Gulf of Mexico, while Canada protected an area near Great Slave Lake for its summer nesting.

Heralded by newspapers, radio and ornithological grapevine, the tiny brave flock takes off each spring from its Texas home and flies a thin, well-guarded route stretching 2,500 miles across the mid-United States to Canada. This fall, many binoculars will be watching its journey south, to see if there are any new fledglings.

First Organized Protection

The first attempt of organized protection in North America was in 1852, when Samuel Merritt of Oakland, Calif., bought a marsh to protect the wild waterfowl. Today it is a thrilling sight to see migratory birds soar across the tops of office buildings and drop to their city lake sanctuary for rest and food, to the delight of Oakland citizens.

Many smaller sanctuaries under private individuals, or under town, county, state or Federal auspices are awakening to the need to save land and animals from the mechanical mesh of civilization, while private societies continue to fight relentlessly against the needless slaughter. Game farms are acquiring and protecting animals already extinct in the wild, and zoos are taking on a new role as living museums, where threatened species can be saved.

The Bronx Zoo in New York is starting a 100-acre breeding farm for rare animals, and the zoos of San Diego and Chicago are doing much the same thing, in an effort to save some of the world's wonderful creatures from vanishing completely from the earth.

• Science News Letter, 84:154 September 7, 1963

REUSABLE



MADE OF ATTRACTIVE COLORED CARDBOARD

FOR
BULLETIN BOARDS,
SIGNS & DISPLAYS

SAVES TIME • NEATER
ECONOMICAL • ORDER BY MAIL

ORDER or REQUISITION NOW!

PLEASE RUSH THE FOLLOWING:

- 1 3/8" lower case in sets of 240 @ \$1.25
- 2" CAPITALS in sets of 180 @ \$1.50
- 3" CAPITALS in sets of 225 @ \$2.25
- 3" Lower case in sets of 230 @ \$2.00
- 3" NUMERALS in sets of 150 @ \$1.50
- 4" CAPITALS in sets of 144 @ \$2.25
- 4" NUMERALS in sets of 100 @ \$1.50
- 6 1/4" CAPITALS in sets of 40 @ \$2.25
- 6 1/4" NUMERALS in sets of 40 @ \$2.00

MARK IN APPROPRIATE BOXES THE NUMBER OF COMPLETE SETS DESIRED. PLEASE ORDER A SEPARATE SET FOR EACH COLOR AND SIZE NEEDED.

COLOR	1 3/8" L.C.	2" Caps	3" Caps	3" L.C.	3" Nos.	4" Caps	4" Nos.	6 1/4" Caps	6 1/4" Nos.
RED									
WHITE									
BLACK									
GREEN									
BLUE									
YELLOW									
GOLD									
SILVER									

FOR CANADIAN ORDERS ADD 10%

- 1" CAPITALS with reusable adhesive backs in sets of 200 letters, numbers and signs, @ \$1.50 set, Heavy Paper.
 - Red White Black
- Stik-Kleen Two-sided plastic reusable adhesive—no damage to walls, at \$1.00 per pack.
- For FREE samples send self-addressed stamped envelope.
- Enclosed is a check or cash for \$.....
- Purchase Order No.
- Send invoice (for responsible institutions only). A 25¢ handling charge will be added to invoices totaling less than \$3.00.
- C.O.D. (\$1.00 deposit required)

Name.....

Address.....

City..... State.....

School Address.....

SATISFACTION GUARANTEED
OR YOUR MONEY BACK

MUTUAL EDUCATION AIDS DEPT. 107
1946 Hillhurst Ave. • Los Angeles 27, California