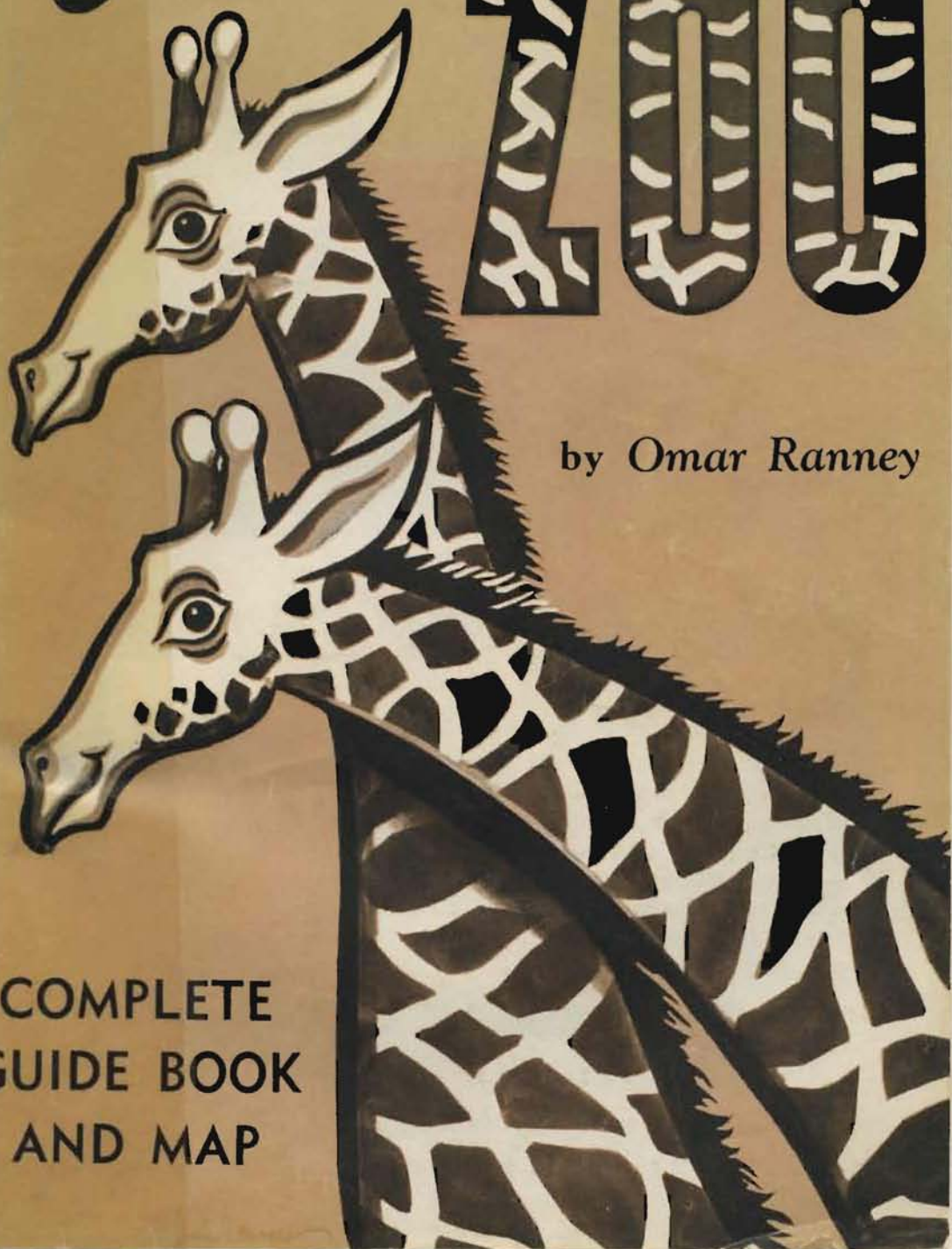


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by Omar Ranney



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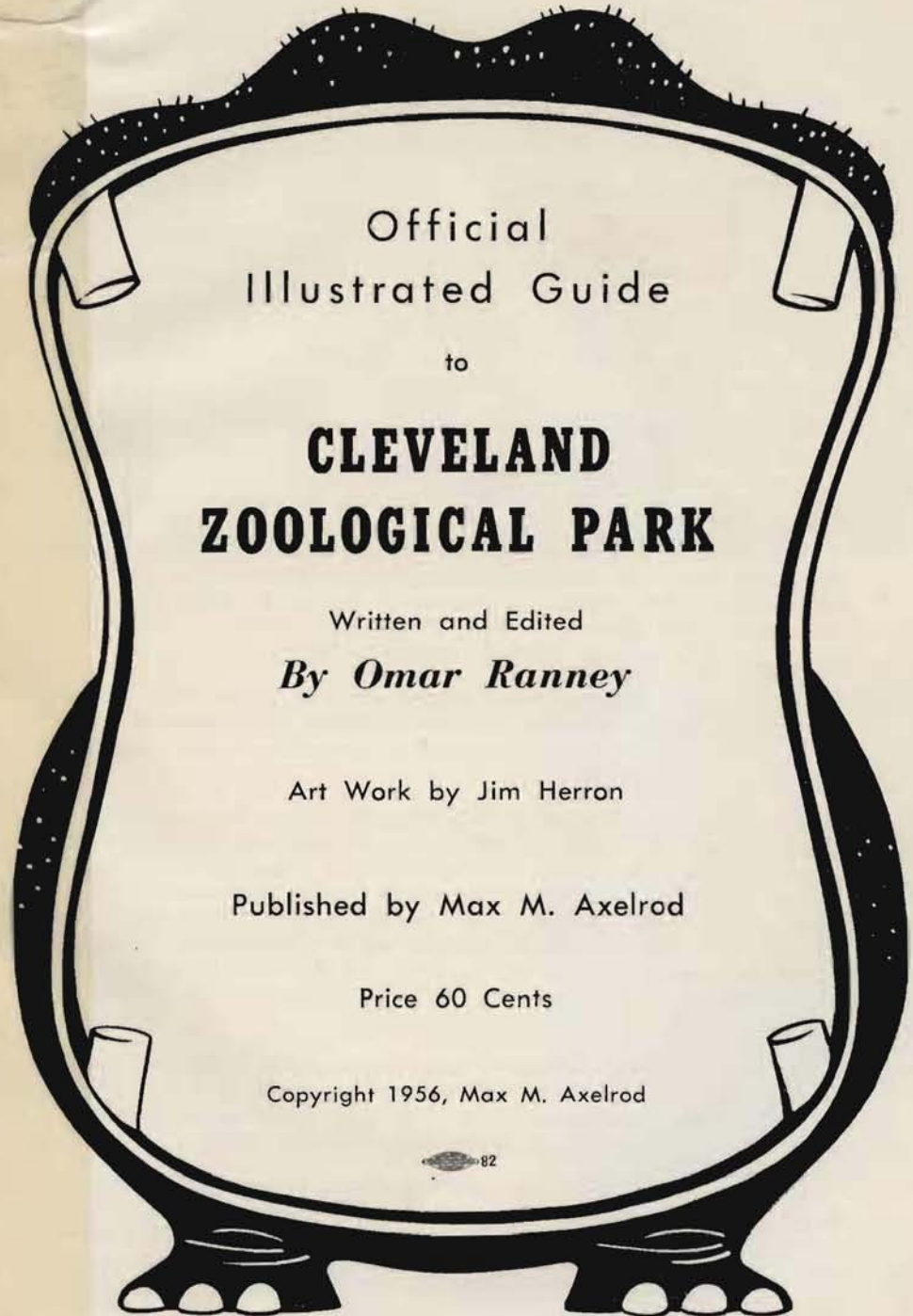
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Official
Illustrated Guide

to

**CLEVELAND
ZOOLOGICAL PARK**

Written and Edited

By Omar Ranney

Art Work by Jim Herron

Published by Max M. Axelrod

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Zoo in Review

By Harold T. Clark

President Emeritus, The Cleveland Museum of Natural History, and Chairman and Treasurer of Board of Control, The Cleveland Zoological Park.

THE PEOPLE of Cleveland have long shown their interest in Natural History. As far back as 1845 there was established The Cleveland Academy of Natural Science, ancestor of The Cleveland Museum of Natural History.

As the City grew and its residents had fewer opportunities to enjoy nature, there developed, during the 1870's, an increasing awareness of the need for Parks. Wade Park, together with a herd of deer, was given to the City by Jephtha H. Wade on September 15, 1882, his wife, Sue W. Wade joining in the deed. This gift marked the founding of The Cleveland Zoo. On October 4, 1885, the Board of Park Commissioners, upon which Board Mr. Wade served from 1875 until his death August 9, 1890, began the erection of a deer barn. Another building primarily for birds, which is still to be seen in Wade Park, was built in 1889.

Because of residential developments around Wade Park and the erection of The Cleveland Museum of Art, which opened on June 4, 1916, the Zoological collections, beginning in 1907, were moved to Brookside Park.

With enlarged collections it soon became evident that successful operation of a Zoological Park requires continuous, scientific guidance. As far back as 1926 efforts were made by important civic groups to have the management of the Zoo entrusted by the City to The Cleveland Museum of Natural History. These efforts, renewed at various times, finally resulted in placing such control in the Museum as of October 1, 1940. A fortunate choice was made in February, 1942, when Fletcher A. Reynolds was secured as Director.

On May 7, 1946, Cleveland voters approved a bond issue of \$1,000,000. This made possible the erection of the Bird Building and other needed improvements. The City wisely supplemented these funds, straightened Big Creek and put it underground.

On November 6, 1952, the voters approved another \$1,000,000 bond issue, from which have come the Pachyderm Building and other improvements. Up to the present time funds needed to operate the Zoo, exclusive of concession receipts and of certain private gifts, have been provided by the City of Cleveland. The

(Continued on Page 91)



MIKE AND IKE, two fugitives from an Orang-utan cage, decide it's more fun to be outside than inside. While a couple of zoo keepers are busy looking for their hats, these two red heads are plotting some further mischief.

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MEET THE DIRECTOR of Cleveland Zoo, Fletcher A. Reynolds, shown here examining a strip of film of the Zoo's East Africa Expedition. This safari brought back animals for the new Pachyderm Building.

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The Animal Kingdom

THE more we see and the more we know of the world of nature around us, the more fascinating does it become. A peaceful-looking meadow on a summer's day is, in reality, teeming with animal life. And even in our own yard, if we submitted it to a close enough inspection, we would find an astonishing number of animal forms, enacting a never-ending drama of butterflies and beetles, birds and bumblebees. How exciting it is, then, even to contemplate broadening that focus to take in all the forests and fields, all the mountain slopes and river valleys of the earth, from the frigid polar region of the North to the steaming jungles of the tropics! Indeed, there is such a myriad of species that even to men of science today there are still unopened doors to discovery in this strange world.

To become even casually acquainted with animal life, it is of course necessary to proceed in some orderly manner. Animals include everything from the microscopic one-celled amoeba on up to highly developed man, and they are classified first of all in two main Divisions—the vertebrates and invertebrates. Vertebrates include all animals that possess a spinal cord. Externally, they differ widely, but be they gorillas or humming birds they have that one common characteristic.

* * * *

VERTEBRATES, in turn, are divided into five Classes — Fishes, Amphibians, Reptiles, Birds and Mammals. From that point they are subdivided into Orders. And under mammals, which we will consider first, we shall look into five Orders—Primates (apes, monkeys and lemurs), Rodents (gnawing animals), Carnivores (the flesh eaters), Ungulates (the hoofed animals), and Marsupials (pouched animals). Beyond the Orders, animals are still further subdivided into Families, Genera and Species.

Mammals are of many forms. Although primarily creatures of the land, there are some—the bats—that fly. Some, too, live in the sea. But they have certain characteristics that set them apart from other vertebrates. Any animal that suckles its young belongs to this Class. Mammals also have hair. While some like the whales, dolphins, elephants and armadillos, have very little, they all possess it at some time during their lives. Mammals, in addition, have two pairs of limbs, and most of them have tails. In all these distinctive features Nature has employed a diversity that is amazingly ingenious, each species possessing some peculiar adaptation that so far has enabled it to survive in a great struggle for existence. These are matters which we shall explore as we take a trip around the animal world in the pages of this book.



PRIMATES

Primates comprise the order of mammals consisting of man, apes, monkeys and lemurs. The word "primate" means "of the first," and is used because this is the highest order in the animal kingdom. Some of the characteristics common to the group are agility in trees, and the fact that both hands and feet are used as grasping organs. Collectively they are considered, next to man, the most highly developed of the mammals.

THE GREAT APES

There are four types of apes—the gorilla, chimpanzee, orang-utan and gibbon. The gorilla is the largest. The orang-utan is the only anthropoid ape with red hair, and the gibbon, of which there are several species, is the smallest and most dexterous.

The Gorilla is the rarest, the largest and most powerful of the man-like apes. The males grow to a height of about six feet and weigh about 500 lbs. Females are somewhat smaller. They lead a nomadic life in their native Africa, traveling in small family parties usually consisting of one grown male, several "wives," and some small males, probably sons and grandsons. They travel on the ground rather than in trees, and usually walk on all fours. At night the male leader sleeps in a sitting position with his back up against a tree trunk, while his charges rest in the lower branches of the trees. Gorillas are usually left-handed and are aloof and indifferent to training. The fact that they are less anxious to please may be responsible for the theory they are less intelligent than the Chimpanzee. The Gorillas at Cleveland Zoo were purchased in the French Cameroons on the 1950 African Expedition.

The Chimpanzee is a regular clown with its sad face, oversized ears and long arms. It is the most popular of the apes because it is the most adaptable and can be trained to wear clothes and do tricks. A born entertainer, the chimp loves an audience, and will stamp its feet, shake the bars of its cage and go into a wild dance if it is in the mood.

Native to Africa, this excitable creature is not safe to handle after about six years of age, when it usually goes savage. Many authorities believe that the chimp, next to man, is the most intelligent of all mammals.

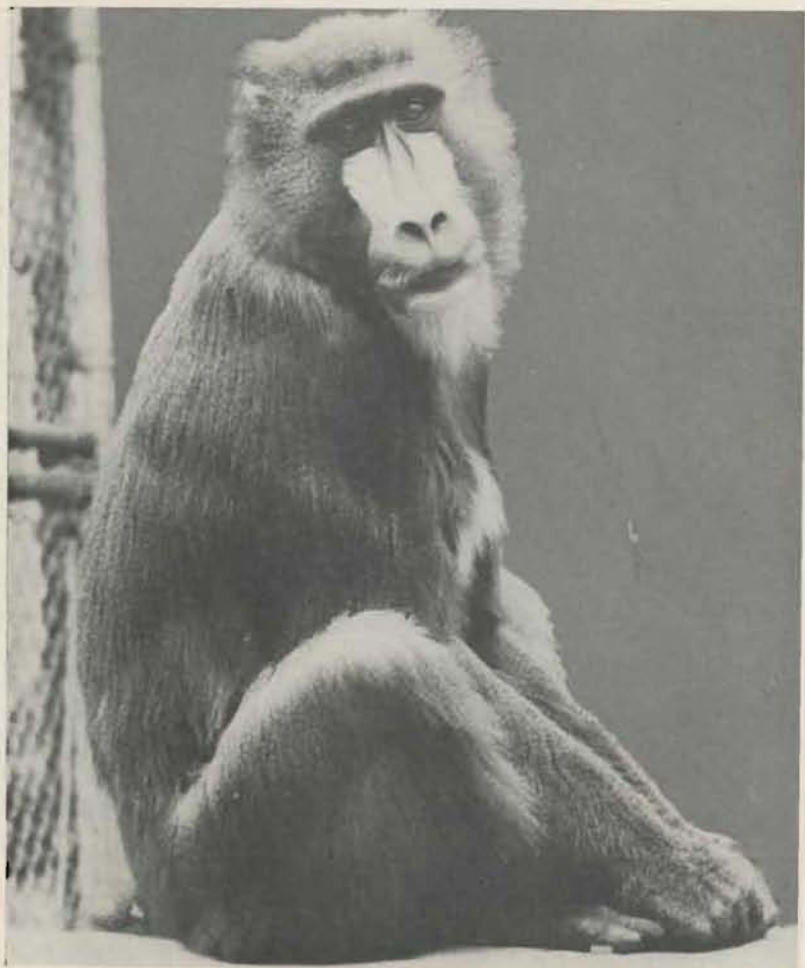
GERT, THE GORILLA, may look like a nightmare to you. But in the jungle tree society she's a doll. With those long, powerful arms of hers she's a natural swing fan.



The Orang-utan in his native Borneo and Sumatra is primarily a tree dweller. His long, strong arms carry him easily through leafy "roads" of his own choosing in his home forests. When tired, he quickly builds a tree platform as a temporary resting place. On the ground, his progress is slow because of short, weak legs and the habit of walking on the sides of his feet. This red head of the ape family has a five-year life span, usually grows to a height of 4 ft. 3 inches and has an arm spread of more than 7 ft.

MONKEYS

Monkeys are divided into two groups—the New World and the Old World. The New World monkeys are found in Central and South America and many of them are equipped with a prehensile tail (one that will grasp and hold on to an object). This is found only in New World monkeys. The Old World monkeys are found in India, Siam, the Malay Peninsula, Dutch East Indies, and Africa. While they all have tails, they cannot swing by them as



PRIMATE PRIMA DONNA is this dignified Mandrill, the most colorful of all the baboons of West Africa. Her nose is a flaming scarlet and her face covered with folds of bright blue.

the New World monkeys do. Many of them have cheek pouches for storing food, a convenience that is not afforded their New World brethren.

Among the members of the Old World group are the following:

The Mandrill is one of the most interesting of all the baboons of West Africa. Its face is covered with folds of bright blue skin and the nose is a flaming scarlet. It is said that the Mandrill's face is the model for the devil masks used by African witch doctors. This grotesque visage, with its pointed beard, is caused by huge upper teeth whose roots force up the cheek bones in such manner as to cause deep ridges. An adult male measures about a yard

from head to buttocks and weighs about 100 pounds. His coat begins with a deep chestnut on the back and shades into a cream color on the stomach. The bare buttocks are bright blue and red and the tail is short. In its native forest the Mandrill travels in small bands of six or more and eats vegetables, fruits and meat. In captivity it is easy to care for when young, but becomes unmanageable when grown.

The Drill, another short-tailed baboon of West Africa, is quite similar to the Mandrill, though not as vividly colored. Its face is black and when full grown it has a bright slash of red on the lower lip. The buttocks of this animal are greenish blue. These baboons do not develop fully until they are about nine years old.

Other Baboons: Dog-faced Baboons are found in various species over a large part of Africa. One of the most interesting is the strong, intelligent, ferocious Gelada.



"Some joke, eh mom?" (Chimpanzee)

The Mangabeys are large, active monkeys of African Forest origin. They were named by a pioneer naturalist of the seventeenth century who mistakenly thought they came from the island of Madagascar and so called them after a district of that island. In their native land they seldom come down from the trees, where they live on fruits and insects and travel around in colonies. They are not so destructive or aggressive as other types of monkeys and make nice pets. Their white eyelids and eyebrows give them a most expressive face. Vocally, they are rather silent, talking in muffled twitterings and guttural grunts. Some of the more interesting types are the Sooty Mangabey, the Grey cheeked Mangabey and the Cherry headed Mangabey.



"HONESTLY, when I see what's outside, laughin' at what's inside, it makes a monkey wonder!" (Sooty Mangabey).

The Vervet or blue monkey from South Africa lives in large bands of about 100 in its native land. There is one boss of the group but his leadership is constantly being challenged and his life is one long fight. These monkeys are very destructive to crops and

seem to delight in first eating their fill and then ruining what they can't consume. The vervet's coat looks more grey-green than blue and it has black hands and feet and a black face covered with hair.

The Mona Monkey is among the most beautiful of the species that live in the African forest. It has a handsome white chest and throat and its body is iron grey with a vivid chestnut stripe running from the middle of the back to the tail.



"What's up, Doc? Any Cavities?"
(Rhesus Monkey).

The White-nosed and Moustached Monkeys both come from West Africa. The white-nosed not only has a white spot on its nose but has a white fringe around its face. Its fur is mostly olive-green and its disposition uncertain.

The Diana Monkey is named after the mythological goddess of the moon because of the suggestion of a crescent on its forehead. It is a colorful creature with its chestnut colored back, orange abdomen and thighs, and a striking strip of white under the chin and across the chest and arms. On its chin is a sharply pointed beard of which it appears extremely proud.

The Green Monkey is one of the most beautiful as to coloring, and its name, of course, is derived from the shade of its fur. Each separate hair is black and yellow, which gives the creature a rich, greenish hue. The under-parts of the body are white, and over the sides of its face is a golden yellow fringe.

The Talapoins are the smallest of the Old World monkeys, so cute that the natives of Africa's French Camercons, where our specimens came from, keep them as pets. Greenish grey in color, they are fond of insects and fruit.

The Rhesus and Pig-tailed Monkeys are probably the best known of the macaques, a genus that is widely distributed throughout India, Borneo and Sumatra. The rhesus is sent to this country in large numbers for use in medical research. The pig-tailed is native to Sumatra, where it is trained to collect cocoanuts. These nimble creatures are light fawn in color, with a dark brown streak on the top of the head and along the back.

The Crab-eating Macaque will actually eat almost anything. Fruits, of course, are always acceptable, but for a luscious dessert, they like nothing better than insects, lizards, crabs and oysters. As

with most other monkeys, the macaque should be captured young, as the older he is, the less useful and worse tempered he becomes.

The Java Monkey, native to Java, has a longer tail than most of the macaques, but its disposition is equally bad. It is not strictly a tree mammal, and spends much of its time on the ground.

The New World group includes the following:

The Spider Monkey's tail is so adept it acts as another hand, and since it is smooth on the under side it clings easily to a tree. Its name is decidedly descriptive, for with its pot-bellied body and arms, legs and tail flailing out in all directions it is spider-like in appearance. It is native to both Central and South America.

The Wooley Monkey is found chiefly in the forests of Brazil and is one of the largest of the American monkeys. Except for its ears, soles of feet, palms of hands and the last third of its tail, it is entirely covered with a thick fur. It was this rather gentle monk that caused Darwin in his "Descent of Man" to ask who could doubt our kinship with the apes.

The Capuchin Monkey is so called because of the way the hair grows on its forehead. The word capuchin means hood or cowl and this little fellow looks as though he's wearing one. They are found all the way from Central America to southern Brazil and their intelligent alertness has made them the business partner of many an organ grinder. There are several kinds of capuchins. Among them are the weeper (thus named because of its mournful cry) and the white throated.

Marmosets are such tiny, appealing creatures, they are often kept as household pets. With a great deal of pampering, they have been known to live 18 years. However, they are extremely delicate, and under ordinary conditions of captivity they usually live only one or two years. When full grown they are only between 8 and 12 inches long (not counting the tail), and the babies measure about three inches. In their homeland of Central and South America, they run about the trees like squirrels, searching for insects and fruit.

THE LEMURS

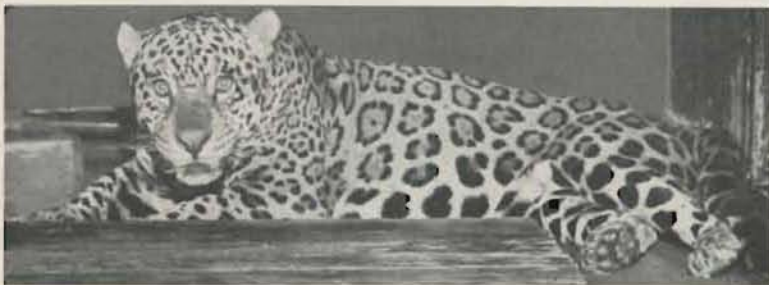
In appearance the lemurs don't seem to fit into the order of Primates at all. They are small and inoffensive and not very intelligent. However, their teeth are similar to those of the other monkeys and they are nearly all tree-dwellers. Most of them are found on the island of Madagascar, and it is significant that no large flesh-eating animals dwell there. The lemurs could never survive against large, active enemies. The word "lemur" means "a night-wondering ghost," and suits these strange creatures with their stealthy, noiseless footsteps and nocturnal habits.



The Carnivora, or flesh-eaters, form a large order of mammals that are specially adapted for capturing other animals and devouring them. Their name doesn't mean that in all cases they eat flesh exclusively, but nevertheless it is a main item in their diet. The order includes the cats, hyenas, dogs and bears, and Cleveland Zoological Park has many specimens of all these groups.

THE CATS

The cat family is widely distributed, being found everywhere in the world except in the polar regions and in the islands of Australasia and Madagascar.



PROTECTIVE PATTERN is the rosette-splashed coat of the Jaguar. This largest of the New World cats is as dangerous as she is beautiful.

As you go through the zoo, note carefully some of the peculiar adaptations which have enabled these cat animals to survive. In bone and muscle they are "streamlined" for agility—for free, graceful motions. Their feet are padded with cushions so they can make a noiseless approach in stalking their prey. They have claws which can be retracted when they walk, and extended when they strike. Their canines are long and curved, for tearing flesh from the bone. Their eyes are adapted for vision either by night or day. And, above all, their characteristics are grace and ferocity.

Tigers are noted for the beauty of their coat, a pattern of dark lines against a tawny-yellow background, which in the wild state makes them almost invisible in the light and shadow of the jungle. Contrary to a popular misconception, there are no tigers in Africa. The greatest number is in Asia, where the Royal Bengal is found, but the largest specimens are in eastern Siberia. Some, too, live on the island of Sumatra. Their ferocity is well known, and there have been many cases of man-eating tigers.



"I AM A ROYAL BENGAL TIGER—a King in my own country. You are my mortal enemy—Man. My muscles are tense—my claws are rigid—as I see you out there. Daring to stand in front of me and stare. My jaws ache as I dream of my revenge—a rush, a spring and I'd have you!"



ARISTOCRATS OF THE ANIMAL KINGDOM are this male lion (above) with his handsome mane and the female whose less spectacular appearance is a protection to her in her natural surroundings. (Photo of the male lion by Andy Kraffert, Cleveland Plain Dealer.)

In captivity, tigers are not as adaptable as their cousins, the lions. Tiger cubs are much more of a rarity. The specimens in Cleveland Zoological Park are Royal Bengals.

The Lion is found in both Africa and Asia. It easily adapts itself to captivity, and cubs are frequently born in the zoo. The young, of which there are from two to five in a litter, are spotted until they are eight or nine months old. Achieving maturity in about three years, a male lion will weigh as much as 400 pounds. His chief characteristic is his mane, giving him a majestic appearance that has gained him the title of "King of Beasts." This honor the lion hardly deserves; the tiger, for one, can often outfight him. The lioness is smaller and has no mane. As a rule the male and female mate for life, and they hunt together, attacking their prey with a swift bound. They are primarily plains animals, hunting the antelope and zebra.



The Leopards are the third largest of the Old World big cats. They are so agile, they hunt from trees, and they are a particularly crafty animal. Their range includes practically all the territory in which the lion and tiger are found. The black leopard, known as the most ill-tempered of all the cats, is simply a black variety of the ordinary spotted form and is rather common in Malaysia. Black leopards may bear spotted cubs, and vice-versa.

Leopards eat small mammals such as wild pigs, baboons and the like, but they have an especial fondness for dogs. Hunters often use dogs for bait, staking them out in a lonely part of the forest while the hunter waits concealed nearby.

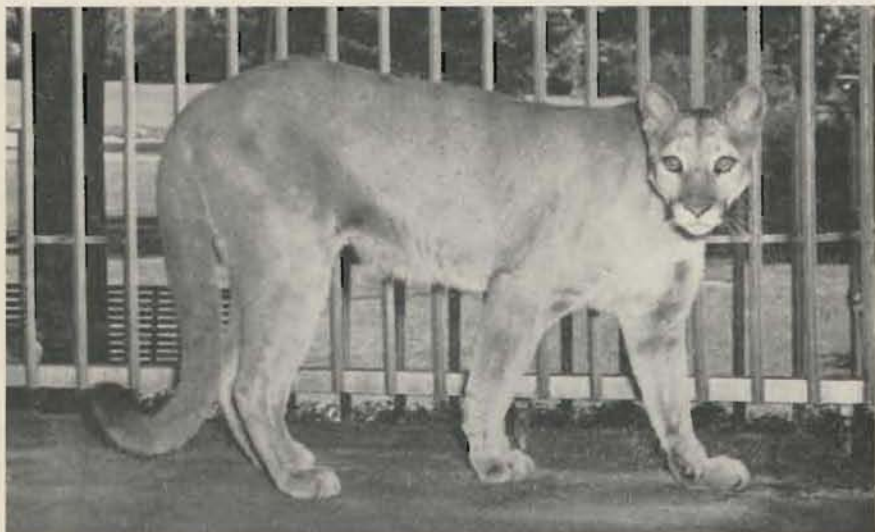
The Cheetah has been a house pet of princes for centuries. It is found on the hot plains of India and Central Africa and is easily trained in captivity. Its long legs and slim, deep body give it wonderful speed, and in India it is often trained as a hunter. It feeds on small antelopes, stealing up on them quietly and then springing with a terrific burst of speed. Although similar in coloring to the Leopard, the Cheetah is different in character and physical detail. It is a ground hunting animal.

The Jaguar, found in Central and South America, is the largest of the New World cats. Its spot patterns are similar to those of the leopard, the difference being that the leopard has just an ordinary spot, while the jaguar has rosettes. The jaguar, too, has a larger body and a much larger head. It is a dangerous animal, and in some parts of the American tropics, man-eating jaguars have been known.

The Ocelot is one of the smaller cats (about four feet long), ranging from Texas to Central and South America. It is both spotted and striped.



"DON'T LOOK NOW, but that Puma in back of me has been carrying on with one of those new lions. It's a scandal!" (Black Leopard).



"DID YOU HEAR what that cat in the next cage said about me? Talk about a green-eyed monster!" (Puma).

The Puma is known also as the mountain lion, panther, cougar, painter, catamount and American lion. Its habitat is the Americas, and it once ranged the greater part of the United States. Today, however, it is seldom found in North America outside the Florida Everglades and the western mountain regions. It is fairly abundant in the American tropics.

Bay Lynx is the mammal most commonly known in America as the wild cat, or bob-cat. It is found in both the United States and Canada. Its fur is of uniform bay color, and its short, bushy tail is a distinguishing feature. They feed chiefly on rodents, and small birds.

BARNUM WAS RIGHT

"Every one in these enlightened days concedes that human nature imperatively demands amusement and recreation. The childish mind, to which all the world is yet fresh and interesting, and the jaded brain of the adult call with equal insistence for 'something new and strange.' Granted the necessity of amusements and the desirability of their being morally clean and healthful and instructive, the provider of such entertainments is a public benefactor."—From *"The Wild Beasts, Birds and Reptiles of the World: The Story of their Capture"* by P. T. Barnum—April, 1888.

THE BEARS

If a popularity contest were conducted in the zoo, the bears certainly would rate well up at the top, for most of them love to perform, and on Sunday afternoons in summer they draw large crowds to the bear dens. The bears form a distinct group of the carnivora, and there is no mistaking any member of this family. While cat animals are built for speed and agility, the bears are built for strength; they are massive, and their motions are deliberate. Their heavy fur is a striking characteristic. The presence of five toes on both the hind and the fore feet is also a distinguishing feature of the group. The claws, unlike those of the cat animals, cannot be retracted.

Bears eat more vegetable food than any other carnivores. In fact their diet is quite variable. In the wild, they will eat honey, roots, berries, and even insects, in addition to what meat they can obtain. As a rule they get along well in captivity and are very adaptable. In the zoo they do not hibernate in winter, although they are less active.

Cleveland Zoo has an unusually fine collection of bears.

The Kodiak Bear is a monstrous, imposing looking fellow, holding the distinction of being the largest meat-eating animal living on land. When full grown, a male will weigh as much as 1,800 pounds, or, by comparison, four times as much as a big, adult lion. Yet, when they are cubs, they are tiny balls of fur. As they grow up they become extremely dangerous, particularly when cornered, and they know only one enemy—man.

The Kodiaks are from Kodiak Island, where they live mainly on salmon. Their time of feasting is during the salmon runs from June to October, when they fatten up preparatory to the winter's hibernation.

American Black Bear is common to practically all wooded North America. It is more widely distributed than any species of bear. A born tree climber, it can scurry up a tree almost as soon as it can walk. In fact the first thing a mother black bear does when she senses danger is to send the young ones a-climbing.

They mate before hibernating. Cubs number one to four in a litter. At birth they are tiny and almost naked, weighing from



IF THE GIANT KODIAK BEAR has a wistful look in his eye, he's probably dreaming of the old fishin' stream on Kodiak Island. He can just imagine himself wading in the cool, clear water scooping up salmon with his agile claws. Oh well, he'll settle for a peanut!





"IT'S NOT COLD after you get in," says Perry the Polar Bear.

eight to 18 ounces. When full grown they weigh as much as 400 pounds.

The Cinnamon Bear is simply a color phase of the Black Bear, and is not, scientifically, a distinct species. The Black Bear has many color shades, and sometimes brown and black cubs are found in the same litter.

Grizzly Bears are known to all of us—at least on the printed pages of fiction—for writers of western stories long have dramatized them as the embodiment of all that is ferocious in big game animals. The grizzly as a rule is not as aggressive a mammal as some of the tall stories would have you believe, although he is very dangerous when brought to bay. It is his massive bulk that has made him a prize catch for the hunters—first, for the Indians, and later for white man's big game hunters. And as a consequence grizzlies today are rarely found outside the Yellowstone, where the government protects them on reservations. An adult male will weigh as much as 800 pounds.

Malayan Sun Bears are the smallest bears of the world. They inhabit the dense forests of Sumatra, Java and Borneo, where they

are almost entirely vegetable feeders. The sun bear has a sleek coat of fine, glossy fur—deep black except for a yellowish white patch on the chest. Their extremely long claws are another characteristic. Although playful looking in captivity, they are dangerous and not to be trusted.

The Brown Bear is found in the mountainous regions of Europe, and its range extends into Asia as far as the Himalayas. It once lived in the British Isles, where bear-baiting was an old-time British sport, the bear being tied to a pole and worried by dogs. The brown bear is a good climber and digger, and it is one of the familiar performing bears.

Himalayan Black Bear is a denizen of the forest regions of the Himalayas. It is distinguished by the white, inverted V which is noticeable on its chest when it stands erect. This Himalayan species has large ears that make it look like an overgrown teddy bear.

Polar Bears have been well equipped by nature for survival in the Arctic regions. The soles of their feet are hairy, enabling them to gain a footing when climbing and running over the icebergs. In the water they are as much at home as on land; they are great swimmers and divers, and in this respect they almost match the seals, which form a main item of a polar bear's diet. They swim only with their forelegs, their broad paws making perfect paddles.

Japanese Black Bear is closely allied to the Himalayan Black Bear, but it is not as large, and the white mark on the throat is less distinct. It is very common in northern Japan, where the natives use it for food and clothing and worship it in their religious festivals.

THE HYENAS

These animals with their loathsome eating habits and cowardly characteristics are offensive. Still, in the thinly populated country from which they come, they have a definite usefulness. They act as scavengers, clearing away decaying carcasses that would otherwise pollute the air, and their massive jaws and specially constructed teeth do the work thoroughly and well.

The Striped Hyena is found in Northern Africa and India. It is a dirty gray in color, and the front part of its body is more developed than the hind part, which accounts for its peculiar slinking gait. This creature is solitary and nocturnal in habit and it never fights unless cornered.

The Spotted Hyena is found further south in Africa and is sometimes called the "Laughing Hyena," because of the hysterical sounds it utters. The Spotted variety hunts in packs.

THE DOG TRIBE

The wild members of the dog tribe hunt in packs, and although individually small, collectively they are as dangerous as the larger animals. Since their claws are fixed, and are therefore not much use in a fight, they always attack with their teeth. Their sense of sight, smell and hearing are highly developed and this fact is the primary factor in their survival.

The Coyote or Prairie Wolf is noted chiefly for the weird barking sounds it emits. It seems to be much enamoured of its own voice and loves to give long concerts in the moonlight. It is found in the northern Mississippi valley westward to the Rockies, and while it does not attack man, it hits the farmer by destroying his poultry and sheep. It does repay him in some degree, however, by destroying insects.

The Gray Wolf, or Timber Wolf, is found in the Great Plains region. When Bison were numerous they followed the herds in order to prey upon the young and feeble. Their hunting habits depend upon circumstances, for they hunt alone, in pairs or in packs, and seem to kill for the love of it. The Gray Wolf mates for life and the females make devoted mothers, never harming their young, and guarding them well.

The Red Fox is known for its resourcefulness and cunning and because of these characteristics fox hunting has become one of the most exciting sports. This fox is found in North America from the Atlantic to the Pacific, and when in prime condition can far outdo any pack. Speed is their greatest weapon, and they have been known to run at the rate of thirty miles per hour. Their large, bushy tail as well as being very beautiful, acts as a blanket in winter, and they sleep with it curled up around them.

The Gray Fox or Tree Fox is very different from its cousin, the Red Fox. Red Foxes seldom climb trees, but when pursued usually hole in the ground. The Gray Fox when pursued climbs a tree to escape and is therefore much more easily taken. This creature is found from New York State to Georgia, west to the Mississippi valley and north to Illinois.

MISCELLANEOUS MEAT EATERS

The Raccoon is one of several small carnivores in the Cleveland Zoo collection. Found in North and Central American woodlands, the raccoon is nocturnal in habit. In the wild state it travels in companies and although not arboreal, trees do form its nesting place and refuge when it is being pursued. The raccoon is often called "little brother of the bear," due to its resemblance in build and the fact that it hibernates during the severest winter weather. One



MODELING the very latest masquerade fashion for the famous Fur Frolic—(a four-footed version of the Mardi Gras) is ravishing Robby Raccoon. Costume and mask by Mother Nature.

aided greatly in its survival. One is the long, flexible tongue with which it searches out insects, honey, fruit, etc., and the other is the prehensile tail with which it holds on tightly to trees and branches. It is extremely active and is nocturnal in habit. One human-like trait is the creature's manner of holding food in one

of its most interesting characteristics is its habit of washing food before eating.

The Coati-Mundi is closely related to the raccoon, and the ringed tail immediately gives you the clue. The coati-mundi is an expert climber. Its agility in the trees and the silent, almost ghost-like manner in which it flits about are its greatest protection. This bright-eyed creature is native to Mexico, Central and South America.

The Kinkajou, or "honey bear," is often sold for a pet, since it is easily tamed and can be very amusing. In the wild state, however, it is very fierce. Two things about the Kinkajou have



CAROL COATI-MUNDI is a natural for the woodland masquerade. An expert climber, she's always in the swing. Carol's outfit by Creature Camouflage.

hand and breaking it up with the other. It comes from Mexico and South America.

The Skunk, commonly called "wood pussy," is one of the most beautiful of all animals. Although quite small, it is entirely fearless, for it has every confidence in its not-so-secret weapon. The powerful fluid it discharges is not only extremely disagreeable, but burns like fire, and in some cases has been known to cause blindness. This essence is from a gland on each side of the base of the tail, and the animal arches the tail high when ready to discharge it, thus escaping contamination. There is one way to render a skunk harmless, and that is to pick it up quickly by the tail and hold it off the ground. This is nervous work, however, and is rarely successful except with the young. The skunk lives in caves or hollow logs, eating insects as well as robbing the farmer of his poultry.

The Civet is found in Africa and Southeast Asia. It is valued chiefly for a thick substance it carries, from which perfume is made. This is found in a pouch close to the animal's tail, and the civets are often confined in small cages and deprived of this secretion periodically. Quick and active in their movements, the civets prey upon birds, frogs and poultry.

The Otter, an aquatic mammal, has a long, slender body with very short legs and webbed hind feet. Like the sea lion, it has to be taught to swim when young, but becomes an excellent swimmer. It is lithe, graceful and very fast in the water, remarkably adapted for aquatic life. The otter is intelligent and playful, and when caught young can easily be domesticated. It is found in temperate Europe, Asia and America.

The American Mink is semi-aquatic and much smaller than the otter. It swims and dives with facility, and is adept at catching fish, but it also feeds on marsh birds and their eggs, and on small mammals. Because of the value of its fur, the mink is now bred extensively in captivity.

SEA LIONS

(*Pinnepedia*)

The Sea Lion. Every visitor to Cleveland Zoo is attracted to our beautiful Sea Lion pool. Indeed you could scarcely escape it, for the Sea Lion is a boisterous character, and his loud barking call can be heard above the surrounding animal sounds. Sea Lions are the Carnivora of the sea—or fin-footed carnivores, and they are found in the Pacific Ocean from the Bering Strait to California and Japan. Zoo visitors usually speak of them as "seals," and that is their family name, for Sea Lions are eared seals as distinguished from true seals. One characteristic of Sea Lions is that they can propel themselves on land and can go quite a distance in their own clumsy fashion. This is because their rear flippers are turned



"HOW ABOUT A FISH, MAC? And this time make it a big one—I'm starved." (Sea Lion).

forwards under their body. In the case of the true seal the hind flippers are directed backwards.

The Sea Lion is an intelligent creature, and it is this species that you see performing in circuses and vaudeville. In the wild state they live in large, noisy family parties, which are always dominated by the largest Bull, or male. Their principal food is fish and squid. Were it not for restrictions, they would soon become extinct, for they are singularly defenseless.

RODENTS



The rodents, or gnawing animals, are found all over the world and comprise almost a third of the mammals. They are small but extremely prolific and in some regions exist in tremendous numbers. Farmers find them a terrible nuisance, for they live on vegetable food and are very hard on growing crops. Their commonest characteristic is their teeth, which are broad, chisel-like incisors, especially adapted to gnawing. Nature has provided a pulpy substance within the animal which nourishes its teeth. Otherwise they would wear away, they are subjected to such hard usage. Rodents generally are quick and alert, and their bright eyes and well developed ears are a great factor in preserving them from their enemies.

Capibara, the largest of the rodents, come from South America and always live near the water. Swimming is their talent and delight, and they manage to look very graceful as they roll and dive in the water. Full grown they are about 4 ft. long and 2 ft.



THE AFRICAN PORCUPINE is all stuck up—one of these creatures that like to keep you on pins and needles. With her, a policy of "Hands Off" is the better part of valor.



"THIS BUILDING BUSINESS has a fellow up a tree all the time," says Billy Beaver.

high and weigh about 140 lbs. In South America they are often kept as house pets.

The Beaver is the largest of the American rodents, weighing up to fifty pounds. Squat and broad, with coarse fur, its most specialized characteristics are its large, chisel-like incisor teeth with which it cuts down trees, and its flat, oval-shaped tail, which it uses as a rudder when swimming and slaps on the water or the ground to warn of danger. Its engineering skill in building dams of mud, sticks and logs often seems to go beyond mere instinct. The dammed up waters of a stream serve to protect the beaver's home by covering the entrances, both when it is burrowed out in the bank and when it is built of mud and sticks in the middle of the pond. The pond also serves as a storage place for green branches, the bark of which is used for food. Beavers apparently mate for life. They are shy and of nocturnal habit.

Porcupine means "spiked pig," and the expression describes very well this nocturnal creature whose quills are terrifying to all animals. Many people still believe that a porcupine shoots its quills, but this is not true. The quills are actually modified hairs with barbed ends which are so loosely attached to the skin they adhere to anyone coming in contact with them. Leopards and tigers have been known to die after a bout with a porcupine, for the quills burrow deep into their jaws and mouth and prevent them from getting food. Porcupines live in burrows and come out in the evening in search of roots, bark and fruit. We have three species at Cleveland Zoo, the Asiatic, African and brush-tailed.

Coypu, or Nutria, are native to South America and are much sought after for their valuable fur. The coypu in general resemble the beaver although their tails are like the common rat. They are



THERE'S ONE IN EVERY CROWD. (Nutria).

aquatic in habit and spend a lot of their time playing and swimming around in the water. Like other rodents they are fond of grain, and an ear of corn to them is like strawberry short-cake to you.

Guinea Pigs come from South America and are considered good pets for children, for they are clean and never bite those who are caring for them. A favorite joke of animal lovers is to tell the uninitiated that if they pick a guinea pig up by the tail its eyes will fall out. Of course the creatures have no tail at all. They are especially noted for their fertility, since they begin to breed when ten months old and can have young every couple of months. A litter usually consists of two to four.

The Agoutis are active, nocturnal animals living in the South and Central American jungles, where natives smoke them out of their hollow log lairs and use them for food.

The Squirrels are such friendly creatures they might easily become pests if unrestricted. Bird lovers call one strike against them because they rob the nests, but they are frisky and their bushy tails and soft fur make them attractive to watch. At Cleveland Zoological Park we have three varieties—the Mexican black, the gray and the fox squirrel. They do not hibernate but scamper around all winter, seeming to enjoy the snow and cold. Of the three kinds mentioned, the fox squirrel is the largest and laziest and also the most hardy. The gray is more nimble and is a hard worker and early riser.

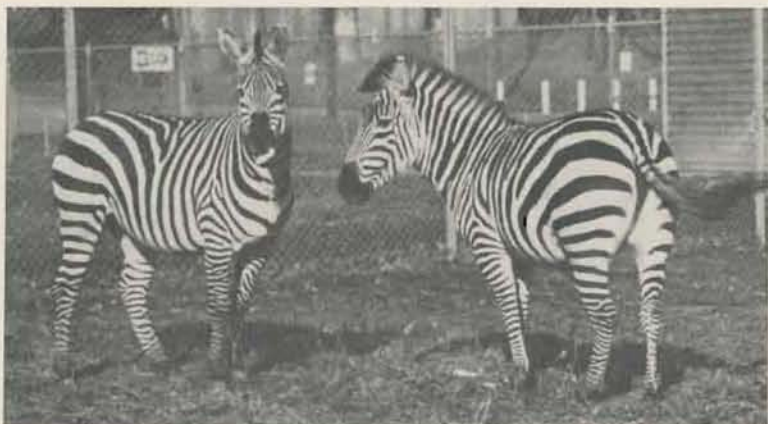
The Woodchuck is the woodland weather prophet, for his other name is the groundhog, and whether or not he sees his shadow is a matter of great concern. He is honored by being the only animal who has a place on the calendar. (Groundhog Day—February 2nd). In habit, he is a lazy creature whose only exercise is in outdistancing the farmyard dog. His main talents lie in the way he plans his den, for though not as good an engineer as the beaver, he pays special attention to drainage and builds in many escape tunnels to help him outwit his enemies, the fox, mink and skunk.

Prairie Dogs are very familiar animals to those who have visited the western plains. They are about fourteen inches long and are quite socially minded, living in large colonies. They live in burrows in the ground, and one amusing trait is their habit of sitting upright on their "door-step" uttering a sort of bark in defiance to any approaching danger.

The Golden Hamster is well known in many parts of Northern Europe and although less than a foot in length, it is every inch a fighter. Anything that threatens it, regardless of size, is fought with unreasoning desperation. The creatures fight constantly among themselves. The burrow of the hamster is a complicated series of passages which it uses as store rooms for stolen grain.

SCHOOL KIDS VIEW THE ZOO

*What did I see at our Cleveland Zoo?
The peacock's feathers of brilliant blue.
The waddling penguins who swim so slick
The monkeys each with a different trick.
The cheetah who runs the fastest race,
The baby leopard's innocent face.
The sea lion's dive so smooth and clear
The gentle ways of the fallow deer.
The ostrich egg that's so strange and big,
The yak who grunts like a giant pig.
The hummingbird with its backward flight
The sloth who sleeps all the day and night.
The elephant who keeps munching hay
The flat-tailed beaver who builds all day.
The snake's old coat, the gorilla's glare,
The African parrot's beady stare.
All of these wonders and more I see—
I look at them and they look at me.*



ZEBRA MATES. A Zoological Rhapsody in Black and White.

HOOFFED ANIMALS

Down through the ages, man has come to depend more closely on the hoofed animals than on any other order, for in this group are just about all the domesticated animals on which we depend for food, as well as our beasts of burden. The order is known as the ungulates, a term which is from the Latin word, ungula, meaning a nail, claw or hoof. Its members include the sheep, swine, oxen, antelope, deer, camels and horses—and these, in the terms of our civilization, mean wool for clothing; milk, beef, lamb and pork for food; leather for countless products; camels for desert transportation, horses for riding the ranges, working the farm-lands, pulling the carts and wagons that have built our modern empires.

The group, because of structural differences, has been divided into two sub-orders—the odd-toed and the even-toed ungulates. The odd-toed include not only the rhinoceros, which has three toes on each foot, but the horse, whose hoofs are really single toes specialized for running.

THE ODD TOED

Zebras are members of the horse family. Nature has arrayed them in black stripes on a creamy white background, a pattern

that from a distance serves as a natural camouflage. No two of these patterns, incidentally, are exactly the same. In Africa, their only habitat, they roam the plains in herds, often keeping company with such antelopes as the wildebeest and the gazelles. Like most of the ungulates, they are vegetable feeders. Many attempts have been made to domesticate them, without any great success. Zebras are obstinate creatures, and are mean fighters when aroused, using both the hind and fore legs, as well as their teeth, as weapons. There are several types of zebras.

Tapirs once had a world-wide distribution, but today they are found only in Malay and in South and Central America. They are massively built animals, with short, stout legs, and an elongated muzzle that looks like the beginning of a trunk. Natives call the Malayan tapir the "kuda ayer," which means "river horse." They are very good swimmers. When the young are born they are covered with stripes, looking not at all like the parent as far as color scheme is concerned. These baby stripes give the young an extra measure of protective coloration and aid in their survival.

The Rhinoceros is found in both India and Africa, and in the latter country there are two species—the black and the white. Our Rhinos are from East Africa and are the black variety. Actually all three types of Rhinoceroses are a dark khaki color. The so-called White Rhinoceros has maintained a separate existence in spite of similar habits, color and habitat. The Black, African Rhinoceros differs from the Indian in that it has a longer, more slender body, does



MR. AND MRS. RHINO are now at home in their formal, beautifully decorated quarters at Cleveland Zoo. Dinner for them is always a black tie affair. None of this casual modern living for them—they believe in keeping up traditions.

not have the double folds of skin on the shoulders and rump, has two horns instead of one, and possesses a hooked lip.

The Rhino's horn is a mass of fine, textured hair set on a cellular base, and is considered an insignia of royalty among the Kaffirs of South Africa. There has been a great destruction of Rhinoceroses to get their horns, which are sold in China for medicinal purposes. Their average life span is 15 years.

EVEN TOED

One of the oddest adaptations in the animal world is the provision made in some mammals for swallowing food and



"I SAID IT AND I'M GLAD. Want to make something of it?" (Indian Water Buffalo).

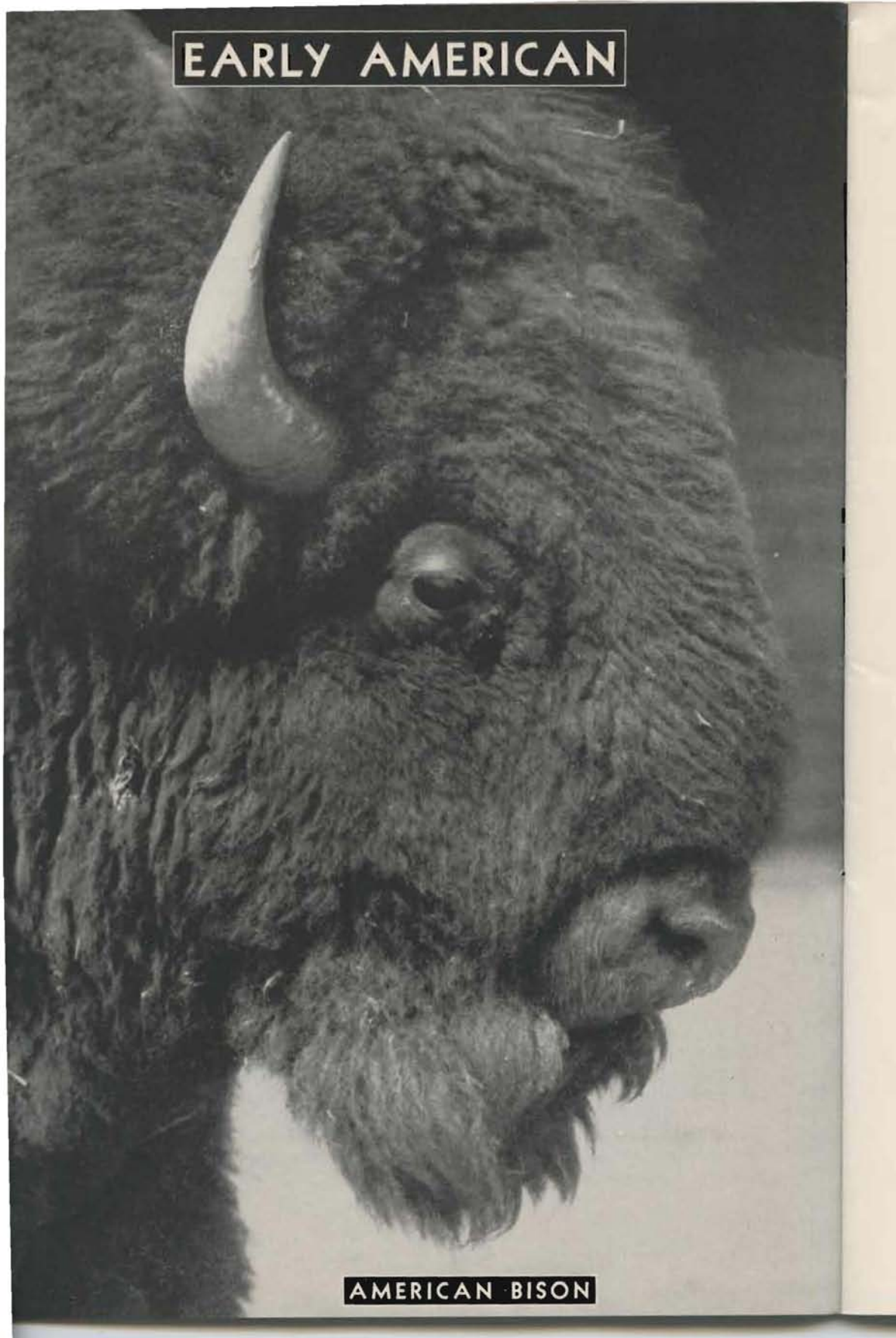


THE YAK has an uncertain disposition and plenty of power to back him up if an argument develops. He's very suspicious if someone approaches him from the rear. Maybe it's because his tail is so much in demand in China and India, where it is used for decorations and for fly swatters. Here, he can be sure he is the only one who will ever use it to swat flies.

storing it in a special receptacle in the stomach, from which it can be returned to the mouth and chewed at leisure. We call these mammals ruminants, or cud-chewers, and we are most familiar with them in our ordinary barnyard cows, goats and sheep.

The ruminants make up the largest number of even-toed hoofed animals, although there are also *non-ruminants* (like the peccaries and hippopotami) in the group.

EARLY AMERICAN



AMERICAN BISON

HOLLOW-HORNED RUMINANTS

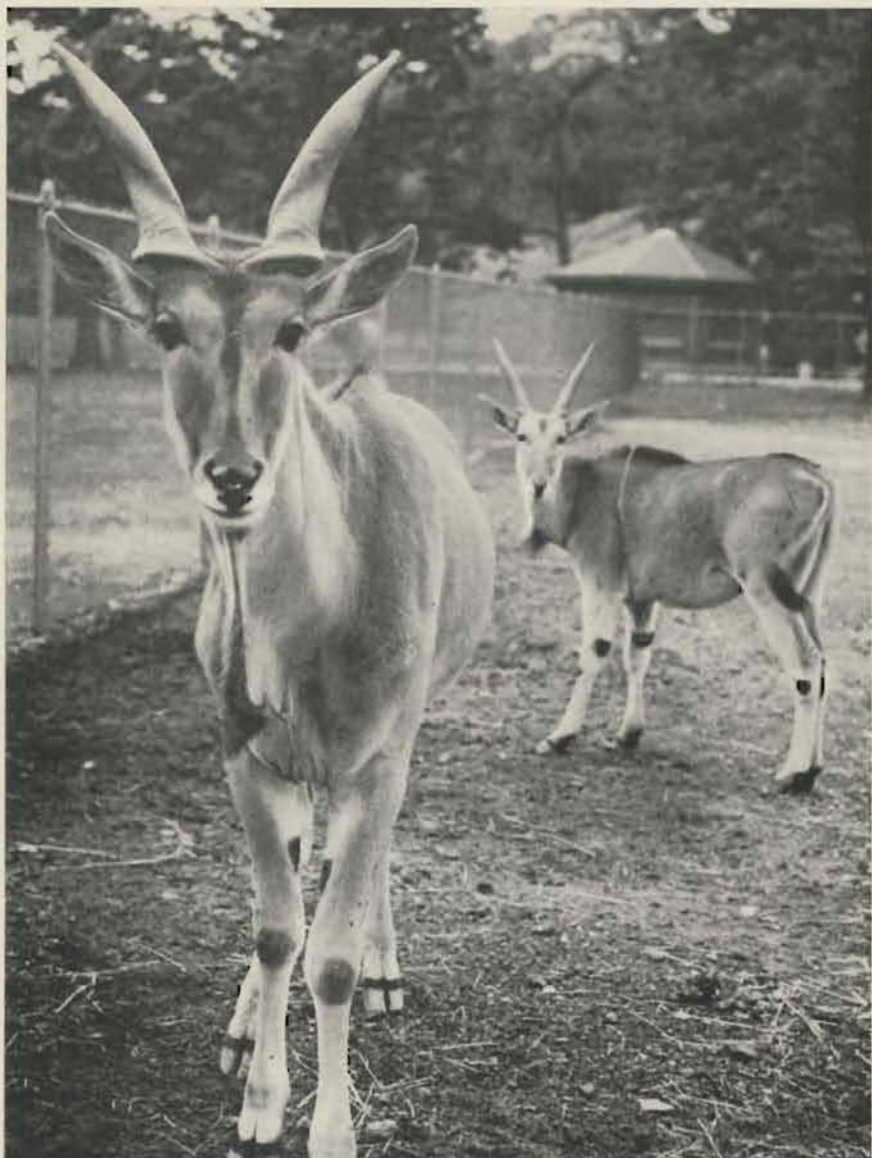
Many of the cud-chewers have horns which grow from bony lumps in the forehead. These horns are hollow at the base. They persist through adult life and are never shed.

Indian Water Buffalo: The horns of this animal are characteristic of the buffaloes; they are flattened at the base in such a fashion they can serve as battering rams. In India and Ceylon, these animals (also called the Arnee) are both wild and domesticated, and in the wild state they often are very ferocious. They are such powerful fighters that native Hindoo princes pit them against tigers, and the fast charging buffaloes, with their long, curving horns, are frequently more than a match for the tigers. In the wild, these buffaloes prefer wet, marshy localities.

The Yak is domesticated and also is found running wild in Tibet and China, where its long, silky hair (usually black) protects it from a rigorous climate. It is sometimes called the Grunting Ox, because its voice is only a grunt. The tail of the Yak is much in demand. The Chinese dye Yak tails red and use them as decorations. In some parts of the Orient the tails are used for religious signs in ceremonies, and in India they are mounted in silver handles and employed as fly swatters.

American Bison are found today only on reservations or in captivity, so they no longer can be considered truly wild. Once they roamed the western plains in such vast numbers that as recently as 1871 the scientist Lydekker estimated a single herd on the Arkansas river as numbering 4,000,000. With its massive frame, and its shaggy coat, the bison was ideally suited to its environment. But, slaughtered by hunters and overrun by the tide of westward expansion, this wild oxen nearly became extinct. Enough of them were saved, however, to reestablish some herds on Government reservations, where they now prosper under man's protection. Although frequently called the Buffalo, the American bison is not a true Buffalo.

The Antelopes, too, are horned ruminants. They comprise a large family, numbering about 100 species in all. This group provides a particularly interesting example of how physical characteristics are developed to allow certain animals to survive in nature's struggle for existence. Speed is the antelope's chief defense against enemies, and for this he has been equipped with a light body and slender limbs, supplemented by unusually keen senses of sight, hearing and smell. With their fleet-footedness and their long, erect horns, they are among the most graceful creatures in the animal kingdom. A great many antelopes are found in Africa, where they live on the plains.



AMONG THE ANIMAL ELITE are the graceful Elands. They seem to enjoy being in the spotlight and posture prettily like the good actors they are.

The Eland, the largest of the true antelopes, is found in sparsely settled districts of South and East Africa, where it travels in herds often numbering between 50 and 100. An imposing looking animal, the bull eland will stand six feet at the withers and weigh around 1,200 pounds. It differs from cattle in having horns

spirally twisted, like a gimlet. In Africa it is considered good eating, except in the dry season. Elands in captivity are generally docile and are good breeders.

The Nilgai is the largest of the Indian antelopes and comes from the Ganges in the northern part of that country. The name means "Blue Bull," which is a good description of the male, but the cow and calf are brown. These antelopes are easy to keep and friendly, despite their angry look.

The Wildebeest, or Gnu, is an antelope of such fantastic appearance that it once was exhibited in American circuses, carnivals and side shows as "the horned horse." In fact the animal looks like a strange combination of horse, bull and antelope. It has a heavy mane, and long, shaggy hair from the chin to the forelegs; this, together with a pair of horns that curve downward and then upward, gives the animal a ferocious look that helps account for the name, wildebeest. The name also is derived from the fact that in the wild the bulls often will prance about and pursue each other in circles when approached by hunters, finally drawing together as a herd and galloping off. It usually is found in the company of the zebra and hartebeest.

The wildebeest is a treacherous animal, and is capable of a fast, lightning-like charge that can come so unexpectedly its keepers in the zoo have to be extremely cautious. There are two species—the blue wildebeest, or brindled gnu, from East Africa, and the black wildebeest or white-tailed gnu, which is now almost extinct.

The Black-Buck, or Indian antelope, comes from central and north-western India. It is so named because the adult male has a black coat. One of the smaller antelopes, the black-buck stands about two and a half feet high.

The Sitatunga is one of the most aquatic of all the Antelopes. In the heat of day they love to find a cool lagoon in their native Africa and go wading. They travel in large herds and feed on grass and young reeds.

The Giraffe, of which there are several species, is best described by its Arabic name "Zurnapa"—the beautiful. In its native East or South Africa, this graceful creature lives in small herds in the thorn scrub of the plains—browsing on Acacia trees and thorn bushes. The average height of a giraffe is 14 feet, although the largest grow to be 18 feet. Their long legs pose a problem when they drink or lie down. To solve it, they stand with feet wide apart to drink, and when ready to sleep, fall down first on their front knees and then the back, after which they roll over on their side. They have a single calf and live about 10 years.



THREE'S COMPANY in this Giraffe family. Upon their arrival they were immediately appointed Editors-in-chief of the Zoo Grapevine. Their colleagues pointed out that they are in a better position than anyone else to know what's going on. For some inside information on how they got to Cleveland Zoo see Pages 48 and 49.

* * *

Wild Sheep belong to still another family of even-toed ungulates. All rams are horned, but not all ewes have horns. The coat of the wild species has short hair, with only a slight layer of wool underneath. In the domesticated sheep, this hair disappears (through care and selection in breeding), and the wool becomes a thick fleece.

In the Zoo there are several of these wild sheep—the Marco Polo's Argalis (the only ones exhibited in any zoological park in the world, with the possible exception of Moscow); the Siberian Argalis (spirited out of Russia through East Germany); the Mouflon, a heavily-horned species from Corsica and Sardinia, reputed to be the ancestor of our domesticated sheep, and the Aoudad or Barbary Wild Sheep, which is the only wild sheep of Africa. The Aoudad is native to the northern part of Africa, where it lives in greatly diminished numbers in the arid slopes of the Atlas mountains.

Wild Goats differ from Wild Sheep. The sheep have small glands between the hoofs of their feet, and the goats do not have these. Goats are also recognizable by a very strong odor and generally have a beard on the chin.

Wild Goats are represented in our collection by the Tahr and the Nubian Ibex. The Tahr is a beardless, agile, shabby-maned fellow who comes from the forested regions of the Himalayas. The Nubian Ibex is found in the Red Sea hills and the coastal mountains of northern Africa. He has a long beard and beautiful horns. He is very quick-tempered and zoo keepers enter his enclosure only in the protective armor of a jeep.



THIS HANDSOME MALE IBEX is about four years old. His magnificent curved horns are one of his claims to beauty, as are his beard and the white "spots" markings on his legs. He is so aggressive that he'll charge anything that enters his domain. Knowing this, the zoo keepers enter his enclosure in a jeep—now he's attacking that! Shown in the background of the picture is one of his mountain-climbing pals.



—————→
HORNS
and
ANTLERS
←————

THE ANTLERS of the Wapiti have that upswept look. If he gets tired of the present crop he knows that next year, there'll be a brand new set.

RUMINANTS WITH ANTLERS

Ruminants with Antlers are members of the deer family, and here should be noted the fundamental difference between antlers and horns, the two being frequently confused.

Antlers differ from true horns, which are hollow at the base, by being solid bone. Horns, too, are permanent during their wearer's adult life, while antlers are shed periodically and a new pair grown in their place. In this latitude antlers are shed in the spring and grown in the summer. They grow from a bony pedicle, or stalk, and in their early stages, while being nourished by blood vessels, they are covered with a soft skin which is known as the "velvet." But when the antlers have become full sized the blood supply is cut off, and the velvet dies and peels off in strips. The antlers then are clean, and hard, and their rough grooves are the channels where the blood vessels formerly passed. No sooner are they shed than buds of a new set appear.

Antlers, of course, are a means of protection against enemies and have a great deal to do with the survival of members of the deer family. They are employed, too, when the bucks fight in the mating season. They are possessed by adult males in all but a few species. Like most other hoofed animals, the members of this group also are protected by a keen sense of hearing, sight and smell, and the majority are very fleet of foot. They are mainly woodland animals.

The **Wapiti**, or American Elk as it is sometimes called, is considered by many to be "the king" of the deer family. With the exception of



THE MOUFLON, one of the wild sheep, has permanent horns. See page 38 for further details.

the moose, it is the largest of the American deer tribe, and it is a truly majestic animal. The male has massive antlers, characteristically carries its head high, and when full grown will weigh as much as 1,000 pounds. Once the Wapiti was found from the Atlantic coast to the Rocky Mountains, but now it is abundant only in Yellowstone Park, where it is protected. It suffered about the same fate as the Bison, for it, too, at one time roamed the plains in great herds and was an easy target for the hunters, who slaughtered the animal by the thousands.

When its new, tender antlers are growing it is usually docile, but once the antlers become hard the Wapiti is a sullen, dangerous animal. During mating season it is known for its loud, bugle-like call. The fawns born to the cow number one, two, or occasionally three.

European Red Deer is closely related to the Wapiti. Indeed, the Wapiti is the American red deer.

In England the red deer, or Stag, as it is commonly known, was

once the favorite animal of the chase; a Stag hunt was considered the greatest of sports. But it was finally put under such strict protection that at one time it was a capital offense in England to kill a Stag. This member of the deer family is reddish brown in summer, its coat turning grayer in winter.

Oriental Deer inhabit the dark forests and hilly country of the Far East, both on the mainland and on islands. Although smaller than the fallow deer, their antlers are large for their size.

The Barasingha or Twelve-Tined Deer is a large, heavy fellow from India along the Himalayas. In the wild state, they herd in parties of fifty or more.

Pere David's Deer is named after a naturalist missionary who discovered it in the grounds of the Summer Palace at Peking. It has long been extinct in the wild state, but is thought to have come from Turkestan originally.

Axis Deer are considered the most beautiful of all tropical deer. Their home is India and Ceylon. Their body is covered with white spots and sometimes white lines on the lower flanks.



GRACIE THE GUANACO is really upset about her coat. Somebody said the moths had gotten into it. Actually she'll soon have a new one for free.



THE ONE-HUMPED Arabian or Dromedary Camel (above) is smaller than the two-humped Bactrian Camel (below), but it has greater endurance.

HORNLESS RUMINANTS

The animals classified in this manner are members of the camel family. Four of these cud chewers come from South America — the llama, alpaca, vicuna and guanaco — and the heads of the family, the Arabian and Bactrian camels, come from Africa and Asia, respectively. While the other hoofed animals have a stomach separated into four parts, a binding characteristic of the members of this group is a stomach of three divisions.

The Arabian Camel or "Dromedary," has enabled man to penetrate some of the most inhospitable regions in the world.

Explorers agree that without this tireless, plodding beast, many parts of the globe would have remained completely unknown until the advent of aviation. Nature has equipped the camel with





CAMEL IN CLOSEUP: Here you see how nature has provided the Arabian Camel with nostrils that can be closed during sand storms. The eyes, too, are heavily lidded as protection against the sand.

"sand shoes"—soft, wide cushions that make walking on hot, slippery sand an easy task. And to prevent its skin from cracking when it kneels to load and unload heavy burdens, it has callous pads on its knees. Its heavily lidded eyes are a protection against sand storms, as are its nostrils, which it can close at will.

The Arabian camel is the one-humped species, and the hump is its food reserve. If the beast is on a long journey it can absorb food from the hump to sustain it. As this food supply is used up, the hump changes from the firm flesh of a healthy animal and becomes limp, but a rest and good food will soon restore it to its proper condition. One of the most remarkable things about this "ship of the desert" is its ability to go for a long period without water. An experienced and conditioned camel can go from 6 to 9 days without a drink, but it requires training in order to do this. In preparation for a long journey, the camel's owner will begin

watering it at ever-increasing intervals. Then, at the time of departure, it is given water containing a quantity of salt. This causes the animal to drink a great amount.

Besides being used for riding, and a most uncomfortable steed it is, and for beasts of burden, the camel provides milk and butter and its hair is used in the manufacture of cloth. In disposition it is morose, stubborn, vicious and not overly bright, but it has had an important part in building our civilization.

The Bactrian Camel of Central Asia has two humps and is taller and heavier in build than its African relative, but it cannot go without water as long, and does not have the endurance of the other species. Its legs are shorter and hair longer than the Arabian, but in other respects they are alike.

The Llamas are native to South America, and are often called the South American camel. There are three members of this group—the true **llama**, the **guanaco** and the **vicuna**. The latter two are a wild species and the first a domesticated animal. Although members of the camel family, these creatures are not meant for desert life. They have no hump, and their thick, fleecy coats and narrow feet fit them for the cold climate of the Andes, where they live. Like the camel, they are built to store water. The Incas were the ones who domesticated the llama, just as the Arabs and Tartars domesticated camels. They kept herds of them and trained them for riding and carrying burdens as well as using them for their wool and flesh.

The Alpaca, though a member of the camel family, is not a llama. It is a tame, domesticated animal reared for its exquisite wool which is so long it sometimes reaches the ground.

NON-RUMINANTS

Non-Ruminants among the even-toed hoofed animals comprise the wild swine, which are represented in nearly every part of the globe. Cleveland Zoological Park has several members of this group. They are:

The Hippopotamus is found in Central Africa, always around water. These amphibious animals spend most of the day in water and feed on water plants and grasses along the shore at night. In captivity they enjoy a tank of water and a roomy cage and eat hay and vegetables. Their teeth are the hardest and whitest ivory known and are in demand for piano keys and dentistry. The story that a Hippopotamus sweats blood is not true, but its perspiration is red. A single young one is born in the water or on land and the mother carries it on her head or back. Their life span is about 25 years.



PORTRAIT Of a Hippo Looking For His Tub. These block busters like to have at least one foot in the water most of the time. To be the Tarzan of the tribe, a full grown Hippo should weigh three tons.

The Pigmy Hippopotamus' habits are unlike those of its large namesake. It lives in the forests and prefers a mud bath to the deep water. This pig-like creature comes from Liberia and was first captured alive in 1912. It will use the water tank in captivity but not constantly like the large Hippo.

The Collared Peccary. This is the American representative of the wild hog tribe. Its range is from Arkansas and Texas to Patagonia. Generally a forest dweller, it feeds on fruits and roots and is fond of snakes and other small animals. A unique feature of the peccary is a gland just above the tail that secretes an oily, evil-smelling fluid.

European Wild Boar. This is the Old World representative of the swine, now found in parts of Europe, Africa and Asia. Once they lived in the British Isles, where boar hunting was popular. A marked difference between this and the New World swine is that its upper tusks project upward, while in the peccaries the upper tusks are directed downward.

The Wart Hog, a close relative of the true swine, is found in Africa and is native to Abyssinia. They are ugly creatures, with two pairs of large warts on the face, curved tusks about nine inches long, a barrel shaped body and short legs. They eat leaves, roots and fruits. They always enter their burrows backwards so their tusks are ready for a possible enemy.

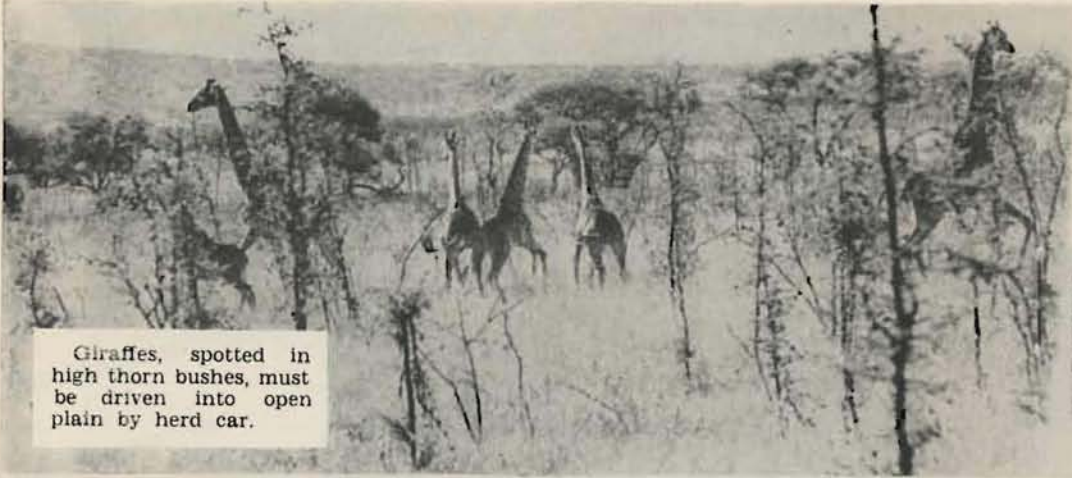
Babirussa (meaning pig-deer) come from Celebes and Boru and are the size of a large, domestic pig, but have much longer legs. They live on the banks of rivers and ponds and are excellent swimmers. The curved tusk of the male seems to have no practical use.



THIS BOTTLE BABY pygmy hippopotamus weighed 29 lbs. when photographed and will weigh 300 lbs. when full grown. A gift from Republic Steel, through Friends of the Cleveland Zoo, Bomi (as we've named him) hails from the Bomi Hills in Nigeria, Africa. This locale is famous for its rich deposits as well as glamour boys like Bomi.


How To Catch

1




Giraffes, spotted in high thorn bushes, must be driven into open plain by herd car.

2



Once in open plain, giraffes are pursued by fast catching car with catcher strapped in seat on front left fender.

3



A giraffe, roped from catching car, is calmed down before being loaded on truck.

atch a Giraffe



Safari crew makes ready to handle four long legs in boosting balky giraffe onto truck.

4



Ready for new home in Cleveland Zoo, giraffe is headed for next stop—on board New York-bound ship.

5



There is a mysterious quality about the elephant that makes it a favorite with every visitor to the zoo. You have the feeling Aladdin might have summoned this creature by rubbing the magic lamp. However, naturalists will tell you that, while the elephant once roamed the entire earth, along with the mastodon and dinosaur, it is now found only in India and Africa.

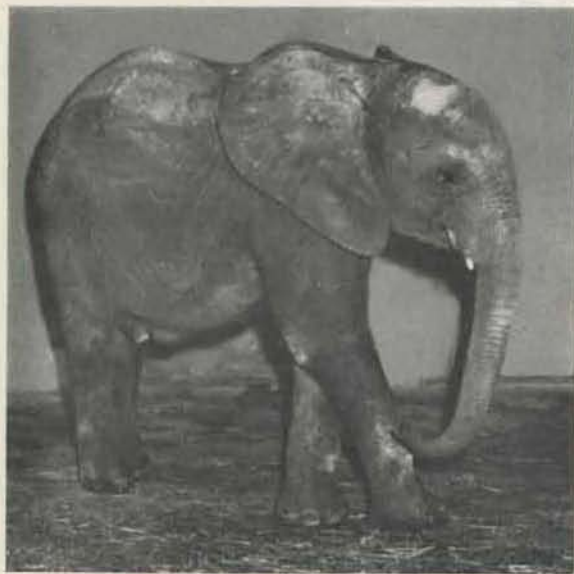
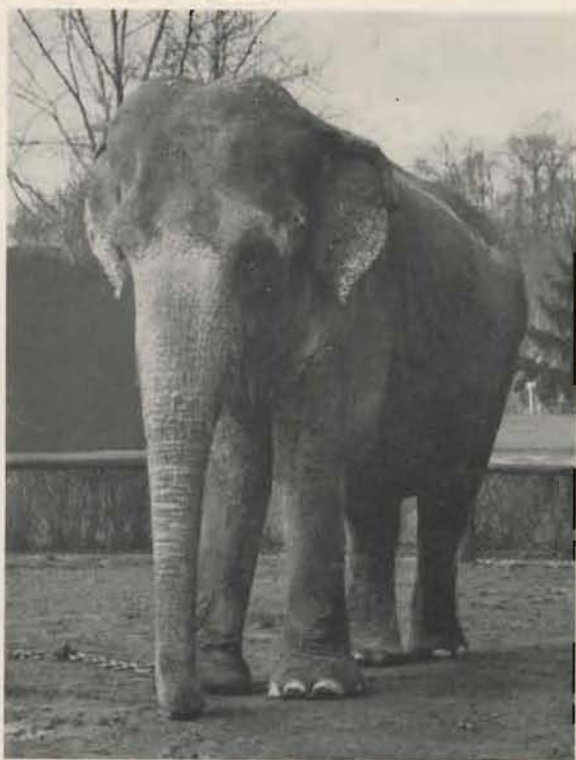
At Cleveland Zoo both species are represented. The African elephant is easily recognized by his large, sail-like ears, which sometimes have a spread of as much as five feet. In the wild state, these are thrown out at right angles to the head, when the animal attacks, which must at least frighten the enemy. The African elephant is taller than his Indian brother and his tusks are longer and heavier. The tusks of the female Indian elephant generally are small, while those of the African female are long and slender.

A baby elephant at first seems to find its trunk a puzzling nuisance. In a short time, however, it learns to carry food to the mouth and to dust the body, and a mother elephant uses it to chastize her young. The Indian elephant has a finger-like appendage at the end of the trunk and the African has two of them. These "feelers" are so sensitive they can pick up the smallest object.

Elephants reach maturity at about 20 years of age and rarely live beyond 50 years, despite stories of their indestructibility. A full grown elephant can carry 1,200 lbs. and exert a pulling force equal to 50 men. They are very loyal to one master, and in India a Mahout is assigned to an elephant for life. Some keepers use an ank, or goad—a sharp-pointed instrument—to guide and punish their immense charges. The skin on an elephant's back is an inch thick, but behind the ears and under the belly it is thin and sensitive.

In the wild state, elephants travel in herds of about thirty. They are ruled by a bull until he is defeated and driven out by a rival. Sometimes these exiles become dangerous and attack man—they are called rogue elephants. The herds are not difficult to approach if the observer goes up wind. Though their sense of smell is acute, their eyesight is poor and sound is no problem, since they make a great racket themselves as they feed.

INDIAN ELEPHANT:
As far as elephants are concerned, the female of the species is not more deadly than the male. She is much more easily managed and has a better disposition. This is why females invariably are the ones exhibited.



THE AFRICAN ELEPHANT is all ears and proud of it. Note how this lady is showing hers to advantage. She has already learned about camera angles.

MISC. ANIMALS



MARSUPIALS

Marsupials are pouched mammals whose young are born in a very undeveloped condition. They instinctively work their way along the mother's fur to a pouch, where they feed and grow for several months. At Cleveland Zoo we have three of this species—the Red Kangaroo, the Opossum and Bennett's Wallaby.



"I BELIEVE I'VE PUT ON A LITTLE WEIGHT," says Mr. Kangaroo.
"Try this exercise," advises his wife.

The Red Kangaroo comes from the rocky lands of South and Eastern Australia. In a normal position, the male stands about six feet in height and weighs over 200 lbs. The female is much smaller, weighing about two-thirds as much as her mate. She has only one baby at a time and it is about an inch long at birth. The Kangaroos are grass-eating animals and in their homeland live in groups of ten or so. They run in a series of leaps with their short forepaws held against the chest and the tail used as a balance. They breed freely in captivity and usually live five or six years.

Bennett's Wallaby is similar to the Kangaroo but not half as large. They are from Tasmania but are often seen in England, where they live in the brush. They are grass eaters.

The Opossum is the only marsupial found outside the Australian region and the only one found in the United States. There are about twenty-four species of Opossum, most of them living in South America. Ours is the Virginia Opossum. A female usually has a dozen babies in a litter, each one about an inch long. They move into her pouch for about five weeks and then venture out on the mother's back to exercise. The expression "playing 'possum" comes from the animal's habit of feigning death when in danger. Their life span is about one year.

EDENTATA

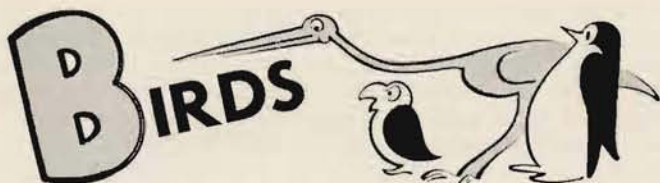
In the Edentata Group (toothless mammals) we exhibit two specimens, the Armadillo and the Two-Toed Sloth.

The Armadillos are found from Texas through Central and South America, and the one we have is the only one found in the United States. The long, sharp claws of this interesting creature enable him to get into mischief if his cage isn't well constructed. He can pull up bricks and rip out boards in no time. The upper part of his body, from nose to tail, is a series of scaly bands with an accordion-like, fleshy muscle between them. This enables him to roll up into a ball as a defensive tactic. The Armadillo has two to four young in a litter, and will live about 10 years.

The Two-Toed Sloth is found in the dense forests of Central and South America. It sleeps its short life away, hanging upside down from trees. On the ground it walks with difficulty, but can swim very well. It cannot jump in its tree dwelling but travels only if the branches touch.



BIRDS




The members of the animal world with which the majority of us are most familiar, because we see some of them every day, are the wild birds. It may be just a robin on the front lawn, but the wonders of bird life are continually before us, inviting our exploration in a field of nature that holds both excitement and mystery.

How does that robin manage to travel hundreds of miles in its yearly migrations and return to nest season after season in the same tree? Even the scientists cannot entirely answer that one. And the question of what guides birds in their migratory flight is truly something to wonder about.

Birds are of many kinds, and there are some that do not fly, but they are all warm-blooded vertebrates that are clothed in feathers and lay eggs. Also, they have toothless jawbones which at the extremities are developed into beaks, or bills. With those common characteristics, bird species have, over the centuries, adapted themselves to their particular environments in many ways, both in habits and variegated physical structure.

In most birds, for example, the forelimbs are wings used in flying, but with the penguins they are flippers to be employed as paddles in swimming. The hind limbs in some are used for perching; others, like the ostrich and the emu, use them for walking and running. In bird flight we have the rapid wing beats with which the tiny hummingbird is able to hover, and, by contrast, the almost motionless, and seemingly effortless, gliding of the vultures. The bills of the birds of prey are sharp and hooked, for seizing and tearing, while in the seed eaters they are adapted for cracking husks. In plumage the owls are clothed in somber, mottled colors, but the noisy parrots and macaws are gaily arrayed in the brightest hues.

Everywhere in bird life there is this great diversification. And in the zoological park, with species from many parts of the world, much of that drama of the birds is on display.



AN ENCHANTED GARDEN is this woodland scene that provides the illusion of a natural setting for some of the birds in Cleveland Zoo's beautiful modern Bird Building. You can almost believe the birds swaying in the tree tops will soon take off and disappear over the horizon.





THE CONCAVE CASQUED HORNBILL from Asia, sometimes called the Great Indian Hornbill, would be a great fellow to have around on Hallowe'en. That beak of his is a built-in noisemaker that would send any broom-riding witch back to her hovel.

PERCHING BIRDS

This is a large, varied group of the Order Passeriformes, including about half of the known birds of the world. In general the members are small, or medium sized. Their toes—three forward and one behind—can be bent downward to get a grip on a twig or perch. Our best songsters are found among the perching birds, and in selecting some of the prima donnas of this order one thinks of such superior vocalists as the canaries, the finches, the nightingales, the mockingbirds, the thrushes and many others. The young characteristically are naked and helpless when hatched, in contrast to birds of other groups that are able to run around almost as soon as they break out of the egg.

The Bird Building has an unusually well diversified collection of birds of this order, emphasizing the tropical species. Following are some of the most interesting and brightly plumaged:

Cocks of the Rock are among the most spectacular perching birds on display. We generally exhibit both the scarlet and the bright orange cock of the rock. These birds, pigeon size and characterized by a semi-circular comb of feathers, are from the mountainous, densely forested regions of South America. In mating season the males congregate and stage nuptial dances to show off their brilliant colors before the females.

Bell Birds gain their name from their loud, resonant notes—notes that sound like the ringing of an anvil and can be heard up to two miles. The Bare-Throated Bell Bird is from Brazil.

Tanagers are exclusively American. The tropical species are found in Central and South America. Noted for their bright colors, the tanagers comprise about 400 known species.

The Troupial, from Venezuela, is also called the "Bugle Bird." In this same family are the flashy American orioles, the bobolink, and meadowlark.

Sugar Birds are a small, dainty species from the American tropics. Their long, curved bills are adapted for getting the nectar from flowers.

Finches are a large, widely distributed family of birds, characterized by hard, cone-shaped bills that are well suited for seed eating. Often delicately colored, they are of many varieties, the largest being the grosbeaks. Among the noted songsters of the family is the wild canary.

The Myna Birds are found in Malaysia and India. Often versatile songsters, they can strike a variety of notes, and some, like the Java Hill Myna, can be taught to talk. The latter species is glossy black, with yellow wattles about the head.

Weaver Birds, from Africa, are so named because of their skill in building intricately woven, hanging nests.

The Wydah Birds, closely related to the weavers, are noted for their long tails. In the Giant Wydah of South Africa, which is the largest, the tail sometimes reaches 15 inches in length.

Waxbills are tiny birds of the African and Australian tropics, scarcely larger than the hummingbirds and found in many beautiful color combinations.

Bulbuls are fruit and berry eating birds of Asia, Malaysia and Africa. Members of the family generally are sociable and travel in noisy flocks. Most spectacular are the green bulbuls, in which a bright green is set off against jet black, blue and orange.

HORNBILLS, TOUCANS AND BARBETS

Hornbills, found chiefly in the tropics, are known for their grotesque bills, which are extremely large, and curved, and are surmounted by a casque. Another oddity that is characteristic of this group is the presence of prominent eyelashes, a rarity among birds. There are about 60 species of hornbills. In addition to Africa they are native to India, the Malayan countries, Celebes, New Guinea and the Solomon Islands. They have a clumsy, extremely noisy flight.

Hornbills nest in holes in trees, and it is the practice of the male to "lock" the female in by building a wall of mud over the hole so there is barely enough room for him to pass food to her while she sits on the eggs. The wall remains until the young are nearly fledged.

Toucans are noted for their enormous bill which is not only as long as the bird itself, but almost equals the body in bulk. It is, however, extremely light in weight. These strong looking birds are confined to the New World and are found in wooded places from Southern Mexico to Northern Argentina. They are very noisy creatures but fly easily and gracefully. The plumage of many of them is brilliant, their black and green bodies being ornamented with red, orange, white and blue. The bills are also usually highly colored. Among the varieties are the Toco, Ariel and White Breasted. The Aracaris are among the most brilliant of the Toucan family and are smaller. The Toucanets are still more diminutive.

Barbets get their name from the French, meaning beard, and are so called because of the strong bristles around the base of their bill. They are found in the forest regions of both Old and New Worlds and spend most of their time in the tree tops searching for insects. These stockily built creatures have heads that seem too big for their bodies, and possess large, stout bills. Their plumage is bright in color.



"SHADOWS IN BIRDLAND," might be the title of this arrangement by Mr. and Mrs. Toucan. These sophisticated looking creatures are really noisy extroverts at heart.

PENGUINS

The Penguins breed in lonely lands, but among themselves they are very sociable, and live in large colonies, making their shallow nests in such proximity to each other that an intruder would have difficulty finding a place to walk without crushing the eggs. Penguins are more at home in the water than any other birds. They are expert divers and can swim beneath the surface of the water, emerging only briefly to breathe. Their wings, while useless in flight, make excellent paddles and are helpful in propelling them along the surface. On land they are very slow and clumsy because their oversized feet are placed so far back on their body.

About twenty living species of penguins are known. In the Cleveland Zoo collection we have the King Penguin, which is second in size only to the very large Emperor Penguin. Others on exhibit, in the Bird Building and the Penguin Pool, are the Gentoo, Rock Hopper and Humboldt Penguins. Not all are from extreme cold climate; the Humboldt is found along the west coast of South America.

HUMMINGBIRDS

Audubon called hummingbirds "glittering fragments of the rainbow," and so they seem, with their brilliant, metallic coloring of crimson, emerald, violet, blue, green and gold. Their plumage vies with the bright-hued tropical flowers among which they mostly make their home. To the novice, a hummingbird is difficult to see, for it moves like a flash of light, darting from bush to flower, hovering for an instant over a bloom and then away. This fascinating creature gets its name from the humming or buzzing noise made by its rapidly beating wings. Hummingbirds have small, delicate feet and a prominent breastbone that acts as a firm support for the powerful muscles that move their wings. They are quite fearless and can be coaxed to take syrup or honey from a patient hand. In defense of their young they will even attack a hawk or crow. The popular idea that they live only on the nectar of flowers is not true. Insects form the major portion of their diet. The nest of the hummingbird is one of the marvels of bird architecture and very difficult to see. It is deeply cup-shaped, made of plant down and fastened together with spiders' webs. The outside is camouflaged with lichen and looks just like a knot or projecting bit of bark. Hummingbirds are confined exclusively to the New World and the Ruby-throated is the only one found east of the Mississippi river.

They are the only birds that can fly backwards. During the day, they must eat every two hours. At night they go into partial hibernation.



(Penguins)

LOOKS LIKE SAM PENGUIN is about to flip over some cute chick he has spotted. Mamie has her eye on him, though, and is ready to nip this romance in the bud. Pictured right is Sam just after he took a dive. Mamie knows how to keep him in line.



THE PARROTS

The noisiest bird residents of the zoo are the members of the parrot tribe. This includes not only the parrots, but the screaming macaws and the cockatoos, as well as the dainty parakeets and lorikeets. All belong to the same group and are brilliantly colored. Besides their flashy plumage, a characteristic feature is their short, hawk-like bills. The upper mandible is hinged to the skull so it is movable, and in this respect the parrots differ from all other birds.

Notice their short legs, and their feet with two toes in front and two behind; this, too, is characteristic. Their beak is used in climbing. And they have a thick tongue which in certain of the parrots,



THE COCKATOO is convinced that fine feathers make a fine bird since her own are so outstanding.



TREE-TOP GOSSIPS, the African Gray Parrots keep their beady eyes trained on the next door nest. They're noseey but nice.

particularly the African Gray Parrot, enables them to develop quite a linguistic ability.

Parrots are widely distributed, living in all of the tropical regions of the world.

Among the macaws, one of the better known is the blue and yellow macaw of tropical South America. The red and blue macaw also attracts considerable attention, being one of the largest and most gorgeously plumed. It is from Central and South America.

The cockatoos are most easily distinguished from others in the parrot group by their long, frontal crest. They are found in Australia, and the Solomon and Philippine Islands, where they go about in flocks. The largest of the cockatoos is the Great Black Cockatoo. Other attractive species are the sulphur crested, orange crested, roseate and spectacled.

The cockatiels, from Australia, are the only members of the parrot family outside of the cockatoos that have a crest. They are small and make nice pets.

The lorikeets and lories of Australasia, boast a distinctive brush-tipped tongue, useful when feeding on nectar, an adaptation the other parrots do not have.

The parakeets form another large sub-family of parrots, well represented in our collection.

QUETZALS

The Quetzal is often regarded as the most beautiful bird in the Americas. A member of the trogon family, it is found in Costa Rica and Honduras as well as Guatemala, where it is the national bird. The quetzal was once sacred to the Mayan and Aztec Indians, who allowed only the chiefs and high priests to wear the bird's plumage. The handsome one with the long streamer plume is the male, who sports glistening metallic green and scarlet feathers.

STORKS, IBISES AND SPOONBILLS

Storks have long been the fictional baby dispatchers, a role that is the result of their nesting habits. The European white stork, which is one of the varieties we have in the zoo, and is the best known, likes to build its nest on house roofs and frequently will show great preference for chimney tops.

The American wood stork, which is seen through the South and into South America, is the only stork with a curved bill. The Maribu stork of Africa is a carrion eater and generally is seen feeding with the vultures.

Storks are birds of the marshes, where they feed on lizards, eels, snakes, frogs and insects. They are voiceless.

Ibises are medium or large size wading birds, closely related to storks. Their bill, however, is slender and bent downward. The White Ibis is found in tropical America from North Carolina to Southern California. They prefer fresh water regions but are also found with Herons and Pelicans along brackish water lagoons.

Spoonbills are related to the Ibis but are distinguished by their bill, which is almost straight, flattened, narrow in the middle and flared out into a broad spoon-shaped affair. The Roseate Spoonbill is the American representative and has a bare head and chin. The neck and upper back are white and the rest of the plumage pink. It is without crest or ornamental plumes.

CRANE-LIKE BIRDS

Cranes frequent marshy districts and grassy plains, and they are known for their long legs, necks, and bills. They are fast runners and oftentimes would rather run than fly. An odd coiling of the windpipe gives the cranes a loud, resonant voice, which is marked most in the whooping crane. Those that migrate customarily fly at great height.

Three species of cranes are found in North America—the whooping, which is the largest; the sandhill, most abundant, and the

LEGENDARY CHARACTERS,
The European Stork: "How Many
Miles to Babyland . . . Brother
Bird?"

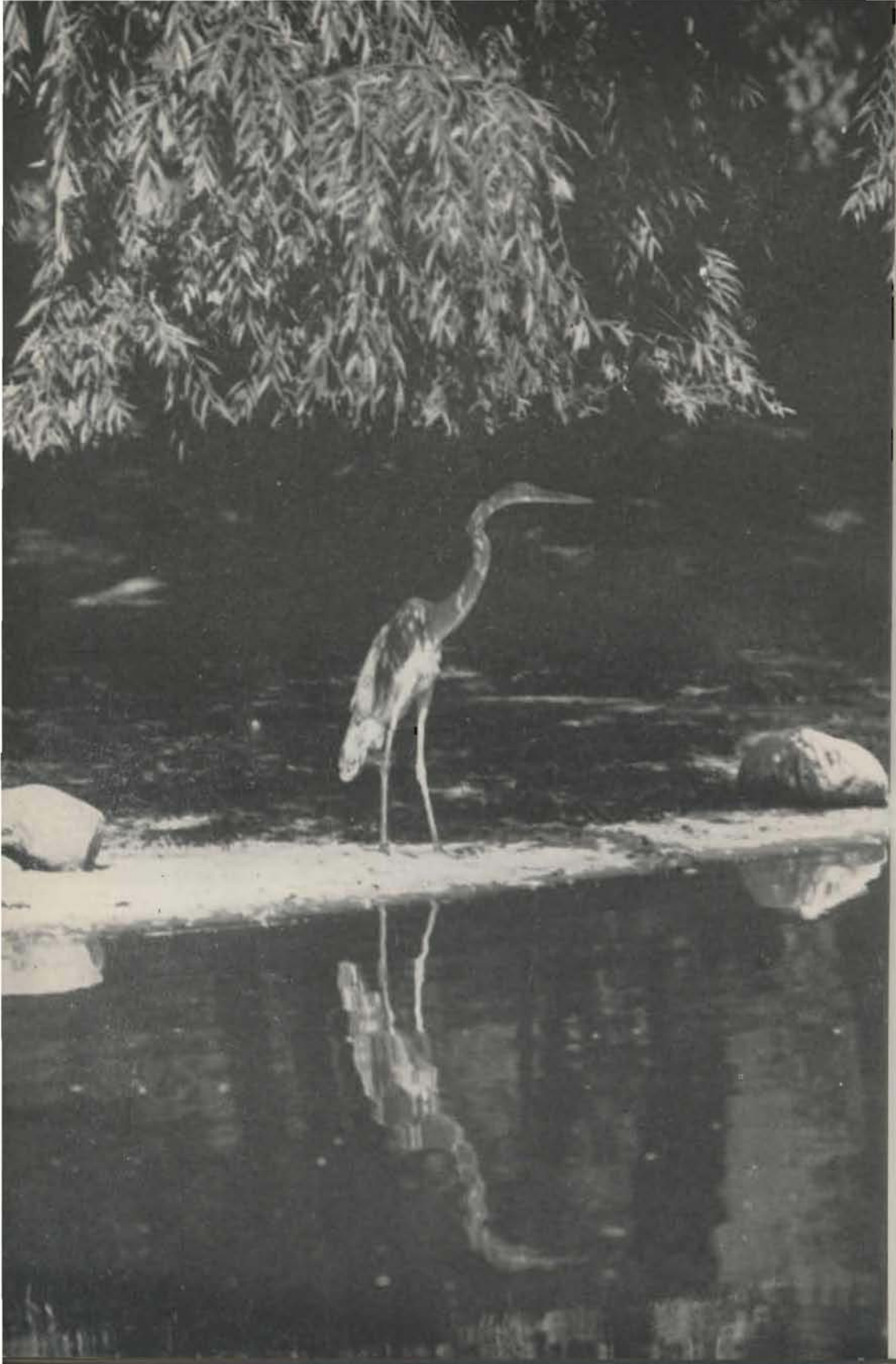


little brown. The Saurus Cranes are native to India. The Crowned Cranes, from Africa, are the most beautiful of the cranes.

India's Demoiselle Crane migrates into Africa and was the subject of the first references to bird migrations in classical literature. The Paradise or Stanley Crane of Africa is distinctive for its long train of feathers.

Gallinules: The Florida Gallinule is typical of this group. It is dark blue slate in color, with white underparts and a bright red bill, and is about twelve inches in length. It ranges throughout tropical and temperate America from as far north as Canada and South to Brazil and Chile. A timid creature, it likes bushy marshes and concealing vegetation. In spite of this characteristic, it is as noisy as its bolder relations.

The American Coot is found in north and middle America. It is a fine swimmer and diver and likes to feed on wild celery as well as other aquatic plants. Its broad lobed toes give it unusual skill in the water and as it moves them strongly, the Coot's head bobs along on top of the water like a rubber ball. Its coloring is dark brown with a white bill, and it is about sixteen inches long.



HERONS AND EGRETS

Hérons frequently are confused with cranes, for their appearance is quite similar. The easiest way to differentiate is to remember that cranes for the most part are dry land birds, while herons are wading birds. Also, cranes build their nests on the ground, while herons build them off the ground.

The Great Blue Heron is common to North, Central and South America, and an adult will stand about 4 feet tall. They are frequently to be seen in our northern Ohio marshes.

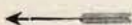
The Black Crowned Night Heron is mainly nocturnal in habit and is sometimes called a "Quawk," because of its call. These birds nest in communities where they build crude platforms of sticks placed in trees where the branches fork.

The Egrets are showy, beautiful birds, often glistening white in color with exquisite, elongated plumes on the back. These are the aigrettes once so fashionable for millinery decorations. Egrets are shy birds and great wanderers. In the South and some western states they have community nesting spots, but they were greatly depleted by the plume hunters, from whom they are now protected. The Egrets to be seen at Cleveland Zoo include the American, the Snowy and the Reddish.

PELICANS AND CORMORANTS

Pelicans live on fish, and nature has provided them with a ready-made net to enable them to catch a quantity of fish at once. This net is the pouch that is suspended from their lower bill. Although they are strong fliers, with broad wings, they have to have a considerable runway to get off the water. Their bodies are heavy and clumsy, and as they stumble along the surface of the water, flapping their big wings hard in an effort to gain the air, they resemble a heavy, over-loaded bomber. Once in the air they are graceful and sure of themselves in flight. These birds are very sociable, and live in communities, often on islands.

Brown Pelicans are found in Florida and they have a systematic and interesting way of feeding. They line up in follow-the-leader style, take to the air, and, flying close to the surface, dip down and then up with a scoop full of fish. Their fishing has been reported as being perfectly synchronized so they don't interfere with each other. In feeding the young, the older birds get a pouch full of



MARSHLAND MONARCH is the Great Blue Heron who often can be seen here in Ohio. Wading into a likely spot, he stands perfectly motionless until a fish approaches, then—flash goes the long neck, and goodbye Mr. Fish.

fish, and then, alighting in the midst of the youngsters, open their bills and permit them to help themselves.

White Pelicans breed in California and migrate to the Gulf Coast and Florida. Their method of fishing is somewhat different from the brown. The community of birds arrange themselves in lines in shallow water a little distance from the shore. Then, flapping their wings and disturbing the water, they drive the fish in toward shore, where they can scoop up large quantities of them easily. These birds have a nine-foot wing spread.

The Cormorants are excellent swimmers and often pursue their prey under water. They feed exclusively on fish. Cosmopolitan in distribution, they are, however, most abundant in the tropics. They have a long powerful body about two or three feet long, short, stout legs and a rather long neck. The plumage is dark colored with greenish reflections.

DUCKS, SWANS AND GEESE

Our collection of birds in this group is displayed in the Waterfowl Sanctuary, which, together with the Bird House, forms one of the most beautiful zoological park exhibits anywhere in the world.

Here, in a natural setting—in a lake covering approximately three and a half acres—are to be found 50-odd species of waterfowl. The sanctuary has become a stopover station for migratory fowl on their yearly flights. Every effort has been made to preserve the true, northern Ohio setting, and two large islands in the lake have been planted with native trees and shrubs.

The Swans to be seen in the sanctuary comprise an unusually fine collection. We have the black-necked swan of South America, generally considered the most beautiful of the swans, with its white body, black neck and blue and red beak. The black swan, an Australian species, also is to be seen, as are the whooping swan of northern Scandinavia and northern Asia, the whistling swan of North America, the mute swan and the Bewick Swan of northern Europe, and the European White Swan. Represented, too, is the coscorobia, a white species from South America, which some scientists list with the swans and some with the geese.

The Geese in the collection include several varieties whose migratory flyways pass over this section of the country. The most familiar of these is the Canadian Goose, or "honker," which every fall comes winging its way across Lake Erie from the North, traveling in picturesque flocks that frequently take on a V formation. Others are the Blue Goose, Lesser Snow Goose, Hutchins, and White-Fronted Goose—all of them nesting in the Arctic.

Among the exotic species in the Waterfowl Sanctuary are the



PREMIER BALLERINA of Birdland is the Mute Swan.

Siberian, Red-Breasted, Chilean, Egyptian, Cereopsis, Ashy-Headed, and Semi-Palmated Geese.

The Ducks, too, are varieties that commonly migrate back and forth over this area. The sanctuary affords a fine opportunity for a fairly closeup view of the Wood Duck, Red Headed Duck, Pintail, Baldpate, Scaup Duck, and Mallard.

The zoo collection also includes such exotic species as the Mandarin, Black East Indian, Crested, Spotbill and Tufted Ducks, and the Ruddy Shell Drake.

BIRDS OF PREY

In this grouping are birds of robust build, with powerful wings for swift flight and pursuit, bills specially adapted for tearing flesh, and feet with sharp, curved claws. About one member of the group—the vultures—there is some argument as to whether they are, strictly speaking, birds of prey, since they generally feed only on carrion. But they resemble the others closely enough in other respects to be included in the order.

The American Bald Eagle, is known also as the Bald-Headed Eagle, and White-Headed Eagle. The word "bald" is used in the ornithological sense, meaning a head that is white feathered. Although native to this part of the country, the American Eagle is now rarely seen in this vicinity. It mates for life and nests in trees near a body of water. It generally returns to the same tree-top home year after year. An adult will have a wing spread as long as eight feet.

Eagles, as a group, have long been considered the monarchs of the birds, being the symbol of strength, courage and dignity. Long ago the Romans used the eagle as the ensign of the legion, and the figure of an eagle was emblazoned upon the banners of the ancient kings of Babylon and Persia. Today the American Eagle is the national emblem of the United States.

The Golden Eagle, although about the same size as the American eagle, has a much wider distribution and is better known around the world, sometimes being called the "King of Birds." Besides being found in North America, it is native to some parts of Europe and northern Asia.

The Bataleur Eagle has a distinctive crest on the back of its head. Native to Africa, it is a sooty-colored eagle with bright red eyes.

The Hawks, which are exhibited in the Flight Cage, are the most misunderstood of all our birds. They are supposed to be inveterate poultry killers, but instead they destroy countless rodents, insects and amphibians. They frequent open fields, swampy woods and marshes.

We have a well-rounded collection of hawks from many parts of the world.

Turkey Vultures are the large "buzzards" we see in this vicinity. They soar at considerable heights—sometimes almost out of sight—and they seem to float in the air, describing great spirals without any apparent movement of the wings. How they are able to locate their food from such heights is one of the wonders of bird life. Obviously they must have remarkably keen vision. A full-grown Turkey Vulture will have a wing spread of six feet. A very noticeable characteristic, on close view, is its naked, crimson-colored head.



BORN TO BE A VILLAIN, the Turkey Vulture thrives on bad news. He soars and glides effortlessly in widening circles but when he swoops down to earth it's to death and destruction.

The King Vulture is from tropical America, extending into Southern Mexico. It is a bird of the forests and is the most brilliantly colored of the vultures. The "king" has a lead-colored ruff about the neck, a blue and scarlet head, and an orange and black bill.

The Black Vulture is found in the American tropics, and comes as far north as Southern Ohio. It is easily distinguished from the other two vultures we have described, the naked skin of its head and fore neck being a dusky color. It is sometimes called the carrion crow.

Other Vultures in our collection include the Griffon, Eared, Augur and Kolb Vultures from Africa, and the Lammergeier Vulture from Africa and Europe.

The Cara-Cara, like the vultures, eats carrion, but it also preys upon live snakes, lizards, frogs, young alligators and some of the small mammals. One of its favorite tricks is to swoop down on a pelican and frighten the bird into disgorging its food, which the Cara-Cara then feasts upon. Its range extends from the southern United States to South America.

The Secretary Bird is from South Africa and stands about four feet high on long strong legs. It is light gray in color and has black



THESE WISE GUYS with their puffed up plumage aren't as big as they look. (Snowy Owls)

wings. The name comes from the series of long plumes which hang loosely from the back of the bird's head. This looks like a bunch of quills that clerks used to stick behind one ear as they went about their work.

* * * *

Owls are more often heard than seen, because most of them are nocturnal, but in the zoo you have a fine opportunity to view some of the better known species up fairly close. Their soft, fluffy plumage exaggerates their size, and it is easy to see how their big eyes and solemn, philosophical expression have made them a symbol of wisdom.

Their toes are armed with sharp claws and their bills are short but strong, with the upper mandible curved. They are capable of swift, silent flight. All of this makes them great hunters of small mammals, particularly such rodents as rats, mice and shrews. These morsels are eaten whole, the owls later disgorging such indigestible portions as the bones and hair in the form of pellets.

The Great Horned Owl frequents the forests, and because there is not nearly so much heavily timbered land in Ohio today, this big owl is not as common as it was in pioneer days. Two prominent tufts of feathers over the eyes have the appearance of horns. In this vicinity it is the earliest breeder of all the birds. When snow is still on the ground, the great horned owl already is sitting on its eggs, which generally number two or three. This and the barred owl are Ohio's two "hoot" owls.

The Barred Owl is next to the great horned in size. During the day it conceals itself in hollow trees and dense woods, coming forth at night to hunt. It prefers a large cavity in a tree for a nesting site.

Barn Owls have very long wings for the size of their body. Although they are nocturnal, they can see in the brightest daylight. In a night they can destroy a surprising number of rodents. The Barn Owl is second only to the Screech Owl in abundance in Ohio. Its odd looking face has earned it the nickname of "monkey faced owl."

Snowy Owls, although residents of the Arctic, are sometimes seen in Ohio. They get this far south every four years, their southern "invasion" apparently being caused by shortage of food. They feed largely on the Arctic lemming, although they also prey upon waterfowl and are strong enough to make off with an Arctic hare, which is just about as big as they are. Unlike many other owls, the snowy owl is active during the daylight hours.

The Eagle Owl is the largest of the owls. There are several species of this Old World owl.

PIGEONS AND DOVES

This group, represented in all parts of the world, is known for powers of flight. These birds, too, have been particularly beloved by man, and today the expression "gentle as a dove" is well known, the phrase originating from the gentle "coo" that is common to all pigeons and doves.

The young, at first, are fed with a milky fluid which is disgorged by the parent birds from glands in the crop. The fluid is sometimes called "pigeon's milk."

To this group once belonged the famed Passenger Pigeon, which only a few decades ago existed on this continent in countless numbers but now is extinct.

Our collection includes the Plumed Pigeon from Australia, the Goura-Crowned Pigeon from New Guinea, and the Bleeding Heart Dove from the Philippines. The red splotch of feathers on the bleeding heart's otherwise white breast causes many zoo visitors every year to report to us in great alarm that we have a "badly wounded" bird.

FOWL-LIKE BIRDS

In this classification are birds that have strong legs and toes for running, well developed claws for scratching the ground in search of food, and digestive organs which include a crop where grain is softened, and a gizzard which reduces it to pulp. When hatched, the young are clothed with down and are able to run within a few hours after emerging from the egg.

Peafowls are the birds commonly known as "peacocks." In your trip through the zoo you are apt to hear harsh screams. When you do you will know there is a peacock around, for this is one way he has of attracting attention to himself. But his most celebrated manner of showing off is his magnificent feather display.

The Red Jungle Fowl is the bird from which all our domestic poultry is said to be descended. It is, as the name suggests, a bird of the forest, where it seldom takes wing, and it is found in India, Indo-China, the Malay Peninsula and the Philippines. Jungle Fowls in their native haunts have some of the characteristics of our domestic fowl; the males crow and the females cackle. The Gray, Green and Java Jungle Fowl also are from Malaya and the Philippines.

Pheasants are one of the so-called "game birds," a group that also includes the grouse, partridge, quail, and ptarmigan. Though pheasants are frequently seen wild hereabouts, their native home is Asia Minor. From there they were introduced into the European countries and North America. The cock has a brilliant display of plumage, but the hen, by comparison, is of dull dress.

Asiatic species that enhance our beautiful pheasant exhibit are the Greater Argus, Empian, Blue-Eared Manchurian, and Swinhoe Pheasants.

The Guinea Fowls are all native to Africa and are characterized by their bare head with its bony crest. They gather in large flocks and are wary and difficult to approach. They can run swiftly and also will fly when flushed. To be seen in Cleveland Zoo are the Tufted, Helmeted and Black Bush Guinea Fowl.

OSTRICH

This plumed giant is the largest of living birds, and an adult male will stand 8 feet in height and weigh about 300 pounds. The ostrich comes from Africa and lives in small flocks on the desert and open plains. It is wary of man but is friendly with such animals as the zebra and the antelopes and often joins up with them. One of its greatest protections is the speed with which it can out-distance any pursuers.

It can run about 60 miles per hour—faster than a horse, although its habit of running in a curve gives an advantage to a straight-



MAMA OSTRICH can't take her eye off the old man for a minute. Just let her go out to lunch and the fan club takes over. Those peacocks really look up to papa.

line runner. It is no stream-liner, for in running it spreads its great wings wide and stretches its neck out ahead. The ostrich has only two toes and it defends itself by kicking forward and by attacking with its wide, flat beak. It cannot fly. These birds mate at about four years of age, and remain with one mate for life.

The Emu is the second largest living bird, and comes from Australia where it frequents grassy plains and open forest country. It stands about five feet in height and its loose feathers give it a hairy appearance. The Emu is very much at home in the water, and its outstanding ability as a swimmer aids it greatly in escaping from enemies. Like the ostrich, it defends itself by kicking, but its method is sideways and backwards, instead of the forward attack of its cousin.

The Cassowary is found in New Guinea and adjacent islands. It stands about five feet in height, is black in color and has a bright colored bony helmet on its forehead. It is diurnal in habit, sleeping from sunset until morning, and has a curious, not very loud voice that snorts and grunts in seemingly constant displeasure. It has a sullen, treacherous disposition and is dangerous to approach when wounded, for it can kick sideways with enough force to knock a man down.

The Rhea, sometimes called the American Ostrich, is confined exclusively to the pampas of South America. Its habits are similar to the Ostrich and it has the same powerful legs and tremendous speed. When running it often holds one wing up like a sail. In its natural state, it lives in herds of up to 20 or 30 and its dim gray plumage is so much the color of the haze, it is almost invisible from a distance.

Special Exhibits

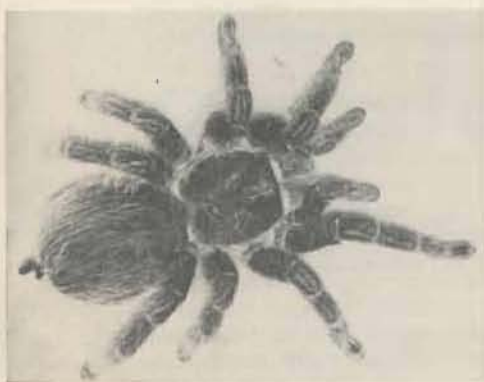


The greatest camouflage artist of all is Mother Nature. With her knowledge of protective coloring she keeps us from seeing countless ordinary creatures that are really right under our noses. For this reason, Cleveland Zoo has established a Special Exhibits room in the basement of the Animal Building where we find displayed, in their natural habitat, animals common to this part of the country, but very hard to see, nevertheless.

Reptiles and Amphibians on exhibit in this room are discussed in the reptile section. Here we concern ourselves first with the invertebrates—animals without a backbone.

INVERTEBRATES

Insects are the most common of the invertebrates, and we regularly exhibit some of the more interesting forms. One of these, the PRAYING MANTIS, is so-called because it often is seen with knees bent and front legs held as though supporting a prayer book. The mature female is green and difficult to distinguish from leaves, the male is a browner shade. It is common to this region.



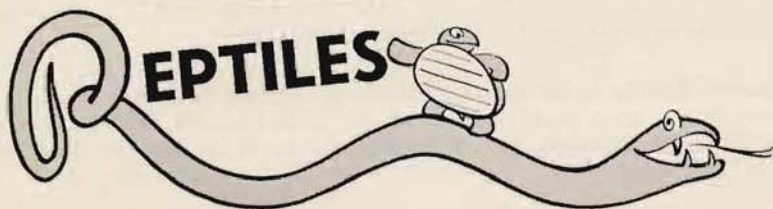
THE REPUTATION of the Tarantula is much worse than its bite, according to scientists. However, most of us would give it plenty of room.

Of interest for its protective resemblance to twigs is the WALKING STICK. In our Special Exhibit room we also exhibit species of the ROACHES and GRASSHOPPERS.

Spiders, according to legend, are to be greatly feared because of their venomous bites. However, the truth is that no spider is known in the northern United States, outside of the invading black widow, whose bite would seriously harm a human being. They lay their eggs in a mass, and after the young emerge they shed their skin

several times as their body grows too large for it. The form of the spider doesn't change a great deal during this process, it simply grows. Spiders are carnivorous and feed chiefly on insects. The most remarkable of the species are the web builders. The TARANTULA in America sometimes lives under stones or in cracks of trees.

Spider Relatives are the CRAYFISH and SCORPIONS. CRAYFISH, often improperly called crabs, abound in brooks. True crabs, like lobster and shrimp, live in the sea. There are about 20 species of SCORPIONS in the southern part of the United States. They do not lay eggs, but the young develop inside the mother.



Reptiles are divided into five orders or groups—1. Turtles and Tortoises; 2. Crocodilians; 3. Lizards; 4. Snakes; 5. Tuatera (a living fossil represented by the tuatera of New Zealand, which has remained unchanged since Devonian times). Generally speaking, they are all similar in that they are covered with scales and plates



THE GILA MONSTER has a beauty that is only skin deep. Beneath that colorful exterior lies a heart that is strictly poison.

of various forms. Another common characteristic is the creeping and crawling manner in which they move about.

They are sluggish in temperament and are cold blooded, their body heat being partially controlled by the surrounding temperature. Reptilian young are hatched from eggs and have their natural form at birth. In many cases, however, the egg does not develop a shell and is retained and incubated in the body of the female; the young then seemingly are born alive.

LIZARDS

Lizards are especially well protected in their coloring, and as they flick themselves through the grass or among sand and pebbles it is almost impossible to see them. We have several species of this group at Cleveland Zoological Park.

Iguana Family is the largest family of lizards, and Cleveland Zoo usually has such representative types as the LARGE GREEN SOUTH AMERICAN IGUANA, the HORNED LIZARD from Mexico, and the CRESTED BASILISK.

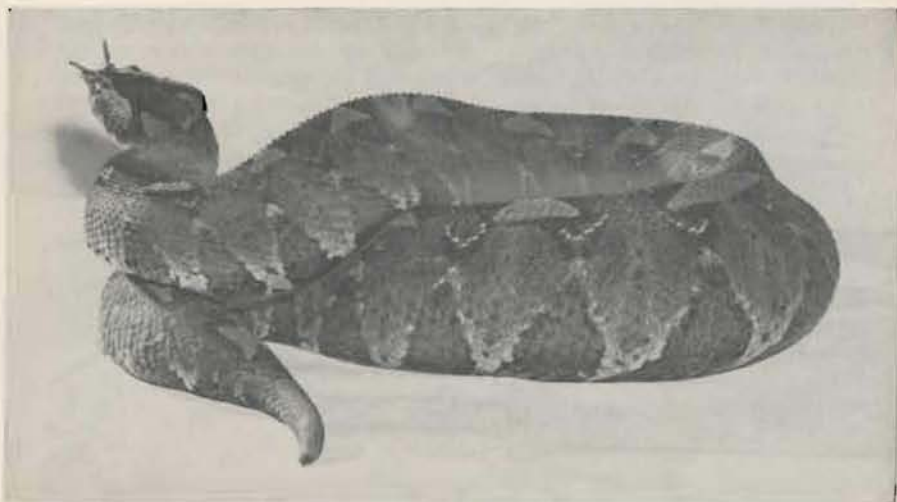
Monitor Family includes the largest lizards. One type, the Komodo Dragon, reaches 10 feet. We have a close relative in the LACE MONITOR from Australia, which grows to 8 feet. Others usually exhibited are the YELLOW INDIAN MONITOR and the GOULD MONITOR from Australia.

Skink Family is characterized by very smooth scales and degenerate legs. The GIANT GLASS LIZARD, also called the glass snake, actually has no legs. The family is represented locally by the BLUE-TAILED SKINK.

Poisonous Lizards include only two species—the GILA MONSTER (Arizona and New Mexico), and the BEADED LIZARD (Mexico). The jaws of the Gila monster are amazingly strong and have to be pried off the object grasped. The fangs are simply grooved teeth located in the lower jaw. While the poison it exudes is generally not fatal to human beings, it is very distressing. The tail of the Gila Monster acts as a reservoir for food and serves it in the same manner as the camel's hump. When the Gila is well-fed, the tail is thick and round, but during a fasting time it decreases in size.

SNAKES

Snakes are probably the most maligned members of the animal kingdom. They are feared usually without reason, and all kinds of superstitions have grown up about them. Snakes periodically shed their skin. This is accomplished by rubbing against rough objects, breaking the skin at the lips and then crawling out of it like a glove. The snake-haters insist that the skin is cold and



IF YOU'RE CLOSE ENOUGH to see the two horns of the Rhinoceros Viper—you're too close! This fellow is deadly.

slimy to the touch, but, on the contrary, it is smooth, dry and not cold at all. Snakes are docile, secretive creatures and are not prone to unprovoked attacks upon human beings.

POISONOUS SNAKES

Poisonous snakes stab their prey with specialized teeth called fangs. These fangs are connected with a gland located on each side of the head in which the venom is stored.

True Vipers are confined to the Old World. Typical is the PUFF ADDER from Africa, which has fangs over an inch in length and a particularly potent venom. Others exhibited when available are the EGYPTIAN SAND VIPER and the HORNED VIPER from Europe.

Pit Vipers, confined to the New World, are so-called because they have a pit between the nostrils and the eyes, serving as a heat detector to aid them in finding their food. The most dangerous snakes of North America fall in this group. Included are the RATTLESNAKES, ranging in size from the foot-long PYGMY RATTLESNAKE to the huge DIAMOND BACK RATTLESNAKE, recorded at 8½ feet. Others are the COPPERHEAD and the COTTON-MOUTH or WATER MOCCASIN. The cotton-mouth gets its name from its habit of opening its mouth to disclose the white interior. The copperhead is brown in color with dark brown bands and a lighter coppery head—hence the name. It is common in Southern Ohio.

Cobra-Type Snakes are the most dangerous of all the reptiles, because the venom acts on the nervous system rather than on the blood stream, which is affected by the venom of the viperines. The CORAL SNAKE of the southern United States belongs to this group. The largest is the KING COBRA from Asia, which grows in excess of twelve feet. The group is represented in Australia by the PURPLE DEATH ADDER among others.

Rear Fang Snakes have fangs located in the rear of the upper jaw. With the exception of two or three types, they are harmless to man. Exhibited here are the FALSE CORAL SNAKE and the VINE SNAKE, both from South America.



NON-POISONOUS SNAKES

Harmless snakes are by far in the majority. They have an economic value, for they kill huge numbers of rodents annually.

King Snakes are inoffensive to man. They are large, colorful constrictor snakes. The CALIFORNIA KING SNAKE and the MILK SNAKE are typical.

Garter Snakes are probably the best known, for they are found all over the United States. In fact, like the water snakes, they are world-wide in distribution. They have as high as fifty young, usually born in autumn.

Water Snakes live in swampy places or close to rivers, ponds or lakes. At the first approach of danger they can dive to the bottom and remain there for some time. Contrary to what many persons believe, a colony of water snakes is not detrimental to game fish, for they feed on the slow-swimming fish (carp, bullheads, etc.), and sick fish.

The Racers travel at surprising speed. Characteristic of most egg layers, they deposit a dozen or two eggs under flat stones, or in soft, moist soil in June or July, leaving them to be incubated by the heat of the sun. Typical are the WHIP SNAKE from the United States, and the GIANT RAT SNAKE from India.

Bull Snakes sometimes grow in excess of eight feet. They are powerful constrictors and include all types of small mammals in their diet.

The Rat Snakes are so named because they are especially adept at destroying rodents. The group includes the fox snake, gray rat

snake, yellow rat snake, corn snake, and pilot black snake. This last has been so named because of the erroneous idea that it warns other snakes of approaching danger and leads them away to safety.

Giant Constrictors are divided into two groups—the **PYTHONS** and the **BOAS**. The boa constrictors are confined to the New World and the Pythons to the Old World. The largest Python is the **REGAL PYTHON**, and the largest true boa is the **SOUTH AMERICAN BOA**, which has a red tail. Boa constrictors seldom grow in excess of 12 or 15 feet. Contrary to popular belief, they do not attack or eat human beings. Another constrictor of this group is the **ANACONDA** of South America, a water snake which sometimes attains a length of 18 feet.

TURTLES AND TORTOISES

The members of this group are easily recognized when you remember that the tortoise has a high, dome-like shell and club-shaped feet, and is the type that lives on land and is almost helpless in the water. Turtles, on the other hand, have webbed feet and usually are at home in the water. The type that lives in fresh water is usually referred to as the terrapins. All are reproduced by eggs.

At Cleveland Zoological Park the following are represented:

Snapping Turtles: A local form is the **COMMON SNAPPING TURTLE**. It has a huge, powerful head, and broad, webbed feet with large, thick nails. It cannot completely withdraw itself into its shell, but it protects itself by using sharp, powerful jaws. This creature is a bold, aggressive fighter and is capable of severing a finger if one should be careless enough to come within reach of its darting head.

The **ALLIGATOR SNAPPING TURTLES** are regular giants, some of them weighing as much as 140 pounds. They are like the Common Snapping Turtle except for size. In the water their protective coloring makes them hard to see and they can remain submerged for a long time. They are a booby trap for unwary fish, for in their mouth is attached a white piece of skin that resembles a grub. While under the water, they keep their mouth open and make this skin move slowly to attract the fish. Then, as the fish glides near to investigate, out snaps the turtle head, and it's goodbye to Mr. Fish.

Terrapins are the common, pond-dwelling turtles, such as the **PAINTED TURTLE**, so-called because of the bright shell markings; the dull-colored **MUD** and **MUSK TURTLES**, and the **SLIDERS**, which are named for their habit of basking in the sun and sliding down into the water when frightened.

Box Turtles have an arched, globular shell, and they can withdraw

into it and close it so tightly you could not insert a toothpick under the shell. The muscles of the turtle hold the shell closed until they are sure all danger is past. This turtle stays on land and is one of the best protected of all the reptiles. A close relative is the **BLANDINGS TURTLE**.

Soft-Shelled Turtles are characterized by a leathery shell instead of a bony one. They are highly prized as food in the South and are capable of inflicting severe lacerations by biting. They have a long, snake-like neck. Their distribution is world-wide.

Giant Tortoises are the largest of all the family, exceeded in size only by the sea turtles. They are confined to the Galapagos Islands off the coast of South America and the Seychelles Islands in the Indian Ocean. They are complete vegetarians. Sometimes the male weighs as much as 350 pounds.

ALLIGATORS AND CROCODILES

The American Alligator and the American Crocodile are the two species of Crocodilia that exist in the United States. The easiest way to differentiate between the two is by the difference in the teeth. In the crocodiles, the fourth tooth of the lower jaw on either side extends outside and above the upper jaw. In the alligators it fits into a pocket of the upper jaw. The head of the crocodile is generally narrower than that of the alligator.

Alligators live in the southern part of the United States and in recent years were threatened with extinction, but most southern states now have game laws protecting them and they are rapidly coming back. The demand for their hide for leather, combined with the use of the young for curios and also the fact that some hunters consider it great sport to shoot them, was a major factor in their predicament. A 15 foot 'gator used to be about the average size, but now a 12-footer is considered a giant.

Caimens are crocodilians that are intermediate between the alligators and crocodiles. They are confined to Central and South America and frequently are sold as alligators. The majority of them are small, seldom exceeding seven feet in length. Most common is the **SPECTACLED CAIMEN**.

Crocodiles, found in the tropics and semi-tropics of the world, are the largest of all living reptiles. Especially large is the Salt Water Crocodile of Asia, which has been recorded at 30 feet in length. These creatures are much more agile than the 'gator and are quite vicious in captivity. The crocodiles found in Asia and Africa are well known for their man-eating propensities. The **AMERICAN CROCODILE** of the Florida Keys reaches a length of about 15 feet. The **GAVIAL**, of the rivers of India is an exceptional crocodile in that it has a head so narrow it can only swallow small fish.



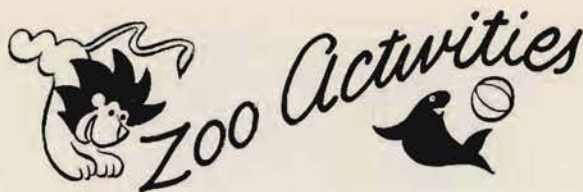
MINIATURE MONSTER: The Tree Frog is so perfectly camouflaged you scarcely ever get a good look at him. Notice the tiny suction cups on his feet as he clings to his captor's thumb here in this unusual photo.

AMPHIBIANS

Amphibians are closely related to, but are very much unlike, reptiles. All are confined to a moist habitat and are dependent on water. They undergo a larval period, usually in water, and are equipped with gills which usually are exchanged for lungs when they change into adult form.

Frogs usually lay their eggs in large masses in water. From the egg comes the tadpole which gradually turns into a land animal that still must keep its skin wet in order to live because the skin aids in respiration. The frogs you hear singing in the woods are males and they do it to attract a mate. Females have scarcely any voice at all. In February you hear the **SPRING PEEPERS**, whose love song is joined by the **TREE FROG** in May. The peepers are about the size of the end of your thumb and very difficult to see in spite of their vocalizing. In April or May you begin to hear the spotted **LEOPARD FROG** sing his mating call. The last of the frogs to come out of hibernation is the big **BULL FROG**.

(Continued on Page 91)

The title 'Zoo Activities' is written in a large, stylized, cursive font. To the left of the word 'Zoo' is a cartoon monkey with its tail curled. To the right of the word 'Activities' is a cartoon penguin holding a ball.

Zoo Activities

Tour Trains keep your visit to the Zoo from being too fatiguing. The ride is enjoyable for youngsters and their parents as well as for older people who might otherwise find the long walks between exhibits difficult. There are five trains, and a round trip ticket sells for 25 cents. The trains make five stops at strategic points and ticket-holders are permitted to get off at as many of the stops as they wish, and continue on a later train.

The Children's Zoo includes an area of special Nurseryland exhibits and the miniature Zoo Railroad. In the exhibit section are to be found many of the nursery rhyme characters—the goose that laid the golden egg, Baa Baa Black Sheep, the Wise Old Owl, and others.

The Zoo Railroad, circling a miniature mountain in the Children's Zoo, is operated daily in the summer, running in the afternoons. Passengers board at the main station. The track follows an unusually scenic route.

The Feeding of the zoo animals is a show in itself, and some of the most interesting specimens are fed publicly so all can see. Diets are carefully worked out in the zoo commissary under the direction of the zoo veterinarian, and no animal is overfed or underfed. Therefore, it is important that visitors to the zoo do not give "handouts" in the mistaken belief that they are being kind to the animals. The park feeding schedule is as follows:

Cat Animals—lions, tigers, leopards, etc.— 2 p. m. every day but Monday.

Sea Lions—10:00 a. m. and 4:00 p. m. daily.

Penguins—2:30 daily.

Schools Visit the Zoo. One of the most important activities in the zoological park is working with the schools. Thousands of children visit the zoo every semester as part of their class work, and the Cleveland Public School System has a teacher regularly assigned to the zoo for the purpose of conducting student tours.

Other Educational Activities include broadcasts by Director Reynolds over the local radio stations. The zoo works in close cooperation, too, with art pupils. There seldom is a day in summer that young people and adults are not seen working at their sketching boards in the zoo grounds.





(Royal Bengal Tiger)

This is me at six weeks. See how I'm snarling and showing off? I felt so safe in my mother's arms, I just had to act porky.



Hello! The photographer happened by at just the right moment, for I'd just stepped out of my shell. My mother was saying, "left, right, left—my, what strong legs!"

(Australian Black Swan)



(Aoudads)

I WONDERED WHAT that man (Perry Cragg—Cleveland News photographer) was doing standing in front of us with a box in his hands. My legs still trembled a little, but I steadied myself against my mother. Someday I'd have big horns like my dad—I hoped I'd look like him, too. I thought we were the best looking family in the world.



I was two weeks old when this was taken and had begun to feel right at home in the world. I liked having everyone admire me and was having fun posing for the photographer. My mother didn't like it, though, in fact she was so mad she spit!

(Guanaco)

(American Bison)

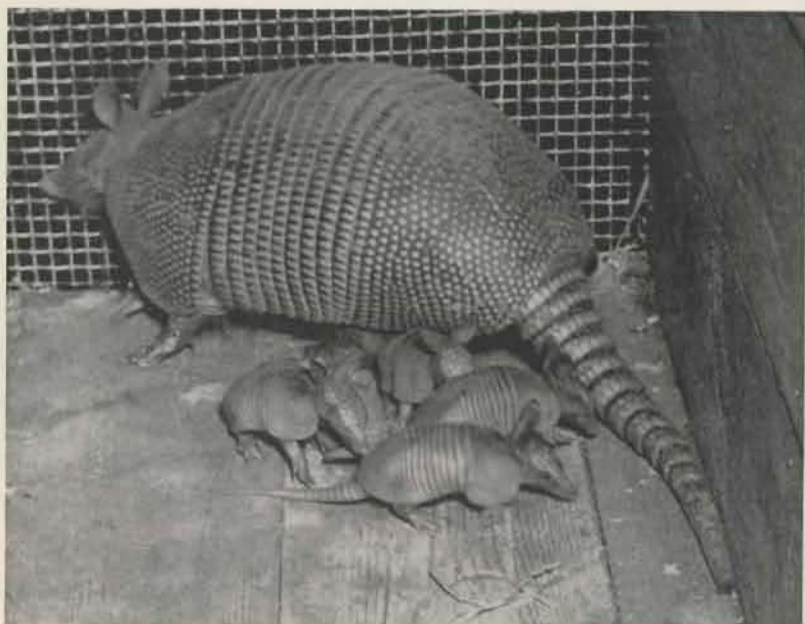


When I was born I weighed 40 pounds and my mother thought I was a beautiful baby. She was very jealous and wouldn't let anyone near me. Even when this picture was taken, and I was a big fellow of six weeks, I could hear her grumbling and fretting as I ate my dinner.



(Emu)

Our mother kept counting us over and over again after we got out of the shell. One, two, three, four, five—she just couldn't believe her good fortune. Life Magazine carried our picture because it's so unusual for a mother Emu even to lay an egg in captivity—much less hatch one. I'm the one standing alone—even in those days I was the independent type. (Photo by Herman Seid, Cleveland Press.)



(Armadillos)

We were just a few days old when they came to take our pictures. Sister wanted to be the whole show but I gave her a push with my nose. Our mother was sulking because we hadn't finished our dinner. OK, Mom, we're coming!



(Lion)

Here we were 2 months old, and our mother wasn't sure you were our friends. Although we still were not weaned, we had begun to acquire a taste for meat as we gnawed on bits of bone from our mother's supper.

Zoo in Review

(Continued from Page 2)

Museum has managed the enterprise, without compensation, as a public service.

Since 1942 the collections have been added to and virtually rebuilt from private funds. For example, an important contribution from the owners of The Cleveland Browns in 1949 made possible The Cleveland Zoo West Africa Expedition to secure gorillas and other living creatures from the French Cameroons in 1950. Again, the remarkable collection of East African animals in the Pachyderm Building resulted from The Cleveland Zoo East Africa Expedition in 1955, financed and led by Messrs. Frederick C. Crawford, Vernon B. Stouffer and Gordon A. Stouffer with Director Fletcher A. Reynolds, Technical Advisor and Fletcher A. Reynolds II as his assistant.

Other important gifts have come from numerous public spirited organizations and individuals, such as generous contributions made by the Hanna Fund for special needs; Pigmy Hippos from Republic Steel Corporation; Malayan Tapirs from The Cleveland Arena; funds to provide planting around the Water Fowl Sanctuary from Brooklyn Kiwanis Club, and many beautiful flowers, shrubs and trees from Mr. Leon Santamary. Indeed so many important gifts have been made to The Cleveland Zoo during the past fourteen years, not only for the enlargement of its collections, but for improving its physical plant and making it useful and attractive, that it is impossible to mention them, even briefly, in this Review, much as they deserve public thanks.

But, Like Abou Ben Adhem—"May Their Tribe Increase"!

May 1, 1956

AMPHIBIANS

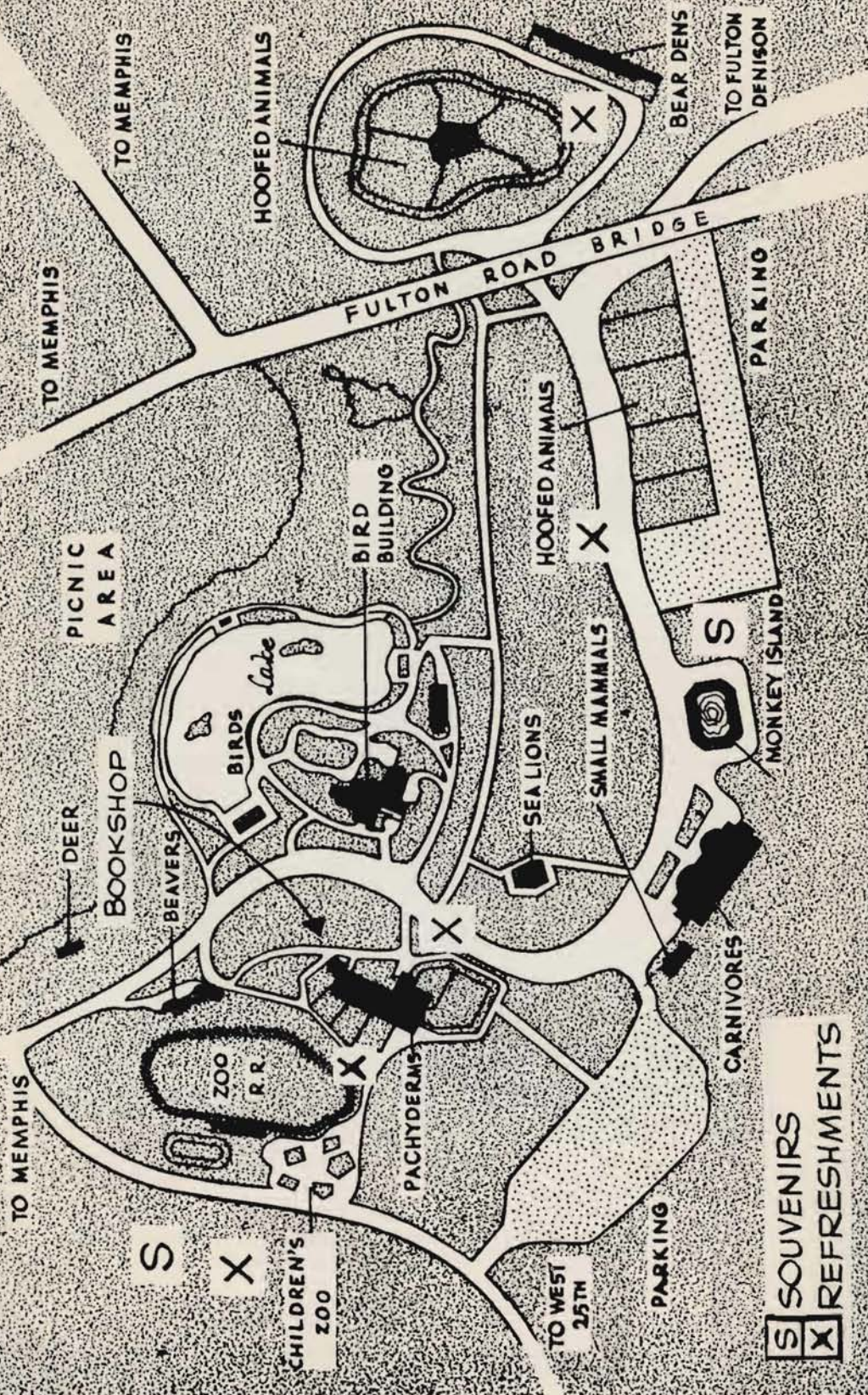
(Continued from Page 83)

Toads have warty, dry skin, but the old story that you will get warts if you touch them is untrue. Toads are easier to find than frogs and they do a lot of singing in the water, too. They are also great fly catchers, flicking their tongues out with great dexterity.

Toads are widely distributed in the torrid and temperate zones. They range in size from the half-inch OAK TOAD of southeastern United States to the very rare GIANT BLOMBERG'S TOAD from South America, which reaches a length of 15 inches or more.

Salamanders are often mistakenly called lizards because of their close resemblance. Salamanders have smooth, slimy skins, no scales and no claws. They are dependent on moisture, and are found under stones and damp boards and in springs and brooks.

They range in size from the GIANT SALAMANDER of Japan, sometimes five feet in length, to the tiny RED-BACKED SALAMANDER.



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