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Leopard

The Animal Kingdom

Large Mammals

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The Rhinoceroses

The rhinoceros, a huge ungainly creature, is actually, or comes close to being, the second largest of all land mammals (the African elephant is the biggest; the hippo vies with the rhino for second place).

Consequently, it is hard for our minds to accept the fact that the rhinoceros, sizable as it is, can rate only as a miniature, compared to one of its ancestors. Millions of years ago *Baluchitherium*, a hornless rhinoceros, had its heyday. This giant of central Asia stood seventeen feet nine inches at the shoulder and measured thirty-four feet from the tip of its big nose to the end of its tail!

However, the rhinoceros is no midget. Its great bulk renders it practically immune to attack by lions, tigers, and other natural enemies. We might think, then, that the rhinoceros would be a contented, not to say complacent, creature. Not so!—though generally non-aggressive, to be sure, this hulking mammal is surly and unreliable in temper. When suddenly confronted with danger, it is apt to charge without provocation. Given time to digest the situation, it will usually seek safety in flight.

Why does the rhinoceros tend to charge on sudden impulse? We do not quite know. It has fairly acute senses of smell and hearing, but its eyesight is none too good. Perhaps the headlong dash of the rhinoceros is instinctive, handed down from an age when the flesh-eaters were more powerful and less discriminating when scanning for food. (The rhinoceros itself is a strict vegetarian, limited to green foliage, grasses, and the like.)

At any rate, some present-day observers

believe that the precipitate rush of the rhino may be due to curiosity, or perhaps its nearsightedness. Others claim that the animal is anxious to protect its young.

Today we find rhinoceroses only in the warmer parts of Africa and Asia and in Indonesia. But these behemoths, survivors of a bygone age when armed might was a determining factor in survival, once ranged over the entire Northern Hemisphere. The woolly rhinoceros, a prehistoric creature that lived millions of years ago in northern Europe and Asia along with the woolly mammoth, has been discovered in a remarkably good state of preservation, frozen in the Arctic ice. This find was uncovered in Siberia in 1931.

The rhinoceros is a great, clumsy beast protected by a thick, scantily haired hide. Its legs are on the stubby side and its three-toed feet are shod with a broad, horny, compact sole. Its massive head is concave in front.

This head is armed with one or two horns that continue to grow throughout the rhino's life. We might plausibly suppose that the horn is connected to the skull by means of a bony core. The fact is, though, that the horn is merely an outgrowth of the skin, and is composed of a well-consolidated mass of hair. It is the horns that give these creatures their family name (Rhinocerotidae—"nose horns").

The rhinoceros is considered a good swimmer. It loves to wallow in mud and bathe in dust to rid itself of ticks and other skin parasites. Some birds make a practice of picking over the head or back of the



Reticulated Giraffe

Black
Rhinoceros

Pigmy Hippopotamus

animal, and are even enterprising enough to enter the rhino's ears in search of these insect pests. Tick birds also act as lookouts, giving warning of approaching intruders by their noisy, scolding chatter.

The African Black or Hook-lipped Rhinoceros, *Diceros bicornis* ("two-horned"), is the common species of Africa. Standing five feet at the shoulders, a full-grown male may weigh as much as three thousand pounds. Its upper lip, extended into a point, is prehensile for grasping twigs and leaves and drawing them into the mouth.

This rhino, as we can tell from its name, has two horns; it sometimes happens that females have longer horns than the males. As a rule, the front horn is the longer of the two, the record length being fifty-three and a half inches. The average length, however, is about half that much.

There is no doubt that the black rhino has an excellent notion of local geography, and a sense of smell that is keen without being on a par with the elephant's or the buffalo's. Likewise its sense of hearing serves it well; but when it comes to vision, this animal, like all its cousins, scarcely sees any better than a nearsighted man without his glasses.

Certain African natives kill the black rhinoceros with their elephant spears. (Interestingly enough, they fear it nowhere near as much as they do the elephant.) The rhino's tough hide, half to three-quarters of an inch thick, makes splendid fighting shields; the natives bleach it almost white. As for the rhino's flesh, it is, as you might expect, coarse grained and rather tough. However, the Africans pound it with stones till it becomes fairly palatable. They consider the liver a great delicacy.

The black or hook-lipped rhinoceros usually has a home territory about ten

miles in diameter. Inside this area there must be a water hole or other drinking place. If the water dries up, the beast will find a fresh supply somewhere else. It usually goes for a drink about midnight, but there is no fixed time. Although early morning and evening are the times of greatest activity, the black rhino may be abroad any hour of the day or night. It is an unsociable creature, and it is a rare occasion when we find more than two or three individuals (including a calf) together.

There was a time when the black rhinoceros was common over most of Africa south of the Sahara; today it is plentiful only in East Africa. Though steep, rocky hill country is the ideal habitat for this animal, the author has often seen it on the plains. Like other members of its family, this rhino makes a ritual of rolling in the dry dust bowls. It is never so happy as when wallowing in soft, wet mud. Narrow, winding trails of the rhino lead in all directions from the wallow back into the bush.

Primarily a browser, the rhino feeds on the shoots and leaves of low bushes; it is also partial to twigs, as well as herbage and some long grasses. It does most of its feeding during the early morning, late evening and night.

Despite its short legs and great body, the rhinoceros can keep abreast of a car going twenty-eight miles an hour. Charging, the animal can do thirty-five miles an hour. Just as we would expect, it is not quick in turning, and it is easy to dodge a charging rhino—if you do not get panic-stricken.

There is one creature to which the rhino always courteously concedes the right of way—the elephant. The chances are that it has learned from long experience to respect its formidable associate of the African veld.



Great Indian Rhinoceros
The largest rhinoceros of Asia.

There is no fixed mating season for the black rhino. Reproduction is slow in this family, the young being born about eighteen months after mating time. There is usually one calf, weighing about seventy-five pounds. After a few hours, it is able to follow its mother around. But though the calf is quick to obtain the mother's care, it is slow to relinquish it. The youngster is suckled for about two years, and continues to stay with her until more than half grown. The mother will not mate again while she has a calf with her.

The life expectancy of the black rhino in the wild state is probably not over twenty-five years. A captive animal lived to the age of forty-seven.

The White Rhinoceros, or Burchell's Rhinoceros, *Ceratotherium simum*, is also known as the square-lipped rhinoceros. It is the biggest of all the rhinos. Standing six and a half feet at the shoulder, the white rhino weighs up to four tons. Despite its bulk, this giant, like the elephant, has an uncanny knack of slipping silently away, even in dense thickets.

Among the white rhinos, both sexes have two horns, the front one being about twice the length of the rear one. It is not unusual for the front horn to measure three feet in length; the recorded maximum is five feet.

Actually, the colour of the white rhino's hide is smoky grey. View it by bright moonlight on the grassy plains, however, and the animal really appears white; so perhaps its name is not so inappropriate as many highly critical observers have claimed. In any event, the normal tone of the skin is somewhat obscured by the colour of the mud in which the rhinoceros wallows ecstatically.

The white rhinoceros seems mild tempered and slow compared to its more nervous and highly irascible black relative; and it is correspondingly less likely to charge blindly at a possible foe. It is more sociable, too. White rhinos frequently gather in parties that include a bull, a cow, and calves of assorted ages.

When feeding, the white rhinoceros moves slowly upwind as it grazes during the cool early morning and evening hours; during the heat of the day it slumbers peacefully under the ample shade of a tree. When disturbed, this ungainly beast makes off at a swift trot, its nose close to the ground. Pressed for speed, it will break into a gallop and keep up a fast pace for quite a distance.

It is estimated that the female white rhino has her baby about seventeen or eighteen months after mating time. Occasionally a cow will have twins, but such instances are rare. A calf is mature at about five or six years, and is then ready to breed.

Unlike the black rhino's calf, which tags along behind its mother, the white rhino's calf precedes the cow. The youngster is steered in the right direction by the pressure of the maternal horns on its

rump. When a cow, accompanied by its young, is shot, the calf will charge the intruder—just as the baby elephant does in the same pitiful plight.

Today the white rhinoceros dwells in a comparatively limited region in Central Africa. Formerly common on the grassy prairies of South Africa, this rhinoceros had practically been eliminated there at the turn of the century, with a few survivors left to enjoy the protection of the game preserve in Zululand, Natal. Strangely enough, there are no white rhinos in the area lying between the northern and southern limits of its range.

The Great Indian Rhinoceros, or One-horned Rhinoceros, *Rhinoceros unicornis*, is the largest rhino found in Asia. A big male may stand slightly more than five and a half feet at the shoulder and weigh about two tons or more. These creatures haunt the great plains of northern India, Assam, and Nepal, where the giant grass grows to a height of fifteen or twenty feet. Here the Indian rhino lives among the grassy runways like an enormous field mouse!

Both male and female are equipped with a single horn. It rarely exceeds a foot in length—though some rare specimens measure up to twenty-four inches.

The Indian rhino's thick hide is folded into plates or shields, hinged at the joints and studded with small rounded lumps which—by a slight stretch of your imagination—can pass for rivet heads. This beast is often described as the "iron-plated rhinoceros," and, imaginatively speaking, it does look as if it had been put together in a machine shop. The skin, dark grey in colour, is practically hairless—aside from a fringe on the ears and at the end of the tail.

The Indian rhinoceros is likely to show extraordinary fits of temper without the

least provocation. At such times it rushes about, uttering loud grunts, trampling down the bush, and cutting deep furrows in the ground with its horn. In the course of one of those seemingly meaningless displays of anger, it will furiously assault any moving object.

Even large bull elephants are not safe from the violence of this ill-tempered beast, and in the ferocious battle that ensues, a big tusker may acknowledge defeat and make a hurried retreat. In such duels the rhino is more likely to slash with its teeth than strike with its horn—the teeth are more effective weapons against the elephant's tough hide.

The female rhinoceros, despite these occasional ugly outbursts, is all sweetness toward her calf and very solicitous for its welfare. In the midst of her protective fury against intruders, she may suddenly decide that discretion is the better part of maternal care, and prudently lead her calf to safety in flight.

The young rhino is born about eighteen or nineteen months after its parents have mated. A newborn calf is about two feet high at the shoulder and weighs between 75 and 120 pounds. Born in a very advanced stage of development, the youngster is able to follow its mother soon after birth.

The Javan or Lesser One-horned Rhinoceros, *Rhinoceros sondaicus*, reminds us in many ways of its great Indian cousin. However, the Javan variety is more slender and smaller, with a shoulder height of about four feet six inches, and a weight of over a ton. It has only one horn, which may be as much as ten inches long in the male. A few females are hornless; most have a very small horn.

The Javan rhino's skin is cracked into a mosaic pattern of scalelike discs, and the folds on the foreshoulder meet over

Two-horned Rhinoceros

the back of the lower neck. These folds in the Indian rhino curve backward toward the rear of the shoulder and do not meet.

Originally found in Burma, Assam, Indo-China, and through the Malay Peninsula to Sumatra and Java, the Javan rhino has been exterminated over most of its former range. It favours thick jungle and marshland, but it has also been found in forested mountain country.

The Sumatran or Asiatic Two-horned Rhinoceros, *Dicerorhinus sumatrensis*, is the smallest of the living rhinos, rarely exceeding one ton in weight and four and a half feet in shoulder height. This animal has two horns, one in line behind

the other. The front one is the larger of the pair, reaching a length of fifteen or twenty inches in the male. The rear horn, placed between the eyes, is seldom more than seven inches long. The females' horns are smaller.

The Sumatran rhino often goes by the name of "the hairy rhinoceros"—the hair is hard to see but can easily be felt by hand. The newborn are covered with thick brown hair, which disappears in time.

Like the Javan rhinoceros, this beast frequents thick forest and bamboo country, where it leaves well-worn trails between wallows. Today the Sumatran rhino dwells in Sumatra, Borneo, and the Malay Peninsula.

African Black Rhinoceros

This shows well the enormous power and considerable speed of the rhinoceros. The photograph was taken as the infuriated animal tried to ram a fast moving lorry.



The Even-toed Hoofed Mammals

Although pigs have hoofs, these are not the same as the horse's or rhino's. Pigs belong to the large group of even-toed hoofed mammals. As we have seen, the term "even-toed" does not refer to the *number* of toes. These creatures have no first toe at all, and the second and fifth toes are often lacking as well. Where the second and fifth toes are present, they generally serve no major purpose.

So it is the third and fourth toes that matter, and that is why these animals are called "even-toed." On solid ground it is these toes that support the weight of the body. All the members of this order are called the Artiodactyla, a word meaning "even-fingered."

The group is in turn divided into three smaller sections, or sub-orders. These are:

The Suiformes—the ones that do not chew the cud: the pigs, peccaries, and hippopotamuses.

The Tylopoda ("knobby feet")—primitive ruminants, or cud-chewers, that have tusklike outer incisor teeth as well as canines in the upper jaw. In this group we find the camels, dromedaries, llamas, alpacas, vicuñas, and guanacos.

The Ruminantia—these are the true ruminants, that have no teeth at the front of the upper jaw. In this group are

all the animals that have paired horns or antlers supported by bony outgrowths of the skull: all the deer, antelopes, sheep, goats, cattle, and giraffes.

Of course it is not because they have horns or antlers that we call these animals ruminants. That word simply means that the creatures to which we apply it chew the cud. Their stomach, instead of being a simple compartment, is divided into a series of three—sometimes four—chambers. The first one is called the rumen (whence the group name). A ruminant has the advantage over other kinds of animals of being able to swallow large quantities of food quickly and store it up in the rumen. At leisure, the ruminant brings the food back up into its mouth and chews it thoroughly so that it can be digested easily.

It is interesting to observe how a ruminant chews its cud—the undigested food brought up from the stomach. As the animal chews, the lower jaw moves from side to side, but only the teeth at one side of the jaw are in contact at one time. After a brief period, the cud is shifted over to the other cheek and milled on that side for a while.

With these distinctions in mind, we may turn back to the pigs.

Even-toed Hoofed Mammals: I

Pigs, Peccaries and Hippopotamuses

Have you ever observed a pig's snout? It is more remarkable than might be supposed. The snout is used to push, to lift, to dig and to break through tangled brush.

Such tasks call for an exceptionally durable organ, and the pig's snout answers that description well. At the end of the long, flexible muzzle the nostrils open on