The Black rhinoceros (*Diceros bicornis*). *Photo: Zoological Society of London.*

THE RHINOCEROS

By R. W. HAYMAN

"FIRST-TIMERS" at the Zoo are always exciting news, and the arrival last year of a young pair of white rhinoceroses from Uganda was doubly interesting because of the rarity of the animals, as well as the fact that this species had never been exhibited before in this country. It is only quite recently, in fact, that the first white rhinoceroses to be exhibited (in modern times) were secured by the Pretoria Zoo, while another pair came to Antwerp three years later, in 1949. The qualification "in modern times" is used advisedly, since it now seems clear that the Greeks and Romans were much more familiar with this species than we are. There is good evidence that it was imported in numbers, through Egypt, for the spectacles and games.

Perhaps the most astonishing fact about rhinoceroses is that they should have survived to the present day, to the age of the jet and the atom. Possibly no other mammal alive better looks the part of a survival from ancient times; the great unwieldy bulk, the naked wrinkled skin (sometimes in folds like armour plate), the ponderous head with grotesque horns balanced on the nose, all combine to present a picture of an animal that has changed little from olden days.

We are living in an age which seems likely, on present trends, to see the last of a line of creatures which, when the earth was much younger, roamed the forests and plains of Europe, Asia, Africa and North America in a great variety of forms. One of these, the giant *Baluchitherium*, was probably the largest land mammal that has ever existed; it was taller at the shoulder than the biggest African elephant. The only survivors today of this ancestry are five species, belonging to four genera, living in parts of Africa and S.E. Asia.

The diversity of these five suggests that they represent the tail-end of divergent lines of ancestors. Like many other creatures of long lineage, they seem unable to change with a changing world, and the past century has seen a devastating reduction in their numbers in all their former haunts. Most of those alive today owe their continued existence to the selfless efforts of those who have toiled often against disheartening trends, to ensure them a safe refuge from man's direct attack, or the more insidious indirect attack through the destruction of their habitat for settlements and cultivation.

There has never been a satisfactory reason given for the terms white and black for the two African species. Both animals are essentially alike in the dull grey colour of their skins, but it has been suggested that when the Boer settlers crossed the Vaal River and first met the bigger species, they may

The pair of White rhinoceroses, the first to be exhibited in this country, photographed in the London Zoo. *Photo: Fox Photos.*

have seen them plastered with light mud from their wallows. Hence the term "white rhino". So the story goes.

Another suggestion is that "white" is a corruption of the Dutch "wijd", meaning wide or broad, an allusion to the broad square mouth. The alternative names square-lipped and hook-lipped for white and black animals respectively are less well-known but more accurate. The shape of the mouth indicates the very different feeding habits of the two animals. The white rhinoceros, with its square broad lips, grazes, with head normally hanging low; the black, with hooked prehensible upper lip, holds its head higher as it browses on leaves and scrub. The former is only found in the more open savannahs where grass is plentiful; the latter inhabits the more arid scrub and bush, and has a much wider distribution today.

The white rhinoceros survives at the present time in two parts of Africa only. In the Mfolosi Reserve in Natal about 550 animals were counted in 1948. Formerly vast numbers roamed the plains of southern Africa, but fell before the guns and greed of the hunters as inevitably as the bison of North America. The meat was said to be delicious, the hide had many uses, and the horns commanded a ready sale for export to the Far East, where an implicit faith in their medicinal value led to constant demand at a high price. The animals were unsuspicious and were easily killed.

A Mystery

One of the mysteries of African zoogeography is the wide gap between the northern limit of the South African white rhinoceros (*Ceratotherium simum simum*) and the southern limit of the northern form (*C.s.cottoni*), which only became known to Europeans in 1900 and was not scientifically described until 1908. No members of this species have been known from Kenya or Tanganyika, so that the discovery in the regions west of the Nile in Northern Uganda and the Sudan of another form led to no little stir. Since that date it has been found that the territory occupied by this animal extends westward from the Upper Nile along the borders of the north-east Belgian Congo and the south-west Sudan into French Equatorial Africa. In some parts of this range it has been greatly reduced by hunting, but in the east it still exists in fair numbers, and in Uganda has increased in recent years under strict protection.

A few facts about the white rhinoceros: it is (if larger than the Great Indian rhinoceros, as is believed) the third largest land mammal existing. The weight of a big male has been given as about two tons; a big male Indian elephant is known to weigh about 3¼ tons. It stands up to 6 ft. 6 ins. at the shoulder, and is about 15 ft. long from nose to root of tail, which is about another 30 inches. The front horn has a record length of 62¼ ins. in the southern race, 45¾ in the northern. The second horn is often quite small.

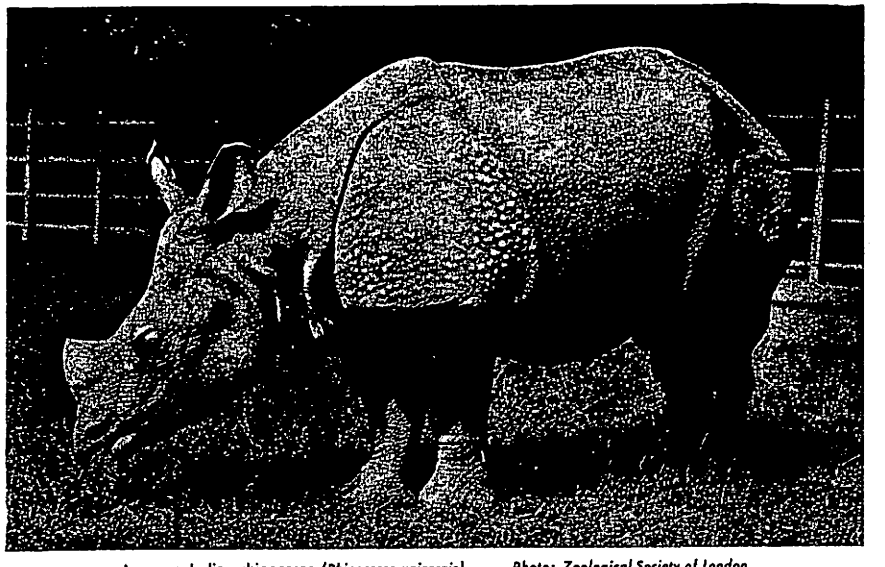
Horn composition

As in all rhinoceroses, the horn is composed of a dense mass of closely packed fibres growing from the skin, and supported by a raised boss on the nasal bones of the skull. The horn has no attachment to the skull itself and is easily separated from the skin by a sharp knife. The hump on the neck, just forward of the shoulders, is one of the features of this species. In captivity, unfortunately, the horns of all rhinos are usually worn down to a mere stump by rubbing on walls and tree stumps. No rhinoceroses associate in herds, but a family party of the white species consisting of parents and three young at different stages has been seen.

The gestation period is believed to be about 18 months, and a single young one is born. Growth in the early stages is comparatively rapid. The young animal in the Pretoria Zoo, whose exact age was known, weighed 105¼ lbs. at 14 days, 1,013 lbs. at 18 months. It is believed that they may live up to 50 or 60 years. All rhinoceroses are short sighted but have good ears and scent. Both African species are without front teeth and use their horns in attack or defence.

The black rhinoceros

The black rhinoceros (*Diceros bicornis*) is a smaller beast of a different temperament. Unlike its placid relative, it has the reputation of being uncertain in its behaviour, and is just as likely to charge blindly at anything trespassing on its territory as to run away. In 1685 one charged and upset the Governor of



A young Indian rhinoceros (*Rhinoceros unicornis*). Photo: Zoological Society of London.

the Cape's coach, and in our own times cars and lorries have been badly battered in encounters in East Africa.

This species stands about 5 ft. 6 ins. at the shoulder, and can weigh up to 1¼ tons. Its length is about ten feet without the tail. The front horn record (from a female) is 53½ ins., but anything over 30 ins. is reckoned good. A specimen with a well-developed third horn behind the second is known. The black rhinoceros formerly ranged from the Cape to Abyssinia and Somaliland (outside the Congo forest region), and westward to Nigeria.

It has almost entirely disappeared from S. Africa; a few survive in the white rhinoceros reserve in Natal, and some in the Kruger National Park, but elsewhere it is still reasonably common only in parts of Tanganyika and Kenya. In the latter country, quite recently, the Game Department had to destroy officially about 1,200 rhinos in one year in 600 square miles of thick bush intended for native settlement. Wherever human interests come first, the unfortunate rhino has to go.

The three Asiatic species belong to two quite different genera, both distinguished from the African forms by, among other characters, the presence of incisor teeth. The genus *Rhinoceros* includes two species, the Great Indian, *R. unicornis*, and the Javan, or lesser one-horned, *R. sondaicus*. Apart from the single horn, both species have the skin arranged with deep folds crossing the sides of the neck, behind the shoulders, and over the hindquarters. The Indian is the second largest species of rhinoceros, and is probably very slightly smaller than the white. It is said to reach 6 ft. 4 ins. at the shoulder and 14 ft. in length. The horn can reach 24 ins., but 15 ins. would be considered good. After the African black, this is the rhinoceros most often seen in zoos. It has been known to live 47 years in captivity. The heavy folds of its skin give it an armoured appearance like some prehistoric monster.

Formerly ranging from N.W. India to Indo-China, it now survives only in reserves in the Nepal Terai, in N. Bengal and in Assam. About 350 individuals are believed to exist today, about 150 of them in the Kaziranga Sanctuary, Assam, where visitors are taken to see them by elephant. On foot it would be almost impossible to catch a glimpse of them in the tall elephant grass which they favour. Incidentally, they fight

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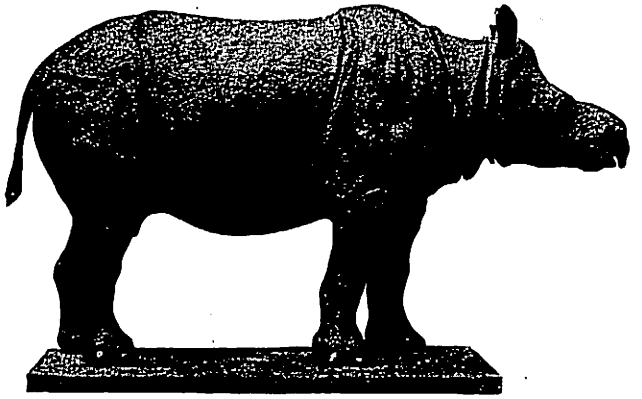
concluded

among themselves by using like tusks the sharp lower incisors, and will sometimes attack the visitors riding elephants in the same way.

The Javan rhinoceros is smaller, under 5 ft. 10 ins. at the shoulder, the female somewhat less. The skin, whose folds are arranged in a different fashion, is remarkable for the mosaic effect produced by its pattern of scale-like polygons, separated by cracks. Its status is more precarious than that of any other species. It formerly ranged through Bengal, Assam, Burma, Siam, Malaya, Sumatra and Java, but now the only animals known certainly to exist are about 40 to 50 in a forest reserve in the west of Java. The horn does not exceed ten inches in the male, is usually less and is generally absent or vestigial in the female.

The last Asiatic species is the only two-horned rhinoceros outside Africa, the Sumatran, *Dicerorhinus sumatrensis*. Apart from the two small horns, which are not known to exceed 15 inches and are usually much less, it is characterized by its small size, about 4 ft. 4 ins. at the shoulder and rather hairy coat, particularly when young. It is purely an animal of deep jungle, and in Malaya goes well up the mountain ranges; its habitat is such that it is likely to survive for some time yet. It is also found in Sumatra and Borneo (where it is the only rhinoceros), and a closely related form, probably a subspecies, *D. s. lasiotis*, inhabits suitable areas in Assam. In this the ears are particularly hairy.

The most fortunate thing for the future of rhinoceroses in general would be that the advance of knowledge would dispel once and for all in China the stubborn belief in the efficacy of rhino horn, skin and dried blood in the treatment of sundry ills and complaints. Once the continuous hunting and poaching pressure was ended it might be possible for the remnants of these extraordinary animals to hold their own, provided always that man does not throw covetous eyes on the wildernesses they now occupy.



A preserved specimen of the rare Sondaic or Javan rhinoceros (*Rhinoceros sondaicus*) (Photo: Zoological Society of London).

An aerial view of a herd of Cape buffalo accompanied by Cattle egrets. Photo: Paul Popper.

THE CATTLE EGRET

By J. J. YEALLAND

THE Buff-backed heron (*Bubulcus ibis*) is commonly known as the Cattle egret from its habit of following cattle and other large grazing mammals, sometimes perching on their backs, but more often stalking around their feet in order to catch grasshoppers disturbed by them.

About the towns in West Africa this egret is also seen in attendance on natives engaged in grass-cutting with machetes, but on these occasions the birds wisely stand at a respectful distance.

In addition to grasshoppers and other insect life, the birds feed on ticks (being known in some places as Tick-birds), lizards and, in swamps or along the banks of rivers, frogs, small fish and other water life. Grass fires provide food in the form of various small creatures fleeing from them.

The Buff-backed heron is widely distributed in Africa, Madagascar, the Comoro, Aldabra and Seychelle islands; is also inhabits the Iberian peninsula and parts of south-western Asia. In recent years it has spread to north-eastern parts of tropical South America where it is now well established.

A race, the Indian Cattle egret (*B. i. coromandus*) ranges over a wide area of south-eastern Asia.

In West Africa, at least, there are seasonal movements of some birds. Bates records that "A few Buff-backed herons migrate every year, still further south, across the Forest; for some used to appear at my place in November and again in May, using that small cleared island in the sea of forest as a halting place, and astonishing my goats by the familiarity of their manners."

Nesting takes place in the tree-tops, large numbers of the birds congregating together, sometimes in company with other tree-nesters such as Little egrets, Glossy and Sacred ibises and Abdim's storks. The nest is composed of twigs and the eggs, generally three to five in a clutch, are of a pale bluish-white. Roosting is also communal and in some places trees in or near villages are occupied.

This is one of the smaller herons, of mainly white plumage, but in the breeding season both male and female are adorned with long pinkish-buff plumes on the crown, upper breast and back. These are replaced after the breeding season by much paler and shorter feathers, those of the male being only slightly tinged with buff and the female being entirely white except for the crown.

Bubulcus ibis is on the British List as a very rare visitor. A footnote in the "Handbook of British Birds" records that between 1929 and 1939 large numbers of the Indian Cattle egret were released at Whipsnade and elsewhere, and these strayed to many parts of the country and beyond, causing confusion among observers because of the great similarity between immature birds of the two forms. Latterly those released at Whipsnade were ringed.