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Rhino Fact File

AFRICAN RHINOS

There are two kinds of rhinoceros in Africa – the black rhino and the white rhino. There are approximately 4000 black rhino and 20 000 white rhino surviving in the wild.

Black rhino

Black rhino (which are actually grey in colour) are browsers, using their pointed upper lips like a miniature elephant trunk to twist off low-growing branches of trees and shrubs. Their pointed upper lip is an easy way to distinguish them from white rhino, which have square wide mouths. Black rhino are also smaller, faster and more solitary than white rhino. They are unfairly reputed to be bad-tempered, but are actually just shy and inquisitive. They will run towards anything unusual in their surroundings, but usually run away if they smell humans. Even so, if a black rhino is encountered in the wild, you should climb the nearest tree or stand very still. Encounters between neighbouring black rhino are rarely aggressive except when males are competing for a female. Some individual rhinos are very nervous and a female with a calf will charge anything she considers a potential threat. Rhinos have poor eyesight but a good sense of smell and hearing.

Diceros bicornis grows to 1.6m tall, weighs up to 1 400kg and has two horns. The species occurs in savannas and deserts of eastern and southern Africa. Black rhino are the fastest kind of rhino with a top speed of 55km/ hour. They eat woody trees, shrubs and herbs.

Black rhino subspecies

There are three subspecies of black rhino, although the physical differences are not great:

- *Diceros bicornis minor* (slightly smaller than the others, mainly found in South Africa and Zimbabwe)
- *Diceros bicornis bicornis* (large, adapted to arid and desert conditions, found in Namibia)
- *Diceros bicornis michaeli* (have rib-like corrugations down their body, found in Kenya, most aggressive of the black rhino)
- *Diceros bicornis longipes*, of which a few had survived in Cameroon, recently went extinct.

White rhino

The name of the white rhino is often said to be a corruption of the Dutch word “wijd” meaning wide, to describe the shape of its mouth, although the true origin of the names “black” and “white” rhino remain unclear. *Ceratotherium simum* (white rhino) grows to 1.8m and weighs over two tons. It is second only to the African elephant in the size of land mammals. It is a grazer and lives in social groups. White rhino occur in savanna bushveld of southern Africa and in north-eastern Democratic Republic of Congo. They mainly eat grass and are the most abundant rhino species. About 11650 occur in Africa. They have two horns.

How to distinguish between black and white rhino in the wild

Black rhino are more likely to be solitary and are shyer, keeping to thicker bushy areas. White rhino tend to be in groups. Black rhino have short necks and hooked lips which make browsing branches easier. White rhino have long necks and wide mouths for eating grass.



ASIAN RHINOS

There are three kinds of rhino in Asia, all of which are endangered.

Greater Indian one-horned rhinoceros

Rhinoceros unicornis is very large, up to 2m high at the shoulder, and weighs nearly three tons. It occurs in north-eastern India and southern Nepal. This rhino eats mainly grass and reeds (but will also eat the rice, lentils, mustard and maize crops of people living around their swampy habitats). They have canine teeth and can fight ferociously. Although still endangered, they are the least threatened of the Asian species as populations have increased with good protection and translocations to re-establish populations in areas where they went extinct.

Javan/ lesser one-horned rhinoceros

Rhinoceros sondaicus or Javan/ lesser one-horned rhinoceros is the rarest of the rhinos. It weighs up to 1400 kg and can be 3.5 m long and 1.7 m at the shoulder. Once found throughout Thailand, Burma, Vietnam, peninsular Malaysia, Sumatra and Java, there are now very few surviving, in Java and Vietnam. They live in lowland and riverine jungle.

Sumatran/ two-horned Asian rhinoceros

Dicerorhinus sumatrensis is the hairiest rhino, especially when young. They grow up to 1.5m tall and weigh up to one ton. They inhabit mountains and forest at higher altitudes. Small relic populations occur in Vietnam and on peninsular Malaysia, Sumatra and Borneo, but numbers have been declining rapidly. Both the Javan and Sumatran rhino are threatened by poaching and habitat loss from logging operations and human settlement of land for farming.

AFRICAN RHINO ACTIVITIES AND BEHAVIOUR

Black rhino adults tend to roam within specific areas, called home ranges or territories. The size and location of ranges depend on the available food, water and shelter as well as on social interactions between rhinos.

Normally males will not be very successful in getting themselves a fixed range, or mating, until more than 10 years old. Mature dominant male ranges do not overlap very much. There may be other bulls living in or overlapping with mature bull territories. However these are almost always subordinate animals – probably younger than 15 years old. They tend to behave with deference in the dominant bull's presence. As the subordinates mature they may have to move away to find themselves their own territory, or try to one day displace the territorial bull. Fighting among bulls will increase as the number of males in an area increases and as the subordinates grow up and try to show their muscle.

Beyond one year of age, fighting injuries are the most common single cause of death other than killings by man. Poaching with firearms and snaring are the main causes of man-induced rhino deaths.

Old age is the next most frequent cause of death, and accidental deaths occur like falling off cliffs or into ditches, becoming wedged between trees or rocks, stuck in mud or drowning. Elephants have also been known to kill rhino. "Delinquent" behaviour by orphaned, introduced male elephants in particular has accounted for many rhino deaths.

Infant rhino have a higher chance of dying if poor nutrition affects the mother during pregnancy or lactation. These infants will succumb more easily to cold, disease and predation by hyena or lion. Mother rhinos tend to protect their calves fiercely.



Rhino get few diseases in the wild, except for anthrax. However, death can result from diseases under conditions of poor nutrition and/ or stress (caused, for example, by drought or habitat changes, or capture and captivity). They may then get sick from things to which they would normally be resistant (parasite overload, secondary infections in wounds, pneumonia, tick-borne diseases).

Rhino are host to many parasites. Black rhino carry a few tick species that are rhino specialists. Ticks are the cause of much of the determined rubbing on posts and stones undertaken by rhino. In Zululand and parts of east Africa, a filarial worm causes ulcerous skin sores on black rhinos' flanks and chest. In dry months of the year, these dry up and a crust forms on the outside of the sore, but in the wet season these become visible as big red open sores. This condition does not usually affect the rhino much.

Black rhino are mostly water-dependent and must drink at least every two to three days. When succulent plants form a large part of their diet they can go without drinking for longer.

Black rhino spend more hours walking and feeding than white rhino do as their browse food resources are more widely scattered through the landscape than the grass of grazing species'. A black rhino can walk for 20% of its daily feeding time versus 5% in white rhino. Black rhino do more of their feeding and drinking during the cool hours of the night than during the day.

Rhinos, as megaherbivores, lose body heat slowly relative to smaller animals so heat regulation is a key issue. Sweat glands on the skin aid evaporative cooling as does their hairlessness. But during hot weather they must select particular sites for keeping cool and resting. They favour the ridges of hills where they can catch a cool breeze, the shade of trees or thicket, or a muddy spot in a wallow.

Social advertising is important to rhino. They make use of dung piles or middens and scrapes (spray-urination sites) which become a prominent feature of any rhino's home range. The middens are used by more than one rhino and by both black and white rhino. Males use spray-urination to advertise their presence and mark their range.

Rhino use their horns for self-defence and attacking opponents or predators. White rhino groups stand in a circle facing outwards to form a barricade with calves near the centre.

ILLEGAL RHINO HORN TRADE

Unlike the horns of cattle, goats, sheep, deer and antelope, which grow from the skull and have bony cores, rhino horn is formed of keratin and gelatin which grow from the skin of the nose in a compacted mass on a corrugated mound of nasal bone. If cut or knocked off, the horns grow again.

Although trade in black rhino horn has been banned under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) since 1977, there is continuing consumer demand for it and inadequate enforcement of the law. Although enforcement efforts have improved significantly in some countries, powdered rhino horn is still used as an ingredient in traditional Chinese medicine said to reduce fever and other ailments. The main users are in China, Singapore, Malaysia, Taiwan, South Korea, Hong Kong, Vietnam and wherever Chinese communities live, including in the USA and Europe.

Yemen was once a major destination for rhino horn and was fashioned there into curved handles for ceremonial daggers known as *jambiyyas*. Much of the heavy poaching of Africa's rhino in the 1970s was a direct result of young Yemeni men working in Saudi Arabia during the oil boom and returning home wealthy enough to buy the decorative daggers. Subsequent economic difficulties and work by the government and organizations like WWF and TRAFFIC have reduced the number of rhino horn *jambiyyas* being traded. Yemen's religious leader has issued an edict declaring that the killing of rhinos is against the will of God.



THREATS TO RHINO

Poaching

Poaching is a major threat as a result of inadequate enforcement in some countries and continuing consumer demand for rhino horn products. Powdered rhino horn is still used in some Chinese traditional medicines, not as an aphrodisiac as is popularly believed, but primarily as a mild fever reducer.

In 2009, rhino poaching began to escalate after a relative lull since the dark days of the early 1990s. Poachers are well-armed and very dangerous. Many have military training. Poaching rings are run by international criminal gangs.

Poverty, wars, corruption and greed, land-hunger

Although the demand for rhino horn originates mostly outside of Africa, some of the greatest threats to rhinos come from within. These include poverty, wars, corruption, varying attitudes of politicians and local communities towards conservation, and hunger for land. In some areas, conservancies with rhino populations have been invaded. On the other hand, a community-owned game reserve in South Africa became a partner in the Black Rhino Range Expansion Project in 2007.

Genetics

When a population is small there can be a critical loss of genetic material through random events, such as too few females being born, or floods, fires, disease or poaching may reduce the number of reproductive females or males. Loss of reproductive capacity may follow so that the population grows smaller and smaller and continues to lose genetic viability until it enters an "extinction vortex": small size of populations leads to increased in-breeding, which leads to lower birth-rate and survival until eventually the population dies out. This is why it is essential to manage rhino populations for maximum growth rate.