

## The plight of the rhinoceros



Rhinoceroses are known for their distinct prehistoric, solid look. They are one of the oldest land mammal species in the world. They are herbivores, have small brains for mammals of their size, one or two horns, and a thick protective skin. The largest of them can exceed weights of one ton and are second only to elephants in shoulder height.

I became interested in them a few years ago when I went on a photo safari to South Africa with eight other people from all over the country. We all met in Atlanta, and the next day took a 17-hour, overnight flight to Johannesburg, South Africa.

We were met by our tour guides at the airport and piled into their van for a two hour drive to their private nature reserve, Chazen.

It was almost dark by the time we got there so we couldn't see much. We were tired and hungry but before we were taken to our lodge they gave us each two papers to sign.

One was basically a promise not to hold them liable if we were killed or injured by a wild animal.

The other was a promise to not disclose where we saw a rhinoceros if we saw one. We could say we saw rhinos in South Africa but not where. Nor could we geocache a photo of one on Facebook.





At the time it seemed like dramatic overkill to make us sign this document. I had read a little about the poaching problem, but it wasn't as if any of us middle aged ladies from the U.S. were likely to be in cahoots with the poachers. I've since learned however that poachers will follow social media to find their targets and many in my group were prolific Facebook posters.

So as a preface to this talk and some of the photos I will show you, I visited several nature reserves and parks on that trip and was lucky enough to see rhinos at one or more of those places but even today, I won't specify which places.



There are five or six types of rhinoceroses. Three of them are Asian.

Sumatran Asian rhinos are the smallest of the rhino species. They weigh between 1,000 and 2,000 pounds. And are about 3 to 5 feet tall. They are also the hairiest. Because of its hairy skin and other prehistoric characteristics the Sumatran rhino is considered the most primitive rhino species. It is the closest living relative to the woolly rhinoceros that lived in Europe and Asia during the Ice Age.

Sumatran rhinos can run fast and are very agile. They climb mountains easily and can negotiate very steep slopes and riverbanks.

In 1986 it was believed there could have been as many as 800 Sumatran rhinos remaining in the wild. Now there are fewer than 100. It is thought that their numbers declined dramatically about 9,000 years ago due to a climate shift. More recently widespread habitat loss as well as poaching has further decreased their numbers.

They live in dense tropical forests in both lowlands and highlands. Once found in many parts of Southeast Asia, they are now restricted to just a few sites on the islands of Sumatra and Borneo in Indonesia.



The Javan rhino is one of the rarest large mammals on earth. It exists only in Ujung Kulon, in western Java, Indonesia. The population has grown from 30 in 1967 to between 50 and 60 in 1980. Since then however population growth has been stagnant. The biggest threat to the Javan rhino is the very small size of the remaining population. This leads to inbreeding and loss of genetic variability and vitality. Although their current habitat is secure, it is much too small for long-term survival of the species.

Javan rhinos are comparable in size to the African black rhino. They range between 2,000 and 5,000 pounds. And stand at 4.5 to 5.5 feet tall at the shoulder.





The greater one-horned rhino was once almost hunted to extinction. The Mughal emperors of South Asia used them in fights against elephants as entertainment. The rhinos would often win. Thankfully, this sport is no longer practiced or permitted. With strict protection from Indian and Nepalese wildlife authorities their numbers have been brought back from under 200 last century to around 3,580 today.

Habitat destruction and loss are further threats as the greater one-horned rhinos live in areas with very fertile soil. They are semi-aquatic and often take up residence in swamps, forests, and riversides. They are good swimmers and will dive and feed underwater.

Greater one-horned rhinos are the second largest of the rhino species. They weigh between 4,200 to 7,100 pounds and are between 5.75 to 6.5 feet tall and 10 to 13 feet long.



There are two and some say three types of African Rhinoceroses.

The black rhinoceros was originally widespread and abundant over Africa. Some estimates put their number at over a million in 1900. Rampant poaching reduced the total population to about 2,400 by 1995. Since then conservation efforts have brought the numbers up to approximately 4,800. They now occupy a much smaller area though, mostly just in parks and reserves.

Black rhinos have small mouths with pursed lips that make it easy for them to feed on bush and tree leaves. They stand between 5 to 5.75 feet high at the shoulders and are between 11 to 13 feet in length.



Of all the lodges that we stayed at on that trip my favorite was the Black Rhino Lodge in Pilanesburg. The setting and accommodations were beautiful.

We went on five game drives while there, but we never once saw a black rhino.





The only rhinoceros I lucky enough to see on my trip was the Southern white rhino. It is the largest of the species. Only elephants are taller at the shoulder than white rhinos. Adults weigh between 3,750 to 7,940 pounds. They are 11.2 to 13.1 feet long and 5.25 to 6.10 feet tall at the shoulders.

White rhinos are not really white of course. Their skin is the same gray color as the black rhino.

All Rhinos love a good mud wallow. Mud wallows protects their skin from the sun, cools them off, and smothers parasites. After wallowing their skin inevitably take on the color of the local soil.



The name, “white” may have evolved from the word “wide” which is a description of their mouth. The wide mouth makes it easier for them to take in lots of grass. And the large humps on their backs makes it easy for them to hang their heads down for long periods of time as they feed on the grass.

Unlike most of the other rhino species who are usually solitary, the white rhinos are more sociable. They don't mind hanging out with other species and each other. All rhinos are herbivores though. When their area goes through a drought which is happening more frequently in Africa, they will fight for territory.



They frequently stand back to back in this classic pose which gives them a wider range of site and smell. This may be one of the reasons they are faring better than other rhino species. Rhinos do not have good eyesight, but there sense of smell is fantastic making them easier to approach from downwind.





Northern White rhinos are essentially extinct. There are only two females still alive in the world. The last male died in 2018 at the age of 45. His daughter and granddaughter survived him. They were able to harvest some sperm from him and some eggs from the females and now have two viable embryos. Of the females, one is too old to give birth and her daughter has reproductive tract problems. The plan is to implant the embryos into surrogate southern white rhinos in an attempt to save the species.

Adult rhinos have no real predators in the wild except humans. Mankind is the only reason they are going extinct. During the 19<sup>th</sup> century the black rhino, which was the most numerous at that time with several hundred thousand animals, was hunted relentlessly across most of Africa. By 1970 there were still an estimated 65,000 animals left.

Poaching pressure increased in the 1970's and 80's as a result of the rising demand for rhino horn in Asia and the Middle East. Between 1970 and 1992, the black rhino suffered a 96 percent reduction in numbers.

Rhinos are killed for their horns. That is the only part of the animal that is used. The horns are made up of keratin, the same type of protein that makes up our hair and fingernails. On the black market in South Africa the horn of a white rhino sells for up to \$3000 a pound, but in Asia it wholesales for five to ten times that, and retail prices can go up astronomically from there. This is a picture posted by Malaysian authorities showing a recovery of almost 10 million dollars worth of black market rhino horns.

In Yemen, the horn continues to be coveted by Muslim men, although imports were banned in 1982. The material is used for the handles of curved daggers called “jambiya,” which are presented to Yemeni boys at age 12. Jambiya are considered a sign of manhood and devotion to the Muslim religion, and are used for personal defense. Yemeni men place great value on the dagger handles, which are commonly studded with jewels. In China, the ornamental use of rhino horn dates back to at least the 7th century. Rhino horns have been carved into ceremonial cups, buttons, belt buckles, hair pins, and paperweights.

Far more pervasive, however, is their use in the traditional medicine systems of many Asian countries, to cure a variety of ailments. In Traditional Chinese Medicine, the horn, which is shaved or ground into a powder and dissolved in boiling water, is used to treat fever, rheumatism, gout, and other disorders. According to the 16th century Chinese pharmacist Li Shi Chen, the horn could also cure snake bites, hallucinations, typhoid, headaches, carbuncles, vomiting, food poisoning, and “devil possession.”



Overall there isn't much evidence to support any of these claims. In 1990, researchers at Chinese University in Hong Kong found that large doses of rhino horn extract could slightly lower fever in rats, but the concentration of horn given by a traditional Chinese medicine specialist are many many times lower than used in those experiments. Basically you'd do just as well chewing on your fingernails.

Dehorning is being tried to proactively stop poaching. The rhino is tranquilized then the horn is sawed off. At first glance it would seem that removing the horn would solve the poaching problem, but it is more complicated than that. In some places dehorning has lowered poaching losses by up to 29%, but in others it hasn't made a difference. A small amount of horn must be left on to avoid injuring the animal and that is enough for poachers to make some money. Also the poacher may not realize the horn is gone when they shoot a rhinoceros at night. There have also been reports that some poachers will kill a dehorned rhino for revenge or just so they don't waste time tracking that same rhino again. Dehorning is an expensive process. The horns do grow back and need to be continually removed. It also robs the rhino of their horns which are used in foraging and fighting for territory.

In 2011, the Rhino Rescue Project began infusing rhino horns with a mixture of pink dye and a tick poison which is safe for rhinos but toxic to humans. The dye only colors the inside of the horn, not the outside. The application is posted on signs and advertised to deter poachers. Some question the effectiveness though. Will the poaching syndicates care if their product has poison in it? The treatment needs to be reapplied every four years. And just like with dehorning the rhinos need to be tranquilized and some rhinos do not survive that.

All parks and nature reserves patrol for poachers, but the amount of land involved makes that difficult. We'd see fences when we first entered a park or reserve but rarely saw them during game drives. These vast tracks of land that give all the animals plenty of room for social distancing and establishment of territory also make tracking poachers very difficult.

The amount of poaching has gone down recently but still remains a huge threat to the survival of the species in the wild. There are reports that poaching has increased since the COVID-19 lockdowns. Reduced human presence has made it easier for poachers to move around unseen.

The tourism industry motivates and funds wildlife conservation across the continent. Guides and guards help monitor wildlife and poachers. The economic hardships caused by the lack of tourists at this time has reduced the number of park employees and made it easier for the international crime syndicates to recruit locals to do their dirty work.

Botswana is reportedly evacuating all the Black Rhinos in the Okavango Delta to an undisclosed location to try to hide them from poachers.

Tourism provides an economic incentive that make preservation of all the African animals important. On the other hand tourism has also probably made it easier for poachers to approach the rhinos. I was amazed by how close we got to some of the animals. At one lodge we were told to keep our windows closed if we didn't want to come back to find our rooms ransacked by monkeys.



Our big noisy jeeps did not seem to bother most of the wild animals. They were used to jeeps and not threatened by them at all.



These lions were taking their afternoon nap by the side of the warm road when we drove up to them.



They noticed us, but didn't move. The rangers are very careful to not disturb them by driving too close. The vehicles were completely open but we were told that as long as we kept our arms and heads inside, the animals would not attack us. They would just see us as one big ugly animal that was too big to attack and not a threat to them.



Elephants came the closest to us. They weren't bothered by the jeeps at all. The ranger would make sure there was plenty of room to pass us on both sides and the elephants would just keep coming and eventually move around us as they went about their business. This was a typical traffic jam in Africa.



It would be pretty easy for a predator to drive right up to these rhino. Getting to see the rhinos and all the other animals in their natural habitat was the trip of a lifetime for me.

During the evening game drives we would stop for a sundowner to toast the end of another wonderful day in Africa. I would like to propose a toast now to the end of another great, although unusual, year for our Torch Club. May we all meet in person again soon.