

The World's Most Trafficked Mammal : The Temminck's Ground Pangolin *Smutsia temminckii*

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Range and Habitat

Range:

The Temminck's ground pangolin is one of four African Pangolin species. *Smutsia temminckii* is the most widespread of the African Pangolins, native to eastern and southern Africa, ranging from South Africa up the eastern side of the continent to South Sudan and inland to eastern Chad.

- Temminck's Ground Pangolins each occupy a home territory which can span from six to fourteen square kilometers
 - Female pangolins will share territories with the previous year's offspring or with male pangolins when trying to breed

Habitat:

- Savannahs and woodlands where water is generally nearby
- Ground Pangolins are entirely terrestrial staying on the ground their entire life unlike their arboreal Asian pangolin relatives



Sociality and Reproduction



Temminck's Ground Pangolins are solitary mammals spending most of their life alone within their home territory. Pangolins are only found together when a female is looking for a mate or when she is still caring for the past year's offspring. Temminck's Ground Pangolins communicate to one another through scent. Pangolins use specialized scent glands to leave scent markers to outline their territory or to signal to potential mates that they are looking to reproduce.



← Scan here to see how Female pangolins carry their baby

Temminck's Ground Pangolins reach sexually maturity around 1-2 years old and only rear a single pup at a time.

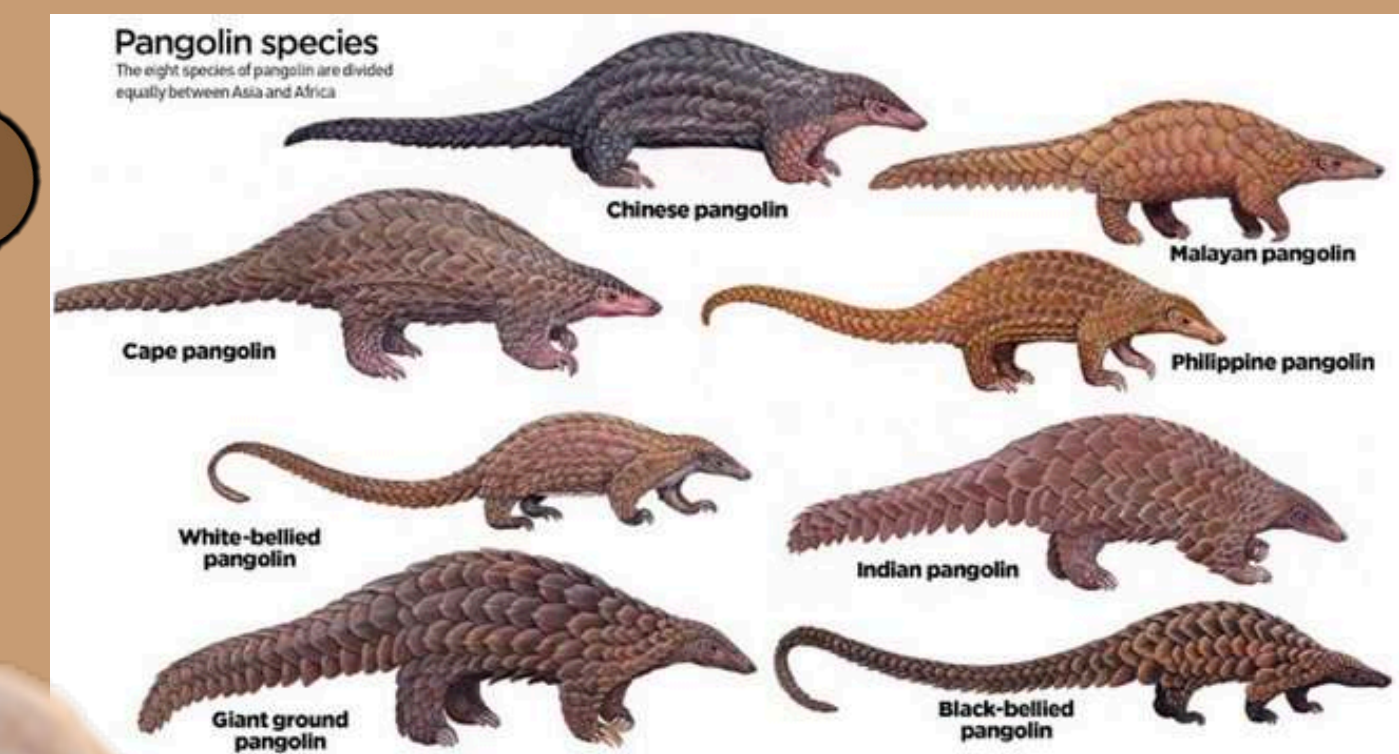


Conservation

The epidermal scales that cover the Pangolins body, are made of Keratin, the same thing that makes up our hair and nails. These scales make up roughly 20 percent of the Ground Pangolins total body weight and are heavily sought after to be used in traditional Chinese medicine to treat ailments ranging from Arthritis to menstrual pain. There is no scientific backing to prove these traditional practices being affective, regardless as of 2019, 2.7 million pangolins are poached each year for their scales and meat. In 2016 pangolins were given the highest level of protection under the Convention on International Trade in Endangered Species (CITES); this listing banned the commercial trade of all eight species of pangolin or any of their parts (scales). This protection, however, is not enough to save the pangolin. The ban is only implemented in 17/48 pangolin-range states and in order to protect pangolins from illegal trading more law enforcement is required. Additionally, a push for governments to discredit the myth that the scales of pangolins contain any medicinal properties is essential to decreasing the demand for pangolin products.

Evolution

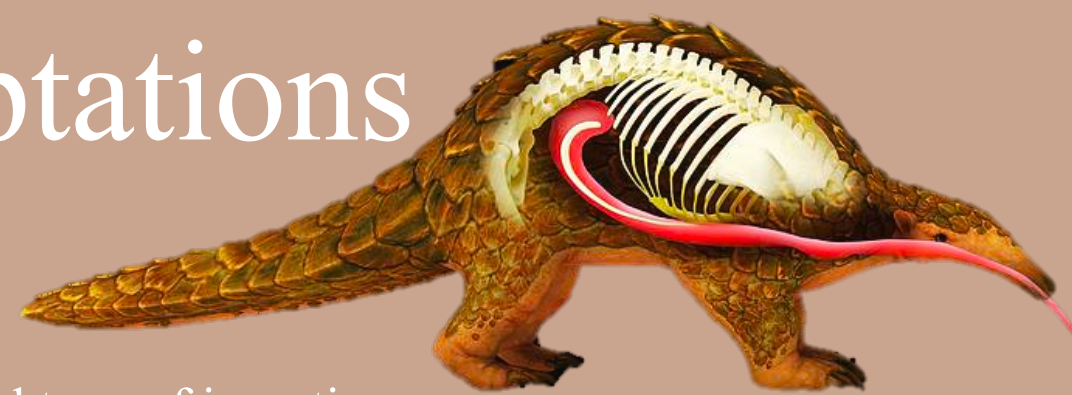
The Temminck's Ground Pangolin is one of eight species of pangolin which exist today throughout Africa and Asia. All eight species are of the family Manidae and the order Pholidota. Manidae is the only family within this order, pangolins closest relatives diverged from carnivora and are described to be bears, hyenas, and wolves. Carnivora existed 60 million years ago and given Pholidota diverged from Carnivora, *Smutsia temminckii* along with the other pangolin species have had an extensive amount of evolutionary time to fill niches and specialize to them.



Pangolin comes from the Malay word, "pēngulin". This translates to "roller", which describes their ability to roll.

- Harvard Museum of Natural History

Physiological Adaptations and Diet



Diet: The Temminck's Ground Pangolin is a specialized type of insectivore that feeds exclusively on ants and termites, referred to as Myrmecophagy. All eight species of pangolin share this specialized diet and have unique adaptations to help them be incredibly successful.

Adaptations for Feeding:

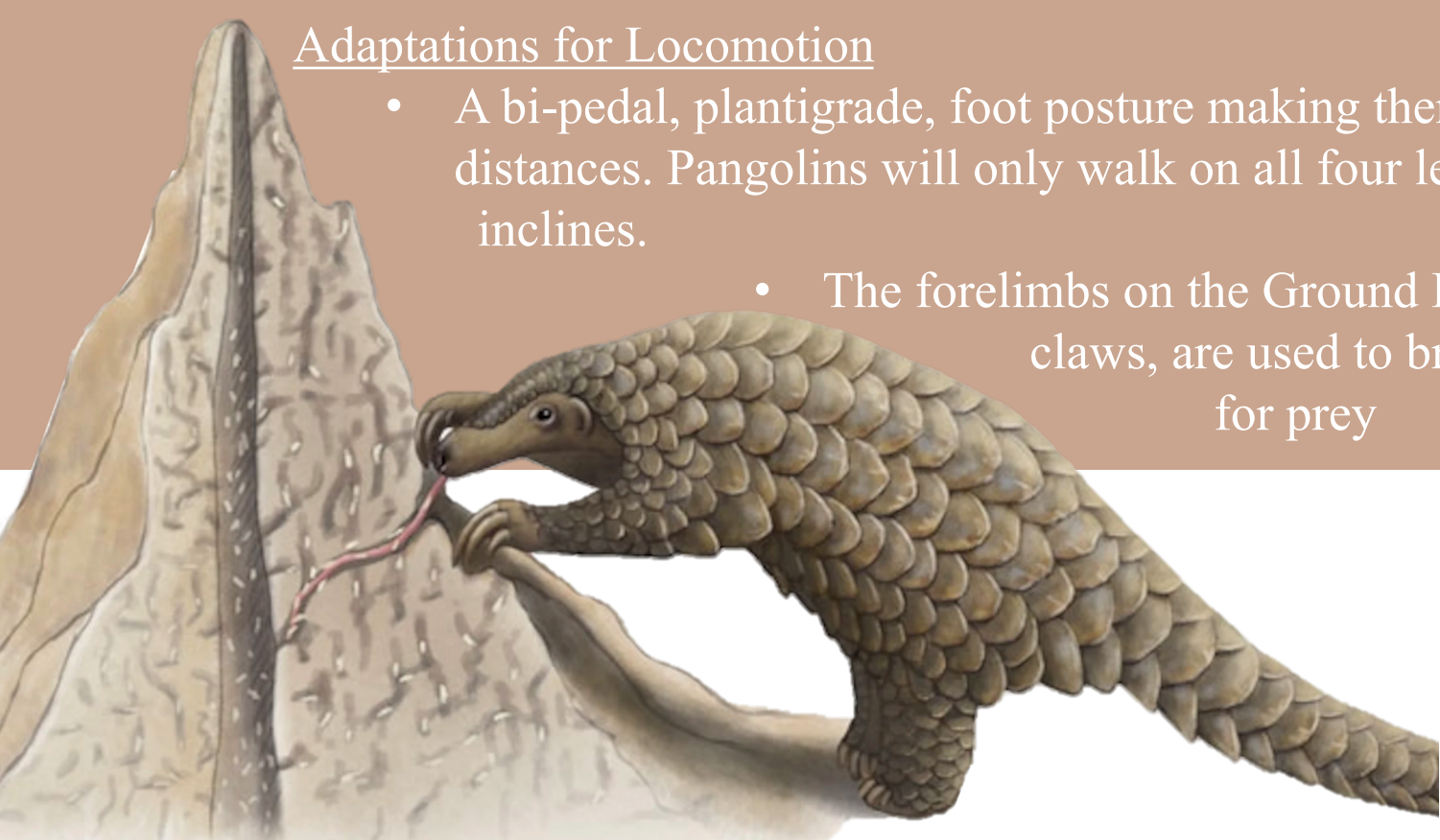
- Elongated tongue which retracts far within the pangolin's body, equipped with an overactive salivary gland to help their tongue remain "sticky" to enable them to lap up ants and termites.
- A narrow fusiform snout equipped with a highly adapted nose that uses olfaction to find food.
- Unique skull featuring no teeth and a specialized digestive tract featuring a short intestine and no caecum, in addition to a unique stomach which contains small rocks and pebbles to help them digest their food (like that of how gizzards function in turkeys or ducks)

Adaptations for communication:

- Highly adapted scent gland which are used to mark territories and send messages to other pangolins such as "Keep Out! This is my territory" or "I'm ready to mate"
- Specialized noses that help Pangolins not only smell out food, but interpret olfactory communications from other pangolins

Adaptations for Locomotion

- A bi-pedal, plantigrade, foot posture making them well adapted for traversing long distances. Pangolins will only walk on all four legs when trying to get over steep inclines.
- The forelimbs on the Ground Pangolin, equipped with long claws, are used to break apart termite mounds and dig for prey



Scan for a video of Pangolin Feeding And locomotion

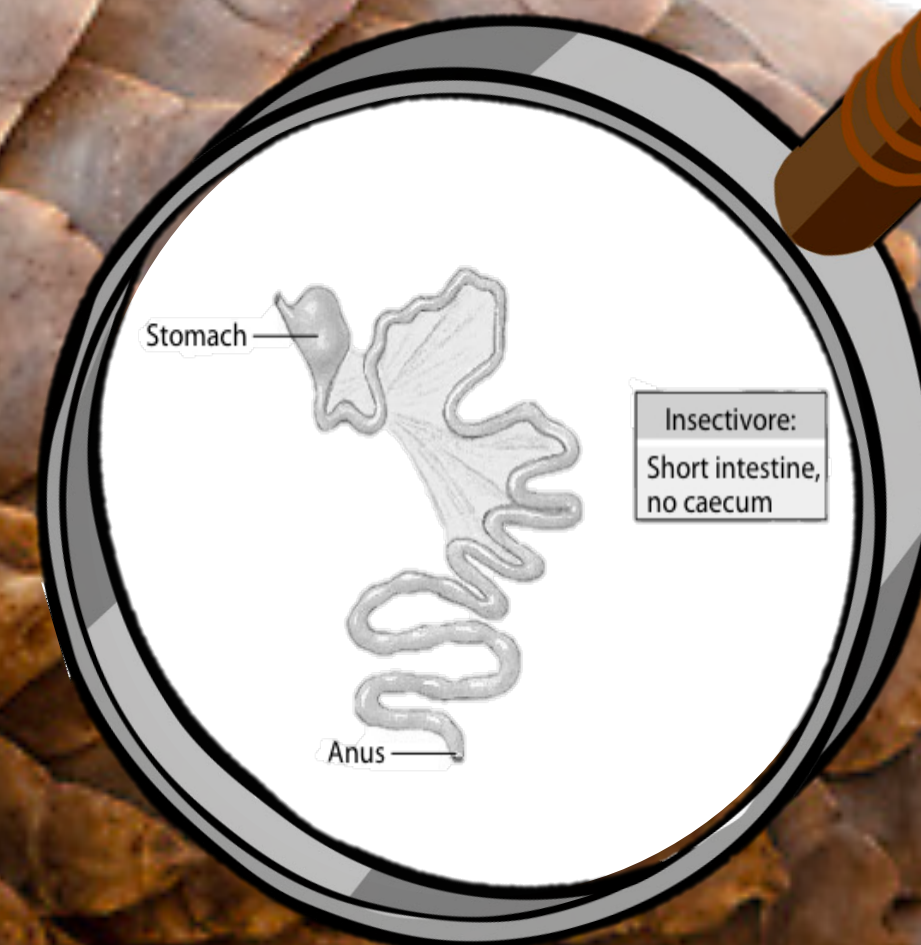
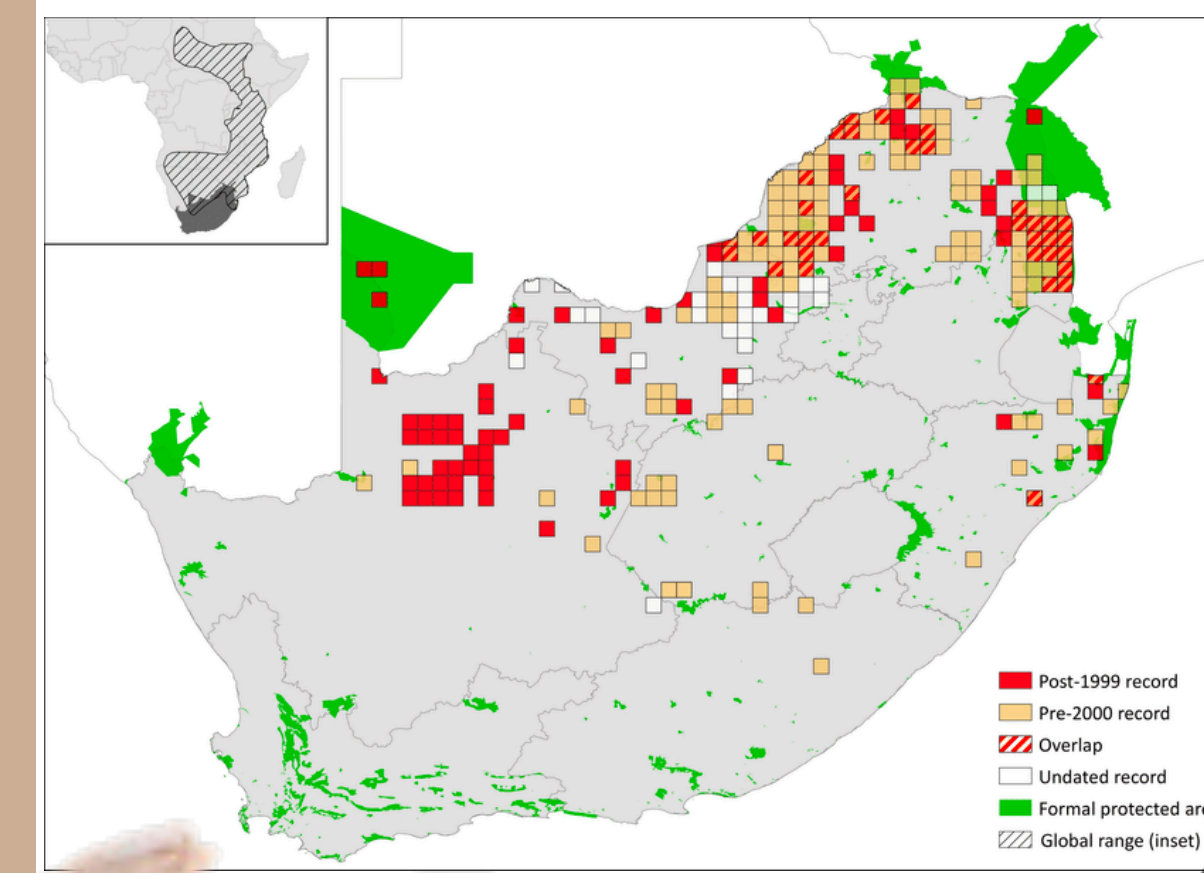
In addition to using olfaction to communicate with other pangolins, *Smutsia temminckii* uses its body language to communicate. When two male pangolins are in competition for a mate, they will physically fight one another for mating rights. Additionally, pangolins communicate to other animals, particularly predators, to show their strength and lack of vulnerability by tightly balling up. Pangolins are covered in overlapping scales that not only make them look intimidating, but when balled up, provides them considerable protection from predators like big cats.



vs.

Long claws used for fossorial motion (Digging)

Bi-Pedal, plantigrade, foot posture perfect for ambulatory motion (walking).



Insectivore:
Short intestine,
no caecum

Scan and skip to the time stamp 1:19 to learn about threats to pangolins and conservation efforts

