

# Sunda Pangolin (Manis javanica)

Pholidata, Manidae

## Form and Function

Sunda/Malayan Pangolins have been reported to be more arboreal than other pangolin species, frequently climbing trees to access food and shelter, but have been observed burrowing and swimming.

The tail has an unscaled cutaneous pad at the tip and is very strong and prehensile this allows the tail to serve as a climbing aide allowing Sunda Pangolins to move along branches upside down or hang by only their tail.

Sunda Pangolins are quadrupedal and both fore- and hindfeet have granular pads. When walking Sunda Pangolins hold their heads and tails below their body level giving them a humped appearance.

Pangolins have keratinous, epidermal scales that cover the lateral and dorsal surfaces of both the tail and body, the outer surfaces of the limbs, and the forehead stopping just before the muzzle. These scales likely evolved due to their diet as they offer a defensive barrier to predators and the insects that they feed upon. If necessary, pangolins will curl up into a ball in defense and are nearly impossible to uncurl.



## Sociality

Sunda/Malayan Pangolins are generally solitary, except when breeding and caring for young. These pangolins have been observed to have home ranges estimated to be approximately 1.58 km without significant variation between sexes, mass, or habitat, although ranges size decreases with the decrease of suitable forest space. Males have been observed displaying aggressive behavior towards each other which suggests that they are territorial and will defend their home ranges against other males.

Most social interactions are scent based and generally comprised of urine and secretions from anal glands. These interactions happen through scent markings and communicate information about sexual and health status.



## Diet

Sunda Pangolins are myrmecophagous feeding primarily on several species of ants and termites, but also on the larvae of other insects, as well as flies, worms, and crickets. They use their long tongues and enlarged salivary glands to reach up to 25 cm inside nests and pull out insects after using large front claws to break in.

Like many other myrmecophagous mammals, Sunda pangolins lack any teeth in their oral cavity but have keratinized tooth-like structures in their digestive tract called pyloric teeth. These pyloric teeth aid in mastication and extraction of nutrients.



## Reproduction

There isn't a lot known about the age at which Sunda/Malayan Pangolins reach sexual maturity. It is thought that males reach sexual maturity at about 1.5 years old and females are thought to reach sexual maturity at 1-year-old.

Unlike other species of pangolin, breeding of Sunda Pangolins is suspected to occur year-round in the wild and has been observed to be aseasonal in captivity. Many mammals display obvious estrus behavior, which are not present in Sunda Pangolins. Pangolins display a variety of behaviors to communicate interest/disinterest in sexual activity.

Sunda Pangolins give birth to one young at a time, twins can occur but are extremely rare.

Weaning occurs at approximately 3-4 months and during the weaning period the young gradually reduce the frequency and duration of suckling until the young are completely independent of the mother. During the weaning period, mothers display behaviors, such as wrestling, scratching, and fleeing, to encourage separation between the mother and young.



## Range and Habitat

Sunda Pangolins are generally found between 1,700 m and 0 m above sea level in the countries of Brunei Darussalam, Cambodia, Indonesia, Lao People's Democratic Republic, Malaysia, Myanmar, Singapore, Thailand, Vietnam, and possibly China (Heinrich). Although they have been observed in a variety of habitats, including oil palm and rubber plantations, Sunda Pangolins prefer the primary and secondary forests. This is likely because these forested areas contain more older, larger trees that provide hollows in or near the base that can be used for sleeping and denning.



## Conservation and Management

Sunda/Malayan Pangolins are classified as rare or critically endangered in most of their natural range and major factors influencing their abundance include availability and quantity of prey, availability of denning sites, predation, and human exploitation rates. The greatest threat to the Sunda Pangolin is the overexploitation by human through unsustainable hunting or poaching for local and international use. Despite legislation being put into place to prevent this trafficking on the national and international level, it is thought that more than 200,000 Sunda/Malayan Pangolins were trafficked between 2000 and 2013 due to underfunded law enforcement in many countries. Compounding this issue is the loss of habitat due to mining, creation of hydropower dams, and logging, which is opening access to areas which had previously been inaccessible to poachers and hunters.