Tamandua tetradactyla (Southern Tamandua or Lesser Anteater)

Family: Myrmecophagidae (Anteaters)
Order: Pilosa (Anteaters and Sloths)
Class: Mammalia (Mammals)

Fig. 1. Southern tamandua, *Tamandua tetradactyla*.

[http://analytical.wikia.com/wiki/Southern_tamandua, downloaded 21 October 2011]

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TRAITS. The southern tamandua or tamandua is a toothless mammal with one of the least complex skulls. They have disproportionately long snouts with even longer narrow rounded tongues. The tongue can extend up to 40 cm and is covered in minute posteriorly directed spines and coated with thick, sticky saliva. They have five fingers with large claws on the second, third and fourth. Their claws may be up to 16 inches in length (Macdonald, 2001). Their tails are long and prehensile meaning that it is specially adapted for gripping (Fig. 2). The tail is almost bare of fur with the tip blotched pinkish-yellow or brownish-black. They have a coarse yellow to dark brown coat and black fur forming a vest occurs in some of the southern tamanduas (Fig. 1). Tamanduas have very small brains (Shabel and Reference, 2011). Their stomachs are simple with a strengthened pyloric portion for digesting insects (Feldhammer et al, 2004). The eyes are small and the ears are rounded. They have four short muscular feet and their tail is not held upright but rather dragged along the ground (Smith, 2007). The head to body length is 58-61 cm with a tail length of 50-52.5 cm. They can weigh between 3.4-7 kg with males usually heavier (Macdonald, 2001). Walking is performed on the wrist to avoid being hurt by its long claws. The hind leg also has elongated toes to enable greater grip while climbing (Smith, 2007).

ECOLOGY. The southern tamandua inhabits a variety of habitats from dry grasslands to steamy rainforests (Shabel and Reference, 2011). They can also be found in savannas and thorn shrubs. However, they are commonly found near streams and rivers with many vines (Gorog, 1999). In a study done on their habitat choices it was found that southern tamanduas always selected forested habitats or forest edges once available irrespective of the landscape. They are therefore seen to be highly selective in their habitat choices. They occurred least in the open grassland (Desbiez et al, 2009). Their average territory size is 350-400 hectares. They forage in the open but most of their time however is spent in trees (Macdonald, 2001). The southern tamandua shelters in tree hollows and also in abandoned holes on the ground. The *Tamandua tetradactyla* is found in South America, East of the Andes from Venezuela to Northern Argentina and also on the island of Trinidad (Macdonald, 2001).

SOCIAL ORGANIZATION AND ACTIVITY. The southern tamandua is usually a solitary species except at birth. Occasionally a mother can be seen carrying her young on her back (Fig. 4) but they are also left on branches or close to the nest while the mother forages. They do not have a constant resting place or nest and can be nocturnal or diurnal in behaviour. Their metabolic rate and locomotion is affected by their diet which explains their slow and minimal movements. They show activity for an average of eight hours per day. Due to their very specialised diets they have evolved metabolic rates that are between 33-60 % of what is expected for their body weight and variable but low body temperatures of 32.7-35 ^{0}C (91-95 ^{0}F). These temperatures help to cope with the low energy content gained from their diet and also help to burn less kilojoules of energy. This slowing of their metabolism results in their slow movements over small home ranges (Macdonald, 2001).

The *Tamandua tetradactyla* is capable of both digging and climbing and spend most of their time in trees (Shabel and Reference, 2011). A Venezuelan study done showed that 13-64% of their time awake is spent in trees (Gorog, 1999). In Brazil their density was estimated to be 0.34/ km^2 with their density in forested areas being higher than in floodplain areas (Smith, 2007). The longest a captive southern tamandua has been known to live is for nine years and six months (Smith, 2007). In the wild they have been known to live up to sixteen plus years (Shabel and Reference, 2011).

FORAGING BEHAVIOUR. The southern tamanduas have very specialised diets. The word tamandua means insect eater (Shabel and Reference, 2011). They feed exclusively on social insects especially termites and ants (Shabel and Reference, 2011) and have been known to show individual variation in prey choice (Eisenberg and Redford, 1999). They have poor vision and hence depend on smell to detect prey. They dig a hole in the nest displacing their prey (Fig. 3) and with tongue movements as rapid as 150 times per minute they ingest ants/termites along with their larvae and cocoons. The insects trapped on the tongue which is coated with sticky saliva are crushed on the hard palate before swallowing occurs. Termite soldiers and large-jawed ants like the army or leaf-eating ant are avoided as they have strong bites. Little or no permanent damage is caused to nests as they spend only a short period feeding gaining approximately 0.5 % of their daily requirement per feeding bout. The *Tamandua tetradactyla* are able to remember the location of nests and how recently they have visited them so that they do not completely use up their food source (Shabel and Reference, 2011). They also consume beetle larvae and their water requirement is obtained through their food. They however do not eat any of these species which have a chemical defense. About 9000 ants are consumed a day and bees and honey may also be

eaten (Macdonald, 2001). They are able to exploit these other food sources of which some are arboreal, due to its semi- arboreal nature. Wild southern tamanduas' diets consist of 30-65% protein and 10-50% fat (Smith, 2007).

COMMUNICATION. Tamanduas' social lives are dominated by smell (Macdonald, 2001) and therefore this is one of their major ways of communication. They produce an unsavoury secretion from their anal glands. These secretions are very strong smelling. This helps in the marking of trees, paths, or conspicuous objects by possibly advertising their presence, status or sexual condition (Macdonald, 2001). It can also be used to mark the boundaries of their territories (Shabel and Reference, 2011). Sound making is not very common and mainly occurs between mothers and their young and during fights. They use hisses, snorts, roars and sniffs to convey vocal communication. Roars are heard during fights. Baby tamanduas get their mother's attention with the use of high-pitched grunting sounds (Shabel and Reference, 2011). Grunting sounds are also made when their prey is being consumed and hence it helps in locating them (Smith, 2007). Their black vest is believed to act as a warning of their claws and also as a way to identify different species amongst themselves (Shabel and Reference, 2011).

SEXUAL BEHAVIOUR. Reproduction and courtship behaviour of wild southern tamanduas have not been widely studied and hence little information has been published on the topic. Two theories however, are put forward by scientists. Some believe that they are born in the spring months (March-May) as during this period there is plenty food available. On the other hand some believe that they breed throughout the year (Shabel and Reference, 2011) and the females are hence considered to be polyestrous (Gorog, 2007). Mating is therefore assumed to occur in the fall months (Macdonald, 2001). Females have a gestation period of four to five months. Published periods range from 130- 190 days with an average at around 160 days. They give birth to one young at a time and twins are rarely born (Smith, 2007). Birth is performed while standing on their hind legs with their tail used as added support. The placenta of the young is consumed by the females (Smith, 2007). The young do not resemble their parents and have a coat ranging from white to black. Adult markings are also absent (Shabel and Reference, 2011). At two to three years sexual maturity is attained by females. The southern tamandua is of the K-selected species type and hence they usually have one young and invest a great deal of post- natal care (Macdonald, 2001).

JUVENILE BEHAVIOUR. Juveniles upon birth are carried on their mothers' back (Fig. 4) for several months to a year. During this period they learn survival aspects inclusive of food locations and may adopt the mother's dietary preferences (Smith, 2007). Babies are able to walk after only one month. At about one year old they attain independence and begin living on their own as well as feeding for themselves (Shabel and Reference, 2011).

ANTIPREDATOR BEHAVIOUR. Cryptic camouflage or blending into the environment is the main defence employed against predators as they normally take a passive approach to conflict (Macdonald, 2001) as they are naturally gentle and quiet animals (Shabel and Reference, 2011). The black markings are believed to give this advantage especially in the decreased lighting of the forests (Shabel and Reference, 2011). When under threat southern tamanduas stand on their hind legs with their forelegs outstretched (Fig. 5). They then make quick, hook like movements with their claws being very lethal weapons. If they are attacked while in a tree they grip the branch with their tail and hind legs to obtain greater balance while freeing up their forelegs (Smith,

2007). To increase balance on land they lean against rocks or tree- trunks. While in this position they also crush predators with their powerful grip (Shabel and Reference, 2011). The spectacled owl, harpy eagle and hawk eagle are some of its common predators (Macdonald, 2001) while the Jaguar, Puma and Cougar are other known predators (Shabel and Reference, 2011).

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Fig. 2. A southern tamandua using its prehensile tail as an extra grip.

[http://www.abenteuer-pantanal.de/pantanal/pantanal_saeugetiere_en.php downloaded the 30 October, 2011]

Fig. 3. A southern tamandua foraging for food.

[http://www.inriodulce.com/links/tamandua.html downloaded 30 October, 2011]

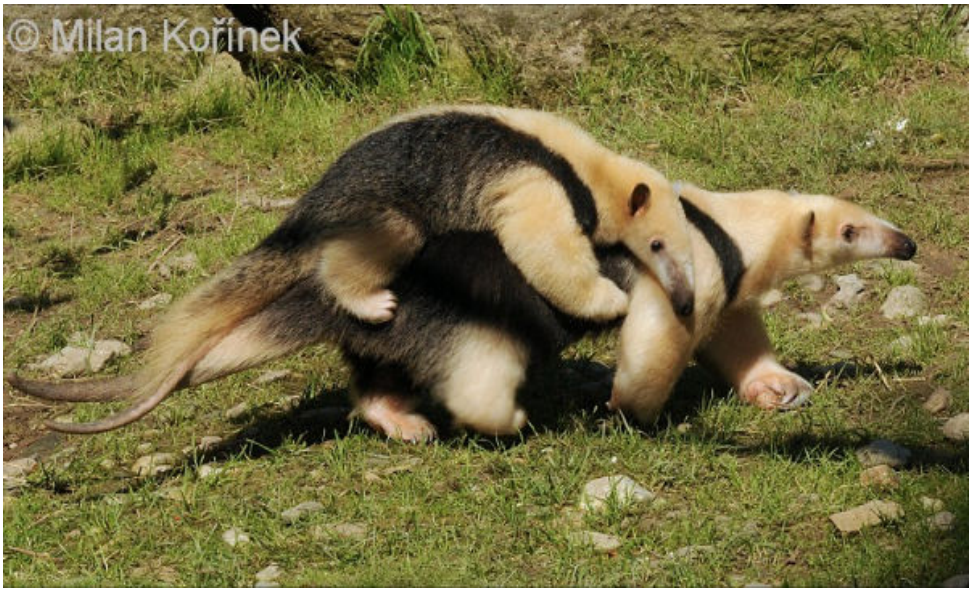

Fig. 4. A juvenile southern tamandua is carried on its mothers back.

[http://www.biolib.cz/en/taxonimage/id164170/?taxonid=31886&type=1 downloaded 30 October, 2011]

Fig. 5. The defensive position of a southern tamandua.

[http://www.faunaparaguay.com/tamanduatetradactyla.html downloaded 30th October, 2011]