

## **GIANT ANTEATER (*Myrmecophaga tridactyla*) TALKING POINTS**

The following items should be in the bag, if they are not let someone in education know. If you discover a new problem with any biofact (broken pieces, loose teeth, etc.), it is your responsibility to let the staff know **and** make a notation with the date, time and your name on the sign out clipboard.

**Note:** Please return all items to their appropriate place on the cart, and make sure lids and bungee cords are secured. Things should be left exactly as you found them.

**Note:** Do not try to open the Lucite containers with the food. We are trying to prevent animals from getting into the bone room.

### **GIANT ANTEATER INVENTORY**

- Giant Anteater skull replica with 24" mock tongue
- Lucite boxes containing anteater food
- Anteater Resource Cards

**GIANT ANTEATER GENERAL INFORMATION:** The giant anteater, also known as the ant bear, is a large, insectivorous mammal, native to Central and South America. It is the largest of four living species of anteaters and is classified with sloths in the Order Pilosa. This species is mostly terrestrial, in contrast to other living anteaters and sloths, which are more arboreal. It is recognizable by its toothless, elongated snout, bushy tail, long fore claws, and distinctively colored pelage. The giant anteater is a member of the last living group of animals to have evolved in South America, when it was an isolated island continent.

### **GIANT ANTEATER RANGE/HABITAT**

- Found southern Belize to northern Argentina (see map)
- Multiple habitats including grassland, swamps and tropical rainforest
- It forages in open areas and rests in more forested habitats, possibly because forests are warmer than grasslands on cold days and cooler on hot days

### **GIANT ANTEATER PHYSICAL ADAPTATIONS**

#### **1. Head/Skull/Dentation**

- Elongated snout with eyes on side of the ~ 12" long skull
- Snout is curved and tubular and ends in a tiny mouth opening and nostrils. Nose is moist (like a dog's)
- Lower jaw is in two halves, held together by a ligament
- Jaw movement is very limited; to open and close its mouth, the two halves of the lower jaw rotate
- Toothless (edentate). Grind and crush insects against horny growths on roof of mouth and sides of the cheek
- 24" tongue of the anteater is attached directly to the sternum; tongue is only ½" wide. (see photo) Attaching to the sternum allows for quickness of their tongue; the sternum provides a rigid attachment sight that the tongue muscles can attach. The length enables them to probe deep into an ant/termite colony.

- Tongue covered in backward-curving projections or spikes (**papillae**) and coated in thick, sticky saliva secreted from its enlarged salivary glands, which allows the giant anteater to collect insects
  - Brain is quite small relative to its body size
- 2. Size /Weight/Lifespan**
- Average nose to tail length: 6 -7 ft
  - Average tail length: 2 – 3 feet long
  - Sexual dimorphism: Average weight: Male 73 – 90 lbs., Female 60–86 lbs.
  - Average Lifespan: 14 years wild, up to 26 years captivity
- 3. General Characteristics Body/Coat/Fur/Tail**
- Thick, coarse hair that is longer towards the tail; fur provides warmth on cooler days
  - Hair is mostly grey and salted with white, with a diagonal black and white shoulder stripe running along the body to mid-torso, where it ends in triangular points; the coloring provides camouflage in their natural environment
  - Skin under the bushy tail is covered with scales; the skin and very long hairs protect the anteater from the bites of soldier ants and termites
  - Forelimbs are white, with black bands around the wrists, while its hindlimbs are dark.
  - Tail is bushy and nearly as long as the body; the hair on the tail is parted to one side; tail used to warm and protect themselves against the elements
- 4. Feet//Paws**
- Forefeet have five claws with the inner three being very long and sharp. Foreclaws are up to four inches long, and are used to tear open insect nests. (see photo)
  - Forearms and claws are so powerful that the giant anteater can rip open a termite mound or anthill with a single blow of its paw. Strength is necessary because termite nests are extremely hard, having been made of soil and termite saliva and then baked in the sun
  - Hind feet have short claws on all five toes
- 5. Senses/Scent Glands**
- Small eyes with poor vision so rely on sense of smell
  - Good sense of smell used to forage for food and detect predators
  - Sense of smell is 40 times more sensitive than that of humans
  - Research has found that giant anteaters can identify the particular species of ant or termite they are about to consume by smell before they rip open the prey's nest
  - These animals may also mark their territory in the wild with anal secretions, which other anteaters would then be able to smell as well
  - Sense of hearing is not clearly known; some scientists say it is particularly good, while others believe it is not really well developed

## **GIANT ANTEATER BEHAVIORAL ADAPTATIONS**

### **1. Life Style**

- Giant anteaters are usually solitary, except for mother-young pairs, or during breeding
- Giant anteaters spend most of their day looking for food
- Anteaters are not aggressive, but they can be fierce. A cornered anteater will rear up on its hind legs, using its tail for balance, and lash out with dangerous front claws. Anteaters can move around on the hind legs with great agility then strike with the forefeet in any direction. The giant anteater can fight off its natural predators, pumas and jaguars
- Knuckle walk; large front feet are curled under when it walks; they walk in sort of a

shuffle, bearing their weight on the knuckles in order to protect their sharp claws

- Plantigrade gait; walk on the sole of the foot with the heel touching the ground
- The giant anteater has no permanent resting place, but uses abandoned burrows, dense vegetation, or depressions, where it curls up with its head between the forelegs, and its tail covering the body. Although they have the ability to dig well, they do not construct burrows
- Walk with their snout to the ground, sniffing to detect food
- Giant anteaters are likely territorial, with their territories ranging about one square mile for adult males and about 1.5 square miles for adult females. Anteaters are wanderers and do not stay in one spot for long
- While some giant anteaters appear to be strictly diurnal, others appear to be just the nocturnal. Diurnal anteaters tend to be found most often in areas remote from civilization, while nocturnal anteaters live in more heavily (human) populated areas

## 2. Communication

- Hissing, snorting, roaring, and sniffing are used in communicating
- Sounds detected during breeding or when the mothers communicate with their young
- Giant anteaters do not vocalize much, but the pup can let out a shrill, high-pitched grunt to alert mother when in distress

## 3. Diet/Eating Habits/Digestion

- Diet consists mainly of ants, termites, beetles and larger insect larvae, worms and occasionally fruit. In general, giant anteaters prefer to dine on insects that lack heavy jaws or chemical defenses, which the anteaters cannot easily digest (**formivorous**: meaning a diet of ants)
- Diet at the SF Zoo consists of commercial pellets made for insectivores, which gives them the same nutrients they would get in the wild. The pellets are small enough for the anteaters to pick up with their tongue
- Eats up to 30,000 insects each day. They will generally rip up a small part of an ant/termite hill, but never destroy a nest. This adaptation allows the anteater to return and feed on this mound in the future. Termites are fast workers and will quickly repair an injured nest.
- Thought to obtain water by licking wet plants
- Due to their slow metabolism, they are able to get enough protein/nutrients from termite/ant diet
- The tongue can be extended 150 times a minute to obtain prey; an anteater's tongue moves very rapidly into the ant/termite nest and back into the mouth
- Salivary glands are large and highly specialized to secrete sticky saliva, which picks up eggs, cocoons, and adult insects
- Anteaters don't chew (no teeth); they grind and crush insects against the horny growths on the roof of the mouth and sides of the cheek
- Stomach (similar to a bird's gizzard), has hardened folds and uses strong muscular contractions to further grind up the insects
- Digestive process is further assisted by small amounts of ingested sand and soil
- Giant anteaters swallow at a much higher rate than most other mammals; when feeding they swallow almost continuously
- Giant anteater cannot produce stomach acid of its own, but uses the formic acid of the ants/termites for digestion
- At the Zoo, the anteaters are fed a diet of commercially prepared insectivore kibble, occasional bananas or avocado, hard-boiled eggs, vitamins and a mineral mix.

#### 4. **Breeding/Reproduction/Growth/Parental Care**

- When breeding occurs is debated among scientists; some think they mate throughout the year, while others believe mating occurs in autumn (March – May in southern hemisphere)
- Larger male squats over the female, who is lying on her side, to mate
- Female gives birth to one pup while standing up, after a gestation period of 190 days; the female delivers in her bipedal position, propped up by her tail
- Young anteater climbs onto mother's back immediately after birth (see photo)
- Pups are born with a full coat of hair and adult-like markings
- Pup clings to the fur on its mother's back, for protection, until it is almost half her size (~ 6 to 9 months); the young will then stay near her until she leaves her mother when it is full grown at about 2 years or if the mother becomes pregnant
- Pup is camouflaged by aligning with the mother's stripes; similar coloring helps the pup blend in so predators can't see it (see photo)
- Mammary glands are near the armpit, which allows for easy access by the young from its mother's back. Pup is weaned at about nine months of age, about the same time the pup no longer rides on the mother's back
- Giant anteater pups have a 50-percent mortality rate in the first three months of life; they are especially susceptible to pneumonia and other health-related problems at this time

#### **GIANT ANTEATER INTERESTING/FUN FACTS**

- Anteaters tend to always sleep with their tail in the same direction, wrapped around them to keep them warm
- Anteaters are excellent swimmers, but usually stay on dry ground and are amazingly quick
- Giant anteater has the lowest body temperature of any placental mammal: about 33 °C (91 °F), a few degrees lower than typical a mammalian temperature of 36–38 °C (97–100 °F). They also have lower metabolic rates than most other mammals, a trend thought to correlate with their dietary specializations and low mobility
- Anteaters have special articulations between the vertebrae in the lower back and also have fused pelvic bones. This gives extra support when ripping open a termite mound.
- Main predators are the jaguar and puma
- Though some research shows that ancestral giant anteaters may have been bipedal, current giant anteaters walk on all fours with their noses close to the ground

#### **TERMITE MOUNDS** (see photo)

- Occur in all habitats from rain forest to savannah and mangroves
- Mounds in South America range between 2 and 4 m tall
- Constructed from combination of digested wood and termite fecal material that forms a glue
- Tunnels connect the colony to the outside
- Termites may also nest underground
- Most abundant termites of the Neotropics are of the Genus *Nasutitermes*
- Termites are organized in castes: worker, soldier and queen.
- Termite mounds form patches of high nutrient concentrations in otherwise nutrient-poor soils

## GIANT ANTEATER CONSERVATION STATUS

- Listed as Vulnerable on the IUCN red list and Appendix II of CITES. In Argentina, they are listed as endangered
- Habitat destruction is the primary threat to giant anteaters
- Giant anteaters, through their diet, have an enormous impact on local insect communities; Anteaters are important to their environment because they control the amounts of ants and termites thus protecting trees and making sure that too many termites do not destroy a forest.
- Giant anteaters are widespread geographically, but there are reports from many parts of their range that they have been locally exterminated
- The anteater's dietary specificity, low reproductive rate, large body size, and threats (in the form of encroachment by humans on their territory) throughout many parts of their range have proved to be significant factors in their decline
- Other threats to anteater are run-ins with cars and an even bigger concern of late has been the killing of giant anteaters for their pelts or for sport
- The San Francisco Zoo participates in the Association of Zoos and Aquariums' coordinated Population Management Plan for giant anteaters.





**Giant Anteater  
Front Claw**



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