

African Giant Black Millipede

Archispirostreptus gigas

Class: Diplopoda **Order:** Spirostreptida **Suborder:** **Family:** Spirostreptidae

Other names: Giant Millipede, African Black Millipede, and Tanzanian Giant Black Millipede

Other subspecies:

Other Relatives: There are currently 6,500 millipede species identified worldwide [1].

Millipedes belong to the class Diplopoda, which has at least 15 recognized orders of millipedes [2].



Other Names: Giant Millipede

Other relatives:

Zoo Millipedes 0.0.6

DOH: unknown 5/2011 best approximate AQ: 7/26/12

Status

Not evaluated

Geographic Range

Tropical and arid coastal forests of eastern Africa [2]



Habitat

Moist debris, rotting wood of tropical and sub-tropical Africa [3]. They live in temperatures ranging from 75 to 85° F. with 75 to 80% humidity [4].

Characteristics

Size: 4-12" in length [1]

Longevity: Wild: unknown

Captivity: 5-7 years [1]

Physical Description

- The African giant millipede is one of the world's largest millipedes.
- It can grow up to 12 inches long [1], and can be as thick around as a person's thumb.
- It is covered with a tough black **cuticle**.
- Like other millipedes, its body is divided into many segments, usually 30-40 [3]. Each of those segments has 2 pairs of legs, except for the head and tail segment [3]. This distinguishes them from the centipede, which has only one pair of legs per segment.
- Millipedes have a pair of antennae, and mandibles (jaws) that resemble those of insects.
- They have two clusters of simple eyes, which probably only detect light and dark.
- Millipedes breathe through **spiracles** located on the sides of their bodies.
- They vary in size from one inch to one foot in length. The African Giant Black Millipede is one of the largest millipedes in the world, measuring from 7.5 to 11 inches.

Dimorphism

Male: Males and females look similar, but males have a pair of specialized legs called **gonopod** on the 7th segment, used for transferring sperm. Gonopods are little graspers where there would be legs at that segment.

Female:

Diet: Detrivore

Diet in the Wild: Decaying plant matter such as fruit and leaves.

Diet in the Zoo: various fruits and vegetables

Behavior

- *Nocturnal*- night active
- *Terrestrial*-ground-dwelling, but also *fossorial*- they will burrow and dig into the soil.
- For protection, a millipede will roll into a ball and secrete an odorous liquid from glands on their bodies is unpalatable to predators [1].
- Adult millipedes attract mates by emitting pheromones to locate others of the same species.
- Some males rub their legs together (**stridulation**) to attract females.
- Millipedes do not see well, so their antennae help them find dead organic matter and determine if it has decayed enough to eat [2].

Reproduction

- During breeding, males use a modified pair of legs to transfer sperm to the female.
- Both male and female have their reproductive organs on their undersides. The male winds around the female, transfers sperm from his organ to his legs and thus deposits the sperm inside her [3].
- The female builds a chamber under the soil, using dung to form the walls, and lays her eggs (up to 2,000) inside.
- The eggs will hatch in about three months [1].
- The juvenile millipedes are called neonates. They are white, and have only a few body segments and three pairs of legs.
- The neonates go through many molts, adding segments and legs as they grow. Their color darkens gradually to black. Young millipedes typically molt within the first 12 hours after hatching [1].
- Each time they molt, they acquire more legs. They will molt 7-10 times before acquiring 200-300 legs [1].
- Some species of millipede can live up to 13 years.

Conservation:

- **Use & Trade**
 - Beneficial in their ecosystems as they help recycle decaying plants [3]
- **Threats**
 - Human-caused changes in land use are escalating, and this affects the natural habitat required by millipedes and other animals for survival. Vast forests are being removed for timber or other paper products, and industrial emissions are polluting water and air resources. Additionally, habitat is rapidly converted by expanding human communities and agricultural needs. It's only a matter of time until many insect species populations will become severely reduced, or eliminated [2].
- **Predators**
 - Birds, small mammals, frogs and reptiles [1]

Did you know?/Fun Facts

- Although the name "millipede" means "1,000 feet", the adults of most species probably have only 200-300.
- It is known in Zulu as *amasbongololo* [5]
- One way to distinguish millipedes from centipedes is by the number of legs per segment-millipedes have 2 pairs per segment, centipedes only have one. Additionally, centipedes have pincers and are venomous.

Glossary

Cuticle- term used for any of a variety of tough but flexible, non-mineral outer coverings of an organism, or parts of an organism, that provide protection

Detrivore- organisms that obtain nutrients by consuming detritus (decomposing plant and animal parts as well as feces)

Gonopod- specialized appendages of various arthropods used in reproduction or egg-laying

Spiracles- openings on the surface of some animals, which usually lead to respiratory systems.

Stridulation- the act of producing sound by rubbing together certain body parts.

References

[1] Point Defiance Zoo & Aquarium, "Giant African Millipede," Point Defiance Zoo & Aquarium, 2015. [Online]. Available: http://www.pdza.org/files/library/cae9b85635dea840_o.pdf. [Accessed January 2015].

[2] Woodland Park Zoo, "Giant Millipede," 2014. [Online]. Available: http://www.zoo.org/page.aspx?pid=1918#.VMPhK_54qt0. [Accessed January 2014].

[3] Oakland Zoo, "Giant African Millipede," Oakland Zoo, 2015. [Online]. Available: http://www.oaklandzoo.org/Giant_African_Millipede.php. [Accessed January 2015].

[4] J. Fouskaris, "African Giant Black Millipede," PetBugs.com, 2001. [Online]. Available: <http://www.petbugs.com/caresheets/A-gigas.html>. [Accessed January 2015].

[5] Wikipedia, "Archispirostreptus gigas," Wikipedia, 10 September 2014. [Online]. Available: http://en.wikipedia.org/wiki/Archispirostreptus_gigas. [Accessed January 2015].