



## Emperor Black Scorpion

Kingdom: Animalia  
 Phylum: Arthropoda  
 Subphylum: Chelicerata  
 Class: Arachnida  
 Order: Scorpiones  
 Family: Scorpionidae  
 Genus: *Pandinus*  
 Species: *imperator*



Photo courtesy of Karen Marzynski

### Habitat

- **In the Wild:** Emperor black scorpions live in the hot, humid rainforests of the coastal countries of western Africa from Senegal to the Congo to Gabon.
- **Exhibit Location:** Social Animals, Zoo to You Collection

### Characteristics

- Emperor black scorpions are the largest, but not the longest, of the scorpion species. The body, including the tail, can reach up to 6.5 inches in length. Its weight varies, but can be up to 1.1 ounces.
- Emperors are glossy black, but can be dark brown to green. The stinger and claws can also be red-colored. Their overall color gets darker after each molt. This dark coloring also acts as camouflage.
- Whitish membranes connect the various body segments and expand in pregnant females. They have large fat pinchers, 4 pairs of legs, and a long tail tipped by a venom gland and a stinger.
- Comb-like structures behind their 4<sup>th</sup> pair of legs are used to sense the texture of the ground. These structures are larger on males than females. Like all scorpions, they use sensory hairs to detect ground and air vibrations. They have poor eyesight, good hearing, and a good sense of touch.
- Scorpions grow and shed their entire exoskeleton several times before they are full-grown. As adults, they are hard to distinguish from a distance, since males and females act and look similar. Males can be smaller and narrower.
- **Lifespan: In the Wild** unknown (no research done); **In Captivity** 5-8 years

### Behaviors

- Males are territorial and will fight to the death. They spend much of their time looking for females with which to mate.
- Scorpions nestle in burrows that they dig in the soil. They also dig under rocks, logs, or tree roots. They are sensitive to light, so they are primarily nocturnal.
- They may rest in a burrow waiting until prey comes close to ambush it, or they may actively hunt their prey. As they lie in wait, potential prey creates vibrations the scorpions can sense. They quickly strike with the stinger or grasp the victim. Larger emperor scorpions rarely use their stinger to capture prey; instead they crush it with their claws. Smaller and younger ones rely on their stingers to subdue their prey. Scorpions must predigest their food before they consume it. Once subdued, they secrete digestive enzymes onto the prey which liquefies it.
- **Enrichments at the Zoo:** rearrangement of exhibit furniture

### Reproduction

- Emperor black scorpions reach sexual maturity at about 3 years of age. Mating can occur year round, but warm temperatures are needed.
- When the two meet, the male holds her in his grasp. He holds and pushes her around until he finds a suitable place to mate. When he finds it, he deposits his sperm onto a solid substrate. He pulls her over his sperm, which she accepts into her. He quickly leaves after mating, for a smaller male could be her next meal.

- The gestation period is 7-9 months and occurs inside the female's body. Live birth to as many as 35 young can occur. Babies are only about ½ inch in length when they first appear on their mother's back. The mother protects and cares for the white-colored young, as they stay with her for quite a while. She may even share prey items with them. A group of young seems to have a better chance of survival when living in a family group.

### Diet

- **In the Wild:** mice, baby lizards, arthropods and other scorpions, any other animals they can successfully subdue
- **At the Zoo:** crickets

### Conservation Status

- **IUCN status:** not listed; **CITES Appendix:** not listed
- Some consider this species threatened in the wild due to deforestation, habitat destruction, desertification, pollution, farming, and exploitation for the pet trade. The captive population is thought to be extremely large.
- All scorpion species are beneficial to the environment because they prey on insects and arachnids. With the proper permits, they can still be imported, but removal from their natural habitat results in a smaller chance that they will repopulate their environment. If one is wanted as a pet, be sure to buy captive-bred scorpions. They breed well in captivity.
- Predators: birds, bats, small mammals, large spiders, centipedes, lizards, man

### Did You Know?/Fun Facts

- The emperor black scorpion is also known as the "imperial scorpion."
- Scorpions are ancient arachnids, having been on Earth for over 400 million years.
- To conserve energy in times of famine (food shortages), scorpions can slow down their metabolism. They do not need to drink water, since they get all they need from their food. Their feces consists of a dry, powder-like substance.
- Even though they are cold-blooded, scorpions can be cooled to below freezing, or endure the blistering heat of the desert.
- The sting of most scorpions is only as harmful as a bee sting. Even though large, heavy, and terrifying in appearance, the emperor's sting is not lethal (deadly).
- Scorpions are in the same family as spiders, ticks, and mites. They are not insects.
- Emperor black scorpions are popular as pets because of their docile (calm) nature.
- Emperor scorpions fluoresce to a greenish-blue under black UV lights.

### Sources:

- theBigZoo.com, (2005). Emperor scorpion. Retrieved Oct. 22, 2005, from theBigZoo.com Web site: [http://www.thebigzoo.com/Animals/Emperor\\_Scorpion.asp](http://www.thebigzoo.com/Animals/Emperor_Scorpion.asp).
- Woodland Park Zoological Society, (2005). Animal fact sheets - emperor scorpion. Retrieved Oct. 22, 2005, from Woodland Park Zoological Society Web site: [http://www.zoo.org/educate/fact\\_sheets/scorpion/emperor.htm](http://www.zoo.org/educate/fact_sheets/scorpion/emperor.htm).