

Scorpion Facts



Scorpions are predatory arachnids distinguished by their segmented curved tail with a venomous stinger and grasping pincers, in the order *Scorpiones*. Their high adaptability to environmental conditions has allowed them to survive to the present with unchanged body structures.

TAXONOMY

- ★ There are 1,388 species found in the tropics into the temperate zones. Their embryological patterns, anatomy of their reproductive system, structure of their sternum, gnathobase, legs, cheliceral dentition, venom glands, and the number and distribution of their lateral eyes are some of the factors in classifying their species.
- ★ The 17 extant families include: *Buthidae*, *Vaejovidae*, *Chactidae*, *Scorpionidae*, *Bothriuridae*, *Diplocentridae*, *Euscorpiidae*, *Liochelidae*, *Iuridae*, *Urodacidae*, *Chaerilidae*, *Superstitioniidae*, *Hemiscorpiidae*, *Microcharmidae*, *Troglotayosicidae*, *Urodacidae* (cave scorpions), and *Pseudochactidae*.

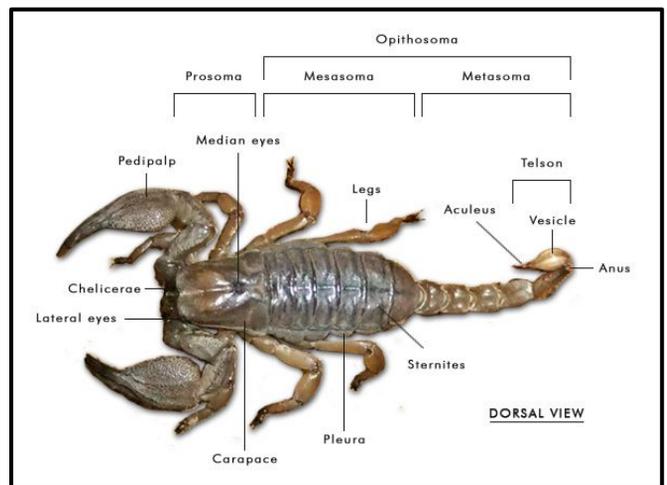
PHYSICAL ATTRIBUTES

- ★ Just like other arachnids, scorpions have four pairs of legs with two body segments - cephalothorax and abdomen. They also lack wings and antennae, making them easily distinguishable from other insects.



Scorpion Facts

- ★ Scorpions are approximately 2.5 inches (6cm) in length. *Hadogenes troglodytes* of South Africa is known as the longest scorpion in the world, with a length of 8.3in (21 cm).
- ★ Its exoskeleton, made of chitin, provides support and muscle attachment, aids in respiration, and gives resistance against predators.
- ★ The scorpion's head, cephalothorax (also known as prosoma), is covered by a protective shell and includes two eyes on the top and two to five eyes along the corners of the head, mouth, and the claws known as pedipalps, which have pinchers called chelae.
- ★ The front half of the abdomen, mesosoma, has six segments with four pairs of walking legs, and contains the sexual and respiratory organs of the scorpion.
- ★ The scorpion's tail, metasoma, has six segments and bears the venomous stinger (telson).
- ★ The scorpion's venom varies depending on the species. Scorpions take a lot of energy to produce their venom, which is mainly composed of neurotoxins.



Top view of scorpion

DIET

- ★ Scorpions are carnivorous predators that eat any small animal that comes their way. Insects, spiders, pill bugs, snails, lizards, snakes, and rodents are their common prey.
- ★ The *Isometroides vescus*, Australian spiral burrow or spider hunting scorpion, feeds only on burrowing spiders.
- ★ Predators include centipedes, owls, bats, and coyotes.



Scorpion Facts

HABITAT

- ★ Scorpions are universally distributed except in New Zealand and Antarctica. Known as desert dwellers, they are also found in tropical rainforests and grasslands. They are nocturnal arachnids, so mature scorpions prefer staying in one area.
- ★ Most scorpions live in burrows to protect themselves from their predators and to stay cool during hot days and warm during cold nights.

REPRODUCTION

- ★ Mating rituals vary from species to species; but in general, males perform a one-hour courting dance, *promenade à deux* (a walk for two). He grabs the female's pedipalps and moves her back and forth, in circles.
- ★ Clubbing happens when the two raise tails, touching and bumping them together without stinging. After the dance, males usually leave because aggressive females might eat them.
- ★ The devil scorpion from Brazil reproduces by parthenogenesis; females do not need a male to fertilize.
- ★ Scorpions are viviparous - they produce live babies. Females give birth to her youngs two to 18 months after mating, depending on the species.
- ★ Babies are usually white and soft-bodied and cannot sting or feed. They are attached to their mother's back for protection and nourishment until their first molt, when they shed the old skin.
- ★ It takes two to three years before babies mature into adults, with some species maturing in six months to seven years.
- ★ The size of the litter depends on the species but usually consists of around eight scorpionlings.



Mating scorpions



Female scorpion with young



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BEHAVIOR

- ★ They have sensitive hairs on their pedipalps, allowing scorpions to determine the exact distance and direction of their prey. Most species use their venomous sting only when the situation calls for it. Usually, they grab and crush their prey with their pincers.
- ★ Scorpions glow when exposed to ultraviolet light due to the presence of fluorescent chemicals in their exoskeleton.
- ★ The modern scorpion can live as long as 25 years.
- ★ They can survive a year without eating.
- ★ Scorpions are able to survive underwater for up to two days because they have “book lungs”. Book lungs have many layers of thin membrane stacked together, like pages in a book.



Name: _____

Scorpionatomy



Match the parts of the scorpion to the corresponding labels, and write your answers in the blanks provided.

TELSON

PEDIPALP

CHELA

ACULEUS

EXOSKELETON

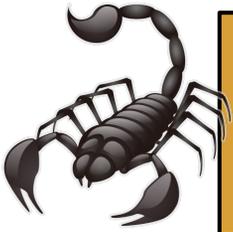
CLAW

PATELLA

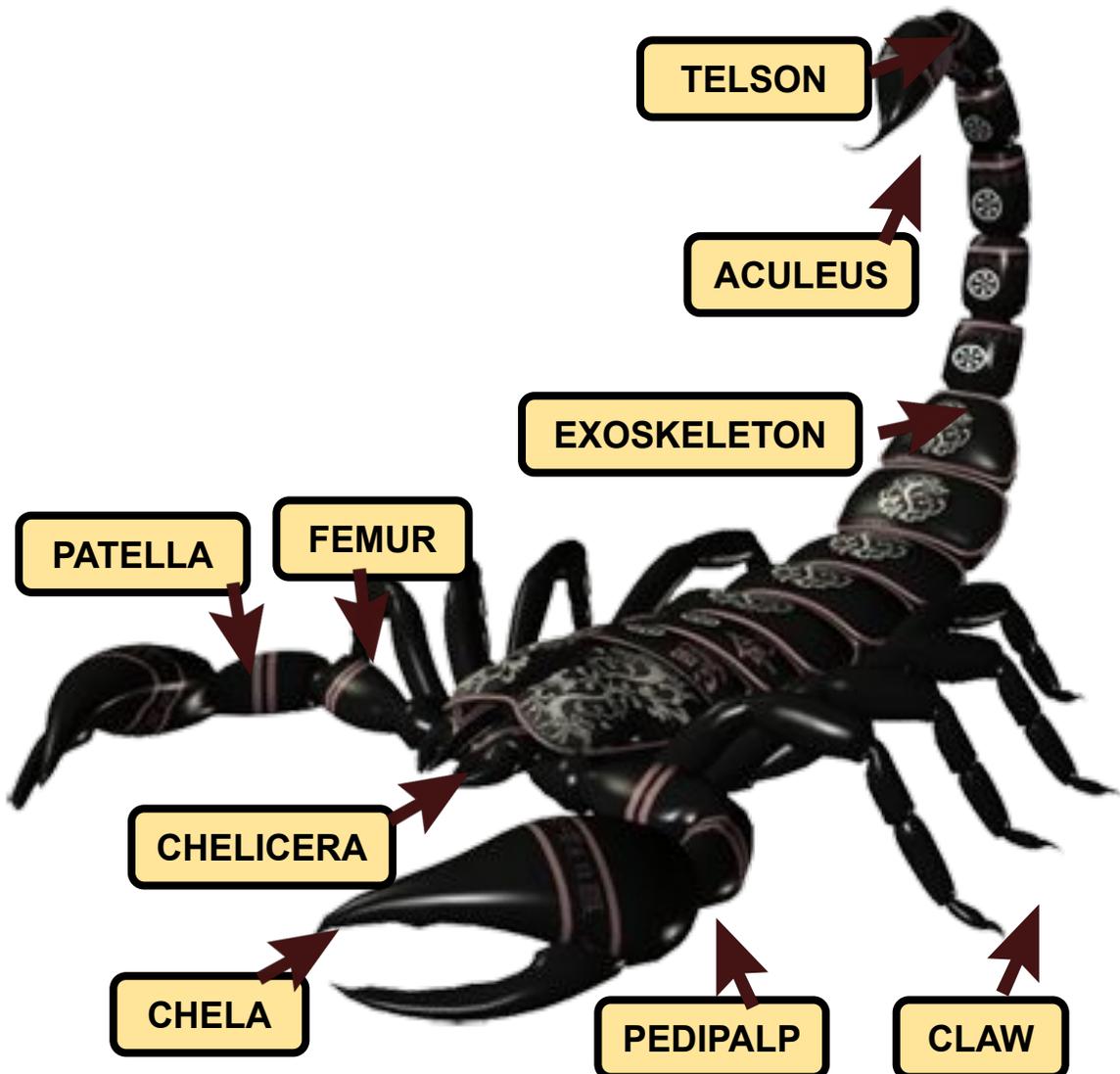
CHELICERA



Scorpionatomy



ANSWER KEY



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