White Sands

National Park Service
Department of the Interior
White Sands National Monument

Common Arachnids of White Sands

Dr. Lightfoot Image

There are over 500 different species of invertebrates that live at White Sands. Though rarely seen during the day, sometimes their tracks and burrows are evidence of their activity in the sand. While most arachnids do bite or sting, most of those at White Sands have weak venom and are not life threatening to humans. Remember though, White Sands is their home and you are just a guest.

Dr. Lightfoot Image

Wind scorpion
Eremobates spp.

This arthropod goes by many different names including the wind scorpion, camel spider, sun spider, and solpugid. They are not dangerous to humans and have no venom. Not especially large creatures, the biggest ones have a leg span of only a couple inches. They are very fast and active nocturnal predators, running rapidly over the ground at night in search of prey. The first pair of leg-like appendages are not actually legs but pedipalps with five segments each. These appendages function partly as sense organs, like insects' antennae. They also assist in feeding and fighting. They have large pinching mouthparts called chelicerae they use to overpower and chew prey.

Dr. Lightfoot Image

Sand scorpion
Paruroctonus utahensis

Scorpions, like their spider relatives, have eight legs. However, they additionally have greatly enlarged pedipalps attached to the head, in the form of appendages, with large pinchers used for grasping prey. They also have a characteristic long tail or telson, with a single large stinger at the end. Scorpions use their pinchers to grasp other invertebrates, and then use the stinger at the end of the tail to inject venom into their prey. They chew their prey with mouthparts, or chelicerae, equivalent to the fangs of spiders. Some scorpions have powerful venom that is dangerous to humans. However, like all the scorpions that live at White Sands, the sand scorpion has mild venom and is not dangerous. The sting is painful, similar to a bee sting. Sand scorpions live in burrows they dig in the sand, and they come to the surface at night to search for prey. The sand scorpion lives on sandy soils throughout the Southwest.

Tarantula
Aphonopelma spp.

These large, hairy spiders can be six inches across with their legs fully extended. Their bite is not dangerous to humans but can be painful and may cause an allergic reaction in some people. Tarantulas make their homes in burrows and crevices. They will lay in wait and ambush instead of using a web to ensnare their prey. Anything that the tarantula can subdue is a potential meal, including insects, small rodents, and reptiles. The tarantula's mouth acts like a tube that sucks up liquids. They coat their food in digestive fluids to predigest it outside of the body before they eat. Tarantulas have terrible eyesight and rely mostly on their sense of touch to perceive the world around them. Male tarantulas can be seen in the evenings after summer rains going in search of female tarantulas.

Western black widow spider
Latrodectus hesperus

The female black widow is all black with a distinct hourglass mark on the bottom of her abdomen. Females are about as big as a quarter, and males are less than half that size. The male widow is a brown-yellow color with a yellow hour glass mark and white strips along his abdomen. Adolescent females have the same markings and color as adult males. These spiders live in dark, damp places like the thatch at the bases of yucca plants and old rodent burrows. They only bite when disturbed and are generally not lethal to healthy adults. When mating the male spider wraps the female in a thin layer of silk. If he cannot get away fast enough after he is finished, the female may eat him. In the summer, females can lay four to nine egg sacs, each filled with hundreds of eggs.

Funnel-web spider
Agelenopsis longistylus

Funnel-web spiders build flat-spreading webs close to the ground that have a descending cylinder (funnel) near the center or on one side, which leads down into a dark retreat. The webs have two layers, a thicker, base layer that supports the entire web, and a thinner, upper layer which transmits the vibrations of insects that fall onto the web to the spider, who resides inside the funnel entrance. When the spider detects the vibration of an insect or other small arthropod, it will run out on the web to the insect, tackle it, bite it, and drag it into the funnel to feed on. These spiders have mild venom, are not dangerous to humans, and should not be confused with the unrelated and dangerous "funnel-web" spiders of Australia.

Apache jumping spider
Geolycosa rafaelana

As their name implies, jumping spiders are avid jumpers. They hunt and behave much like cats, watching for invertebrates equal or smaller in size. They then pounce on, subdue, and eat them. Jumping spiders are ambush or sit-and-wait predators. Unlike other spiders, they roam around on vegetation and do not build webs to capture prey. Jumping spiders have excellent vision, and they can jump several inches to capture prey. They also have elaborate courtship displays, where males court females by dancing and displaying iridescent blue-green markings on the fronts of their fangs. The Apache jumping spider is widespread throughout the Southwest and much of the southern United States and into Mexico.

Burrowing wolf spider
Latrodectus mactans

Burrowing wolf spiders are medium- to large-sized spiders that construct and live in silk-lined burrows. These spiders tend to spend the daytime at the bottom of the burrows and come up to the top at night, similar to tarantulas. They have very sensitive touch senses and feel the vibrations of passing insects and other spiders from their burrows. Once they feel the vibrations they will ambush and attack their prey, pull them down into their burrows, and feed on them. The openings of the silk lined burrows, with a similar circumference to your finger, can be seen during the day and are common at White Sands. Other species of free roaming wolf spiders look similar to the sand wolf spider, but they tend to be lighter and camoflauge on the sand surface.

Sand wolf spider
Arctosa littoralis

The sand wolf spider, also called the beach wolf spider, lives in open sandy habitats such as at White Sands. These spiders do not build webs and are free ranging predators that run over the ground surface in search of small invertebrate prey. Their coloration is variable so that they are camouflaged to the particular type of sandy backgrounds that they live on. Those at White Sands tend to be much lighter in color than elsewhere. These spiders use their camouflage to sit and wait on the open sand for smaller passing invertebrates that they then chase down and consume. Sand wolf spiders have mild venom and are harmless to humans. These spiders inhabit sand dunes and sandy beaches throughout the United States and Mexico.