



Common Insects of White Sands



Dr. Lightfoot Image

The desert is a harsh place to live, but that doesn't stop the insects at White Sands National Monument from making homes in the dunefield. Some of the most common insects can easily be spotted at the right time of year. At White Sands, you are a guest in their home, respect all-big and small-wildlife.



Yucca moth
Tegeticula elatella

The yucca moth is solely responsible for the pollination of yucca plants. The moth pollinates the flowers by scooping up a sticky ball of pollen with specialized mouthparts from the stamens of one plant and inserting the pollen into the pistol of a yucca flower of another plant; no other creature performs this task. After pollination, the moth will lay eggs in the bottom of the flower. The pollinated flower then turns to fruit, encasing the moth's eggs. When the eggs hatch, the

larvae feed on the seeds as they make their way out. Not all of the seeds are consumed as some must be left behind for the next generation of yucca. After emerging from the fruit, the larvae drop to the ground and burrow down a few inches where they go into a cocoon stage and wait until Spring to emerge as adult moths. There are several species of yucca moths in the Southwest that specialize on different yucca species.



White-lined sphinx moth
Hyles lineata

Sphinx moths are often mistaken for hummingbirds as they hover around flowers feeding on nectar with their long tongues. They feed on and pollinate a number of plants including evening primrose, four o'clocks, and desert willow. From April through October, the best time to see these moths feeding is around dusk or dawn, though they have also been observed flying in the middle of the day. Some of the plants in the monument they lay their eggs on are the desert four o'clock and the evening primrose. When the eggs hatch, the larva

will feed on the host plant, growing to about the size of an index finger. They have a sharp horn at the top rear-end of their bodies and are called hornworms. The color of sphinx larva can range from pale yellow to dark green with varying highlights of red and black. After getting their fill, the larva will drop off the plant and burrow into the ground and pupate, emerging as a moth 2 to 3 weeks later. Several other species of sphinx moths live at White Sands.



Bleached skimmer dragonfly
Libellula composita

Bleached skimmer dragonflies make their homes in saline and alkaline waters of the Southwest desert. While in their larval stage of development they look more like toads, and they live at the bottom of saline ponds where they wait to ambush other aquatic insects, larvae, and even tadpoles! Mature dragonflies feed on soft-bodied insects they can catch, such as mosquitoes and other small flies. They hunt by

waiting on a perch, darting out and grasping insects with their spiny legs, and returning to their perch to feed. Skimmers mate mid-flight during their flying season which can last from May to September. Dragonflies are among the most accomplished flying animals on earth.



Tarantula hawk wasp
Pepsis grossa

The tarantula hawk is one of the largest wasps in the world. The tarantula hawk has a painful sting, but they are not aggressive or likely to sting humans. The female wasps hunt for tarantula burrows during the daytime, and use their stinger to paralyze the tarantula in order to drag it back to her burrow. A single egg is laid onto the top of the spider's abdomen,

and the larva burrows into the spider after hatching. The larva will then feed on the tarantula's internal organs saving the vital organs for last. Adult tarantula hawks feed on nectar, and like other wasp species, the male tarantula hawk does not have a stinger. *Pepsis grossa* is also the official state insect of New Mexico.



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White Sands Interdune sand-treader camel cricket

Daihiniodes larvale

Two species of sand treader camel crickets live only at White Sands, where they are adapted to live in the gypsum sand. These crickets are called “sand-treaders” because they have specialized spines on their hind and fore-legs for digging in the sand. Like dogs they dig in the sand with their front legs and then use their hind legs to kick the sand several inches behind them. They are only active at night, which is when they come to the

surface of the sand to forage on dead plant material. During this time, they are also hunted by scorpions and other nocturnal insectivores. In the daytime, they burrow into the sand where it can be many degrees cooler than the outside air temperature and much moister. These crickets are fairly small, less than two inches on average.



Darkling beetle

Eleodes obscurus sulcipennis

Darkling beetles are scavengers of dead plant material on the ground. They tend to wander around mostly at night. There are many different species of darkling beetles at White Sands, each specialized to particular habitats and time periods, and each species leaves a distinctive track in the sand. Darkling beetles will raise their abdomen in the air when they feel threatened, which serves as a warning to any would-be predators. They can then exude a foul-smelling fluid from the

posterior tip of their abdomen that repels predators. When this chemical gets on your skin, it can stain it purple or brown but is not harmful. The adult beetle lays eggs in loose plant material on the ground so that when the larvae hatch they can feed on that material. Being jet black, the darkling beetle will be one of the easier creatures to spot on the dunes.



Dr. Lightfoot Image

Toothpick grasshopper

Paropomala pallida

Many species of short-horned (short antennae) grasshoppers inhabit White Sands. They are herbivores, feeding on a variety of different plants. Most grasshoppers will produce sound for attracting mates. Some rub their hind legs against their forewings, and others snap their wings in flight making crackling sounds. Only two species live in gypsum and feed off of plants that survive in

it. Unlike crickets and katydid, grasshoppers are active during the daytime. After the eggs are fertilized, the female will find a spot in the soil or sand, where she will lay about 100 eggs covered in a sticky substance for protection. The nymphs that hatch the next year look like smaller versions of adults without wings.



Minor ground mantis

Litaneutria minor

Ground mantises are small active ground hunters that are camouflaged on soil surfaces. Unlike the larger green mantises, they do not hunt on plants. They can be seen running down prey on the ground during the day, grabbing them with their specialized raptorial forearms. As soon as they hatch, they will begin hunting and are sometimes cannibalistic. Their prey consists of any insect they can catch. When threatened, they

will use their forearms as a defense mechanism and make themselves look bigger by standing to intimidate predators. Females are larger than males and cannot fly. Some males with larger wings can fly, whereas those with smaller wings cannot. At certain times of the year the ground mantis will molt and shed its exoskeleton. Egg cases, known as ootheca, will be laid on twigs and branches.



Walking stick

Diaperomera velii

Stick insects are mostly nocturnal creatures and spend most of their day hiding under plants, which can also provide food. Females are generally larger than their male counterparts. In the photo to the left, the female is on top and the male is on the bottom. They do their best to mimic their surroundings in order to blend in. Unfortunately, this defense does not help them when bats

hear them at night. When threatened, they will feign death in an attempt to deter any attacker. Sometimes they will sacrifice a limb if playing dead doesn't work. Being very nutritious, they are highly predated. Their flexible legs help them move and hang in bushes, which makes them even more difficult to spot!



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Harvester ants

Pogonomyrmex maricopa

Harvester ants specialize in collecting seeds for their young to feed on. There are several species in New Mexico. The Maricopa harvester prefers sand and sandy soils, while other species prefer loamy or gravelly soils. These ants are active during the daytime, running around on the ground in search of seeds, which they pick up and carry back to their underground nest. The nest contains a series of chambers at different depths from the surface. These chambers are used to keep the seeds stored at optimal conditions so they do not germinate or decompose. As soil moisture and temperature conditions

change, the seeds are moved to a different chamber. Like other ants, colonies consist mostly of sterile female workers, one fertile female queen that lays eggs, and larvae in special brood chambers. Winged fertile females and winged males emerge from the nests following summer rains. The winged females and males mate, the mated females become queens, dig burrows and start new nests. Maricopa harvester ants do have stingers and can render a painful sting, so it is best to observe from afar and not handle them.