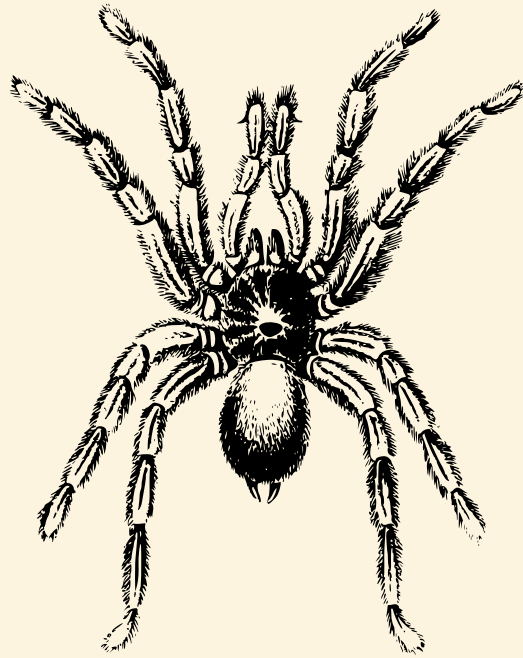


INSECTS AND ARACHNIDS OF FAIRVIEW PARK



Western Pygmy Blue



The Western Pygmy Blue is the smallest butterfly in the world. Their wingspan is on average only half an inch, or about the size of your fingernail, making it very difficult to spot. The wings are mostly brown or copper with blue coloration in the areas closest to the body and white edges. The underside of the wings has short, white horizontal lines and some black dots. It can be found in a variety of habitats salt marshes, deserts, and disturbed areas. The caterpillars eat plants including saltbush and Russian Thistle while the adults feed on flower nectar. They are seen year-round but are most common in the fall.

Valley Carpenter Bee



Valley Carpenter Bees are an example of extreme sexual dimorphism. The males are fully yellow with green eyes and the females are solid black with metallic wings. They are large and bulky, about an inch long. Many people mistake them for bumblebees, but they are only distant cousins. They nest in wood by drilling holes with their powerful mandibles, usually in oak trees, giving them their name. They often cannot fit in deep, narrow flowers to reach nectar and as a result, they often participate in "nectar robbing". They pierce through the side of the flower to suck out the nectar. This circumvents the mutualism between the flower and bee because without going through the front of the flower, the pollen will not be picked up.

Orbweavers



There are over 25 species of Orbweaver spiders in Orange County. They have different colorings and patterns, but they all have similar body shapes. Their abdomens are rounded but triangular, and they have long legs. They are most noticeable during summer and fall when they weave large, perfectly round spider webs. Their webs are the ones that come to mind when we think of Halloween or cartoon depictions of spider webs. They weave a web each night and eat whatever small insects were caught in their web. Larger orbweavers have been observed eating small frogs and hummingbirds if caught in their web.

Harvester Ant



Ants can commonly be overlooked, but they are very important for a healthy ecosystem. They are important for keeping soil aerated, distributing native plant seeds, and serving as a food source for native reptiles. Harvester ants live underground in chaparral or coastal sage scrub habitats and they feed on the seeds of these plants. They will collect the seeds and take them to their underground nests to store. If you see a pile of seed husks, there is likely a nest nearby. Some of the seeds will sprout before they get eaten and grow into the native plants you see in the park. The ants have long, white hairs on their chin that help them to move soil when they are excavating.

Anise Swallowtail Butterfly



This butterfly has mainly yellow and black markings with faint spots of blue on the bottom of the wings. Population numbers in Orange County have fluctuated over the years. They occur mainly in semidisturbed areas at low elevations, so their population increased as land in the county turned to agricultural uses. This is likely because the caterpillars feed primarily on Sweet Fennel plants, an invasive species that occurs in disturbed habitats. As the county became even more disturbed and fields were covered in concrete, their population declined as their food source disappeared. As their environment changed, many of them went into diapause sometimes lasting years, meaning that their development was halted due to environmental conditions.

Western Tiger Swallowtail



This butterfly has yellow wings with black tiger-striped markings and a black border. The bottom of the wings have a long tail and the inside of the wings have blue markings along the edges. The caterpillars of this species eat California Sycamore, Cottonwood, and Willow plants, meaning they are found primarily in riparian or moist areas. The adults are found in the same habitat. Adults can be seen "puddling" or going down to wet sand or mud along a stream to sip water and nutrients. The caterpillars will feed for 3-4 weeks before entering the pupal stage for 10-20 days. Once the adult butterfly emerges, it survives for less than a month.

California Trapdoor Spider



This family of spiders is unlike any other species of spider. Unlike most spiders, Trapdoor Spiders do not spin a web to catch prey but instead make a burrow with a D-shaped trapdoor that is camouflaged. They hide behind this trapdoor until the right moment when they can come out and kill their prey. They begin making these burrows from birth, using their legs to create the tunnel. They then coat it with a mixture of dirt and saliva to reinforce it. After, they add a layer of silk. Finally, they build the trapdoor with a combination of web and the dirt surrounding the burrow. The resulting burrow can be up to 40 centimeters deep! They spend a large portion of their lives in this burrow.

Common Green Darner



Dragonflies are some of the earliest winged insects with fossils dating back to before the dinosaurs over 300 million years ago. The Green Darner is a dragonfly with a long abdomen, olive green head, and bright green mid-section. Males have bright blue abdomens while females have reddish brown abdomens. Dragonfly wings are powered separately, making them very maneuverable and precise in flight. Green Darners also have compound eyes with 30,000+ simple eyes that allows them to see almost 360 degrees around and UV light. They need water in order to reproduce, but once they are adults, they forage anywhere they can find prey. As adults, they eat small flies, beetles, and other flying insects. Green Darners reproduce in the summer along shorelines of wet areas. When mating, the male's abdomen is connected to the female's head and the female's abdomen is connected to the male's head in a wheel formation. Eggs hatch about a week later. Dragonfly larvae are called nymphs and they spend their time in water, hunting small aquatic insects.

Bold Jumping Spider



Bold Jumping Spiders are small, fuzzy hunting spiders. The top of the abdomen has white, yellow, red, or orange spots. The chelicera often have an iridescent green-blue color and they have white to brown rings along their legs. They walk with jerky movements and as their name suggest, they can jump very long distances. They are found on plants, trees, fences and many other places. They prey on insects and other spiders with their excellent eyesight. The two large eyes they have in the front give them excellent vision and allows them to jump with accuracy and see 360-degree views. They do not spin webs but use a thread of silk to tether themselves or to hold their eggs. During courtship, the male will wave his forelegs, display his colorful chelicera, and drum the ground. The eggs are laid in small crevices during the summer.

Bumblebees



Yellow-faced Bumblebee



Sonoran Bumblebee



Crotch's Bumblebee

There are three bumblebees that are found in Fairview Park: The Sonoran Bumblebee, Crotch's Bumblebee (a Candidate Endangered Species since 2019), and Yellow-faced Bumblebee. They visit a large variety of flowering plants and are excellent pollinators for common crop plants such as blueberry, bellpepper, eggplant, and tomato. Some flowers produce pollen in anthers that are shaped like saltshakers with two holes. In order to get the pollen out, the bumblebees bite the top of the anther, curl around the anther, and sonicate until the pollen comes out. They use their flight muscles to produce this vibration, a function that non-native honeybees are not able to do.

Mourning Cloak Butterfly



This butterfly is one of the most common ones in Orange County and can be found in neighborhoods as well as riparian habitats. They are medium to large with brown-black wings with yellow borders and a row of blue spots adjacent to the yellow. The caterpillars eat willow and cottonwood trees in the riparian areas and commonly Chinese elm in suburban areas. As adults, they walk on the tree trunks head down and feed on the sap. They like to perch on high objects and will typically find the highest perch in the area. Females lay the eggs encircling twigs of willows, cottonwoods, or other food sources. The caterpillars live communally, pupate, then emerge as adults in June and July.

White-Lined Sphinx



The White-Lined Sphinx is a furry, large-bodied moth with six white, horizontal stripes on the body. They have long, narrow triangular forewings and short hindwings. They sip nectar by hovering near flowers, flapping their wings rapidly in order to keep their heavy bodies afloat.

Because of their rapid wing movement, they are often mistaken for hummingbirds. They primarily fly at night, but can be seen during the day too. Females lay eggs on their food sources in the spring, sometimes hundreds of eggs in one season. Food plants for both the caterpillars and adults vary widely. The caterpillars vary in color but all have a pointed horn in the back that is typically yellow or orange.

Tarantula Hawk Wasp



Tarantula Hawk Wasps are large insects that are deep blue with orange wings and antennae tips. The males of this species are harmless, but the females have an extremely painful sting.

They are not aggressive towards humans, but they do attack tarantulas. They are parasitoids, meaning that their larvae live as parasites in the host and eventually kill them. The tarantula hawk will sting a tarantula, paralyzing it. Then she will drag the tarantula into a burrow that she dug beforehand. There, she lays an egg on the tarantula's abdomen before sealing the burrow. The egg hatches and the larva burrows into the tarantula and begins feeding on its body, while it is still alive. They wait to eat the vital parts of the spider until the end to keep it alive and fresh as long as possible.

Tiger Centipede



The Tiger Centipede gets its common name from the dark bands that are on each segment of their bodies. They vary in color, some being blue or green and others being tan or orange as seen in the photos above. They are generally about 4 to 5 inches long. At Fairview Park, they can mainly be found in the soil but may also hide underneath rocks or logs. They burrow during the day to escape the heat and because they need moisture to survive. These carnivores hunt at nighttime and their prey consists of insects, lizards, rodents, and more. They inject venom into their prey using pinchers to cause muscle damage, unlike other insects who bite or sting.