



### Western Black-legged Tick

*Ixodes pacificus*

Body length  $\frac{1}{8}$  inch

■ Actual size

## Ticks

There are several species of ticks that are found in our region. Two of the most common are the Pacific Coast Tick and the Western Black-legged Tick. Of these two, the Black-legged Tick has been linked to Lyme disease.

Ticks have sense organs that can detect hosts, usually land vertebrates, that may be nearby. They have bristle-like setae (hairs) that are sensitive to humidity and certain chemical "odors." A tick will climb to the top of vegetation and wave its legs in the air to detect a possible host animal. If it is successful, it will attach itself, injecting an anti-coagulant from its saliva, and begin to ingest blood for protein in its diet. Once full it will drop off the host.

Ticks will feed for several hours or several days, depending on the species and host.



### Pacific Coast Tick

*Dermacentor occidentalis*

Body length  $\frac{1}{16}$  to  $\frac{1}{8}$  inch

■ Actual size



## Mosquito

*Culex pipiens* - Northern house mosquito

Male mosquitoes only sip nectar, but females need the protein and iron in blood from vertebrates in order to produce eggs for the next generation.

Mosquitoes have been called "the scourge of human societies" because they are carriers of devastating diseases such as malaria, encephalitis, yellow fever, and many others. Mosquitoes are also known as vector agents because they spread parasites and disease-causing viruses from one person to the next without becoming infected themselves.

Millions of dollars are spent to control mosquito populations. You can help by eliminating sources of standing water on your property. Encouraging the preservation of areas where dragonflies (a very effective natural predator of mosquito adults) can grow and thrive will help keep populations in check. If you do have mosquitoes in your area, be sure to use window and door screens, and to apply mosquito repellents when you go outdoors.

## If Bitten or Stung

- Don't panic, remain calm.
- Administer first aid. If the situation is truly serious call for help or seek medical attention.
- Remember that the park is home to these creatures. Respect them and do not kill them or disturb them.
- If you have concerns about Lyme Disease or West Nile Virus, contact Alameda County Vector Control at 510-567-6800 for information.

# STINGERS AND BITERS

Many creatures with reputations as stingers or biters are actually shy and reserved. Others have earned their reputation due to their need to protect themselves and their homes, or to ensure the survival of their species. We can all agree that no one likes to be bitten or stung, but we need to remember that all of these creatures have important roles in nature. Doing what you can to learn about them, and possibly avoiding them, benefits everyone.



Body length  $\frac{1}{8}$  to  $\frac{1}{4}$  inch

## Black Widow

*Latrodectus mactans*

You can identify these spiders by their long black legs, and shiny, round black abdomens. If you can see their belly their most identifying feature, a red hourglass shape, can usually be seen. Black Widow webs are irregular in pattern and made of very coarse, sticky silk. Webs are usually built in sheltered, protected places near the ground.

Black Widow spiders are venomous, but not aggressive. They prefer to focus on their prey, especially millipedes, centipedes, and a variety of insects and their eggs. They only bite humans in self defense. Contrary to popular belief, females only rarely eat the male after mating.

Predators of Black Widows include spider wasps, blue mud daubers, some species of birds, and rodents.



Body length 2 to 2½ inches

## Tarantula

*Euryptera californicum*

California's tarantulas spend most of their lives no further than a few feet from their burrow entrance. The male has a once in a lifetime walk-about when he is searching for a female, travelling far from his burrows, never to return.

These spiders are not aggressive toward humans, but you won't want to pick them up, as the bristly microscopic hairs on the abdomen will break off, causing irritation to your skin.

As many spiders do, these large creatures have eight eyes, grouped on top of their heads. They are nocturnal and hunt by touch.

Females undergo an annual molt, and may live to be ten years old.



Body length ½ to 1 inch

## False Tarantula Spider

*Calisoga longitarsus*

This spider resembles several of the smaller members of the tarantula family. *Calisoga* has smooth, velvety bodies, and they don't climb very well. While not aggressive when undisturbed, they will bite when threatened, and can be feisty. *Calisoga*s live in burrows, preying on small insects and other spiders at night.



Body length ½ to ¾ inches

## Yellow Jacket

*Vespula pensylvanica*

These social wasps are cousins to Paper Wasps. Yellow jackets have a stouter body that is slightly wider than their head.

Yellow jackets usually nest on the ground or at ground level near tree stumps and rotted logs.

Adults are nectar eaters, but chew insects into a pulp to feed to their larva. Nicknamed "meat bees," these wasps will seek out fresh meat, whether from your hamburger or from roadkill, to feed their young as the colony grows, and as insect populations become depleted in autumn.

Use caution around Yellow Jacket nests, as they will fiercely defend their homes with bites and stings.



Body length 1½ inches

## Paper Wasp

*Polistes dominula*

Female Paper Wasps will work together in nest building and rearing young. But they don't form large "hives" like the Yellow Jackets.

Paper Wasps are easily recognized by their long slender legs, which dangle below their body in flight. Even though they are not as aggressive compared with other wasps, they will sting if disturbed. Their diet includes garden pests such as caterpillars, small beetles, and a variety of small invertebrates.

The most commonly seen Paper Wasp is the introduced European Paper Wasp.



Body length ¾ to 1 inch

## European Honey Bee

*Apis mellifera*

Honeybees have barbed stingers that stay in your skin if you get stung. When the bee pulls away, some of its vital body tissue is torn off and the bee soon dies.

Honeybees produce honey and wax and pollinate crops and many of the world's plants. It takes millions of trips between flowers and the hive to produce one single jar of honey.

These bees have a complex society with queens, drones and workers in a very well organized colony. The workers are known for an intricate dance language for communicating the distance, quality and direction of food sources.



Body length ½ to ¾ inch

## Velvet Ant

*Desymulla occidentalis*

Velvet Ants are not ants, but hairy wasps in the Mutillidae family. The females have no wings, and can inflict a painful sting. The males are larger and have wings, but no stingers.

Adults feed mostly on nectar and water. Females bite into the nests of other wasps or bees, and lay eggs in the cocoon. The developing velvet ants will eat the larvae and pupae of the host wasp or bee, parasitizing the entire nest.