

INSECTS RESEMBLING MOSQUITOES in Contra Costa County

Contra Costa County is home to 23 species of mosquitoes. There are also several types of insects located throughout the county that many people perceive as a mosquito, but actually are different species of insects. Please note: we do not provide services for insects other than mosquitoes, yellowjackets, and bees.



Mosquito adults are small, delicate, two-winged flies. At first you might mistake them for the widely distributed, nonbiting midges. However, female mosquitoes differ from similar insects because of their long, slender proboscis (proh-bos-is, -kis), a tubular feeding organ adapted for piercing skin and sucking blood (see fig. 1). They need blood in order to produce eggs.



If you were to view a mosquito with a hand lens, you would see another characteristic that distinguishes mosquitoes from closely related flies—small scales cover their long, slender wings. Male mosquitoes also have scale-covered wings, but they use their proboscises, or “beaks,” only for sucking plant juices and other sources of sugar rather than blood - they do not bite people or other animals.

- Bites and takes in a blood meal using its proboscis (proh-bos-is, -kis). See fig. 1.
- Wings as long as or longer than its body.
- Usually lay eggs in water.



Chironomid midges (Chironomidae) are the most common and are often seen swarming in open spaces, particularly near bodies of water. When populations become large, they can be seen resting on walls and screens of buildings. Midges can be distinguished from mosquitoes: they don't have a biting proboscis and lack scales on their wings. Midge larvae develop in lakes, ponds and streams. Some species are extremely tolerant of polluted conditions and may be found in enormous numbers in and around sewage treatment plants. They typically live on or in the mud, unlike mosquito larvae which float at the surface. The larvae of many species contain hemoglobin (similar to what's found in our blood) hence the common name 'bloodworms'. Mass hatching can occur and the spontaneous appearance of swarms of adults can be very noticeable in the spring and summer. Adults live for about a week.



The dixid midge (Dixidae) is commonly found around moist areas with abundant vegetation. Typically at dusk, dixid midges can be seen swarming around along the edges of streams and lakes. Adults live less than a week and are incapable of biting. They lack a proboscis and wing scales. Larvae are found growing at the surface of slow-moving water, are wormlike and swim by bending their bodies in an easily identifiable “U” shape. They feed mainly on algae.

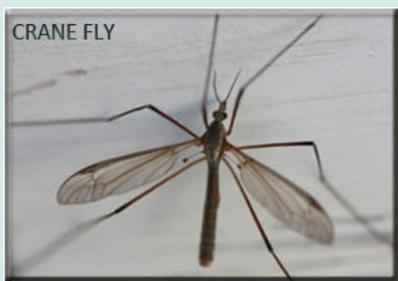


Biting midges, or “no-see-ums,” (Culicoides) are minute insects known for being vicious daytime biters. Coming primarily from damp sandy clay or mud, they are often found close to their source (rivers, lakes and seashores) due to limited flight capacity. Despite their name and small size (some can pass through standard window screens), they are easily visible to the naked eye. They are uncommon in Contra Costa County, but, in some parts of the world they are a significant pest capable of transmitting diseases of cattle and other livestock.





Owl midges (Psychodidae) also known as drain flies or sewer flies, are small, hairy flies that can move about very nimbly, but are weak fliers. They lack a proboscis, but do have scales and hairs on their rounded, paddle shaped wings. The larvae are aquatic or semi-aquatic and are very common in sewers and drains where they feed on slime and debris. The larvae are able to live in soapy water. When found indoors they are a good indicator of a leak in a shower/bath, sink, or laundry drain. Cleaning out sink and tub drains and traps can reduce or eliminate indoor nuisance problems.



Crane flies (Tipulidae), also known as mosquito hawks and mosquito-eaters, are delicate insects, fly poorly, and vary in size from 1/16th of an inch to as large as 1 1/2 inches. The larger varieties are often mistaken as 'giant mosquitoes' but adults are completely harmless and do not bite. They are attracted to lights and often congregate around porch lights. Despite their common names, they do not feed on mosquitoes; in fact adults of most species do not feed at all. The adult crane fly (pictured left) only lives for about three days. The larvae live in mud and feed on decaying vegetation and other organic material.



Mayflies (Ephemeroptera) are found commonly near creeks, flood control channels and other water sources. Despite their common name they are not considered true flies because they have four wings rather than two. Their larvae are found in most aquatic habitats and prefer to live in running water. Adult mayflies have large triangular front wings with many cross veins. The wings are held upright over the thorax. They also have long filaments or 'tails' at the end of their body. Mayflies are an important source of food for trout and other game fish. At certain times of the year huge numbers may emerge simultaneously from particular bodies of water. They are attracted to lights and the resultant large 'swarms' may alarm some people. Adult mayflies are short-lived, do not feed and survive just a couple of days.



Dance flies (Empididae) are gnat-like insects that are named because of their noticeable vertical movement or 'dancing' behavior. These 'dancing' swarms consist mostly of males who are competing to mate with passing females. They are generally larger and heavier bodied (more fly-like) than mosquitoes. Spring swarms are seen in open, sunny places like clearings in the woods. They prey on other insects including mosquitoes and are therefore considered beneficial insects.



Fungus gnat adults (Anisopodidae) are common in shaded, wooded areas. Different species range in size from tiny to larger than mosquitoes. Under a magnifying glass, most species can be seen to have prominent spines on their legs which are absent in mosquitoes. They lack a biting proboscis and their wings don't have scales. They are found in foliage in or near damp places and are sometimes seen in small swarms. They are attracted to lights, sometimes in large numbers, and may be found indoors, particularly associated with overwatered house plants or have poor drainage. The larvae fed on fungi and mold in the soil. Adults are harmless and cannot bite.

