Mosquitoes of Marin and Sonoma Counties

Mosquitoes require water to complete their life cycle. Prevent mosquitoes from breeding by eliminating or managing standing water. Most mosquitoes lay egg rafts that float on the water. Each raft contains approximately 100 to 400 eggs. Within a few days, the eggs hatch into larvae. The larva or "wiggler" comes to the surface to breathe through a tube of days the larva will molt (shed its skin) to become a pupa. The pupa or "tumbler" cannot eat. It breathes through two tubes on its back. Only the female mosquito feeds on plant juices. It takes only five to seven days for mosquitoes to complete their life cycle (egg to adult) during warm weather. In colder climates, it may take three weeks during the summer or many months over the winter in order to lay her eggs the following spring.

A vector is any insect or other arthropod, rodent, or other animal of public health significance capable of causing human discomfort, injury, or capable of harboring or transmitting the causative agents of human disease.

**PHOTO CREDITS:**

**COVER**
† Midge Urtica–J. Forman Orth
†† Crane Fly–Brian Valentine (aka LordV)

**INSIDE**
* Biting Midge–Wilson, Darpel & Mellor (2008)
**** Crane Fly–© 2008 Dr. Mark S. Brunell

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595 Helman Lane, Cotati, CA 94931
Monday through Friday 7:00am to 3:30pm 1.800.231.3236 or 707.285.2200 www.msmosquito.com

OUR SERVICES

The Marin/Sonoma Mosquito & Vector Control District is committed to protecting the health and welfare of the communities in which we serve. Our programs and services are supported by property taxes and are provided free of charge to all residents in Marin and Sonoma counties.

Our services include:

- Mosquito Control & Mosquitofish
- Ground-Nesting Yellowjacket Control
- Rodent Control Advice

For more information about mosquitoes in your area, please ask for our Mosquitoes of Marin and Sonoma Counties and Are you raising Mosquitoes in your Backyard? brochures.
ABOUT INSECTS THAT RESEMBLE MOSQUITOES

Marin and Sonoma counties are home to numerous insects that closely resemble mosquitoes. Many of these insects emerge in large numbers during the early spring, causing the public great alarm. The information in this brochure can help identify these insects that are often mistaken for mosquitoes.

BITING MIDGES

Biting midges or “no-see-ums” are very small, grayish colored flies about the size of an ordinary pinhead.

The larvae are aquatic or semi-aquatic, commonly found in areas such as fresh or salt water, coastal lagoons, estuaries, tidal flats, or habitats with decaying plant materials, sandy, or alkaline soils.

Adults feed on blood and produce very painful, burning bites. Their bites usually produce a temporary swelling that may become vesicular, rupture, and produce an open lesion that may exude moisture for weeks.

Personal protection is the best defense against biting midges; wear protective clothing such as long sleeves and pants, and apply repellent to exposed skin when in areas where these insects are present.

NON-BITING MIDGEs

Non-biting midges are small flies that look like mosquitoes. While these insects do not pose a health threat, they can be a serious nuisance, particularly in communities adjacent to large aquatic habitats.

Adult midges are short-lived and weak flyers. During peak emergence, massive swarms of these midges can cover houses, cars, and other structures. Homes and buildings with outside lighting will attract large numbers of non-biting midges. To discourage the congregation of these insects, move lights away from areas such as doorways, windows, patios, etc.

Replacing mercury vapor lights with yellow or sodium vapor lights will help reduce concentrations of these insects as well. Blacklight traps (bug zappers) will kill midges, but unfortunately often attract more midges into the area than are killed.

FUNGUS GNATS

Fungus gnats are common in the fall, spring, and early summer. They have slender legs and segmented antennae that are longer than their head. Fungus gnats are generally 1/16 to 1/8 of an inch long with light grey to clear wings. They are weak fliers and can be found near potted plants or resting on foliage and leaf litter.

Female fungus gnats lay their eggs in moist organic material or potting soil. The larvae feed on fungus, preferring leaf litter and decaying vegetation.

Adult fungus gnats can be very abundant at times but do not cause harm to people, plants or animals.

CRANE FLIES

Crane flies are tan in color with long legs and slender bodies reaching 1 to 2 inches in length. The larvae live in moist soil, muddy water or decomposing material.

Adult crane flies are sometimes called “Texas mosquitoes” or “mosquito hawks”, but are most commonly known as “mosquito eaters”. This is a misnomer because in actuality, crane flies do not eat adult mosquitoes. Some species of crane flies feed on nectar while others do not feed at all.

These non-biting insects do not constitute a health problem but can create an annoyance when found inside homes or in large numbers.