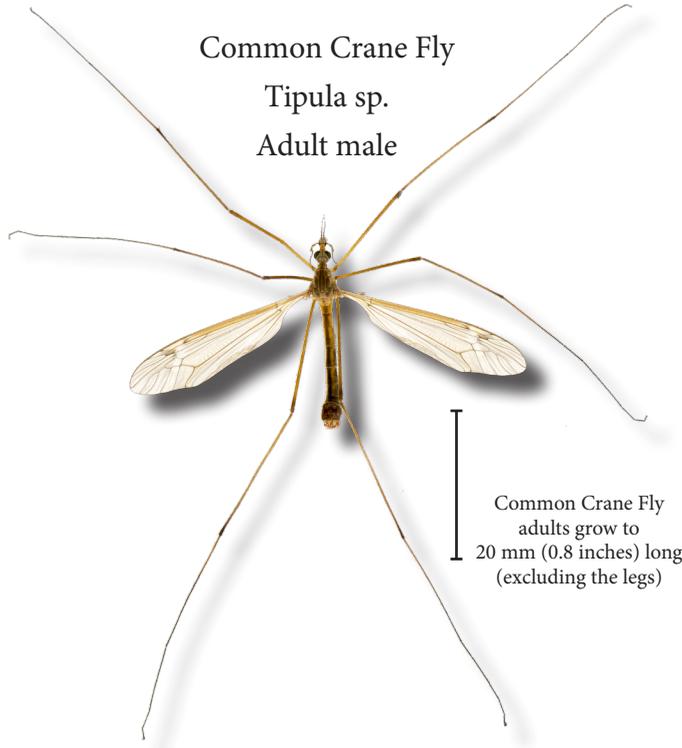


# Crane Flies

## Status

- Neutral
- Cannot bite or sting
- No health threat
- Completely harmless



Common Crane Fly

*Tipula* sp.

Adult male

Common Crane Fly adults grow to 20 mm (0.8 inches) long (excluding the legs)

Abundant and completely harmless, crane flies are known for their mosquito-like appearance and extremely long legs. They make up the most numerous family of flies (Tipulidae), with 14,000 described species in the world, over 1,500 in North America, and more than 400 in California.

The adult body is long and narrow, most often orange-brown to brown in color. The top (dorsal surface) of the thorax has a characteristic deep V-shaped notch (suture). Males have a short, broad, round-tipped abdomen; females have a long, pointed abdomen. Both sexes have two long narrow front wings. Like all flies, the hind wings are reduced to tiny club-like “halteres” that work like gyroscopes to provide stability during flight.

Their antennae are relatively short and flexible. The eyes are bulbous and much broader than the rest of the head. In front of the eyes, the head becomes snout-like (called a rostrum) and ends in a slender bump (nasus). Most species have no useable mouthparts and cannot feed. Those that can feed as adults feed only on nectar that they sip from flowers. They do have a pair of finger-like maxillary palps that they move like antennae to sense their environment. Not a single species of crane fly can bite!

Our most abundant species are the common crane flies (several species in the genus *Tipula*). Adults range from 13-20 mm (0.5-0.8 inches) long, excluding the legs. Our largest crane fly is the giant western crane fly (*Holorusia hespera*) which reaches 35 mm (1.4 inches) long and is one of the world’s largest flies.

On average, adult crane flies live for only 1-3 days! During their short life, they are fed upon by bats, birds, lizards, spiders, and predatory insects such as praying mantids and ground beetles. Because of their abundance and use as food for other animals, crane flies are of tremendous ecological importance.

Common Crane Fly Pupa

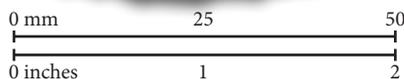


Common Crane Fly larvae and pupae grow to 50 mm (2 inches) long

Common Crane Fly Larva



Giant Western Crane Fly larvae and pupae grow to 60 mm (2.4 inches) long



## Nicknames & Misconceptions

The nickname “Daddy Long-legs” refers to their long legs. However, other arthropods are also called Daddy Long-legs, such as cellar spiders and harvestmen.

The nicknames “Mosquito-hawk” and “Mosquito-eater” refer to the belief that crane flies eat mosquitoes. They do not.

Common Misconception	The Truth
Crane flies bite .....	False
Crane flies sting .....	False
Crane flies eat mosquitoes.....	False
Crane flies are poisonous.....	False
Crane flies are actually male mosquitoes .....	False

## Life Cycle

Crane flies have four stages in their life cycle: egg, larva, pupa, and adult. Female crane flies lay their eggs in moist or wet soil, often along creeks, sometimes in overwatered lawns. After 6-14 days, the wormlike larvae hatch from the eggs. The larvae are cylindrical, legless, and flexible but tough-skinned, a trait that led to their nickname “leatherjackets.” They feed on organic matter in the soil, such as decaying plant material. As they mature, they outgrow their skin, grow a new skin layer, and shed the old one, a process called molting. After four growth-molt cycles, the crane fly larva enters the pupal stage. About a week (sometimes a few months) later, the adult fly emerges from the pupal case. The process of changing body forms while maturing is called metamorphosis.

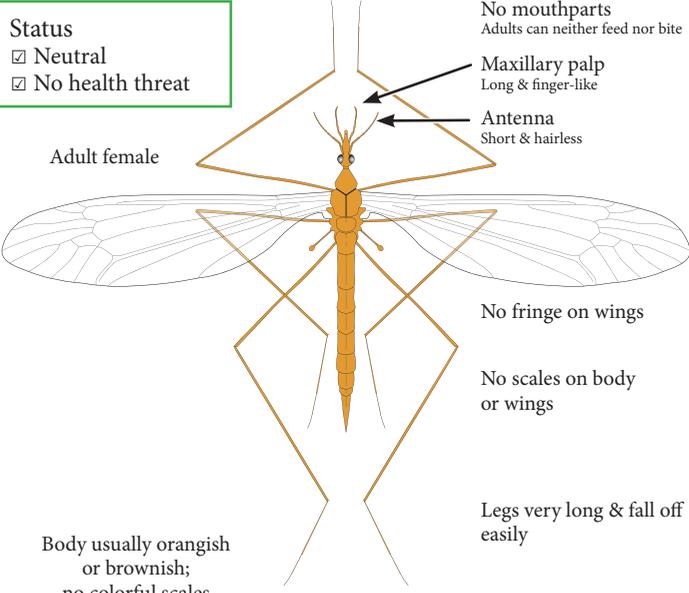
Flip page over for a helpful identification guide



# Crane flies & Look-alikes

**Status**

- Neutral
- No health threat



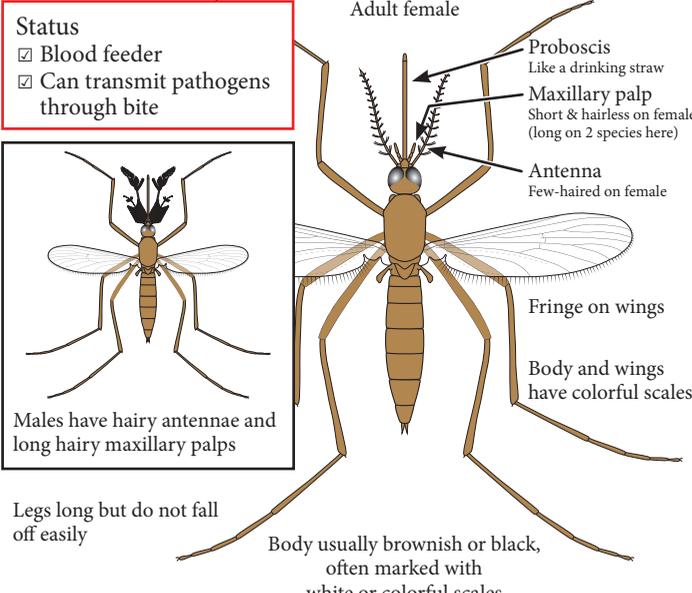
**Adult female**

- No mouthparts  
Adults can neither feed nor bite
- Maxillary palp  
Long & finger-like
- Antenna  
Short & hairless
- No fringe on wings
- No scales on body or wings
- Legs very long & fall off easily
- Body usually orangish or brownish; no colorful scales

Crane Flies (Tipulidae). Eggs are laid in moist soils. Juvenile stages and pupae live in moist soils where they feed on organic matter. Adults emerge mostly during late winter to early spring; a few species emerge in fall. Adults range in size from 10-25 mm long. They have a long head but no proboscis. Their legs are all about the same size, always kept down (not held up). Most adults have no mouthparts and cannot feed.

**Status**

- Blood feeder
- Can transmit pathogens through bite



**Adult female**

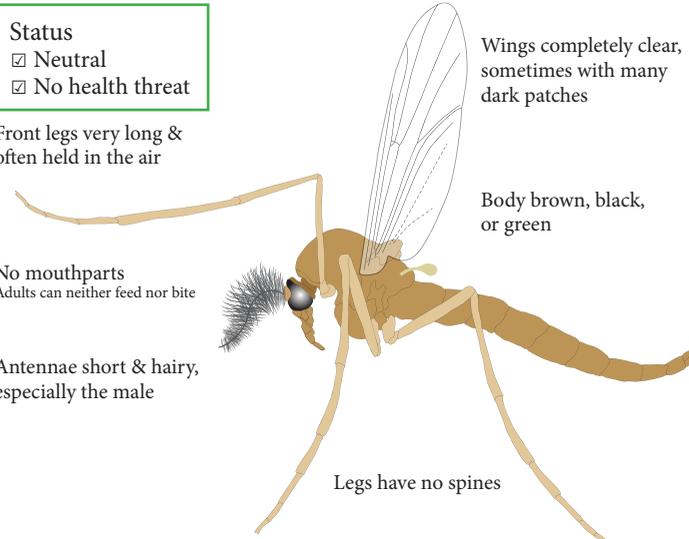
- Proboscis  
Like a drinking straw
- Maxillary palp  
Short & hairless on female (long on 2 species here)
- Antenna  
Few-haired on female
- Fringe on wings
- Body and wings have colorful scales
- Legs long but do not fall off easily
- Body usually brownish or black, often marked with white or colorful scales

Males have hairy antennae and long hairy maxillary palps

Mosquitoes (Culicidae). Eggs are laid on or above water. Juvenile stages and pupae live in stagnant water where they feed on algae. Adults emerge yearround. Adults range in size from 3-9 mm long, much smaller than crane flies. They have a long narrow proboscis. Their hind legs are very long; when at rest, they often keep them raised in the air. Adults feed on nectar. After mating, females also feed on animal blood.

**Status**

- Neutral
- No health threat



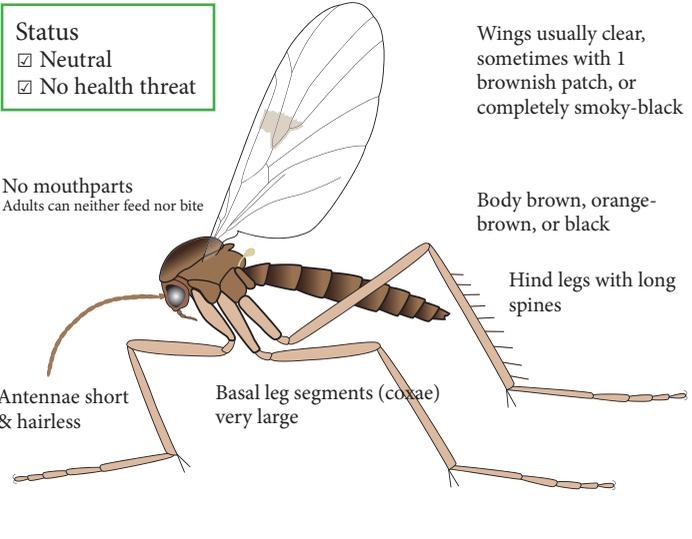
**Adult female**

- Wings completely clear, sometimes with many dark patches
- Body brown, black, or green
- Front legs very long & often held in the air
- No mouthparts  
Adults can neither feed nor bite
- Antennae short & hairy, especially the male
- Legs have no spines

Water Midges (Chironomidae). Eggs are laid on water. Juvenile stages and pupae live in mud of lakes, ponds, and slow-moving or stagnant water where they feed on organic matter. Adults emerge in spring and summer. They range in size from 1-10 mm long, much smaller than crane flies. In the early evening, males fly together in huge swarms that attract females. Females are also attracted to lights at night. Their front legs are very long; when at rest, they are often held in the air. Adults have no mouthparts; they can neither feed nor bite.

**Status**

- Neutral
- No health threat



**Adult female**

- Wings usually clear, sometimes with 1 brownish patch, or completely smoky-black
- Body brown, orange-brown, or black
- Hind legs with long spines
- Basal leg segments (coxae) very large
- Antennae short & hairless
- No mouthparts  
Adults can neither feed nor bite

Fungus Gnats (Mycetophilidae). Eggs are laid in moist soil and on fungi. Juvenile stages and pupae live in moist organic soils and fungi on which they feed. Adults emerge during moist times of year such as winter and early spring. They range in size from 2.2-13.5 mm long, much smaller than most crane flies. They usually fly in the evening and are attracted to organic soils, fungus, and rotting fruit. Their front legs are very long, usually kept down. Adults have no mouthparts; they can neither feed nor bite.

