



# BUG BIZ

Pest Management and Insect Identification Series



## Crane Flies (*Diptera: Tipulidae*), *Tipula* spp.

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### Description

Adult crane flies within the genus *Tipula* are large tan or brown, long-legged, spindly bodied flies varying in body length from 0.39-0.98 inches (10-25 mm) for most species. However, the giant crane fly, *Tipula abdominalis*, which does occur in Louisiana, may reach 1.9 inches (50 mm) in body length. The wings of most species are transparent, but a few possess dark wing patches. Many smaller species of crane flies are included in other genera, and some small species may be mistaken for mosquitoes. Crane flies possess greatly reduced mouthparts and short antennae composed of many similarly shaped segments. The presence of a distinctive V-shaped depression on the pronotum behind the head is diagnostic for the family. The genus *Tipula* exists in a bewildering variety of subtle variations, with almost 500 species in North America alone and approximately 2,500 species worldwide. *Tipula* is one of the largest genera of animals, possibly only surpassed by the beetle genus *Agrilus* (approximately 3,000 species).

Larvae of crane flies are brown, fleshy, cylindrical maggots without legs. They bear an array of fingerlike appendages on the rear end surrounding the spiracles (breathing orifices). Larvae can be quite large, up to 1.9 inches (50 mm) in body length.

### Life Cycle

The larvae of crane flies occur in moist soil, forest leaves and wood litter and in aquatic habitats associated with organic matter, depending on the species. Most species are generalist detritivores, but a few may feed on living plant tissue, such as grass roots. Larval durations vary according to species, but several generations per year are possible. Adults are short-lived, do not feed and live only long enough to mate and deposit eggs, typically not more than a week. Mating occurs a short time after adult emergence and may be preceded by a low-altitude mating flight just above grassy or herbaceous vegetation.



TOP: Larva. Marvin Smith, Bugguide.net. BOTTOM: Adult. Jessica Louque Smithers Viscient, Bugwood.org.

### Ecological Significance and Pest Status

Larvae of crane flies are important in nutrient recycling of organic matter in both terrestrial and aquatic systems. The slow-flying, clumsy adults are an important forage base for birds, lizards and other insectivorous animals, including predatory insects and spiders. Early spring in Louisiana is heralded by the mating flights of crane flies in yards and fields. Adults are attracted to lights and often congregate around porch lights when few other insects are active during warm late winter evenings. The colloquial common name “mosquito hawk” refers to the mistaken belief that adult crane flies prey on mosquitoes. In fact, they do not feed at all. Larvae of some species in western North America are considered minor pests of lawns and turf grass, where they are referred to as “leather jackets.” None of the species occurring in Louisiana are considered pests.

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An interesting Louisiana connection exists in the taxonomy of crane flies. The late LSU herpetologist Douglas Rossman (1936-2015) was an avocational crane fly taxonomist and has a species named in his honor, *Tipula rossmani*, based on specimens from Louisiana.

: The remarkable diversity of crane flies is known mainly through the productivity of two specialists of the group, Charles P. Alexander (1889-1981) of the University of Massachusetts and George W. Byers (1923-2018) of the University of Kansas.

## Control

No control is recommended for crane flies. Accidental entry into homes can be prevented by turning off lights and sealing points of entry, such as loose-fitting doors.

## References

Byers, G. W. 2003. A new species of *Tipula* (*Lunatipula*) from Louisiana (Diptera: Tipulidae). *Journal of the Kansas Entomological Society* 76: 230-233.

Byers, G. W. 2008. Crane flies (Diptera: Tipulidae and others). In: Capinera, J. L. (ed) *Encyclopedia of Entomology*. Springer, Dordrecht.



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