

## Stop 5. European Crane Fly and Annual Bluegrass Weevil Identification and Management

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European crane flies that have recently established and become a turf pest in Michigan consist of two different species from Europe: *Tipula paludosa* (European crane fly) and *Tipula oleracea* (common crane fly). The adult stage of both of these pests looks like a giant mosquito with a wing span of more than an inch. They prefer moist soils, so are most likely to be found in irrigated turf, although with enough rain they can develop in almost any lawn. The adults fly, mate and lay eggs in August and September and may be seen in or near infested lawns or golf turf in large numbers. The second species, the common crane fly, may also have a second generation of adults that emerge in the spring. The larvae, called “leatherjackets,” grow to become nearly an inch-long and look like a brown caterpillar with no head or legs.



European crane fly adult (left) and larvae (right). (Credit: Dave Shetlar, OSU)

In October the leatherjackets consume enough turf roots, stems and leaves to cause visible injury to lawns or golf courses. Turf damage begins to appear as a general thinning of the infested turf, but may progress to large dead patches. Leatherjackets can be brought to the surface by drenching with a soapy water solution – 1 ounce dish wash soap in 2 gallons of water. Leatherjackets also tend to come to the surface when an insecticide is applied. This can be a nuisance on golf courses if large numbers of leatherjackets appear on tees, greens and fairways.

Turf treated for grubs in the spring are **not** protected from European crane fly damage in October. However, if grub treatments are made in July or August, they should also protect against European crane fly. See the table below for a list of products that are effective against European crane fly.

## Products and timing of products used to prevent damage

| Product                              | Correct timing for European crane fly   |
|--------------------------------------|---|
| Sevin (carbaryl)                     | In April, May or October when turf damage is discovered.                                |
| Acelepryn<br>(Chlorantraniliprole)   | April or May (also protects against grubs and other turf pests).                        |
| Arena (clothianidin)                 | Should provide protection when applied in July or August (also protects against grubs). |
| Merit (imidacloprid)                 |   |
| Aloft (clothianidin +<br>bifenthrin) |   |
| Meridian (thiamethoxam)              |   |

So far crane fly damage has only been reported from around the Grand Rapids, Mich., and Detroit areas, but each year the infested area increases. Symptoms like thin turf and digging activity by skunks and raccoons may appear to be caused by grubs, but the presence of gray to tan-colored leather jackets will confirm the pest as European crane fly. Infested lawns can be treated in October with Sevin or another turf product containing carbaryl. In order to avoid this problem next year, insecticides used for grubs can be applied in July or August to also protect against European crane fly.

**Annual bluegrass weevil** is a major golf course pest in the northeast United States. Because it is often resistant to pyrethroid insecticides, it can be very difficult to control. We have been expecting it to arrive in Michigan because it became a problem in Pennsylvania and Ontario at least five years ago. Maybe we should consider it a blessing that it has not yet become a golf course pest in Ohio or Michigan. Still, it is wise to be aware of this future pest so that when it does appear we will recognize it and take the steps needed to control it before we see too much turf damage.

Watch for patches of dead annual bluegrass that appear in June or July on aprons around greens or on fairways. Usually, only the annual bluegrass dies, although bentgrass can become infested. Annual bluegrass weevil can be distinguished from anthracnose by the presence of sawdust-like frass, hollow stems, and the tiny ( $1/16^{\text{th}}$  of an inch) weevils and their larvae (legless white grubs,  $1/16^{\text{th}}$  of an inch-long). The grubs may be found inside of annual bluegrass stems, and the adult weevils will float when cup-cutter samples of turf are submerged in water.