European Crane Flies in Whatcom County

The European crane fly, or *Tipula paludosa*, is a common insect found in pastures and lawns throughout western Washington. Crane fly problems are rare in Whatcom County. A survey of lawns in Lake Whatcom neighborhoods by WSU Master Gardeners, revealed that only 5% of home lawns have 20-25 larvae per square foot. Most lawns had no to very few crane flies. Even 25 larvae per square foot is not a large enough population to require treatment.

Many homeowners have used pesticides to control damage to lawns. In the past, the use of pesticides has been routine and by the calendar. Now we have the know-how to manage crane flies using an *Integrated Pest Management* (IPM) approach. IPM is a decision-making process that uses knowledge and pest monitoring to solve pest problems and does not solely rely on calender-time insecticide applications. Using IPM saves time, money and reduces the impact on the environment.

How your lawn affects water quality

If you think you might have a crane fly problem, an insecticide may not be the best answer. When you use an insecticide, herbicide, or fertilizer in your yard, it doesn't always stay there. Rainfall can wash it off your plants or lawn and into a stormwater drain or creek, where it can harm fish and other aquatic life.

Pesticide and fertilizer use is a particular concern in the watershed of Lake Whatcom—the drinking water source for more than 85,000 people in Whatcom County. In 1999, while testing streams and stormwater detention ponds in the lake's watershed, the state Department of Ecology found three insecticides, dursban, diazinon and malathion—all commonly used to treat crane flies.

No insecticides have yet been detected in Lake Whatcom—a good sign that the stormwater ponds are doing their work—and the lake is a safe source of drinking water, but pesticides are still a concern. This brochure can show you how to determine if crane flies are a problem for your lawn and how to effectively control them.

Crane Fly Pests of the Pacific Northwest

For expert advice and information about crane flies please come visit us at:

http://whatcom.wsu.edu/cranefly

Lake Whatcom Cooperative Management

Whatcom County Integrated Pest Management

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Whatcom County

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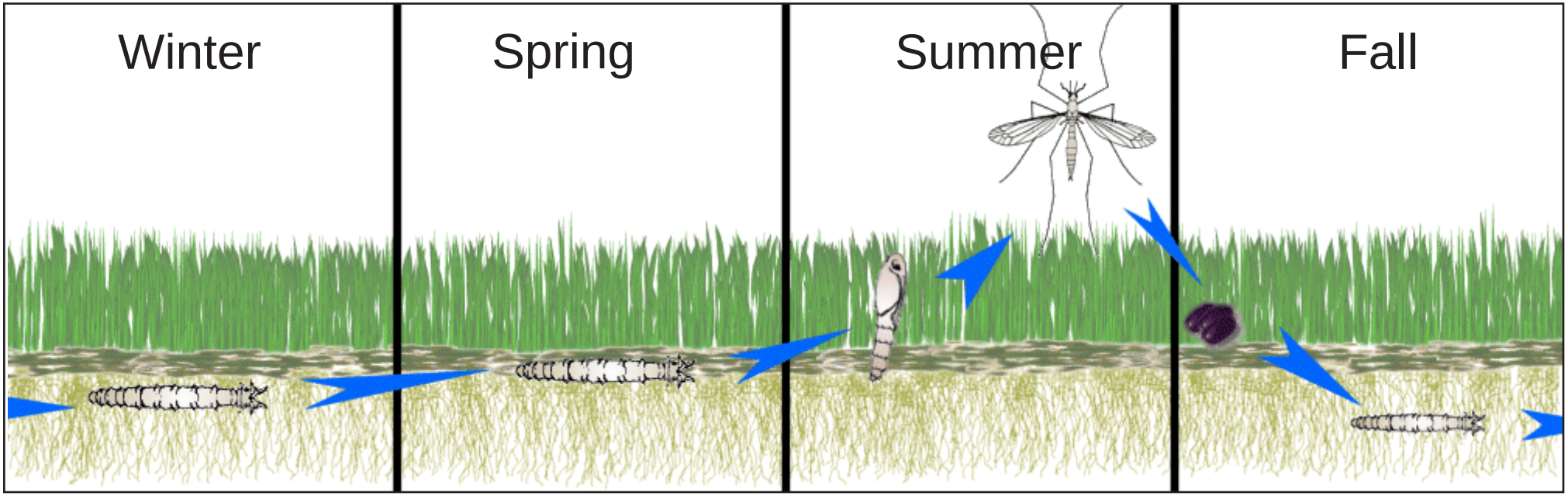
Managing the European Crane Fly in Whatcom County



The Life Cycle of the Crane Fly

Sometimes called "mosquito hawks," adult crane flies look like large mosquitoes, with bodies about an inch long, not including the legs. Adult crane flies do not bite or sting, nor do they cause damage to lawns. Adult crane flies emerge from the soil in late August to mid-September, with the females mating and laying eggs within 24 hours. The eggs develop into worm-like larvae known as "leather jackets"—nicknamed for their tough skin.

As larvae, the crane fly feeds on grass roots during the fall and throughout winter when conditions are favorable. Lawn damage caused by leather jackets is noticeable in March and April. Feeding usually stops in mid-May and early June. High numbers of larvae can cause dead patches in lawns.

From July to August, the crane fly larvae enter the pupa stage. From late August through September, the pupae move to the surface and emerge as adult crane flies.

Monitoring

The first step to managing crane flies is to determine if they're a problem by scouting your lawn. Prior to any pesticide treatments or drastic actions, find out the extent of the problem. Determining the amount of crane fly larvae will help you decide whether or not you need to treat.

The best time of year to check your lawn for crane fly larvae is from February to April. During this time, the leather jackets are large enough to see easily.

- Select three or four random areas on the lawn.
- Measure a 6" x 6" square
- Cut three sides of the square.
- Peel back the top layer of grass—about 1-2 inches—and count the larvae. They are usually found at the base of the lawn's thatch layer or in the top two inches of soil.
- Multiply the number of crane fly larvae in each square by four. This gives you the number per square foot.

Decision Making

Decisions for treating crane fly problems are based on sampling the number of larvae per square foot and the condition of the turf. Vigorous, healthy lawns can tolerate many crane fly larvae. Researchers have observed healthy lawns with over 50 larvae per square foot and no signs of damage.

Ave. # of leather jackets per square foot	Decision-Making
0 to 25	Do Nothing. Maintain lawn health. Treatment may be necessary, if turf is young, not well established and with poor root structure.
25 to 50	Decisions are based on the health of the turf. Do not treat if lawn is vigorous and healthy.
50 and up	Treat crane fly problem during April 1-15. Look towards long-term solutions, such as replace problem areas with turf alternative plants.