SHORE STEWARDS NEWS

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This issue was written by Sharon Collman, WSU Educator, Snohomish County. Additional information and resources provided by Cheryl Lovato-Niles, Beach Watcher & Shore Stewards coordinator for Whatcom County. Resources in this newsletter were originally created for WSU Extension in Whatcom County.

What is the Problem with Crane Flies?

Crane flies are generally beneficial two-winged flies that look a bit like large mosquitoes. Despite their somewhat scary appearance, they don't bite, suck blood, or carry diseases. In fact, the adults are harmless and rather comical as they bounce around the landscape and off interior walls. They are also an important food source for birds and other critters. The aquatic larvae of many crane flies are indicators of good stream health, and become fish food. Other crane flies are decomposers and help break down decaying organic matter.

Adult crane fly photo from Ken Gray Photo Collection

Two species of crane fly have adapted to feeding on grasses and the roots of some plants. There have been cases where, over a period of several years, they became so numerous that lawns were completely stripped of grass. Bare soil, where there was once lawn, made good media headlines and had a strong impact on the minds of turf-conscious gardeners. Gardeners assume crane fly is the cause of any unhealthy looking lawn. However, serious damage only occurs to some lawns in an area; it often builds up over several years. The exception is when this crane fly is new to an area, or when it arrives with heavily infested sod. There is usually plenty of time to check lawns and intervene if the numbers begin to build. In fact, often even heavy infestations disappear because the eggs dry out or birds, parasitoids, and little organisms in the soil eat the larvae.

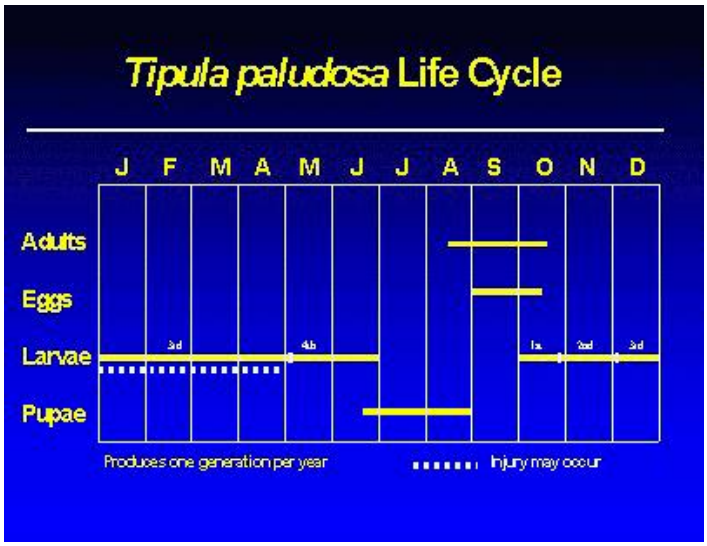
Is There Any Good News About Crane Flies?

The adults and larvae are great bird food; starlings and robins often completely control lawn populations. There are also a lot of other natural enemies of the larvae that attack them through winter (e.g. native nematodes, microorganisms, parasitoids, frogs, and small insectivorous mammals). Adults are eaten by birds, bats, cats and yellowjackets, etc. Turf researchers in Washington and Oregon say, "Only one in ten lawns will get crane fly, and only one in 100 will need to be treated". With a little effort, you can tell if you have them (see the "numbers game" below) before they get way out of control.

When Do I Look for Crane Fly Larvae and Adults?

Larger larvae can be found in the top three inches (3") of turf (and sometimes in flower beds especially near the lawn) in spring. With a shovel, turn over the sod and look. Adults emerge and are weakly attracted to lights in late summer and early fall and may get into the house by mistake. There they soon die.

Look for the crane fly larvae from February - to mid May. Search in shaded or wet areas, or where lawn health is poor, yellowing or missing. If there are no larvae, then search for the real cause of the poor lawn health.



In August, when the adults emerge, the leathery, shiny pupa cases (leatherjackets) are an indicator of where crane fly larvae were living and where the next eggs are most likely to hatch.

The adults mate almost immediately after they emerge. The females lay most of their eggs before they make their first flights and that's why they can build up rapidly in one area. Once they are airborne, there is no reason to try to control them.

What Do I Look For?

That's pretty easy. Just go out and look. The larvae are in the top three inches of sod, so just dig up a bit of sod and look through the roots and thatch for the blunt-ended, grayish-brown larvae.

Photos Courtesy of Todd Murray

How Do I Determine if I Have a Problem Population of Crane Flies?

Even though that handful looks like a lot of crane fly larvae, it takes way more than this to do significant damage. The young larvae (at right) were picked up off the turf on a wet rainy day in February. They were just lounging around leisurely nibbling the grass. Dr. Gwen Stahnke at WSU Puyallup says she's seen a healthy turf on good soil suffer NO significant damage from as many as 80 larvae per square foot. (Yes, she counted them all!). On the other hand, on poor soil with unhealthy grass, only 12 larvae have caused damage. Obviously, the key here is to start growing healthy grass that will not be severely damaged by a few crane flies. Please visit Crane Fly Management.

Photo Courtesy of Sharon Collman

How Many is Too Many?

The turf and entomology experts at Oregon State University and Washington State University have established the guidelines below through research and experience. Turf people have pretty high standards for commercial turf and golf courses, so if they are comfortable with these numbers, we can relax in the assurance that it will serve as accurate guidelines for home lawns.

Average number of crane flies per foot^2	Your Decision
0 to 25	Do nothing; fertilize appropriately. May need to treat if turf is young, not well established or with poor root structure.
25 to 50	If your lawn is vigorous and healthy, do nothing. Decisions are based on the health of the turf, your personal tolerance, location and use of the turf
50 to 80	Treat crane fly problem. Look towards long-term solutions, such as replacing problem areas with a turf alternative species.

Make sure that the pesticides will not run downhill to streets where they can move to storm drains and on to streams. Birds, small mammals or pets may eat the dead contaminated larvae that come to the surface. So if the damage is not severe hold off.

Resources

1. Crane Fly Frequently Asked Questions, WSU Extension, Whatcom County: http://whatcom.wsu.edu/cranefly/faq.htm

2. They May Be Leatherjackets, But They Don't Drive Harleys, Craig MacConnell, WSU Extension, Whatcom County: http://whatcom.wsu.edu/cranefly/articles/MacConnell-harleys.htm

3. Integrated Pest Management Prescription: European Crane Fly, Thurston County Public Health and Social Services. http://www.co.thurston.wa.us/health/ehipm/pdf/Crane%20fly.pdf

Integrated Pest Management

You may wonder why a Shore Stewards newsletter is focusing on insect control. Crane flies are recognized as a problem in our area, and this is an introduction to what is called Integrated Pest Management, or IPM. As described by the Environmental Protection Agency:

"Integrated Pest Management (IPM) is an effective and environmentally sensitive approach to pest management that relies on a combination of common-sense practices. IPM programs use current, comprehensive information on the life cycles of pests and their interaction with the environment. This information, in combination with

available pest control methods, is used to manage pest damage by the most economical means, and with the least possible hazard to people, property, and the environment."

Events

Saturday, February 6, 7:00 pm: ***A Sea Change.*** Coupeville Methodist Church, 608 North Main Street. Whether you are attending Sound Waters, or just want to enjoy a free movie, this powerful new film on climate change and the oceans asks you to "imagine a world without fish". *A Sea Change* is the first documentary about ocean acidification, the underbelly of climate change, a little-known but potentially devastating threat to ocean life. *A Sea Change* has played to sell-out crowds at major film festivals in Washington, DC, San Francisco and Seattle in 2009.

Dr. Richard Feely, senior scientist with University of Washington and NOAA's Pacific Marine Environmental Laboratory, will provide opening and closing remarks, as well as answer questions following the screening. This free film event is sponsored by the Island County Marine Resources Committee.

2010 Beach Watchers Training

The WSU Island County Extension Beach Watchers are looking for new members to join them in their mission "to improve, maintain and protect a thriving Puget Sound ecosystem through education, community outreach, stewardship, and research." Those interested in the class of 2010 may download the application right now from the Beach Watchers' website, http://www.beachwatchers.wsu.edu/island/about/training/ or request a printed copy by mail by contacting the WSU Beach Watchers Office at Admiralty Head Lighthouse: (360) 679-7391. The deadline to apply is February 26th.

Training will take place every Monday and Wednesday in April and October from 8:30am-4pm. Most classes will be held at Race Road Fire Hall in Coupeville.

Beach Watcher training topics include water quality, agriculture and aquaculture, coastal geology, marine animals of all sizes, forage fish and salmon, shoreline management, beach litter clean-up, estuaries, forestry stewardship, low-impact development, native plants, seabirds, waste, and recycling, among others. We invite you to join us for the education, the friendship and the fun of it!

ISLAND COUNTY MARINE RESOURCES COMMITTEE

This product is funded by the Island County Marine Resources Committee and the Northwest Straits Commission. You can view the Marine Resources Committee website at www.islandcountymrc.org
The website for the Northwest Straits Commission can be seen at http://www.nwstraits.org/

If you would like to download or view previous Shore Steward newsletters, please visit www.shorestewards.wsu.edu/island/newsletter . Your Shore Stewards Coordinator is Scott Chase, (360)387-3443, ext 258, or email at shorestewards@wsu.edu .