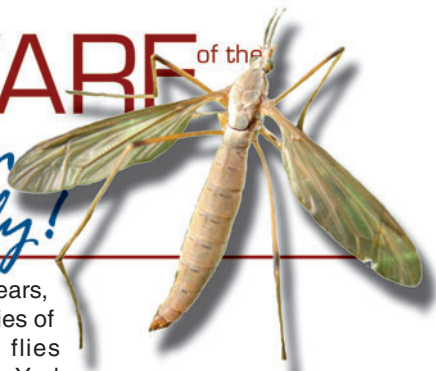


BEWARE of the

European Crane Fly!



Over the last few years, two *Tipula* species of invasive crane flies have emerged in New York

State that can have a devastating impact on golf courses. Both species are native to Europe and have been identified in western New York as early as 2004. These species are different from native crane flies which do not cause injury to turf. The two invasive species have been identified as *T. paludosa* (the "European crane fly") and *T. oleracea*, (the "common" crane fly). In May of 2007, adults of the common crane fly, *T. oleracea*, began to emerge on Long Island, where they were first detected in 2006 and may represent a separate area of establishment.

Dr. Daniel C. Peck, Assistant Professor of Soil Insect Ecology and Turfgrass Entomology with the New York State Agricultural Experiment Station, Cornell University, has been documenting the alarming spread of the European crane fly infestation in New York, since they were first identified. At the larval stage, where they are known as leatherjackets, the insects inhabit the top layer of soil and cause damage similar to white grubs as they prune roots. At night, they emerge to graze on the above-ground portions of the stem and cause damage similar to black cutworms. As seen in the



May 2007, leatherjacket (*T. paludosa*) infestation damages golf course rough.

photographs, the damage they cause can have a swift and adverse affect on otherwise healthy turf. In 2006, the New York State Turfgrass Association awarded \$30,000 to be distributed over the next three years for his project, "Alerting and Arming the Northeast Against European Crane Flies – New Invasive Pests of Turfgrass." Dr. Peck is conducting a "series of studies to slow the spread and reduce the impact of exotic crane flies on golf courses in the Northeast."

With support from Senator Catharine Young, Chair of the New York State Senate Agriculture Committee, an appropriation was included in the 2006-2007 and 2007-2008 state budgets in the form of Turfgrass Environmental Stewardship Fund grants. Preference in grant selection has been given to research that will have a positive impact on the environment. In light of the fact that precise crane fly identification is critical to determining proper control methods, Dr. Daniel Peck and Dr. Ping Wang with the New York State Agricultural Experiment Station of Cornell University, have received an Environmental Stewardship Fund grant. Their project, "Development of Molecular Diagnostic Techniques for Identification of Invasive Pest Crane Flies in Turfgrass," takes a molecular biology approach using DNA barcodes to effectively and reliably identify the pest crane flies using various types of field collected samples.

How can you get involved? The first step is to get informed. To learn where the European crane fly has been located, the differences between harmful and harmless crane flies, the description and life

cycle of the two European crane fly species, how to recognize the damage they cause, and monitoring and management techniques, please visit Dr. Daniel Peck's fact sheet: www.nysipm.cornell.edu/factsheets/turfgrass/ecf.pdf

Many measures have been taken to assess the gravity and scope of the invasive European crane fly. The New York State Department of Agriculture and Markets - Division of Plant Industry participates in the Cooperative Agricultural Pest Survey (CAPS), whose primary objective is the early detection of exotic plant pests. They have included the European crane fly on their invasive species list which means a task force conducts surveys, posts information and photographs on their web site, and provides a toll free hotline number if the species is located.

Leatherjackets (*T. oleracea*) collected from the surface of a practice green after a successful control application in November.



If you suspect a crane fly infestation on your golf course or home lawn (swarms spotted over the turf or found on the sides of buildings, pupal exuviae protruding from the turf like little twigs, large populations of larvae found in the soil or turf damage similar to those in the photographs), please collect the flies (adult insects, pupae, exuviae or larvae) and store them in alcohol. Drain the alcohol before sending and mail to Daniel Peck, NYSAES, 630 W. North Street, Geneva, New York 14456. This will provide an accurate identification and assist researchers with monitoring the distribution of the European crane fly. Working together, we can reduce this threat to healthy turf, and preserve the quality of home lawns and golf courses.

(Title European Crane Fly Photo: T. Cook, Oregon State University)

Late winter damage caused by leatherjacket infestation in a golf course green. (*T. oleracea*)



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