

## New Invasive Invertebrate Found In Oneida Lake

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Cornell University Biological Field Station

Researchers at Cornell University Biological Field Station have identified a new non-native species in Oneida Lake, NY. *Hemimysis anomala*, a small mysid shrimp, also known as the “bloody red shrimp,” was identified on 8/20/09 in the diet of a white perch by Tom Brooking and Scott Krueger. Fish diet assessments are part of routine monitoring of the Oneida Lake fishery conducted with support of the New York State Department of Environmental Conservation (principal investigator Randy Jackson). Thirteen individuals (5 males, 8 females, 6 to 8 mm long) were found in the white perch’s diet. *Hemimysis* were only found in one white perch stomach; 69 additional white perch and 47 yellow perch caught in our routine sampling had not consumed *Hemimysis* that night. This indicates that *Hemimysis* are present in low numbers at this time. However they could become abundant in Oneida Lake in the near future as they have relatively short generation time (4-6 weeks).

As far as we know, this is the first introduction of this species in an inland lake outside of the Great Lakes. The species was first found in 2006 in Lake Ontario, close to Oswego and in Lake Michigan by Muskegon. Oneida Lake is connected to Lake Ontario by the Oneida and Oswego rivers, however Oneida Lake is upstream a distance of 33 river miles. Significant rapids with strong current, along with multiple hydroelectric dams and canal locks make this invasion route unlikely for a small aquatic crustacean. We believe it is more likely that *Hemimysis* was transported with boats traveling the canal system.

At this point it is unknown what the impact of this new invader will be in Oneida Lake or in Lake Ontario. Ongoing research by Cornell University (Rudstam and Boscarino) and USGS (Walsh and Lantry) in cooperation with Canadian scientist and funded by New York Sea Grant and the Great Lakes Fisheries Commission is investigating the role of this animal in the aquatic food web in Lake Ontario. In Europe, *Hemimysis* feed on both algae and zooplankton. They are also eaten by fish, in Lake Ontario at least by alewife and yellow perch. In contrast to our native mysid that is abundant in deep cold water of the Finger Lakes and Lake Ontario, this species likes warm water and can be seen swarming in rocky areas, sometimes by docks.

Contact the Cornell Biological Field Station (315 633 9243) or Maureen Walsh at USGS-Oswego (315-343-3951) for more information on this species in New York State.

Further information is available from the Great Lakes NOAA National Center for Research on Aquatic Invasive Species at: <http://www.glerl.noaa.gov/pubs/brochures/hemimysis.pdf>

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Hemimysis taken from a white perch stomach in Oneida Lake



Photo: Cornell University Biological Field Station