

December 2014/January 2015

FREE

# The Guide

leading you to the best that  
Northeast Michigan has to offer.

**Alpena Christmas**  
Historic mill gets decked out

**Here comes Santa Claus**  
Gladwin's own jolly elf

**Outdoor inspiration**  
Mio product goes national

**North Country History**  
Christmas in the lumber camp

Updates on Michigan's premier winter festivals & more

# On the hunt for the endangered Hine's emerald dragonfly



By **BRANDON SCHROEDER**  
Michigan Sea Grant

Armed with GPS units, maps of the park, muck boots and identification guides, student-scientists searched Negwegon State Park for dragonfly habitat and the invasives that threaten it.

**NEGWEGON STATE PARK** – Walking the woods, wading wetlands and scouring Lake Huron beaches – what more could a kid (or an adult) ask for in a fun-filled exploration of this remote location? Add Great Lakes scientists and an endangered dragonfly and the trip to this Alpena County state park just got a lot more interesting for some conservation-minded Alpena County youngsters.

During summer break, the Alpena 4-H Environmental Science Club ventured here as citizen scientists to assist Friends of Negwegon State Park. Working alongside scientists from the Michigan Natural Features Inventory, the youth were on the hunt for potential habitat of the endangered Hine's emerald dragonfly. Armed with GPS units, maps of the park, muck boots and identification guides, they searched for invasive species that threaten the dragonfly's critical wetland habitat.

When school started back this fall, middle school science students from Alpena Community Schools joined the project, continuing their long-term stewardship at Negwegon State Park. While past students from this school helped make the park's interpretive signs, this trip found the middle-school students partnered with Alpena Community College's field biology class,



mapping endangered species, wetland habitats and problematic invaders.

Splashing color across Michigan's wetlands and waterways are some 150 species of dragonflies and their close relatives, damselflies. Some are common, such as the green damer dragonfly referred to by some as Michigan's unofficial state insect. Others, like the Hine's emerald dragonfly are more rare, even threatened or endangered. A new citizen science effort led by Michigan Natural Features Inventory, a program of Michigan State University Extension, calls on community involvement to help protect the Hine's emerald dragonfly and the high quality natural habitats found at Negwegon State Park.

A recent Lake Huron Biodiversity Conservation report calls attention to



In effort to help save the threatened Hine's emerald dragonfly, youth work alongside MSU Extension scientists to map the wetlands habitats and invasive species of Negwegon State Park.



Northeast Michigan and this shoreline park for its abundant rare habitats and threatened species – a place worth protecting. Funded by U.S. Fish & Wildlife Coastal Program, through the Great Lakes Restoration Initiative and local Community Foundation for Northeast Michigan, this innovative conservation project trains and engages community volunteers to map potential endangered species habitats and threatening invasive species. Fielding the project entailed a partnership with Huron Pines, Michigan Sea Grant, Friends of Negwegon, DNR Parks Stewardship, U.S. Fish & Wildlife, among others.

A project of partnerships!

It only made sense that students – our youngest citizens – might also

partner in this project. Fostering school-community partnerships through 4-H and local school connections, the Northeast Michigan Great Lakes Stewardship Initiative network helped link educators and youth with this habitat study.

Attention to the Hine's emerald dragonfly offers opportunity to promote biodiversity conservation – conservation of a variety of species and their habitats. Scientists have documented adult Hine's emerald dragonflies in the park but were unsure where adults lay their eggs and where the larvae develop. Larvae spend 3-5 years in these wetlands, even inhabiting crayfish burrows during dryer seasons, before emerging as adults. Threats to these critical wetland habitats by the ever-encroaching





Hine's emerald dragonfly habitat, including 77 crayfish burrows that scientists will later search for Hine's juveniles. Students also helped map more than 230 instances of invasive plant species that were ultimately treated with help of Huron Pines.



Adding to the project's stewardship value, Alcona students explored the beach while conducting their annual beach trash clean-up. With Michigan Sea Grant experts they searched the shoreline dunes for other rare species such as the pitcher's thistle and Lake Huron locust. As with wetland habitats, invasive species threaten habitats of these two rare beach-loving species and students improved beach habitat by working with Friends of Negwegon and U.S. Fish and Wildlife Service to remove invasive spotted-knapweed.



Wet feet barely slowed down Alcona 4-H youth as they mapped Negwegon State Park's critical wetlands and learned about a diversity of dragonfly species found here – such as this meadowhawk dragonfly.

invasive species present a management opportunity before the invaders become too well established at Negwegon.

But how can you protect habitat and contain invaders if you don't know where to find them?

To date citizen youth scientists have helped map 23 locations of potential

The work provided students with an invaluable place-based education experience that taught the young citizens about Great Lakes science and careers, habitat stewardship and civic engagement. In trade, their enthusiastic contributions were valued by scientists, who welcomed the students as partners in this important conservation effort.

— Brandon Schroeder is the District Sea Grant Extension Educator for Michigan State University Extension.

**Support**  
community-based education in  
Northeast Michigan.  
Visit [www.NEMIGLSI.org](http://www.NEMIGLSI.org) today.



# NORTHEAST MICHIGAN Great Lakes Stewardship Initiative

Expanding Classrooms. Strengthening Communities.



Protecting the Great Lakes and the Natural Resources of Northeast Michigan through hands-on, place-based education in and with the community.

[www.nemiglsi.org](http://www.nemiglsi.org)