

Gypsy Moth Monitoring at Isle Royale National Park, 2001

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Introduction:

The gypsy moth (*Lymantria dispar*) is an exotic species in North America, and has spread across much of the northeastern United States. Michigan's lower peninsula is considered completely infested, while the upper peninsula is slowly becoming infested as well. In 1997, Houghton and Keweenaw counties recorded no gypsy moths, but surrounding counties were already occupied by low numbers. Northern Minnesota's Lake Superior shoreline has had scattered gypsy moth captures. The USDA, with cooperation from other state and federal agencies, has initiated Federal regulations and a nationwide integrated pest management approach to managing the gypsy moth. Isle Royale National Park is cooperating with these nationwide efforts.

Description:

Gypsy moth caterpillars have few natural enemies in North America, and consequently they survive in high numbers to become major defoliators of trees and shrubs. There are 4 stages of development: egg, larva (caterpillar), pupa (cocoon), and adult (moth). Egg masses are velvety, buff or yellow colored, and average about 1.5" x .75" in size. Caterpillars are grayish, hairy, 1.5" to 2.5" long, and display red and blue dots on their backs when half grown. Female adults are generally white, but cannot fly. Male adults are tan to brown, have wavy patterns on their wings, and a 1.5" wingspan. A USDA pamphlet in Natural Resource Management files shows photographs of all stages.

Location of traps in 2001:

Gypsy moth traps were set out in 2001 mostly as a precautionary measure to identify possible populations on Isle Royale. In 2001 there were additional traps set at the Moskey Basin location since a male was captured at this site in 2000. General locations were: the Daisy Farm campground, Moskey Basin Campground (5 traps), Mott Island (2 traps), Rock Harbor marina (2 traps), Windigo (2 traps), Belle Isle campground, Malone Bay ranger station, Siskiwit Bay campground, Grace Island campground, Chippewa Harbor campground, and Birch Island campground. The most likely method of spreading the gypsy moth to Isle Royale would be egg masses attached to boats or hiking equipment, so traps were placed in high visitor-use areas. The traps contain a pheromone designed to attract male gypsy moths.

No moths of any species were recorded in 1998-1999.

In 2000 an individual male gypsy moth was captured in the Moskey Basin trap. This male was positively identified by NPS, USFS, and USDA personnel. With only one moth found, the trapping coordinator encouraged a standard method of a localized increase in trapping effort by surrounding the original trap site with 4 more traps set at cardinal directions.

In 2001 there were no gypsy moths positively identified by NPS staff. However, two traps (Chippewa Harbor and a satellite trap from Moskey Basin) that contained unidentifiable moths were sent into the USDA for verification.

Recommendations:

This monitoring program is low cost, with materials donated by the U.S. Forest Service, and it involves few personnel hours. The need to continue monitoring is very high due to the capture of a moth in 2000.

Contact:

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