

# THE ASIAN GYPSY MOTH SITUATION IN MONGOLIA

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## Abstract

In the last several summers, the Asian gypsy moth (AGM), *Lymantria dispar asiatica* (Lepidoptera: Lymantriidae) in northern Mongolia has exhibited signs of a widespread, devastating outbreak. Siberian larch, *Larix sibiricus*, was impacted most, however, some *Populus* spp., *Betula* spp and *Salix* spp. also served as suitable food species. From a base camp in Dalbay Valley (N 51° 1.4', E 100° 45.3'), on the northeastern shore of Lake Hovsgol (elevation 1650 m (5200 ft)), we investigated the biology, behavior and ecology of AGM during the summers of 2002 (BAT) and 2003 (PWS & BAT).

Field evidence indicated that female AGM behavior very definitely concentrated vast quantities of egg masses on rock outcroppings, often on the higher ridges that delineated the river drainage in each valley that drains into Lake Hovsgol. In spring, the AGM neonate larvae on the exposed rocks, and vegetation near the ridges, were so abundant and they spun so much silk that most everything was festooned with thick layers of silk—giving the appearance of ice and snow. Many larvae failed to disperse by ballooning and were killed by entanglement. Those larvae that were successful drifted into the nearest larch trees and commenced feeding. This process left

a clear “edge effect” in that trees closest to the rock outcroppings were most severely defoliated, and therefore suffered greatest mortality, some in part do to secondary invasion by *Ips cembrae* (Coleoptera: Scolytidae). By mid-July, larvae had reached the 4th instar. Levels of parasitism proved to be uncharacteristically low. At the same time we noted that many egg masses showed no sign of hatch and many possessed high levels of non-embryonated (infertile) eggs. We expect to investigate this peculiarity in coming summer seasons. Unseasonably cool weather and precipitation caused larval development to slow and many larvae failed to reach maturity.

In late August, we experienced the adult flight period (ca. 100 miles south of Dalbay Valley) and we witnessed a massive nocturnal flight of AGM (96% ♀♀, 4% ♂♂) coming to a mercury vapor light illuminating a hotel front in Moron. Many thousands of females descended upon this light between ca. 10 PM and 1 AM. During daylight hours (ca. 10 AM to 3 PM), we observed many individual females flying high up onto the rock ridges to select sites for oviposition. We commenced experiments designed to clarify which came first, female flight or mating during both of the recognized active diurnal and nocturnal flight periods. Results are expected in 2004.