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than alternative hosts. The importance of predation in influencing host suitability may be inversely related to phenological constraints imposed by climate. With longer summers, high predation risks on hosts of high nutritional quality may favor oviposition on hosts with low nutritional quality. Understanding patterns of host suitability has utility for understanding population dynamics and distribution limits of forest insects.

PERFORMANCE AND FECUNDITY ON
SEVERAL TREE SPECIES OF GYPSY MOTH
FROM THREE CONTINENTS

Yuri N. Baranchikov, Maxim E. Grebennikov, Tamara A. Vshivkova (Institute of Forest, Russian Academy of Sciences, Krasnoyarsk 660036, RUSSIA), and **Michael E. Montgomery** (USDA Forest Service, Northeastern Center for Forest Health Research, 51 Mill Pond Rd., Hamden, CT 06514)

A comparison of mortality, relative growth rate, pupal weight, and fecundity of gypsy moth, *Lymantria dispar*, from Asia, Europe, and North America has been conducted in laboratory conditions in Krasnoyarsk and Hamden. On all host plants Asian larvae nearly always grew faster, weighed more, and survived better in the first two instars. The differences in growth were less or disappeared in older instars. The fecundity of Asian strain was less on the majority of plants. The feeding aggressiveness of Asian larvae is always realized in younger instars -- the most critical period of their development. The further performance depends on the general suitability (quality) of the food plant. The lower fecundity of Asian females per unit of body weight comparable to European and North American females may be the cost for their ability to fly. The feeding aggressiveness of young Asian larvae is an adaptation for highly unpredictable conditions for the progeny of flying females.

PREDICTING GYPSY MOTH DEFOLIATION: A
COMPARISON OF THREE EGG MASS SURVEY
METHODS

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Gypsy moth populations in Michigan were estimated using three egg mass survey methods, the five-minute walk, the 0.01-ba fixed-radius plot, and a recently developed method that uses a plot of the nearest 100 trees around a central point. Subsequent defoliation was visually estimated at the same sites. The fixed-radius and 100-tree plot methods were better predictors of defoliation than the timed-walk method, but the walk required much less time. Using the ratio of new to old egg masses in conjunction with egg mass density greatly improved the accuracy in predicting defoliation.

FOREST INSECTS OF MEXICO

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This poster represents a summary of 187 species of forests insects of Mexico that include hosts, distribution, damages, and economic importance, and are ordered according to the part of the tree that they attack. The following groups are included: cone and seed insects, bud and shoot feeding insects, defoliating insects, sap-sucking insects, gall forming insects, and bark and phloem feeding insects.