

**NYMPHALIDAE BUTTERFLY SPECIES RICHNESS AND RELATIVE SPECIES
ABUNDANCE DIFFERENCES BETWEEN PRIMARY FOREST AND BORDER SITES
IN THE NORTH-CENTRAL CARIBBEAN OF COSTA RICA**

Carolyn Stephen, Knox College
Advisor: Raquel Sánchez, PhD

Understanding species diversity has become very important to the management and conservation of the environment. Measurements of species richness and species abundance can have important implications for regulations and conservation because they can determine the health of a community of species. This study investigated species richness and abundance of butterflies in the family Nymphalidae at habitats disturbed at their borders. Nymphalidae species are highly diverse in the Neotropics and feed on rotting fruit. Traps baited with rotten banana were placed in the canopy and the understory of three habitats: within primary forest, at a river/forest border, and at a banana plantation/forest border. Species richness and species abundance were found to increase significantly at border habitats. However Shannon's Diversity Index indicated that the "primary forest" habitat maintained the greatest level of diversity. The edge effect, in which species richness and abundance increase due to greater complementary resources from two different habitats, could be one possible explanation for increase species richness and abundance at disturbance habitats.