Entomology in Ecuador

The Western Amazonian basin has long been recognized as supporting one of the highest levels of biological diversity in the world. Insects are particularly abundant and species rich in this region, yet the task of describing new species, discovering their range, understanding the factors that govern their distribution and the degree of alteration in their community structure as a result of habitat degradation is still in its early stages. The wide diversity of habitats that Ecuador possesses in a small area makes it an ideal location for biodiversity and ecological research. Although the diversity of many groups (e.g. plants, birds, and frogs) has been the focus of numerous publications data on the entomological fauna in Ecuador are scarce, mostly limited to the response of insect diversity to altitudinal gradients. During the past decades, the Ecuadorian research in Entomology has been dominated by taxonomic studies. Face to the acute environmental awareness and called attention to the pressing problem of biodiversity conservation, this taxonomic knowledge has recently been re-focused in an ecological perspective.

The nine contributions to this special issue aim to present some of the major lines of research developed in ecological entomology in Ecuador, mainly at the Museum of Zoology of the Catholic University of Quito (QCAZ), Invertebrate Section. The studies concern different ecosystems of Ecuador such as lowland Amazonian rainforests (Carpio et al. 2009, Checa et al. 2009), Montane cloud forest (Donoso & Ramón 2009) and Andean páramos (Moret 2009). Most studies however cover a wide range of biogeographic regions (Badher et al. 2009, Barragán et al. 2009, Donoso et al. 2009, Dangles et al. 2009) including comparisons with other regions from Latin America (Cárdenas et al. 2009). The coverage of taxa (e.g. Diptera, Isoptera, Hymenoptera, Lepidoptera, Coleoptera), thematic (e.g. taxonomy, biogeography, community ecology, conservation biology) and methodological (e.g. multi-dimensional analysis, spatial statistics, niche modeling) was designed to highlight the diverse areas on which QCAZ entomologists have focused during the last years, giving a broad view of some of their scientific achievements.

In spite of their large topical range, the contributions to this special issue are united by a common theme: a focus on how a good knowledge of species taxonomy plays a crucial role in fostering and underpinning ecological research in the field of entomology. This is particularly important in tropical countries like Ecuador where the task of entomologists seems to have a time limit with a clock ticking faster and faster as human disturbance continues to increase. I hope that this special issue will not only provide a fresh view of entomological research performed in Ecuador but also foster interest from entomologists worldwide to come and perform research in this country which shelters one of the most species-rich but also most endangered insect fauna on Earth.

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