

Morpho-Eco-Space - Revealing the true ecological importance of arthropod larvae

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Conventional biodiversity research mainly focuses on the number of species and on the adult animal stage, because adult animals can be more easily identified than larvae. Yet larvae have a larger impact on the environment. Concerning biomass and number of individuals arthropod larvae are the dominating form of animal life. Thus common biodiversity approaches are not sensitive for the true diversity of animal species. The new approach of the professorship is based on an alternative and species-independent measure for diversity: morphology. Morphological diversity can be measured quantitatively and can be based on structures used to interact with the environment and that are present during different life phases. Such traits become a proxy for ecological diversity and hence represent a multi-dimensional morpho-eco-space. Based on this the hypothesis is that the true diversity of arthropods lies in the larval forms. Information about the morphology of larvae arthropods is hardly found in literature. An astonishing amount of arthropod larvae is available in museum collections. This treasure is a perfect basis for the description and comparison of specimen, some of them up to 100 years old.

Projektbeteiligte

Prof. Dr. Joachim Haug

Universität München

Fakultät für Biologie

Funktionsmorphologie der Tiere

Planegg-Martinsried

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Quantitative analysis of lacewing larvae over more than 100 million years reveals a complex pattern of loss of morphological diversity

