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The illustrated html-database 'Geometrid Moths of Australia' as a model for the cooperation project of the ZSM 'Geometridae mundi'

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Löbel, H. (2009): The illustrated html-database 'Geometrid Moths of Australia' as a model for the cooperation project of the ZSM 'Geometridae mundi'. Pp. 124 in: Hausmann, A. (ed.): Proceedings of the fifth Forum Herbulot 2008. Global strategies for plotting geometrid biodiversity in web-based databases (Munich, ZSM, 24-28 June 2008). – Spixiana **32/1**: 124

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After three extensive collecting tours through Australia the author had to face the difficult problem to identify the collected geometrid moths. Since existing identification literature is missing or not suitable and since reference collections in major German museums are insufficient for comparison the author took photographs of the complete geometrid collection in the Australian National Insect Collection (ANIC) in Canberra applying a simplified approach: Digital photographs of the whole system boxes were subsequently converted to images of a single specimen of each species and inserted in a user-friendly, html-based database 'Geometrid Moths of Australia'. The underlying software is based on that of the website www.noctuidae.de generated by Bernd Schacht. The core of the database is the systematic part, accompanied by introduction and explanation pages. It contains 21 overview pages with all species being illustrated with a larger thumbnail (200 pixels) in the taxonomic order and with the names of the Checklist of the Lepidoptera of Australia (Nielson et al. 1996), as used in the ANIC.

Each species has its own species page which contains six or more high-resolution pictures (900 pixels), written information, and images of the ANIC collection series. In addition there are also pages for each genus. Species and genus pages are directly linked to an alphabetical species and genus register. Overview, genus and species pages are all linked with each other.

For a first identification approach the overview pages are best suitable, being reminiscent of the colour plates of a book. Morphological details can be better seen on the species pages. Several species can be compared on the screen either through the genus pages or by simultaneous loading of several pictures from the folder "bilder" in the background of the database. In future, the quality of the photos can be increased by photographing the single specimens rather than the whole system boxes. This database allowed the identification of nearly all collected Australian Geometrids, at least to genus level.

Encouraged by this success, the Bavarian State Collection of Zoology Munich (ZSM) and the author agreed on creating, in a similar approach, a database of all geometrid taxa worldwide. This 'Geometridae mundi' project will be performed in the run of the next years.

As a first step all geometrid species of the ZSM and some private collections will be imaged and the underlying software and database developed and completed. Available photos of type specimens will be included into the database. After finishing this first step an offline version of the database can be given to all institutions and scientists researching on geometrid moths. They will be asked to provide additional photos from species which are not yet represented in the database. The database will be updated continuously, and update versions will be distributed to all active partners.

Images of genitalia slides, caterpillars, distribution maps and further written information can get included step by step, later on. The ZSM considers to host an online version in future and to create interfaces for linking the database with other projects, for example the 'Encyclopaedia of life'.

Nielson, E. S., Edwards, E. D. & T. V. Rungsi. 1996. Checklist of the Lepidoptera of Australia. Csiro Publishing, Australia.

ZOBODAT - www.zobodat.at

Zoologisch-Botanische Datenbank/Zoological-Botanical Database

Digitale Literatur/Digital Literature

Zeitschrift/Journal: Spixiana, Zeitschrift für Zoologie

Jahr/Year: 2009

Band/Volume: 032

Autor(en)/Author(s):

Artikel/Article: The illustrated html-database Â‘Geometrid Moths of AustraliaÂ’ as a model for the cooperation project of the ZSM Â‘Geometridae mundiÂ’ 124