

FORUM HERBULOT 5

(June 24 – 28, 2008)

Global strategies for plotting geometrid biodiversity in web-based databases



Proceedings

1. The fifth *FORUM HERBULOT* (see www.herbulot.de) started with a celebration of the centenary of the birthday of Claude Herbulot. A short video sequence, taken from Herbulot's speech at the ZSM in 2000, was presented. The chairman pointed out briefly CH's merits in geometrid research which, surprisingly at that time, already comprised even elements of "global strategies for plotting geometrid biodiversity in web-based databases". Philippe Darge then highlighted the personality, life, and scientific achievements of his late friend CH in a touching personal manner, and welcoming the presence of Mme. Colette Herbulot.

The participants expressed their high esteem of the scientific achievements of the late eponymous patron of the Forum. The research initiative *FORUM HERBULOT* was, once again, generally welcomed and the need for, and the advantages of, close scientific cooperation among geometrid experts were stressed.

2. The seminar session dealt with promising actual possibilities and new strategies for modern systematic research. The four sections were chaired by Malcolm Scoble, Paul Hebert, Cathy Young, and Axel Hausmann.

a) The first session highlighted the new horizons opened up by web-based databases for an improved access to collection data. After an introductory talk on funding strategies (Sihvonen) three large-scale projects for imaging geometrid biodiversity (Holloway & Miller/NG, Staude/Africa, Löbel/Australia etc.) were presented. The session culminated in a wide ranging discussion of the CATE project on e-science and its meaning for geometrid taxonomy and systematics (Scoble, Kitching). Further mechanisms were agreed upon to develop interfaces between projects, and to collect and exchange digital images of, and information on, type specimens.

b) *FORUM HERBULOT 5* stressed the crucial role and the enormous impact of DNA barcoding for research on geometrids. The audience welcomed the concrete strategies and opportunities for barcoding geometrid diversity at a global scale as presented by Paul Hebert (CCDB, Canada), such as the ongoing international iBOL initiative with the challenging plan to barcode 80K Lepidoptera species, of which 15-20K would be geometrids. Experiences from the sphingid and saturniid campaigns, from old-type-sequencing (Rougerie), and from applications in forestry, biodiversity assessment, and nature conservation (deWaard) are encouraging.

c) Deep phylogeny was a topic addressed by several stimulating talks involving molecular and/or morphological approaches (Öunap, Yamamoto, Young, Beljaev, Lévêque). The data sets (nDNA; mtDNA genes; skeleton-muscular system) from those studies confirm, once again, the position of the Larentiinae / Sterrhinae lineage as sister group to all other geometrids. As postulated and forecast by the previous *FORUM HERBULOT* congresses, the use of molecular methods has meanwhile much expanded and became a valuable tool for complementing the morphological and ecological data sets. *FORUM HERBULOT 5* offered a platform for defining and refining the work plans in order to focus future common research on deepening the insight into the basic phylogeny of Geometridae. First results from a project on Gondwanaland relicts in Chile and Tasmania (Hausmann) encourage further development of a common integrated taxonomic approach for the study of the relationships of 'southern clades' (Tasmania: Young, McQuillan – Chile: Parra,

Hausmann – South Africa: Krüger, Staude).

d) Finally, the presentations of an array of projects on geometrid systematics, on biodiversity patterns, and on books in preparation (Lewis, Parra, Wojtusiak, Strutzenberger, Can, Mironov, Galsworthy, Wu, Han, Xue) were much appreciated.

Conclusions:

For the forthcoming two-years-interval until the next *FORUM HERBULOT*, it is planned to establish tools for e-science in Geometridae, to extend the DNA barcoding campaign Geometridae to a global scale, and to refine and improve the “the *FORUM HERBULOT* world list of family group names in Geometridae”, e.g. by considering new insights from molecular analyses and by extending the list from tribe to genus level.

3. *FORUM HERBULOT 5* offered a pleasant post-conference tour (June 26 – 28) to the SEL study area Sesvenna in Southern Tyrol (northern Italy) which was even featured in the local TV programme after an extensive ‘shoot’ and interviews on the lower steppe slopes. The collecting activities in the surrounding alpine and dry habitats yielded good results which will be communicated to the common database of TLMF Innsbruck and Nature Museum Bolzano. The 35 participants also enjoyed the opportunity to go on with discussions and work out plans for collaboration. The *FORUM HERBULOT 5* came to an end with a guided visit to “Ötzi”, the famous “man in the ice”, at the Museum in Bolzano.

4. The chairman informed the participants of the sad news that Prof. Hiroshi Inoue, honorary member of the *FORUM HERBULOT*, had passed away a few days ago. The participants honoured this outstanding and great old colleague and friend by signing a book of condolence at the ZSM.

5. A proposal to have the next *FORUM HERBULOT 6* in Gainesville, Florida, in 2010 (June 22-23), was generally welcomed. Chairman reported that future venues have been suggested by the museums in Pretoria (South Africa) and Concepción (Chile).

6. Participants expressed their thanks to the organizers and sponsors of the *FORUM HERBULOT 5 (2008)*.

Munich, 26.6.2008

Dr. A. Hausmann, Zoologische Staatssammlung München, Germany. – Dr. J.D. Holloway, The Natural History Museum, London, U.K. – Dr. M. Scoble, The Natural History Museum, London, U.K. – M. Sommerer, Volpinistr. 73, München, Germany. – Dr. C.J. Young, Dept Primary Industries, Water and Environment Hobart, Australia.