©Zoologische Staatssammlung München/Verlag Friedrich Pfeil; download www.pfeil-verlag.de

Parra, L. E. 1995. Lepidoptera. In: Simonetti, J. A., Arroyo, M. T. K., Spotorno, A. E. & Lozada, E. (eds.): Diversidad biológica de Chile. 269-279 pp. CONICYT, Santiago, xii + 364 pp.

Morrone, J. J. 2001. Biogeografía de América Latina y el Caribe. Manuales y Tesis SEA 3: 1-150.

The International Barcode of Life Project (iBOL)

Paul D. N. Hebert

Hebert, P. D. N. (2009): The International Barcode of Life Project (iBOL). Pp. 129 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**: 129

Dr. Paul D. N. Hebert, Biodiversity Institute of Ontario, University of Guelph; e-mail: phebert@uoguelph.ca

Over the past 5 years, many barriers to large-scale DNA barcode analysis have been overcome, but reference sequences are only available for 40K? species. The International Barcode of Life (iBOL) Project will increase coverage to 500K? species by 2014. My presentation summarizes the key research goals of iBOL, progress towards its activation and some lessons learned through early barcode projects, many of which have examined Lepidoptera, for further information see Stoeckle & Hebert (2008) and www.DNAbarcoding.com.

Stoeckle, M. Y & P. D. N. Hebert (2008): Barcode of Life. Scientific American October, 2008: 82-88.

Global DNA barcoding campaigns in Lepidoptera: lessons from sphingid moths

Rodolphe Rougerie, Jean Haxaire, Ian J. Kitching, Thierry Vaglia, Pierre Basquin, Ronald Brechlin, Philippe Darge, Ulf Eitschberger, Tomas Melichar, Jacques Pierre & Paul D. N. Hebert

Rougerie, R., Haxaire, J., Kitching, I. J., Vaglia, T., Basquin, P., Brechlin, R., Darge, P., Eitschberger, U., Melichar, T., Pierre, J. & Hebert, P. D. N. (2009): Global DNA barcoding campaigns in Lepidoptera: lessons from sphingid moths. Pp. 129-130 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**: 129-130

Corresponding author: Dr. Rodolphe Rougerie, Biodiversity Institute of Ontario, Canadian Centre for DNA Barcoding, University of Guelph, Guelph, Ontario, Canada; e-mail: rrougeri@uoguelph.ca

Lepidoptera is the most sampled insect order in DNA barcoding studies. From regional, continental and global campaigns, more than 180 000 barcodes have been obtained in 123 families and for ca. 20 000 species. Global campaigns, seeking planetary coverage, have been initiated recently for the families Geometridae, Saturniidae and Sphingidae. The latter campaign, benefiting from the involvement of an international network of expert taxonomists and collectors, has progressed rapidly. Eighteen months after its start, it is now close to completion with almost 12 000 sequences obtained for more than 1400 species and subspecies. This campaign represents a pilot project for similar efforts in other families. We present its development with emphasis on: (1) its organization and management, based on the use of the Barcode of Life Datasystems (BOLD); (2) the material used and the success of high-throughput protocols for collection specimens; (3) the overall results in terms of observed genetic divergences at the species level, and estimated impact on the recognized diversity of the family. For each of these three points, we address potential challenges and pitfalls such as (1) facilitating collaborative work and respecting data privacy, (2) detecting and avoiding misidentifications or cross contaminations, (3) optimizing success for collection specimens, and (4) properly interpreting levels of variations in interspecific and intraspecific divergences. From practical examples, we show how the combination of DNA barcoding

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): Hebert Paul D. N.

Artikel/Article: The International Barcode of Life Project (iBOL) 129