## **ZOOTAXA**

1833

# Heinrich Friese (1860–1948): Names proposed and notes on a pioneer melittologist (Hymenoptera, Anthophila)

CLAUS RASMUSSEN & JOHN S. ASCHER



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(*Zootaxa* 1833)

118 pp.; 30 cm.

30 July 2008

ISBN 978-1-86977-245-1 (paperback)

ISBN 978-1-86977-246-8 (Online edition)

FIRST PUBLISHED IN 2008 BY

Magnolia Press

P.O. Box 41-383

Auckland 1346

New Zealand

e-mail: zootaxa@mapress.com

http://www.mapress.com/zootaxa/

### © 2008 Magnolia Press

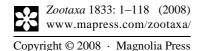
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ISSN 1175-5326 (Print edition)

ISSN 1175-5334 (Online edition)





### Heinrich Friese (1860–1948): Names proposed and notes on a pioneer melittologist (Hymenoptera, Anthophila)

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### **Abstract**

Heinrich Friedrich August Karl Ludwig Friese (1860–1948) was an important pioneer bee biologist (melittologist). Between 1883 and 1939 he described 1,989 new species and 564 new varieties or subspecies of insects, of which over 99% were bees. His research was global, including description of new taxa from all biogeographical regions where bees occur, belonging to all seven extant bee families and 124 genera, including *Megachile* (with 262 species-group taxa proposed), *Bombus* (232), and *Halictus* (153). The present catalog provides a complete list of the taxa proposed by Friese, including a bibliography of his 270 entomological publications. The catalog lists all valid names proposed by Friese and details on the nomenclature, sex, and region of origin of each. The current combination and subgeneric placement are cited for taxa now regarded as valid species. A brief biography is followed by a discussion of how to locate and treat Friese types, a notoriously complicated issue due to Friese's confusing labeling practices and the broad dispersion of his specimens.

**Key words**: Apidae, Megachilidae, Halictidae, Andrenidae, Colletidae, Melittidae, Stenotritidae, Entomologist, Biography

Bees are fundamental components of ecosystems where they provide pollination services for a multitude of plants, including crops (Barth 1991; Buchmann & Nabhan 1996; Proctor *et al.* 1996). Recently reported declines in native bee populations (Biesmeijer *et al.* 2006; National Academy of Sciences 2006; Fitzpatrick *et al.* 2007) are therefore of public concern, and further data on populations are required for evaluating apparent