

Systematics of the Hersiliidae (Araneae) of the Afrotropical Region

by

Stefan Hendrik Foord

Submitted in partial fulfillment of the requirements for the degree of
PhD (Zoology)

In the Faculty of Natural and Agricultural Sciences
University of Pretoria
Pretoria

January 2005

Table of Contents

	Content	Page
DISCLAIMER		iii
SUMMARY/OPSOMMING		iv
ACKNOWLEDGEMENTS		v
CHAPTER ONE	A Cladistic Analysis of the Family Hersiliidae (Arachnida, Araneae) of the Afrotropical Region	6
CHAPTER TWO	A Revision of the Afrotropical species of <i>Hersilia</i> Audouin (Araneae: Hersiliidae)	50
CHAPTER THREE	A Revision of the Afrotropical Species of <i>Hersiliola</i> Thorell and <i>Tama</i> Simon with Description of a New Genus <i>Tyrotama</i> (Araneae: Hersiliidae)	168
CHAPTER FOUR	The First Records of <i>Murricia</i> Simon from the Afrotropical Region (Araneae: Hersiliidae)	208
CHAPTER FIVE	The First Records of <i>Neotama</i> Baehr & Baehr from the Afrotropical Region and Description of a New Genus, <i>Prima</i> (Araneae: Hersiliidae)	220

Disclaimer

This PhD thesis comprises a number of chapters prepared for submission to a range of journals. Consequently, chapter formats and contents contain some inconsistencies and overlap in order to secure publishable entities.

Acknowledgments

I would like to thank Annette van den Berg, Charnie Craemer, Lindie Steynberg, and Elizabeth Kassimatis for providing technical as well as theoretical assistance. The various museum curators I borrowed material from are thanked, in particular, Peter Jäger and Rudi Jocqué, whom responded almost immediately to any request I made. Alan Hall and Chris van der Merwe at the University of Pretoria Laboratory for Microscopy were always helpful.

Comments by Prof. Clarke Scholtz improved the manuscript.

Angela Versari kindly taught me how to draw. I hope I didn't disappoint her.

Study leave by my employer, the University of Venda, allowed me to complete most of the work for this thesis. The NRF provided financial assistance.

However, my greatest debt is, firstly, to my wife Caron and our two daughters, who allowed me the freedom to pursue my studies. Secondly to Prof. Ansie Dippenaar-Schoeman, her enthusiasm, vast experience and knowledge provided the context for this study and thirdly, my parents, whose keen interest, support and love throughout all my life made all of this possible.

Summary

The Hersiliidae of the Afrotropical Region is revised and the phylogenetic positions of taxa within the family cladistically analysed. The following genera have been newly erected: *Tyrotama* gen. nov. for *Tama arida* and seven additional species, and *Prima* gen. nov. for *P. ansieae* spec. nov. and one additional species. The genera *Murricia* Simon and *Neotama* Baehr & Baehr are recorded for the first time from the Afrotropical Region. All valid species are redescribed. The following 20 species are newly described: *Hersilia beva*, *H. bubu*, *H. caronae*, *H. dilumen*, *H. eloetsensis*, *H. moheliensis*, *H. plara*, *H. salda*, *H. taita*, *H. tamatavensis*, *H. unca*, *H. woutrinae*, *Murricia emlynae*, *M. uva*, *Prima ansieae*, *P. syda*, *Tyrotama gamkasiensis*, *T. taris*, *T. makalaliensis*, *T. namibia*. The males of *T. arida* and *T. bicava* are described for the first time.

The following species have been synonymized: *Hersilia segeregata* Benoit with *H. occidentalis* Simon, *Hersilia nossibeensis* Strand with *H. insulana* Strand, *Tama obscura* Smithers with *Tyrotama arida* (Smithers). For *Hersilia insulana* Strand a lectotype and paralectotype have been designated; a neotype has been designated for *H. vinsoni* Lucas. *Hersilia corticola* Lawrence was transferred to *Neotama* and *Hersiliopsis madagascariensis* Wundelich was transferred to *Hersilia* Audouin. The following species remain doubtful: *Hersilia kauderni* Strand, *H. stumpfi* Strand, *H. fossulata* Karsch.

A total of 47 hersiliid species are recorded for the Afrotropical Region. Keys are provided to the six genera of the Afrotropical Hersiliidae and the species of *Hersilia* and *Tyrotama*. A cladistic analysis based on 48 characters and 22 species inferred the following phylogeny: ((*Hersiliola Tyrotama*) (*Neotama* (*Prima* (*Murricia Hersilia*)))). Morphological data supports the monophyly of *Tyrotama* and the phylogeny suggests that the genus is not closely related to *Tama*. The new genus *Prima* is weakly supported as the sister taxon of *Neotama*. Support for the genus *Hersilia* is weak and synapomorphies that unite five identified species groups within the genus are much more consistent than those that unite *Hersilia*. However, the genus *Hersilia* is retained until a comprehensive generic level analysis for the world is conducted.