



Zootaxa 3142: 1–172 (2011)
www.mapress.com/zootaxa/

Copyright © 2011 · Magnolia Press

Monograph

ISSN 1175-5326 (print edition)

ZOOTAXA

ISSN 1175-5334 (online edition)

ZOOTAXA

3142

Systematic revision of the family Kalliapseudidae (Crustacea: Tanaidacea)

DAVID T. DRUMM & RICHARD W. HEARD

*Department of Coastal Sciences, The University of Southern Mississippi, 703 East Beach Dr., Ocean Springs, MS 39564 USA
Current address: National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Alaska Fisheries Science
Center, Resource Assessment and Conservation Engineering Division, 7600 Sand Point Way NE, Seattle, WA 98115, USA
E-mail: david.drumm@eagles.usm.edu*



Magnolia Press
Auckland, New Zealand

Accepted by R. Bamber: 10 Oct. 2011; published: 23 Dec. 2011

DAVID T. DRUMM & RICHARD W. HEARD
Systematic revision of the family Kalliapseudidae (Crustacea: Tanaidacea)
(*Zootaxa* 3142)

172 pp.; 30 cm.

23 Dec. 2011

ISBN 978-1-86977-827-9 (paperback)

ISBN 978-1-86977-828-6 (Online edition)

FIRST PUBLISHED IN 2011 BY

Magnolia Press

P.O. Box 41-383

Auckland 1346

New Zealand

e-mail: zootaxa@mapress.com

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

© 2011 Magnolia Press

All rights reserved.

No part of this publication may be reproduced, stored, transmitted or disseminated, in any form, or by any means, without prior written permission from the publisher, to whom all requests to reproduce copyright material should be directed in writing.

This authorization does not extend to any other kind of copying, by any means, in any form, and for any purpose other than private research use.

ISSN 1175-5326 (Print edition)

ISSN 1175-5334 (Online edition)

Table of contents

Abstract	4
Introduction	5
Taxonomic history	9
Material and methods	12
Results	14
Discussion	17
Systematics	22
Suborder Apseudomorpha Sieg, 1980	22
Superfamily Apseudoidea Leach, 1814	22
Family Kalliapseudidae Lang, 1956	22
Key to the subfamilies of Kalliapseudidae	22
Subfamily Hemikalliapseudinae Guţu, 1972	22
Key to genera of Hemikalliapseudinae	24
Genus <i>Acutihumerus</i> Guţu, 2006	24
<i>Acutihumerus cavooreni</i> (Băcescu and Absalao, 1985)	24
Genus <i>Bacescapseudes</i> Guţu, 1981	24
Key to species of <i>Bacescapseudes</i>	25
<i>Bacescapseudes adenaicus</i> (Băcescu, 1978)	25
<i>Bacescapseudes brevidigitus</i> Guţu, 1998	26
<i>Bacescapseudes grossidigitus</i> Guţu, 2006	26
Genus <i>Hemikalliapseudes</i> Lang, 1956	26
Key to species of <i>Hemikalliapseudes</i>	27
<i>Hemikalliapseudes hanstroemi</i> Lang, 1956	27
<i>Hemikalliapseudes makellus</i> Bamber, 2003	28
<i>Hemikalliapseudes vasileradui</i> Guţu, 2006	35
Genus <i>Paraleiopus</i> Brum, 1978	35
<i>Paraleiopus macrochelis</i> Brum, 1978	35
Subfamily Kalliapseudinae Lang, 1956	36
Key to genera of Kalliapseudinae	36
Genus <i>Phoxokalliapseudes</i> n. gen.	36
Key to species of <i>Phoxokalliapseudes</i> n.gen.	37
<i>Phoxokalliapseudes gobinae</i> (Bamber, 1998) n. comb.	38
<i>Phoxokalliapseudes multiarticulus</i> (Guţu, 2006) n. comb.	43
<i>Phoxokalliapseudes singaporensis</i> n.sp.	50
Genus <i>Cristapseudes</i> Băcescu, 1980	57
Key to species of <i>Cristapseudes</i>	58
<i>Cristapseudes omercooperi</i> (Larwood, 1954)	59
<i>Cristapseudes siamensis</i> Guţu and Angsupanich, 2005	63
<i>Cristapseudes unicus</i> Guţu, 2006	64
<i>Cristapseudes exocladum</i> n. sp.	64
Genus <i>Kalliapseudes</i> Stebbing, 1910	69
Key to species of <i>Kalliapseudes</i>	70
<i>Kalliapseudes langi</i> Guţu, 2006	71
<i>Kalliapseudes longisetosus</i> Drumm, 2007	72
<i>Kalliapseudes magnus</i> Lang, 1956	74
<i>Kalliapseudes makrothrix</i> Stebbing, 1910	81
<i>Kalliapseudes mauritanicus</i> Monod, 1923	81
<i>Kalliapseudes messingi</i> Drumm, 2007	83
<i>Kalliapseudes obtusifrons</i> (Haswell, 1882)	83
<i>Kalliapseudes primitivus</i> Nierstrasz, 1913	84
<i>Kalliapseudes senegalensis</i> Guţu, 2006	84
<i>Kalliapseudes struthi</i> Bamber, 2005	86
<i>Kalliapseudes tomiokaensis</i> Shiino, 1966	88
<i>Kalliapseudes bamberi</i> n. sp.	89
<i>Kalliapseudes dongarae</i> n. sp.	95
<i>Kalliapseudes gutui</i> n. sp.	102
<i>Kalliapseudes profundus</i> n. sp.	107
<i>Kalliapseudes quadrirobustirostris</i> n.sp.	113
<i>Kalliapseudes syntresis</i> n. sp.	117
Genus <i>Mesokalliapseudes</i> Lang, 1956	123
Key to species of <i>Mesokalliapseudes</i>	125
<i>Mesokalliapseudes bahamensis</i> Sieg, 1982	126

<i>Mesokalliapseudes brasiliensis</i> (Băcescu, 1986)	130
<i>Mesokalliapseudes crassus</i> (Menzies, 1953)	136
<i>Mesokalliapseudes macsweenyi</i> Drumm, 2003	136
<i>Mesokalliapseudes soniadawnae</i> Bamber, 1993	140
<i>Mesokalliapseudes thalaspispeleus</i> Guțu, 2006	140
<i>Mesokalliapseudes viridis</i> (Menzies, 1953)	140
<i>Mesokalliapseudes quadriflagellata</i> Drumm and Morales-Núñez, 2010	141
Genus <i>Monokalliapseudes</i> Lang, 1956	141
<i>Monokalliapseudes schubarti</i> (Mané-Garzón, 1949)	142
Genus <i>Transkalliapseudes</i> Drumm and Heard, 2006	144
Key to species of <i>Transkalliapseudes</i>	145
<i>Transkalliapseudes banana</i> Bamber, 2008	145
<i>Transkalliapseudes spinulata</i> Drumm and Heard, 2006b	145
Subfamily Tanapseudinae Băcescu, 1978	145
Key to genera of Tanapseudinae	145
Genus <i>Psammokalliapseudes</i> Lang, 1956	146
Key to species of <i>Psammokalliapseudes</i>	146
<i>Psammokalliapseudes granulatus</i> Brum, 1973	147
<i>Psammokalliapseudes mirabilis</i> Lang, 1956	150
Genus <i>Tanapseudes</i> Băcescu, 1978	150
Key to the species of <i>Tanapseudes</i>	152
<i>Tanapseudes gutui</i> Hansknecht <i>et al.</i> , 2002	152
<i>Tanapseudes ormuzana</i> Băcescu, 1978	152
<i>Tanapseudes sinensis</i> Bamber, 2000	156
Acknowledgments	161
Literature cited	161
Appendix I	166
Appendix II	170

Abstract

Kalliapseudidae is a family of shallow burrow-dwelling and fossorial marine and estuarine tanaidaceans. There are currently 39 known species in 12 genera and three subfamilies. They are distributed throughout the world's tropical, subtropical, and temperate coastal waters and, with a few known exceptions, are restricted to depths of less than 200 m. The phylogeny of Kalliapseudidae is assessed to test the monophyly of currently accepted subfamilies and genera, based largely on examination of material loaned from various museums and institutions. Multiple exemplars from other apseudomorph families were also included in the ingroup to test the monophyly of the family. Parsimony analyses included 41 terminal taxa and 64 binary and multistate morphological characters. Analyses based on successive weighting resulted in 20 most parsimonious trees. The strict consensus tree of these most parsimonious trees supported Kalliapseudidae, Kalliapseudinae, *Tanapseudes*, *Cristapseudes*, and *Mesokalliapseudes* as monophyletic. The genus *Kalliapseudes* could not be resolved, but constraining it to be monophyletic resulted in a significantly worse tree. The subfamilies Hemikalliapseudinae and Tanapseudinae were recovered as polyphyletic and paraphyletic, respectively, but without support. Constraining them to be monophyletic did not result in a significantly worse tree. Results indicated high levels of homoplasy in three morphological characteristics traditionally used to differentiate groups. *Alokalliapseudes macsweenyi* is transferred back to the genus *Mesokalliapseudes*, rendering *Alokalliapseudes* a junior subjective synonym. Nine new taxa, including six species of *Kalliapseudes* and one species of the genus *Cristapseudes*, and one new genus (*Phoxokalliapseudes*) and species (*P. singaporensis*) were discovered and described. Two species of *Kalliapseudes* (*K. gobinae* and *K. multiarticulus*) are transferred to *Phoxokalliapseudes* **n. gen.** Neotypes are designated for *K. magnus*, *C. omercooperi* and *M. schubarti*, and a lectotype is designated for *K. mauritanicus*. Distribution maps, illustrated keys to the subfamilies, genera and species, and preliminary remarks on biogeographic history are also presented.

Key words: Kalliapseudidae, revision, new genus, new species, new combinations, cladistic analysis