ZOOTAXA

2082

A revision of *Leydigia* Kurz, 1875 (Anomopoda, Cladocera, Branchiopoda), and subgeneric differentiation within the genus

ALEXEY A. KOTOV

Magnolia Press
Auckland, New Zealand

Alexey A. Kotov

A revision of *Leydigia* Kurz, 1875 (Anomopoda, Cladocera, Branchiopoda), and subgeneric differentiation within the genus

(*Zootaxa* 2082)

84 pp.; 30 cm.

24 Apr. 2009

ISBN 978-1-86977-347-2 (paperback)

ISBN 978-1-86977-348-9 (Online edition)

FIRST PUBLISHED IN 2009 BY

Magnolia Press

P.O. Box 41-383

Auckland 1346

New Zealand

e-mail: zootaxa@mapress.com

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

ISSN 1175-5326 (Print edition)

ISSN 1175-5334 (Online edition)

Zootaxa 2082: 1–84 (2009)
www.mapress.com/zootaxa/

ISSN 1175-5326 (print edition)
ZOOTAXA
ISSN 1175-5334 (online edition)

A revision of *Leydigia* Kurz, 1875 (Anomopoda, Cladocera, Branchiopoda), and subgeneric differentiation within the genus

ALEXEY A. KOTOV
A. N. Severtsov Institute of Ecology and Evolution, Leninsky Prospect 33, Moscow 119071, Russia. E-mail: alexey-a-kotov@yandex.ru

Table of contents

Accepted by M. Alonso: 21 Feb. 2009; published: 24 Apr. 2009

Abstract

A revision of the genus *Leydigia* Kurz, 1875 (Anomopoda, Cladocera, Branchiopoda) is presented. The list of all species-group nominal taxa consists of 34 published and 3 unpublished names. Of these, 12 species are accepted as valid: (1) *Leydigia* (*Leydigia*) *leydigi* (Schödler, 1863); (2) *L.* (*L.*) *louisi* Jenkin, 1934 with two subspecies *L. louisi louisi* Jenkin, 1934 and *L. louisi mexicana* Kotov, Elías-Gutiérrez et Nieto, 2003; (3) *Leydigia* (*Neoleydigia*) *propinqua* Sars, 1903; (4) *L.* (*N.*) *australis* Sars, 1885; (5) *L.* (*N.*) *microps* Sars, 1916; (6) *L.* (*N.*) **sp. nov.** from '*L. acanthocercoides*' in Alonso, 1996; (7) *L.* (*N.*). *macrodonta* Sars, 1916; (8) *L.* (*N.*) *acanthocercoides* (Fischer, 1854); (9) *L.* (*N.*). *laevis* Gurney, 1927; (10) *L.* (*N.*) cf. *ipojucae* Brehm, 1939; (11) *L.* (*N.*) *ciliata* Gauthier, 1939; (12) *L.* (*N.*) cf. *striata* Birabén, 1939. Lectotypes are selected for 3, 5, 7, and 9. Exact identification of 10 and 12 is not possible without examination of material from type localities and neotype selection. As confirmed by examination of authors' type material, some taxa (*Leydigia africana* Gurney, 1904 and *Leydigia ankammaraoi* Prasad, Santa Kumari et Bose, 1985) prove to be junior synonyms of previously described species; species 8-12 form a compact *acanthocercoides*-group, with fine differences among members.

A cladistic analysis for 13 studied taxa and 18 morphological characters resulted in four most-parsimonious trees (TL = 32; CI = 0.78), which differ only in the grouping of members of the *L. acanthocercoides*-group. A slightly polytomic strict consensus tree (the 50% majority rule bootstrap simulation led to a tree of similar topology to the contree), as well as some 'orthodox' ideas on the evolution of the genus (not contradicting each other), are used to subdivide the genus into two subgenera, *Leydigia* (*Leydigia*) Kurz, 1875 and *Leydigia* (*Neoleydigia*) subgen. nov. *L.* (*N.*) *acanthocercoides* is the type species of the latter. A key for the identification of well-known species of *Leydigia* is provided. The level of description of representatives of the genus *Leydigia* in different continents is estimated, and perspectives for further investigations are outlined.

Key words: Anomopoda, Chydoridae, Cladocera, Crustacea, *Leydigia*, morphology, phylogeny, revision, systematics, taxonomy

Abbreviations

Collections. AAK, personal collection of A. A. Kotov, Moscow, Russia. DAD, Collectio Dadayana, the Hungarian Natural History Museum, Budapest. DLWC, Dept. of Land and Water Conservation of New South Wales, Australia. ECO-CH-ZOO, Zooplankton Reference Collection, El Colegio de la Frontera Sur (ECOSUR), Chetumal branch, Chetumal, Q. Roo, Mexico. GOS, Collection of G. O. Sars, Zoological Museum of Oslo University. MGU, Zoological Museum of Moscow State University (=Moskovskij Gosudarstvennij Universitet), Russia. NHM, the Natural History Museum, London, United Kingdom. NMK, Collection of N. M. Korovchinsky, Moscow. NNS, Collection of Prof. N. N. Smirnov, now at the Zoological Museum of Moscow State University, but not officially deposited there. NNS MGU, Collection of Prof. N. N. Smirnov officially deposited to MGU. RBINS, Royal Belgian Institute of Natural Sciences, Brussels, Belgium. RMBC, the Royal Museum of British Columbia, Victoria, BC, Canada. USNM, The United States National Museum of Natural History, Smithsonian Institution, Washington, D.C., U.S.A.

In text and illustrations. IDL, inner distal lobe of limb I. IP, interpore distance. ODL, outer distal lobe of limb I. Parth., parthenogenetic. PP, postpore distance.

Introduction

Recent progress in the investigation of the subfamily Aloninae Dybowski et Grochowski, 1894 emend. Frey, 1967 (Chydoridae, Anomopoda, Cladocera) is remarkable. A series of genera has been revised (Dumont & Silva-Briano 2000; Kotov 2000a; Kotov 2000b; Sinev 2002; Van Damme *et al*. 2003; Sinev 2004; Van Damme *et al*. 2005; Sinev 2008; Van Damme & Dumont 2008a; Van Damme & Dumont 2008b), but others, like *Leydigia* Kurz, 1875, await further study.