



Zootaxa 3761 (1): 001–156  
www.mapress.com/zootaxa/

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# Monograph

ISSN 1175-5326 (print edition)

**ZOOTAXA**

ISSN 1175-5334 (online edition)

<http://dx.doi.org/10.11646/zootaxa.3761.1.1>

<http://zoobank.org/urn:lsid:zoobank.org:pub:82E0F1DC-BC98-4E8A-A3D5-21ECB392CC0B>

# ZOOTAXA

3761

## A revision of the New World genus *Aptilotella* Duda (Sphaeroceridae: Limosiniinae)

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Magnolia Press  
Auckland, New Zealand

Accepted by S. Gairmari: 8 Nov. 2013; published: 5 Feb. 2014

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(*Zootaxa* 3761)

156 pp.; 30 cm.

5 Feb 2014

ISBN 978-1-77557-330-2 (paperback)

ISBN 978-1-77557-331-9 (Online edition)

FIRST PUBLISHED IN 2014 BY

Magnolia Press

P.O. Box 41-383

Auckland 1346

New Zealand

e-mail: [zootaxa@mapress.com](mailto:zootaxa@mapress.com)

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

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ISSN 1175-5326 (Print edition)

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## Abstract

The genus *Aptilotella* Duda (Diptera: Sphaeroceridae: Limosiniinae) is redefined and revised. The type species, *Aptilotella borgmeieri* Duda is redescribed, and twenty-seven species are described as new: *Aptilotella andersoni* sp. n., *A. angela* sp. n., *A. caerulea* sp. n., *A. corona* sp. n., *A. diffisa* sp. n., *A. ebenea* sp. n., *A. erinacea* sp. n., *A. gemmula* sp. n., *A. germana* sp. n., *A. gladia* sp. n., *A. gloriosa* sp. n., *A. gracilis* sp. n., *A. hamata* sp. n., *A. involucris* sp. n., *A. macta* sp. n., *A. macula* sp. n., *A. pennifera* sp. n., *A. pichinchensis* sp. n., *A. pyropanda* sp. n., *A. quadrata* sp. n., *A. quatuorchela* sp. n., *A. radians* sp. n., *A. simplex* sp. n., *A. solaris* sp. n., *A. sphyra* sp. n., *A. umbracatus* sp. n., and *A. viva* sp. n. A phylogenetic analysis and key to species are presented, with illustrations and distributional notes.

**Key words:** Acalyptratae, Sphaeroceridae, Neotropical, identification key, phylogeny, taxonomy, new species

lineages also occur in Africa, notably in the vicinity of Mount Elgon and Mount Ruwenzori. They have been extensively studied by Richards (see for example, 1951, 1955, 1957, 1962, 1965). These flies appear to be a remarkable example of extreme convergence between distantly related lineages. Tracing their relationships will involve not only the wingless forms, but also numerous macropterous taxa.

Several undescribed *Aptilotella* species are known from inadequate material, and additional collecting is needed to justify description at this time. Of particular interest would be the rediscovery of *A. borgmeieri*, which may still reside in well-protected Atlantic forest sites. Flightless sphaerocerids tend to be sensitive to disturbance due to their restricted distributions. Kits and Marshall (2011) cited the flightless genus *Frutillaria* Richards as an example of a potentially significant taxon for identifying habitats of conservation concern. *Aptilotella* may be of similar importance, and species such as *A. borgmeieri* are likely to be threatened or already lost. Perhaps Duda implied this when he wondered in 1924, “whether this easily overlooked species of fly will ever be found again.”

## Acknowledgements

This revision of *Aptilotella* would not have been possible without the dipterous donations from the Leaf Litter Arthropods of Mesoamerica (LLAMA) project, National Science Foundation grant DEB-0640015, Biodiversity Surveys and Inventories Program. R.S. Anderson (Canadian Museum of Nature) contributed over half of the material. Half of the newly described species are known only from his specimens, and he has collected every species except *A. caerulea* and *A. macta*. *Aptilotella andersoni* was named as a tribute to Dr. Anderson’s prolific collecting efforts. R.S. Anderson is also thanked for assistance with the maps, and M.D. Jackson (DEBU) for support with TNT. Support for this project was provided by an NSERC Discovery Grant to the second author.

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