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New species of *Cymatodera* Gray (Coleoptera: Cleridae: Tillinae) from México and Central America, with notes on others

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Abstract

Nineteen new species of *Cymatodera* Gray are described: *C. mexicana*, *C. cicatricula*, *C. matehualacaligoides*, *C. brailovskyi*, *C. durangoensis*, *C. monticola*, *C. paucipunctata*, *C. anulata*, *C. christina*, *C. copei*, *C. oxchuc*, *C. merickeli*, *C. romeroi*, *C. cellulosa*, and *C. acutipennis* from México; *C. doda* from México, Nicaragua and Costa Rica; *C. carinipennis* from México and Guatemala; *C. rileyi* from México, Honduras, and Belize, and *C. wilsoni* from Costa Rica. These species are figured, along with the type of *C. kolbei* Schenkling, and a lectotype is designated for the latter. I include a brief discussion on the prevalence and evolution of brachyptery in *Cymatodera*.

Key words: Clerid fauna, taxonomy, Sierra Sur de Oaxaca, Isthmus of Tehuantepec, Chiapas, Honduras, Nicaragua, Costa Rica, endemism, brachyptery, aptery, tropical deciduous forest, pine-oak forest

Introduction

As I previously noted (Rifkind 2014), *Cymatodera* is one of the most speciose of the clerid genera in México and Central America (approximately 83 described species), but also among the most poorly studied. Recent descriptions of species belonging to this fauna appear in Rifkind 1993, Rifkind, Toledo & Corona 2010, Burke 2013, Burke & Zolnerowich 2014, and Rifkind 2014, but many more species remain undescribed in collections. The area encompassing the southwest U.S. southward through Isthmian Panamá is a locus of *Cymatodera* evolution. As is the case for many other arthropod genera (e.g. within Curculionidae (Anderson & O'Brien 1996) and Buprestidae (Hespenheide 1996)), *Cymatodera* diversity is particularly high in southern México, and certain subregions, such as the Sierra Sur of Oaxaca and the Chiapan highlands, appear to be hotspots of both speciation and endemism. *Cymatodera* species have adapted to a remarkably broad range of habitats, including desert, thorn forest, tropical deciduous forest, pine-oak forest, tropical wet forest, rain forest, and cloud forest. Though members of the genus are primarily nocturnal, and attracted to lights, many species are also encountered by beating vegetation, tree limbs, and slash during the day. Aptery and brachyptery are particularly common in the genus, and the association of flightless species with isolated mountain ranges provides a potential model for studies of biogeography, vicariance, and the mechanisms of speciation. The present paper proposes nineteen new species of *Cymatodera* from México and Central America, and is intended to take us a step closer toward a more comprehensive understanding of the genus, with the ultimate goal of revision and practical keys for species identification.

Brachyptery in *Cymatodera*. Flightlessness is remarkably common in *Cymatodera*, and brachyptery (*sensu lato*, including aptery) is evident in approximately fourteen previously described species: *C. mitchelli* Chapin, *C. vandykei* Schaeffer, *C. angustata* Spinola, *C. balteata* LeConte, and *C. punctata* LeConte (the last two exhibiting both macropterous and brachypterous phena) from the United States; *C. intermedia* Barr, *C. cephalica* Schaeffer, and *C. purpuricollis* Horn from Baja California, México; *C. maculifera* Barr, *C. depauperata* Gorham, *C. barri* Rifkind, *C. pueblae* Burke, *C. lineata* Burke, and *C. valida* Gorham from mainland México and/or northern Central America. This list however, grossly underrepresents the richness of the flightless *Cymatodera* fauna. Several are

and mentor, William F. Barr, for designating morphospecies of new taxa within his collection; these, along with his attached diagnostic notes, pencilled on card in his neat distinct hand, formed a basis for several of the descriptions contained herein. Jesús Romero Nápoles kindly facilitated my field studies in Oaxaca and Chiapas. My wife Patricia Gum helped prepare the illustrations.

Literature cited

- Anderson, R.S. & O'Brien, C.W. (1996) Curculionidae (Coleoptera). In: Bousquets, J.E.L. *et al.* (Eds.), *Biodiversidad, taxonomía y biogeografía de artrópodos de México: hacia una síntesis de su conocimiento*, Universidad Nacional Autónoma de México, México, D.F., pp. 1–660.
- Burke, A.F. (2013) Six new species of *Cymatodera* from Mexico and Central America and the retention of *Cymatodera obliquefasciata* as a valid name (Cleridae, Tillinae). *ZooKeys*, 299, 49–75.
<http://dx.doi.org/10.3897/zookeys.299.4359>
- Burke, A.F. & Zolnerowich, G. (2014) Four new species of *Cymatodera* Gray from Mexico (Coleoptera, Cleridae, Tillinae). *ZooKeys*, 387, 33–49.
<http://dx.doi.org/10.3897/zookeys.387.6827>
- Corporaal, J.B. (1950) *Cleridae. Coleopterorum Catalogus. Supplementa pars 23*. Uitgeverij Dr. W. Junk's-Gravenhage, 373 pp.
- Hespenheide, H.A. (1996) Buprestidae (Coleoptera). In: Bousquets, J. E. L. *et al.*, (Eds), *Biodiversidad, taxonomía y biogeografía de artrópodos de México: hacia una síntesis de su conocimiento*, Universidad Nacional Autónoma de México, México, D. F., pp. 1–660.
- Lee, J.C. (2000) *A field guide to the amphibians and reptiles of the Maya world*. Cornell University Press, Ithaca & London, 402 pp.
- Morrone, J.J., Organista, D.E. & Bousquets, J.L. (2002) Mexican biogeographic provinces: preliminary scheme, general characterizations, and synonymies. *Acta Zoológica Mexicana*, 85, 83–108.
- Ramamoorthy, T.P., Bye, R., Lot, A. & Fa, J.E. (Eds.) (1993) *Biological diversity of Mexico: origins and distribution*. Oxford University Press, New York, pp. 1–812.
- Rifkind, J. (1993) A new species of *Cymatodera* from Oaxaca, Mexico (Coleoptera: Cleridae). *The Coleopterists Bulletin*, 47, 83–87.
- Rifkind, J. (2006) Stridulation in *Cymatodera* Gray, 1832 (Coleoptera: Cleridae). *The Pan-Pacific Entomologist*, 82, 258–261.
- Rifkind, J. (2014) A new species of *Cymatodera* Gray (Coleoptera: Cleridae: Tillinae) from southern Mexico. *The Coleopterists Bulletin*, 68, 69–72.
<http://dx.doi.org/10.1649/0010-065X-68.1.69>
- Rifkind, J., Toledo, V. & Corona, A. (2010) New species of Cleridae (Coleoptera) from Morelos, Mexico. *Zootaxa*, 2659, 53–59.
- Schenkling, S. (1907) Neue Cleriden von Zentral-Amerika nebst Bemerkungen über die Beziehungen der mittel-amerikanischen Cleriden zu denen des übrigen Amerika. *Deutsche Entomologische Zeitschrift*, 1907, 297–307.