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# *Oreiallagma* gen. nov. with a redefinition of *Cyanallagma* Kennedy 1920 and *Mesamphiagrion* Kennedy 1920, and the description of *M. dunklei* sp. nov. and *M. ecuatoriale* sp. nov. from Ecuador (Odonata: Coenagrionidae)

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## Abstract

In this paper we re-evaluate *Cyanallagma* Kennedy 1920, which currently includes 15 species, and we address another five species that share diagnostic characters with some of them but are currently placed within *Leptagrion* Selys 1876, *Mesamphiagrion* Kennedy 1920, and *Telagrion* Selys 1876. A new genus, *Oreiallagma*, is described to include five species originally placed in *Acanthagrion* Selys 1876, *Cyanallagma*, and *Telagrion*. These species are *O. thelkterion* (De Marmels 1997) (type species), *O. acutum* (Ris 1918), *O. oreas* (Ris 1918), *O. prothoracicum* (Kimmins 1945), and *O. quadricolor* (Ris 1918). The last stadium larva of *O. quadricolor* is described. The remaining species currently included

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in *Cyanallagma* are allocated to two separate genera: *Cyanallagma sensu stricto* and *Mesamphiagrion*. *Cyanallagma sensu stricto* comprises southern South American species including the type species, *Cyanallagma interruptum* (Selys 1876). *Mesamphiagrion* Kennedy 1920 includes a cluster of species from northwestern South America that are considered congeneric with the type species *Mesamphiagrion occultum* (Ris 1918). Two new species from Ecuador, *M. dunklei* and *M. ecuatoriale*, are described and *Argia hebdomatica* Navás 1934 is found to be a junior synonym of *M. ovigerum* (Calvert 1909). Synonymic lists, diagnoses, illustrations, keys, and distribution maps for the three genera are provided.

**Key words:** Zygoptera, new genus, new species, South America

## Introduction

Generic concepts within neotropical Coenagrionidae are plagued by a lack of diagnostic characters. The abundance of recently discovered taxa coupled with a lack of review of generic concepts often precludes a meaningful classification and analysis within this diverse family. Until these problems are resolved little progress will be possible allowing for meaningful diagnostics and phylogenetic considerations. Past literature dealing with species we treat here has often involved generic transfers reflecting the inadequacy of their generic diagnoses.

Here we redefine *Cyanallagma* Kennedy 1920, currently including 15 species. We also address another five species that share diagnostic characters with some species of *Cyanallagma* but are currently placed within *Leptagrion* Selys 1876, *Mesamphiagrion* Kennedy 1920, and *Telagrion* Selys 1876. Several of these species have previously been included in or shifted among other genera, including *Acanthagrion* Selys 1876, *Archaeallagma* Kennedy 1920, *Argentagrion* Fraser 1948, *Argia* Rambur 1842, and *Enallagma* Charpentier 1840. Some of these species, known only from types, have not been re-examined since their original descriptions almost 90 years ago.

**History.** As the following historical account will show, the species treated here have not easily yielded to generic assignments often due to lack of material and addition of new species that have gradually broadened generic concepts. This has obscured their original definitions resulting in disagreement on cohesive character suites that may be used to define genera.

From the Andes, Ris (1918) described *Acanthagrion acutum*, *Telagrion oreas*, and *T. quadricolor*, and Kimmins (1945) described *T. prothoracicum*. None have been rediscovered since.

Kennedy (1920) erected *Cyanallagma* for species of Selys' (1876) '*Acanthagrion interruptum*' group, designating *Acanthagrion interruptum* as type species and including also *A. laterale* Selys, *A. acutum*, and "perhaps [*A.*] *cheliferum* Selys". His diagnosis (Kennedy 1920) was extremely brief: "as *Acanthagrion* but with male cerci not decumbent and usually forked". Leonard (1977) revised *Acanthagrion*, agreed with Kennedy's (1920) earlier actions, and transferred the following additional species to *Cyanallagma*: *Acanthagrion nigrinuchale* Selys 1876, *A. trimaculatum* Selys 1876, *A. lindneri* Ris 1928, and *A. ambiguum* Ris 1904. His work was written in the 1930s and published posthumously. Fraser (1948) erected *Argentagrion* for reception of *Acanthagrion ambiguum*. Rácenis (1958) placed species of Selys' second ('*Acanthagrion interruptum*') section into two genera: *Cyanallagma* (including *Acanthagrion interruptum*, *A. bonariense* Ris 1913, and *A. laterale* Selys) and *Argentagrion* (including *A. ambiguum*, *A. cheliferum*, and *A. lindneri*). Bulla (1973) redescribed *Cyanallagma bonariense* and *C. interruptum*, and indicated that Rácenis (1958) diagnoses needed to be corrected to include variability observed within *C. interruptum* and *A. ambiguum*.

Cruz (1986) described *Cianallagma* [*sic*] *demarmelsi*. De Marmels (1989) provided a complete characterization of *Cyanallagma* and redescriptions of the poorly known *A. acutum* and *Mesamphiagrion occultum* (Ris 1918). Later De Marmels described three new species, *C. risi*, *C. tepuianum*, and *C. thelkterion*, redefined the genus, and referred his previous records of *C. ovigerum* to *C. risi* (De Marmels 1997). He also provided illustrations and keys for all species of *Cyanallagma* inhabiting the Andean cordillera of northern South