Resolution of some taxonomic and nomenclatural issues in a recent revision of *Ceraeochrysa* (Neuroptera: Chrysopidae)

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Abstract

With the purpose of promoting nomenclatural stability, this paper addresses a number of errors, omissions, and controversial conclusions in a recent revision of the green lacewing genus *Ceraeochrysa* by Freitas et al. (2009).

1. **Valid species, new combinations and synonymies:** (a) We identified *Ceraeochrysa chiricahuae* Freitas and Penny (in Freitas et al. 2009), *Chrysopa forreri* Navás, and *Chrysopa intacta* Navás as subjective synonyms. Thus, *Ceraeochrysa intacta*, a species that was previously synonymized under *Ceraeochrysa placita* (Banks), becomes the valid name of the species [New status, new combination]. *Chrysopa forreri* is now synonymized under *Cer. intacta*, not *Cer. placita* [New synonymy]. And, *Cer. chiricahuae* becomes a junior synonym of *Cer. intacta*, not a valid species of *Ceraeochrysa* [New synonymy]. (b) We enumerate specific internal and external features of the *Chrysopa cornuta* type that identify it as conspecific with *Ceraeochrysa caligata* (Banks), not *Ceraeochrysa cincta* (Schneider) as proposed by Freitas et al. (2009). Thus, *Ceraeochrysa cornuta* (Navás), which has priority, is reinstated as the valid name [Reinstated status, reinstated combination]. *Chrysopa caligata* (Banks) is reclassified as a junior subjective synonym of *Cer. cornuta*, not a valid species [Reinstated synonymy]. (c) We provide documented evidence for reinstating three synonymies that Freitas et al. had reversed [Reinstated synonymies]: (i) *Allochrysa parvula* Banks is a junior subjective synonym of *Ceraeochrysa lineaticornis* (Fitch); (ii) *Chrysopa columbiana* Banks is a junior subjective synonym of *Ceraeochrysa lineaticornis* (Fitch); (iii) *Chrysopa rochina* (Navás) is a junior subjective synonym of *Ceraeochrysa cincta* (Schneider).

2. **Generic assignments:** (a) Visual evidence is provided for the placement of *Ceraeochrysa laufferi* (Navás) in *Ungla*. Therefore, *Ungla laufferi* (Navás) is reinstated as the valid name [Reinstated combination]. (b) We question Freitas et al.’s rationale for including *Cer. placita* (Banks) and *Cer. intacta* (Navás) (as *Cer. chiricahuae* Freitas and Penny) in the genus *Ceraeochrysa*; female and larval features of the two species differ markedly from those used to characterize *Ceraeochrysa* species. As an alternative that recognizes the uncertainty surrounding the generic placement of these species and that avoids additional, unnecessary name changes, we propose including the caveat “genus incertae sedis” with the names, as follows: *Ceraeochrysa placita* (Banks), genus *incertae sedis*, and *Ceraeochrysa intacta* (Navás), genus *incertae sedis*.

3. **Type designations:** (a) Errors concerning the *Chrysopa furculata* Navás type in the Muséum national d’Histoire naturelle, Paris (MNHN), are corrected, and doubts raised by Freitas et al. (2009) concerning the identification of this specimen as the holotype are removed. (b) The earlier designation of the *Chrysopa rochina* (Navás) type in the MNHN as the lectotype (not holotype) is verified.

**Key words:** *Ceraeochrysa*, Chrysopodes, Ungla, synonymy, generic assignment

Introduction

With a few notable, relatively well-studied exceptions, the world’s green lacewing taxa require species-level systematic treatment. The requirements include descriptive and alpha-level taxonomic work, as well as revisionary and phylogenetic studies. One effort to help fulfill the needs, a revision of the largely neotropical genus *Ceraeochrysa* (abbreviation: *Cer*), was published recently (Freitas et al. 2009). This study makes a