

## Nomenclatural Notes of Cleridae (Coleoptera)

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## Abstract

Nomenclatural notes on systematics and synonymies of the Cleridae are provided. The species taxa are listed in accordance with their subfamilial taxonomic categories. An alphabetical list of genera includes: *Calendyma* Lacordaire, *Chariessa* Perty, *Cregya* LeConte, *Enoclerus* Gahan, *Lasiodera* Gray, *Lebasiella* Spinola, *Madoniella* Pic, *Muisca* Spinola, *Pelonium* Spinola, *Perilypus* Spinola, *Platynoptera* Chevrolat, *Pseudichnea* Schenkling, *Pujoliclerus* Pic, *Tarandocerus* Chevrolat, *Trichodes* Herbst, and *Troxoides* Opitz.

**Keywords.** Classification, synonymies, genera, species.

## Introduction

The purpose of this contribution is to make known some nomenclatural notes on the systematics and synonymy of the Cleridae. The project is based on examination of the male genitalia of a considerable number of the Western Hemisphere Cleridae. The genitalia and other attributes were examined in the process of assessing species level discontinuities. In the Cleridae, there are substantial differences in the main characteristics of the male genitalia. They include vast differences at the subfamily level. These differences are particularly apparent when it relates to the construction of the phallobase, the phallobasic lobes, and the generalized tegmen structure of the aedeagus. Nomenclatural notes have been proposed on the basis of the forthcoming Catalogue (Catalogue of the checkered beetles of the Western Hemisphere).

## Materials and Methods

Lingafelter and Nearn (2013) [1] published a very informative article that addresses the issue of availability of varietal names in nomenclatural work as per the International Code of Zoological Nomenclature, Article 45.6 (ICZN, 1999) [2]. I followed their methods to determine the availability of varietal names addressed in this work.

The subject of subspecies was comprehensively reviewed by Wilson and Brown (1953: 97) [3]. Their view of the subspecies concept is nicely concise in their following statement, "We are convinced that unless our own sampling of the taxonomic literature has badly deceived us, we shall soon begin to observe the withering of the trinomial and its cumbersome appurtenances- the types, the tinted labels, the ponderous subspecies lists gravely entered in a thousand catalogues, the awkward labeling of masses of "intergrade" specimens, and all of the other procedural details that so unnecessarily consume the few effective working hours a modern taxonomist has". Accordingly, and after careful review, I have elevated or synonymized subspecific taxa with their accepted nominal species.

## Results

## Subfamily Clerinae

In his catalogue, Corporaal (1950) listed several varietal *Enoclerus* names that I consider to be good species, based on genitalic comparisons. They are: *E. bolivianus* (Schenkling), *E. cupidus* Wolcott, *E. flavosignatus* (Spinola), *E. rubripennis* (Pic), *E. captiosus* Wolcott, *E. pulchellus* (Klug), *E. apicatus* (Schenkling), *E. socius* (Chevrolat), *E. myops* (Spinola), and *E. jucundus* (Klug). In that same work, involving *Enoclerus*, Corporaal validated several varietal names, which I herein consider junior synonyms. The junior synonyms names include: *E. obscuricollis* (Schenkling) [= *E. bellus* (Schenkling)], *E. sericans* (Westwood) [= *E. bombycinus* (Chevrolat)], *E. costiricensis* Wolcott [= *E. insidiosus* (Gorham)], *E. imperialis* (Spinola) [= *E. laportei* (Spinola)], *E. assimilis* (Chevrolat) [= *E. mexicanus* (Laporte)], *E. testaceipes* Wolcott [= *E. nigrifrons* (Say)], *E. dubius* (Spinola) [= *E. nigripes* (Say)], *E. rufiventris* (Spinola) [= *E. nigripes* (Say)], *E. affiliatus* LeConte [= *E. quadrisignatus* (Say)], *E. latecinctus* LeConte [= *E. laportei* (Spinola)], *E. nigricollis* (Schenkling) [= *E. ruficans* (Laporte)], *E. tristis* (Schenkling) [= *E. senicus* (Klug)], *E. tristiculus* (Schenkling) [= *E. subjunctus* (Schenkling)], *E. cruentatus* (Spinola) [= *E. versicolor* (Laporte)], *E. granadensis* (Schenkling) [= *E. versicolor* (Laporte)], and *E. jouteli* (Leng) [= *E. viduus*].

I have examined specimens of all known South American species of *Enoclerus*, including many types, and I find that on the basis of male genitalia various nominal species need to be placed in synonymy: *E. flavibasis* is synonymized with *E. biparitus* (Schenkling), *E. meridionalis* (Chevrolat) is synonymized with *E. planonotatus* Laporte, *E. festivus* (Gorham) is synonymized with *E. indagator* (Chevrolat), *E. felix* (Gorham) is synonymized with *E. cinereopilosus* (Blanchard), *E. fraternus* (Schenkling) is synonymized with *E. ruficollis* (Laporte), and *E. gaudens* (Gorham) is synonymized with *E. miniatus* (Spinola). In all these *Enoclerus* species which are synonymized there is a common feature that involves the curvature of the aedeagal lobes.

Foster (1976) [4] revised the North American *Trichodes*. In that work, he described several subspecies which on the basis of male genitalia I now placed in synonymy. These names are: *T. apivorus borealis* Wolcott & Chapin, *T. ornatus hartwegianus* White, *T. ornatus douglasianus* White, *T. ornatus tenuosus* Foster, *T. ornatus bonnevillensis* Foster, and *T. illustris* Horn. *Trichodes basalis* Van Dyke and *T. horni* Wolcott and Chapin are reinstated as valid species due to observed variation in the length of the phallic lobes. *Trichodes* species in general have an extended phallobasic apodeme, which can be distinguished at *Trichodes* species level.

Barr (1976) [5] described the subgenus *Coniferoclerus*. The character, such as antennal length, upon which this nominal subgenus is based falls within the range of characteristics of *Enoclerus*. Moreover, *Enoclerus (Coniferoclerus) arachnodes* (Klug) is herein synonymized with *sphegeus* (Fabricius) (personal communications, Jacques Rifkind). The characteristic in question, antennal length, is self-explanatory.

Wolcott (1927) [6] described *E. paraensis* (Chevrolat) var. *captiosus*. Clearly, this variety should be raised to species status, on the basis of characteristics of the male genitalia. Also, unlike in specimens of *E. paraensis* (Chevrolat), those of *E. captiosus* have the prothorax red with the apical margin narrowly black.

Barr (1976) [5] described *Enoclerus (E.) coccineus desertus*. The characters upon which this nominal subspecies is based fall within the range of characteristics of the nominal species *E. coccineus* (Schenkling).

Barr (1976) [5] synonymized *E. fasciicollis* (Schenkling) with *E. comptus* (Klug), which I consider a junior synonym of *E. commodus* (Klug). In the same paper Barr placed various nominal species of *Enoclerus* in synonymy. He synonymized *E. distinctus* (Spinola) and *E. morosus* (Chevrolat) under *E. comptus* (Klug). I have examined the male genitalia of *E. distinctus* (Spinola) and *E. morosus* (Chevrolat) and find that these species are not conspecific with *E. comptus* (Klug). Barr also placed in synonymy the following additional *Enoclerus* taxa which are herein resurrected to full species status on the basis of male genitalia: *E. uncinatus* (Schenkling), *E. atrotuberculatus* (Pic), *E. minutus* (Blanchard), and *E. erythropus* (Klug). Barr was correct to elevate *E. rubripennis* (Pic) to full species status. Lastly, I agree with Rifkind (personal communication) that Barr's four designations of sub species involving *E. laetus* (Klug) should be synonymized on the basis of male genitalia. They are: *E. laetus* (LeConte), *E. laetus nexus* Barr, *E. laetus chaipini* Wolcott, and *E. laetus intergivus* Barr. The characters involve the development of the phallic lobes.

The following nominal species are synonymized with *Enoclerus sobrinus* Castelnau. The basis for establishing these synonymies involve similarities of the male genitalia. The species include: *Enoclerus hybridus* (Chevrolat), *E. malleri* (Pic), *E. nigriventris* (Blanchard), *E. notatus* (Klug), *E. phaleratus* (Klug), *E. triplagiatus* (Blanchard), and *E. wagneri* (Pic).

Corporaal (1950) synonymized *Enoclerus socius* Chevrolat with *E. tricinctus* Chevrolat. However, these two nominal species show considerable differences in the male genitalia, including variation in the apex of the parameres and the dorsal sinus differing in length. I therefore remove *E. socius* from synonymy. At the same time, I place *E. faber* (Chevrolat) and *E.*

*hieroglyphicus* (Gorham) in synonym under *E. socius*. The variation involves the apex of the parameres and the dorsal sinus differing in length.

Pic (1911) [7] described two varieties of *Calendyma multiguttata* Pic. They are: *C. multiguttata* var. *atricollis* and *C. multiguttata* var. *semijuncta* Pic. These two varieties are herein synonymized as the genitalia characteristic upon which they are based fall within the range of variation of *C. multiguttata*.

In 2021, I described *Enoclerus cinctus* Opitz. Unfortunately, this species name is occupied by *Enoclerus cinctus* Schenkling (*Clerus*). Therefore, Opitz's species name constitutes a junior secondary homonym. I propose *Enoclerus rifkindi* Opitz as a replacement name.

#### Subfamily Orthopleurinae

The following nominal species are synonymized with *Lebasiella pallipes* (Klug), on the basis of male genitalia characteristics. They are: *L. marginella* (Chevrolat), *L. erythrodera* Spinola, and *L. mesosternalis* Schaeffer.

#### Subfamily Peloniinae

Based on the current generic concept (Opitz 2017, 2018) [8,9] the nominal species *Pelonium decemputatum* Chevrolat and *P. octonotata* Gorham are herein transferred to the genus *Muisca* Spinola. Also, *Platynoptera duponti* Spinola is transferred to the genus *Chariessa* Perty. The nominal species *Cregya metallescens* (Gorham) and *Pelonium conformis* Chevrolat are herein transferred to the genus *Pujoliclerus*, and the nominal species *Cregya micans* Gorham is transferred to *Troxoides* Opitz. These changes are based on the characteristics of the male genitalia.

The following nominal species and/or varieties are synonymized with *Tarandocerus lycoides* Spinola: *Platynoptera suturalis* Schenkling, *P. simplex* Schenkling, *P. pectoralis* Schenkling, *P. tucumanensis*, *P. tucumanensis* var. *bairi* Pic, *P. tucumanensis* var. *breviapicalis* Pic, *P. peruviana* Pic, *P. arcuatefasciata* Pic, *P. basifasciata* Pic, *P. boliviata* Pic, *P. dilateapicalis* Pic, *P. externotata* Pic, and *P. mathani* Pic. These changes are based on observations involving the male genitalia.

The nominal species *Pseudichnea flavomarginata* (Chevrolat) is herein considered a senior synonym of *Pseudichnea flavolimbata* (Spinola). These changes are based on the characteristics of the male genitalia including the structure of the endophallus.

The following two nominal species are synonymized with Gorham's (1877) *Lasiodera ruficollis*. The characters upon which these nominal species [*Enoplium ornatum* Klug and *Lasiodera malleri* (Pic)] [10] are based fall within the range of variation of *L. ruficollis*.

#### Subfamily Epiphloeinae

Opitz (2019) [11] described *Madoniella aspera*. Unfortunately, this species name is preoccupied by Opitz (2010: 14) [12,13] and thus constitutes a junior primary homonym. *Madoniella caballa* Opitz is hereby provided as a replacement name for *Madoniella aspera* Opitz 2019 [20].

#### Subfamily Platynopterinae

950) described the genus *Theresamora*, which I herein synonymize with the genus *Platynoptera* Chevrolat. These two taxa share similar characteristics. Specifically, they share elytral ridges, and a fimbriate phallobase.

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