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**World catalogue of the family Callirhipidae (Coleoptera: Elateriformia),
with nomenclatural notes**

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Table of contents

Abstract	3
Introduction	4
Material and methods	5
New nomenclatural acts	7
Fixation of type species	7
New synonyms	7
New statuses	14
New names	16
New combinations	17
Catalogue	18
Genus-group names	18
Species-group names	20
Non available names	57
Species excluded from Callirhipidae	57
Acknowledgements	58
References	58
Appendix: Checklist of the family Callirhipidae	64

Abstract

The elateriform family Callirhipidae Emden, 1924 is catalogued. The family contains 14 genus-group taxa, of which 10 are currently considered as valid and four as synonyms. The family contains 214 available species-group names, of which 175 represent currently valid species and subspecies, and 39 are synonyms. For each taxon, all references known to the author are listed. For species-group taxa, type locality, type material, current status and known distribution are given. Lists of unavailable names and taxa excluded from the family Callirhipidae are presented. A systematic checklist of the family is appended. The following new synonyms are proposed: *Simianus* Blanchard, 1853 = *Simianellus* Emden, 1924 **syn. nov.**; *Callirhipis javanica* Laporte de Castelnau, 1834 = *Callirhipis impressicollis* Fairmaire, 1887 **syn. nov.** = *Callirhipis armitagei* Pic, 1916 **syn. nov.** = *Callirhipis angustata* Pic, 1943 **syn. nov.**; *Callirhipis lineata* Waterhouse, 1877 = *Callirhipis ruficollis* Pic, 1943 **syn. nov.**; *Callirhipis separata* Gemminger, 1869 = *Simianellus bicolor costatus* Emden, 1932 **syn. nov.**; *Callirhipis sirambea* Pic, 1921 = *Callirhipis (Helleriola) henrikseni* Emden, 1934 **syn. nov.**; *Callirhipis suturalis* Waterhouse, 1877 = *Callirhipis scutellata* Fairmaire, 1887 **syn. nov.** = *Callirhipis aureoscutata* Pic, 1938 **syn. nov.**; *Callirhipis tonkinea* Pic, 1907 = *Callirhipis tonkinea* var. *diversa* Pic, 1926 **syn. nov.**; *Celadonia hoodii* (Saunders, 1834) = *Callirhipis laportei* var. *notaticollis* Pic, 1912 **syn. nov.**; *Ennometes cribratus* (Waterhouse, 1877) = *Simianus cribripennis* Fairmaire, 1893 **syn. nov.**; *Ennometes impressiceps* Pic, 1922 = *Ennometes ruficornis* Pic, 1943 **syn. nov.**; *Simianus terminatus* Fairmaire, 1887 = *Simianus pyrochroides* Pic, 1921 **syn. nov.** = *Simianus pyrochroides* var. *lateniger* Pic, 1925 **syn. nov.** *Callirhipis hoodii* Saunders, 1834 is designated as the type species of the genus *Celadonia* Laporte de Castelnau, 1840. Revised and new statuses are here proposed for the following taxa: *Callirhipis (Callirhipis) impressa* Montrouzier, 1857 **stat. revalid.**; *Callirhipis (Callirhipis) samoensis* Pic, 1921 **stat. revalid.**; *Ennometes cerutii* (Pic, 1927) **stat. revalid.**; *Ennometes ruficeps* Pic, 1926 **stat. nov.** from *Ennometes rouyeri* var. *ruficeps*; *Celadonia bocourti* Pic, 1927 **stat. nov.** from *Simianides laportei* var. *Bocourti*; *Simianus diversicornis* Pic, 1925 **stat. nov.** from *Simianus pyrochroides* var. *diversicornis*; *Simianus reductus* Pic, 1925 **stat. nov.** from *Simianus pyrochroides* var. *reductus*. The new replacement name *Callirhipis (Parennometes) pici* Hájek, **nom. nov.** is proposed for *Callirhipis costata* Pic, 1927, preoccupied by *C. costata* Waterhouse, 1877. The following new combinations are established: *Callirhipis (Ennometidium) impressiceps* (Pic, 1922) **comb. nov.** from *Ennometes*; *Callirhipis (Ennometidium) obscura* (Pic, 1927) **comb. nov.** from *Ennometes*; *Callirhipis (Parennometes) carolinensis* Blair, 1940 **comb. nov.** from *Callirhipis* s. str.; *Callirhipis* (subgenus ?) *pauloplicatus* (Pic, 1943) **comb. nov.** from *Simianus*; *Celadonia bicolor* (Laporte de Castelnau, 1834) **comb. nov.** from *Callirhipis*; *Celadonia gounellei* (Pic, 1916) **comb. nov.** from *Callirhipis*; *Celadonia hoodii* (Saunders, 1834) **comb. nov.** from *Callirhipis*; *Celadonia laportei nigroimpressa* (Pic, 1950) **comb. nov.** from *Callirhipis*; *Celadonia luteonotata* (Pic, 1907) **comb. nov.** from *Callirhipis*; *Celadonia scapularis* (Laporte de Castelnau, 1834) **comb. nov.** from *Callirhipis*; *Ennometes incertus* (Emden, 1936) **comb. nov.** from *Callirhipis (Parennometes)*; *Ennometes onoi* (Blair, 1940) **comb. nov.** from *Callirhipis (Parennometes)*; *Ennometes tarsalis* (Emden, 1932) **comb. nov.** from *Simianellus*; *Simianus basalis* (Emden, 1924) **comb. nov.** from *Simianellus*; *Simianus bicolor* (Fairmaire, 1893) **comb. nov.** from *Homoeorhipis*; *Simianus bituberculatus* (Schultze, 1915) **comb. nov.** from *Simianellus*; *Simianus bituberculatus dilatatus* (Emden, 1932) **comb. nov.** from *Simianellus*; *Simianus confusus* (Emden, 1932) **comb. nov.** from *Simianellus*; *Simianus croceosellatus* (Fairmaire, 1887) **comb. nov.** from *Homoeorhipis*; *Simianus cyaneicollis* (Waterhouse, 1877) **comb. nov.** from *Simianellus*; *Simianus globicollis* (Emden, 1924) **comb. nov.** from *Simianellus*; *Simianus incisus* (Emden, 1924) **comb. nov.** from *Simianellus*; *Simianus laetus* (Waterhouse, 1877) **comb. nov.** from *Simianellus*; *Simianus latepunctatus* (Pic, 1943) **comb. nov.** from *Ennometes*; *Simianus maculaticeps* (Pic, 1921) **comb. nov.** from *Homoeorhipis*; *Simianus malaccanus* (Pic, 1916) **comb. nov.** from *Simianellus*; *Simianus melanocephalus* (Emden, 1924) **comb. nov.** from *Simianellus*; *Simianus mesomelaenus* (Fairmaire, 1887) **comb. nov.** from *Homoeorhipis*; *Simianus nigripennis* (Emden, 1932) **comb. nov.** from *Simianellus*; *Simianus nigriventralis* (Schultze, 1915) **comb. nov.** from *Simianellus*.

lus; *Simianus obscurus* (Emden, 1924) **comb. nov.** from *Simianellus*; *Simianus obscurus sikkimensis* (Emden, 1932) **comb. nov.** from *Simianellus*; *Simianus palawanicus* (Emden, 1932) **comb. nov.** from *Simianellus*; *Simianus pascoei* (Waterhouse, 1895) **comb. nov.** from *Callirhipis*; *Simianus ruber* (Pic, 1929) **comb. nov.** from *Horatocera*; *Simianus separatus* (Gemminger, 1869) **comb. nov.** from *Callirhipis*; *Simianus thoracicus* (Emden, 1924) **comb. nov.** from *Simianellus*; *Simianus ustus* (Fairmaire, 1887) **comb. nov.** from *Homoeorhipis*. Lectotypes are designated for the following taxa: *Callirhipis angustata* Pic, 1943; *Callirhipis armitagei* Pic, 1916; *Callirhipis aureoscutata* Pic, 1938; *Callirhipis cribrata* Waterhouse, 1877; *Callirhipis hoodii* Saunders, 1834; *Callirhipis (Helleriola) henrikseni* Emden, 1934; *Callirhipis javanica* Laporte de Castelnau, 1834; *Callirhipis lineata* Waterhouse, 1877; *Callirhipis orientalis* Laporte de Castelnau, 1834; *Callirhipis ruficollis* Pic, 1943; *Callirhipis sirambeus* Pic, 1921; *Callirhipis suturalis* Waterhouse, 1877; *Callirhipis tonkinea* Pic, 1907; *Callirhipis tonkinea* var. *diversa* Pic, 1926; *Ennometes impressiceps* Pic, 1922; *Ennometes ruficornis* Pic, 1943; *Simianus pyrochroides* Pic, 1921 and *Simianus pyrochroides* var. *lateniger* Pic, 1925.

Key words: Coleoptera, Callirhipidae, catalogue, new synonyms, new combinations, new statuses, lectotype designation

Introduction

The family Callirhipidae represents a small elateriform group of Coleoptera of uncertain systematic position. Larvae feed on rotten wood, while adults are sometimes collected on dead tree trunks but more commonly found attracted to light. Members of the family occur mainly in the tropics of the Oriental, Australian and Neotropical zoogeographical regions. Only a few species reach the Palaearctic region in Nepal, northern India and China (cf. Hájek 2006), one species occurs in North America (cf. Young 2002), and one species lives on the Seychelles (Hájek 2008). The only catalogue of the family was published by Pic (1925b). Brief reviews of the family were recently given by Lawrence *et al.* (1999a, b), Young (2002) and Lawrence (2005). Currently, Callirhipidae comprises 10 valid genus-group taxa and 175 valid species-group taxa.

The genus *Callirhipis* was established by Latreille (1829) within the group “Serricornia” for a single Javanese species, *C. dejeani*. Later, Latreille (1834) included *Callirhipis* in his new family Rhipiceridae, and Laporte de Castelnau (1834) published the first revision of the family. During the next 90 years, many entomologists described seven additional genera and about 100 new species. The most active specialists in the family were Charles O. Waterhouse, George C. Champion, Leon Fairmaire and Maurice Pic (see References). In the 1920s, Fritz van Emden for the first time defined Callirhipidae as a tribe within the family Sandalidae (= Rhipiceridae) (Emden 1924b). During the next 12 years Emden described three genera, three subgenera and nearly 50 new species and tried to establish a classification within the family (cf. Emden 1931). Emden (1929) outlined the distribution of the family from a zoogeographical point of view, and he also described larvae (Emden 1932a). However, Pic described even more new taxa, altogether more than 60 (one third of all known species), usually based on single specimens and males and females as separate species. Emden tried to correct Pic’s descriptions and place his species within correct genera, but without the possibility to study the type material, he failed, and callirhipid classification reverted to chaos. Since Pic’s death in 1957, no one has been interested in the alpha-taxonomy of Callirhipidae, and only four island species have been added by Japanese entomologists (Nakane 1973, 1985, 1996; Satô 1995).

Whereas the alpha-taxonomy of callirhipids stagnated in the second half of 20th century, the interest of entomologists turned to systematic position of the family. The first attempt to move *Callirhipis* and *Zenoa* from Rhipiceridae to Lichadidae (= now Eulichadidae) based on wing venation and folding by Forbes (1926) had been largely overlooked. Also the conclusion of Böving & Craighead (1931) based on larvae of the callirhipid genus *Zenoa* and the rhipicerid genus *Sandalus* Knoch, 1801, that the two families are distinct (although under incorrect names), was not generally accepted. However, Crowson (1950, 1955) again separated the families and placed them into a newly defined superfamily Rhipicerioidea. Later, Crowson (1971) transferred Rhipiceridae to the superfamily Dasciloidea, and Crowson (1973) placed Callirhipidae in his Armatopoeidea. Kasap & Crowson (1975) still classified Callirhipidae in Armatopoeidea, but mentioned that they also shared characters with the dryopoid Eulichadidae. Subsequently, Lawrence & Newton (1982) classified Callirhipidae as a basal Dryopoidea, and Lawrence (1988) included the family in his new superfamily Psephenoidea. Lawrence & Britton (1991) and Lawrence & Newton (1995) added the family Callirhipidae to their expanded superfamily Byrrhoidea. Lawrence *et al.* (1995) suggested a clade formed by the families Ptilodactylidae, Chelonariidae, Callirhipidae and Eulichadidae. Costa *et al.* (1999) noted that the monophyly of the superfamily Byrrhoidea sensu Lawrence & Newton (1995) is not supported by any synapomorphy and placed Callirhipidae and Eulichadidae as incertae sedis within the series Elateriformia. Most