

## Synonymy of *Rhamphidera* Skelley with *Bancous* Pic, termitophilous fungus beetles (Coleoptera: Erotylidae).

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**Abstract.** The genus *Bancous* Pic, originally described in the Heteromera (Rhyssopaussidae) and later transferred to Cucujiformia (*incertae sedis*), was found to be congeneric with *Rhamphidera* Skelley (Erotylidae). *Bancous* is here placed in the family Erotylidae (Erotylinae, Tritomini) and *Rhamphidera* is moved into synonymy. This synonymy creates two new combinations: *Bancous perplexus* (Skelley) and *Bancous eureka* (Skelley). *Bancous* is redescribed and a lectotype is designated for *Bancous irregularis* Pic.

### Introduction

Pic (1946) described *Bancous* for specimens of an unusual beetle from the Ivory Coast, placing them in “[Heter. Rhyssopaussidae]” (sic). This description was soon followed by Paulian’s (1947) paper discussing this species. Realizing it did not belong in Heteromera, Paulian transferred it into “Cucujaria” but did not place it in any family. *Bancous* has remained as “Cucujaria,” currently called Cucujiformia, *incertae sedis* ever since.

Being unaware of *Bancous*, Skelley (1994) described *R. perplexa* in the genus *Chasmatodera* Arrow. Later Skelley (1999) erected the genus *Rhamphidera* for *R. perplexa* and *R. eureka* Skelley. Discovering another specimen of this group, the author (MAA-Z) realized the relationship between *Bancous* and *Rhamphidera*, alerting the other author (PES). The study of a type specimen of *Bancous irregularis* Pic confirmed the relationship and allows us to bring *Bancous* into its proper placement within the family Erotylidae.

### *Bancous* Pic 1946

*Bancous* Pic 1946: 124. Type species: *Bancous irregularis* Pic 1946:124, by monotypy.

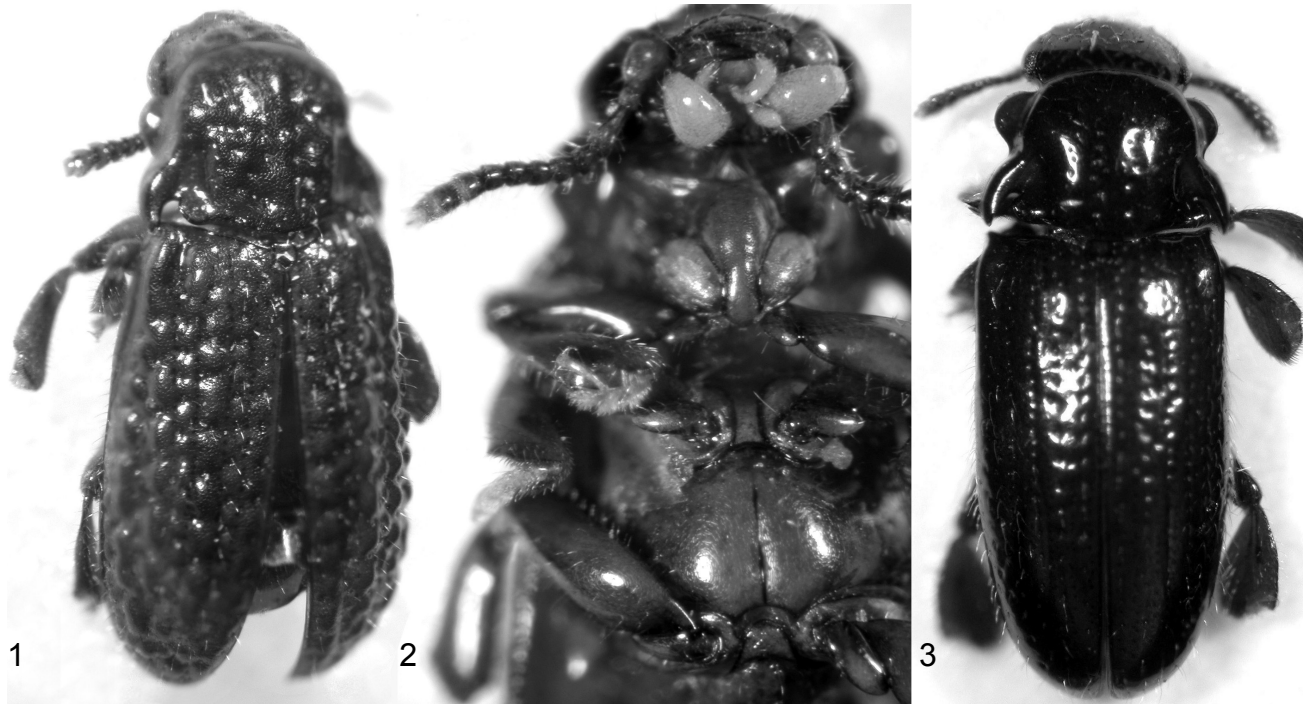
*Rhamphidera* Skelley 1999: 259-260. Type species: *Chasmatodera perplexa* Skelley (1994: 235-240), by original designation. **New Synonymy**

**Diagnosis:** Length = 3.0-4.0 mm. Head broad, distance between eyes = 5 ocular diameters in dorsal view. Maxilla with lacinia lacking teeth. Pronotum constricted laterally, and notched with depression at base near each posterior angle. Abdominal ventrite II with lateral porose patch. Female terminalia greatly reduced in length, styli vestigial.

**Remarks:** *Bancous* and *Rhamphidera* are exceedingly similar in most characters. The only notable differences are that *Rhamphidera* has broadly dilated tibiae and a smooth dorsal body surface, while *Bancous* has weakly dilated tibiae and a nodulose body surface. Other than these characters, the diagnosis, description and general comments for *Rhamphidera* Skelley (Skelley 1999) hold for *Bancous*. The noted differences are not considered strong enough to maintain them as separate genera. Further materials and more detailed studies may eventually show otherwise.

The biology of *Bancous* is basically unknown, but data indicate associations with fungus-growing termites. The type series of *B. irregularis* was collected in old fungal gardens of *Protermes minutus* Grassé (Paulian 1947). The type series of *B. eureka* (Skelley) was collected in the nest of *Protermes prorepens* (Sjöstedt) (Skelley 1999). Further work with these fungus growing termites will yield many more interesting finds.

Delkeskamp (1962, 1965) revised the majority of African tritomine erotylids, but never studied specimens of *Bancous* or *Chasmatodera* (another probable



**Figures 1-3.** 1-2. *Bancous irregularis* Pic, lectotype. 1) dorsal view; 2) ventral view. 3) *Bancous perplexus* (Skelley), dorsal view of Equatorial Guinea specimen.

termitophilous erotylid). Using Delkeskamp's (1962) key to tritomine genera, they would be identified as the genus *Latosia* Delkeskamp, with which they share the broad head and flattened, sickle-shaped mandibles. *Bancous* and *Chasmatodera* are immediately recognizable by their pronotal shape which has the basal margin notched near each posterior angle and a large depression on the disc near each notch. *Chasmatodera* has an entire lateral margin, while *Bancous* has a constricted lateral margin (Figs. 1, 3). It is interesting to note that *Latosia* has two species that are still only known from the type specimens.

### *Bancous irregularis* Pic 1946

*Bancous irregularis* Pic 1946: 124

**Diagnosis:** Body dark brown; antennae, palpi and tarsi not as dark, not contrasting in color; dorsal surface nodulose (Fig. 1), strongly microreticulate. Flight wings absent. Metatibiae weakly widened, almost parallel-sided (Fig. 2).

**Lectotype Data:** “[blue paper] MUSÉUM PARIS, Côte d’Ivoire, RÉSERVE de BANCO, R. PAULIAN & G. DELAMARE/ [hand written] *Bancous* n. gen./ [hand written, underlined] *Co-TYPE*/ [red paper] *Co-TYPE*/ [hand written on lined paper] *Bancous* irregu-

laris [last word illegible]/ *Bancous irregularis* Pic/ [red paper] LECTOTYPE, *Bancous irregularis* Pic, des. 2002 Skelley & Alonso-Zarazaga/ [white paper, black border] Erotylidae: Tritominae: Tritomini, det. P.E. Skelley 2002” deposited in the Museum National d’Histoire Naturelle, Paris.

**Remarks:** Pic (1946) did not indicate how many specimens were studied, nor designate any specimen as a type. Paulian (1947) indicated the original series included several specimens and illustrated various body parts of a male. The only specimen studied, apparently a female, was intact and bears a label, “Co-Type”. Since no specimen has been validly designated and since there is strong evidence showing more than one specimen was available to Pic for the original description, we are here designating a lectotype for *Bancous irregularis* Pic, to fix the concept of this species.

This is the only species in the genus for which a male has been reported (Paulian 1947). Unfortunately, the other specimens collected and studied by Paulian (1947) were not located. However, Paulian's description and illustrations of various body parts are quite informative.

The lectotype of *B. irregularis* was relaxed in an attempt to determine its gender and search for flight wings. The specimen appeared to be female, with

reduced terminalia, and no hint of flight wings was discovered. Flightlessness in erotylids appears relatively common for species occurring in stable habitats or niches where the food source is either abundant or not highly ephemeral. Flightlessness in a social insect colony is not so unusual, as numerous other inquiline beetles have lost flight wings. They may disperse by phoresy or not at all. Some termites are known to have multiple queens or recruit new queens when needed, thus a colony may live for decades. Skelley (1999: 262) briefly discusses this phenomenon for *B. eureka*, presenting a "winged-morph" hypothesis of dispersal.

#### ***Bancous perplexus* (Skelley 1994)**

*Chasmatodera perplexa* Skelley 1994: 235-240.  
*Rhamphidera perplexa* (Skelley), Skelley 1999: 260-261  
*Bancous perplexus* (Skelley), **New Combination**

**Diagnosis:** Body dark brown; antennae, palpi and tarsi not as dark, but not contrasting notably in color; dorsal surface smooth, nitidous (Fig. 3). Flight wings present, fully developed. Metatibiae very broad, triangular or almost circular, apex weakly sinuate (Fig. 3, and Skelley 1994: fig. 3).

Specimens studied: *Bancous perplexus* is known from 3 specimens; one each from Zambia and Cameroon (Skelley 1999); and a newly discovered specimen. Label data for the third specimen follows: "/ Fernando Poo, Santa Isabel, XI-1919, M. Escalera/ *Bancous* sp. nov. Alonso-Z. det. 2002/ M. N. C. N., MADRID". This locality is now known as the island of Bioko, near the capital city Malabo in Equatorial Guinea. The specimen was found wrongly identified as an *Arthropterus* sp. during a survey of the Paussinae (Carabidae) in the collection of the Museo Nacional de Ciencias Naturales, Madrid. As with other known members of this species, it is a female. Label data and deposition of the third specimen are presented so future workers may locate all known specimens to better analyze subtle variability once more specimens are available.

#### ***Bancous eureka* (Skelley 1999)**

*Rhamphidera eureka* Skelley 1999: 261-262  
*Bancous eureka* (Skelley), **New Combination**

**Diagnosis:** Body light brown; antennae, palpi and tarsi very pale, contrasting with rest of body; dorsal surface smooth, nitidous. Flight wings absent. Metat-

ibiae broad, triangular, apex strongly sinuate (Skelley 1999, fig. 20).

Specimens studied: Only known from a series of three specimens collected in the Belgian Congo from the nest of a fungus growing termite, *Protermes prorepens* (Sjöstedt) (Skelley 1999).

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#### **Bibliography**

- Delkeskamp, K.** 1962. Die afrikanischen Arten der Tritomini und von 3 Gattungen der Triplacini (Col. Erotylidae) 31. Beitrag zur Kenntnis der Erotyliden. Deutsche Entomologische Zeitschrift (Neue Folge Band) 9(1-2):66-125, 11 Taf.
- Delkeskamp, K.** 1965. Die afrikanischen Arten der Triplacini (mit 1. Nachtrag für die afrikanischen Tritomini) (Col. Erotylidae) 34. Beitrag zur Kenntnis der Erotylidae. Deutsche Entomologische Zeitschrift, N.F. 12(1-2):83-177, 11 Taf.
- Paulian, R.** 1947. Sur la position systématique des Rhysopaussides (Coleoptera). Revue Française d'Entomologie 14(1): 13-15.
- Pic, M.** 1946. Nouveaux Coléoptères de la Côte d'Ivoire. Bulletin de la Société entomologique de France 51: 121-124.
- Skelley, P. E.** 1994. Review of the African genus *Chasmatodera* (Coleoptera: Erotylidae: Triplacinae: Tritomini). Sociobiology 23(3): 233-240.
- Skelley, P. E.** 1999. Termitophilous pleasing fungus beetles: *Chasmatodera* Arrow and *Rhamphidera* Skelley, gen. nov. (Coleoptera: Erotylidae: Tritomini). Annales Zoologici 49(3): 255-263.

