



### Re-classification of *Rhipidiomorphus malaccanus* Pic, a long-neglected genus and species of Psephenoidinae (Coleoptera: Psephenidae)

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In his long career, Maurice Pic (1866–1957), a prolific French entomologist, described many thousands of insect species, subspecies, and varieties, as well as several hundreds, if not more than a thousand, of new genera across orders and families (Villiers 1958a, b). The majority of Pic's described taxa are beetles, especially in Tenebrionoidea and the former Malacodermata (or Malacodermatidae). Many genera were described in a brief and uninformative style and without explicit family assignment, making it difficult to determine their familial affiliation based on the literature (Pollock 2005). Accordingly, several taxa have remained little known or long-neglected until now. Most of Pic's type material is deposited in the Muséum national d'Histoire naturelle, Paris (MNHN), where it is possible to examine and provide a possibility to reliably determine their identities.

*Rhipidiomorphus* Pic is just one such case. Original descriptions of the genus and its type species, *R. malaccanus* Pic, were placed among those of drilid and drilid-like genera and species in Pic (1918). These beetles are currently recognized as either belonging to the Drilidae (or Drilinae of Elateridae), Phengodidae, Rhagophthalmidae, and Lampyridae (Wittmer 1963, Crowson 1972, Kundrata and Bocak 2011 a, b). Pic (1918) stated that *Rhipidiomorphus* was allied to *Pterydrias* Reitter by sharing dehiscent elytra. The latter, another enigmatic taxon, however, provided little clue for inferring the systematic position of *Rhipidiomorphus*. *Pterydrias* has long been considered as belonging to Drilidae or Karumiinae, but was more recently verified to be a genus of Ripiphoridae (Batelka and Hájek 2010). In the 1918 Zoological Record *Rhipidiomorphus* was listed in Malacodermatidae, which were commonly used to denote the “soft-skinned” beetle groups at that time. No subsequent author has reviewed or even mentioned this genus and species except Wittmer (1944) who explicitly placed them in Drilidae. *Rhipidiomorphus* has been ignored since that time.

Lately we rediscovered the type specimen of *R. malaccanus* in the general collection of the MNHN. The holotype was in the corner of a box containing many former drilid taxa described by Pic (1918) and the box was labeled Cantharidae/ Drilinae on its exterior. This may reveal Pic's intention toward placing *Rhipidiomorphus* in Drilidae or Malacodermatidae. In reality, *R. malaccanus* is neither a drilid nor a malacodermatid but instead it is a psephenid. Herein we report this rediscovery and new identification.

***Rhipidiomorphus* Pic**, 1918: *Mélange exotico-Entomologiques* 28: 1. – *Revista de la Sociedad Entomológica Argentina* 12: 216.

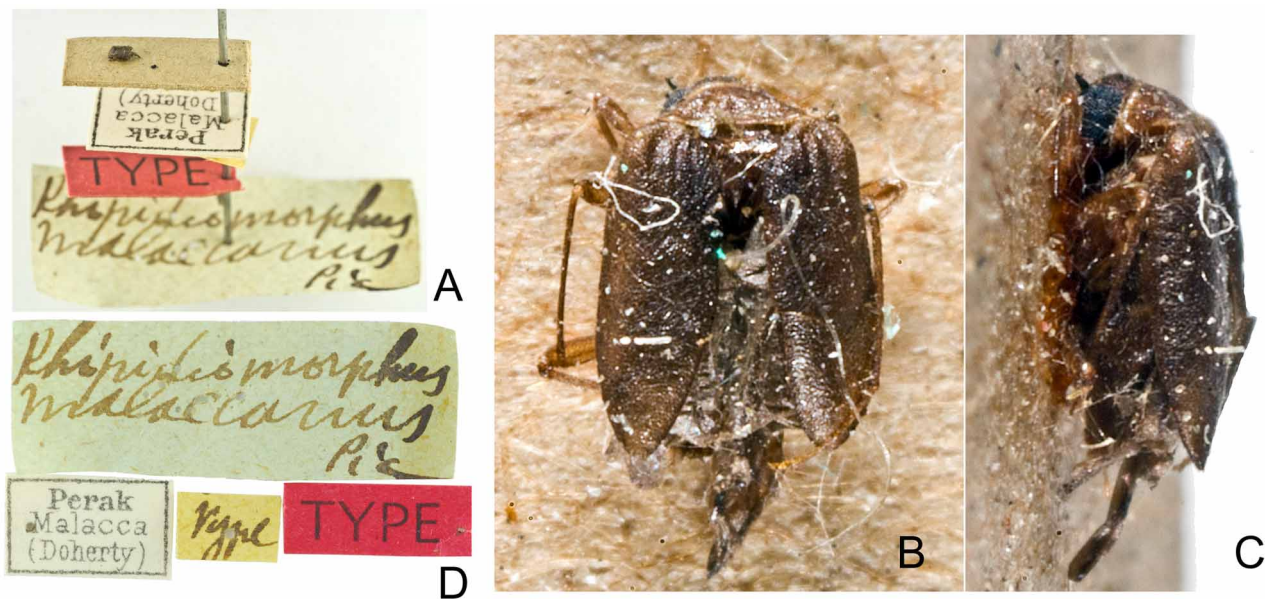
**Type species:** *Rhipidiomorphus malaccanus* Pic, 1918.

**Material examined:** Holotype (Figs. 1A–C), female, “Perak/ Malacca/ (Doherty)// *Rhipidiomorphus malaccanus* Pic// Type (handwritten)// Type (printed)”.

The holotype of *R. malaccanus* is a card-mounted female whose dorsal and partial lateral aspects were visible. The soft body, partially exposed head from pronotum, broadly pentagonal-shaped pronotum, dehiscent elytra, transverse scutellum, long and slender legs, etc., assure that the beetle belongs to the subfamily Psephenoidinae, a small psephenid subgroup currently comprising six valid genera (Lee *et al.* 2005, Jäch *et al.* 2006, Jeng and Jäch 2003, Jeng *et al.* 2006a, b). In general, females of Psephenoidinae bear fewer and less prominent features for generic diagnosis than their males. Reliable generic features in females are found externally and internally, such as the shape of the antennal flagellum, labrum-clypeus and palpi, size of the compound eyes, structure of the elytra, pretarsal claws, abdominal sternites VII and VIII, among others (Jäch and Jeng 1995, Jeng and Jäch 2003, Jeng *et al.* 2006a, b). Without removing the holotype from its mounted cardboard, there is no way to make a detailed morphological examination. The dehiscent elytra of the holotype, however, provide some clue about its generic affiliation. Among documented females of psephenidine genera,

only *Psephenoides* Gahan and *Sinopsephenoides* Yang have dehiscent elytra. *R. malaccanus* is not likely a *Sinopsephenoides* which possesses many unique characters in both sexes, such as exaggeratedly long tarsi (which are about as long as the body length), basally bulging inner margin of the elytra, etc. (Jäch and Jeng 1995). Instead, the general morphology of *R. malaccanus* matches those of females of *Psephenoides*. It is worthy to mention that Pic (1922, 1948, 1954) described several species of Psephenoidinae. A male specimen of a psephenoidine species from Sumatra, bearing a label with hand written “Gn Psephenides plutôt”, was found near the holotype of *R. malaccanus*. Perhaps Pic was aware of the correct familial assignment of *Rhipidiomorphus* in later years.

Based on the currently available evidence, it is inferred that *Rhipidiomorphus* is either a genus allied to *Psephenoides* or a potential synonym of the latter. Further examination of the holotype in detail and the future discovery of the male of the species from the type locality will lead to a more decisive conclusion.



**FIGURE 1.** The holotype of *Rhipidiomorphus malaccanus* Pic: A. overview; B-C. dorsal and lateral aspects; D. labels.

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