



## Review of four species of the genus *Brachinus* Weber (Coleoptera: Caraboidea: Brachinidae) from the Philippines

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### Abstract

Species diversity of the bombardier beetles is poorly known in Asia except Japan. In the present paper, species of the genus *Brachinus* Weber of the Philippines are dealt with. Among the four species reported in the Philippines, two species are described as new to science: *B. philippinensis* Tian & Deuve, **new species** and *B. solidipalpis* Tian & Deuve, **new species**. Redescriptions are given for the two known species, *B. luzonicus* Chaudoir and *B. piceus* Chaudoir. A key to all Philippine species of *Brachinus* is provided.

**Key words:** Coleoptera, Caraboidea, Brachinidae, *Brachinus*, new species, the Philippines

### Introduction

Members of the family Brachinidae are called bombardier beetles because of their peculiar “shooting” behaviors using apical abdominal glands (Habu & Sadanaga, 1965; Erwin, 1965; Habu, 1967). They are ectoparasites and their adult body size depends on the size of their hosts as larvae (Erwin, 1970). Habu (1967) dealt with the Japanese fauna. Erwin (1970) provided a background of bombardier beetles classification when reviewing North and Middle American species.

With numerous representatives, the genus *Brachinus* Weber, 1801 is widely distributed in all zoogeographical regions except the mainland of Australia (Habu, 1967; Darlington, 1968; Erwin, 1970). In contrast to the 62 species known from North America, only 23 species were recorded from Southeast Asia. Two species, viz. *B. piceus* Chaudoir, 1876 and *B. luzonicus* Chaudoir, 1876, have been recorded so far from the Philippines (Andrewes, 1930; Csiki, 1933). Furthermore, both species are poorly known because they have almost been ignored since the original descriptions (Chaudoir, 1876).

Recently, during sorting of carabid collections in Muséum National d'Histoire Naturelle, Paris (MNHN), we found twelve specimens of *Brachinus* collected from the Philippines. Among them two species are new to science and are hereby described. In addition, *B. piceus* and *B. luzonicus* are redescribed. A key to all four Philippine species is also given.

### Material and methods

All specimens were from MNHN. Although we have tried to find more specimens from several other European museums or institutions, there is still no more potential material available for our study. In total, twelve