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A Fossil Record of *Malacopsephenoides japonicus* (Coleoptera, Psephenidae) from the Middle Pleistocene Shiobara Group in Shiobara, Tochigi Prefecture, Japan

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Shiobara in Tochigi Prefecture is one of the most famous fossil sites in Japan. Abundant fossil leaves are found from the siltstone of the Middle Pleistocene Shiobara Group. Several fossil beetles are known from the site, such as *Calosoma maximowiczi* (Morawitz), *Dendroxena sexcarinata* (Motschulsky), *Oiceoptoma subrufum* (Lewis), *Acalolepta luxuriosa* (Bates), *Megopis sinica* White, *Apriona japonica* Thomson, and *Anoplophora malasiaca* (Thomson) (Aiba, 2015).

Recently, we obtained a fossil pupa of a water penny beetle, *Malacopsephenoides japonicus* (Masuda), which is third fossil record of Psephenidae from Japan (Fujiyama, 1983; Hayashi & Kawakami, 2009).

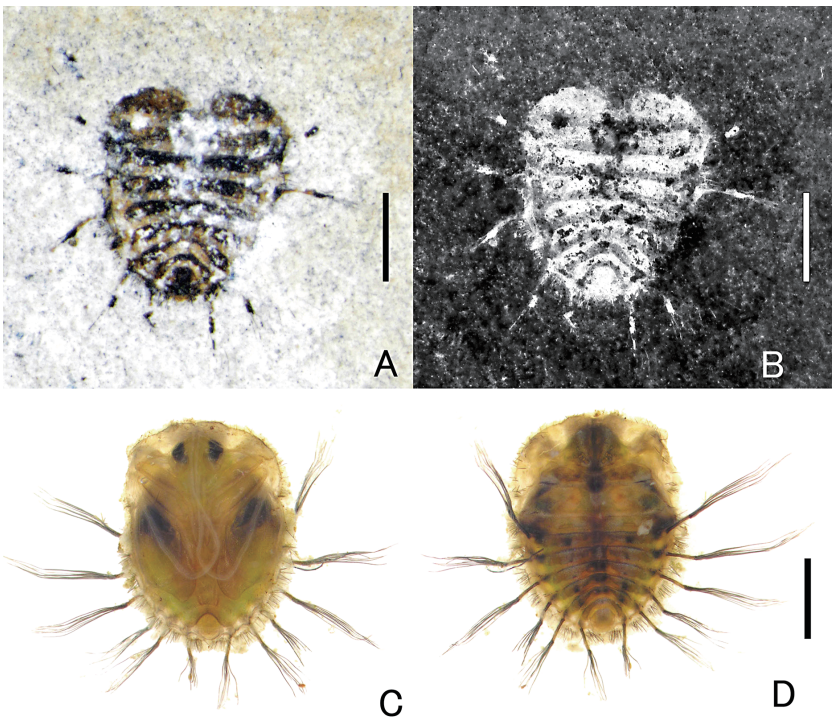

Fig. 1. *Malacopsephenoides japonicus* (Masuda). —— A, B, Fossil pupa (Mesonotum and abdominal tergite I–VIII; pronotum lacking) from the Shiobara Group, Tochigi Pref.; C, D, pupa of recent specimen from Shimane Pref. (C, ventral view; D, dorsal view). All scale bars are 1.0 mm.

Specimens examined. One pupa fossil in siltstone (dried), Shiobara, Nasushiobara, Tochigi Pref., Honshu, Japan. The fossil is deposited in the collection of Keio Yochisha Science Museum [KYFSI011].

Description of fossil. Body entirely oval but pronotum not preserved; mesonotum and abdominal tergite I–VIII visible; tergite II–VII with a pair of spiracular spines side by side, tuft-like gills visible in several spines but most of them not preserved; tergite VIII terminal without spiracular spines; short setae on abdominal margin.

Geological notes. The geologic age of fossil-bearing siltstone is indirectly 0.3 Ma in relation to the K-Ar whole-rock age. ONOE (1989) reported 171 species of fossil plants and 50 types of fossil pollen and spore.

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