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REDISCOVERY OF *SOLENAIA EMARGINATA* (LEA) IN THAILAND

WILLIAM H. HEARD

Department of Biological Science, Florida State University, Tallahassee, Florida 32306, U.S.A.

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Summary

The freshwater mussel ***Solenaia emarginata*** *was originally described from Thailand in 1860. Shells of this very rare mollusc were recently found again, for the first time since that date, near the Khwae Yai River in Kanchanaburi Province.*

The shell form of ***Anodon soleniformis*** *from India and* ***Mycetopus iridineus*** *from China is similar to that of* ***S. emarginata,*** *and those two species are included in the genus* ***Solenaia.*** *The anatomy and larval form of only* ***S. soleniformis*** *are known, but, because of shell similarities, all three species are provisionally placed in the family Amblemidae. Other mussels with similar shell form, from Australia and South America, probably belong to different families.*

The type locality of the freshwater mussel *Mycetopus emarginatus* Lea was recorded simply as "Siam"[1]. Until its recent rediscovery, it had not been collected again since the original description more than 100 years ago. For that reason, it was considered that an error occurred in the original locality information, and that this species is really a member of the South American genus *Mycetopoda* Orbigny[2].

Several empty shells of this very rare species (Fig. 1), among those of several other mussels, were found on 10 April 1971 in a roadside ditch about 150 m south of highway 323, 12.3 km northwest of Kanchanaburi. All of the shells were remains of animals recently eaten by villagers. No live animals of this species were found in the Khwae Yai River at Ban Nong Bua (2.5 km south of the shell site), nor in the Khwae Noi River or in the Mae Klong River which receives those tributaries. Other shells found with *M. emarginatus* were of *Chamberlainia hainesiana, Hyriopsis myersiana* and *Uniandra contradens tumidula*, of which live animals of only *H. myersiana* were found in the nearby Khwae Yai River.

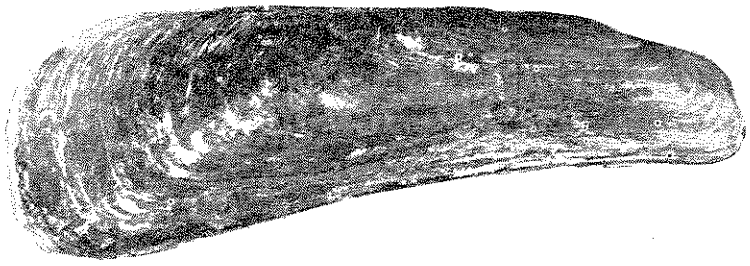

Fig. 1. Outer surface of the right valve of *Solenaia emarginata* (Lea). Length; 93.5 mm.

Mycetopus emarginatus is the type species by original designation of the genus *Solenaia*[3]. The new generic name *Balwantia*[4] was subsequently established for the Indian *Anodon soleniformis*[5], a mussel with a shell similar to that of *M. emarginatus* and to that of the Chinese *M. iridineus*[6]. The anatomical description of *A. soleniformis* demonstrated that mussel to be a member of the family Amblemidae[7]. The anatomies of *M. emarginatus* and *M. iridineus* are unknown, but, because of similar shell characters, *A. Soleniformis* and *M. iridineus* are herein placed in the genus *Solenaia* with *M. emarginatus*, and *S. emarginata* and *S. iridinea* are provisionally placed in the family Amblemidae with *S. soleniformis*.

Species of the South American mussel genus *Mycetopoda*[8] [= *Mycetopus*[9]] belong to the mutelacean family Mycetopodidae[10]. Their anatomies and larval form (lasidium) differ significantly from those of unionacean mussels which produce glochidial larvae, the form described from *Solenaia soleniformis*[4]. *Mycetopoda* shells are different from those of *Solenaia*, but the letter resemble the shells of *Mycetopodella falcata* from the upper Amazon drainage in Columbia and Ecuador (animal unknown, but probably a mycetopodid), and also of *Lortiella rugata* from northern Australia (animal unknown, but probably a unionacean hyriid). Several molluscs from Asia and South America exhibit similarities in shell form[11], and they are considered to reflect convergent evolution.

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บทคัดย่อ

ได้มีการบรรยายถึงหอยน้ำจืด Solenaia emarginata เป็นครั้งแรกในประเทศไทย ในปี ค.ศ. 1860 เมื่อเร็ว ๆ นี้ได้พบเปลือกหอยที่หายากมากนี้เป็นครั้งแรก หลังจากนั้น ที่บริเวณใกล้แม่น้ำแควใหญ่ในจังหวัดกาญจนบุรี

เปลือกของ Anodon soleniformis จากอินเดีย และ Mycetopus iridineus จากจีน มีความคล้ายคลึงกับของ S. emarginata และทั้งสองพันธุ์นี้จัดรวมอยู่ในจีนัส Solenaia ปัจจุบันนี้มีเพียง S. soleniformis เท่านั้นที่เป็นที่รู้จักในเชิงโครงสร้างด้านกายวิภาค และลักษณะของตัวอ่อน แต่เนื่องจากเปลือกมีลักษณะคล้ายกัน จึงจัดทั้งสามพันธุ์นี้อยู่ในแฟมิลี Amblemidae หอยอื่นที่มีลักษณะเปลือกคล้ายคลึงกันจากออสเตรเลียและอเมริกาใต้ คงจะอยู่ในแฟมิลีอื่น