INTRODUCTION

Freshwater fauna introductions in Singapore have been relatively well documented (Yeo & Chia, 2010), but the origins of many alien species, such as freshwater molluscs are unconfirmed (Tan et al., 2012). Among the known introduced molluscs, the South American *Pomacea canaliculata* is perhaps the most notorious owing to it being a widespread and major agriculture pest (Joshi & Sebastian, 2006). However, *P. canaliculata* is a relatively recent introduction to Singapore (since 1980s; Tan et al., 2012) compared to *Sinotaia guangdungensis* (Kobelt, 1906) (Viviparidae), which was first recorded in the 1950s (as *Vivipara polyzonata* by Johnson, 1957), making it the earliest reported introduced freshwater mollusc here.

The taxonomy of *Sinotaia guangdungensis* has been confusing, resulting in the species being referred to by different names. Following Johnson (1973), the species has been known in Singapore as *Angulyagra polyzonata* (and subsequently as *Taia polyzonata* in Clements et al., 2006; Tan et al., 2012); however, the name *Taia polyzonata* appears to have been used almost exclusively in Singapore and neighbouring Malaysia (e.g., Palmieri et al., 1980; Sengupta et al., 2009; Tan et al., 2012). Shea (1994) re-identified the species in Singapore as *Bellamya heudei guangdungensis*, by differentiating it from *Angulyagra polyzonata*, and although Shea’s correction was noted by Chan (1997), this name has been overlooked in Singapore to date.

*Sinotaia guangdungensis* is rarely documented in its native region in southern China (Shea, 1994) and little else is known about the species. Therefore, an account based on specimens collected in Singapore can contribute to informing and guiding future efforts to resolve the taxonomic and biogeographic confusion associated with this species and with the Viviparidae in general. Additionally, a record of its introduction history can also be useful in elucidating freshwater biological introductions to Singapore. In this research note, we review the taxonomy of *Sinotaia guangdungensis*, its current distribution in Singapore, as well as its known distribution within its invaded range, and the likely origins of the introduced population. Records from the Zoological Reference Collection (ZRC) of the Lee Kong Chian Natural History Museum (formerly Raffles Museum of Biodiversity Research), National University of Singapore; published literature; and unpublished data were consulted. Singapore material was also compared to photographs of type material from Senckenberg Forschungsinstitut und Naturmuseum, Frankfurt, Germany, and the Naturhistorisches Museum Wien, Austria.

SPECIES ACCOUNT

Family Viviparidae Gray, 1847
Genus *Sinotaia* Haas, 1939

Type species: *Paludina quadrata* Benson, 1842 (type locality: Chusan, China).

*Sinotaia guangdungensis* (Kobelt, 1906)

(Fig. 1)

*Vivipara (quadrata var.) heudei var. guang-
dungensis* Kobelt, 1906: 124–125, pl. 21, figs. 12, 14.


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