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RECORD OF A FRESHWATER BIVALVE, *PSEUDODON VONDEMBUSCHIANUS* (MOLLUSCA: UNIONIDAE) IN SINGAPORE

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ABSTRACT. - The freshwater mussel, *Pseudodon vondembuschianus* (Unionidae) is reported from Singapore for the first time. It is almost certainly an introduced species as a result of the food or ornamental fish trade.

Johnson (1973), on reviewing the known literature and from his own studies, noted that freshwater bivalves were absent in Singapore. On 24 August 1989, a sizable population of a fresh-water clam, *Pseudodon vondembuschianus* (Lea, 1840) (Mollusca: Unionidae) was found along the edges of Sungai Seleter Reservoir, which is one of the 14 freshwater impoundments in Singapore. Various sizes of live healthy clams were collected from the shallow sandy bed of the reservoir. This indicates that the clam is growing and multiplying there. The largest specimen measures 87.0 mm in length; 53.0 mm in width and 26.5 mm in height. Specimens (ZRC.1989.2299-2348 and ZRC.1990.1701-1704) have been deposited in the Zoological Reference Collection, Department of Zoology, National University of Singapore.

Pseudodon vondembuschianus is commonly found in forest streams, rivers and lakes of Thailand, Malaysia, Sumatra, Java and Borneo (van Benthem-Jutting, 1953; Berry, 1964; Brant, 1974). The shell of this bivalve is thin, dark greenish or yellowish-brown in colour, broad-oval to wedge-shape oval, moderately inflated. There are two to three low ridges which diverge back-wards from the apex over the shell. Although Brandt (1974) and some workers classify *Pseudodon* in a separate family, Amblemidae Rafinesque, 1820 (superfamily Unionoidea), not all agree (see Vaught, 1989). The present author prefers to adopt a more conservative and better known classification for the moment, and place *Pseudodon* in the Unionidae sensu lato.

Unionid bivalves retain their fertilized eggs in their gill chambers until they hatch into larvae. The larvae, known as glochidia, are released into the water and subsequently attach themselves to pelagic fish, usually on the gills. The larvae then encyst in the host tissue as parasitic stages for a period of time. After metamorphosis, they drop off from the host and grow into free-living adults. This temporary parasitism of young unionids helps in dispersal.

In the past few decades, increasing numbers of freshwater fishes from neighbouring countries have been introduced to Singapore for farming or ornamental purposes (see

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Chou & Lam, 1989). The occurrence of *Pseudodon vondembuschianus* in Singapore waters is probably through the introduction of such freshwater fishes. It is however, unlikely that this bivalve will have any adverse effects on the local fauna in the reservoirs.

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