

Tree snail *Amphidromus atricallosus perakensis* on an invasive *Acacia* tree

Subjects: *Amphidromus atricallosus perakensis* (Mollusca: Gastropoda: Camaenidae).
Acacia mangium (Magnoliophyta: Fabales: Fabaceae).

Subjects identified by: Contributors & Chan Sow Yan.

Location, date and time: Singapore Island, edge of Lower Seletar Reservoir; 14 September 2014; morning.

Habitat: Heavily disturbed scrubland.

Observers: Chan Sow Yan & Tan Siong Kiat.

Observation: One adult individual of the white shell variety of *Amphidromus atricallosus perakensis* (shell length about 4 cm) was found adhering to the underside of a leaf of the invasive tree *Acacia mangium*. See accompanying picture.

Remarks: This is probably the first record of an *Amphidromus* species utilizing an invasive, non-native tree species of the genus *Acacia* as a habitat. This observation is interesting considering that the tree species *Acacia mangium* is a recent introduction from Australasia with not more than 30 years of presence in Southeast Asia (Osunkoya et al., 2005, Krishnapillay et al., 2007).

Sutcharit et al. (2013) suggested that *Amphidromus* species may be less restrictive in their selection of tree species as habitat than historically thought. Some *Amphidromus* species have been reported to make egg nests with the leaves of bamboo (family Poaceae, tribe Bambuseae) (Paravicini, 1921), mango *Mangifera indica* (Paravicini, 1921; Sutcharit et al., 2013), pomelo *Citrus grandis* (Sutcharit & Panha, 2006), rambutan *Nephelium lappaceum* (Sutcharit & Panha, 2006), banyan *Ficus microcarpa* (Sutcharit & Panha, 2006) and jackfruit *Artocarpus* spp. (Paravicini, 1921; Sutcharit et al., 2013). The authors have also observed *A. atricallosus perakensis* on banana *Musa* sp. and cocoa *Theobroma cacao* foliage in Malaysia. *Amphidromus* have also been found on concrete structures near vegetated areas (Lok & Tan 2008; Sutcharit et al., 2013).

The diverse range of trees and structures used by *Amphidromus* for shelter and egg-nesting suggests that macrohabitat may not be the sole driver of survivability for *Amphidromus* species. Rather, the presence of *Amphidromus* may be more determined by the availability of moist microhabitats created by various species of leafy trees and the abundance of microfloral food sources (Lok & Tan, 2008; Sutcharit et al., 2013). This runs contrary to other arboreal snail taxa such as those from Moorea and Hawaii, which rely on particular tree species for habitat (Murray et al., 1982, Meyer et al. 2014).

Overall, this incidental observation lends support to suggestions that *Amphidromus* species are adaptable to well-vegetated anthropogenic areas. However, further research is needed to identify if *Amphidromus* populations could persist in anthropogenic habitats over the longer term. In particular, investigations should be made on whether *Amphidromus atricallosus perakensis* could establish successful nesting on non-native species such as *Acacia mangium*.

It should be noted that *Amphidromus atricallosus perakensis* is thought to be a non-native species in Singapore (see Tan & Chan, 2011).

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Note: We thank Chan Sow Yan for providing the photograph for this contribution.



Amphidromus atricallosus perakensis adhering to the underside of a leaf of the invasive tree *Acacia mangium*. Photograph by Chan Sow Yan.

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