

## Possible mating and spawning behaviour of partridge sundial snails

Neo Mei Lin

[tmsnml@nus.edu.sg](mailto:tmsnml@nus.edu.sg)

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**Subjects:** Partridge sundials, *Architectonica perdix* (Mollusca: Gastropoda: Architectonicidae).

**Subjects identified by:** Author.

**Location, date and time:** Johor Strait, Pulau Ubin, Chek Jawa; 15 July 2017; around 0815 hrs.

**Habitat:** Estuarine. Intertidal seagrass meadow with soft sand substrate.

**Observer:** Author.

**Observation:** Two examples with similar shell lengths of about 2.3cm were observed superficially buried in the sand, both individuals with their ventral sides facing each other. When placed in a tide pool (see accompanying picture), one of the snails (the one on the left of the picture) released a stream of cloudy fluid (indicated by white arrow) for approximately one minute. The other snail did not appear to respond. Both snails were later observed burrowing into the sand.



Photograph by Neo Mei Lin

**Remarks:** *Architectonica perdix* is distributed in the Indo-Pacific (Bieler, 1993), and is known to occur on Singapore's sandy seashores and reef flats (Chuang, 1973; Tan et al., 2017). Although information on its reproductive biology is scarce, it is thought to be a simultaneous hermaphrodite (Ruppert et al., 2004).

When the snails were found facing each other with their ventral sides, they were believed to be in mating position. Tan et al. (2017) recently made similar observations of this species presumably mating at Tanah Merah, but did not witness any spawning activity. In the present observation, the cloudy fluid released by one of the snails appeared to be semen. This may indicate spawning, which apparently has not been previously observed in Singapore.

**References:**

- Bieler, R., 1993. Architectonicidae of the Indo-Pacific (Mollusca, Gastropoda). *Abhandlungen des Naturwissenschaftlichen Vereins in Hamburg* (NF). 30: 1–376.
- Chuang, S. H., 1973. 11 Sea Shells. In: Chuang, S. H. (ed.). *Animal Life and Nature in Singapore*. Singapore University Press. pp. 175–201.
- Ruppert, E. E., R. S. Fox & R. D. Barnes, 2004. *Invertebrate Zoology: A functional evolutionary approach*. 7<sup>th</sup> edition. Belmont, CA: Thomson-Brooks/Cole. 990 pp.
- Tan S. K., H. H. Tan, S.-Y. Chan, L. H. S. Nguang, B. Y. Lee & I. Iesa, 2017. Recent sightings of two species of sundial shells at eastern Singapore. *Singapore Biodiversity Records*. 2017: 116-118.