

## Biodiversity Record: Snail shells in a bird nest

Chan Sow-Yan\* & Lau Wing Lup

Email: [chansowyan@gmail.com](mailto:chansowyan@gmail.com) (\* corresponding author), [suiseki1984@yahoo.com.sg](mailto:suiseki1984@yahoo.com.sg)

**Recommended citation.** Chan S-Y & Lau WL (2026) Biodiversity Record: Snail shells in a bird nest. Nature in Singapore, 19: e2026059. DOI: 10.26107/NIS-2026-0059

---

**Subjects:** Miniature awl snail, *Subulina octona* (Mollusca: Gastropoda: Achatinidae);  
Dwarf awl snail, *Opeas hannense* (Mollusca: Gastropoda: Achatinidae);  
Graceful awl snail, *Allopeas gracile* (Mollusca: Gastropoda: Achatinidae);  
Striated awl snail, *Striosubulina striatella* (Mollusca: Gastropoda: Achatinidae).

**Subjects identified by:** Chan Sow-Yan and Lau Wing Lup.

**Location, date and time:** Singapore Island, Hougang Avenue 10; 29 March 2026; around 1040 hrs.

**Habitat:** Urban parkland among high-rise concrete residential buildings. On a narrow strip of greenery by an open car-park.

**Observer:** Lau Wing Lup.

**Observation:** Two parts of an empty and broken bird nest, each about 5 cm in diameter, were found in close proximity to each other on the grass patch (Fig. 1) at the foot of red lip trees (*Syzygium myrtifolium*). A thorough observation of the abandoned and empty nests, probably blown off trees by strong winds, revealed empty snail shells of four achatinid species (Fig. 2). A total of twenty-three shells were extracted from the nests. They consist of three adult and six juvenile *Striosubulina striatella*, two juvenile *Allopeas gracile*, one juvenile *Opeas hannense* and eleven juvenile *Subulina octona* shells. Most of the shells were placed in the inner layer of the nests, together with other organic and anthropogenic materials (Fig. 3). No live snails were found among the nest material.

The nest is suspected to be that of the Swinhoe's white-eye (*Zosterops simplex*), based on its small size, and its round hammock-like shape (see Tan, 2014, as *Zosterops palpebrosus*). This is also suggested by the presence of three adult and two fledgling white-eyes in the immediate area of the broken nest (Fig. 4) during the period of observation.



Fig. 1. Empty nest broken into two portions (indicated by arrows) on the ground. (Photograph by: Lau Wing Lup).



Fig. 2. Close-up of the nest interior. Note snail shells among the nesting material.

Fig. 3. The four species of snail extracted from the nests, sorted and grouped as *Striosubulina striatella* (a) followed by *Opeas hannense* (b), *Allopeas gracile* (c) and *Subulina octona* (d). Space between black bars = 1 mm.

Fig. 4. A fledgling Swinhoe's white-eye near the abandoned nest (a). An adult white-eye (circled red) on the second floor corridor overlooking the open car-park where the nest was found (b). Pictures obtained on 29 March 2026.

(Photographs by: Lau Wing Lup)



**Remarks:** The presence of gastropods in bird nests seems to be rarely documented in literature. For instance, Miquel et al. (2015) recorded a broken shell of *Allopeas gracile* in a nest of the monk parakeet (*Myiopsitta monachus*) in Argentina. The present observation may be the first record of the presence of four species of achatinid snail in a bird nest, possibly that of the Swinhoe's white-eye (*Zosterops simplex*).

The purpose of snail shells in the nest is presently unknown and probably merits further investigation. It is likely that the snails were gathered deliberately by the parent birds and placed into the nest. Although they seem to have no value as nest construction material, they could have been used as items of decoration. Another possibility is that they were

collected for food or as calcium supplements. It is known that some birds collect additional calcium-rich material, like snail shells or calcareous grit, during egg-laying as the calcium content of their insectivorous diet is usually inadequate for shell formation (Mänd et al., 2000). However, the undamaged state of most of the shells in the nest does not imply that they were ingested. It is also interesting to note that despite the occurrence of other small terrestrial snail species in the vicinity, such as *Kaliella scandens* and *Kaliella barrackporensis* (personal observations), these were not present in the nest.

**Literature cited:**

- Mänd R, Tilgar V & Leivits A (2000) Calcium, snails, and birds: a case study. *Web Ecology*, 1(1): 63–69.
- Miquel SE, Turienzo P & Di Iorio OR (2015) Gastropod species found in birds' nests from Argentina. *Revista del Museo Argentino de Ciencias Naturales*, 17(1): 87–96.
- Tan HH (2014) Oriental white-eye nesting at Kent Ridge. *Singapore Biodiversity Records*, 2014: 2–3.