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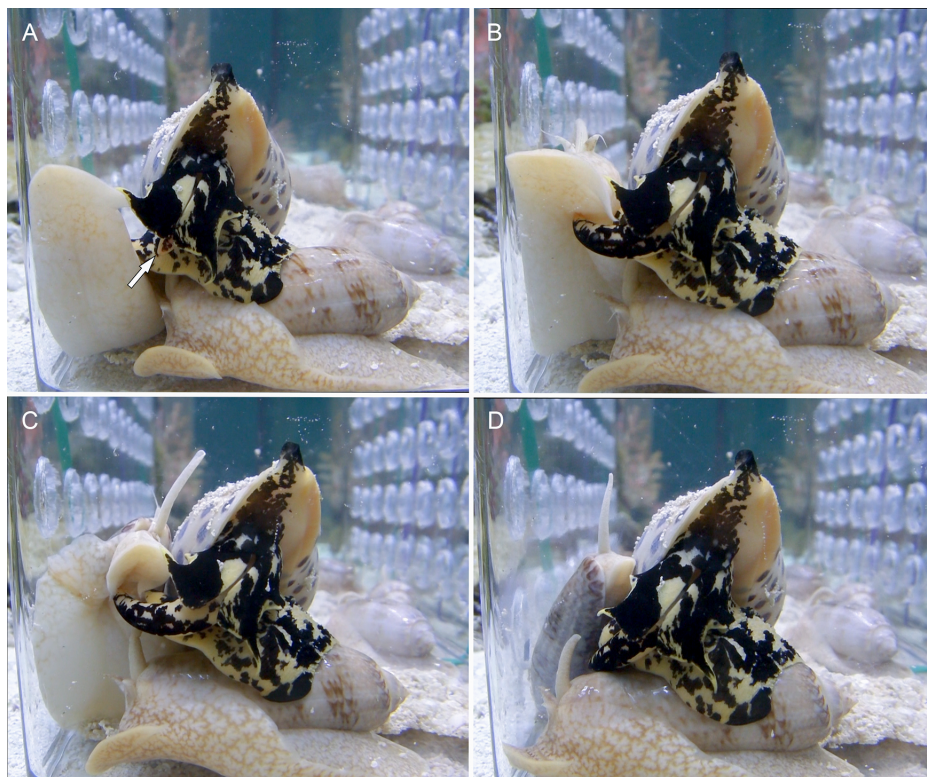
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Swift strike by the gastropod *Scaphella junonia* on its gastropod prey *Americoliva sayana*

José H Leal *, Rebecca A Mensch

Bailey-Matthews National Shell Museum, 3075 Sanibel-Captiva Rd, Sanibel, Florida 33957.

* Corresponding author email: <jleal@shellmuseum.org>.



We record for the first time a strike by the volutid *Scaphella junonia* (Lamarck, 1804) (“junonia”) on its preferred prey, the lettered olive, *Americoliva sayana* (Ravenel, 1834), and the ensuing reaction of the latter to the attack. Three junonias were collected by one of us (RA Mensch) during the Gulf of Mexico expedition, February 23–26, 2018, of R/V WEATHERBIRD II, (GS Herbert, Chief Scientist). The junonias were kept alive in a 208-L tank with a layer of sand of similar granulometry to the substrate at the collecting site, and fed lettered olives. The male specimen featured here measures 82 mm and was collected on February 26, 2018, at Station XXI N, 26°29.414’N–26°28.684’N, 83°29.553’W–83°29.049’W, 55.5–54.6 m depth. The specimens will be deposited at the GS Herbert West Florida Shelf Collection, School of Geosciences, University of South Florida.

Mollusk-eating volutids typically envelop their prey within the posterior part of the longitudinally folded foot, positioning the head in a ventral and posterior direction, into the “chamber” thus formed to reach the prey (Ponder 1970, Bayer 1971, Vermeij 1978, Morton 1986, Bigatti et al. 2009, 2010). Morton (1986), after observing *Melo melo* (Lightfoot, 1786) feeding on gastropods, remarked that “possibly a venom is produced from a pair of accessory

salivary glands and the pleurembolic proboscis everted into the immobilised prey,” but conceded that this would be difficult to observe as the proboscis is hidden from view by the folded foot. Bigatti et al. (2009) studied *Adelomelon ancilla* (Lightfoot, 1786) feeding on mollusks, stating that they release secretions from the accessory salivary glands into the “foot chamber” to induce muscle relaxation in their prey. Bigatti et al. (2010) reported that *Odontocymbiola magellanica* (Gmelin, 1791) captures their prey with the metapodial region of the foot, indicating that the foot creates a “closed environment.” Bayer (1971) briefly described a junonia feeding in captivity. Given choices of different mollusks and “other invertebrates,” the junonia ate only three species of gastropods, with lettered olive as the favorite. Bayer noted that the “prey was always held in the same manner. The junonia (...) inserted its head into the pouch [the “foot chamber”] for a short time, after which the olive no longer showed any indication of struggle.”

The three junonias kept in captivity for the present study repeatedly perform a modified “foot chamber” procedure, mostly using the foot chamber to move a captured lettered olive around, *after* a strike in the open. This fast, “open-water” strike was observed several times in the past 6 mo, and was documented in a 42-s video (by RA Mensch) available at <https://youtu.be/jk5xK6DFoDo>. The video shows lettered olive approaching junonia from the right-hand side of the latter. Panels A–D were from the video. On Panel A (21:27 s), junonia has made contact with the lettered olive, mostly via its right tentacle, and starts to evert its proboscis (arrow). On Panel B (24:14 s), the proboscis has been quickly extended; its tip (mouth) strikes the lettered olive. On Panel C (25:05 s), the lettered olive recoils violently following the strike, suggesting injection of toxin(s), most likely via piercing of the prey tegument by the radula. Panel D (27:29 s) shows the lettered olive beginning to slide to the bottom, incapable of moving. These events last only 06:02 s. Junonia subsequently ate the lettered olive. These observations in captivity indicate that (1) unlike what happens with most mollusk-eating volutids, predatory strikes by junonias can occur outside the “foot chamber,” (2) the strike is swift and effective, and (3) the quick recoiling reaction of the lettered olive after the strike suggests that a fast-acting toxin, or more than one toxin, is (are) injected during the strike.

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