Photo Gallery

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LOVE WILL TEAR US APART: TRAUMATIC MATING THROUGH CONSUMPTION OF BODY PARTS IN A SEA SLUG

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Study Description

Many sea slugs bear numerous finger-like dorsal projections called cerata, at the tip of which they can store intact nematocysts (organelles usually with stinging function) from their cnidarian preys. In a recently published paper in *Ecology*, we showed that during mating of the sea slug *Phidiana lynceus*, partners may ingest cerata from each other, a hitherto unreported kind of extragenital traumatic mating. Given that this behavior is apparently not related to a "collateral damage" (e.g., injection of substances into the partner), this finding may shed some light into "adaptive harm" hypotheses that aim to explain the evolution of traumatic mating.

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Fig. 1. The sea slug *Phidiana lynceus* Bergh, 1867, living animal (~12 mm in length). Unlike the majority of their molluscan relatives, these eolid nudibranchs do not have a shell as protection against predators. Their defense comes from the stinging cells that they steal from their preys. They eat cnidarians, such as hydroids, being able not only to retain the stinging cells (the cnidae) but also to use them as their own defense. The stolen cnidae are stored in the tip of the dorsal finger-like projections visible in the photograph and released whenever the animal feels threatened. *Phidiana lynceus* is reported from both east and west coasts of the Atlantic Ocean, but there are some records for the Pacific Ocean. The specimen of the photograph was found in the São Sebastião Channel, southeastern Brazil, a place rich in biological diversity but with increasing human impact. Photo credit: Alvaro E. Migotto.

Fig. 2. *Phidiana lynceus*, two individuals during traumatic mating behavior through consumption of body parts, crawling on the spaghetti bryozoan *Amathia verticillata*. Photo credit: Licia Sales.

Fig. 3. *Phidiana lynceus*, detail of an individual's stomach region after mating, showing by translucency two finger-like projections (cerata of the partner) ingested during the interaction. Photo credit: Licia Sales.

These photographs illustrate the article "Love will tear us apart: traumatic mating through consumption of body parts in a sea slug" by Licia Sales, Alvaro E. Migotto, and José Eduardo A. R. Marian published in *Ecology*. https://doi.org/10.1002/ecy.2849