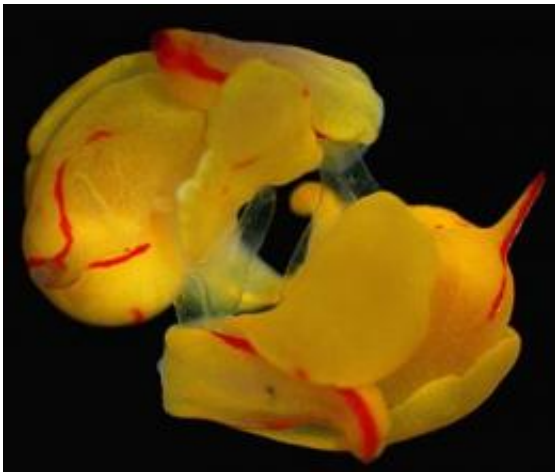


Traumatic mating may offer fitness benefits for female sea slugs

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The bipartite penises, which are everted as largely translucent structures at the right front of the head (h), are reciprocally inserted into the partner. While the actual penis (p) is inserted into the gonopore (located behind the right parapod), the penile stylets (s) are hypodermically inserted into the foot of the partner. Markings are only shown for the lower animal.

Female sea slugs mate more frequently than required to produce offspring, despite the highly traumatic and biologically costly nature of their copulation, as reported Aug. 22 in the open access journal *PLOS ONE*.

The authors of the study, led by Rolanda Lange of the University of Tuebingen in Germany, investigated the [mating behavior](#) of a

simultaneously hermaphroditic species of [sea slug](#) that mates via an extravagant ritual that involves a syringe-like penile appendage that stabs the partner to inject prostate fluids and sperm.

Surprisingly, the researchers found that the sea slugs mate more frequently than minimally required for offspring production and that both elevated and reduced mating rates are detrimental to female fitness, suggesting that there may be some additional, indirect benefits to this traumatic mating beyond reproduction.

More information: Lange R, Gerlach T, Beninde J, Werminghausen J, Reichel V, et al. (2012) Female Fitness Optimum at Intermediate Mating Rates under Traumatic Mating. PLOS ONE 7(8): e43234.
[doi:10.1371/journal.pone.0043234](https://doi.org/10.1371/journal.pone.0043234)

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