

Discovery of solar sea slugs in the Falkland Islands

Elysia patagonica – a small (~70 mm) sea slug – is known to occur along coasts of mainland South America (*J Mollus Stud* 2021; doi.org/10.1093/mollus/eyab003). In 2020, *E. patagonica* or a close relative (pictured here) was first sighted in the Falkland Islands. However, specimens have not been formally described. Considering the distance and oceanic currents between the Falklands and South America, which can disrupt population connectivity, the individuals found in the Falklands could either belong to a distinct founder population or possibly represent a new species.

The members of the genus *Elysia* are known as “solar sea slugs” because they absorb photosynthetic plastids from the plants they consume and they bask in the sunshine, turning their bodies bright green. This mechanism of gaining energy through photosynthesis is analogous to corals and their symbiotic algal cells (zooxanthellae). In some parts of the world, solar sea slugs are increasingly difficult to find (eg *Elysia chlorotica* in California), are too rare to study (*National Geographic* 2018; <https://on.natgeo.com/3WgSp1K>), and are sensitive to climate change (*J Mollus Stud* 2021; doi.org/10.1093/mollus/eyab003).

More specimens were observed by the authors in 2022 at other locations, including Rookery Bay, Yorke Bay, Cape Pembroke, and Elephant Beach. Most of these sites are close to the capital (Stanley), and new discoveries in shallow-water environments will likely increase as scientists (professionals and amateurs alike) continue to explore local rock pools. However, the process of describing biodiversity is time-consuming and requires expert taxonomic skillsets. Collected specimens have been sent for formal identification; however, the length of time between discovery and description is extensive (*Antarct Sci* 2021; doi.org/10.1017/S0954102020000462). In the interim, locals are peeking into new tidal environments, and who knows what else they might find?



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