

Designation of a Neotype for the Dwarf Sea Hare *Aplysia concava* G. B. Sowerby I, 1833, and a Review of the Status of *Aplysia norfolkensis* G. B. Sowerby II, 1869 (Mollusca: Heterobranchia)

MATT J. NIMBS 

Southern Cross University, National Marine Science Centre,
Bay Drive, Coffs Harbour NSW 2450, Australia

ABSTRACT. A recent revision of the globally distributed dwarf sea hare *Aplysia parvula sensu lato* split that species into 10 separate taxa. As Australian specimens were not included in this revision, further study using material from the south west Pacific was warranted. At least one described species, *Aplysia concava*, was found to occur in southeastern Australia, New Zealand and New Caledonia. A redescription of this species was published by Nimbs & Wilson (2021) even though the holotype was deemed lost—the difficulty, in 2020–2021, to access important and relevant museum specimens, prevented the designation of an appropriate neotype at that time. The present study is an annexure to the published redescription for the purpose of designating a neotype for *Aplysia concava* and provides a discussion on the taxonomic status of another dwarf sea hare species, *Aplysia norfolkensis*, which is herein regarded as a junior synonym of *A. concava*.

Introduction

The sea hare genus *Aplysia* Linnaeus, 1767 is the most speciose genus in the marine mollusc family Aplysiidae Lamarck, 1809 (Nimbs *et al.*, 2017a,b). The dwarf sea hare, *Aplysia parvula* Mörch, 1863 *sensu lato*, was once thought to be a globally distributed taxon, but a recent study by Golestani *et al.* (2019) divided it into 10 species, many of which are cryptic. In that study, Australian animals were not examined and, consequently, Australian *Aplysia parvula s. l.* warranted further study. Given the presence of cryptic species complexes among Indo-Pacific *A. parvula s. l.*, molecular data from Australian specimens were analysed in an attempt to identify any unknown or previously unrecognized species (Nimbs & Wilson, 2021).

Among Australian specimens of dwarf sea hares, only *Aplysia concava* G. B. Sowerby I, 1833, was found (Nimbs & Wilson, 2021). Golestani *et al.* (2019) reported the *A. concava* holotype lost and, as the original description was based solely on a shell, they could not differentiate it from any of the other species examined in their study. Consequently, they considered *Aplysia concava* to be a *taxon inquirendum* (Golestani *et al.*, 2019).

Recently collected specimens from the Australian east coast and some museum-material conformed to the original description of *A. concava* by G. B. Sowerby I and, with additional molecular data, a redescription was published by Nimbs & Wilson (2021). During their study in 2020 additional museum specimens of Australian *Aplysia parvula*

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