



***Verella verella* (Hydrozoa) on the coast of Pakistan along the northern Arabian Sea**

Taxonomic information on Hydrozoa from waters of Pakistan is limited to relatively few studies, including those of Haque (1977), Moazzam & Moazzam (2006), Ali-Khan & Shehnaz (2001a,b), and Gul & Gravili (2014). None of them reported the pleustonic species *Verella verella* (Linnaeus, 1758). Daniel (1976) reviewed the worldwide distribution of the two dimorphic forms of *V. Verella* (with the sail oriented either Northwest or Southeast), but no occurrences of the species were recorded in the northern Arabian Sea. The aim of this report is to record this hydrozoan found on the coast of Pakistan, as knowledge of its occurrence in the region is lacking in the scientific literature.

Verella verella, commonly known as the “by-the-wind sailor,” and, was originally described as *Medusa verella* by Linnaeus (1758: 660). The type locality was given as “Habitat in Pelago. Loeffling. In Mari Mediterraneo. Brander”, thus in the Mediterranean Sea (Schuchert, 2010). Following Calder (1988, 2010) and Schuchert (2010), *Verella* Lamarck, 1801 is taken to be a monotypic genus represented by single circumglobal species, *V. verella*.

During a field visit to Manora (24°47'25"N, 66°58'47"E) in Karachi, Pakistan, on 4 May 2014 during the pre-monsoon period, two stranded specimens of *V. verella* were collected and photographed (Fig. 1). In addition, five specimens of the siphonophore genus *Physalia* were also noticed along the same area of the shore. After examination, the specimens (JMGDC/MDZ/CN 13) were deposited in the Museum of the Department of Zoology, Jamia Millia Government Degree College, Malir, Karachi, Pakistan.

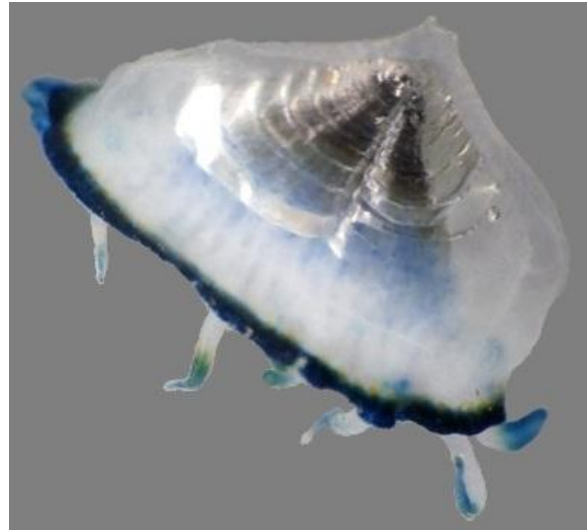


Figure 1: *Verella verella* (Linnaeus, 1758) from Manora, Karachi, Pakistan.

Family Porpitidae Goldfuss, 1818

***Verella verella* (Linnaeus, 1758)**

The specimens comprise of floating, polymorphic hydroid colonies composed of an oval, chitinous float with an upright triangular sail on the upper surface and different types of zooids on the underside. The sail is oblique to the long axis of float. The zooids include a large, central gastrozoid, surrounded by a band of gonozooids and a band of tentacle-like dactylozooids towards the periphery. The gonozooids have numerous medusa buds in groups near the base. The size of float ranges between 12 mm length x 8 mm width with deep blue margin, shiny silver sail and the dactylozooids of light blue colour distally.

The stranded specimens of *V. verella* found at Manora can be the consequence of strong pre-monsoon winds in the northern Arabian Sea. The circumglobal distribution of this holoplanktonic, pleustonic species, its consumption of pelagic prey, intake of nutrients

from symbiotic zooxanthellae, and large strandings along many shores, indicate that *V. velella* is important in open-ocean carbon cycling and in transport of pelagic production to landmasses (see Purcell *et al.*, 2012).

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