

## First record of *Phycocaris simulans* (Decapoda; Hippolytidae) from the Republic of Maldives

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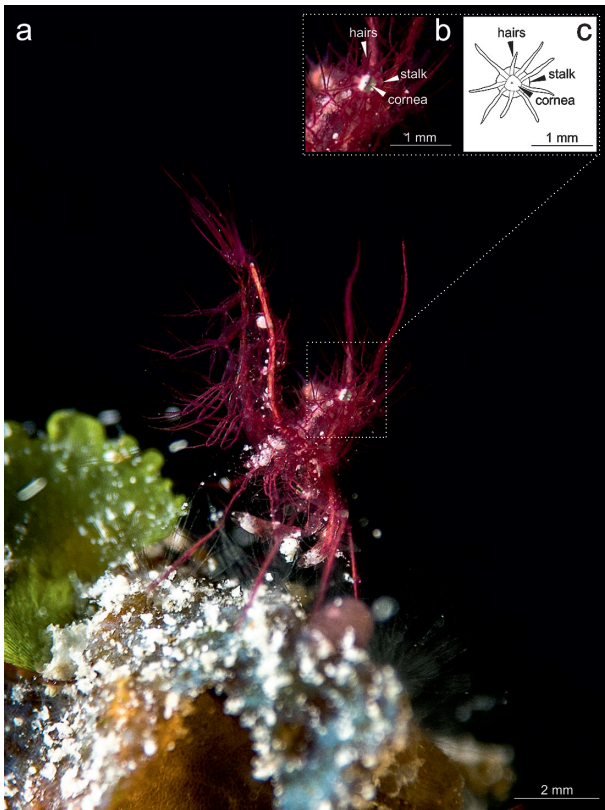
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*Phycocaris simulans* (Kemp 1916) is the only species in the genus *Phycocaris* (family Hippolytidae). It is commonly known as hairy shrimp due to the extreme camouflage that closely resembles the small turf of algae within which it can often be found (Johnson 1989; Gan and Li 2017). *Phycocaris simulans* was originally described by Kemp (1916) from the Andaman Islands and more recently by Gan and Li (2017) from Hainan Island in the South China Sea, although only a few reports have been published (e.g. Johnson 1989; Preston and Doherty 1990). To date, the known geographic distribution comprises the Andaman Islands (Kemp 1916), Heron Island and Darwin, Australia (Bruce 1983), Kume Island, Japan (Kawamoto and Okuno 2003) and Hainan Island, China (Gan and Li 2017).

During a biodiversity survey in April 2016 a single specimen of *P. simulans* was observed (Fig. 1) at 20 m depth on the south side of the coral reef surrounding Angaagaa Island, Ari Atoll, Republic of Maldives. The reef is a circular-shaped coral formation of around 1 km in maximum diameter with the island on the east side. The reef consists of gentle slopes with around 80% of coral cover mainly dominated by branching and tabular *Acropora* spp. colonies. The specimen was found motionless on a small turf of filamentous red algae partially covering a dead tabular *Acropora* sp., which was also coated by green algae, tunicates and sponges. The dead *Acropora* sp. colony, of around 50 cm in maximum diameter, was lying on the slope in a relatively sheltered area with no direct exposure to the current.

The shrimp was photographed for subsequent observations, but could not be collected (Fig. 1a). The original description of Kemp (1916) and the recent description of Gan and Li (2017) were used as guidelines for the identification. The shrimp was identified as *Phycocaris simulans* due to the presence of hairs at the junction of the cornea and stalk (Fig. 1b-c) which is a unique and remarkable feature reported in both descriptions. Moreover, this morphological characteristic is not known in any other genera of the family Hippolytidae. Thus, to the best of our knowledge this finding represents the first record of *P. simulans* in the Republic of Maldives and it confirms that this species is more widespread throughout the Indian Ocean than previously thought. Considering the paucity of studies regarding this genus, further investigations are needed to clarify its habitat preferences, distribution and diversity.



**Fig. 1** a) *Phycocaris simulans*; b) close-up of the eye with arrows indicating the cornea, the stalk and the hairs; c) a tracing from b) where the structures are clearly visible, the dashed lines indicate the internal part of the eye.

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