



Host-specific Ectoparasitic Isopod (*Nerocila loveni*) found on a Little Filesnake (*Acrochordus granulatus*) on Surwada Beach, Gujarat, India

Aadit Patel¹, Aurobindo Samal², and Shreya Pandey³

¹Snake Research Institute, Office of the Deputy Conservator of Forests, Valsad (North) Division, 1st Floor, Jilla Seva Sadan-2, Tithal Road, Valsad-396001, Gujarat, India (patelaadit1march@gmail.com)

²Earth Crusaders Organisation (ECO), Bhubaneswar, Odisha-751019, India (aurobindo.cse@gmail.com)

³University of Oulu, 90014, Finland (shreya.pandey@oulu.fi [corresponding author])

Although parasites have received limited attention in the field of wildlife biology due to the inherent complexities in accurately quantifying their impact on host species, they generally have been viewed negatively due to the inherent harm they inflict on their hosts (Gómez and Nichols 2013). Parasites are detrimental to the host organism’s fitness or growth rates by influencing the host’s immunity, which affects the dynamics of host populations, altering trophic interactions and the cycling of energy and nutrients in ecosystems (Wood and Johnson 2015).

Host specificity is strongly expressed in many parasites of fishes, including a majority of isopodan ectoparasites (Rameshkumar and Ravichandran 2013), although some species show a lack of host specificity, or their preferred hosts are unknown. The Cymothoidae are ectoparasitic isopods of marine, freshwater, or brackish-water teleost fishes, including several commercially important species (Balakrishnan and

Tudu 2020). Upon finding a suitable host, cymothoids attach to the body or buccal or gill cavities of the host and start feeding on blood and/or tissues (Romestand and Trilles 1977; Horton and Okamura 2003), or they can attach to and feed on skin and fins (Rajaram et al. 2018). Even in the postlarval juvenile or manca stage, some are highly host specific (Trilles 1964; Tsai et al. 1999). Several species, however, exhibit low host specificity, and the mancae may attach to and feed on opportunistic intermediate hosts from different fish families (Sarusic 1999) and sometimes on non-fish hosts (Trilles and Öktener 2004; Wunderlich et al. 2011). The 65 or more species in the cymothoid genus *Nerocila* live attached to the skin or fins of fish and several species are morphologically variable, making identification challenging (Trilles 1972, 1979; Williams and Williams, 1980, 1981; and Bruce 1987a, 1987b).

On 10 January 2023, during fieldwork on Surwada Beach, Gujarat, India (20.571, 72.894), the first author

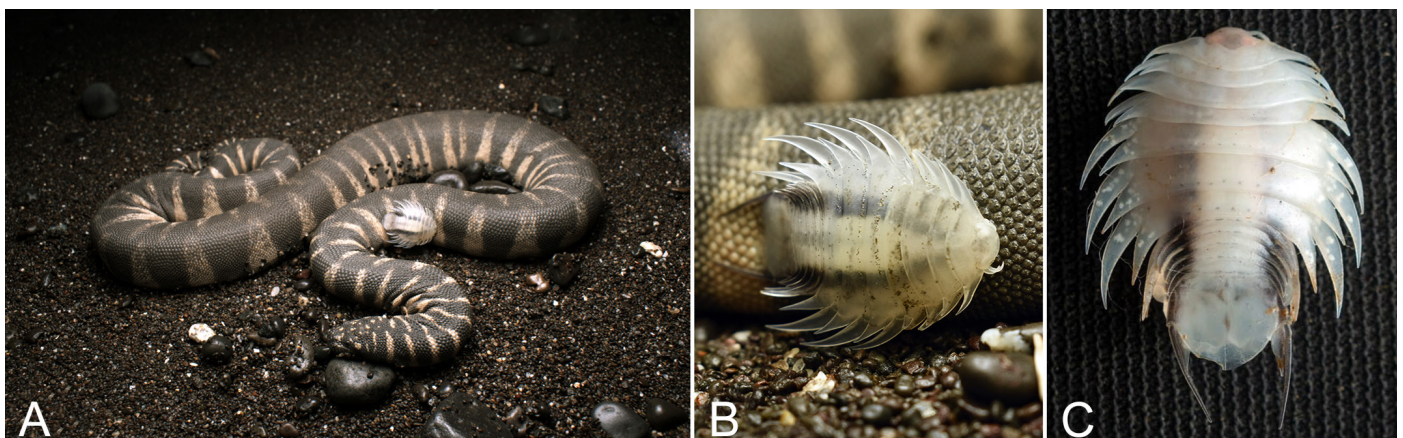


Figure 1. Attachment of an ectoparasitic isopod (*Nerocila loveni*) on a Little Filesnake (*Acrochordus granulatus*) on Surwada Beach, Gujarat, India (A); an enlarged image of the attached parasite (B); and a dorsal view of the parasite (C). Photographs by Aadit Patel.

encountered a Little Filesnake, *Acrochordus granulatus* (Schneider 1799) (Fig 1A; KUDA 14124), with an ectoparasitic isopod attached to its body (Fig. 1B; KUDA 14125), which, based on the photograph, was later confirmed to be *Nerocila loveni* Bovallius 1887 (Fig. 1C; KUDA 14126).

As *N. loveni* is a common ectoparasite of fish (Tuah et al 2021), the occurrence of this species on the body of a file-snake could be an example of opportunistic exploitation of an available host by a non-host-specific cymothid. However, this observation of *N. loveni* attached to a filesnake does not necessarily indicate that the latter is a compatible host and this could be a case of an accidental attachment. To date, few investigations (Pillai 1954, 1964; Ravichandran et al. 2010; Rameshkumar et al. 2011, 2012a, 2012b; Trilles et al. 2011) have addressed parasites of Indian marine fishes. Thus, a detailed study of the 17 species in the genus *Nerocila* that have been described from India and their host preferences is still necessary (Trilles et al. 2011).

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