

**Discovery of the fish host of the 'planktonic' caligid *Caligus undulatus* Shen & Li, 1959
(Crustacea: Copepoda: Siphonostomatoida)**

ABSTRACT

The siphonostomatoid copepod *Caligus undulatus* Shen & Li, 1959 has been widely reported from plankton samples obtained from neritic and oceanic waters off coasts of the Indo-West Pacific and Atlantic Oceans. Until now, its fish host has remained unknown. This copepod belongs to an intriguing group of congeners that, despite being part of a chiefly parasitic group, are consistently found as zooplankters. Quite unexpectedly, in October 2019, a fish host of *C. undulatus* was discovered in the Seto Inland Sea, Japan—namely, the Japanese sardinella *Sardinella zunasi* (Bleeker, 1854). Both juvenile (chalimus) and adult individuals of this caligid were observed as parasites of the fish host. The discovery suggests that the species has an alternative life cycle as previously proposed for other purportedly 'planktonic' congeners and might frequently switch hosts during the adult stage. Thus, the *C. undulatus* group is newly proposed as a species group in the genus, in which five species are known as planktonic. Some hypotheses on the modified life cycle of caligids also briefly discussed.