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AMOEBOPHYRIDA (SYNDINIALES), AN IMPORTANT PARASITOID GROUP FOR DINOFLAGELLATES

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Syndiniales (Alveolata) are marine parasitoids that infect a wide range of host species, extending from dinoflagellates, ciliates, radiolarians, cercozoans, chaetognaths, copepods, cnidarians, appendicularians, crabs, and even fish eggs. These pathogens obligatory killed their host to accomplish their life cycle. Detected from the sea surface to deep hydrothermal vents, Syndiniales often constituted the majority of the 18S gene sequences retrieved from environmental genetic libraries from marine waters. Among them, Amoebophryidae, (Syndiniales Group II), preferentially infect dinoflagellates, a key component of the marine phytoplankton also responsible for the majority of the toxic red tides. In this study, we will review several recent multidisciplinary approaches employed to study this parasitoid group, and original findings concerning their in situ specificity, their control capacity on dinoflagellate host populations both from field observations and by in silico modelling, and an ingenious mechanism develops by this parasitoid to survive on a long term in close association with its host.

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