



## An overview of Suctorian ciliates (Ciliophora, Suctorea) as epibionts of halacarid mites (Acari, Halacaridae)

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### Abstract

Scant information is available regarding the prevalence and distribution of suctorian ciliates on halacarid mites. However, using this limited information and data from our laboratory on the systematics, biology, ecology and distribution of suctorian ciliates that are epibionts of halacarid mites, we redescribed four suctorian species: *Limnoricus ceter* (Jankowski), *Praethecacineteta halacari* (Schulz), *Thecacineteta calix* (Schroder) and *Acineta sulcata* Dons. We also recognized *Lissacineta allgeni* Jankowski and *Thecacineteta allgeni* (Jankowski) as synonyms of *Praethecacineteta halacari* (Schulz), and *Thecacineteta laophontis* Jankowski and *Paracineta moebiusi* Kahl as synonyms of *Thecacineteta calix* (Schroder). Many suctorians have been reported, but not properly identified in the halacarid literature. So, we have attempted to identify those suctorians to species level. Lastly, the interactions between the suctorians and their hosts are also discussed and *Praethecacineteta halacari* is also reported for the first time from the Indian coast.

**Key words:** Ciliophora, Suctorea, Halacaridae, epibionts

### Introduction

Representatives of several groups of freshwater and marine aquatic mites have been identified as hosts of suctorian ciliates (Suctorea) (Precht 1935; Matthes 1956; Matthes & Stiebler 1970; Matthes *et al.* 1988; Dovgal 1996; Gelmboldt & Dovgal 2005; Dovgal & Pesic 2007). There are extensive literature, along with figures and photomicrographs, on the halacarid mites, on which the suctorians occur (Abé 1997; Grimaldi 1965; Bartsch 1989, 1994, 1998, 2001, 2003; Chatterjee *et al.* 2004, 2006; Pepato & Tiago 2005). However, very little information is available regarding the distribution and prevalence of suctorian ciliates on these mites. Moreover, several species have been insufficiently described and documented in the old literature, and many nomenclatural problems were not addressed. In some cases, the suctorian species were not identified to species or even genus level. As a result, we have tried to identify some species of suctorians from figures and photomicrographs in the halacarid literature (Bartsch 1989, 1998, 2001, 2003; Abé 1997; Bartsch & Panesar 2000; Pepato & Tiago 2005). In addition, several suctorian-infested halacarid mites were recently collected from Goa (West coast of India, Arabian Sea) for examination. This paper presents an analysis of pertinent literature and data on the systematics, biology, ecology and distribution of suctorian epibionts of halacarid mites.