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MESOZOA

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FAUNA OF INDIA CHECKLIST

MESOZOA

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Introduction: Mesozoa is a common terminology used for Dicyemida and Orthonectida fauna. These two phyla were previously considered as class under the Phylum Mesozoa (Drábková *et al.*, 2022). The name Mesozoa was used to indicate the position in-between protozoa and metazoan (Aruga *et al.*, 2007). Both the phyla consists of microscopic parasitic marine invertebrates. The evolutionary relationships of metazoans are not clear till date (Zverkov *et al.*, 2019). Dicyemid and orthonectid lineages are showing divergence in the molecular phylogenetic (Zverkov *et al.*, 2019) and also found as monophyletic (Drábková *et al.*, 2022).

Global diversity: A total of 146 species of mesozoans are accepted world-wide till date. Phylum Dicyemida comprised of 122 species classified under one class, three families and 11 genera. Phylum Orthonectida comprised of 24 species classified into two families and six genera.

Diversity in India: Only 6 species of Dicyemids are reported from India waters belonging to one class, one family and three genera. No Orthonectida are reported from Indian waters till date.

Diversity in States: Presented in table 1.

Table 1: : Mesozoa of India, State-wise distribution

Sl. No.	State / Union Territory	No. of Species
1.	Andhra Pradesh	05
2.	Tamil Nadu	01
	Total number of species	06

Endemism: Endemism of dicyemids is not recorded.

Habitat: All mesozoans are exclusively marine and found inside the other marine invertebrates as parasite.

Ecological Significance: The distributions of the dicyemids are host specificity (Whang *et al.*, 2020).

Human Significance: Mesozoa has no direct impact to human. But dicyemids are found in ecologically important cephalopods.

Threatened species: No assessed.

Protected Species as per WPA: Not included.

Species under CITES: There is no species enlisted under the CITES Appendices.



Invasive alien species: No dicyemid species is reported from India as invasive.

Gap areas: Studies on mesozoa are scanty worldwide as well as in India. Their distribution is in terms of geographical locations are unclear along with the reason of their host specificity.

Apart from dicyemids no Orthonectida are reported from Indian waters till date. The evolution of the group is also not well established. Therefore, the studies on mesozoa is required to taken up immediately to understand its diversity, ecology and phylogeny.

Systematic list: Species list cited below (Table 2).

Table 2: Mesozoa of India

Sl. No.	Species
1.	<i>Dicyema ganapatii</i> Kalavati, Narasimhamurti & Suseela, 1984
2.	<i>Dicyema madrasensis</i> Kalavati, Narasimhamurti & Suseela, 1984
3.	<i>Dicyema nouveli</i> Kalavati, Narsimhamurti & Suseela, 1984
4.	<i>Dicyema octopusi</i> Kalavati, Narsimhamurti & Suseela, 1984
5.	<i>Dicyemenea coromadelensis</i> Kalavati, Narsimhamurti & Suseela, 1978
6.	<i>Dodecadicyema loligo</i> Kalavati, Narsimhamurti & Suseela, 1980

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