# CLADOCERA (CRUSTACEA) OF TAMIL NADU - CHECKLIST AND BIBLIOGRAPHY

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Cladoceran investigation of Tamil Nadu was initiated by Rajagopal (1962) with recordings from Madras coastal waters. Seasonal events in a natural population of *Daphnia carinata* were studied by Vijayaraghavan (1970). Navaneethakrishnan and Michael (1971) investigated the egg production and relative growth in *Daphnia carinata*. Vijayalakshmi and Venugopalan (1972) investigated the biological aspects of *Penilia avirostris* in Portonovo waters. Murugan and Sivaramakrishnan (1973) studied the biology of *Simocephalus acutriostratus.* Further Michael (1973) made a detailed analysis of the cladocerans of Madurai area. Murugan (1975a,b) made biological studies of *Moina micrura* and *Ceriodaphnia cornuta*. Santhanam *et al.* (1975) studied the zooplankton of Portonovo waters, Kaliyamurthy (1975) investigated the plankton of Pulicat Lake. Murugan and Sivaramakrishnan (1976) carried out laboratory studies on *Scapholeberis kingi*. Murugan and Venkataraman (1977) studied the developmental aspects of *Daphnia carinata.* Murugan and Ramaseshan (1978) studied *Scapholeberis kingi* and production of ephippia. Santharam (1978) studied the biology of *Daphnia carinata*. Venkataraman and Job (1980) made further studies on the effect of temperature on the growth of *Daphnia carinata*. Raghunathan (1983) reported the planktonic Cladocera of Tamil Nadu. Raghunathan and Srinivasan (1983a,b) investigated the cladocerans of Ennore Estuary. Further Raghunathan and Srinivasan (1986) have worked on the zooplankton dynamics in relation to hydrographic features of Ennore Estuary. Venkataraman (1983) worked out the taxonomy and ecology of Cladocera of southern Tamil Nadu, Venkataraman and Krishnaswamy (1984a,b) reported the occurrence of *Leydigia ciliata* and *Daphnia* from Tamil Nadu. Venkataraman and Krishnaswamy (1985) further studied the cultural aspects of *Diaphanosoma senegal*. Cladocerans from high altitude waters of Tamil Nadu were studied by Raghunathan (1985). The same author investigated the Cladocerans of certain urban water bodies in 1986. Studies pertaining to predation of *Anisops bouveri* on *Daphnia cephalata* were made by Venkataraman and Krishnaswamy (1986). Manimegalai *et al.* (1986) studied the helmet development in *Daphnia cephalata.* Hudec (1987) described a new species, *Moina oryzae* from Tamil Nadu. Michael and Sharma (1988) have completed the Fauna of India volume on Cladocera. Raghunathan (1989) reviewed the work on Indian Cladocera. Raghunathan (1990, 1991, 1992, 1995) conducted ecological studies on the cladoceran fauna of different ponds in Tamil Nadu. Raghunathan and Revathy (1999a,b,c) made studies on the cladoceran species associations, reproduction and on the natural population of a village pond. Suresh Kumar *et al.* (1999) recorded a chydorid cladoceran, *Pleuroxus aduncus* Jurine and its developmental stages from Tamil Nadu. Venkataraman (1999) reported the Cladocera of southern Tamil Nadu. Sureshkumar (2000) carried out a detailed analysis of Cladocera of Tamil Nadu and their possible utilization in aquaculture and Sivakumar *et al.* (2001) made a study on the Cladocera of Dharmapuri District.

For the first time a comprehensive and consolidated list of Cladocera of Tamil Nadu is presented 81 species of cladocerans are recorded from Tamil Nadu with major representation from family Chydoridae (40) and Daphniidae (17) (Table 1). Compared with other states, in India this group has been fairly well studied in Tamil Nadu.

Studies have also been conducted to mass culture cladocerans for ascertaining their suitability as alternative live food in aquaculture. In this connection, studies were made pertaining to *Monia micrura., Ceriodaphnia cornuta, Daphnia carinata, Simocephalus vetulus, Daphnia cephalata, Daphnia lumholtzi* and *Macrothrix spinosa* for culture purposes. In natural situations monoculture like stages (swarming) have also been observed earlier by Raghunathan (1983, 1992).

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***Table 1. Systematic list of Cladocera of Tamil Nadu***

| Scientific name | Scientific name | Scientific name |
|---|---|---|
| Sididae | *Moina macrocopa* (Straus) | *Dunhevedia crassa crassa* King |
| *Pseudosida bidentata* Herrick | *Moina brachiata* (Jurine) | *Dunhevedia serrata* Daday |
| *Pseudosida szalayi* Daday | *Moina weismanni* Ishikawa | *Dadaya macrops* (Daday) |
| *Sida crystallina* (O.F. Muller) | *Moina oryzae* Hudec | *Pseudochydorus globosus* (Baird) |
| *Latanopsis australis* Sars | *Moinadaphnia macleayi* (King) | *Alona quadrangularis* (O.F. Muller) |
| *Diaphanosoma excisum* Sars | | *Alona rectangula rectangula* Sars |
| *Diaphanosoma sarsi* Richard | Bosminidae | *Alona davidi davidi* Richard |
| *Diaphanosoma senegal* Gauthier | *Bosmina longirostris* (O.F.Muller) | *Alona davidi punctata* (Daday) |
| *Diaphanosoma brachyuram* (Lieven) | *Bosminopsis deitersi* Richard | *Alona costata* Sars |
| *Penilia avirostris* Dama | | *Alona monocantha tridetata* (Stingelin) |
| | Macrothricidae | *Alona pulchella* King |
| Daphniidae | *Macrothrix spinosa* King | *Alona guttata* Sars |
| *Ceriodaphnia cornuta* Sars | *Macrothrix laticornis* (Jurine) | *Alona cf. karelica* Stenroos |
| *Ceriodaphnia quadrangula* (O.F. Muller) | *Guernella raphalis* Richard | *Alona sarsinorum* Stingelin |
| *Ceriodaphnia laticaudata* P.E. Muller | *Grimaldina brazzai* (Richard). | *Alona cannellata* Brehm |
| *Ceriodaphnia pulchella* Sars | | *Alona pseudonodonta anodonta* Daday |
| *Daphnia carinata* King | Ilyocryptidae | *Graptoleberis testudinaria* (Fischer) |
| *Daphnia cephalata* (King) | *Iiyocryptes spinifer* Herrick | *Leydigia acanthocercoides* (Fischer) |
| *Daphnia lumholtzi* Sars | | *Leydigia australis ceylonica* (Daday) |
| *Daphnia longicephala* Hebert | Chydoridae | *Leydigia ciliata* (Gauthier) |
| *Daphnia similis* Claus | *Pleuroxus aduncus* (Jurine) | *Biapertura karua* (King) |
| *Daphnia projecta* Hebert | *Alonella nana* (Baird) | *Biapertura verrucosa* (Sars) |
| *Scapholeberis kingi* Sars | *Chydorus sphaericus* (O.F. Muller) | *Oxyurella singalensis* (Daday) |
| *Simocephalus vetulus* (O.F. Muller) | *Chydorus parvus* (Daday) | *Kurzia longirostris* (Daday) |
| *Simocephalus vetuloides* Sars | *Chydorus cf. herrmanni* | *Euryalona orientalis* (Daday) |
| *Simocephalus exspinosus* (Koch) | *Chydorus kallipygos* Brehm | *Indialona globulosa* (Daday) |
| *Simocephalus latirostris* Stingelin | *Chydorus barroisi* Richard | *Notalona globulosa* (Daday) |
| *Simocephalus acutirostratus* (King) | *Chydorus ventricosus* Daday | *Ephemeroporus barroisi* Richard |
| *Simocephaius serrulatus* (Koch). | *Chydorus reticulatus* Daday | |
| | *Chydorus eurynotus* Sars | Podonidae |
| Moinidae | *Chydorus robustus* Stingelin | *Evadne tergestina* Claus |
| *Moina micrura* Kurz | *Chydorus brehmi* Biswas | *Podon polyphemoides* (Leuckart) |

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