

CHECKLIST OF INDIAN CLADOCERA (CRUSTACEA)

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Cladocerans, commonly known as water fleas, are minute crustaceans generally ranging in size from 0.2-5.0mm. They belong to the order Cladocera of the sub-class Branchiopoda under the sub-phylum Crustacea and are grouped into 11 families. Of the 11 families, the Chydoridae is the largest and is further subdivided into four sub-families based on the head pore morphology, articulation of the mandibles and the number of basal spines on the claw.

Fernando (1980a,b) observed 61 species of Cladocera from India with specific information about the absence of large Cladocera. Sharma and Michael (1987) noted the presence of 87 species and Michael and Sharma (1988) recorded 93 species in India. Raghunathan (1989) reported 106 species and Sharma (1991) updated the list to 109 species which was confirmed later by Murugan *et al.* (1998). In the present work, an attempt has been made to update the list of reported Indian Cladocera. It is worthy to note that many species recorded prior to 1998 and not reported in the earlier list have also been included in the present list. The systematic list of reported Indian Cladocera is presented in Table 1.

The present study gives an account of 190 species belonging to 49 genera and 10 families. Of these, 18 are endemic to India. Chydoridae and Daphniidae comprised significant fraction of the Indian Cladocera. The Sididae and Macrothricidae occupy next in the order of representation. The other groups like Moinidae, Bosminidae, Polyphemidae, Leptodoridae, Holopedidae and Podonidae have few representatives (Fig. 1). Cercopagidae is not reported from India.

Sharma (1991) opines that certain species of the endemic group of cladocerans reported by Rane (1983a,b, 1984a,b, 1985a,b, 1986, 1987) from central India need to be reexamined to ascertain their taxonomic status. Besides the presence of rich and varied freshwater fauna of Indian Cladocera, the marine and estuarine forms are very much restricted and only three species are reported.

Most of the species that have been synonymised by Michael and Sharma (1988) are not included in this list. But, *Simocephalus vetuloides* has been included because of its distinguishing characters such as postero-dorsal valve prominence and the presence of spine and setae on the basipodite of the antenna (Kumar & Altaff, 2002).

Orlova (1998) synonymised three species of *Simocephalus*, viz., *S. vidyae*, *S. vidyae gajareae* and *S. vamani*, reported by Rane (1983-1987) with *Simocephalus acutirostratus*. So those species have also been omitted.

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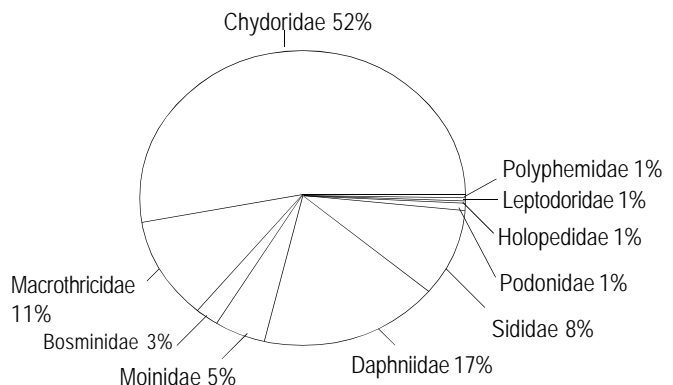


Figure 1. Percentage composition of Indian Cladocera (Crustacea)

Table 1. Checklist of Indian Cladocera

Scientific name	Scientific name	Scientific name
Freshwater forms		
<u>Sididae</u>	<i>Moina brachiata</i> (Jurine)	<i>Alona holdeni</i> Green
<i>Diaphanosoma aspinosum</i> Chiang	<i>Moina dubia</i> Gurney & Richard	<i>Alona intermedia</i> Sars
<i>Diaphanosoma brachyurum</i> Lievin	<i>Moina macrocopa</i> (Straus)	<i>Alona cf. karelica</i> Stenroos
<i>Diaphanosoma excisum</i> Sars	<i>Moina micrura</i> Kurz	<i>Alona karua</i> King
<i>Diaphanosoma leutenbergianum</i> Fischer	<i>Moina oryzae</i> Hudec *	<i>Alona kwangsiensis</i> Chiang
<i>Diaphanosoma modiglianii</i> Richard	<i>Moina rectirostris</i> (Leydig)	<i>Alona ladacensis</i> Brehm
<i>Diaphanosoma sarsi</i> Richard	<i>Moina weismanni</i> Ishikawa	<i>Alona macronyx</i> Rajapaksha & Fernando
<i>Diaphanosoma senegal</i> Gauthier	<i>Moinadaphnia macleayi</i> (King)	<i>Alona monacantha</i> Sars
<i>Diaphanosoma volzi</i> Stingelin		<i>Alona monacantha tridentata</i> (Stingelin)
<i>Latona narendrai</i> Rane *	<u>Bosminidae</u>	<i>Alona protzi</i> Hartwig
<i>Latona tiwarii</i> Biswas *	<i>Bosmina coregoni</i> (Baird)	<i>Alona pseudonodonta anodonta</i> Daday
<i>Latonopsis australis</i> (Sars)	<i>Bosmina longirostris</i> (O.F. Muller)	<i>Alona pulchella</i> King
<i>Latonopsis fasciculata</i> Rane & Harshey *	<i>Bosmina tripurae</i> Korinek <i>et al.</i>	<i>Alona quadrangularis</i> (O.F. Muller)
<i>Latonopsis fernandoi</i> Rane *	<i>Bosminopsis deitersi</i> Richard	<i>Alona rectangula</i> Sars
<i>Pseudosida bidentata</i> Herrick	<i>Bosminopsis devendrai</i> Rane *	<i>Alona rectangula rectangula</i> Sars
<i>Sida crystallina</i> (O.F. Muller)		<i>Alona rectangula richardi</i> (Stingelin)
	<u>Macrothricidae</u>	<i>Alona sarosinorum</i> Stingelin
<u>Daphniidae</u>	<i>Echnisca capensis monodi</i> Gauthier	<i>Alona taraporevalae</i> Shirgur & Naik *
<i>Ceriodaphnia cornuta</i> Sars	<i>Echnisca odiosa</i> (Gurney)	<i>Alona verrucosa</i> Sars
<i>Ceriodaphnia laticaudata</i> (P.E. Muller)	<i>Echnisca triserialis</i> (Brady)	<i>Alonapsis elongate</i>
<i>Ceriodaphnia pulchella</i> Sars	<i>Grimaldina brazzai</i> Richard	<i>Alonella clathratula</i> Sars
<i>Ceriodaphnia quadrangula</i> (O.F. Muller)	<i>Guernella ceylonica</i> Daday	<i>Alonella excisa</i> (Fischer)
<i>Ceriodaphnia reticulata</i> (Jurine)	<i>Guernella odisa</i> (Gurney)	<i>Alonella exigua</i> (Lilljeborg)
<i>Ceriodaphnia setosa</i> Malib	<i>Guernella raphalis</i> Richard	<i>Alonella nana</i> (Baird)
<i>Daphnia carinata</i> King	<i>Ilyocryptus bhardwaji</i> Battish *	<i>Biapertura affinis</i> (Leydig)
<i>Daphnia cephalata</i> King	<i>Ilyocryptus halyi</i> Brady	<i>Biapertura intermedia</i> (Sars)
<i>Daphnia fusca</i> Gurney	<i>Ilyocryptus spinifer</i> Herrick	<i>Biapertura karua</i> (King)
<i>Daphnia longicephala</i> Barry	<i>Macrothrix chevreuxi</i> Gurney & Richard	<i>Biapertura kwangsiensis</i> Chiang
<i>Daphnia longispina</i> O.F. Muller	<i>Macrothrix goeldi</i> Richard	<i>Biapertura verrucosa</i> (Sars)
<i>Daphnia lumholtzi</i> Sars	<i>Macrothrix gronlandica</i> Lilljeborg	<i>Biapertura verrucosa pseudoverrucosa</i> (Sars)
<i>Daphnia magna</i> Straus	<i>Macrothrix hirsuticornis</i> Norman & Brady	<i>Camptocercus australis</i> Sars
<i>Daphnia newporti</i> Baird	<i>Macrothrix laticornis</i> (Fischer)	<i>Camptocercus fennicus</i> Stenroos
<i>Daphnia obtusa</i> Kurz	<i>Macrothrix odiosa</i> (Gurney)	<i>Camptocercus kapuri</i> Battish *
<i>Daphnia projecta</i> Hebert	<i>Macrothrix rectirostris</i> (Brehm)	<i>Camptocercus macrorus</i> Baird
<i>Daphnia pulex</i> Leydig	<i>Macrothrix spinosa</i> King	<i>Camptocercus rectirostris</i> Schodler
<i>Daphnia sarojae</i> Rane *	<i>Macrothrix tetricornis</i> Gurney	<i>Camptocercus uncinotus</i>
<i>Daphnia similis</i> Claus	<i>Macrothrix triserialis</i> (Brady)	<i>Chydorus barroisi</i> (Richard)
<i>Daphnia tibetana f. fusca</i> Gurney	<i>Streblocerus serricaudatus</i> (Fischer)	<i>Chydorus brehmi</i> Biswas *
<i>Daphniopsis katrajensis</i> Rane *		<i>Chydorus denticulatus</i> Henry
<i>Daphniopsis sumanae</i> Rane *	<u>Chydoridae</u>	<i>Chydorus eurynotus</i> Sars
<i>Daphniopsis tibetana</i> Sars	<i>Acroperus angustatus</i> Sars	<i>Chydorus faviformis</i> Birge
<i>Hyalodaphnia hypsicephala</i> Daday	<i>Acroperus harpae</i> (Baird)	<i>Chydorus globosus</i> Baird
<i>Scapholeberis kingi</i> (Sars)	<i>Alona affinis</i> Leydig	<i>Chydorus cf. herrmanni</i> Brehm
<i>Simocephalus acutirostratus</i> (King)	<i>Alona aureola</i>	<i>Chydorus kallipygos</i> Brehm
<i>Simocephalus australiensis</i> Dana	<i>Alona bukobensis</i> Weltner	<i>Chydorus leonardi</i> King
<i>Simocephalus expinosus</i> (De Geer)	<i>Alona cambouei</i> Gurney & Richard	<i>Chydorus parvus</i> (Daday)
<i>Simocephalus latirostris</i> Fryer	<i>Alona cannellata</i> Brehm	<i>Chydorus pubescens</i> Sars
<i>Simocephalus serrulatus</i> (Koch)	<i>Alona costata</i> Sars	<i>Chydorus reticulatus</i> Daday
<i>Simocephalus vetulooides</i> Sars	<i>Alona davidi</i> Richard	<i>Chydorus robustus</i> Stingelin
<i>Simocephalus vetulus</i> (O. F. Muller)	<i>Alona davidi davidi</i> Richard	<i>Chydorus sphaericus</i> (O.F. Muller)
<i>Simocephalus vetulus elizabethe</i> (King)	<i>Alona davidi punctata</i> Richard	<i>Chydorus ventricosus</i> Daday
	<i>Alona cf. dentifera</i> (Sars)	<i>Dadaya macrops</i> (Daday)
<u>Moinidae</u>	<i>Alona dhilloni</i> Battish *	<i>Disparalona rostrata</i> (Koch)
<i>Moina banffy</i> Daday	<i>Alona glabra</i> Sars	<i>Dunhevedia crassa</i> King
	<i>Alona guttata</i> Sars	<i>Dunhevedia crassa ciliocaudata</i> (Sovinsky)

Scientific name	Scientific name
<i>Dunhevedia crassa crassa</i> King	<i>Pleuroxus denticulatus</i> Birge
<i>Dunhevedia serrata</i> Daday	<i>Pleuroxus laevis</i> Sars
<i>Ephemeroporus barroisi</i> Richard	<i>Pleuroxus similis</i> Vavra
<i>Euryalona orientalis</i> (Daday)	<i>Pleuroxus striatus</i> Schodler
<i>Eurycercus lamellatus</i> (O. F. Muller)	<i>Pleuroxus trigonellus</i> (O. F. Muller)
<i>Graptoleberis testudinaria</i> (Fischer)	<i>Pseudochydorus globosus</i> (Baird)
<i>Indialona ganapati</i> Petkovski	<i>Pseudoalona longirostris</i> Sars
<i>Indialona globulosa</i> (Daday)	
<i>Indialona jabalpurensis</i> Rane *	<u>Polyphemidae</u>
<i>Kurzia lattissima</i> (Kurz)	<i>Polyphemus pediculus</i> (Linne)
<i>Kurzia longirostris</i> (Daday)	
<i>Leydigia acanthocercoides</i> (Fischer)	<u>Leptodoridae</u>
<i>Leydigia ankammaraoi</i> Durga Prasad <i>et al.</i> *	<i>Leptodora kindti</i> (Focke)
<i>Leydigia australis</i> Sars	
<i>Leydigia australis ceylonica</i> (Daday)	<u>Holopedidae</u>
<i>Leydigia ciliata</i> Gauthier	<i>Holopedium gibberum</i> Zaddach
<i>Leydigia hardingi</i> Nayar *	
<i>Leydigia laevis</i> Gurney	Marine and estuarine forms
<i>Leydigia quadrangularis</i>	<u>Podonidae</u>
<i>Notalona globulosa</i> (Daday)	<i>Evadne tergestina</i> Claus
<i>Oxyurella sangramsagari</i> Rane *	<i>Podon polyphemoides</i> Leuckart
<i>Oxyurella singalensis</i> (Daday)	
<i>Oxyurella tenuicaudis</i> (Sars)	<u>Sididae</u>
<i>Pleuroxus aduncus</i> (Jurine)	<i>Penilia avirostris</i> Dana

*Endemic to India

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