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38. ON SOME COLLECTIONS OF MONOGONONT ROTIFERS (ROTIFERA: EUROTATORIA) FROM HARYANA STATE, INDIA

(With seventeen text-figures)

Very little is known about the rotifer fauna of Haryana State; the previous report from north-western India (Sharma 1976) included only fifteen species from this region. The present study is, however, based on samples collected from Ambala district (30°21'N, 76°52' E) between July, 1972-June, 1973 and on various occasions between 1978-84. As a result, twenty species are added to the earlier list.

List of examined taxa.

Class : ROTIFERA
Subclass : EUROTATORIA
Superorder: Monogononta
Order : Ploimida

Family: BRACHIONIDAE

Brachionus angularis (Gosse 1851)
B. bidentata Anderson 1889
B. budapestinensis Daday 1885
B. caudatus Borris & Daday 1894

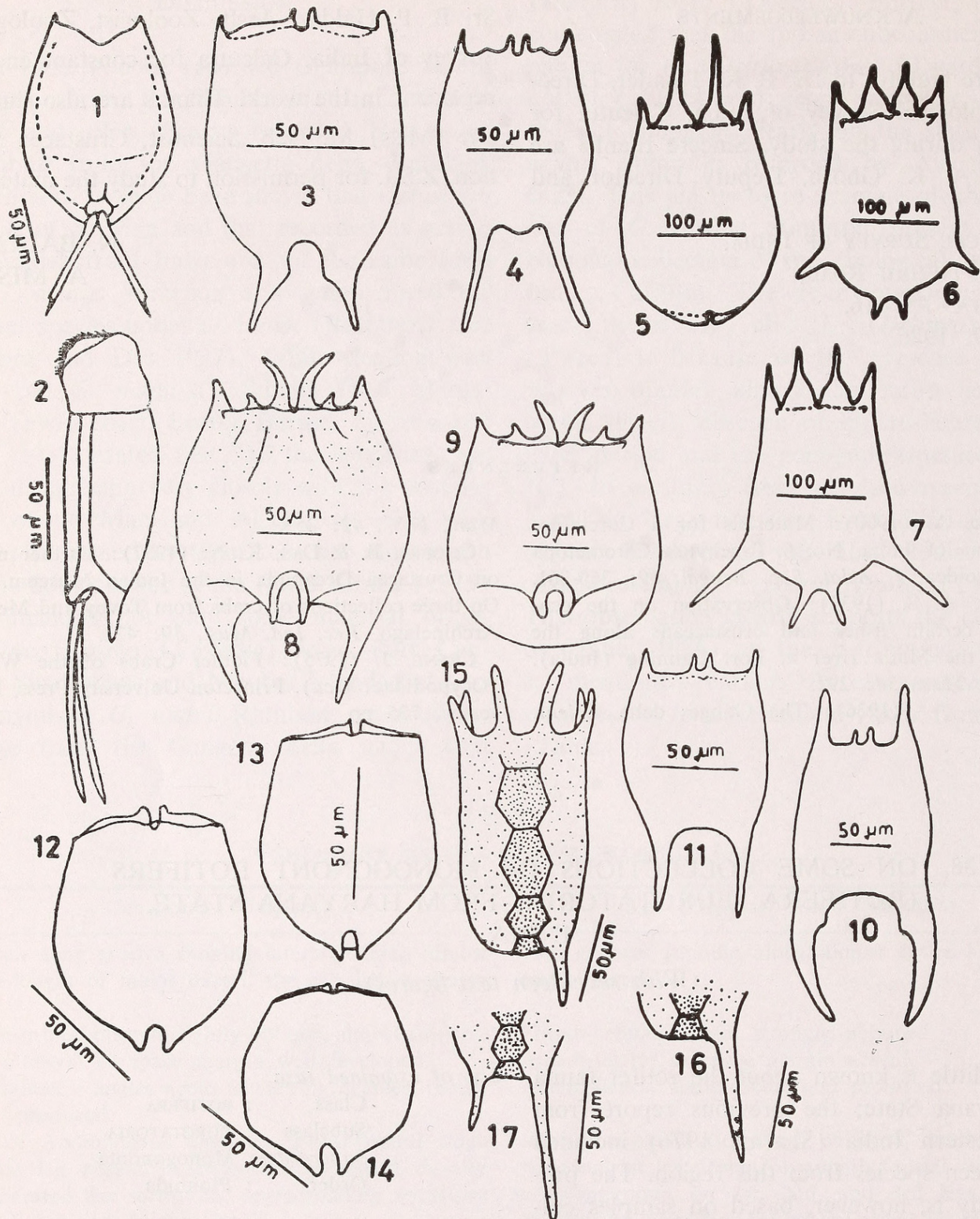


Fig. 1: *Lecane curvicornis*, ventral view; Fig. 2: *Cephalodella mucronata*, lateral view; Fig. 3: *Brachionus caudatus* f. *aculeatus*, ventral view; Fig. 4: *B. caudatus* f. *perso-natus*, dorsal view; Fig. 5: *B. calyciflorus* f. *dorcas*, dorsal view; Fig. 6: *B. calyciflorus* f. *anuraeiformis*, dorsal view; Fig. 7: *B. calyciflorus* f. *amphiceros*, dorsal view; Fig. 8: *B. quadridentatus* typical form, ventral view; Fig. 9: *B. quadridentatus* f. *cluni-orbicularis*, ventral view; Fig. 10: *B. forficula* typical form, dorsal view; Fig. 11: *B. forficula* f. *minor*, dorsal view; Figs. 12-14: *B. angularis*, ventral views; Figs. 15-17: *Keratella tropica*, cyclomorphic variants.

B. calyciflorus Pallas 1766
B. diversicornis (Daday 1885)
B. falcatus Zacharias 1898
B. forficula Wierzejski 1891
B. quadridentatus (Hermann 1783)
B. patulus (O. F. Müller 1786)
B. rubens Ehrenberg 1838
Keratella tropica (Apstein 1907)
K. procurva (Thorpe 1891)
Platyias quadricornis Ehrenberg 1882

Family: EUCHLANIDAE

Euchlanis dilatata Ehrenberg 1832

Family: MYTILINIDAE

Mytilina acanthophora Hauer 1938
M. ventralis (Ehrenberg 1832)

Family: TRICHOTRIDAE

Trichotria tetractis (Ehrenberg 1832)

Family: COLURELLIDAE

Colurella obtusa (Gosse 1886)
Lepadella ovalis (O. F. Müller 1786)
L. patella (O. F. Müller 1786)

Family: LECANIDAE

Lecane curvicornis Murray 1913
L. luna (O. F. Müller 1776)
L. bulla (Gosse 1885)
L. closterocerca (Schmarda 1898)

Family: NOTOMMATIDAE

Cephalodella forficula (Ehrenberg 1832)
C. mucronata (Harring & Myers 1929)

Family: TRICHOCERCIDAE

Trichocerca similis (Wierzejski 1893)

Family: ASPLANCHNIDAE

Asplanchna brightwelli Gosse 1850

Family: SYNCHAETIDAE

Polyarthra vulgaris Carlin 1943

Family: HEXARTHRICIDAE

Hexarthra cf. *mira* (Hudson 1871)

Family: FILINIDAE

Filinia opoliensis Zacharias 1898
F. longiseta (Ehrenberg 1834)

Family: TESTUDINELLIDAE

Testudinella patina (Hermann 1783)
Pompholyx sulcata Hudson 1885

REMARKS

Thirty-five species of monogonont rotifers, belonging to thirteen families and spread over seventeen eurotatorian genera, are documented presently. Amongst these, *Lecane curvicornis* (Fig. 1) and *Cephalodella mucronata* (Fig. 2) comprise new records from N. W. India. The rotifer fauna of Haryana bears a close affinity with that of the adjoining Punjab State. The common occurrence of *Brachionus* spp. and absence of genus *Notholca* imparts a tropical character to the fauna of this state. Various presently recorded species of *Brachionus* comprise pantropical or cosmopolitan forms of alkaline waters (Sharma 1983).

Considerable morphological plasticity is indicated in the examined taxa of *Brachionus* and *Keratella*. *B. caudatus* is represented by f. *aculeatus* (Fig. 3) and f. *personatus* (Fig. 4); *B. calyciflorus* includes f. *dorcas* (Fig. 5), f. *anuraeiformis* (Fig. 6) and f. *amphiceros* (Fig. 7). *B. quadridentatus* consists of typical form (Fig. 8) and f. *cluniorbicularis* (Fig. 9) while *B. forficula* includes typical form (Fig. 10) and f. *minor* (Fig. 11). Specimens of *B. angularis* (Figs. 12-14) could be referred to the typical form. In addition, *K. tropica* is represented by various cyclomorphic forms (Figs. 15-17).

Mytilina acanthophora comprises a rare and interesting form in this fauna; it is known so far only from West Bengal (Sharma 1979a) and Panjab (Sharma and Sharma 1984). *L. curvicornis* is reported previously from Nagpur, Andhra Pradesh and West Bengal while *C. mucronata* is known only from West Bengal (Sharma 1979b). *P. vulgaris*, though common in fish ponds, is reported previously only from eastern India i.e., West Bengal (Sharma 1979b) and Orissa (Sharma 1980). Quite likely, other allied species of *P. dolichoptera-vulgaris* group may also be found in this region. The other reported taxa show a wide distribution in this country.

The rotifer community is comprised of maximum of 12-15 species in the studied samples. Of these, *B. angularis*, *B. calyciflorus*, *B. rubens* and *K. tropica* invariably dominated the limnetic samples while *B. diversicornis*, *B. falcatus* and *B. forficula* comprised subdominant elements. *A. brightwelli*, *P. vulgaris*, *H. mira* and *Pompholyx sulcata* are also found in plankton samples. On the other hand, *Mytilina* spp., *Trichotria tetractis*, *Lecane* spp. and *Cephalodella* spp. are associated with littoral region, often infested with attached algae and macrophytes.

More or less clear indications are available

relating to trophic status of certain taxa. *B. angularis*, *B. rubens* and *B. calyciflorus* are found in eutrophic waters while *B. forficula* and *B. diversicornis* are collected presently from potable waters. Swarming of *B. rubens*, associated with those of certain cladocerans, i.e. *Daphnia carinata* and *Moina micrura*, is observed in ponds with blooms of blue-green algae. Under such conditions, *B. rubens* occurred as an epizoic on the mentioned cladoceran taxa as has also been observed under identical conditions in West Bengal (Sharma 1983).

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39. NYMPHACEAE OF JAMMU AND KASHMIR

Kashmir is famous for its gardens and lakes. The lakes which are of scenic beauty include Dal lake, Nagin lake, Anchar lake and Wular lake. From spring to autumn these lakes get added beauty by the presence of variously coloured flowering plants, mostly of the family Nymphaeaceae.

This family of confused taxonomy, includes

a number of aquatic herbs, in tropical and north temperate regions of the world. The family is represented by two genera in our area, including genus *Euryale* Salisb., now placed in Euryalaceae in Flora Europaea comprising of only one species, and the second genus *Nymphaea* L. comprising many species.

Several workers including Hooker, f. &



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