study, the occurrence and density of different groups seems to be influenced by the temperature. The temperature variance causes presence of less population, during hotest (May and June) and coldest (Jan. and Feb.) months. Population abundence is at its maximum in the months (March and April) of moderate temperature.

Summary

The paper describes ten species of aquatic crustacea found in a variety of habitats of Rewa district. Short description of different species has been supplemented with a view to enable one to identify them. The general composition of the aquatic crustacea is predominated by the members of Daphnidae and the Cyclopidae. Palaemonidae is represented only by a single species.

Acknowledgements

The authors are indebted to Dr. B. K. Tikader, Director, Zoological Survey of India for the publication of this paper. The authors express their sincere thanks to Dr. R. S. Saini, Professor and Head, Department of Zoology, University of Saugar, for his valuable help and criticism during the preparation of this note. They are also thankful to Dr. G. P. Jain, Head, Department of Zoology and Dr. Ramjee Sharma, Head, Department of Botany, Govt. Science College, Rewa for their kind interest and suggestions.

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REDESCRIPTION OF *ALONA TARAPOREVALAE* SHIRGUR & NAIK, 1977 (CLADOCERA : CHYDORIDAE : ALONINAE)

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(With 1 Text-figure)

Introduction

Shirgur & Naik (1977) described a new species, *Alona taraporevalae* based on the study of the material collected from shore waters off Back bay opposite Taraporevala aquarium, Bombay, India. However, this taxon was inadequately described and the illustrations provided were much reduced to show distinct taxonomic details. The present authors had the opportunity to examine the "Type material" deposited in Zoological Survey of India, Calcutta, which indicated a number of distinct and notable differences from the original description. Hence, this species is being redescribed in this account.

Systematic Account

Class : CRUSTACEA
Subclass : BRANCHIOPODA
Order : CLADOCERA
Family : Chydoridae Stebbing, 1902
Subfamily : Aloninae Frey, 1966
Genus : **Alona** Baird, 1843 emend. Smirnov, 1971

Alona taraporevalae Shirgur & Naik, 1977

(Text-fig. 1, a-f)

Alona taraporevalae Shirgur & Naik, 1977, p. 48-59, fig. 1. 1-8, fig. 2. 9-13 and fig. 3. 14-18.

Type Material :

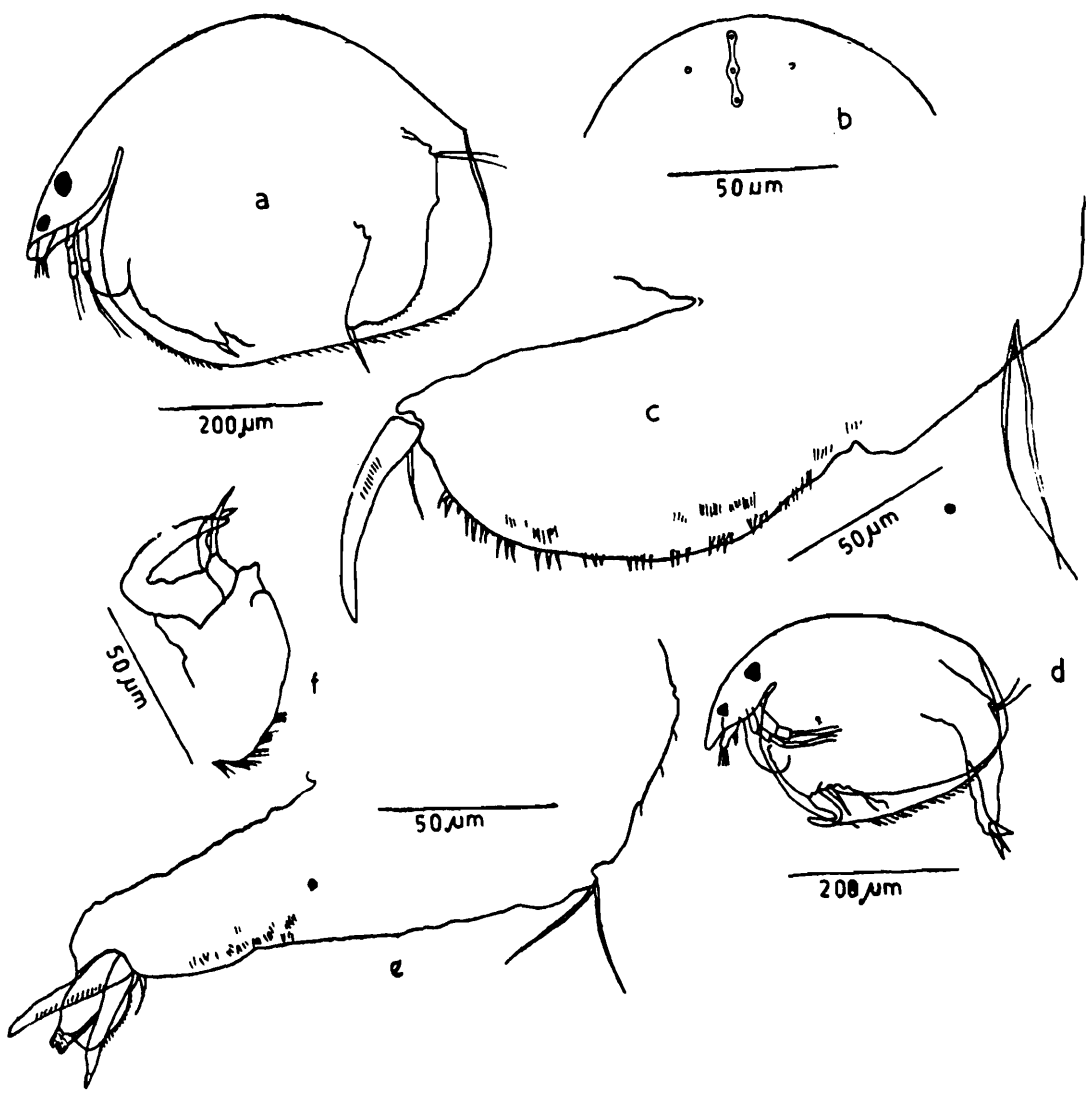
Holotype : Parthenogenetic female, ZSI Regd. No. C 1696/2.

Paratypes : 6 Parthenogenetic females, ZSI Regd. No. C 1697/2 ; 4 Males, ZSI Regd. No. C 1698/2 ; 3 Ephippial females, ZSI Regd. No. C 1699/2.

Type Locality : Back bay opposite Taraporevala aquarium, Bombay, India.

Description :

Female : Body almost oval in outline, with maximum height just before the middle (Text-fig. 1, a). Dorsal margin strongly arched ; ventral margin with a bulge in the middle and a slight concavity following it. Posterodorsal corner of valves distinct ; posteroventral corner



Text-fig. 1, a-f : *Alona taraporevalae* Shirgur & Naik a. female ; b. posterior margin of head shield (magnified) showing head pores c. postabdomen ; d. male ; e. postabdomen (male) ; f. Leg I (male).

broadly rounded, without denticles. Ventral margin of valves with short setae which continue on the posteroventral corner into a row of fine hairs that extends to the posterior margin of valves. Valves without any markings. Rostrum blunt and directed anteriorly. Head shield with broadly rounded posterior margin ; with three main connected head pores, located in the median line near its posterior margin and two small pores lateral to the median main pore (Text-fig. 1, b). Eyes moderately large ; ocellus slightly smaller than eye, located almost halfway between the eye and the tip of rostrum. Antennules reaching apex of rostrum ; olfactory seta situated in the middle, esthatascs unequal. Antennal setae : 0-0-3/1-1-3. Plate of labrum with broadly convex anterior margin and pointed apex. Postabdomen broad (Text-fig. 1, c), slightly tapering distally ; with maximum width in its middle. Dorsal margin of postabdomen convex ; distal dorsal end rounded, not projecting. Preanal corner not so distinct. Nine groups of anal denticles present, each group with 3-4 denticles ; proximal five groups located laterally and distal four groups situated marginally. Few irregular groups of lateral fascicles present ; not projecting beyond the dorsal margin of postabdomen. Claw long, stout and curved ; with setae on the proximal part of its concave margin. Basal spine single, long and about one third the length of claw.

Length : 0.53 mm.

Male : Smaller than female ; with maximum height slightly before the middle (Text-fig. 1, d). Dorsal margin evenly arched. Posterodorsal corner of valves not as distinct as in female ; posteroventral corner rounded, without denticles. Rostrum blunt and directed anteriorly. Plate of labrum with convex anterior margin and rounded apex. First leg modified ; with a strong, thick and curved hook (Text-fig. 1, f). Postabdomen long, narrow and slender, with maximum width at preanal corner (Text-fig. 1, e) ; preanal corner slightly distinct. Dorsal margin of postabdomen almost evenly tapering distally. Ventral margin longer than the dorsal margin and produced distally above the base of claws. Claw long and stout, with setae on its concave margin and with one slender basal spine. Only a few groups of lateral fascicles present. Vas deferens opening near the base of claw, ventral to it. A remarkably distinct and robust penis present between the claws.

Length : 0.32mm.

REMARKS

The described taxon closely resembles *Alona davidi* Richard but differs from the same in the following details :

i. in having distinct posterodorsal corner of valves ;

ii. in the shape of the female postabdomen ; number and arrangement of anal spines and lateral fascicles ;

iii. basal spine being longer than in *A. davidi* ;

iv. in the distinct and unique shape of the male postabdomen and arrangement of lateral fascicles thereon ; and

v. in the presence of a distinct and robust penis in male.

When the description of the present specimens was compared with that given earlier by Shirgur & Naik (1977), a number of differences could be noticed :

i. the shape of the plate of labrum as figured earlier (Shirgur & Naik, 1977, fig. 1.1) is different from the observed shape ;

ii. no distinct reticulations in the posterior margin of females were evident as described in the original (Text-fig. 1.3) ;

iii. lateral fascicles in the female postabdomen do not project beyond the dorsal margin of postabdomen as shown earlier (Text-fig. 1.8) and the number and arrangement of lateral fascicles also showed differences in the presently examined forms ;

iv. number and arrangement of lateral fascicles in the male postabdomen is also different. In the present study of the material, only a few lateral fascicles were visible ;

v. the protuberance marked at the distal end of postabdomen of male (Text-fig. 3.18) is infact the distinct and robust penis.

Habitat : The marine habitat reported for *A. taraporevalae* is of special interest since till now amongst the Cladocera only three genera (*Penilia*, *Podon* and *Evadne*) are known to be strictly marine. There is so far no report of any species of *Alona* known to occur in such a habitat. It is likely that the ephippia might have been carried there by wind since this agency is known to play an important role in the disparsal of the cladocerans. However, it is yet to be ascertained whether Back bay was indeed the original habitat of this species.

Summary

This paper deals with redescription of *Alona taraporevalae* Shirgur & Naik, 1977. The present study has indicated a number of distinct and notable differences from the original description. The examined material has also been compared with a closely allied species, *Alona davidi* Richard.