

**STUDIES ON CRUSTACEA (OSTRACODA) OF BIHAR, INDIA.
II. CENTROCYPRIS INDICUS SP NOV.**

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INTRODUCTION.

The genus *Centrocypris* Vavra was recorded (*C. horrida*) from Palni hills, India by Hartmann (1964). Victor & Fernando (1979) transferred *Eurycypris mathai* Arora to this genus as *C. matha*. Battish (1981) described two new species as *C. bhagirathiae* and *C. madani* from Ludhiana, Punjab. *Centrocypris indicus* sp. nov. is clearly distinguishable from other known species and is described here.

Family CYPRIDIDAE Baird 1845
Subfamily CENTROCYPRIDINAE Hartmann & Puri 1974
Genus. *Centrocypris* Vavra 1895
Centrocypris indicus sp. nov.

Diagnosis : Shell pitcher like in dorsal view, Posterior broader than anterior, outer surface profusely tuberculated throughout, tubercles pointed, anterior ones sharp and longer than posteriors, fine hairs in between the tubercles, ventral margin without plate, height more than half and width 3/4 of the length ; right and left maxillary palps symmetrical in male ; Zenker's organ with 22 whorls of spicules.

Description. Female (Figs. 1-13).

Colour dirty green, ventral black : shell in dorsal view pitcher like, posterior broader than anterior, neck with distinct depression in anterior half, lateral margins partly straight in posterior, surface profusely tuberculate throughout with fine hairs in between, tubercles pointed, anterior ones sharp and longer than posteriors, ventral margin without plate. Left valve extends slightly beyond right valve anteriorly.

Antennule (Fig. 5):

Length ratio of segments 3 to 7 : 18 : 7 : 5 : 3 : 4.5, small aesthetasc on 7th natatory setae well developed.

Antenna (Fig. 6)

Prominent, first protopod with 2 scale bearing stout spines, length ratio of endopod segments 30:13:12:6, inner margin of endopod-1 and outer margin of endopod-2 with rows of microtrichs and inner margin of segment 2 with a bunch of setae, natatory setae long reaching beyond claws and sparsely setose in distal half, Y seta long, proximal and distal parts equal, segment 2 and 3 fused, setae t_1 and t_4

small and simple while t_2 and t_3 finely setulate, Z_1 , Z_2 and Z_3 setulate reaching tip of claws, Y_2 a small aesthetasc, claws G1, G2, G3 serrated terminally ; segment 4 narrow and small, seta Y_3 with a simple seta (or setule) and common stalk, GM long and prominent claw, Gm small and slender seta.

Rake like organ (Fig. 8).

15 teeth.

Mandible (Fig. 7).

Seven rows of multidentate chitinous teeth, palp well developed and four segmented, first segment with 3 plumose and one α seta, second segment with 4 long plumose and one β seta, third segment with plumose thick Y seta, one simple seta on inner side and 7 smooth long setae on outer side, fourth segment with 2 smooth and 2 distally serrated long setae.

Maxillule (Fig. 9).

Third lobe with 5 denticulate and 1 smooth spine, distal segment of palp cylindrical and length twice the least width.

Maxilla (Fig. 10).

Palp in female with 3 unequal terminal setae and epipodite with 6 plumose setae.

Thoracopod- I (Fig. 11).

Segment 1 to 4 with one seta each on its inner side, segment 4 with one strong long terminally denticulate claw and one outer small seta, all the setae pilose with that of segment 1 curved, terminal claw curved, length ratio of segments and claw 62:28:25:12:100 in distal direction.

Thoracopod - II (Fig. 12).

Terminal segment with a complex pincer organ, with a beak like claw, a long denticulate (2 rows) curved claw, a narrow seta PZ_2 in between, a spoon like lobe (Lo) on the interodistal side of the third segment. Segment 4 not distinct from 3rd segment.

Furca (Fig. 13).

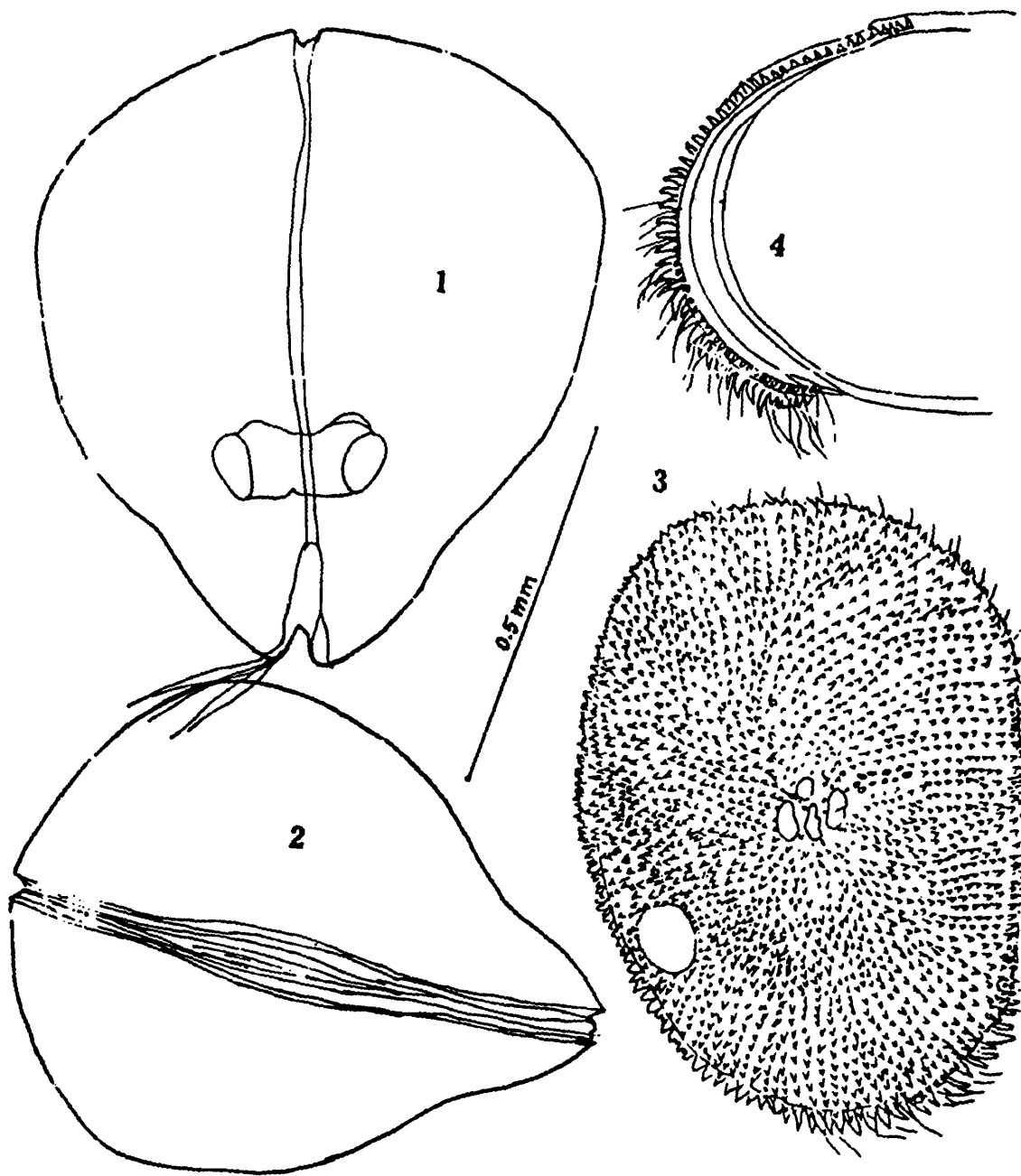
Asymmetrical in female, ramus length 14 times least width, dorsal margin serrate distally, terminal seta (Sa) small and nearly half of the dorsal seta (Sp) furcal support simple arch like.

Male (Figs. 14-19).

Smaller in size but difficult to distinguish from outside, maxillary palp symmetrical, Zenker's organ with 22 whorls of spicules, setae on thoracopod-I (on segments 1 & 3) smaller than females, endopod segments 2 and 3 of antenna fused in both.

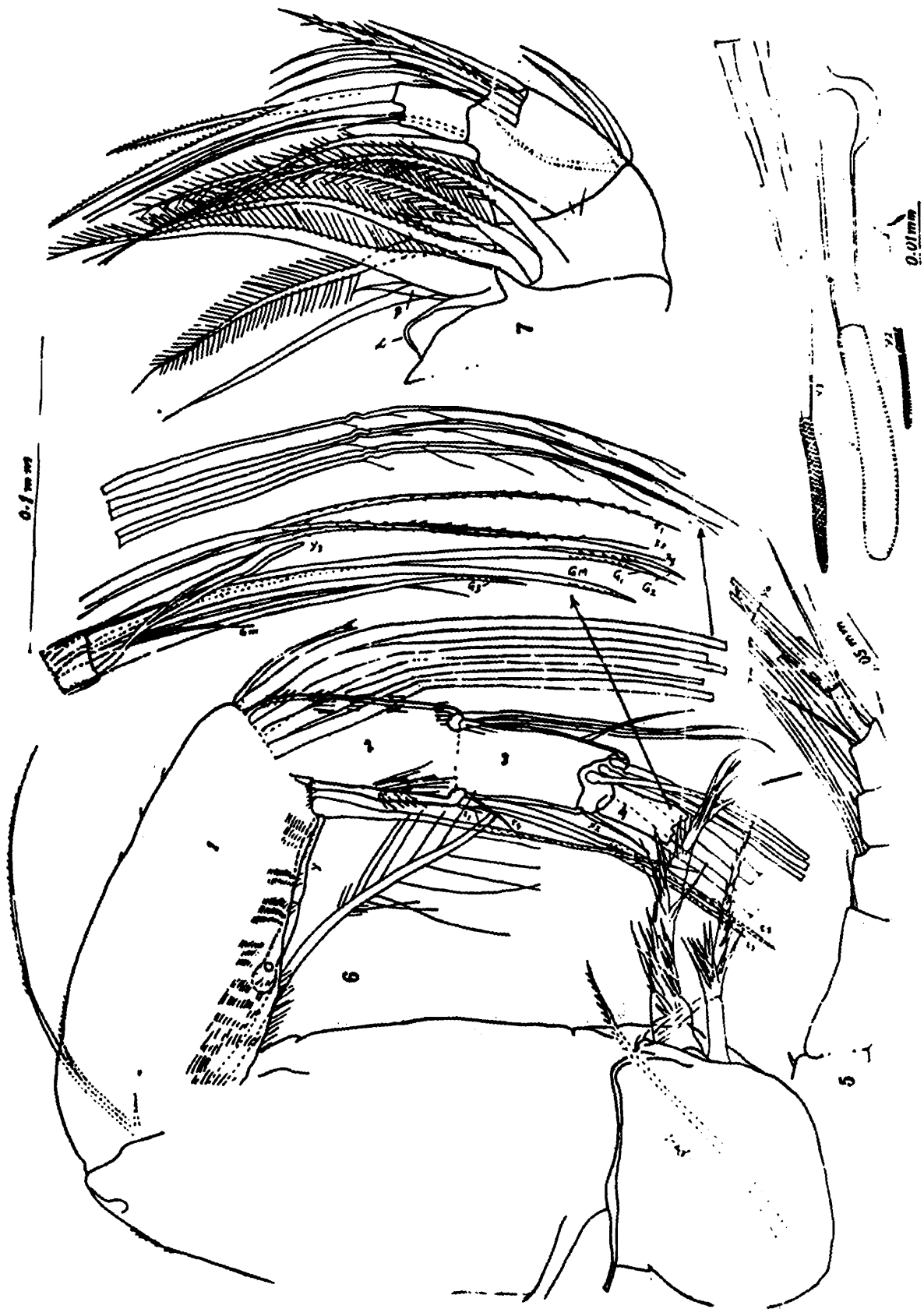
Holotype : ♀ (Slide No 5a, 5b) Reg. No A1052 Zoological Survey of India, Gangetic plains Regional Station, Patna ; Loc. Pond, Sadikpur Mathia, Siwan, Bihar, India, Coll. Lakshman Prasad Gupta, 10-X-1985.

Paratypes : ♂♂ The males will be Allotyped (Slide No 1a, 1b and 3), ♀♀ (Slide No 2, 4, 6 and unsorted 200 specimens in Spirit, Reg. No. A1053, details same as for Holotype.



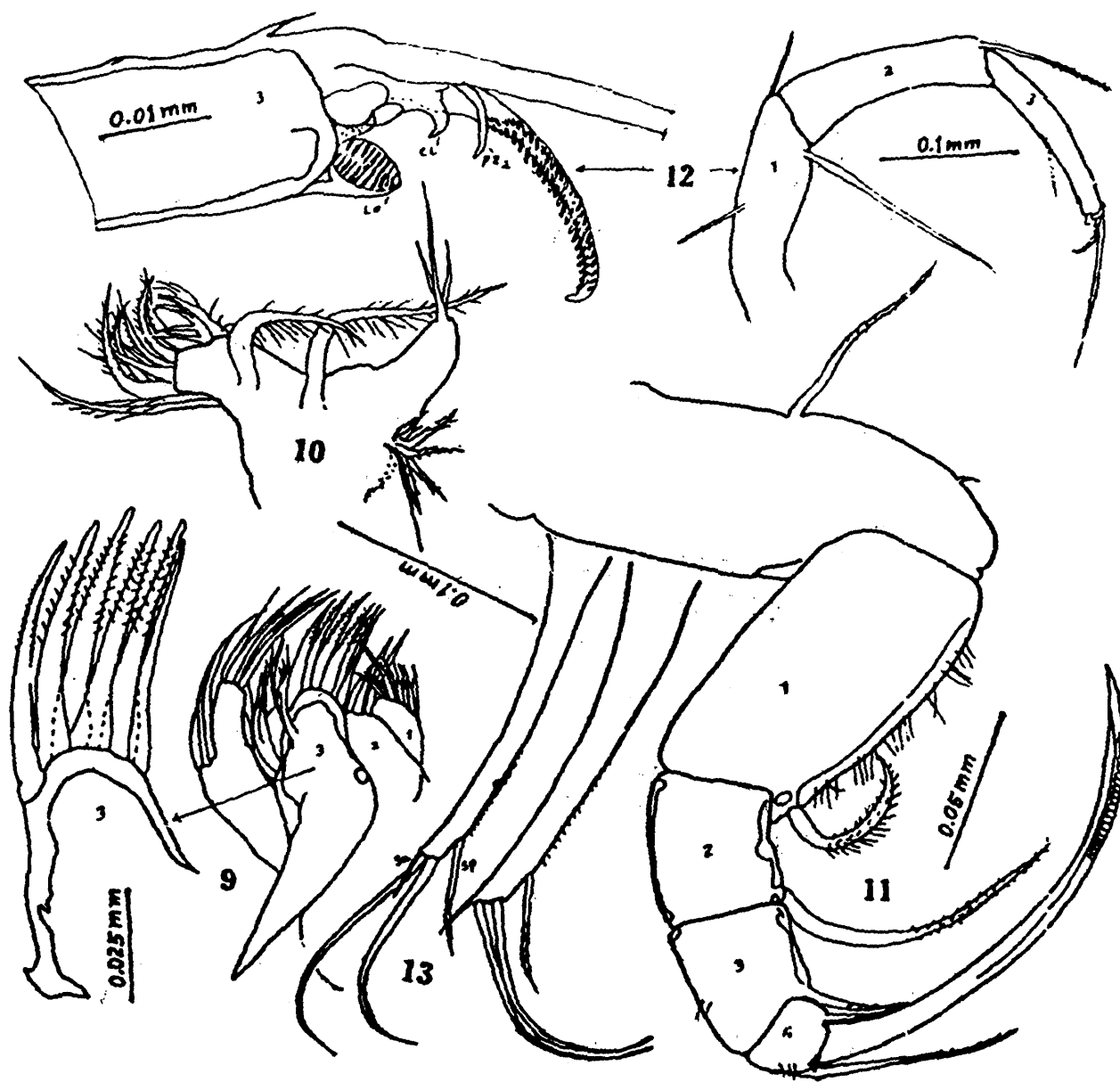
Centrocypis indicus (Female)

Figs. 1-4. 1. Dorsal view of shell outlines. 2. Ventral view of shell outline. 3. Lateral view of shell tubercles. 4. Side view of shell anterior margin.



Centrocypris indicus (Female)

Fig: 5-7. 5. Antennule, 6. Antenna, 7. Mandible.



Centrocypris indicus (Female)

Fig. 9-13. 9. Maxillule ; 10. Maxilla ; 11. Thoracopod-I ; 12. Thoracopod-II ; 13. Furca.



Centrocypris indicus (Male)

Figs. : 8, 14-19. 8. Rake like organ ; 14. Antenna ; 15. Mascilla ; 16. thorocopod-I ; 17. Furca and furcal support ; 18. Zenker's organ ; 19. Hemipenis.

Measurement : Length 0.75 - 0.94 mm, height 0.52 - 0.57 mm ; breadth 0.6 - 0.72 mm.

DISCUSSION

There is some controversy regarding characters and status of the genus *Centrocypris* for inclusion at family level. Hartmann and Puri (1974) stated that *Centrocypris* Vavra 1895 has 4 toothed spines on third lobe of maxillule and hence established a new subfamily centrocypridinae separating it from Notodromatinae which has 6 toothed spines. McKenzie (1971) noted that there are 5 zohnbursten (toothed spines) on third lobe of maxillule and 6 strahlen on epipodite of maxillae in both male and female of *Centrocypris*, which is absent in Notodromatinae. The terminal joint of cleaning limb (Thoracopod-II) is not separated from penultimate (3rd) segment in case of centrocypridinae while in case of Notodromatinae, though small, but clearly separated.

My observations are in agreement with the description given for the genus by McKenzie. It is probable that in case of *C. bhagirathiae* and *C. madani* (Battish 1981), dentate nature of 5th spine which is outermost has escaped his notice as he fails to give this character. In *C. indicus* this is clear and distinct.

Therefore, the present species is close to *C. madani* battish (1981) but differs in outline in dorsal view and being smaller in size, having 15 number of teeth on rake like organs distal segment of maxillular palp which is twice in length to the width, maxillary palp symmetrical, Zenker's organ with 22 whorls of spicules and furcal ramus 14 times longer as its least width. It also differs from *C. mathai* (Arora 1931) which is larger in size and has asymmetrical maxillary palp in males. Thus *C. indicus* is the smallest species known so far.

ACKNOWLEDGEMENT

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REFERENCES

- Battish, S.K. 1981. Two new species of *Centrocypris* Vavra 1895 (Crustacea : Ostracoda) from Punjab, India. *J. Nat. Hist.*, **15** : 135-143.
- Hartmann, G. and Puri, H.S. 1974. Summary of Neontological and Palaeontological classification of ostracoda. *Mitt. ham. zool. Mus. Inst.*, **70** : 7-73
- McKenzie, K.G. 1971. Entomostraca pf Aldabra, with special reference to the genus *Heterocypris* (Crustacea, Ostracoda). *Phil. Trans. R. Soc. B.* **260** : 257-297.
- Victor, R. and Fernando, C.H. 1979. The Freshwater Ostracods (Crustacea : Ostracoda) of India. *Rec. zool. Surv. India.* **74**(2) : 147-242.