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# RECENT FRESHWATER OSTRACODES FROM CHILKA LAKE AREA

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#### ABSTRACT

Eleven freshwater ostracode taxa have been described and illustrated for the first time from the shore of the Chilka Lake, Rambha, Orissa

#### INTRODUCTION

The present paper is the first of a series of two papers on the Recent ostracodes from the Chilka Lake, the largest salt water lake on the east coast of India between latitudes 19° 28' and 19° 56'. The only record of ostracodes from the Chilka Lake is an abstract by Ratnam and Rao (1965) in which three genera *Perissocytheridea*, *Candona* and *Limnocythere* are listed along with a few foraminiferal taxa.

The material was collected from dried mud near Traveller's Bungalow, Rambha (Lat. 19° 32'), Ganjam District, Orissa. The following eleven taxa were recovered from the mud sample: Cypris subglobosa Sowerby, Cyprinotus aff. kimberleyensis McKenzie, Hemicypris megalops Sars, H. pyxidata (Moniez), Herpetocypris sp. indet., Stenocypris hislopi Ferguson Jr., Potamocypris sp. A & B, Ilyocypris australiensis Sars, I. bradyi Sars, and I. gibba (Ramdohr). Of these, Cyprinotus aff. kimberleyensis, Herpetocypris sp. indet. and Potamocypris sp. A & B are represented by only one or two specimens each while the remaining are abundant.

The place from where the mud sample was collected gets flooded by the lake water during the rainy season. The samples from the lake bottom sediments have yielded such typically marine/brackish water genera as Keijella, Phlyctenophora, Loxoconcha, Hemicytheridea, Tanella and Neomonoceratina. This would, therefore, mean that the fresh water ostracodes found at the lake shore during the dry month of February were brought in after the drying up of lake water, that is, they do not live permanently in the lake.

All the figured specimens have been deposited in the Museum of the Centre of Advanced Study in Geology, Panjab University, Chandigarh. All dimensions are in mm.

### SYSTEMATIC DESCRIPTION

Order Podocopida
Suborder Podocopina
Superfamily Cypridacea
Family Cyprididae
Subfamily Cypridinae
Genus Cypris Mueller, 1776
Cypris subglobosa Sowerby
(Pl. I—1a-c)

Cypris subglobosa Sowerby, 1840, in Malcolmson, pl. 47, fig. 3 (description in plate explanation).

Chlamydotheca subglobosa (Sowerby). Brady, 1886, pp. 300-301, pl. 38, figs. 24-27a.

Dimensions: Left valve (CASGMF 710): length 0.97, height 0.58, half width 0.39.

Remarks: This species was originally described from the ponds of Nagpur by Sowerby (1840). In recent years, it has been found to occur in the Karewas of Kashmir (Bhatia, 1968; Singh, 1971); Upper Siwaliks of Simla Hills (Mathur, 1972); Holocene of Bikaner (Bhatia and Khosla, 1968 and of Bombay-Comorin (Hartmann, 1964).

Genus Cyprinotus Brady, 1866 Cyprinotus sp. aff. C. kimberleyensis McKenzie (Pl. I—2)

aff. Cyprinotus kimberleyensis Mckenzie, 1966, pp. 262-264, figs. 2A-2F.

Dimensions: Right valve (CASGMF 711): height 0.81.

Remarks: A single broken valve characterized by a protruding dorsal 'hump' and anteroventral and posteroventral denticulations occurs in our material. Although bigger in size, the present specimen shows a very close resemblance with G. kimberleyensis described from the Holocene of north-western Australia (McKenzie, 1966). In view of the paucity of material it has been assigned to the Australian species with some reservations.

Genus Hemicypris Sars, 1903 Hemicypris megalops Sars (Pl. I—3a-b)

Hemicypris megalops Sars, 1903, p. 27, pl. 3, figs. 3, 32, and 36; McKenzie, 1966, pp. 265-266, figs. 2G-2K.

Dimensions: Female carapace (CASGMF 712): length 0.81. height 0.48, width 0.39.

Remarks: Hemicypris megalops was first described from Sumatra by Sars (1903). Recently, this species has also been reported from north-western Australia (McKenzie, 1966). This probably constitutes the first record of the species from India.

Hemicypris pyxidata (Moniez) (Pl. I—4a-b)

Cyprinotus pyxidatus Moniez, 1892, p. 134, pl. 10, figs. 23-27.

He nizypris pyxidata (Moniez). Sars, 1903, pp. 25—26, pl. 3, figs. 1, la-f.

Dimensions: Carapace (CASGMF 713): length 1.0, height 0.73 width 0.39.

Remarks: In India this species is known to occur in the Upper Siwaliks exposed near Chandigarh (Bhatia and Khosla, 1967).

Genus Herpetocypris Brady & Norman, 1889 Herpetocypris sp. indet. (Pl. II—2)

Description: Left valve elongate-ovate, dorsal margin nearly straight, ventral margin very gently concave in front of middle; anterior and posterior margins rounded. Surface smooth.

Dimensions: Left valve (CASGMF 714): length 1.1, height 0.42.

Remarks: In view of the paucity of material and poor state of preservation a more precise identification is not possible.

Subfamily Stenocyprinae

Genus Stenocypris Sars, 1889

Stenocypris hislopi Ferguson Jr.

(Pl. II—1a-c)

Stenocypris hislopi Ferguson Jr. 1969, pp. 68-71, figs. 1, 2-6.

Dimensions: Left valve (CASGMF 715): length 1.55, height 0.58, half width 0.29.

Remarks: Stenocypris hislopi was described by Ferguson Jr. (1969) on the material collected from pools in Nagpur by the Rev. S. Hislop and housed in the British Museum (Nat. Hist.), London. According to Ferguson Jr. this species, though very similar to S. cylindrica major Baird, is much smaller in size. The present specimens though differ very slightly in outline and size of the carapace probably come within the range of variation of S. hislopi.

Subfamily Cypridopsinae

Genus Potamocypris Brady, 1870

Potamocypris sp. A

(Pl. I—5a-b)

Description: Carapace small, subtriangular, dorsal margin arched, angled at the highest point, ventral margin sinuate; anterior margin broadly rounded, posterior margin narrowly so; maximum height in front of middle, maximum length and width median, maximum height more than half the length. Surface smooth.

Hinge and inner margin as for the genus.

Dimensions: Carapace (CASGMF 716): length 0.55, height 0.36, width 0.26.

Remarks: This species differs from Potamocypris minuta Staplin (1963) in having a smooth surface. More specimens are needed to give it a new name.

Potamocypris sp. B (Pl. II—6a-b)

Description: Right valve elongate, dorsal margin arched, angled just in front of middle, ventral margin very gently concave in the middle; anterior margin broadly rounded, posterior margin narrowly rounded; maximum length median, maximum height in front of middle, height less than half the length. Surface smooth.

Hinge adont. Anterior and posterior vestibula present.

Dimensions: Right valve (CASGMF 717): length 0.68, height 0.29.

Remarks: In view of the paucity of material the present specimen is being described under open nomenclature.

Family Ilyocyprididae
Subfamily Ilyocypridinae
Genus Ilyocypris Brady & Norman, 1889
Ilyocypris australiensis Sars
(Pl. II—3a-b)

Ilyocypris australiensis Sars, 1889, p. 462, pl. 2, figs. 5-8, pl. 6, figs. 1-14,

Dimensions: Carapace (CASGMF 718): length 0.73, height 0.36.

Remarks: This species, though similar to Ilyocypris gibba (Ramdohr), differs from the latter in the absence of lateral protuberances. It is known to occur in Australia, Africa and southern Europe. Hartmann (1964) first reported it from the Indian subcontinent from the Holocene of Kutch and Madras.

# Ilyocypris bradyi Sars (Pl. II—4a-b)

Ilyocypris bradyi Sars, 1890, pp. 59-60.

Dimensions: Carapace (CASGMF 719): length 0.74, height 0.39, width 0.29.

Remarks: Except for the small size the present specimens resemble Ilyocypris bradyi first described from Norway by Sars (1890). In India this species is known from the Upper Siwaliks, near Chandigarh (Bhatia & Khosla, 1967); and Upper Karewas of Kashmir (Bhatia, 1968; Singh, 1971).

## Ilyocypris gibba (Ramdohr) (Pl. II—5a-b)

Cypris gibba Ramdohr, 1808,p. 91, pl. 3, figs. 13, 14, 17.

Ilyocypris gibba (Ramdohr). Brady and Norman, 1889, p.107, pl. 22, figs. 1-5.

Dimension: Carapace (CASGMF 720): length 0.73, height 0.39, width 0.33.

Remarks: This species, characterized by the presence of nodes on the lateral surface was until the present work known in India from the Karewas of Kashmir (Bhatia, 1969; Singh, 1971).

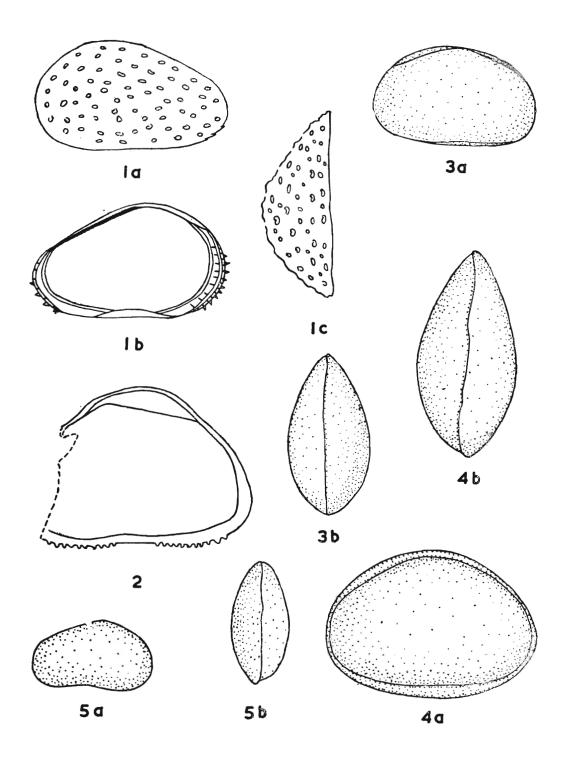
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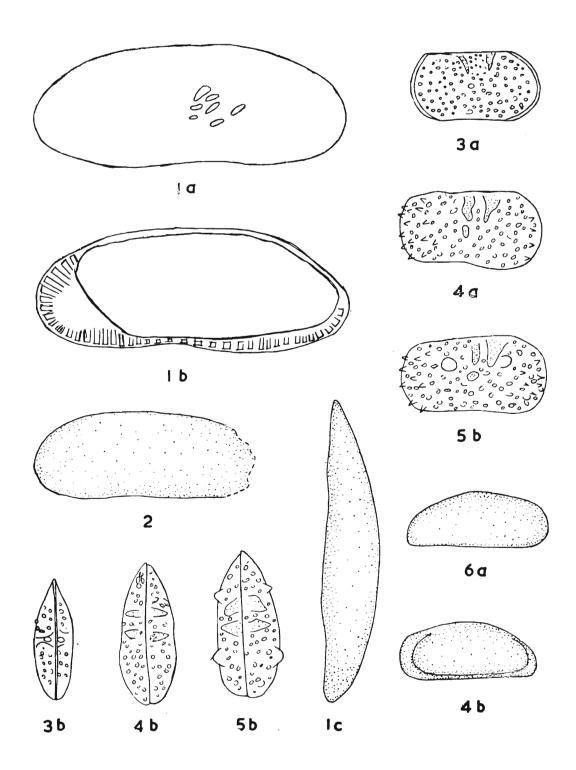
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### EXPLANATION OF PLATES

#### PLATE I

(All figures ×55)

la-c.	Cypris subglobosa Sowerby Left valve, a, external view, b, internal view, c, dorsal view.
2.	Cyprinotus aff. kimberleyensis McKenzie Right valve, internal view.
3a-b.	Hemicypris megalops Sars Carapace, a, left valve view, b, dorsal view.
4a-b.	Hemicypris pyxidata (Moniez) Carapace, a, left valve view, b, dorsal view.

Potamocypris sp. A
Carapace, a, right valve view, b, dorsal view.

#### PLATE II

(All figures  $\times 55$ )

Stenocypris hislopi Ferguson Jr.
Right valve, a, external view, b, internal view, c, dorsal view.
 Herpetocypris sp. indet.

Left valve, external view.

5a-b.

3a-b. Ilyocypris australiensis Sars
Carapace, a, right valve view, b, dorsal view.

4a-b. *Ilyocypris bradyi* Sars Carapace, a, right valve view, b, dorsal view.

5a-b. Ilyocypris gibba (Ramdohr)
Carapace, a right valve view, b, dorsal view.

6a-b. Potamocypris sp. B Right valve, a, external view, b, internal view.