

STUDIES ON CRUSTACEA OF BIHAR. I. TWO NEW
OSTRACODS FROM SUBTERRANEAN WATERS
OF MONGHYR

By

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INTRODUCTION

Studies on the subterranean fauna of Bihar has revealed the presence of interesting ostracods i.e. *Indocandona krishnakanti* Gupta and *Candonopsis urmilae* Gupta (in Press). The present new genus under report is interesting in many features as it possesses the combination of characters and is placed in the subfamily Herpetocyprrellinae of the family cyprididae. Males are absent.

Family ; CYPRIDIDAE

Subfamily : HERPETOCYPRELLINAE

Prionocandona gen. nov.

Diagnostic characters : Shell subtriangular to deltoid in side view ; dorsum slightly convex, highest point anterior of centre, anterodorsal concavity above the eye ; ventre sinuate and inflexed with wide flap ; posterior acutely rounded, anterior widely rounded ; inflated ovate and hexagonal in dorsal view, anterior and posterior end broadly pointed, sides moderately convex, greatest breadth in the middle and more than height ; surface reticulate ; natatory setae on second antennae absent ; second thoracic leg with one reflexed seta smaller than the penultimate segment and one sickle shaped prominent claw ; furca narrow longer than half the length, stout serrate claws ; terminal seta equal to or longer than the terminal claws ; subterminal claw 75 percent of the terminal claw ; dorsal seta stout close to and 50 percent of the subterminal claw ; furcal ramus curved, dorsal margin serrate in

distal two third of the length, chitin support just like *Strandesia spinulosa* (Rome 1969).

The complete absence of natatory setae and structure of second thoracic leg shows close relationship with *Herpetocyprella* Daday (1909).

Type species : *Prionocandona Kantii* sp. nov.

Prionocandona Gupta is closely allied to the genus *Herpetocyprella* Daday (1909) but differs in shell size and structure, claw length of antenna, first thoracic leg, claw structure of the second thoracic leg and also the furca.

***Prionocandona kantii* sp. nov.**

(Figs. 1-3)

Female : Shell length 0.55-0.615 mm, height 0.3 mm, breadth 0.37 mm ; subtriangular to deltoid in side view, left valve slightly exceeds the right in length at its anterior and posterior extremities, dorsum slightly convex, highest point anterior of centre, antero-dorsal concavity above the eye point ; ventre sinuate and inflexed with wide flap provided with prominent pore canals, posterior acutely and anterior widely rounded ; in dorsal view inflated, ovate hexagonal in outline ; anterior and posterior ends broadly pointed (fig. 3 A, B), sides moderately convex, greatest breadth in the middle and more than height, duplicature narrow ; surface reticulate, scattered setae on ventral ; anterior and posterior margins ; inner lamella wider anteriorly.

Antennule (Fig. 1C) : 7 segmented, segmental ratio 23 : 7 : 10 : 6 : 6 : 6 : 6.

Antenna (Fig. 1D) : Natatory setae absent, endopod 4 segmented, segment 2 & 3 fused, length ratios 13 : 3 : 5 : 3, Y seta about 75 percent of first segment in length, distal segment of Y seta 58 percent of its total length, seta Y_1 is pilose, only T_1 & T_2 are present on the inner margin reaching the end of 4th endopod, on outer margin opposit T_1 T_2 are 2 small setae ; Z_1 Z_2 & Z_3 are on the outer side while Z_4 is small and on

the inner side of the antenna, claws G_1 G_3 are longer and reaching the tip of the terminal claw GM, G_2 is about 76 percent of G_3 , all the 4 claws are serrate in the distal end, GM is a narrow slender seta reaching the end of claw G_2 .

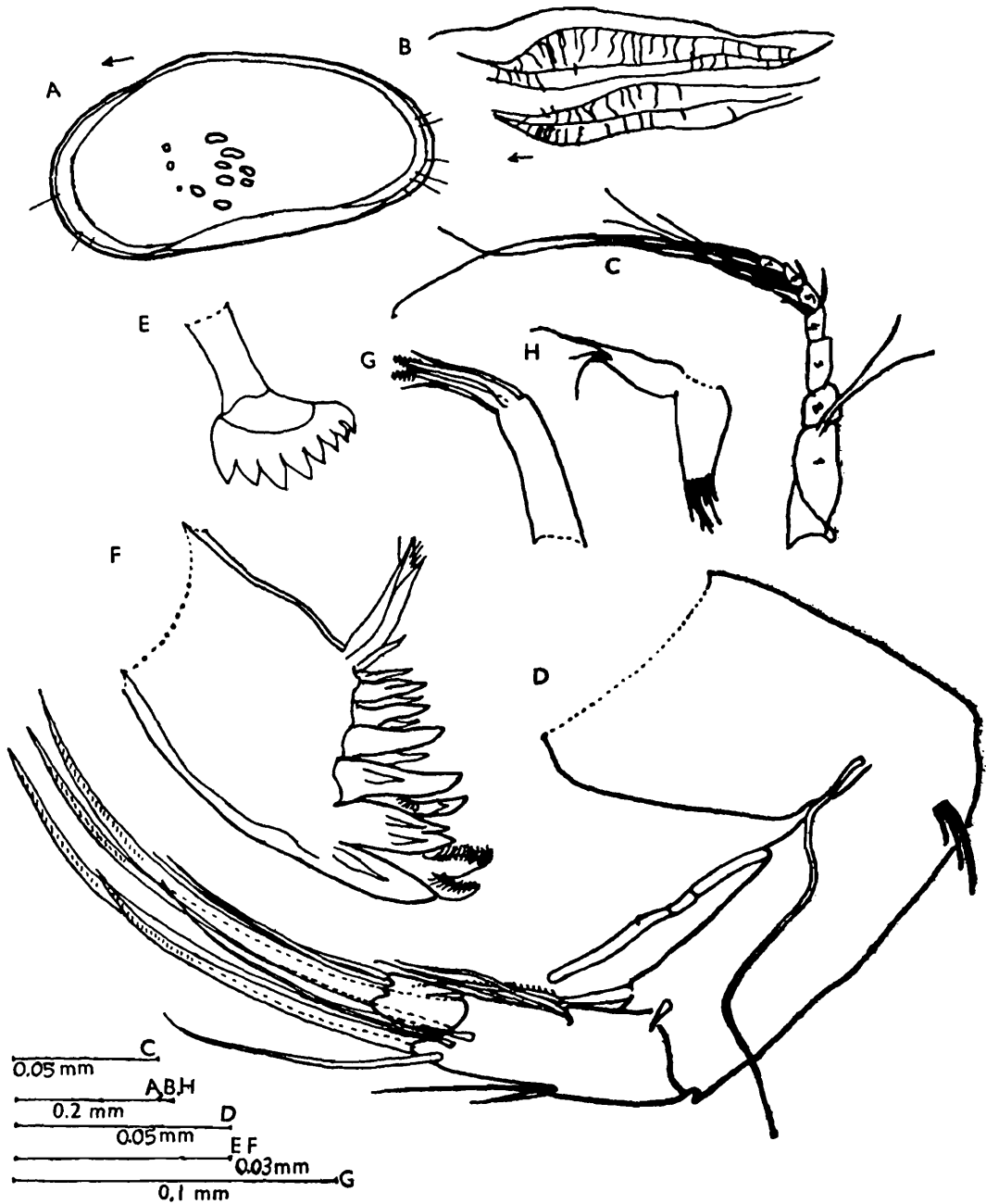


Fig. 1. A. Lateral view of the shell B. Ventral flap of shell
 C. Antennule D. Antenna E. Rakelike organ F. Mandible
 G. Maxillular spines H. Maxilla.

Rake like organ (Fig. 1 E) : 7-8 denticles.

Mandible : (Fig. 1 F, 2A) : 7 multidentate teeth with a row of accessory setae giving typical Cypridine structures,

mandibular palp 4 segmented, segment one with 2 long pilose and one simple seta on inner distal margin, segment 2 with 4 long, simple smooth setae on inner distal margin

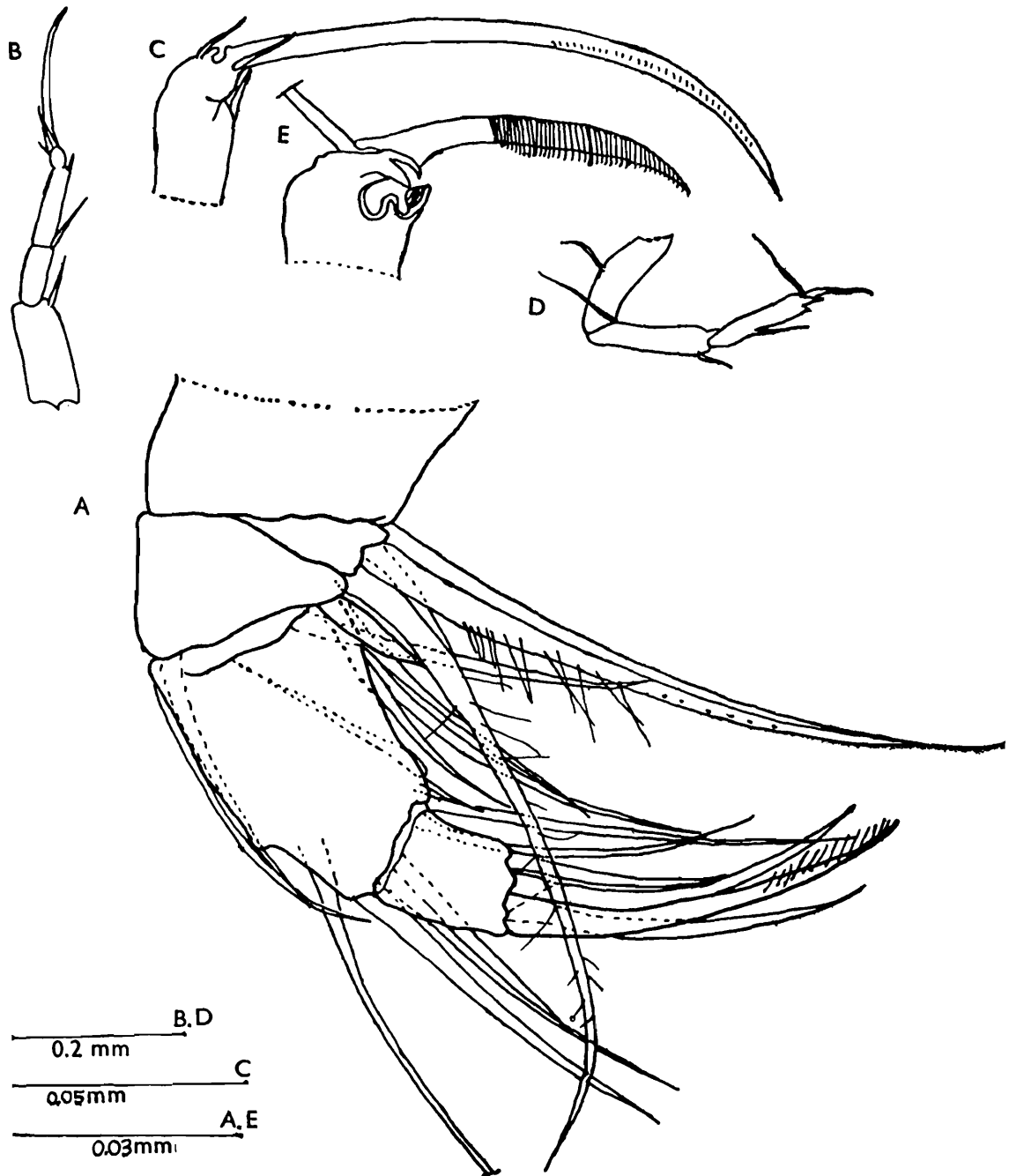


Fig. 2. A. Mandibular palp B. Thoracopod I C. Thoracopod I distal end magnified D. Thoracopod II E. Thoracopod II distal end magnified.

and 2 simple smooth setae on outer margin, segment 3 with 4 smooth long setae on the outer margin and 4 setae of varied length on the inner distal margin, segment 4 with terminal segment with 4 stout terminal setae of which the middle one is stronger with setose termination.

Maxillule (Fig. 1G) : Third lobe with two toothed spines.

Maxilla (Fig. 1H) : Female endopodite with 3 long setae of unequal size.

Thoracopod—I (Fig 2 B,C) : Length ratios of the 4 distal segments 27 : 9 : 14 : 2 ; terminal claw serrate and equal to the combined length of distal 3 segments, each segment with small seta at its distal inner end, the terminal segment has 2 minute setae.

Thoracopod—II (Fig. 2 D,E) : Four segmented, terminal segment greatly reduced with a terminal sickle shaped stout setose claw and a reflexed simple seta shorter than length of undivided penultimate segment, short seta located behind midposition of penultimate segment.

Furca (Fig. 3 C, D) : Furca long narrow, curved symmetrical, ramus 24 times the narrowest width, terminal seta longer than or equal to the terminal claw which is nearly half the length of the ramus, terminal claw stout, subterminal claw 75 percent of the length of terminal claw, dorsal seta stout and close to the subterminal claw, dorsal margin of ramus finely serrate with 5 to 6 groups of denticles in distal two third, claws strongly serrate.

Furcal Chitin support similar to *Strandesia odiosa* (Moniez) figured by Victor and Fernando (1979) and *S. spinulosa* (Rome 1969).

Eyes : Absent.

Male : Not known.

Holotype : 1 ♀ (on slide no-1+ shells in spirit) Reg. No. A 1036 Zoological Survey of India, G. P. R. S., Patna, Loc. Monghyr. Bihar, India, From a well in Belan Bazar ; Coll. L. P. Gupta, 27. IV. 83.

Paratypes : ♀ ♀ (Slide Nos. 2-5) Reg. No. A 1037.

30 ♀ ♀ (in spirit) Reg. No. A 1038, Details as for holotype.

Discussion : The new genus *Prionocandona* Gupta is closer to *Herpetocyprilla* Daday (1909) but differs in being much

smaller in size, the breadth being $\frac{2}{3}$ and height $\frac{1}{2}$ the length. The general outline of *Prionocandona* in dorsal view is hexagonal. The ventral flap is wider and provided with profuse pore canals. The sickle shaped terminal claw of thoracopod-II is elongated in this genus.

Prionocandona Gupta also have some similarity with *Candocyprinotus* Delorme 1970 so far as the absence of natatory setae and terminal segment of the second thoracic leg is concerned but it differs in many morphological features of its appendages.

In dorsal view it is very much similar in outline to the cyprioid *Prionocypris pigra* (Sars 1928) but differs in all other respects. The furca is very much similar to *Strandesia purpurascens* while the furcal support is morphologically similar to *Strandesia odiosa* (Victor & Fernando 1979) and *Strandesia spinulosa* (Rome 1969).

So much diversity in structure justifies its status as a new genus.

***Indocandona biharensis* sp. nov.**

(Fig. 4 A-K)

Description : Shell length 0.58 mm. height 0.25 mm. breadth 0.14 mm. laterally narrow oblong, anterior widely rounded, posterior narrowly rounded, dorsal margin evenly arched, highest in centre, seen dorsally oblong lanceolate with both extremities acuminate, greatest width in centre ; ventre slightly sinuate ; surface smooth, inner lamella narrow ; first antenna longer and slender, 3rd segment longer than other distal segments ; second antenna somewhat straight and not produced into ridge differing from *Indocandona krishnakanti* ; mandible with 7 teeth and one complex seta ; third lobe of maxillule with 2 dentate spines ; maxilla with one endopodial seta ; Thoracopod—I with very long smooth terminal claw, longer than combined length of endopodial segments 2,3 and 4 ; second thoracic leg rather slender and similar to *I. krishnakanti* Gupta but without row of microtrichs at the bases of minute spines, dorsal margin of third

segment and lower margin of first segment smooth and all the setae smooth except reflexed seta; furca just like *I. krishnakanti* but claw is not serrate; furcal support different from *I. krishnakanti*; only one egg present in the female.

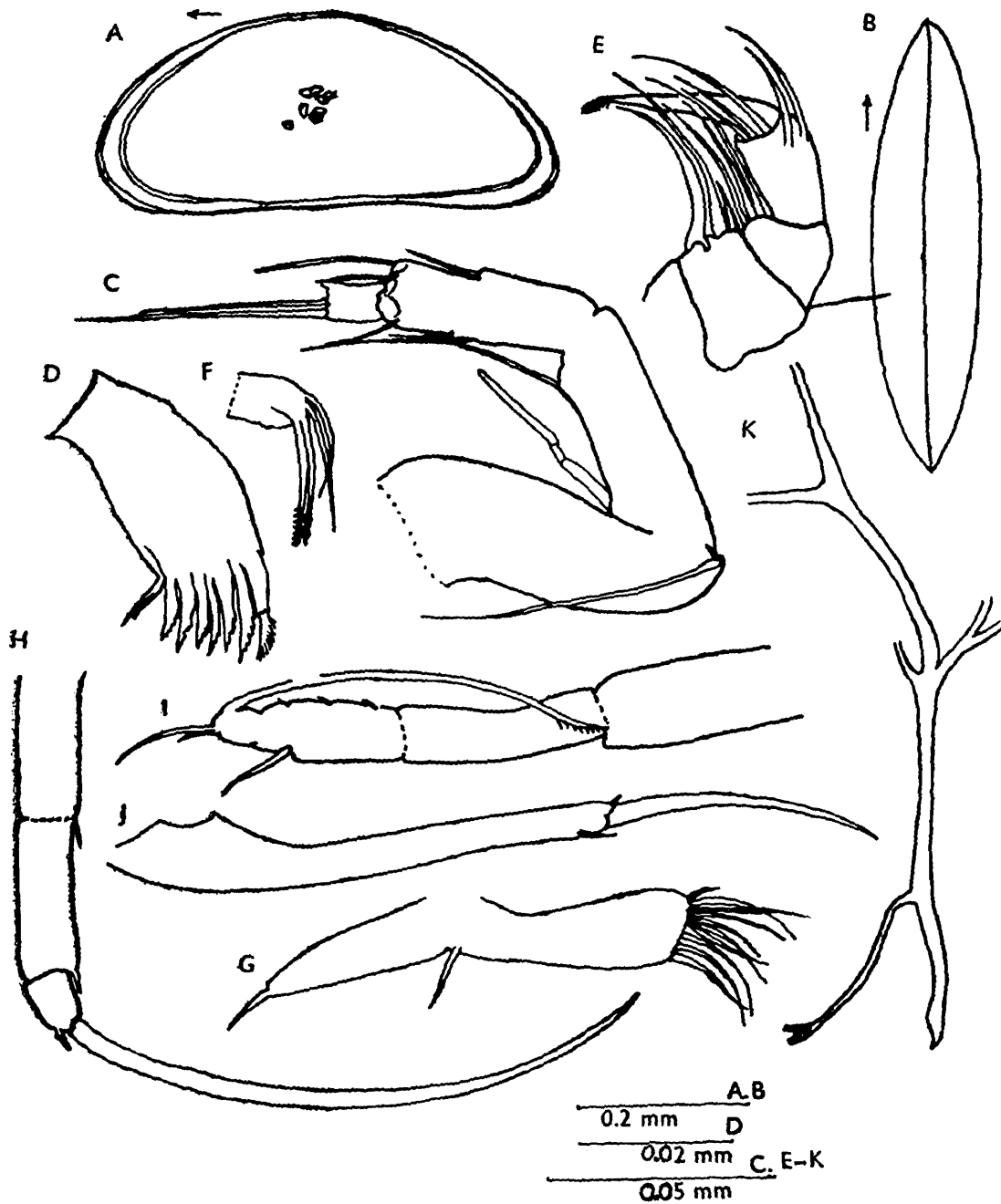


Fig. 4. A. Lateral view of the shell B. Dorsal view of the shell C. Antenna (Terminal claws broken) D. Mandible E. Mandibular palp F. Maxillular spine G. Maxilla H. Thoracopod-I I. Thoracopod-II J. Furca K. Furcal support.

Material: 1 ♀ (on slide No. 1)+broken shell in spirit.
Reg. No. A 1039. Zoological Survey of India, G.P.R.S.,

Patna, Loc. Monghyr, Bihar, India, from a well in Belan Bazar. Coll. *L. P. Gupta*, 27. IV. 83.

Remarks : The species differs from *I. krishnakanti* in its shall shape, morphology and minute details of second antenna mandibular palp, maxillule, second thoracopod, furca and furcal support.

SUMMARY

Two new ostracod crustacea *Prionocandona Kantii* Gen. et sp. nov. and *Indocandona biharensis* sp. n. have been described from subterranean water of Monghyr, Bihar. Their relationships have been discussed.

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