

## Occurrence of a podocopan ostracod *Bradleya ganapatii* sp. nov. in the marginal water bodies, East Coast of India

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### Abstract

Distinguishing characters relating to carapace of a new podocopan benthic ostracod, *Bradleya ganapatii* inhabiting the shallow backwaters of Bimili and Balacheruvu tidal stream on the east coast of India, are described.

### Introduction

In the course of a study of the systematics and ecology of the benthic ostracodes inhabiting some selected marginal water bodies on the east coast of India, a new species belonging to the genus *Bradleya* (Podocopa; Ostracoda) was encountered in the shallow backwaters of Bimili and the Balacheruvu tidal stream. So far 12 species of *Bradleya* are on record (Hornibrook, 1952; Benson, 1959).

Genus: *Bradleya* Hornibrook, 1952

*Bradleya* Hornibrook, 1952, p. 38.

*Type-species*: *Cythere arata* Brady, 1880, p. 101, Pl. 24, Fig. 2a-e. Hornibrook, 1952, p. 39.

*Diagnosis*: Distinguished from other genera of the subfamily Trachyleberidinae by its smooth to reticulate carapace with distinct dorsal and ventral keels. *Bradleya* ranges from upper Cretaceous to Recent.

*Bradleya ganapatii* sp. nov. Fig. 1. A-D

*Material*: Specimens examined 25; 15 with both valves intact.

*Diagnosis*: Distinguished from other species of *Bradleya* by its elongate ovate to subquadrate shape of the carapace, shell thick, heavy, opaque, ornamented with strong ribs reticulated to form a regular network, lacks spines on the dorso-ventral ribs.

*Description of carapace*: Carapace elongate, ovate to subquadrate in shape. Anterior margin broadly rounded with numerous short blunt denticulations. Posterior margin triangular in shape with a few irregular short denticulations. Dorsal and ventral margins straight and subparallel. Carapace thick, heavy, opaque ornamented with strong ribs reticulated to form a regular network. Prominent posterior rib running forwards and downwards. Ventral rib very strong with approximately 12 large pits. Central rib not prominent.

Marginal zone of moderate width. Selvage strong, situated nearer to outer than to inner margin. Line of concrescence parallel to outer margin, coinciding throughout with inner margin. Flange distinct. Marginal pore canals numerous, straight and simple. Two frontal scars present in front of normal vertical row of four adductor muscle scars.

Hingement in right valve with anterior tooth simple, peg-like on an elevated base, posterior tooth large and rounded, obscurely denticulate, almost smooth, median groove faintly and finely crenulate. Eyespots clearly present.

*Carapace size*: Length: 0.55 mm

Height: 0.30 mm

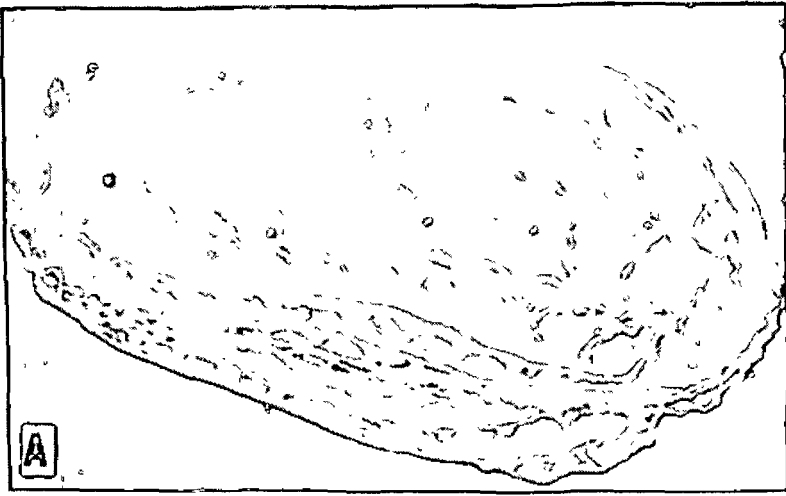
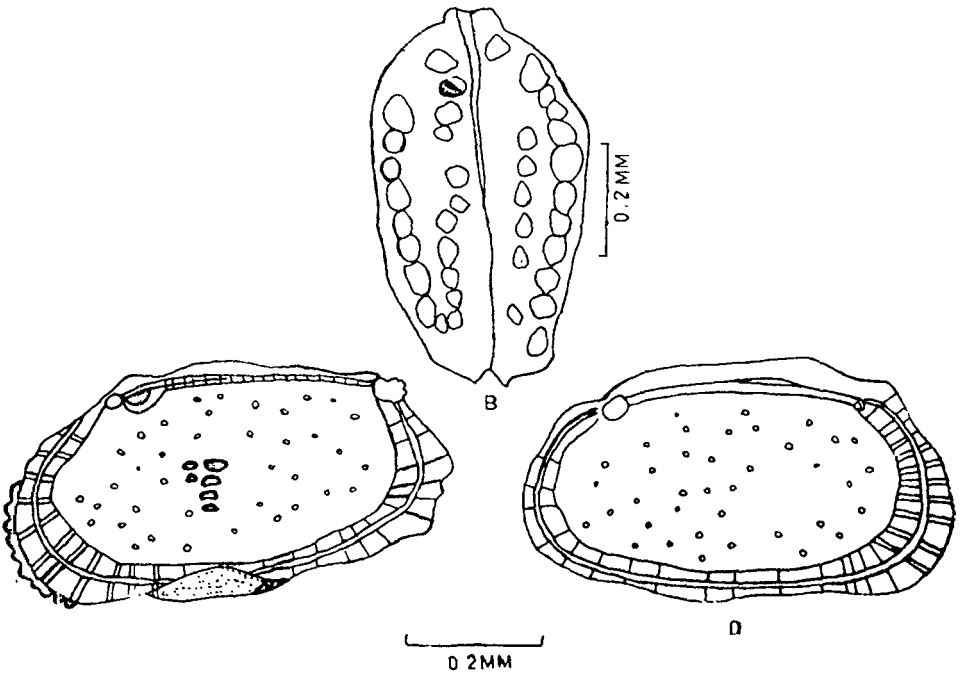


Figure 1. *Bradleya ganapatti* sp. nov.  
A. Exterior view of complete shell  $\times 146$  (SEM)



B. Carapace seen from above    C. Interior view of right valve    D. Interior view of left valve

*Remarks:* The present species differs from *Bradleya arata* Brady, 1880; *B. cuneazea* Hornibrook, 1952; *B. proarata* Hornibrook, 1952; *B. semiarata* Hornibrook, 1952; *B. clifdenensis* Hornibrook, 1952; *B. semivera* Hornibrook, 1952; *B. reticlava* Hornibrook, 1952; *B. auritia* (Skogsberg, 1928); *B. diegoensis* (Leroy, 1943); *B. pinnata* (Leroy, 1943) and *Bradleya* sp. cf. *B. schencki* (Leroy, 1943) in the elongate, ovate to subquadrate shape of the carapace, thick, heavy opaque shell ornamented with strong ribs reticulated to form a regular network. It resembles

*B. dictyon* Brady, 1880 in nature of carapace and ornamentation but differs in the absence of spines on the dorso-ventral ribs.

### Key for identification

- |  |  |
|--|--|
| 1. Carapace large and subquadrate  | 7, 15, 19                                  |
| 2. Carapace elongate and subquadrate.  | 15   |
| 3. Carapace medium sized and oblong  | 9, 12, 15                                  |
| 4. Carapace elongate and oblong.   | 8  |
| 5. Carapace large and subrhomboidal.   | 11   |
| 6. Dorso-lateral and ventro-lateral flanges prominent.   | <i>B. arata</i>                            |
| 7. Dorso-lateral and ventro-lateral flanges not prominent  | 16   |
| 8. Ornamented with reticulated ribs and numerous small tubercles giving the shell a crinkled appearance                        | <i>B. reticulata</i>                       |
| 9. Ornamented with a concentric system of interconnecting ribs and stout tubercles radiating out from the subcentral tubercle. | <i>B. semivera</i>                         |
| 10. Surface ornament rib like rather than tuberculate  | <i>B. pinnata</i>                          |
| 11. Distinctive open ornament of conspicuous sharp, sinuous interconnected ribs..  | <i>B. cliffdenensis</i>                    |
| 12. Antero-dorsal angle elevated with caudal process   | <i>B. lactea</i>                           |
| 13. Antero-dorsal angle elevated without caudal process  | <i>B. diegoensis</i>                       |
| 14. Development of ridges on the exterior surface  | <i>Bradleya</i> sp. cf. <i>B. schencki</i> |
| 15. Carapace with strong ribs reticulated to form a regular network  | 17, 18                                     |
| 16. Carapace with thin prominent ribbing.  | <i>B. auritia</i>                          |
| 17. Each valve produced ventro-laterally as a strong rib bearing a sharp prominent spine posteriorly.                          | 20   |
| 18. Each valve produced ventro-laterally as a strong rib without spine   | 21, 24                                     |
| 19. Dorso-lateral rib prominent and sharp, ending posteriorly at a sharp postero-dorsal spine                                  | <i>B. proarata</i>                         |
| 20. Absence of postero-dorsal spine.   | 23   |
| 21. Right valve with posterior tooth divided into three distinct lobes   | <i>B. cuneazea</i>                         |
| 22. Lobes not distinct   | 24   |
| 23. Central rib prominent  | <i>B. dictyon</i>                          |
| 24. Central rib not prominent  | <i>B. ganapati</i> sp. nov.                |

This species is named after Professor P. N. Ganapati in honour of his remarkable contribution to teaching and research in Marine Biology in India. The type-specimen is deposited with the Zoological Survey of India.

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