

**PSEUDOPYTHINA SUBSINUATA (LISCHKE) A COMMENSAL BIVALVE  
OF SQUILLA NEPA (LATRICELLE) AND SQUILLA RAPHIDEA  
FABRICIUS**

ABSTRACT

*Pseudopythina subsinuata* (Lischke) an erycinacean bivalve is reported as a commensal of *Squilla nepa* (Latricelle) and *Squilla raphidea* Fabricius from Palk Bay and Gulf of Mannar. This is the first report of an erycinacean bivalve commensal to a stomatopod from Indian waters. In the present note a brief description of the species with taxonomic details are given.

A number of small erycinacean bivalves live as parasites or commensals in a variety of invertebrate hosts. The known examples of this phenomenon show that these bivalves are seen associated with invertebrates such as sponges, coelenterates, sipunculids, echinuroids, bryozoans, annelids, molluscs, echinoderms and arthropods (Boss, 1965a). From the Indian region there has been a report of a commensal Erycinid *Jousseaumia* (Bourne, 1906) which was renamed later (Bourne, 1907) as *Jousseaumia* living in the burrows of sipunculids (*Aspidosiphon*), in the corals *Heteropsammia michelini* Milne-Edwards and Haime and *Heterocyathus aequicostatus* Milne-Edwards and Haime from Gulf of Mannar. Available reports on animals associated with stomatopods from Indian region are of polyzoans *Platypolyzoon investigoris* and *Triticella koreni* in *Squilla investigoris* and *Squilla fasciata* respectively (Annandale, 1913), and a gastropod *Epistethe gonodactylis* associated with *Gonodactylus chiragra* (Preston, 1913).

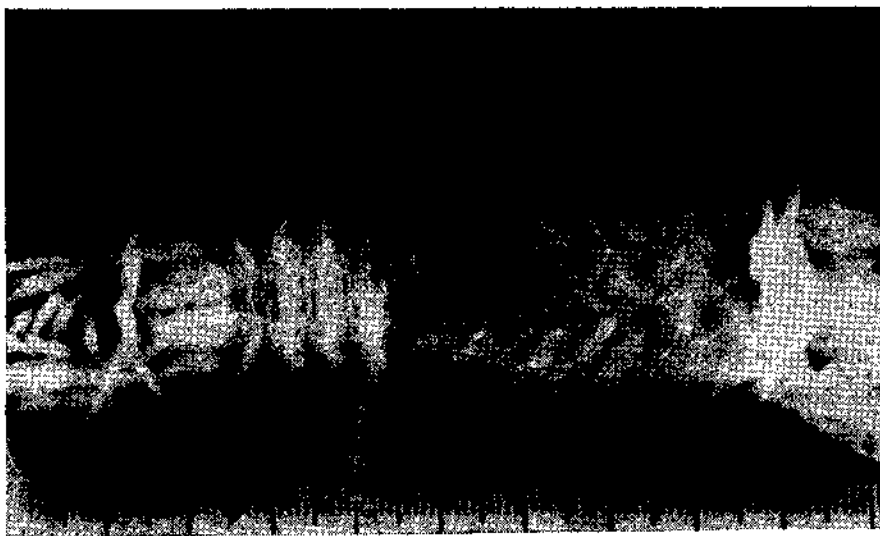


Fig. 1. *Pseudopythina subsinuata* a bivalve attached to ventral side of *Squilla nepa* (Scale in cm).

Kuroda (1937) described an erycinid '*Kellia*' *subsinuata* Lischke from Japan associated with *Squilla oratoria* de Hann, which is now known as *Pseudopythina subsinuata* (Habe, 1946). Popham (1939) described a common galeommatid *Phlyctaenachlamys lysiosquillina* from the burrow of *Lysiosquilla maculata* from

Australia. Knudson (1944) reported an erycinid *Jousseamiella choncharum* Knudson living together with a gephyrian from Indonesian waters. Powell (in Morton, 1957) reported that *Divariscintilla maoria* Powell live attached to a species of *Lysiosquilla* from New Zealand. Boss (1965) described a new species of erycinid bivalve *Parabornia squillina* on *Lysiosquilla scabricauda* (Lamarck) from Caribbean waters.

In the present account a description of *Pseudopythina subsinuata* (Lischke) seen attached to the ventral side of *Squilla nepa* and *Squilla raphidea* collected from Palk Bay and Gulf of Mannar is given. Close examination of the specimens showed that they were firmly attached to the host by fine byssus threads. The association of this bivalve with stomatopods is hitherto known from the Indian region, nor has it been recorded from any other host from this area. The specimens of *Squilla* with *P. subsinuata* were collected from a depth of seven to nine fathoms by trawling off Mandapam both in the Palk Bay and the Gulf of Mannar.

***Pseudopythina subsinuata* (Lischke) (Figs. 1 & 2)**

*Kellia subsinuata* Lischke, 1871.

'*Kellia*' *subsinuata* Kuroda, 1937.

*Pseudopythina subsinuata* Habe, 1946.

Shell small, transversely ovate, equivalved with a thick periostracum. Umbones small, close to the anterior region; ventral margin with an anterior pseudo-byssal gape; antero-ventral part somewhat angular, surface of shell with weak concentric

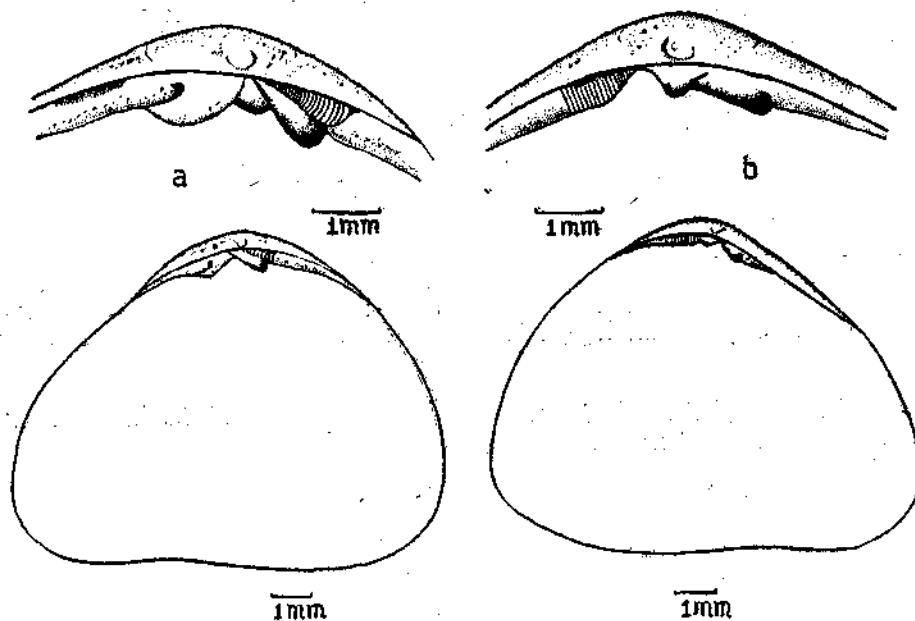


Fig. 2. a. Hinge margin and the right valve of *Pseudopythina subsinuata* ;  
b. Hinge margin and the left valve of *P. subsinuata*.

striations; posterior margin narrowly rounded; lunule absent; hinge line short and straight with poorly developed external ligament; resilium with lithodesma; mantle united dorsally, posteriorly and posteroventrally leaving an antero-ventral inhalent opening and a posterior small exhalent opening; minute papillae present on mantle edge; byssus threads present.

TABLE 1. Details of material of *P. subsinuata* in the collection

| <i>P. subsinuata</i> |                                       |             |            |            |                         |                 |
|----------------------|---------------------------------------|-------------|------------|------------|-------------------------|-----------------|
| Sl. No.              | Place of attachment on the stomatopod | Length (mm) | Width (mm) | Depth (mm) | Host                    | Locality        |
| 1.                   | Last thoracic appendage               | 10.4        | 8.3        | 4.9        | <i>Squilla nepa</i>     | Palk Bay        |
| 2.                   | "                                     | 10.9        | 8.6        | 5.1        | "                       | Gulf of Mannar* |
| 3.                   | "                                     | 4.1         | 2.7        | 1.3        | "                       | "               |
| 4.                   | "                                     | 3.4         | 2.3        | 1.1        | "                       | "               |
| 5.                   | "                                     | 2.0         | 1.3        | —          | "                       | "               |
| 6.                   | "                                     | 0.75        | 0.56       | —          | "                       | "               |
| 7.                   | "                                     | 0.54        | 0.43       | —          | "                       | "               |
| 8.                   | "                                     | 0.54        | 0.44       | —          | "                       | "               |
| 9.                   | First abdominal appendage             | 12.5        | 8.7        | 5.4        | "                       | Palk Bay        |
| 10.                  | Third thoracic appendage              | 11.1        | 8.4        | 4.5        | <i>Squilla raphidea</i> | "               |

\* Specimens 2 to 8 were collected from a single host.

Thiele gave *Pseudopythina* the status of a subgenus under the genus *Pythina*. Dall placed *Pseudopythina* as a subgenus under the genus *Erycina*. Habe (1940) included this species under the genus *Pseudopythina*. *Pseudopythina subsinuata* resembles *P. rugifera* but differs from it in the absence of subumbonal cardinal teeth. It differs from *P. compressa* in the absence of overlapping right valve.

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