

CASSIDINA EXTENDA, A NEW SPECIES OF ISOPOD FROM BOMBAY

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A NEW species of Isopod represented by five individuals was found in a barnacle, *Balanus tintinabulum* Darwin, collected at Bandra on 19th January 1962. When the cirripede was taken to the laboratory the Isopods crawled out of the shell of the dead barnacle in the petri dish. A careful scrutiny revealed that these Isopods belong to the genus *Cassidina*, Milne Edwards, of the family Sphaeromidae. Occurrence of two species of *Sphaeromá*, Latreille, from the same family has been reported earlier by Joshi and Bal (1959). The present specimens collected from the *Balanus* exhibit interesting features of the body parts to treat it as a new species, viz., *Cassidina extenda*. Hence a general description of the species with its distinctive characters is given in this paper.

Family : Sphaeromidae

Genus : *Cassidina* M. Edwards.

Species : *Cassidina extenda* Sp. nov.

OCCURRENCE

Five individuals at Bandra (Band Stand) in January 1962.

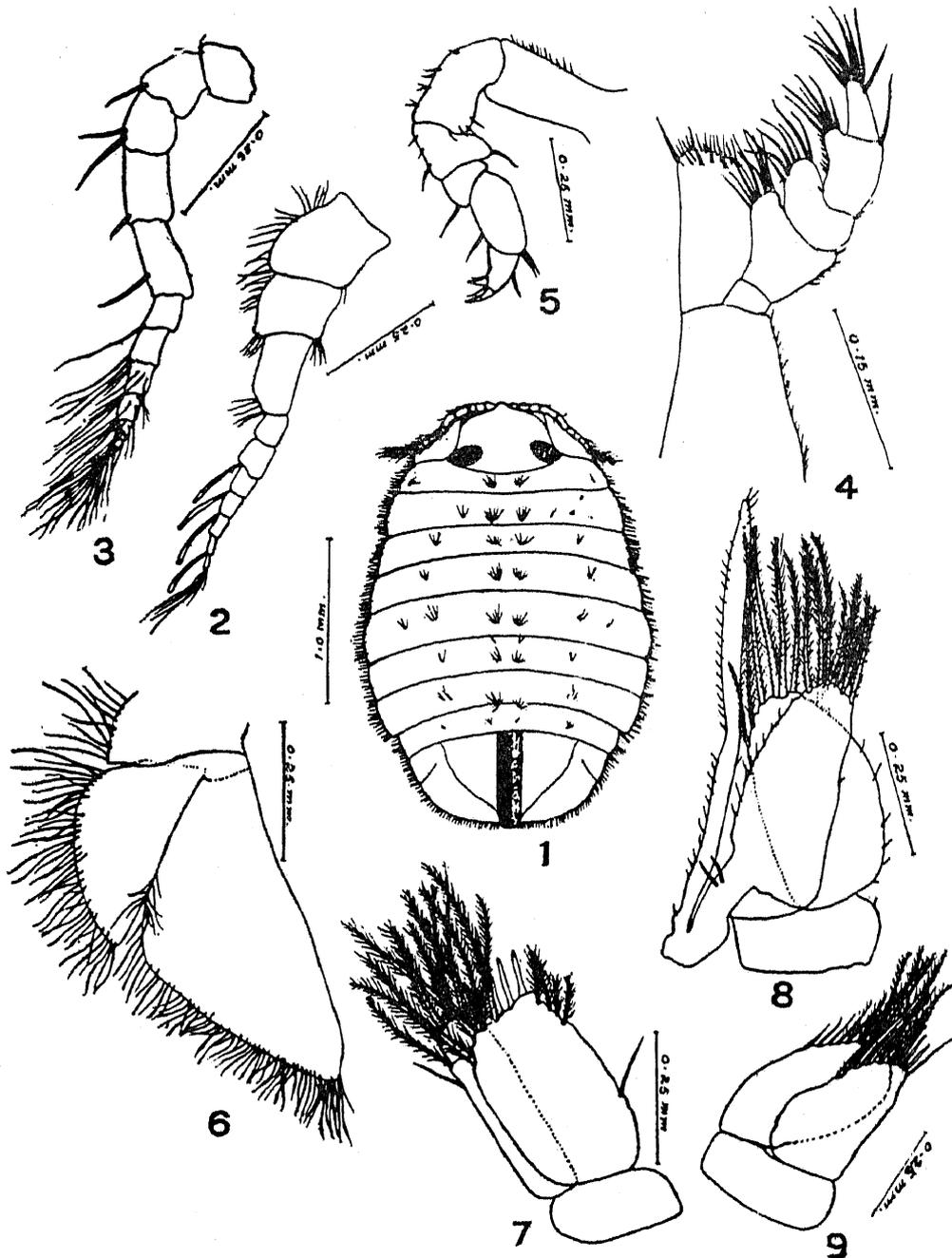
DESCRIPTION

Body (Fig. 1), dark brown in colour, compact, ovate, small, convex along the mid-dorsal line, more than half as broad as long and measuring 1.5 to 2.5 mm. in length. Head with a depression in the mid-dorsal region. Thorax tuberculate and abdomen with a median groove.

Head

The width of the head is more than 1.5 times its length. It is scarcely immersed in the first thoracic segment. Anteriorly it is bent downwards ending in a broadly rounded manner to meet the frontal lamina between the bases of the first antenna. There is a marginal lamellar extension across

the antero-lateral margin concealing the basal articles of the antennae. Eyes are medium sized, oval and situated at the postero-lateral angles of the head. Dorsally the head has a trapezoidal appearance with a wide depression in the middle. Along the anterior margin the head is elevated into double tuberculoid manner. Posteriorly the tubercles are separate and prominent.



Figs. 1-9. *Cassidina extenda* Sp. nov.

Thorax

First three thoracic segments (Fig. 1) are subequal in length, fourth and fifth longer, sixth and seventh progressively decreasing in length but longer than anterior segments. The anterior segments are progressively broader, fourth and fifth being subequal and broadest while sixth and seventh slightly narrower. The epimera are prominent on all the thoracic segments and cover the thoracic appendages. The first segment has a small but prominent epimeral plate at the side with the antero-lateral angles broad and extended. Epimera of the other segments are progressively expanded laterally into truncate margins. Lateral margins of all the epimera bear rows of blunt, short, thick, hair-like setae. Each segment of the thorax has a submedian pair of tubercles forming bilateral rows along the mid-dorsal region of the thorax. Presence of faint elevations on the lateral sides is observed in two individuals. Hairy tufts prominently sprout out of the submedian tubercles. The lateral tubercles are not devoid of hair-like outgrowths.

Abdomen

The abdomen (Fig. 1) consists of one free segment and a telson which is triangular and is truncated. Submedially the telson is elevated into two ridges which are continuous with the bilateral rows of tubercles on the thorax. The lateral sides of the abdomen thus sharply slope laterally unlike the convex nature of the body. The submedian ridges of the telson give a deep trough-like excavation forming a canal extending from the anterior to the posterior end of the telson. This canal along with the ridges is drawn posteriorly into an apparently truncated angle of the telson.

Appendages

Antennae.—The peduncle of the first antenna (Fig. 2) is triarticulate and each segment is provided with small minute setae along the outer border. Proximal articles are broad and expanded. The flagellum which reaches up to the middle of the first thoracic segment has seven or eight setose articles. The setae of the proximal articles are rounded and club-like, broad and blunt while the terminal joint carries five or six long setae. The peduncle of the second antenna (Fig. 3) has five articles with nine-segmented setose flagellum. First two peduncular articles are short, the third is longer, the fourth and the fifth longest of all and subequal.

The maxilliped.—The basipodite of the maxilliped (Fig. 4) bears a truncate quadrangular inner lobe distally fringed with number of small setae. The outer palp of the maxilliped is five articulate with the first article small

plate-like. The second article is expanded, funnel-shaped with the inner antero-lateral side produced into a broad but short lobe bearing seven to eight long spines. The third article is shorter than the second article but the antero-lateral inner side is produced in a prominent broad lobe longer than that of the previous one. It also possesses eight to nine setae. The fourth article is narrower but longer than the preceding ones. The antero-lateral inner lobe is small and bears five to six long setae. The fourth article has also a prominent tapering seta at the antero-lateral apex on the outer side. The fifth article is narrow, cylindrical, short and bears a number of long, fine setae at the apex. The outer edge is provided with small setae.

Thoracic legs.—The first thoracic leg (Fig. 5) has the basis bearily cylindrical in shape with minute setae along the inner border. The ischium is as long as basis but little narrower. The merus is triangular with the antero-lateral outer apical angle produced into a lobe bearing a long spine-like seta. The carpus is very small triangular with the antero-lateral inner apical angle lobular bearing long spine-like setae. The propodus is long and cylindrical with the anterior margin rounded and with two or three spine-like setae on the inner as well as outer side. The dactylus is stout narrower and bears spincter-like pair of strong setae. The outer one is stronger and longer and is in continuation with the outer margin of the leg. All the legs are more or less similar in structure.

The uropod.—The inner branch of the uropod (Fig. 6) is as long as the terminal segment. Proximally it is broad and distally narrow with a straight inner margin and curved outer margin. The outer branch is about 1/3rd of the length of the uropod and has a rounded tip almost reaching the bulged portion of the inner branch of uropod. Both the branches of the uropod possess a number of fine small setae all along the outer margin. The uropod is closely placed with the abdomen.

Pleopods.—Endopod of the pleopod one (Fig. 7) is clearly longer than broad. At the apex it bears six to seven setose spines. The exopod is broad, quadrangular and bear a number of short robust branched setae on the inner apex. The appendix masculina of the second pleopod (Fig. 8) is very long and peculiarly lanceolate but blunt, and is connected with horizontal shaft to the endopod base. The longer and free portion of the shaft possesses strong, minute but stout spine-like processes all along the border. The exopod of the third pleopod (Fig. 9) is unjointed. Both the rami possess branched setae on the terminal margin. The fourth and the fifth pleopods subsimilar and without any setae.

REMARKS

This species is included in the genus *Cassidina* on the basis of expanded nature of the joints of the first antenna and oblong nature of the endopod of the first pleopod (Hansen, 1905) though the unjointed exopod of the third pleopod suggests its association with the genus *Cassidinidea*. As such, on the basis of this feature the species cannot be identified with other known species of *Cassidina*. It is also interesting to note that the lobular expansions of the joints of the maxillipeds are not very prominently extended as those of the other species of *Cassidina* or *Cassidinidea*. This character may even take this species nearer to the genus *Cassidisca* (Richardson, 1905). In *Cassidisca*, however, the joints of maxillipeds are not extended, whereas in this species, moderate extension of the joints is visible. The small size and the tuberculate nature of the body of this species shows apparent resemblance with the description of *Cassidinidea quadricarinata* Pillai (1954). But the single jointed exopod of the third pleopod, moderately extended joints of the maxillipeds, the nature of the bilaterally hairy tuberculate thorax, the groove-like excavation of the abdomen and the shape and the size of the uropods strongly suggest that this species is new and therefore named here as *Cassidina extenda*.

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