

FIG. 5. *Dynamenella setosa* new species; Plp¹, first pleopod; Plp², second pleopod with incompletely formed stylet; S, fully formed stylet from paratype specimen; P, penes; p, penes from paratype specimen shown at lower magnification; Plp³, third pleopod; Md, mandible and mandibular palp (near moult).

rear peraeopods longer and more slender. Blood sinuses conspicuous over surface of all pleopods. Plp¹ exopod with 20 PMS plus one simple, short spine; endopod with 13 PMS. Plp² exopod with 23 PMS; endopod with 10 PMS and incompletely formed stylet (holotype). Fully mature stylet appears to possess one beveled edge. Exopod of Plp³ jointed and

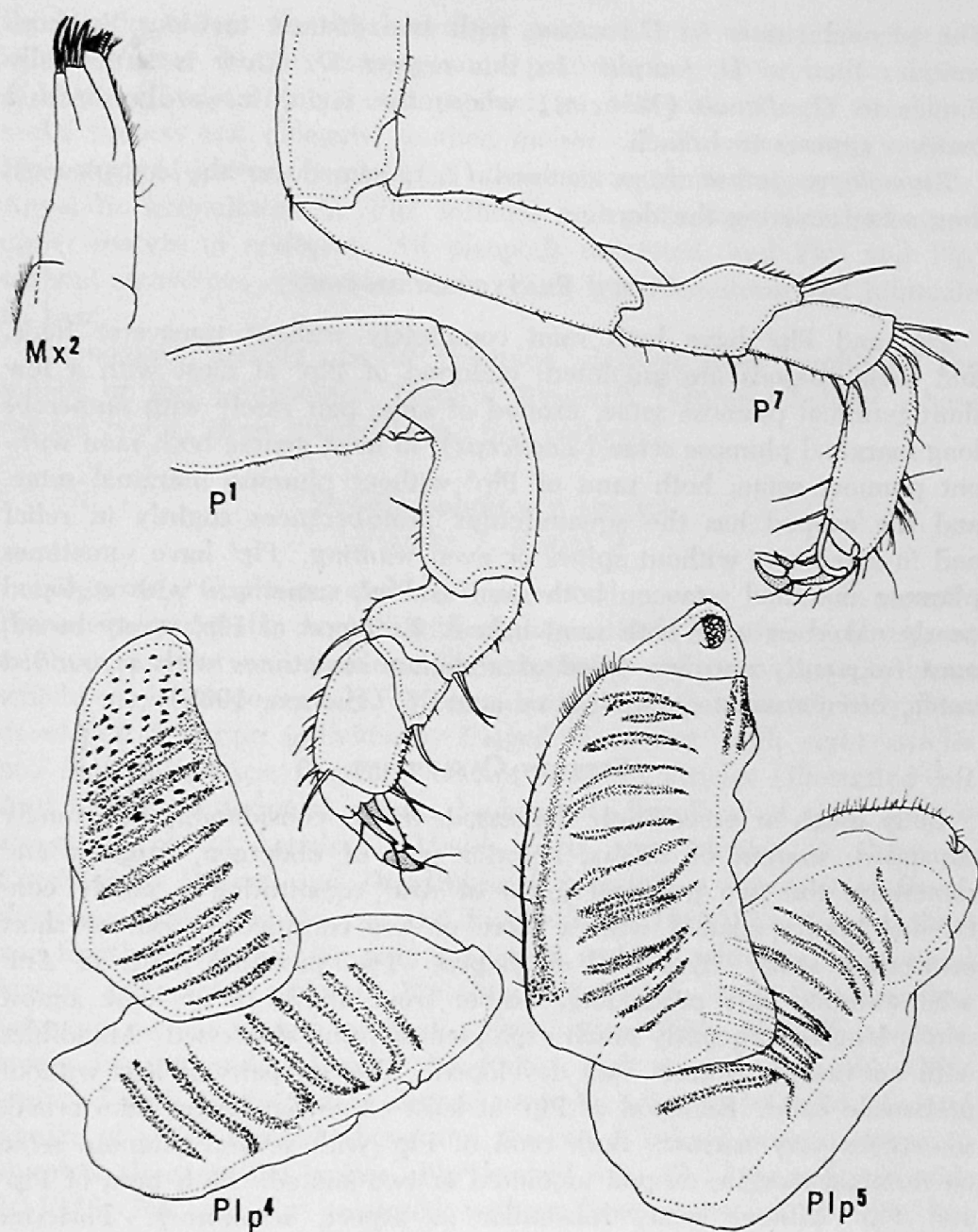


FIG. 6. *Dynamenella setosa* new species; Plp⁵, fifth pleopod; Plp⁴, fourth pleopod; Mx², second maxilla; P¹, first pereopod; P⁷, seventh pereopod.

with 27 PMS; endopod with 11 PMS. Both rami of Plp⁴ with five pairs of respiratory folds. Both rami of Plp⁵ with six pairs of respiratory folds. Lateral border of exopod of Plp⁵ sparsely setose; minute, squarish scales with marginal spines shield surfaces of squamiferous areas.

Affinities: *Dynamenella eatoni* (Miers), like *D. setosa*, also has the pleotelson of both sexes nearly identical. Even though this condition is unlike that in the type-species of the genus (*D. perforata*), Menzies (1962) and Hansen (1905) decided to retain this species in *Dynamenella*.

The pleonal suture in *D. setosa*, with two distinct incisions, is more complex than in *D. josephi*. In this respect *D. setosa* is structurally similar to *D. diana*e (Menzies) where the main, forwardly directed incision appears to branch.

Etymology: *setosa*, from saetosus (L.), named for the conspicuous, long setae covering the dorsum.

GROUP PLATYBRANCHIATAE

Plp⁴ and Plp⁵ have both rami completely without transverse folds, and their exopods are unjointed; endopod of Plp⁴ at most with a few short terminal plumose setae, exopod of same pair rarely with numerous long marginal plumose setae (*Tecticeps*), in most genera both rami without plumose setae; both rami of Plp⁵ without plumose marginal setae, and the exopod has the squamiferous protuberances slightly in relief and in rare cases without spines or even wanting. Plp³ have sometimes plumose marginal setae on both rami as Plp², sometimes with endopod nearly naked or with both rami naked. Endopod of Plp¹ rarely broad, most frequently narrow. (End of abdomen sometimes with a rounded notch, often truncate, rounded, or acute.) (Hansen, 1905).

SECTION CASSIDININI

Body much or exceedingly depressed; thorax considerably or strongly expanded; margin of thorax, anterior part of abdomen, uropods and sometimes the two proximal joints of Ant¹ constituting a nearly continuous border ciliated with a more or less conspicuous rim of short protruding setae. Eyes well developed. Two proximal joints of Ant¹ with anterior part protruding, visible from above in at least almost whole length, frequently much expanded in front, depressed. Mandibles with masticatory process well developed. Anterior pairs of legs without prehensile band. Endopod of Plp¹ at least somewhat longer than broad, sometimes very narrow. Both rami of Plp³ with several plumose setae on terminal margin; exopod unjointed or two-jointed. Both rami of Plp⁴ and Plp⁵ without setae, subsimilar in aspect, respiratory. Posterior margin of abdomen short; a real notch always wanting. Marsupial lamellae wanting; brood in a chamber formed by two external pouches. (Hansen, 1905).

Striella new genus

Type-species: *Striella balani*, new genus, new species.

Diagnosis: Intermediate species with characters about equally divided between the hemibranchiate and platybranchiate groups. Body oval, strongly depressed and fringed with dense, setose growth. Cephalon confluent with and immersed in first and largest of peraeonal somites. No obvious sexual differences. Pleotelson terminates posteriorly in blunt point; minute incision faintly visible terminally. Outer rami of uropods about two-thirds length of endopods. Ant¹ roughly two-thirds

the length of Ant². Proximal joints of Ant¹ not inflated or readily visible in dorsal view. Neither does epistome protrude beyond cephalon. Lobes of Mxp palp not produced on inner margin. Md with strongly developed molar process and elongate, toothed incisor. P¹-P⁷ with natatory setae. Plp¹ endopod extremely elongate, about three times longer than wide. Appendix masculinum on Plp² inflated and projecting slightly beyond upper margin of endopod. All pleopods unjointed, and Plp⁴ and Plp⁵ without transverse, respiratory folds. Penis long, tenuiform and bifurcate to base.

Etymology: *Striella*, gender feminine, derived from combining the initials of the Smithsonian Tropical Research Institute, behind whose marine facility these animals were first collected.

Striella balani new species

Figures 7, 8 and 9

Diagnosis: Cephalon and first peraeonal somite equal in length. Pleotelson essentially smooth with slightly raised, hemispherical area at midline near forward border. Pleonal suture with two short incisions which converge posteriorly. Marginal setose fringe around body best developed in larger individuals. Flagellum of Ant¹ with eight articles and five aesthetascs; flagellum of Ant² with 14 articles (illustrated left Ant² had seven terminal articles broken off; flagellum of right Ant² is composed of 14 articles). Mouth parts very similar to those in *Cassidinidea* Hansen and *Dies* Barnard (possibly a synonym of *Cassidinidea* according to Menzies and Frankenberg, 1966), i.e. second, third and fourth articles of Mxp palp not lobed, and Md with strongly formed incisor and molar process. Plp¹-Plp³ with PMS; only two coupling setae on medial margin of basis. Plp¹ exopod with 21 PMS and one spine; narrow endopod with 13 PMS. Plp² exopod with 22 PMS; endopod with 19 PMS, five aligned medially adjacent to stylet. Lateral border of stylet hyaloid above and thickened below; minute spines in couplets along medial border. Plp³ exopod with 23 PMS; endopod with 10 PMS. Plp⁴ and Plp⁵ unjointed, without setae or respiratory folds, but with conspicuous blood sinuses. A pair of creases extend across base of exopod of Plp⁴; endopod with an apical spine. Plp⁵ exopod with three squamiferous protuberances, each with a delicate pattern of striae; upper pair of protuberances capped with minute, horny spines.

Measurements: Male holotype, length 2.6 mm, width 1.8 mm. Female allotype (illustrated), length 2.1 mm, width 1.1 mm.

Type-locality: Naos Island, Panamá, 22 January 1967; holotype (USNM 122857) plus 37 males, 34 females, 42 young paratypes, USNM 122858.

Distribution: Known only from type-locality.

Affinities: Certain difficulties are met in trying to assign this species to the present system of classification. In many respects it is similar to *Exosphaeroma* and *Pseudosphaeroma* of the hemibranchiate group.

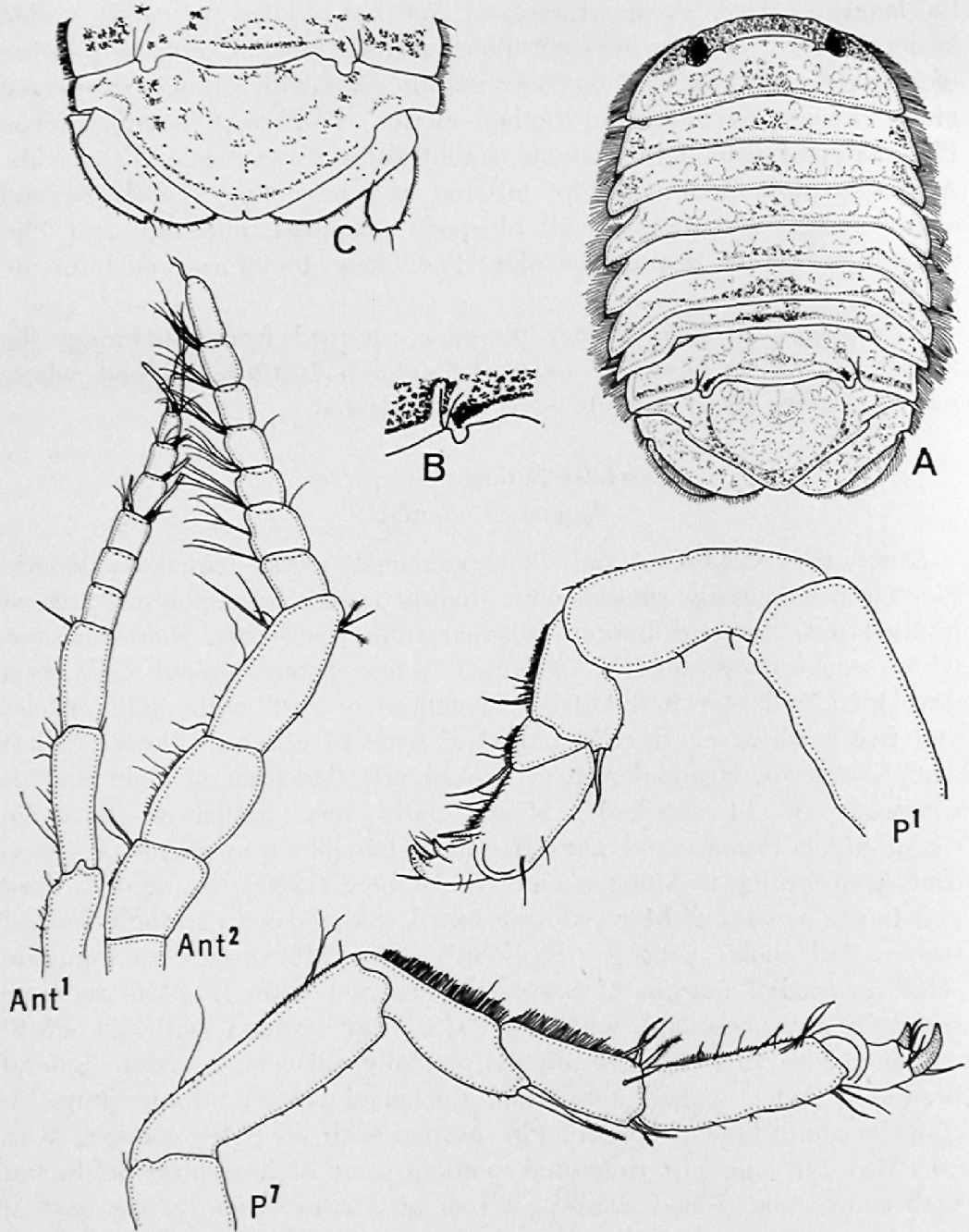


FIG. 7. *Striella balani* new genus, new species; A. male holotype, length 2.6 mm; B. enlarged view of pleonal suture; C. pleotelson of female allotype, length 2.1 mm; P¹, first peraeopod; P⁷, seventh peraeopod; Ant¹, first antenna; Ant², second antenna (terminal section of seven articles missing).

Several of the characters already described, however, including absence of branchiae on Plp⁴ and Plp⁵, and the unjointed exopods of these pleopods, necessitates placement of *Striella* with the Platybranchiatae.

Although the respiratory folds in *Exosphaeroma alba* are especially weakly developed in this genus, examination of the pleopods in toptype

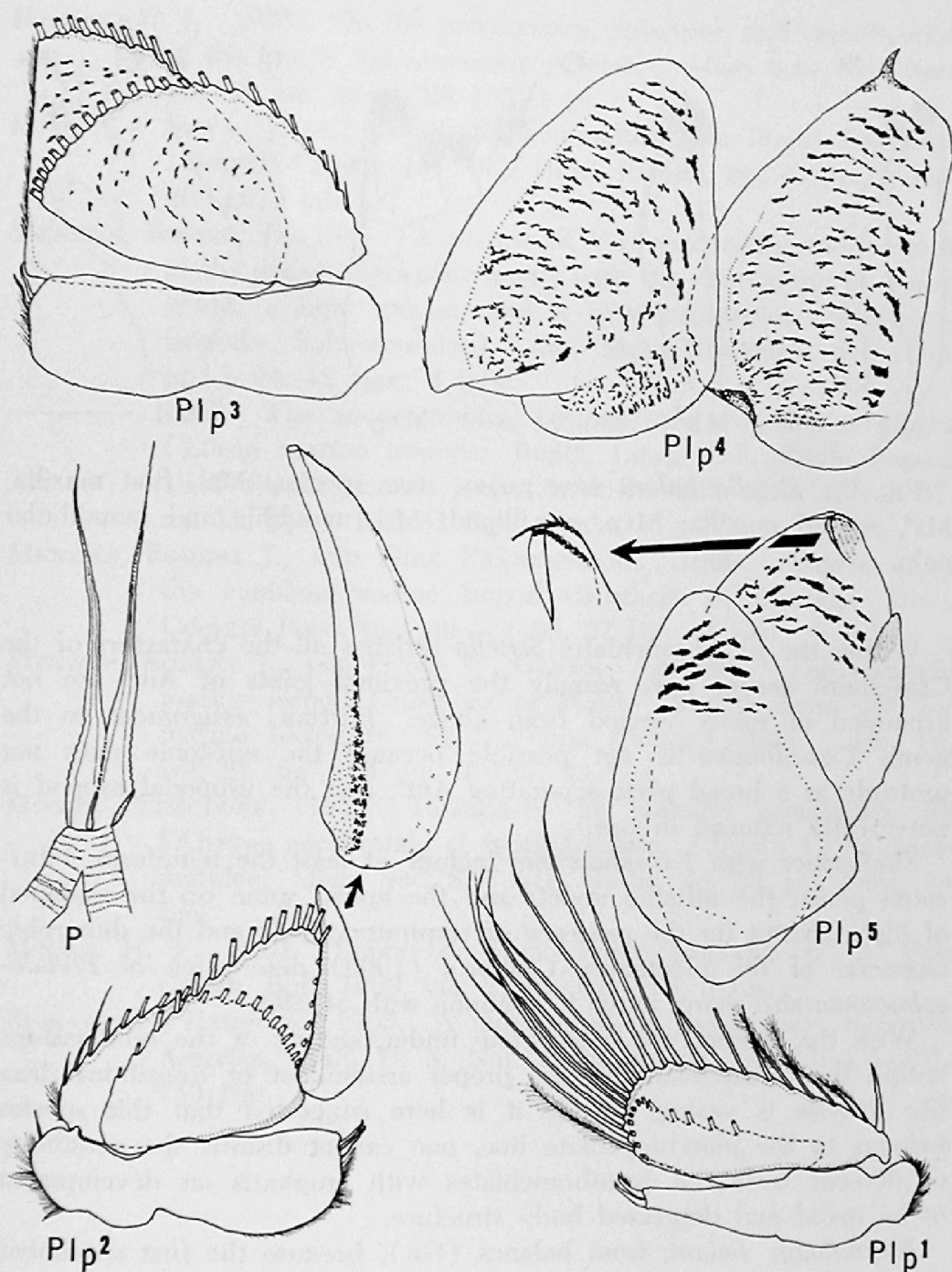


FIG. 8. *Striella balani* new genus, new species; Plp¹, first pleopod; Plp², second pleopod and enlarged view of stylet; P, penes; Plp³, third pleopod; Plp⁴, fourth pleopod; Plp⁵, fifth pleopod with enlarged view of apical, squamiferous protuberances.

specimens reveals their unquestioned presence. This is not the case in *Striella*. It should be pointed out, though, that some species related to *Exosphaeroma* are without folds (Menzies, 1954) and that Monod (1931) has warned against placing too much emphasis on the presence or absence of articulations.

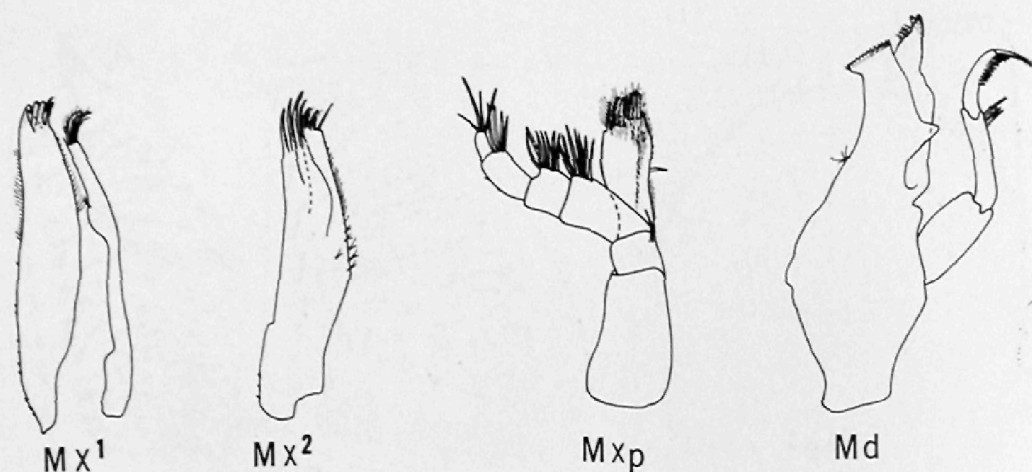


FIG. 9. *Striella balani* new genus, new species; Mx¹, first maxilla; Mx², second maxilla; Mxp, maxilliped; Md, mandible and mandibular palp.

Within the platybranchiates *Striella* satisfies all the characters of the Cassidinini except one, namely the proximal joints of Ant¹ are not expanded or easily viewed from above. Further, assignment to the genus *Cassidinidea* is not possible because the epistome does not protrude as a broad plate separating Ant¹, and the uropodal exopod is not greatly reduced in size.

Similarities with *Exosphaeroma* include at least the tenuiform, bifurcated penis; the inflated stylet; and the apical spine on the endopod of Plp⁴. Except for the presence of respiratory folds and the dimorphic character of the pleotelson, Chilton's (1909) description of *Pseudosphaeroma* also shares much in common with *Striella*.

With the present and incomplete understanding of the relationships within the Sphaeromatidae, the proper assignment of transitional taxa like *Striella* is vexing. While it is here suggested that this species belongs to the platybranchiate line, one cannot dismiss the possibility of descent from the hemibranchiates with emphasis on development of an ovoid and depressed body structure.

Etymology: *balani*, from *balanos* (Gr.), because the first specimens were collected from large clusters of barnacles.

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