

XXII.—DESCRIPTION OF A NEW SPECIES
OF THE GENUS *SESARMA*, SAY., FROM
THE ANDAMAN ISLANDS

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A collection received from Dr. Annandale of the Indian Museum, Calcutta, comprises a new species of the genus *Sesarma*, Say. It is represented by one male and two females that were collected at Mount Hamet, Port Blair, Andaman Island, in fresh-water streams in dense forest at a height of 700 feet, by Mr. B. B. Osmaston, in January, 1907. The larger of the two females, which are a little smaller than the male, carries a *Sacculina*.

Sesarma thelxinoë, sp. nov.

(Plate xi.)

A new species of the subgenus *Sesarma*, related to *Sesarma sylvicola*, de M., from Sumatra, to *S. ocyroda*, Nob., from Benkoelen and to *S. celebensis*, Schenkel, from Celebes.

Both in the male and in the female the distance between the outer orbital angles appears a little larger than the length of the carapace, the proportion being nearly as 13 : 12. Upper surface depressed, very slightly arcuate transversely at the level of the mesogastric area, whereas the gastric region slightly slopes down forward towards the frontal lobes ; posteriorly the upper surface is more flattened, whereas the epibranchial regions are deflexed downward. Regions indicated, but incompletely defined. Of the cervical groove the transverse furrow that defines the gastric region posteriorly is well developed and rather deep only in its lateral parts ; the mesogastric furrow is shallow, though reaching to just behind the middle of the gastric region. The protogastric areas that slope down laterally to the lower situated, hepatic region, are not separated at all from the anterior branchial areas, nor from the mesogastric area which is also undivided. The intestinal region is bounded laterally by shallow depressions.

The front, which is vertically deflexed, is just half as broad as the distance between the outer orbital angles. Of the four post-frontal lobes, which are separated from each other by narrow, moderately deep incisions, the inner are just *twice as broad* as the outer ; the post-frontal lobes are prominent and hide the front, though the lower margin is visible when the carapace is looked at from above. The free edge of the post-frontal lobes is rather sharp, though very

finely granulated; that of the inner lobes is straight and transverse in the male and in the younger female (fig. 2), but in the other female the free edge of these lobes is slightly concave and runs a little obliquely (fig. 4). The outer post-frontal lobes reach a little further forward than the inner. The front (fig. 3), which is somewhat concave, is four times as broad as high; in the male, in which the upper margin is 6.8 mm. broad, the front is 1.7 mm. high at either side of the middle. The lateral margins of the front are nearly parallel, being only very slightly convergent; the lower margin is but very faintly sinuous, the median emargination is broad, but *very shallow*, and the lateral ones are hardly recognisable. Viewed from before, the lower margin appears straight in the middle; on each side of the middle it appears, in the male, very slightly concave, but in the two females distinctly so. The front is covered, especially laterally, with microscopical granules, but the anterior surface of the inner post-frontal lobes is almost smooth; lying on each side contiguous to the lower margin are two or three somewhat larger granules.

As in other species, a transverse ridge is situated a little behind the free margin of the outer post-frontal lobes; between this margin and the ridge, which is very finely granulate and presents a somewhat oblique direction, the upper surface of the outer frontal lobes is covered with some small granules, that anteriorly are partly arranged in transverse rows. Some small granules are also observed on the anterior half of the hepatic region and near the antero-lateral margins of the carapace, as also two short, finely granulated ridges, the anterior, shorter one on the extraorbital tooth, the other near the middle of the first epibranchial tooth. The deflexed, branchial regions are marked with the usual oblique striæ. All the rest of the upper surface of the carapace is *perfectly smooth, without any trace of granules*, even when examined through a magnifying glass; *the inner post-frontal lobes are thus also quite smooth above as far as their anterior margin*. The upper surface is, however, punctate, finely on the gastric region, more coarsely on the branchial regions and on the depressions that separate the latter from the area intestinalis; in a few puncta short, stiff setæ are inserted. As in *S. sylvicola*, the lateral margins of the carapace distinctly diverge backward and are very faintly concave behind the middle.

Extraorbital tooth acute, its outer margin slightly convex, sometimes straight or even faintly concave; by a rather deep, triangular notch this tooth is separated from the first epibranchial, which is also acute and, like the extraorbital tooth, somewhat turned upward; the outer margin of this tooth, which is once-and-a-half as long as the extraorbital tooth, is straight and already divergent. A trace of a very small second epibranchial tooth is indicated. The posterior margin of the carapace is just as broad as the front.

The abdomen of the male (fig. 5) resembles that of *S. sylvicola* (de Man, *Abhandl. Senckenberg. Naturf. Gesellschaft*, xxv, 1902,

pl. xix, fig. 11b); the obtuse, terminal joint is almost once-and-a-half as long as the penultimate, and the posterior margin of the latter is two-and-a-half times as broad as this joint is long. In the younger female the terminal segment is for one-third of its length impacted in the penultimate, in the other female not even as far.

Chelipedes equal, both in the male and in the female. Outer surface of the arm transversely wrinkled, neither the upper nor the inner border of the arm ends in a tooth or spine; but the inner border presents a slight, subterminal dilatation and appears finely, though irregularly, denticulate along its whole length; about thirty very small acute teeth, recognisable through a lens, occur on the lower border. Upper surface of the wrist covered, especially on its outer side, with finely crenulate ridges, inner angle obtuse—not dentiform; examined by means of a lens a few minute setæ are observed on the upper surface. In the male the horizontal length of the chelæ (fig. 6) measures three-fourths the distance between the outer orbital angles; the fingers are a little longer than the palm which is one-fourth higher than long. To the naked eye both palm and fingers appear smooth. Examined by means of a magnifying-glass the rounded upper border of the palm, which carries no pectinated crests, appears a little granular by very small granules; but for a few oblique striations near the carpal articulation, the convex outer surface of the palm appears *perfectly smooth*; the rounded lower margin is slightly granular, the granules being microscopical, though slightly larger and rather acute on the inner side and extending here to the middle of the immobile finger. The fingers are pointed; their convex, outer surface is smooth, though somewhat punctate; the tapering dactylus has neither ridges nor grooves, but is covered above *with minute subacute granules* that extend to near the tip and are rather *irregularly arranged*. The inner surface of the palm presents no trace of a transverse crest or ridge, but it carries a few, very small, subacute granules, visible by a lens, one or two of which near the upper border are a little larger than the rest. The immobile finger has two small, conical teeth, one contiguous to the horny tip, the other near the base, and between them are six or seven smaller teeth, while two or three occur near the base; the tothing of the dactylus is nearly the same.

The chelæ of the female are comparatively smaller, measuring three-fifths only of the distance between the outer orbital angles; but the fingers are comparatively longer than in the male. The oblique striæ near the carpal articulation are hardly developed and the upper border of the dactylus is nearly smooth; the granules on the inner surface of the palm are also fewer in number and smaller.

The ambulatory legs apparently closely resemble those of *S. sylvicola*. The meropodites, which have a subterminal, acute tooth on the anterior border, are slender like the other joints, and their outer surface is covered with short, transverse, crenulate lines, —that of the last pair excepted, these being nearly smooth; so,

e.g., are the meropodites of the penultimate pair three times as long as broad. The carpal joints, which, like the following joints, are smooth, are furnished on their outer surface with two longitudinal ridges, less distinct on those of the last pair. The propodites are little more than three times as long as broad, and the dactyli are but little shorter than the penultimate joints; in the male, not in the female, the posterior margin of the dactyli is tomentose, as also the distal third part of that of the propodites. The ambulatory legs are fringed with stiff bristles which are black on their proximal and white on their distal half.

The carapace and ambulatory legs are red-brown, the chelipedes yellow.

<i>Measurements in millimetres.</i>	♂	♀	♀
Distance between the outer orbital angles	13.7	12.75	12.4
Length of carapace, measured in the middle line, abdomen excluded	12.75	11.6	11.5
Breadth of the upper margin of the front	6.8	6.5	6.4
Distance between the 1st epibranchial teeth		13	12.75
Greatest width of the carapace	14.4	13.75	13.5
Breadth of posterior margin of carapace ..	7	6.5	6.6
Length of the terminal joint of abdomen.	2.5		
,, ,, penultimate joint	1.8		
Breadth of the anterior margin of this joint	2.7		
,, ,, ,, posterior ,, ,, ,,	4.6		
Length of antepenultimate joint	1.52		
Horizontal length of chela	10.4	7.75	8
,, ,, ,, fingers	5.7	4	4.3
Height of the palm	5.5	3.8	4
Length of meropodite	10.4	9	8.5
Breadth ,,	3.2	3	3
Length of propodite			
in the middle	7	6	6
Breadth of ,, ,,	1.8	1.9	1.7
Length of dactylus	6.5	5.75	5.75

Sesarma thelxinoë differs at first sight from *S. ocy-poda*, Nob., its variety *gracillima*, de M., and *S. sylvicola*, de M., by the smoothness of the gastric region and of the upper surface of the inner post-frontal lobes, as also by the smoothness of the outer surface of the chelæ. There are, however, still more differences, for which I refer to my work in *Abhandl. Senckenb. Naturf. Gesellschaft*, xxv, 1902, pp. 522-527, pl. xix, figs. 9-11.

Of *S. aranea*, Nob., a young male specimen, from the Island of Nias, kindly presented to me by Dr. Nobili, is lying before me. The distance between the outer orbital angles is 6.3 mm., the length of carapace 6 mm., and the lateral margins slightly diverge posteriorly, so that, as regards the general shape of the carapace, both species agree with one another. The first epibranchial tooth is, however, shorter than the extraorbital tooth and less prominent laterally; the upper surface of the inner post-frontal lobes and

the anterior part of the protogastric areas are *distinctly rugose and granular*; the front is *higher*,—3 mm. broad, 1 mm. high; the chelæ are *granular* on their outer surface and the five or six acute teeth on the proximal half of the upper margin of the dactylus are *much larger* than in *S. thelxinoë*. The abdomen has a different shape, resembling that of *S. moeschii* (de Man in Max Weber's *Zoolog. Ergebn.*, 1892, tab. xx, fig. 14a); the penultimate segment, indeed, is *much less enlarged*, its posterior margin is 1.92 mm. broad, while this segment is 0.9 mm. and the antepenultimate 0.72 mm. long. Both species are therefore considered as different, but an examination of younger individuals of *S. thelxinoë* will be useful in order to see whether they show the same characters as the adult.

Sesarma (Sesarma) amphinome, de M., of which a female from Sintang, described in 1899, is lying before me, is a more different species.

