

of the palm is coloured a greenish or purplish grey with, in some cases, a reddish brown tinge near the proximal end of the immobile finger. The row of granules near the base of the fingers on the inner surface is rather faint.

In addition to the striking difference in form and colour of the chela, these specimens are distinguishable from *G. coarctatus* in several respects. (1) The granules in the accessory row on the lower orbital wall are smaller but

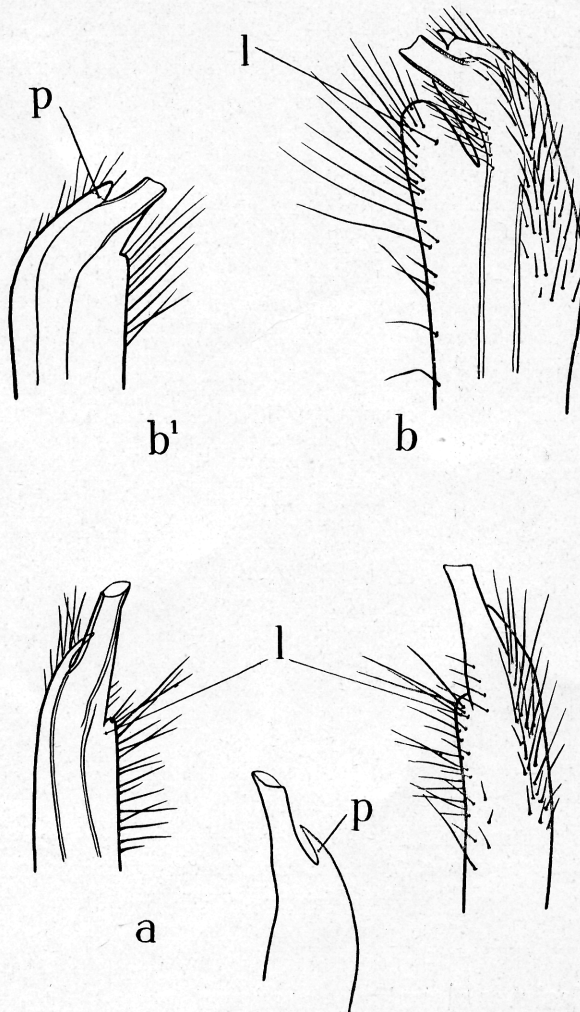


FIG. 6. — *Gelasimus signatus* HESS. — *a*. Apex of first pleopod of male showing terminal tube, small setose lobe (*l*.) and tongue-like process (*p*.) at base of tube. *Gelasimus signatus* var. *angustifrons* DE MAN. — *b*. Apex of first pleopod of adult male. *b*¹. Same of smaller male. *l*. Setose lobe. *p*. Short chitinous process : × 36.

more numerous (8-16). (2) The antero-lateral margins of the carapace are more sinuous as they converge slightly for the first 1-2.5 mm. and then curve inwards rather abruptly. (3) The apex of the first pleopod of the male is as represented in fig. 6*b* (cf. with fig. 4*b* — being from a male of about the same size). (4) The depressions on the carapace are usually more pronounced.

The front has always a long narrow median furrow as in *G. signatus* var. *angustifrons* (De Man, 1891, pl. IV, fig. 11c). I have not examined type specimens of *G. signatus* Hess but the specimens from Port Curtis, Australia (Miers, 1884, p. 236) are probably correctly referred to that species. They differ from the Manoembaai specimens in having a short, wide frontal furrow (De Man, 1891, pl. IV, fig. 11a) and less sinuous antero-lateral margins. Moreover the first pleopod of the male is more slender, with a much longer terminal tube (fig. 6a); the setose lobe at the base of the tube is small while there is a longer narrower protuberance^(p) on the other side of the tube base. The difference in the pleopod supports De Man's separation of the *angustifrons* form, which may even be a distinct species.

DISTRIBUTION. — *G. signatus* has been recorded from the eastern coast of Australia; *G. signatus* var. *angustifrons* from Batavia.

Gelasimus sp.?

MATERIAL. — S. Manoembaai (Aroe), Mangrove, 2 ♀, incomplete, with narrow front and accessory row of granules on lower orbital wall.

c) FRONT MISSING.

Gelasimus sp.?

MATERIAL. — Dodingabaai, Halmaheira, 15-II-29, 1 incomplete ♂, entire dorsal half of carapace missing.

3. Genus SCOPIMERA DE HAAN.

Scopimera aff. *inflata* A. MILNE-EDWARDS.

A. MILNE-EDWARDS, 1873, p. 83.

KEMP, 1919, p. 321, text-fig. 8.

MC CULLOCH & MC NEILL, 1923, p. 49, text-fig. 1, pl. IX, fig. 1 and 2, pl. X, fig. 1 and 2

RATHBUN 1924, p. 10, text-fig. 2.

MATERIAL. — Manokwari (New Guinea), 13-III-29, 9 ♂, 1 ♀ mostly of small size.

These specimens are so near to *S. inflata* and *S. sigillorum* that it is only necessary to give a very brief description of the salient features.

DESCRIPTION OF FEMALE. — Outline of carapace as represented in fig. 7b; $l. = 4.8$, $b. = 7.0$ mm. Front deflexed, width between eye-stalks rather less than one-fourth of width between external orbital angles; anterior border with a slight median emargination.

Merus and ischium of external maxilliped in the proportion of 4 : 3, a blunt wide ridge extending downwards from the carpal articulation on distal third of merus. A few long setae which project posteriorly from the apex of the dactylus are not represented in Kemp's figure (1919, p. 322, text-fig. 8).

Endopod of second maxilliped as represented in fig. 8a, the setae omitted; this type of elongated parallel-sided terminal segment is also found in *S. bitympana* and may be characteristic of all four species in this group (*vide infra*, p. 17).

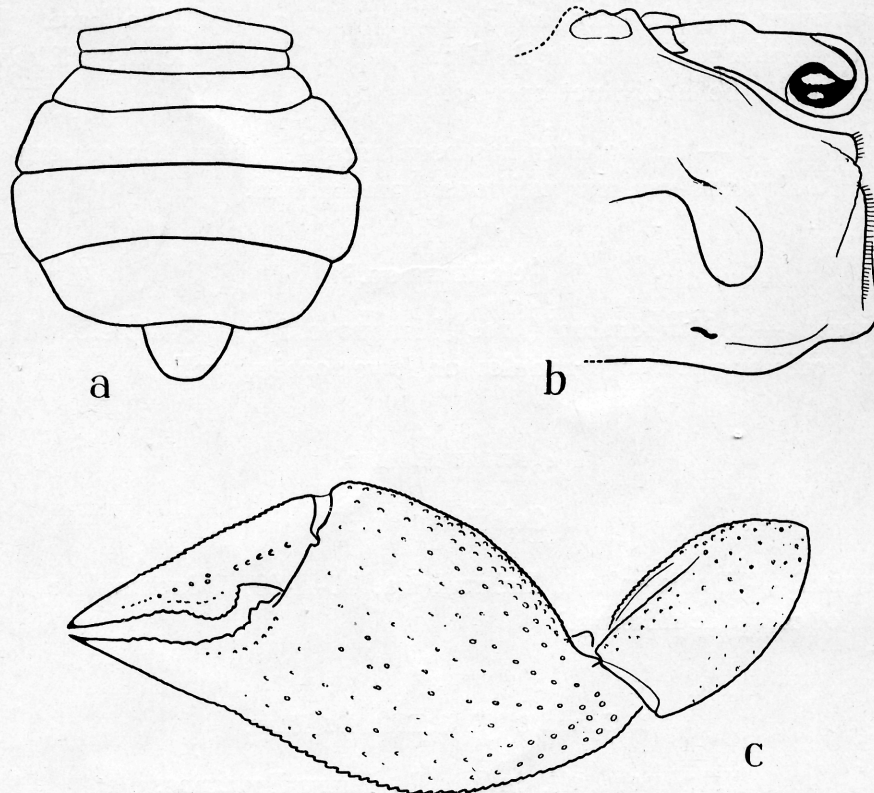


FIG. 7. — *Scopimera* aff. *inflata* A. M.-EDW. — a. Female abdomen. b. Left half of dorsal surface of carapace of female. c. Left chela and carpus of male : $\times 10.5$.

Abdomen subcircular, the maximum width very nearly equal to the length (fig. 7a).

Chelipeds equal. The merus, which has a longitudinally divided tympanum on the inner, a smaller undivided one on the outer face scarcely extends beyond the external orbital angle when closely applied to the carapace. Carpus half as long again as wide, unarmed. Fingers of chela considerably longer than dorsal surface of palm; dactylus with a long but very shallow prominence on the proximal half.

First pair of walking-legs agree with Kemp's description of *S. inflata* (1919, p. 323) save that the merus is a trifle shorter in proportion to its width. The

« strong longitudinal ridge » on the anterior face of the propodus is minutely serrated; a similar ridge also occurs on the second pair of legs.

MALE. — The abdomen is similar to that figured by Rathbun (1924, p. 11, text-fig. 2) except that the sum of segments 3 and 4 is equal to segment 5 and the latter is rather less constricted proximally.

Carpus of cheliped unarmed and twice as long as wide. The chela is represented in fig. 7c; dactylus equal to dorsal border of palm with a wide prominent lobe on proximal half of ventral margin.

First pleopod slender and sinuous with the apex bent to form a hook (fig. 8b; cf. that of *S. bitympana*, fig. 8c).

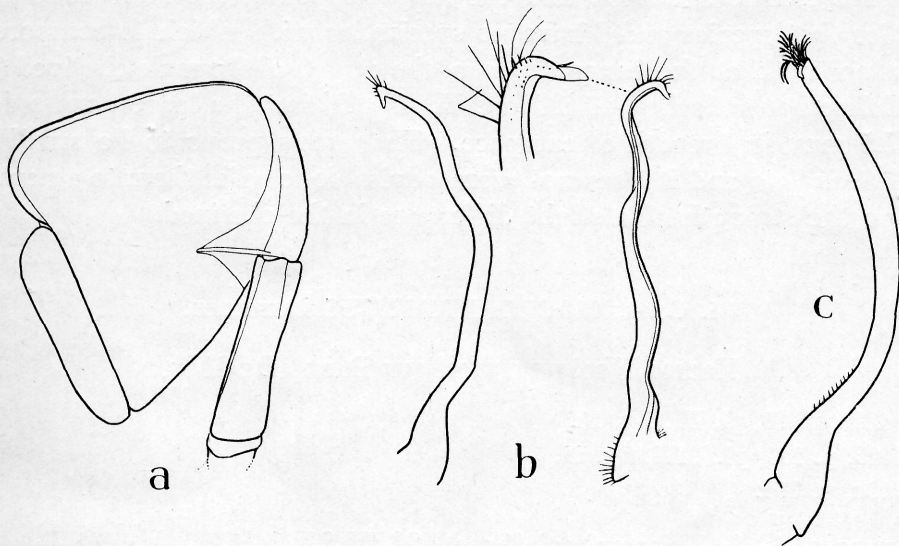


FIG. 8. — *Scopimera* aff. *inflata* A. M.-EDW. — a. Endopod of second maxilliped, b. First pleopod of male drawn from two different aspects to show amount of twisting; apex of same farther enlarged.

Scopimera bitympana SHEN. — c. First pleopod of male. ($\times 15$; apex of first pleopod $\times 45$.)

REMARKS. — Kemp (1919, p. 311) divided the species of the genus *Scopimera* into four groups the last showing affinity with *Dotilla*. This group now comprises four closely related species namely *S. sigillorum* Rathbun (1914, p. 83, as *Dotilla sigillorum*), *S. kochi* Roux (1917, p. 610), *S. inflata* A. Milne-Edwards and *S. bitympana* Shen (1930, p. 227; 1932, p. 262).

The specimens from Manoekwari certainly belong to this group but are not referable either to *S. kochi* or to *S. bitympana*⁽¹⁾. They differ from the former in several respects: the front has not granular edges; the mesogastric region is not concave; the merus of the external maxilliped is rather shorter and more

⁽¹⁾ I have been able to examine several specimens of this species through the courtesy of Mr. C. J. Shen.

angulate antero-internally; the meri of the walking-legs are broader proximally with larger tympana than are figured by Roux (1917, pl. XXVIII, fig. 21); the abdomen of the female is much broader ⁽¹⁾. From *S. bitympana* they differ chiefly as regards the first pleopods of the male (fig. 8c) and the chelipeds. In *S. bitympana* the carpus in both sexes is much broader ($l:b$ approximately 4:3) and in the larger males at any rate the anterior border is thin, almost cristate. The fingers of the chela are longer in both sexes — fingers one and a half (♀) or twice (♂) as long as the dorsal border of the palm — and the tooth on the dactylus of the male is much narrower. In *S. sigillorum* the merus of the third maxilliped is stated to be about three times as large as the ischium.

They are certainly closely related to, if not identical with, *S. inflata*; unfortunately the female abdomen and the first pleopod of the male have not been figured for that species and I have no specimens with which to compare these. There is no tooth at the inner angle of the carpus of the male cheliped (fig. 7c, cf. Mc Culloch and Mc Neill, 1923, pl. IX, fig. 2) but the largest male does not exceed 7.5 mm. in breadth of carapace. They may prove to be small individuals of *S. inflata* and it does not seem advisable to refer them to a new species merely on the strength of a slight difference in the cheliped.

4. Genus MACROPHTHALMUS LATREILLE.

Macrophthalmus pacificus DANA, DE MAN.

DE MAN, 1890, p. 79, pl. IV, fig. 10.

TESCH, 1915, p. 190, pl. VIII, fig. 11.

KEMP, 1919a, p. 391.

MATERIAL. — S. Manoembaai (Aroe), 26-III-29, 1 ♂.

REMARKS. — It was rather difficult to decide whether this specimen ought to be referred to *M. pacificus* or to *M. crinitus* Rathbun. Kemp (1919, p. 391, in table) states that in *M. crinitus* the granulate crest on the outer surface of the palm of the male is conspicuous. There is certainly no trace of such a granulate crest in this specimen. Of *M. pacificus* Tesch (1915, p. 192) writes « contrary to the usual case in the genus, the ambulatory legs are only slightly hairy... ». Unfortunately the ambulatories of the present specimen are so coated with a rather adhesive slime that it is exceedingly difficult to clean them, but they appear to be almost, if not quite, as hairy as in *M. crinitus* (Rathbun, 1910, pl. I, fig. 3, as *M. pacificus* but the specific name has since been changed). Moreover, while the four short ridges on the branchial region of the carapace are distinct on the right, all save the anterior (transverse) one are absent on the left side, which is somewhat irregular and may be slightly abnormal.

⁽¹⁾ See also Mc Culloch and Mc Neill, 1923, p. 51 (quoted from Kemp).