



Figure 13.—*Kraussia integra*, KR VI/H3-10, male of cl:9, cb:10, cheliped of juvenile.

sand and rubble, Date coll: 10/6/1970; KN II, off Elat Bay, west coast Nuhu Tjut, Kai, 5° 40'S, 139° 59'E; H3-4, 27-35 fms., rubble, fan coral, some sand and green algae, Date coll: 13/6/1970; CP II, off Tg. Tutuhuhur, Piru Bay, Ceram, 128° 8'E, 3° 15'S; H8-9, 20-26 fms., coarse sand, lithothamnion sand rubble, Date coll: 1/6/1970. The largest specimen (KR VI/H3-10) one male of cl:9, cb:10.

Preliminary remarks.—Apart from the original of De Haan (1835, not seen) the single accurate description of *integra* is that of Sakai (1939). It could be considered that no accurate illustration of the species exists in the literature at least in regard to the chelipeds, the best being those of Sakai (1939, 1965). A re-examination of the Type specimen or material from Japan would be essential to evaluate the present observations. The only reference in the literature to the size of the species is a male of 18x22.5 given by Sakai (1939), who recorded a total of 16 specimens.

Alcock (1899) quotes: "*K. rastripes* Muller" as a synonym of *integra* and Balss (1922) kept the same standpoint. In fact, the description of Alcock corresponds to *rastripes* and not to *integra*. Some of the specimens of *integra* identified by authors referring to Alcock (1899) could belong to *rastripes*, as is further demonstrated for those of Tweedie (1950).

Observations.—The frontal lobes are "shallow bilobate" like indicated by Sakai (1939). The sinus of the supra-orbital border is well marked. The carapace is granular all over, the granules arranged in small transverse ripples at least on the postfrontal and lateral region. The small specimens under 10 are smooth. The dactyli of the pereopods 2-5 are "blade shaped and recurved" as described by Sakai (1939). On the largest male (277), the two chelipeds are clearly unequal, and with a different shape. On the major cheliped the two fingers are shorter, the palm is higher than on the minor; on the major cheliped the palm is clearly longer than on the minor. Sakai (1939) writes: "Chelipeds are subequal in size but usually unequal in the shape of the fingers . . . the fingers of one

cheliped are very often longer than those of the opposite cheliped; in a very young specimen, the movable finger is usually very much more incurved inward than in the adult."

On a smaller male (275) of 10x11 the two chelipeds also are clearly unequal and very like the large specimen; the female of the same series (275) is damaged and has only one cheliped which has short fingers but is comparatively less swollen and more acutely granular than on the male. Another small male (the largest of the material from the Mariel King Mem. Exp.) has the chelipeds which seem to agree with the characters of the young mentioned by Sakai (1939): the two fingers of the two chelipeds being "more incurved inward". On the large specimens the black pigment of the fixed finger extends to half the height of the palm on the distal area.

The male pleopod 1 seems to be nearly similar with those illustrated by Sakai (1934, text-fig. 64) and Buitendijk (1960, fig. 1a). However I hold some reserve on the identity of the present material with *integra*.

The species is recorded from Japan (De Haan, Balss, Sakai), China (Gordon), Hawaii (Rathbun), Gilbert Island (Balss) and Sulu Molucca Seas (present record). Milners (1884, p. 235) in recording specimens of *nitida* mentioned that in the British Museum, specimens from Philippines (Cuming collection) probably belongs to *integra*. It is, with *nitida* and *rugulosa*, the most recorded species of *Kraussia*. The specimen (WAM.271-70) from the S. of Cape Poivre is the first record of the species in Australian waters.

***Kraussia bongensis* nov. sp.**

(Figs. 19, 20, 23J, 24)

Type specimen: Western Australian Museum.

Type locality: Tawitawi Bay, Sulu Archipelago.

Material.—Holotype (WAM.263-70A) male of cl:20, cb:23; Paratypes, WAM.263-70B, male of cl:15, cb:17; WAM.263-70C, male of cl:14, cb:15, Loc: about 9 miles 130° from Bongae Light, Tawitawi Bay, Sulu Arch., Coll: B. R. Wilson on "Pele", Date coll: 29/2/1964. Other specimens of the same loc: 2 males and 1 female, the largest of cl:9.5, cb:11.

Diagnosis.—(Holotype). Carapace dorsally convex with fine small granular transverse ripples all over. Front bilobate, anterior margin of lateral frontal lobes straight, no trace of antennal sulcus. Antero-lateral border with a feeble concavity behind external orbital angle and posteriorly a feeble notch. Two chelipeds unequal and differently shaped. Major cheliped with palm higher and longer than that of minor cheliped. Length of fixed finger clearly more than one-third of height of palm on major cheliped, and clearly less on minor cheliped. Outer surface of both chelipeds similarly covered with salient granular transverse ripples and ornamented on distal part with black colour of fixed finger extending near upper border of palm. Dactyli of pereopods 2-4 sickle-shaped with anterior border concave without granules save on a very short proximal flat-

tening; anterior border of pereopod 5 entirely granular. Male pleopod with apex forming a lamellar broadening lobe with round distal margin; some subdistal long acicular setae and some stout pre-apical spines.

Observations.—Only on the holotype is the black colour of the palm strongly marked. The male pleopod of the largest paratype has a larger number of subdistal setae and the apical lobe slightly differently shaped. On the smallest male the apical lobe is only developed as a straight small tongue not significantly broadening distally.

The male pleopod provides the most significant discrepancy between *bongensis* and *integra*. In addition, *bongensis* differs from *integra* by: (1) the frontal lobe with anterior margin straight instead of sinuous and median sinus closer.—(2) a marked small concavity immediately behind the extraorbital angle.—(3) a less subquadrate outline of the carapace border and its dorsal surface more convex.—(4) the fingers of both chelipeds which are more incurved with a wider gap.—(5) the black colour of the palm extending higher.

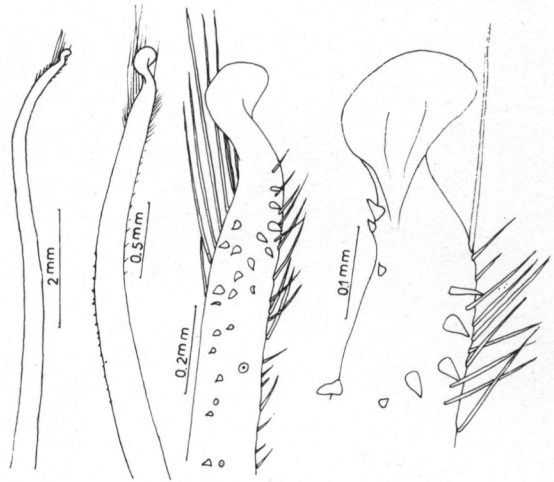


Figure 19.—Male pleopod 1 of *K. bongensis*, WAM 263-70 of cl:20, cb:23.

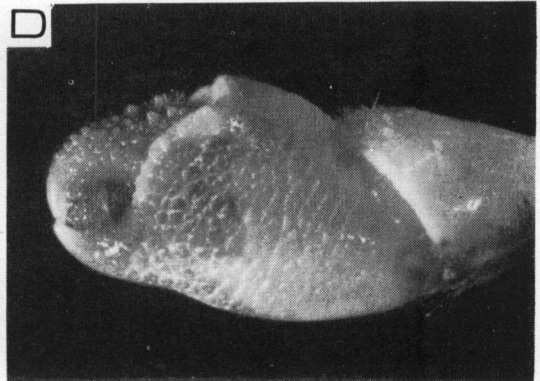
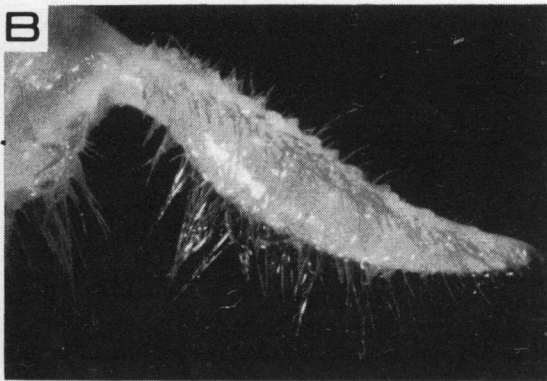
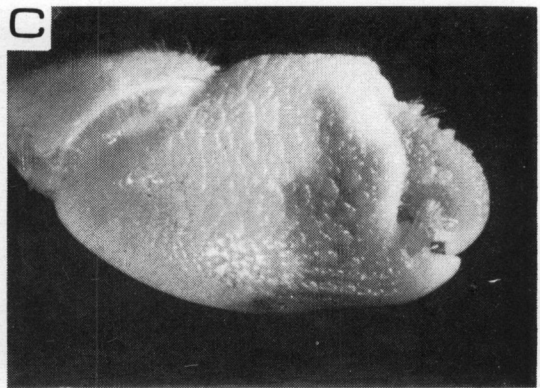
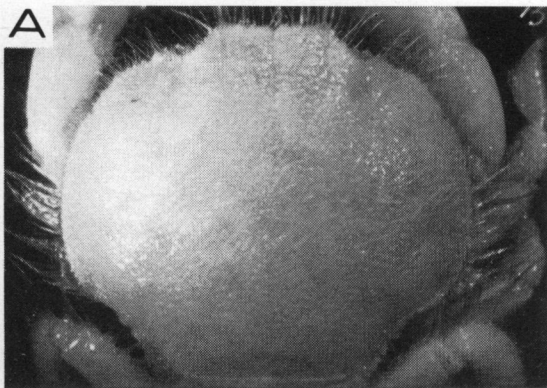


Figure 23.—*Kraussia bongensis*, WAM 263-70, male of cl:20, cb:23. A, dorsal view.—B, pereopods 4, 5.—C, right cheliped.—D, left cheliped.