

Notes on the genus *Demania* Laurie, 1906
(Crustacea, Decapoda, Brachyura, Xanthidae)

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ABSTRACT: The genus *Demania* Laurie, 1906, is a group of Indo-Pacific xanthid crabs that contain poisonous species, and, consequently, there has been growing interest in their systematics in recent years. Of the 15 species presently recognised, many are still poorly known and their status doubtful. This paper is an attempt to clarify the systematics of several of these. A new species is described from the Fiji islands in the Pacific. Four other species, *D. rotundata*, *D. cultripes*, *D. baccalipes* and *D. scaberrima* are re-described in detail. Their infra-specific variations and their affinities are also discussed. The synonymy between *D. alcalai* and *D. cultripes* suggested by Serène (1984) is upheld, while *D. japonica* is shown to be synonymous with *D. rotundata*. Specimens from Singapore previously referred to *D. reynaudi* are shown to be variants of *D. scaberrima*.

INTRODUCTION

The genus *Demania* Laurie, 1906 has been the subject of many studies (e.g. Guinot 1977, 1979, Guinot & Richer de Forges 1981, Serène 1984). It is currently recognised to contain 15 species, most of which have been described from only one or two specimens. Of the 15 species described, several are poorly known, among them *D. cultripes* (Alcock, 1898, type locality Singapore) and *D. baccalipes* (Alcock, 1898, type locality Ceylon), two species based on single specimens. These were originally deposited in the Indian Museum (Calcutta), but their present whereabouts are uncertain. Specimens of the two species in the Raffles Museum, Singapore, of which Guinot (1977, 1979) provided photographs taken by the late Dr Serène, were presumed lost during the transition period that followed the dissociation of the Museum. However, with the incorporation of the collections into the Zoological Reference Collection (ZRC) of the Department of Zoology, National University of Singapore, these and other missing specimens have recently been rediscovered, permitting their reexamination and redescription based on many more specimens that had been available.

In recent years, there has been renewed interest in the genus *Demania* because of several reports of some of its species being poisonous to man and domestic

Description of the female holotype. Carapace pentagonal. Front bilobated, with shallow V-shaped cleft and deep, narrow median notch. Frontal margin of each lobe sinuous, with outer angle sharper, less advanced and inner angle broadly rounded. Supra-orbital margin smooth, inner border swollen, with two notches on outer border, infra-orbital margin with erect tooth on inner border. Regions separated by shallow grooves, areoles punctate (F, M, P) to squamose (L, R), areas bordering grooves smooth and bare. Posterior two-fifths of carapace (P, R) with larger tubercles than anterior three-fifths, except for tubercles extending onto antero-lateral teeth. Antero-lateral margin arcuate, thickened, with four weakly dentate lobes, with lobes E to S becoming increasingly more pointed and the last two (T, S) distinctly acuminate. S-lobe directed horizontally outwards, forming concavity with the straight postero-lateral margin. External orbital angle (D) produced into small, blunt tooth.

Third maxillipeds smooth and punctate proximally, granulate distally, ischium with distinct sulcus, merus irregularly pentagonal, anterior border emarginate, convex, hairy, with depression in line with ischial sulcus.

Chelipeds symmetrical, merus, carpus and manus tuberculate. Merus cristiform, carpus with longitudinal and transverse groove and sharp inner spine. Manus with three to five larger superior tubercles, tubercles of upper outer surface randomly scattered, those of lower surface arranged in rows, one extending onto pollex. Dactylus compressed, superiorly ridged, smooth; pollex slightly deflexed, meeting dactylus without gape, with five teeth of which two are larger.

Ambulatory legs compressed, dorsal margins of merus and propodus crested. Merus doubly crested on ventral margin. Propodus of last leg not broadened, dactyli of all legs long, slightly curved and covered with thick pubescence on margins.

Sternum punctate. Abdomen seven-segmented, surfaces bare and punctate, those of the first segment scabrous.

Remarks. The poorly produced and sinuous frontal lobes are extremely characteristic, the only other species of *Demania* with similar frontal structure being *D.rotundata* (Serène, 1969) (and also *D.japonica* Guinot, 1977, which is here synonymized with *D.rotundata*). It can however, be separated from this very closely related species by its:

1. more cristiform legs,
2. ventral ambulatory meral margins smooth (not serrate),
3. antero-lateral lobes T and S more acuminate,
4. regions F, M, and P punctate (not squamose),
5. cheliped fingers straighter and longer,
6. basal part of the cutting edges of the chelipeds straight and not cut into distinct teeth,
7. outer margin of the outer lobule of the frontal lobe slopes towards the orbit (not vertical).

Moreover, *D.rotundata* has so far been reported only from Taiwanese and

Japanese waters, whereas *D.wardi* appears to be a more oceanic species (south Pacific Ocean).

D.wardi also resembles *D.macneilli* Garth, 1976, from northern Queensland, Australia with regard to the general carapace morphology, but differs significantly in having,

1. the frontal lobes less advanced medially, with the frontal margin of each lobe distinctly sinuous,
2. the posterior two-fifths of the carapace much less squamose,
3. the antero-lateral lobes are more rounded, less dentate, particularly E, N, and T,
4. the areoles less protuberant, especially 5L and 2M,
5. the basal part of the cutting edges of the fingers of the cheliped straight and not cut into distinct teeth,
6. the outer surfaces of the manus with longitudinal rows of granules (not squamose).

A fossil specimen collected from the New Hebrides in the Pacific earlier identified by Mr Warren C. Blow of the Smithsonian Institution as *D.rotundata* (in Mallick & Greenbaum 1975), is also referred to *D.wardi*. The superbly preserved (female) from the Pleistocene Era (Pl.2A, B) is almost identical to the female holotype, and differs only in the structure of the legs. The legs of the female fossil are much more strongly cristiform than in the female holotype of *D.wardi*.

In the absence of a male specimen, it can only be hoped that the male first pleopod, when discovered, will support the differences in external characters noted above.

The species is named after Peter D. Ward of the University of California (Davis), whose research on the food habits of *Nautilus* conducted off Noumea, New Caledonia as well as off Suva, Fiji, led to the trapping of this new *Demania*.

Demania rotundata (Serène, 1969) (Pls.2C-D, 3; Fig.3D-E)

Xantho reynaudi cultripes Sakai, 1939

Xantho cultripes, Takeda & Miyake 1968

Dèmania ? rotundatus Serène, 1968

Xantho rotundatus Serène in Guinot, 1969; Yang, 1979

Demania rotundata, Guinot 1971, 1977, 1979; Serène & Lohavanijaya 1973; Sakai 1976

Demania japonica Guinot, 1977, 1979

not *Xantho (Lophoxanthus) scaberrimus* var. *cultripes* Alcock, 1898.

Materials examined. 1 ♂ cb 34.9 col. 27.4, 1 ♀ cb 38.5 cl 30.0, ZRC 1968.3.2.1 & 2 (Paratypes), coll. by Fisheries Research Station, at Keelung, Taiwan in 1963.

Description. Carapace pentagonal. Front bilobated, with deep and narrow median notch, frontal margin of each lobe sinuous, the outer angle tooth like, the inner broadly rounded. Regions of carapace well delineated by deep grooves. Regions immediately surrounding the antero- and potero-lateral margins, and the posterior

part of the carapace covered with small rounded granules. Anterior part of carapace squamose. Supra-orbital margin with small, low, flattened granules. Infra-orbital margin smooth. Antero-lateral margin with four low, dentate lobes, the last two (T, S) slightly acuminate, lobe E very low and indistinct. External orbital angle (D) absent. Basal segment of antenna large, immovable, unfused, and completely blocking orbital hiatus. Antennules folding obliquely. Pterygostomial, sub-branchial, sub-hepatic and sub-orbital regions with numerous small granules. Sub-branchial region with pubescence. Endostomial ridges absent.

Ischium of third maxillipeds gently serrated on inner margins, lined with stiff hairs, with deep sulcus; outer surfaces finely punctate. Merus covered with small granules.

One cheliped missing. Outer surface of hand with rows of small granules, appearing rugulose. Inner dorsal margin of hand with six lobe-like teeth. Carpus with one spine-like tooth on inner angle, and much smaller and blunter one at its base. Outer surfaces densely covered with small and/or flattened granules. Inner surfaces of hand and carpus smooth. Merus granulose, with dorsal margin cristiform, and divided into one major and one minor fold. Dactylus with distinct dorsal crest, especially thickened at the base. Pollex with five teeth.

Ambulatory legs covered with small granules on all surfaces. Margins of meri of legs one to five increasingly more cristiform and serrated, the first almost smooth. Margins of last ambulatory merus weakly cristiform, singly so dorsally and doubly so ventrally. Margins finely serrated, those of dactylus lined with stiff hairs.

Sternum covered with very small rounded granules. Abdomen five-segmented, strongly sculptured, and covered with small granules. Sutures of segments three to five completely absent.

Female paratype. The female is very close to the male in most non-sexual aspects. The chelipeds are symmetrical and identical, but the tubercles are more numerous, stronger and sharper. The dorsal crest on the dactylus of both chelipeds is also much more pronounced. The meri of the legs however have the proximal parts of the inner ventral carinae expanded into small 'flap-like' structures which are absent in the male. Infra-orbital margin with sharp tooth in inner border; this tooth is completely absent in the male. First and second antero-lateral lobes (E, N) confluent and rounded, only the last two lobes distinct but far less developed than those of the male.

Remarks. *D. rotundata* (Serène, 1969) was described from two males and one female collected in Keelung, Taiwan, and the two paratypes are now deposited in the ZRC. Serène & Lohavanijaya (1973) regarded Sakai's (1939) '*Xantho reynaudi cultripes*' (not Alcock's, 1898, subspecies) as synonymous with this species but Guinot (1977, 1979) preferred to recognise it as a separate species, *D. japonica* Guinot, 1977. Careful comparisons, however, indicated that the only appreciable difference between the two species is in the lateral angle of the carapace; being more rounded in *D. japonica*, but more angled in *D. rotundata*. Although not clearly

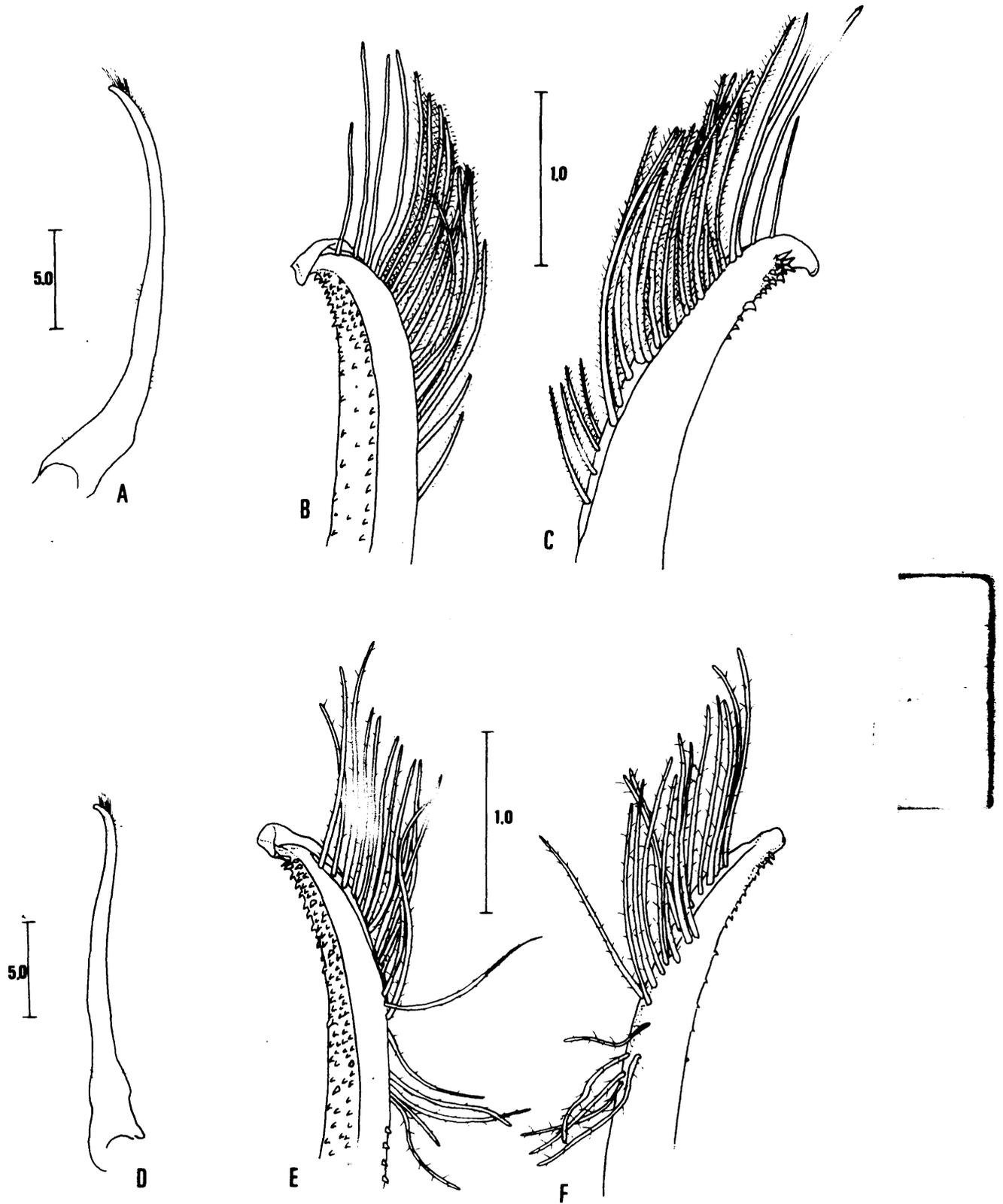


Figure 2. Left Male First Pleopods. A-C. *Demania cultripes* (Alcock, 1898), male, 72.4 by 57.3 mm, ZRC 1965.11.4.6 (Singapore); D-F. *Demania baccalipes* (Alcock, 1898), male, 61.0 by 45.0 mm, ZRC 1965.11.4.5 (Pulau Angsa, Malacca Straits). (Scale in mm).

shown by Guinot (1977, 1979) in the photograph of the male. The proximal part of the ventral crenated margin of the merus of the last pair of ambulatory legs in the female is expanded and rather leaf-like, a feature also present in *D.japonica*. Their male first pleopods are also almost identical in structure, upon comparing those on the present paratype male with those excellently figured by Guinot (1977, 1979) and Sakai (1939) for the two species. Both species also possess the same unique sinuous frontal lobe structure. We therefore think that there is no reason to separate the two species. Takeda & Miyake's (1968) specimens of *Xantho cultripes* are also referable to *D.rotundata* since they probably based their identification on Sakai's (1939) individual.

A Taiwanese Neogene specimen identified by Hu (1980) as '*Xantho reynaudi*' is also probably referable to *D.rotundata*, with regard to the three lobes on the upper margin of the manus of the cheliped, the sinuous front, the vertical outer margin of the inner lobule, shape of the antero-lateral margin, and the structure of the cutting edges of the fingers of the chelipeds. This specimen is however unusual in having the inner lobules of the front more strongly produced than in any of the known specimens of *D.rotundata*.

Distribution. Taiwan and Japan.

Demania cultripes (Alcock, 1898) (Pl.4; Figs.2A-C, 4)

Xantho (Lophoxanthus) scaberrimus var. *cultripes* Alcock, 1898; Balss, 1938; Buitendijk, 1950; Ow-Yang, 1963

Demania ? cultripes, Serène 1968

Demania scaberrima cultripes, Guinot 1969, 1971

Demania cultripes, Guinot 1977, 1979; Yang 1979; Guinot & Richer de Forges 1981

Demania alcalai, Garth 1975; Serène 1984

not *Xantho reynaudi cultripes* Sakai, 1939; nor *Xantho scaberrimus* Walker, 1887

Material examined. 1 ♂ cb 72.4 cl 57.3, ZRC 1965.11.4.6, coll. in Singapore in 1935; 1 ♀ cb 74.1 cl 58.5, AHF No.731 (Holotype of *Demania alcalai*), coll. off Bantayan Barrio, Dumaguete City, Negros Oriental, Philippines on 10/10/1973 in bamboo fish trap in 1 m of water; 1 ♂ cb 72.2 cl 57.1 (Paratype of *Demania alcalai*), coll. from Piapi, Dumaguete City, Negros Oriental, Philippines on 10/10/1973 in coral reef in 1 m deep water; 1 ♂ cb 94.0 cl 75.0 (Paratype of *Demania alcalai*), coll. off Siaton Town, Negros Oriental, Philippines on 6/1971 in gill net.

Description. Carapace pentagonal. Front well produced, bilobated with distinct median notch, each lobe being trapezoidal in shape. Supra- and infra-orbital margins smooth, the former with notch on the outer border. Regions of carapace fairly well delineated by deep, pilose grooves. Immediate regions surrounding the carapace edges (except the front) (L, R) covered with flattened or small granules. Posterior quarter of carapace (R, P) squamose. Rest of carapace smooth and glabrous. Anterolateral margin with four dentate lobes, with the T and S distinctly

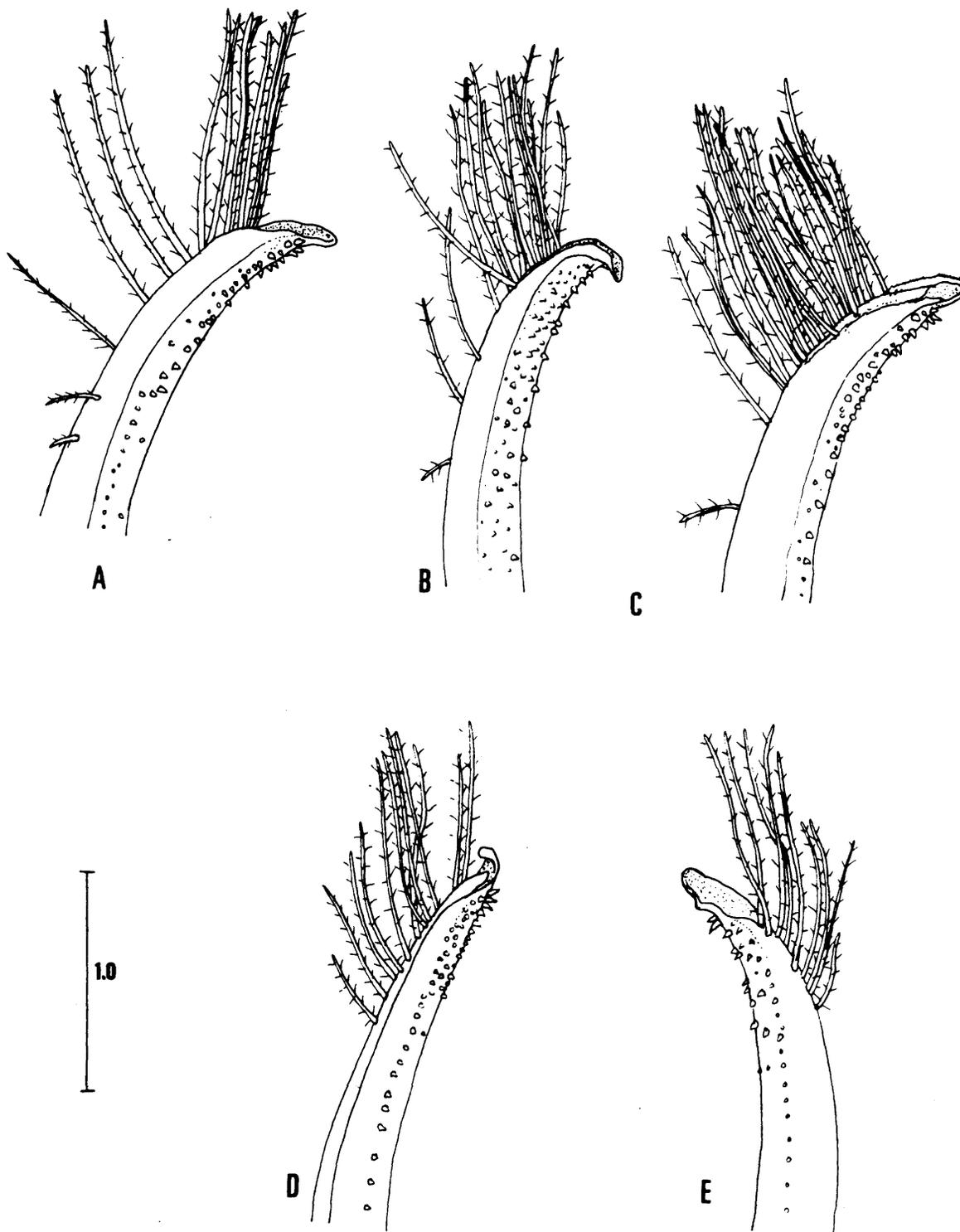


Figure 3. Left Male First Pleopods. A-C. *Demania scaberrima* (Walker, 1887): A. Male, 60.4 by 43.3 mm, ZRC 1984.587 (Tuas, Singapore); B. Male, 45.5 by 33.4 mm, ZRC 1965.11.4.1 (Siglap, Singapore); C. Male, 42.4 by 32.1 mm, ZRC 1984.2.1.1 (South China Sea); D-E. *Demania rotundata* (Serène in Guinot, 1969), male, 34.9 by 27.4 mm, ZRC 1968.3.2.1 (Paratype) (Keelung, Taiwan). (Scale in mm).

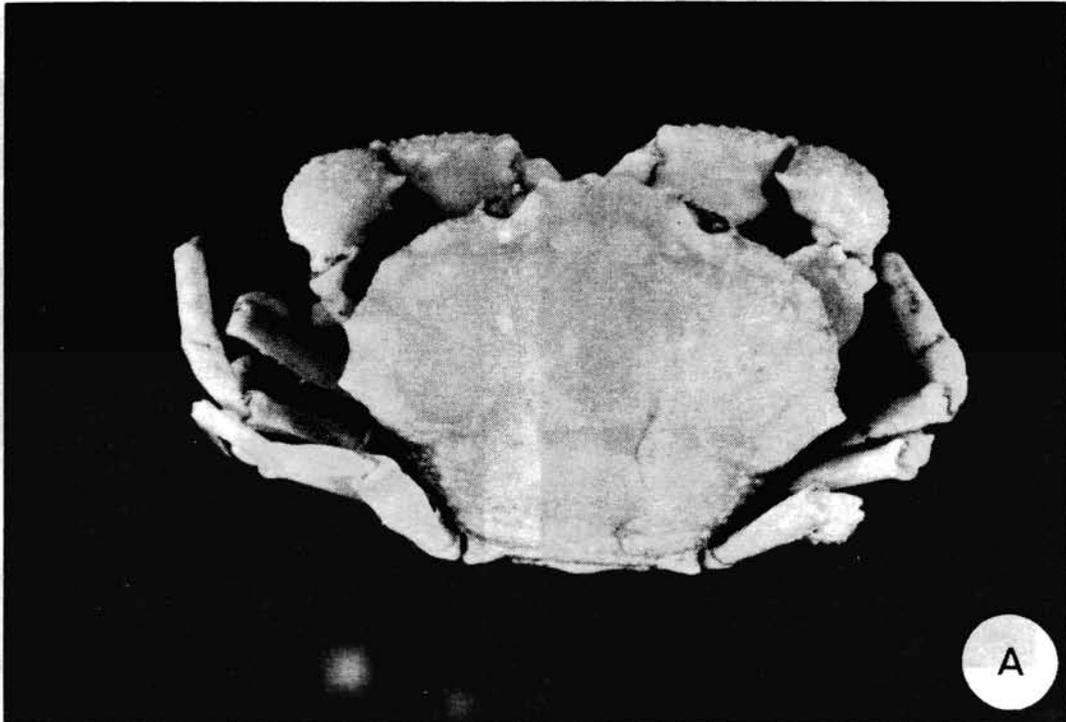


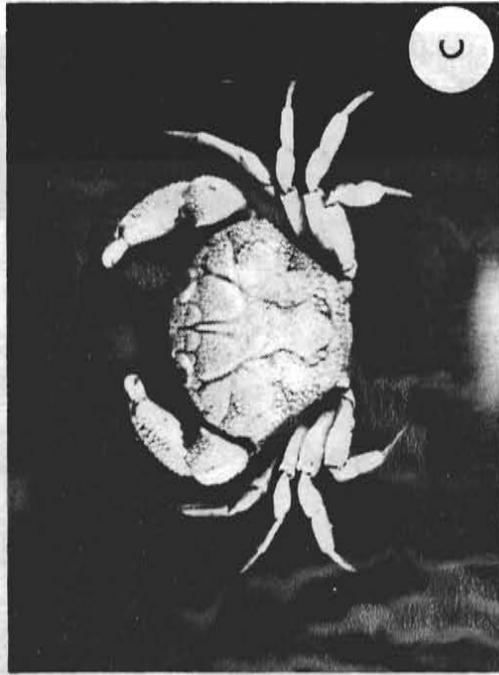
Plate 1. *Demania wardi* sp.nov. Female, 52.8 by 42.4 mm, AHF No.7610 (Holotype) (Suva, Fiji Islands).



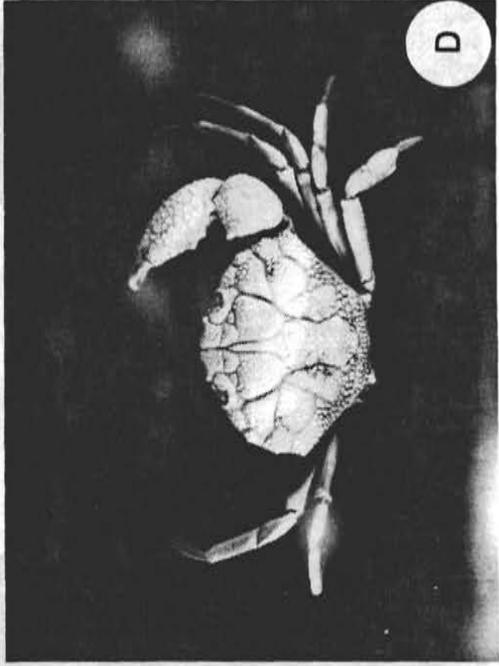
A



B



C



D

Plate 2. A-B. *Demania wardi* sp. nov. Female (fossil), 49.5 by 35.9 mm, (New Hebrides, Pacific Ocean). C-D. *Demania rotundata* (Serène in Guinot, 1969): C. Female, 38.5 by 30.0 mm, ZRC 1968.3.2.2 (Paratype); D. Male, 34.9 by 27.4 mm, ZRC 1968.3.2.1

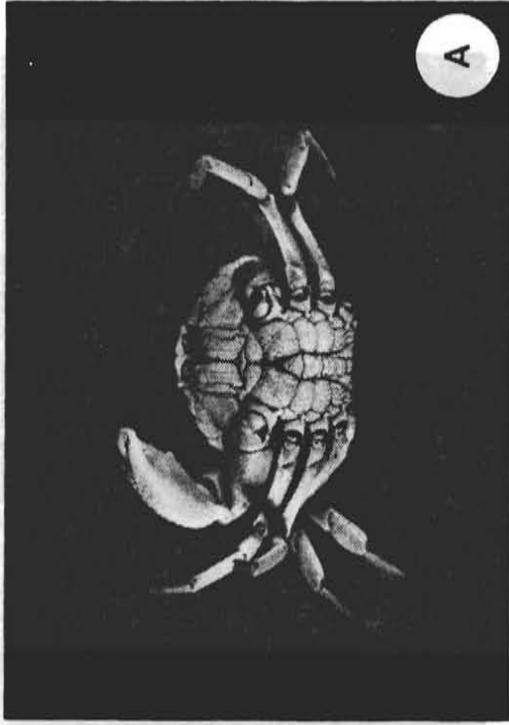


Plate 3. *Demania rotundata* (Serène in Guinot, 1969). A-B. Male, 34.9 by 27.4 mm, ZRC 1968.3.2.1 (Paratype); C. Female, 38.5 by 30.0 mm, ZRC 1968.3.2.2 (Paratype). (Both from Keelung, Taiwan).

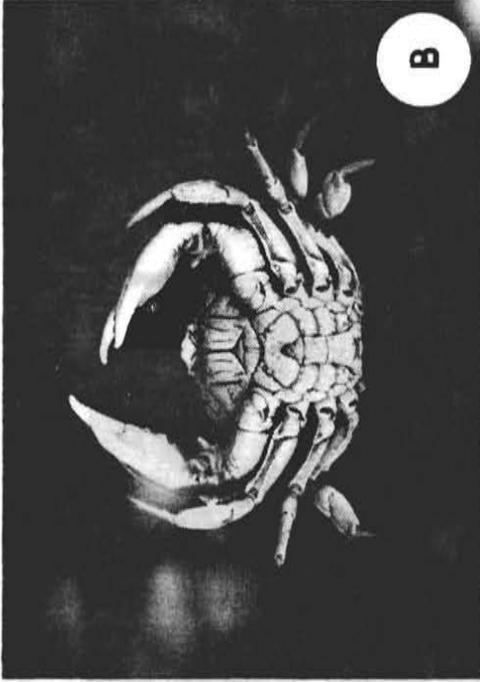
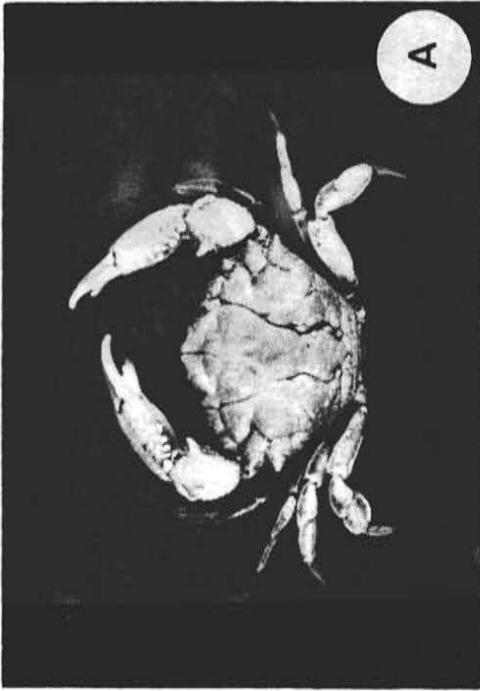


Plate 4. *Demania cultripes* (Alcock, 1898). Male. 27.4 by 57.3 mm, ZRC 1965.11.4.6. (Singapore).



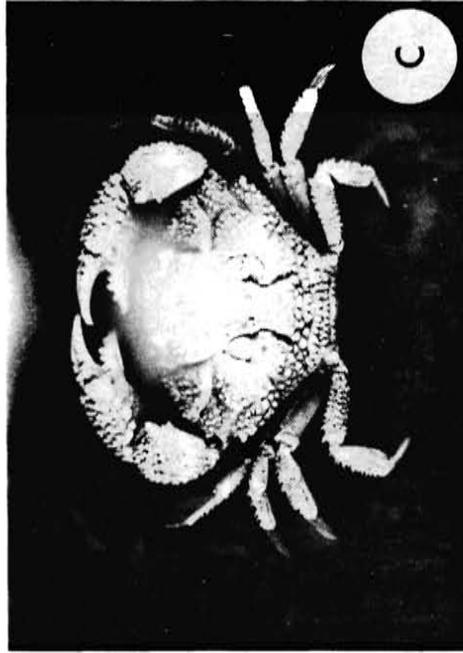
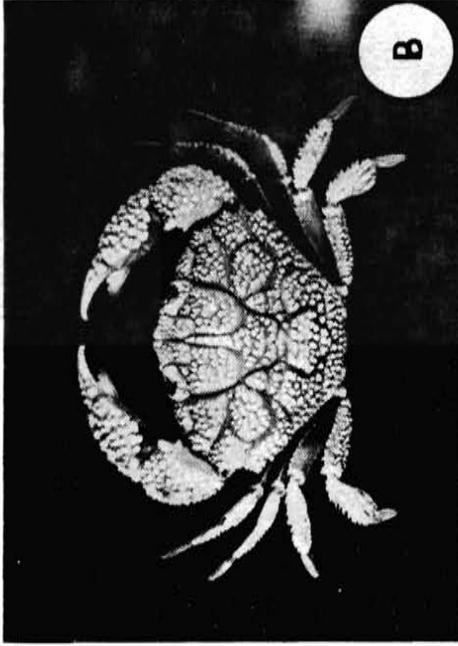


Plate 6. *Demania scaberrima* (Walker, 1887). A, G. Male, 42.4 by 32.1 mm, ZRC 1984.2.1.1 (South China Sea); B. Male, 45.0 by 33.4 mm, ZRC 1965.11.4.1 (Siglap, Singapore); C. Male, 45.5 by 34.0 mm, ZRC 1984.5795 (Tuas, Singapore).



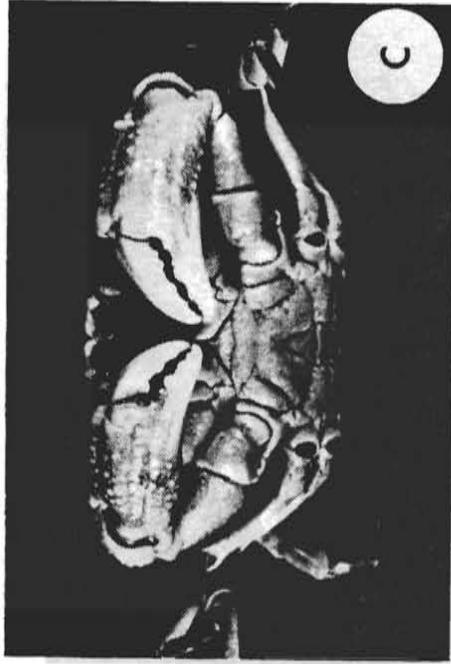
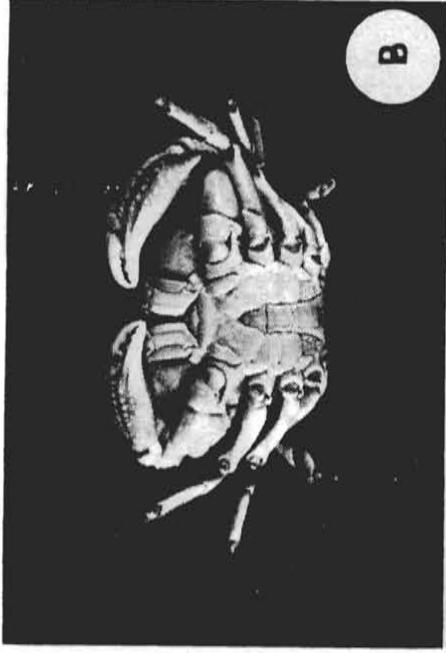


Plate 5. *Demania baccaulipes* (Alcock, 1898). Male, 61.0 by 45.0 mm, ZRC 1965.11.4.5 (Palau Angsa, Malacca Straits).

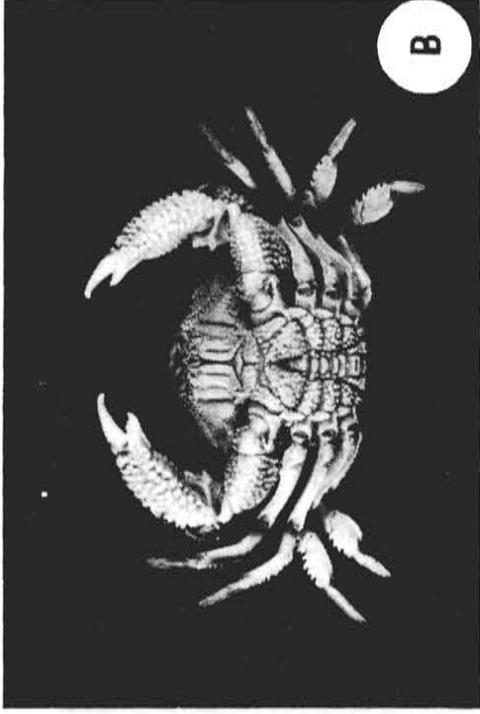
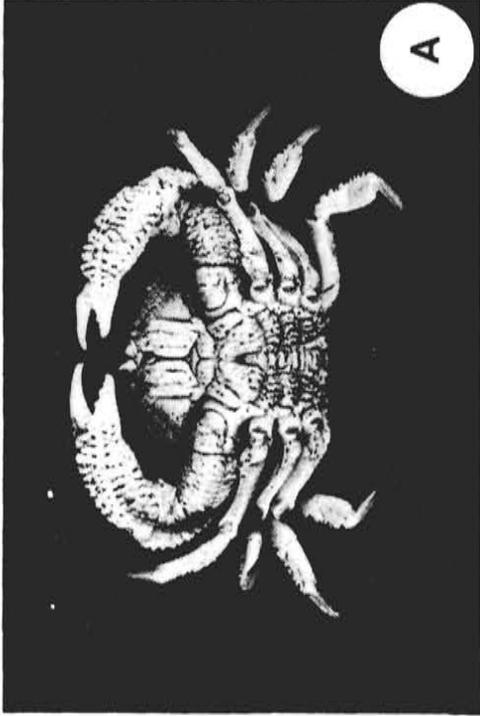


Plate 7. *Demania scaberrima* (Walker, 1887). A, C. Male, 45.5 by 34.0 mm, ZRC 1984.5795 (Tuas, Singapore); B, D. Male, 45.0 by 33.4 mm, ZRC 1965.11.4.1 (Siglap, Singapore).

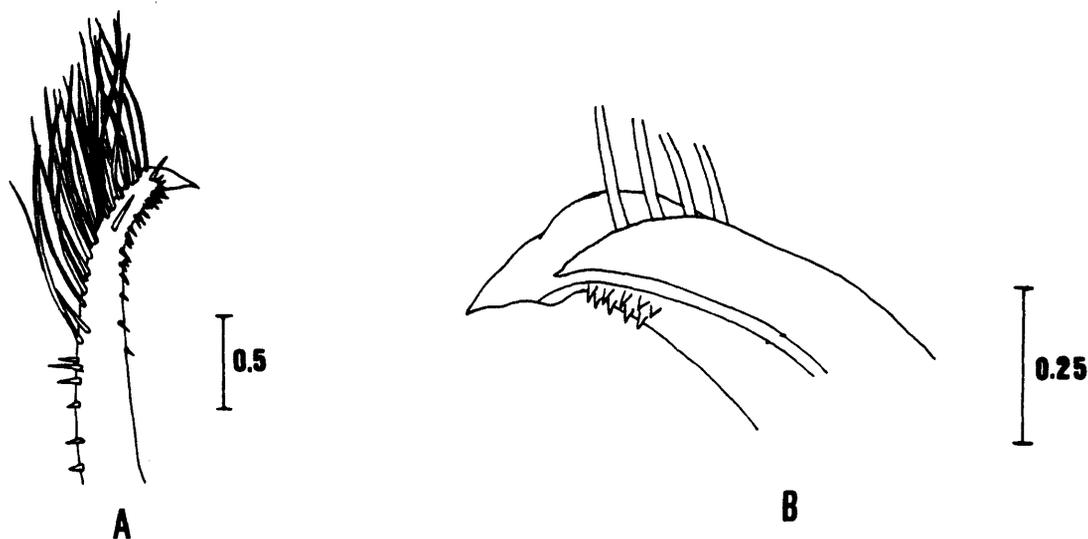


Figure 4. *Demania cultripes* (Alcock, 1898). Male First Pleopod. Male, 72.2 by 57.1 mm (Paratype of *Demania alcalai* Garth, 1975) (Piapi, Dumaguete City, Negros Oriental, Philippines). (Scale in mm).

acuminate, the former being the longest, stoutest and directed forwards at an angle. The external orbital angle (D) is produced into small but distinct blunt tooth. Postero-lateral margins slightly convex and converging. Orbital hiatus blocked by large basal segment of the antenna, which is immovable but not fused. Antennules fold obliquely. Pterygostomial, sub-branchial, sub-hepatic and sub-orbital regions covered with small rounded granules. Sub-branchial region with very dense pubescence. Endostomial ridges absent.

Third maxillipeds relatively smooth, ischium with distinct sulcus, antero-lateral margin laterally produced into a crest-like lobe. Inner margins of ischium finely serrated, surface punctate. Surface of merus with flattened granules.

Chelipeds asymmetrical, with the left the larger, outer surfaces covered with very low tubercles appearing almost smooth, but dorsal margins with large rounded teeth. Inner carpal angle with distinct rounded tooth. Merus with two distinct dorsal crested lobes separated by notch. Inner and outer surfaces of meri and carpi with low, flattened granules.

Ambulatory legs compressed and smooth, with all the dorsal and ventral margins of the segments distinctly cristiform. Ventral margin of meri with two carinae. Margins of dactylus with dense, velvet-like pubescence, the glabrous median region rather broad. Dactylus with a distinct dorsal crest thickened at the base. Pollex slightly deflexed, with five teeth, one tooth particularly large.

Sternum squamose, abdominal surfaces slightly smoother. Abdomen five-segmented, sutures of segments three to five fused, indistinct, last two segments approximately equal in length.

Male first pleopod relatively straight and slender, with group of long, setose hairs on the dorsal part of the distal region. Male second pleopod short.

Remarks. The female holotype and male paratype of *Dermania alcalai* Garth, 1975, have been reexamined in the light of synonymy with *D.cultripes*, as proposed by Serène (1984). Comparisons with the male specimen of *D.cultripes* (see Pl.4) — which was not available to the senior author when he visited Singapore in 1973 — show essential agreement in all external characters, leaving only the apparent differences in the configuration of the male first pleopod to be reconciled. This can be done by assuming that the pleopod of the paratype of *D.alcalai* figured by Garth (1975) represents the tip in its unrolled condition (Fig.2). It is not an immature specimen however, having a cb of 72.2 and a cl of 57.1, as compared with cb 72.4 and cl 57.3 of the photographed *D.cultripes* (Pl.4). With *D.alcalai* being synonymized with *D.cultripes*, the range of the latter now includes the Philippines.

D.cultripes is the largest of the known species in the genus, reaching cbs of up to 94 mm, and like the others, appears to be rather rare but with a wide geographic range. The species is characterized by strongly cristiform legs and two distinctly crested lobes on the manus of the cheliped. The male first pleopod is also unusual in having one of the flaps at the tip usually folding over the other.

This species is known to be poisonous (Garth 1975, Garth & Alcalá 1977).

Distribution. South China Sea, Singapore, Philippines and New Caledonia.

Dermania baccalipes (Alcock, 1898) (Pl.5; Fig.2D-F)

Xantho (Lophoxanthus) reyaudi var. *baccalipes* Alcock, 1898

Xantho (Lophoxanthus) baccalipes, Chhappgar 1957

Lophoxanthus reyaudi var. *baccalipes*, Balss 1938; Buitendijk 1950; Ow-Yang 1963

Dermania ? baccalipes, Serène 1968

Dermania scaberrima baccalipes, Guinot 1969, 1971

Dermania baccalipes, Sakai 1976; Guinot 1977, 1979; Yang 1979

not *Xantho scaberrimus* Walker, 1887

Material examined. 1 ♂ cb 61.0 cl 45.0, ZRC 1965.11.4.5, coll. by M.Smedley at Pulau Angsa, Malacca Straits in 1926.

Description. Front bilobated, with distinct V-shaped median notch. Each lobe concave, with inner angle more pronounced. Regions of the carapace well delineated. Supra- and infra-orbital margins without spines or teeth, the former with two notches. Regions immediately surrounding periphery of carapace (L, R, P) with low, flattened granules. Central regions of carapace (M) smooth and glabrous. Posterior quarter of carapace (R, P) squamose or with low, rounded granules. Antero-lateral margin with four low, dentate lobes (E, N, T, S), the last (S) being lower and less stout than the preceding one (T), giving the crab an almost octagonal shape. External orbital angle (D) produced into small, blunt tooth. Postero-lateral margins slightly convex and converging. Basal segment of antenna large, immovable, unfused, blocking orbital hiatus. Antennules folding obliquely. Pterygostomial, sub-hepatic, sub-orbital and sub-branchial regions with numerous small, rounded granules. Sub-branchial region with scant pubescence. Endostomial ridges absent.

Third maxillipeds relatively smooth, ischium with distinct sulcus, non-punctate, inner margins finely serrated. Merus with indistinct flattened granules.

Chelipeds asymmetrical, with the left larger. Outer surface of hand covered with rows of low, rounded granules. Dorsal margins with low granules. Carpus with large, blunt tooth on inner angle. Merus with one large dorsal sub-terminal granule and several smaller ones. All surfaces of meri and carpi covered with very small granules. Pollex with five teeth, one tooth particularly large. Dorsal margin of dactylus rather rounded and not distinctly crested.

Ambulatory legs rather compressed, dorsal margins of meri of all legs with a discontinuous row of nodules. No spines present. Surfaces strongly rugulose. Margins of dactylus covered with very dense, velvet-like pubescence, glabrous median region very narrow.

Sternal and abdominal surfaces with small dispersed granules. Abdomen five-segmented, segments three to five fused, with no trace of the sutures, last two segments approximately equal in length.

Male first pleopod relatively straight and slender, with a group of very long setose hairs on the dorsal part of the distal region. Male second pleopod short.

Remarks. The male first pleopod of *D.baccalipes* (Fig.1D-F) is almost identical with that figured by Chhapgar (1957), and for *D.squamosa* by Guinot (1977, 1979). Both species also have rather squarish carapaces and an unusual row of nodules on the dorsal margins of the meri of the ambulatory legs. *D.squamosa* differs mainly in having the chelipeds and posterior regions of the carapace much more strongly granulated; this border is also more clearly demarcated. Since the granules on the chelipeds and carapace are unreliable taxonomic characters, it is likely that *D.squamosa* will prove to be only a variant of *D.baccalipes*.

Distribution. Sri Lanka, Bombay (India), Malacca Straits, and Japan.

Demania scaberrima (Walker, 1887) (Pls.6, 7; Fig.3A-C)

Xanho scaberrimus Walker, 1887; Rathbun 1902, 1910; Parisi 1916

Xancho (Lophoxanthus) scaberrimus, Alcock 1898

Actaea granulosa, Adam & White (?) *fide* Doflein 1900

Lophoxanthus scaberrimus, Balss 1922; Gee 1925; Yokoya 1933; Sakai 1934; Shen 1940; Serène 1966

Xancho scaberrimus, Odhner 1925; Chen 1933; Suvatti 1950; Tadeka & Miyake 1969

Xancho reynaudi, de Man 1892; Sakai 1936, 1939; Lin 1949

Lophoxanthus reynaudi, Buitendijk 1950; Ow-Yang 1963

Xancho reynaudi, Takeda & Miyake 1969

Demania ? scaberrimus, Serène 1968

Demania scaberrima, Guinot 1969, 1971, 1977, 1979; Sakai 1976; Yang 1979; Kongkayen 1979; Naiyanetr 1980; Wang & Chen 1981

Demania reynaudi, Yang 1979

not *Xancho reynaudi* H.Milne Edwards, 1834; nor *Cancer granulosis* Audouin, 1826

Materials examined. 1 ♂ cb 45.0 cl 33.4.1 cb 39.6 c. 29.4, ZRC 1965.11.4.1 & 2, coll. by M.W.F.Tweedie on 7/1934 at Siglap, Singapore, det. as *Demania reynaudi* by Buitendijk (1950, p.77); 1 ♂ cb 45.5 cl.34.9, ZRC 1984.5795, coll. by W.M.Lee on 25/9/1982 at Tuas, Singapore; 1 ♀ cb 35.3 cl 28.0, ZRC 1984.4027, coll. by H.Huat on 29/8/1983 in South China Sea, 150 miles from Singapore; 1 ♀ cb 22.1 cl 19.9 (juv.), ZRC 1965.11.4.4, coll. by A.O.Walker (Old Exhibit: presented by A.O.Walker to the Raffles Museum), det. as *Demania reynaudi* by R.Serène on 20/3/1969; 1 ♀ cb 31.4 cl 24.0 ZRC 1969.10.4.2, coll. by 'Huu Nghi' trawler on 22/9/1969 at 08°10'N 104°35'E at 14 to 16 fathoms depth near Cochin, China; 1 ♂ cb 60.4 cl 43.3, ZRC 1984.587, coll. by Koh on 18/1/1984 at Tuas, Singapore; 1 ♂ cb 52.3 cl 39.9, ZRC 1965. 11.4.3, coll. by R.F.Young on 6/9/1938 at 0°09'12"S 106°57'15"E near Lingga, S. China Sea, det. as *Demania reynaudi* by Buitendijk (1950, p.77); 1 ♂ cb 63.0 cl 45.1 (covered with oysters), 4 ♂ cb 62.1 cl 44.0, cb 51.4 cl 37.0, cb 47.0 cl 36.0, cb 31.0, cl 22.7, 2 ♀ cb 45.5 cl 33.1, cb 39.3 cl 28.1, ZRC 1984. 4020-4026, coll. on 26/11/1982 and 15/12/1982 in South China Sea near Horsburgh Lighthouse, Singapore; 1 ♂ cb 42.4 cl 32.1, ZRC 1984.2.1.1, coll. in 1984 in the South China Sea by fishermen.

Remarks. One of the problems with the systematics of the genus *Demania* is the lack of knowledge about the degree of variation in the various characters that have been used to differentiate the species, due to the lack of sufficient specimens. There is a strong likelihood that many of the species exist in several forms, and many of the present names will prove to be superfluous. Of the numerous specimens of *D.scaberrima* collected from Singapore, several had been referred to *D.reynaudi* H.Milne-Edwards, 1834 by other workers, including Balss (1938) and Buitendijk (1950). But upon comparison with the photograph of the holotype of *D.reynaudi* (in Guinot 1977, 1979), they clearly cannot be referred to that species, especially with regard to the armature of the meri of the ambulatory legs. In *D.reynaudi*, the dorsal margins of the ambulatory meri are lined with rounded nodules and the other segments are relatively smooth except for some notches. In *D.scaberrima*, the merus and carpus of the last ambulatory leg are dorsally serrated with two rows of very sharp teeth, and the other meri are almost smooth. Guinot (1977, 1979) also mentions that these two species differ in the structure and granulation of the antero-lateral margins and chelipeds. On examining the 15 specimens of *D.scaberrima* available, we have found that the granules on the carapace vary considerably in pattern and strength. In two specimens (1 male, 1 female, ZRC 1965.11.4.1 & 2), these granules are sharp, small and distributed evenly over most of the carapace, chelipeds and legs, and appear even more distinct than Walker's (1887) original figure of the species. In other specimens, these tubercles are more squamose, and some regions, especially the 3M and 4M, are almost smooth, and very close to the condition in *D.reynaudi*. In one specimen, the dorsal margins of the last ambulatory meri are only weakly serrated. The ornamentations on the surface of the male abdominal segments are rather variable in structure. The upper parts of the sternum can vary from