

*Presented by  
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## CRUSTACEA OF NATAL.

BY THE

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(With Plates.)

The present contribution to the results of the South African Marine Survey owes much to the valuable collections made by Mr. H. W. Bell Marley, and, while far from exhausting the results of his researches, it roams widely over the classification of the Crustacea. Eleven families of the Malacostraca furnish most of the material discussed. Of the species accounted new, four have been assigned to the malacostracan genera *Geryon*, *Cryptodromia*, *Urocaridella*, and *Rosca*, and one to the cirripede genus *Xenobalanus*. But eleven other species have for various reasons been more or less fully examined.

## BRACHYURA GENUINA.

Tribe Oxyrrhyncha.

Family MAMAIIDÆ, Stebbing, 1905.

Genus PLATYMAIA, Miers, 1886.

## PLATYMAIA TURBYNEI, Stebbing. Plate X.

1902. *Platymaia turbynei*, Stebbing, Marine Invest. S. Afr., vol. ii, p. 3, pl. 5.  
 1904. *Platymaia wyville-thomsoni* (pt.) Doflein, "Valdivia" Brachyura, p. 59.  
 1918. *Platymaia turbynei*, Rathbun, Biol. Results "Endeavour," vol. v, p. 9.  
 1920. *Platymaia turbynei*, Stebbing, Ann. S. Afr. Mus., vol. xvii, pt. 4, p. 232.

Two specimens from a sponge in Durban waters have lately been sent me by Mr. Bell Marley, one with the carapace 7 mm. long, the other 5 mm. long, and in each case the breadth approximately equal to the length. Unfortunately all the legs were detached, except in each case the single cheliped present. As in the much larger specimen originally described, so in that now illustrated, the middle spine of the rostrum is conspicuously produced. The pleon, by the concavity of the sides, no doubt confirms the opinion expressed by Doflein in regard to a companion species that early in life the sexes of these crabs can be distinguished, the sides of the pleon while still very narrow, being concave in the male but convex in the female. Attention may be called to the spiny armature of the antepenultimate joint of the second antennae as possibly available for specific

distinction, and similarly the denticulation of the large joints in the third maxillipeds may be found useful. All the figures are to a uniform scale, from the specimen 7 mm. long.

#### Genus PLEISTACANTHA, Miers.

1879. *Pleistacantha*, Miers, Pr. Zool. Soc. London, p. 24, and T. Linn. Soc., vol. xiv, p. 646.  
 1886. *Pleistacantha*, Miers, "Challenger" Brachyura, p. 32.  
 For the synonymy, including *Ergasticus*, A. Milne-Edwards, 1881, and *Echinoplax*, Miers, 1886, see Doflein, "Valdivia," Brachyura, p. 76: 1904.

#### PLEISTACANTHA MOSELEYI (Miers).

1886. *Echinoplax moseleyi*, Miers, "Challenger" Brachyura, p. 32.  
*E. moseleyi*, pl. iv, figs. 2, 2 a-c.  
 1904. *Pleistacantha moseleyi*, Doflein, "Valdivia" Brachyura, p. 76, pls. 24 (figs. 5, 6), 25, 26.

References to *Echinoplax pungens*, Wood-Mason, 1891, and to Alcock's excellent figures of this species under that synonym (*Zool. Investigator*, pls. 17, 39), are supplied by Doflein.

From the locality "Umvoti River, 22 miles, 130 fathoms," I have received (February 19th, 1921) Mr. Bell Marley's sending of this remarkable species, an egg-laden female, 133 mm. long, including the rostral horns, and 84 mm. broad. The chelipeds are slender, but like the other limbs and the third maxillipeds, very spinose. The first ambulatory limbs are 290 mm. long. Of the multitudinous spines on the limbs, the longest, subterminal on the fourth joint of the cheliped, measures 12 mm.

Miers describes his *Echinoplax moseleyi* from the Philippines as an "adult female," about 22 mm. long, with a first ambulatory limb 44 mm. long, and the pleon narrow, in the figure very different from that of our specimen, in which the pleon is trilobed, very broad, with the sixth and seventh segments much longer than those which precede. Mr. Bell Marley describes the colour when fresh as pale yellow, lighter beneath, "the eggs presenting a livid violet colour," which he believes to be most unusual. Miers does not say that his specimen was egg-laden, and he may have been mistaken as to its maturity.

#### Tribe Catometopa.

#### Family GONEPLACIDAE.

#### Genus GERYON, Kröyer, 1835.

See Gilchrist's Marine Invest. S. Africa, vol. iv, p. 34, 1905; Ann. S Afr. Mus., vol. vi, pp. 312, 313, 1910; and for a fully illustrated discussion of the genus, consult Doflein ("Valdivia" Brachyura, 1904), who, however, places it in the family Potamonidæ.

#### GERYON ISCHURODOUS, sp. nov. Plate XI.

Among the closely related species of the genus the present appears well distinguished, and especially by the strong tooth between the antero- and postero-lateral margins, to which the

specific name refers, compounded of *ισχυρόν*, strong, and *ὀδόν*, tooth. The sigmoid curve between this and the smaller tooth at the orbit is also peculiar to this species. The inter-orbital space, a little broader than the orbit, is smooth, its central point not visible in dorsal view. In the ventral aspect there is a strong oblique ridge behind the orbit. Total width of front, including orbits, 16 mm.; greatest width of carapace, 26 mm.; and median length, about 16 mm. Of the male pleon the first two segments are broad but very short; the third segment slightly broader is strongly ridged transversely; the four following segments are successively narrower.

The eyes are stout; the first antennae folded transversely, the second with flagellum longer than the inter-orbital front. The mouth-organs essentially agree with those figured by Doflein for *Geryon affinis*. The left cheliped has a small tooth near the base of the fourth joint, and a strong one on its inner margin; the fifth joint shows a small prominence on the outer margin, and a double tooth on the inner; the finger, longer than the palm, curves to meet the straight thumb at its tip, the confronting edges finely but irregularly serrate; the ambulatory limbs smooth, with long fingers sub-equal to the preceding joint.

*Locality*: Durban waters, collected by Mr. Bell Marley from a coral on the beach. The right cheliped missing.

#### GENUS CARCINOPLAX, *Milne Edwards, 1852.*

See Gilchrist's Marine Invest. S. Afr., vol. iv, p. 37, 1905; and Ann S. Afr. Mus., vol. vi, p. 313, 1910.

#### CARCINOPLAX LONGIMANUS (DE HAAN), 1833.

1835. *Cancer (Curlonotus) longimanus*, de Haan, Crust. Japon., decas. ii, p. 50, pl. 6, figs. 1 and 1a.  
 1905. *Carcinoplax longimanus*, Stebbing, Marine Invest. S.A., vol. iv, p. 37.  
 1910. *Carcinoplax longimanus*, Stebbing, Ann. S. Afr. Mus., vol. vi, p. 313.

These references are here repeated because in my earlier essay this species is referred to de Haan's plate 50 by error for plate 6, and in my later contribution "p. 80, pl. 50" is printed in mistake for p. 50, pl. 6. De Haan gives three figures—IA, IB, IC, representing a young male, an adult of that sex, and a young female, respectively. On plate 5, fig. 3, he figures the species which he names *Cancer (Curlonotus) vestitus*, adding a figure, described on foot of plate as "abd. maris" but on the plate itself as 3♀. This figure corresponds very well with the pleon of the specimen now in hand, by its sexual apertures an undoubted female, which, however, I assign to *Carcinoplax longimanus*.

This specimen, localized by Mr. Bell Marley as coming from "Umvoti R. 16 miles, 130 fathoms," has a carapace measuring 40 mm. at the greatest breadth, with a median length of 33·5

mm. The hand of the left cheliped is 40 mm. long, the long fingers having their confronting edges variously denticulate with interlacing teeth. First segment of pleon broad but very short, second much narrower than the third from which the pleon narrows to the bluntly triangular telson, this being a little longer than the sixth segment, and that in turn notably longer than any of the preceding segments.

## BRACHYURA ANOMALA.

Family DROMIIDÆ.

Genus CRYPTODROMIA, *Stimpson*.

See *Ann. S. Afr. Mus.*, vol. vi, pt. 4, p. 344, 1910; and vol. xvii, pt. 4, p. 251, 1920; and Ihle, "Siboga" Exp., vol. xxxixb, Dromiacea, p. 32.

Dr. Ihle discriminates no fewer than twenty-three species with three varieties in this genus. As the length and breadth of the carapace often hover about half an inch, and may even be content with a quarter, or 6 mm. long by 6.5 mm. broad, the task of identification has some bewildering elements. In the species now to be introduced the convergence of the postero-lateral margins of the carapace is a notable feature, but when the carapace is detached from the connected structures, legs and pleon this convergence is much modified. As shown in the figure, the sulci of the female do not here terminate in any tubercle. This can scarcely be a juvenile feature, since the pleon is actually longer when unfolded than the carapace.

CRYPTODROMIA OKTAHEDROS, sp. nov. Plate XII.

The carapace measures 11.5 mm. in breadth by 11 mm. in length, the unfolded pleon being 12 mm. long. The flagellum of the second antennae is more than half the length of the carapace. The eyes I have been unable to distinguish. The front consists of three large tubercles of which the central is the smallest and somewhat depressed. From these the sides diverge to the greatest breadth, thence descending in a short but straight course, and then turning inwards, converge to the tolerably broad hind margin, thus forming eight very unequal sides, to which the specific name refers, representing the Greek word *ὀκτάεδρος*.

The tuberculate character of the carapace is most strongly developed on the ventral aspect, where the tubercles protrude in a crowd from the frontal three and on each side of the buccal frame to the points of greatest breadth, below which there is a mat of short setae lying smooth.

In regard to the mandibles I may note that I find the palp three-jointed. Dr. Ihle figures it as only two-jointed in *Cryptodromia tumidus*, perhaps accidentally. From his figure of the second maxilliped in that species here the epipod with its podobranch shows a difference. In the larger cheliped the

finger is as long as the palm, the thumb is round-ended, the palm has three low longitudinal setulose ridges. In the smaller cheliped the finger is shorter than the palm, and in closing leaves a small gap between the confronting edges of itself and the thumb. This limb scarcely exceeds in length the second and third peræopods, in which the rather broad fifth and sixth joints are nodulose with fringes of setules, the fourth joint being very broad as in the chelipeds. In the fourth and fifth pairs the sixth joint is very short, having distally a little spine to antagonise with the small curved finger.

*Locality*: Mr. Bell Marley records this as taken at Bluff T.W., Natal, and found covered with a yellow growth.

### Family LATREILLIIDAE.

See Marine Invest. S. Afr., vol. ii, pp. 18, 23, 1902.

#### Genus LATREILLOPSIS, *Henderson*.

1888. *Latreillopsis*, Henderson, "Challenger" Anomura, p. 21.

1913. *Latreillopsis*, Ihle, "Siboga" Exp., vol. xxxix b, Dromiacea, p. 77.

For abundant discussion of the genus see Dr. Ihle's Monograph on the tribe.

#### LATREILLOPSIS MULTISPINOSUS (Ihle).

1912. *Latreillopsis multispinosa*, Ihle, Tijdschr. Ned. Dierk. Ver. (2), vol. xii, p. 211.

1913. *Latreillopsis multispinosa*, Ihle, Dromiacea, p. 78, pl. 4, figs. 19-21.

The egg-laden specimen sent me by Mr. Bell Marley from "Umvoti River 22 miles, 130 fathoms," has a carapace measuring without the rostrum about 45 mm. in length, while that of Ihle's specimen was only 23 mm. long. The difference in size is therefore considerable. On the other hand, the pair of spines rising from the base of the eye-stalks, which Doflein describes as 25 mm. long, do not in our specimen attain half that length, again a considerable difference in the opposite direction. With more specimens for comparison, these differences might be deprived of importance.

### MACRURA ANOMALA.

#### Tribe Hippidea.

#### Family HIPPIDAE.

See Annals, Durban Mus. vol. ii, pt. 1, p. 25, 1917.

#### Genus HIPPA, *Fabricius*.

1787. *Hippa*, Fabricius, Mantissa, Insectorum, p. 329 [Rathbun].

1806. *Remipes*, Latreille, Genera Crust. et Ins., vol. i, p. 45.

For this synonymy see Miss Rathbun, Pr. U.S. Nat. Mus., vol. xxii, p. 301, 1900.

#### HIPPA PACIFICUS (Dana).

1852. *Remipes pacificus*, Dana, U.S. Expl. Exp., vol. xiii, p. 407 (1855) pl. 25, figs. 7a-g.

1852. *Remipes pacificus*, S. I. Smith, Tr. Connect. Ac., vol. iii, p. 338, pl. 47, figs. 9, 10.

A female specimen, cast up on the beach at Durban, has been sent me by Mr. Bell Marley. It corresponds very precisely to Dana's figure. The length of the carapace in the median line is 20 mm. The front is four-lobed. The eggs are numerous. In *Remipes testudinarius*, Latreille, a synonym of *Hippa adactylus*, Fabricius, the front has three small teeth between two larger teeth.

## MACRURA GENUINA.

### Tribe Scyllaridea.

### Family SCYLLARIDÆ.

For the tribe and family see Ann. S. Afr. Mus., vol. vi, p. 372, 1910; and add "Scyllariens," Milne Edwards, Hist. Nat. Crust., vol. ii, p. 279, 1837.

Milne Edwards attributes to his "Scyllariens" 21 pairs of branchiæ, but he has evidently forgotten to include three pairs for the second peræopods, and this omission has evidently been overlooked by Haswell, who assigns "branchiæ 21" to *Ibacus*, whereas in at least one species of that genus Spence Bate extends the number to 28.

### Genus IBACUS, Leach.

1815. *Ibacus*, Leach, Zoological Miscellany, vol. ii, p. 151.  
 1825. *Ibacus*, Desmarest, Consid. gén. Crust., p. 183.  
 1837. *Ibacus*, M. Edwards, Hist. Nat. Crust., vol. ii, pp. 281, 286.  
 1837. *Ibachus*, M. Edwards, Hist. Nat. Crust. Atlas, p. 19, pl. 24, fig. 10.  
 1850. *Ibachus*, Gibbs, Pr. 3d Meet. Amer. Assoc., p. 29 [F. Martin Duncan].  
 1860. *Ibacus*, Stimpson, Pr. Ac. Philad., vol. xii, p. 92 (23).  
 1882. *Ibacus*, Haswell, Catal. Australian Malacostraca, p. 168.  
 1888. *Ibaccus*, Fate, "Challenger" Macrura, Rep. vol. xxiv, pp. 58, 62.  
 1910. *Ibacus*, Stebbing, Ann. S. Afr. Mus., vol. vi, p. 372.

For his "Scyllariens" Milne Edwards claims that the first pleopods of the male carry two broad foliaceous plates. But in *Ibacus* this is not the case, the plates being on the contrary quite narrow. The specimen on which Leach founded the genus was evidently a female, the fifth peræopods being didactyle, but the figure supplied by Desmarest represents them as simple, unless it omits them altogether. In his choice of the generic name, Leach must have had *Abacus* in mind rather than *Ibacus*.

### IBACUS PERONII, Leach. Plate XIII.

1815. *Ibacus peronii*, Leach, Zool. Misc., vol. ii, p. 152, pl. 119.  
 1818. *Scyllarus incisus*, Latreille, Encycl. Méth., pl. 320, fig. 1 [Milne Edwards].  
 1825. *Ibacus peronii*, Desmarest, Consid. gén. Crust., p. 183, pl. 31, fig. 2.  
 1837. *Ibacus peronii*, Milne Edwards, Hist. Nat. Crust., vol. ii, p. 287.  
 1837. *Ibachus peronii*, Milne Edwards, Hist. Nat. Crust. Atlas, p. 19, pl. 24, figs. 10 a—d.

1860. *Ibacus novemdentatus*, Stimpson, Pr. Ac. Philad., vol. xii, p. 92 (23).  
 1882. *Ibacus peronii*, Haswell, Catal. Australian Malacostraca, p. 168.  
 1888. *Ibacus incisus*, Bate, "Challenger" Macrura, Rep. vol. xxiv pp. 58, 62.  
 1850. *Ibacus novemdentatus*, Gibbes, Pr. Third Meeting Amer. Assoc. for Adv. of Science, p. 193 (29), Charleston, S.C. (F. Martin Duncan).

Whether specific rank should be granted to the specimen named by Gibbes and its fellow now in hand is an open question. The name he gave refers to the lateral dentation of the carapace, describing it as nine-toothed. According to Leach, the number of these teeth in *I. peronii* is six, but his figure shows seven, and this number is endorsed by Milne Edwards. Then comes Stimpson, with a specimen from Hong Kong in which the teeth are eight in number, thus swaying awkwardly between nine and seven. Of more importance may be the dentation of the foremost joint of the second antennae, explained by Boas as the metamorphosed flagellum. But here again it is only a question of two or three denticles more or fewer in the two forms. The third point which Gibbes adduces as a possible distinction he practically withdraws, by frankly stating that, though Milne Edwards omits, Desmarest includes it in the account of *I. peronii*. This is the very remarkable character that, as Gibbes says, "the fourth segment of the external jaw-feet is traversed by seven or eight deep fissures." But this is alluded to by Leach in the generic character, and obscurely indicated in his small figure of the third maxillipeds of *I. peronii*. As our figures show, these organs have a very different appearance on the dorsal and ventral aspects, while the denticulate fringe of the fourth joint is notable on both aspects.

The specimen which Mr. Bell Marley has sent me from "Umvoti mouth 15 miles, 130 fathoms," has a carapace nearly 4 inches wide. The trunk of the mandible is ridged, its incisor part forming two blunt teeth, the palp undivided, much curved and setose. The antepenultimate joint of the exopod in the third maxillipeds has a denticulate border. The retinaculum of the first pleopod of the male is very slight.

### Family PALINURIDÆ.

#### Genus PALINURUS, Fabricius.

#### PALINURUS GILCHRISTI, Stebbing, 1900.

See Gilchrist's Marine Invest. S. Afr., vol. i, pp. 29, 31, pl. 1, and Ann. S. Afr. Mus., vol. vi, pp. 373, 374.

Of this species Mr. Bell Marley has sent me a specimen 250 mm. long, much larger than that originally described. The species has proved to be extraordinarily abundant in the Durban locality, "Umvoti River 22 miles, 130 fathoms," with a very thin carapace, and the animal dying soon when out of



water ; " when alive the white contrasting very vividly against the rose and pink splashes of the body." After a journey of three or four weeks the contrast of colours to which Mr. Marley refers is still very striking, and applies also to the antennae and limbs.

### Tribe Caridea.

Family PONTONIIDÆ, *Balc*, 1888.

Borradaile treats this as a subfamily of the Palæmonidæ starting with "*Pontonina* Kingsley, Bull. Essex Institute, x, p. 53 (1878)." The synonymy is supplied in Borradaile's very elaborate discussion of the *Pontonina*, Trans. Linn. Soc. London, Zool., vol. xvii, pt. 3, p. 323, 1917.

### Genus UROCARIDELLA, *Borradaile*.

1915. *Urocaridella*, Borradaile, Ann. Nat. Hist., ser. 8, vol. 15, p. 207.  
1917. *Urocaridella*, Borradaile, Tr. Linn. Soc., vol. xvii, pp. 323, 352.

The original definition contained the characters, "body very slender and compressed," "mandible with two-jointed palp." The later form reads, "body slender, much compressed," and "mandible with palp." In the species now to be described the body is not slender, and the palp of the mandibles is three-jointed. The scale of the second antennæ is not narrow. As commonly happens, a generic definition based on a single species must submit to some modification when additional forms appeal for admission. "First abdominal limb with appendix interna," added to the original definition apparently does not apply to our species.

### UROCARIDELLA BORRADAILEI, sp nov. Plate XIV.

The specimen sent me by Mr. Marley from Natal is labelled "Umhlotuzi River." It is unfortunately devoid of the second pair of peræopods, but otherwise has many interesting features in good order. The length of the carapace with rostrum is 42 mm., of the telson 12 mm., and of the preceding segment about the same. The rostrum, distally somewhat upturned, has 12 dorsal teeth, one minute just behind the acute apex, then five rather widely spaced, followed by five near together, and one well behind the eye, the carapace then becoming smoothly and widely rounded. There are four widely spaced ventral teeth to the rostrum. The sharply triangular and carinate telson is nearly as long as the inner ramus of the uropods, its apex accompanied by a minute outer pair of spines and an inner pair, of which the length is perhaps doubtful. At its base the telson has a median tubercle with a spinule. The uropods are broad, the inner ramus scarcely shorter than the outer.

The first antennæ are triflagellate, the thinnest flagellum almost concealed, branching off not far from the base of the thickest, which is 75 mm. long, its branch somewhat longer than the peduncle, the remaining flagellum like its stouter companion very long, and both far exceeded by the flagellum of the second antennæ.

The palp of the mandible is straight, slight, and very elusive, its third joint setulose and nearly as long as the two preceding joints combined. The dentation of the incisor process and molar has a very variable appearance according to the position of the elongate trunk. The two maxillæ and the second and third maxillipeds are sufficiently explained by the figures, and the agreement of those and the first maxillipeds with those of the type species, without being absolute, is tolerably conspicuous. On the other hand, the characters of the first peræopod render the generic position rather doubtful, for here, instead of "wrist and palm sub-equal," the wrist is about two and a half times as long as the whole chela, in which the fingers scarcely equal the palm; the third joint is somewhat longer than the chela, but shorter than the fourth, which though long, is shorter than the wrist as in *Leander*. The third, fourth and fifth peræopods are all much alike, very long and slender, the finger slightly curved, and little more than a quarter as long as the hand.

The specific name is given out of respect for the eminent carcinologist, Mr. L. A. Borradaile.

## ISOPODA.

### Tribe Flabellifera.

#### Family ÆGIDÆ.

#### Genus SYSCENUS, Harger.

1880. *Syscenus*, Harger, U.S. Fish Comm., 1878, p. 387.  
 1882. *Harponyx*, Sars, Selsk. Christian, No. xviii, p. 60.  
 1885. *Rocinela*, Bovallius, Bih. Svenska Vet. Ak. Handl., vol. x, no. 10,  
 p. 4.  
 1897. *Syscenus*, Sars, Crust. Norway, vol. ii, pt. 4, p. 66.

#### *SYSCENUS INFLIX*, Harger.

1880. *Syscenus infelix*, Harger, U.S. Fish Comm., 1878, p. 389.  
 1883. *Syscenus infelix* Harger Bull. Mus. Comp. Zool., p. 100, pl. 3,  
 figs. 5, 5a, pl. 4, figs. 3-3b.  
 1882. *Harponyx pranioides*, Sars, Forh. Selsk. Christian., No. 18  
 p. 60, pl. 2, fig. 1.  
 1885. *Rocinela liljeborgii*, Bovallius, Bih. Svenska Vet. Ak. Handl.  
 vol. x, No. 10, p. 4, pls. 1, 2.  
 1897. *Syscenus infelix*, Sars, Crust. Norway, vol. ii, pt. 4, p. 67, pl. 28.  
 1899. *Syscenus infelix*, Sars, Crust. Norway, vol. ii, Appendix, p. 247,  
 pl. 1 (Suppl.).

Owing to its comparative rarity this slender species has had the good fortune to be independently described in great detail by three masters of the art—Harger, Sars, and Bovallius.

The specimen sent me by Mr. Marley was found by him in a coral on the Natal coast. It measures 17 mm. in length, and has the fifth peræopod shorter than the fourth. Sars observes in regard to the fifth pair that "in full grown individuals this pair are, in all probability, the longest of all." He mentions a length of 29 mm. attained by a Danish specimen, and Harger records a male 44 mm. long.

#### Family CYMOTHOIDÆ.

##### Genus ROSCA, *Schiödte* and *Meinert*.

1881. *Rosca*, Ssh. & Meinert, Naturh. Tidsskr., ser. 3, vol. xiii, pp. 3, 85.

From the neighbouring genus *Nerocila* the Danish authors distinguish this genus as having the sides of the first five pleon segments all unincised. It shares this character with their genus *Braga*, which is otherwise distinct. The specimen for which *Rosca* was instituted was juvenile, only 10 mm. long, once and a half as long as broad, with the last three peræon-segments strikingly broader than the first four, due no doubt to a sloughing of the hinder part of the coat in advance of the front, as sometimes occurs. The much larger specimen, now in question, shows the same peculiarity. As dissection of the mouth-organs in December fogs was unsuccessful, I name the new species as a request for further information.

##### ROSCA ROGANS, sp. nov. Plate XV.

The type species was taken at Amboina, the new one by Mr. Marley in South African waters at Cap Henderson from a depth of 40 fathoms. In *Rosca limbatus*, *Schiödte* and *Meinert*, the front margin of the first peræon segment is simply sinuate, here it is trisinate, and the sides of the seventh segment are much less produced, with the fifth peræopods not longer than the fourth, as they are said to be in the generic character. The inner ramus of the uropod is two-thirds as long as the outer, instead of "plus duplo brevior." The large overlapping oostegites show the specimen to be a female. The length is 27 mm., the breadth 13 mm.

#### AMPHIPODA.

##### Tribe Phronomidea, *Stebbing*.

See Ann. S. Afr. Mus., vol. vi, p. 473, 1910.

##### Family OXYCEPHALIDÆ, *Bate*, 1862.

##### Genus OXYCEPHALUS, *Milne Edwards*, 1830.

See extensive bibliography in "Challenger" Amphipoda, *Stebbing*, p. 1576, 1888, and the Oxycephalids, *Bovallius*, R. Soc. Upsala, p. 2, 1890.

OXYCEPHALUS CLAUSI, *Bovallius*.

1887. *Oxycephalus clausi*, Bovallius, Bihang till K. Svenska Handl. vol. ii, p. 35.  
 1888. *Oxycephalus clausi*, Stebbing, "Challenger" Amphipoda, p. 1578, pls. 201, 202.  
 1890. *Oxycephalus clausi*, Bovallius, The Oxyceph., R. Soc. Upsala pp. 11, 21, 22, 25, 33, 36, 55, 60, text & figs., pl. 1, fs. 19-24, pl. 2, fig. 1.  
 1918. *Oxycephalus clausi*, Colosi, "Liguria" Results, vol. 2, Crost., pt. 3, p. 211, pl. 17, figs. 3, 4 (*Oxycephalus clausi*).

The amount of description and illustration bestowed upon this species facilitates identification with more than ordinary assurance. The upper limit of size, 35 mm. in length, is approximately reached by the specimens which Mr. Marley sends from Durban waters. It is sufficient to note here the almost blunt ending to the rostrum in the female, the "almost prismatic dorsal sections of the peræonal segments," the tooth on lower margin of several segments of the pleon, what Bovallius calls the "heel" of the carpus or fifth joint of the second gnathopod produced beyond the following joint, the second joint of the fourth peræopod tending to a circular shape, and both rami of the second uropods minutely serrate. Neither here nor in the "Challenger" specimens do I find that "the telson reaches beyond the apex of the last pair of uropoda," as stated by Bovallius, but the difference is trivial.

## THYROSTRACA.

1893. *Thyrostraca*, Stebbing, A History of Crustacea, pp. 6, 11.  
 1902. *Thyrostraca*, Stebbing, Encycl. Britan., Ed. 10, vol. xxxiii, p. 319.

## Family BALANIDÆ.

1854. *Balanidæ*, Darwin, Ray Soc., p. 33.  
 1916. *Balanidæ*, Pilsbry, U.S. Nat. Mus., Bulletin 93, p. 47.

## Genus BALANUS.

This genus is cited here for the sake of pointing out that Pilsbry in the above-noted important Monograph changes the name *Balanus capensis*, Darwin (see Ann. S. Afr. Mus., vol. vi, p. 568) to *B. maxillaris*, Gronovius. If the authority of Gronovius in Linnean nomenclature be rejected, Pilsbry supplies another available synonym in *Lepas cylindrica*, Gmelin, Systema Naturæ, p. 3213, 1790. The name of the Cape species will then stand as *Balanus cylindricus* (Gmelin). For pre-Darwinian applications of the family and generic names, Pilsbry supplies explanatory details.

## Family CORONULIDÆ.

1825. *Coronulada* (part), Leach, Zoological Journal, vol. ii, p. 209.  
 1916. *Coronulina*, Pilsbry, U.S. Nat. Mus., Bulletin 93, p. 268.

Genus *CORONULA*, Lamarck.

1802. *Coronula*, Lamarck, Ann. Mus. Nat., vol. i, p. 464.  
 1910. *Coronula*, Stebbing, Ann. S. Afr. Mus., vol. vi, p. 571.  
 1916. *Coronula*, Pilsbry, U.S. Nat. Mus., Bull. 93, p. 271.

For a full discussion of the classification, Pilsbry's Monograph seems to leave nothing to be desired. I will only state the case for the specific name which I have given in the General Catalogue of South African Crustacea.

*CORONULA DARWINI*, Stebbing.

1910. *Coronula darwini*, Stebbing, Ann. S. Afr. Mus., vol. vi, p. 572.  
 1916. *Coronula complanata*, Pilsbry, U.S.N.M., Bull. 93, p. 276, pl. 63, figs. 1-3a.

Pilsbry's transfer of the name *Ceteopirus complanatus* in the "Catalogus Conchyliorum," from the non-Linnean writer, Chemnitz, to Mörch, who makes no claim to it, is of doubtful validity. But besides this, Pilsbry's learned synonymy discloses two earlier claimants, in 1823 *Lepas quinquevalvis*, Mawe, possibly but not certainly the same species, and in 1824 *Coronula balanarum*, Blainville, which Pilsbry considers an "obvious error for *balenaris*." In my opinion the scholarly Blainville probably intended *balenarum* in preference to *balenaris*. With these competing synonyms all open to objection, the name which honours Darwin may perhaps be allowed to stand.

Genus *XENOBALANUS*, Steenstrup.

1851. *Xenobalanus*, Steenstrup, Vid. Medo. Nat. Hist. Porening i Kjöb. pl. 3, figs. 11-15.  
 1854. *Xenobalanus*, Darwin, Ray Soc., Balanidæ, pp. 438, 608.  
 1897. *Xenobalanus*, Weltner, Arch. f. Naturgesch., vol. lxxiii, p. 253, 280.  
 1900. *Xenobalanus*, Weltner, Fauna Arctica, Cirrip. der Arktis, p. 309.  
 1916. *Xenobalanus*, Pilsbry, U.S. Nat. Mus., Bulletin 93, p. 282.  
 1920. *Xenobalanus*, Calman, Ann. Nat. Hist., ser. 9, vol. vi, p. 165.

Weltner in 1897 notes that Steenstrup never described the species which he named *Xenobalanus striatus* in 1873. For Darwin's synonymous genus *Siphonicella* Pilsbry gives the date 1852, but the Ray Soc. Monograph of the Lepadidæ in which the name first occurs, pp. xii, 156, is dated 1851. Darwin, however, notes the priority of Steenstrup's generic name. Pilsbry (*loc. cit.*, p. 284, pl. 65, fig. 1) adds a variety *pallidus* to the type species.

*XENOBALANUS NATALENSIS*, sp. nov. Plate XVI.

In regard to the specimens now under consideration, Mr. Marley writes from Natal, "I am sending you examples of a maroon-coloured barnacle, which I removed from the caudal fin of *Tursiops catalonia* (Dolphin). I think they may be a *Xenobalanus*; they were fastened on the outer side of the

ukes and the pectorals, and blended with the colour of this etacean's skin and body." The two specimens as received were very dark in colour, which might be called a dark chocolate. That which I dissected measured about 38 mm. in length, with a diameter at the hood of 7 mm.

Darwin has given a very elaborate figure of the star-shaped shell in *X. globicipitis*, Steenstrup, with six rays to the star. The Durban specimen shows only five rays. Pilsbry, however, in plate 65 of his monograph gives two figures of the shell in Steenstrup's species, fig. 2A agreeing with that in our African form, 2B corresponding with Darwin's six-rayed star. Pilsbry does not offer an explanation of the difference, from which it may be inferred perhaps that he regards it of no specific importance. My material, though supplemented by Mr. Chubb's kindness, does not suffice for any clearer determination. On other grounds the African form appeals for specific distinction. In the type species Darwin says, "The probosciformed penis is short and thick." In the Durban specimens it is very long, thick indeed for much of its length, but tapering to the extremity which reaches conspicuously beyond the cirri, the pale flesh colour in notable contrast to the dark cirri on either side. Darwin was plentifully provided with specimens, but neither he nor Pilsbry gives any indication of a penis so massively extended. To the mandibles Darwin attributes five teeth. In the African specimen there are only four, succeeded by a rounded finely denticulate process. In a slightly smaller specimen the number of teeth is reduced to three. In the inner maxillæ the upper teeth or spines are quite short. Pilsbry uses the term for these organs, but I cannot find how he designates those which Darwin calls the "outer maxillæ." I may invite a comparison of these structures with those which I have figured as the first and second maxillæ of *Koleolepas willeyi* in Willey's Zool. Results, part v, p. 679, pl. 73, 1900. The doubly-serrated spines on the cirri of which Darwin speaks I have not been able to find. The diversity of host and difference of locality may add to the probability that *natalensis* is a distinct species.

## EXPLANATION OF PLATES.

## Plate X.

## PLATYMAIA TURBYNEI, Stebbing.

n.s. : Lines indicating natural size of carapace.

Pl. Dorsal view of pleon flattened out.

a.s., a.i. : First and second antennæ.

mx. 2, mxp. 1, 2, 3 : Second maxilla, first, second and third maxillipeds.

prp. 1 : First peræopod (cheliped).

All the figures to a uniform scale of magnification.

## Plate XI.

## GERYON ISCHURODOUS, sp. nov.

n.s. : Figure indicating natural size of the carapace.

car. anterior half of carapace, with eye and flagellum of second antenna, magnified uniformly with the following parts :—

Pl. : Dorsal view of pleon.

oc., a.s., mxp. 3, prp. 1, prp. 5 : Eye, first antenna, third maxilliped, first peræopod (cheliped), fifth peræopod.

*More highly magnified.*

m., m., l, mx. 2, plp. 1, plp. 2 : Mandible, first and second maxillæ, first and second pleopods.

## Plate XII.

## CRYPTODROMIA OKTAHEDROS, sp. nov.

n.s. : Lines indicating natural size of the carapace shown above in dorsal view, with protruding second antennæ, fourth and fifth peræopods on the left, and some segments of the pleon. Below is the ventral aspect on the same scale.

Pl. : Dorsal view of pleon, flattened out.

prps. 1, 1, 3, 5 : Peræopods, first pair or chelipeds, third and fifth, uniform in scale with the preceding figures. The larger cheliped below from its outer surface, the smaller above from its inner surface.

m., mx. 2, mxp. 3 : Mandible, second maxilla, third maxilliped, on higher scale.

## Plate XIII.

## IBACUS PERONII, Leach.

car., n.s. D., n.s. V. : Half of carapace in dorsal aspect, slightly wider than natural size, and ventral aspect of the second antenna in attachment to front of carapace.

l.s., li. : Upper and lower lips.

m., mxp. 2, mxp. 3, V. and D. : Mandible, second maxilliped, dorsal and ventral aspects of third maxilliped.

plp. : First pleopod of male, from second pleon segment. All the detail figures magnified to a uniform scale.

## Plate XIV.

## UROCARIDELLA BORRADAILEI, sp. nov.

n.s. : Line indicating natural length of carapace with rostrum.

r., oc. : Rostrum and eye, with part of carapace.

T., urp. : Dorsal view of telson, with terminal part of left uropod.

a.s. : First antenna from end of peduncle, the shortest and slenderest of the three flagella shown between the bases of the other two.

mxp. 3, prp. 1, prp. 5 : The third maxilliped, wrist and chela of first peræopod, hand and finger of the fifth. Uniform scale for preceding figures, a higher scale for the following.

m., m., mx. 1, mx. 2, mxp. 2 : One mandible showing the full length, part of the other displaying the elusive palp ; first and second maxillæ, and second maxilliped.

## Plate XV.

## ROSCA ROGANS, sp. nov.

n.s. : Lines indicating natural size of specimen figured in dorsal aspect.  
 a.s., a.i. : First and second antennæ on uniform scale with following figures.  
 gn. 1, gn. 2, prp. 5. : First and second gnathopods, and fifth pereopod.  
 urp. : Uropod.

## Plate XVI.

## XENOBALANUS NATALENSIS, sp. nov.

n.s. : Figure of specimen natural size.  
 sh. : Rough sketch of shell.  
 m., m., m. : The two mandibles of specimen figured, and lower figure on right from another specimen.  
 mx. ex., mx. in. : Exterior and interior maxillæ.  
 p. : Penis protruding beyond the fourth, fifth, and sixth cirri.  
 p., c. 6 : Penis and sixth cirrus more highly magnified.  
 c. 1., c. 2., c. 3. : First, second, and third cirri to the same scale as sixth cirrus; spinules not shown except on one margin.

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In the Annals of the Durban Museum, vol. ii, part 6, p. 275, some errors in ancient authorities were pointed out. It is only just, therefore, to acknowledge that on the same page I myself am credited with writing the name "Latrielle" five times by mistake for "Latreille." These Annals however, observe the useful distinction of "Milne Edwards" without the hyphen for the father Henri from the hyphenated "Milne-Edwards" for the son Alphonse, both being celebrated and in part contemporary carcinologists.

Once more I may remark how many false concords would be avoided if in zoology all generic names were regarded as masculine.

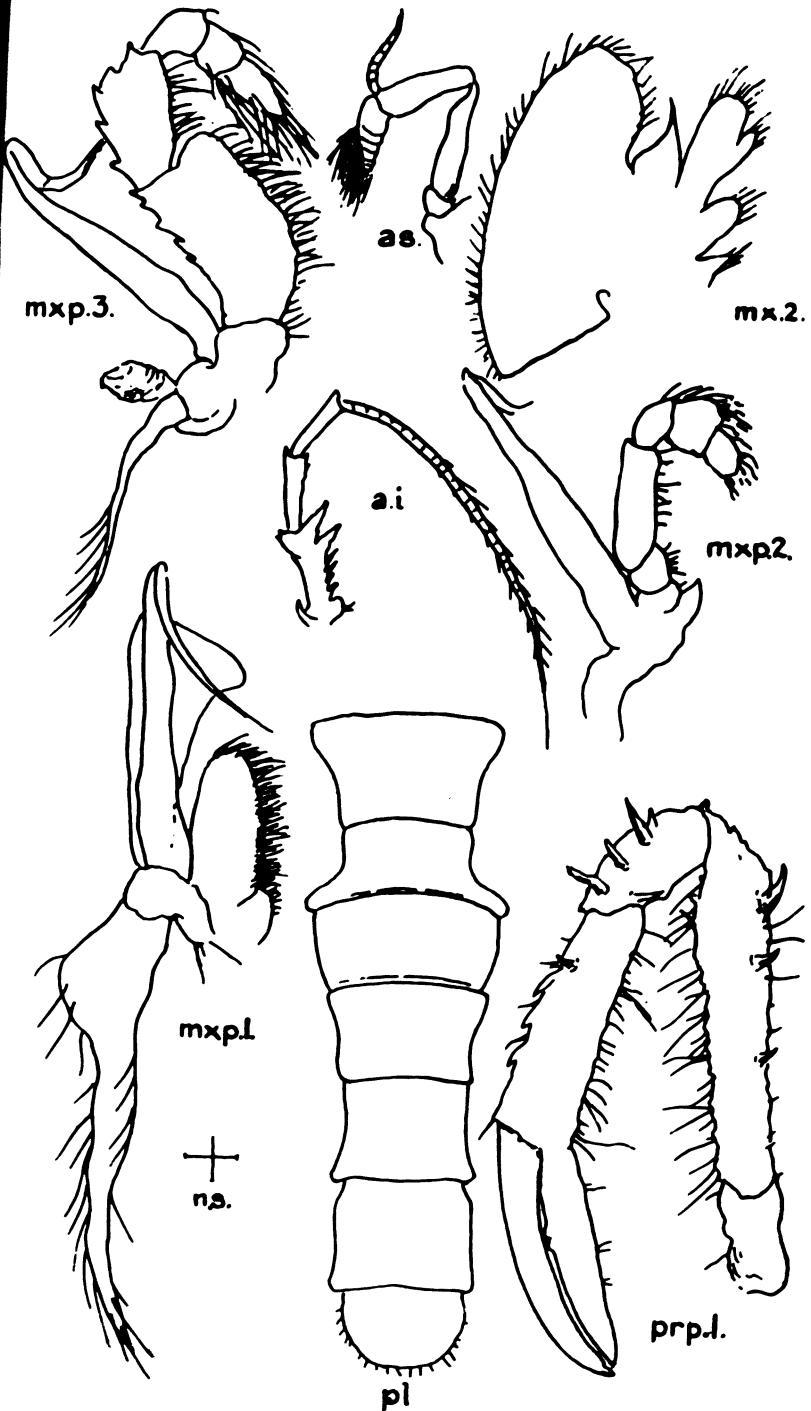
In these Annals, vol. iii, part 1, p. 15, lines 1 and 3, for Gonoplacidæ should be read Goneplacidæ.



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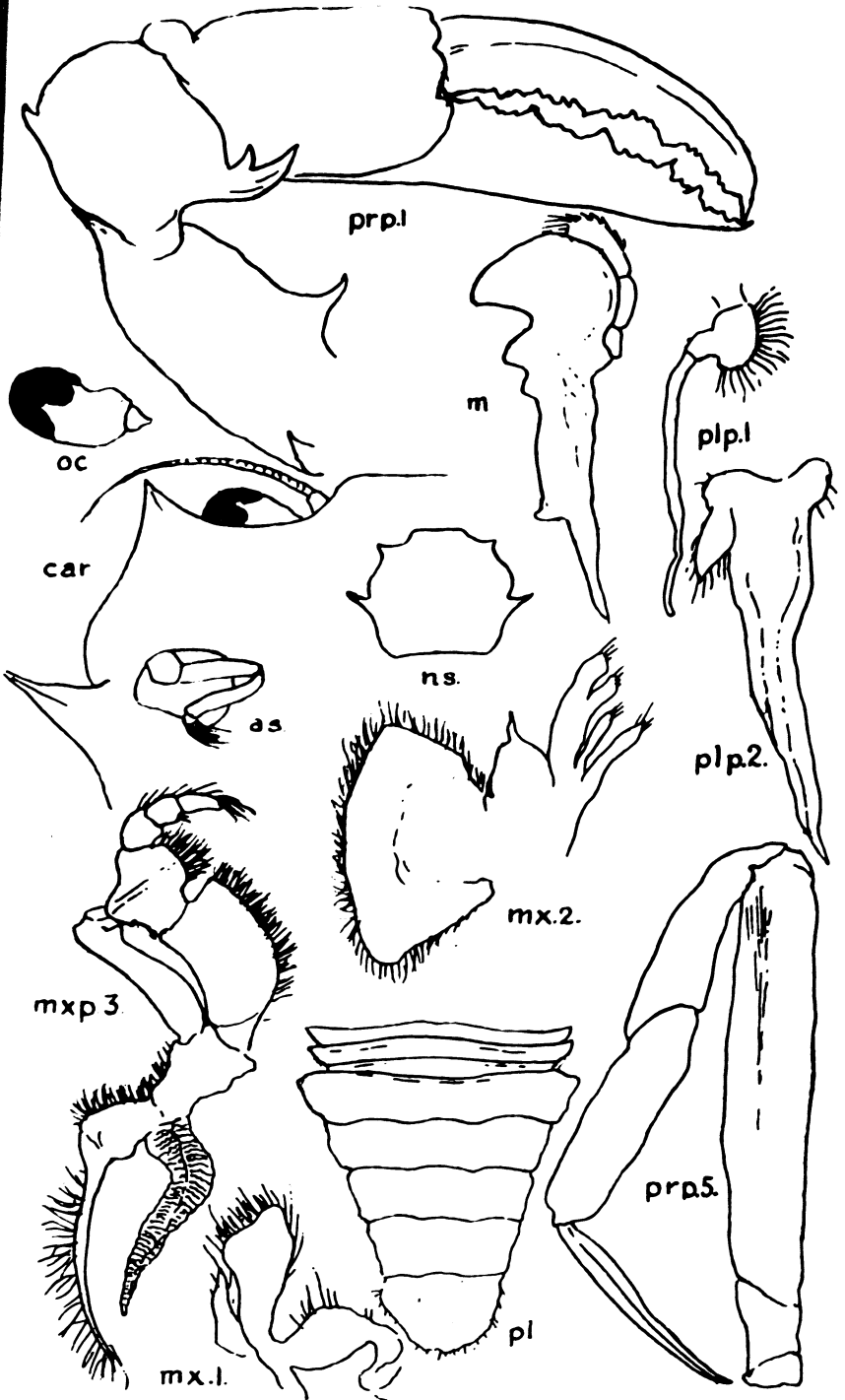
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(Issued 25th August, 1923.)



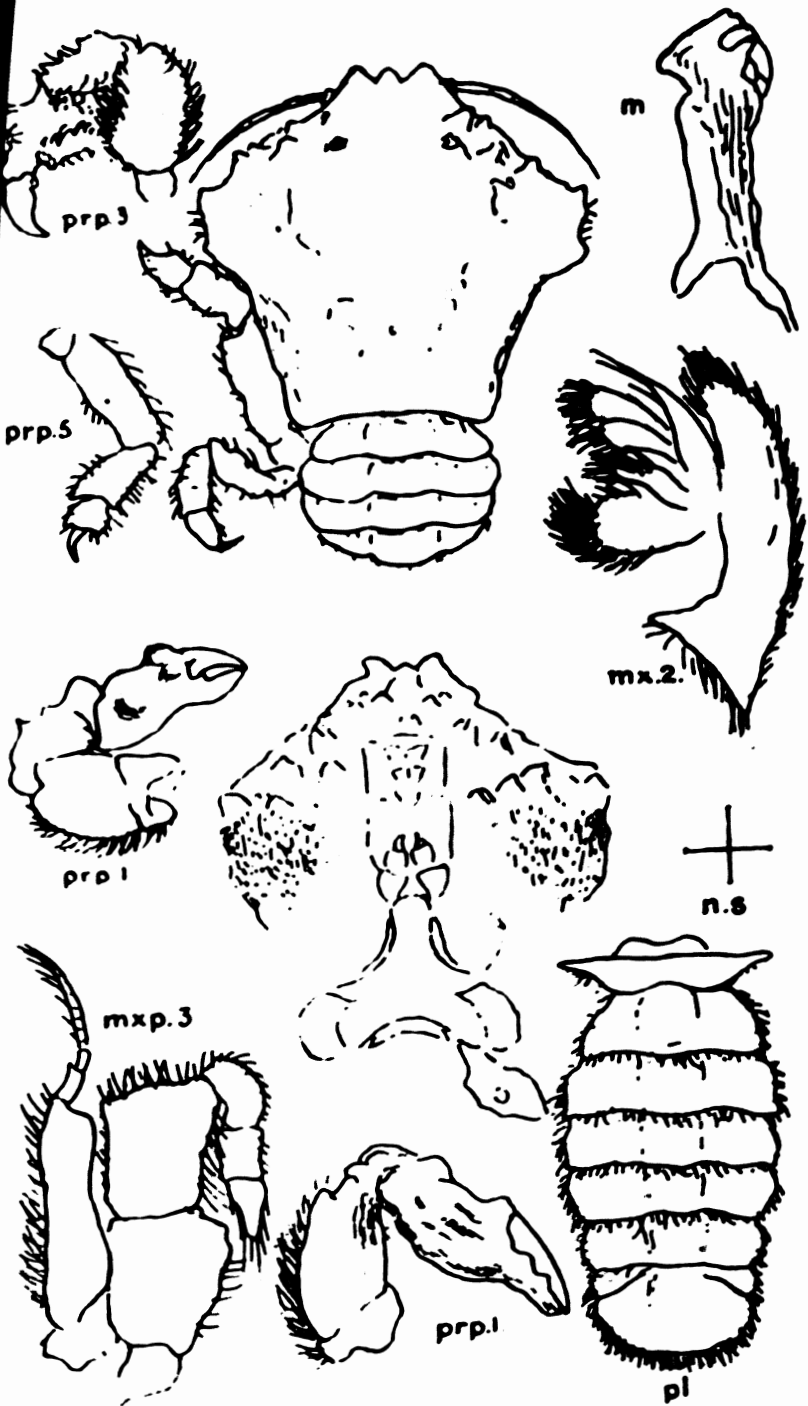
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PLATYMAIA TURBYNEI, Stebbing.



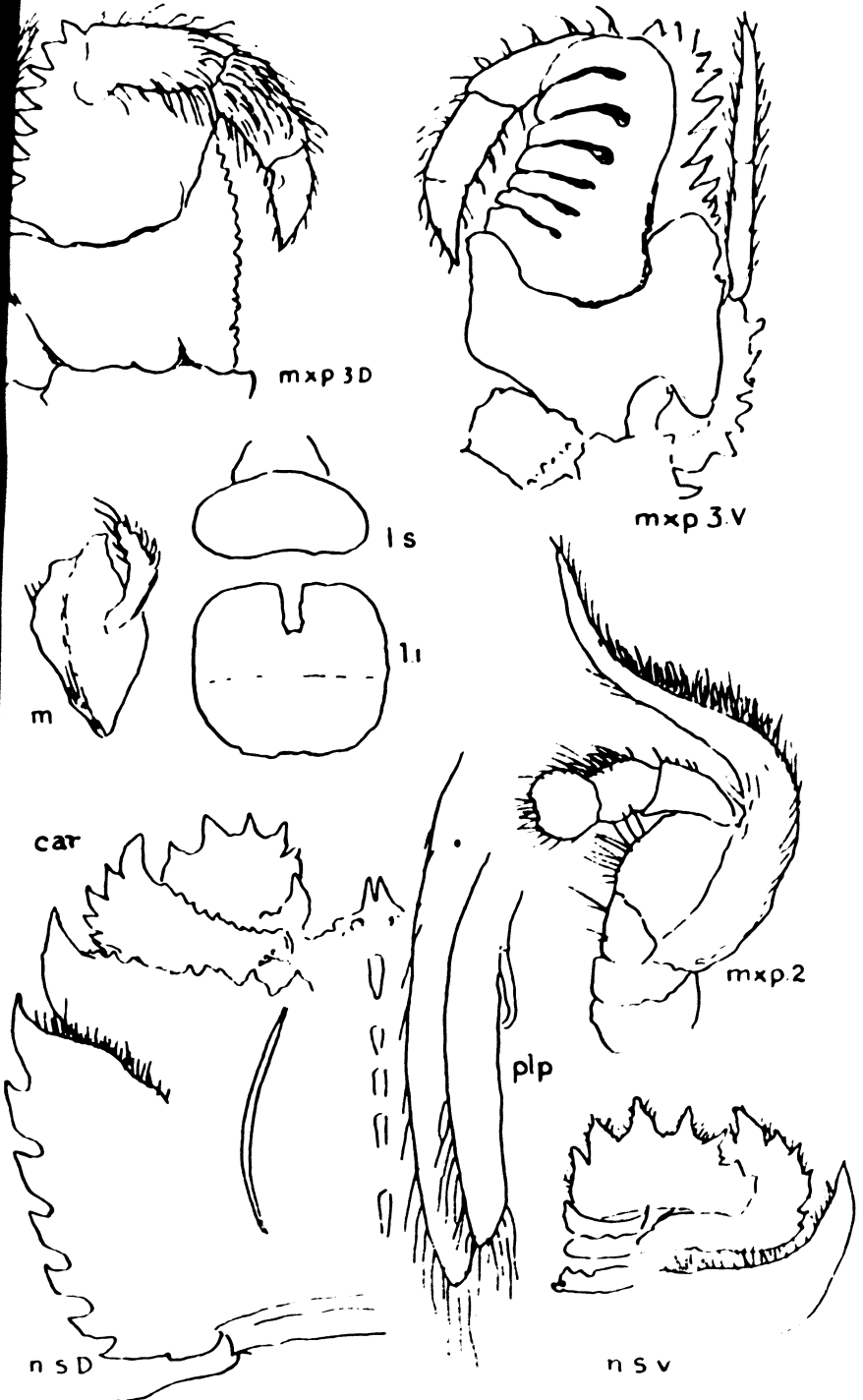
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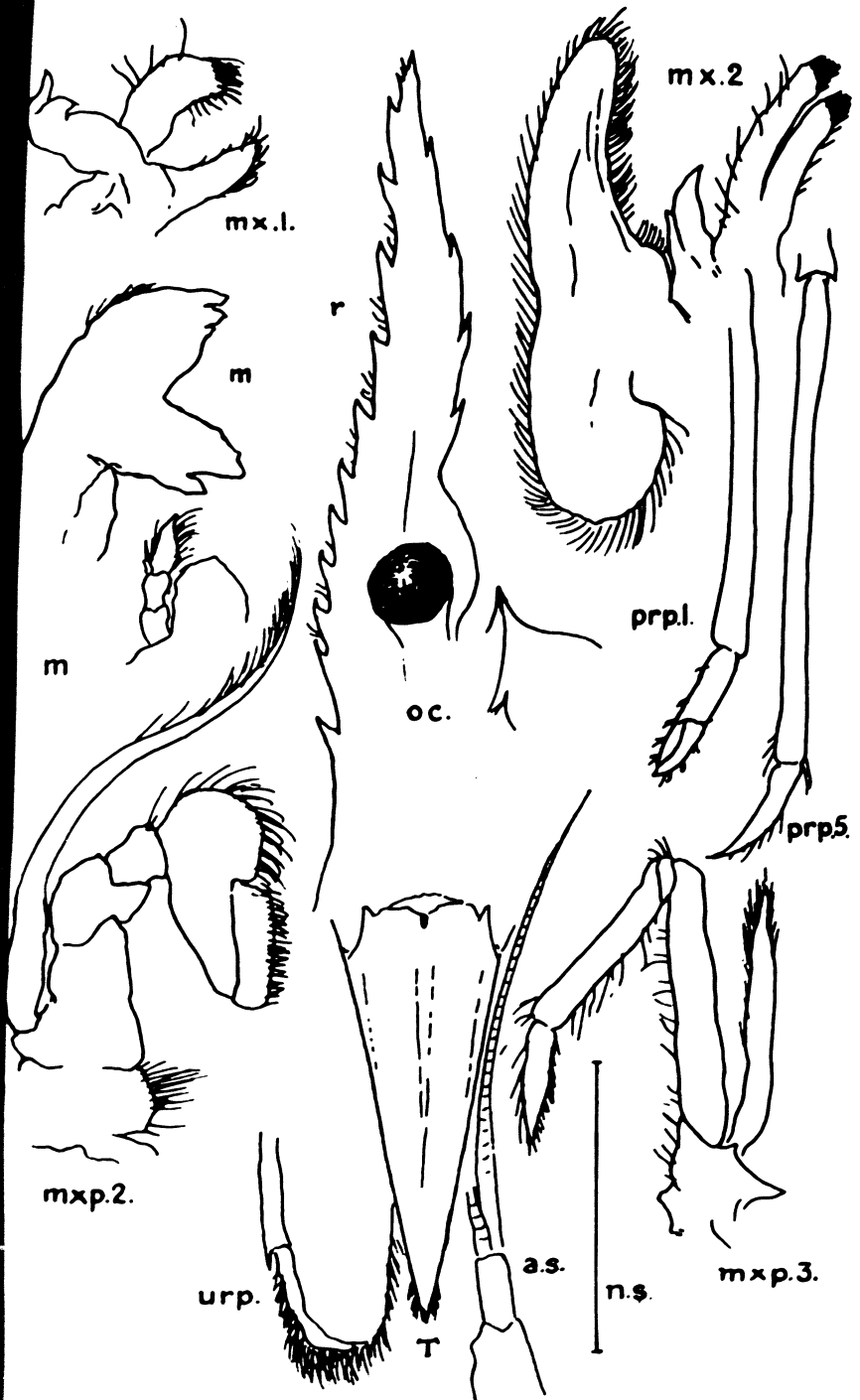
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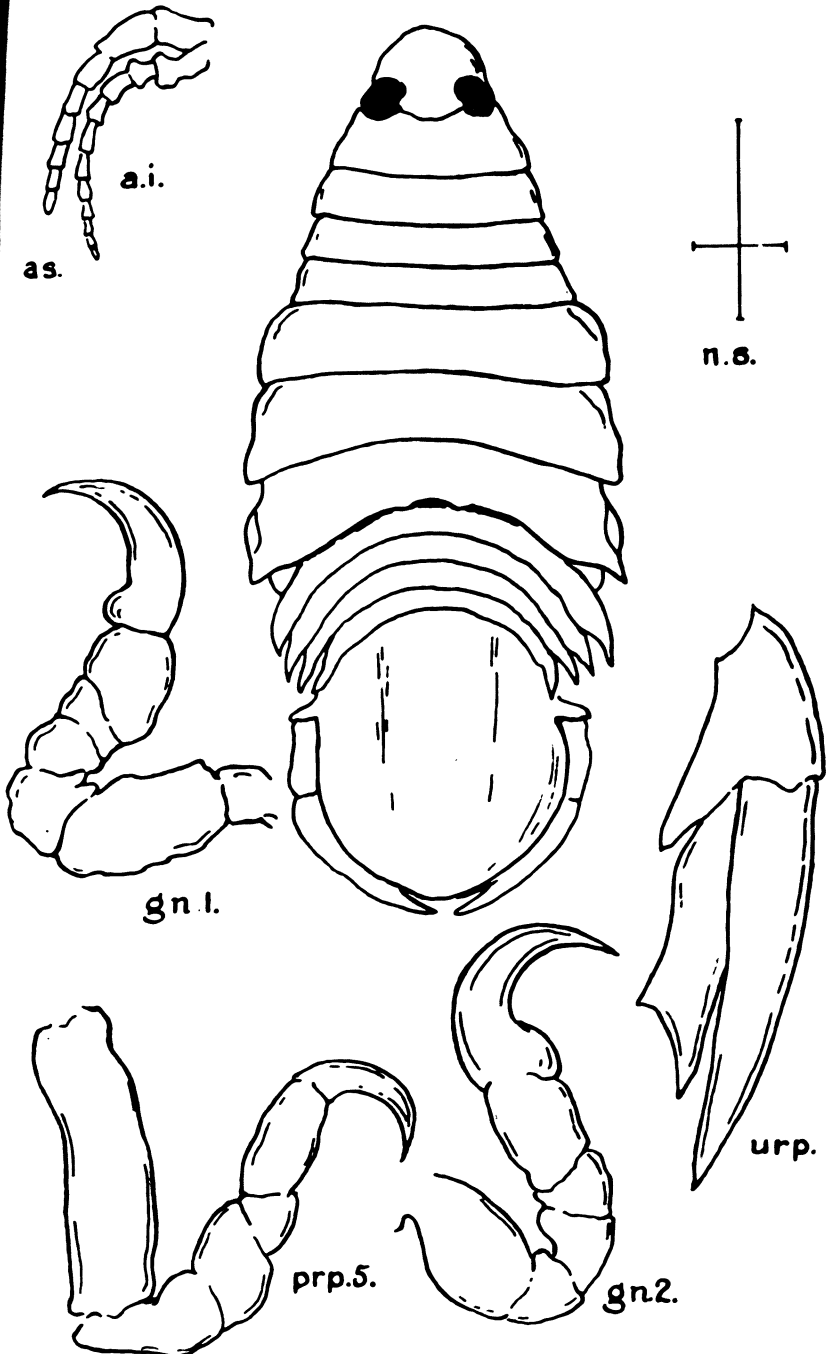
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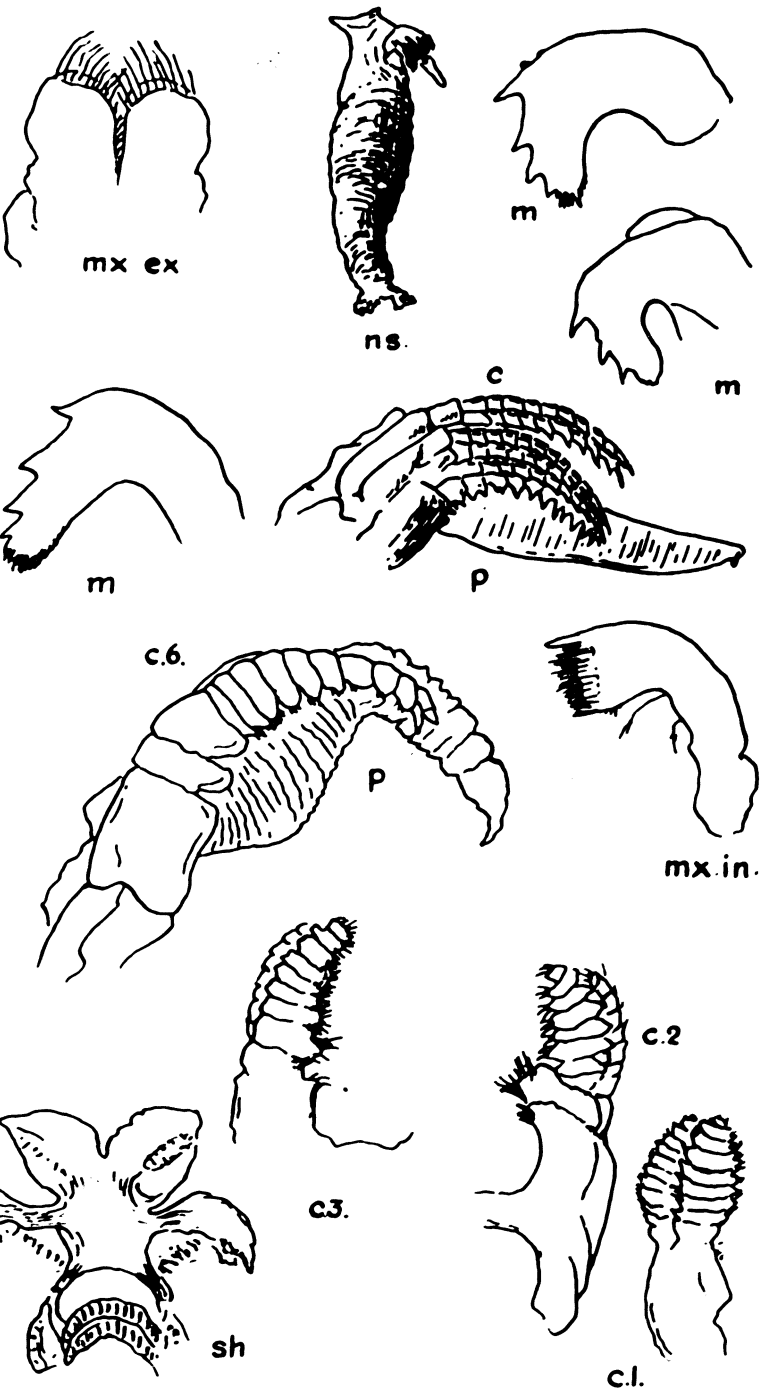
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Del. T. R. R. Sieblich

*ROSCA ROGANS*, sp. nov.



Del. T. R. R. Stebbing.

*XENOBALANUS NATALENSIS*, sp. nov.