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INVERTEBRATE ZOOLOGY

ILLUSTRATIONS

OF THE

ZOOLOGY OF SOUTH AFRICA;

CONSISTING CHIEFLY OF

FIGURES AND DESCRIPTIONS OF THE OBJECTS OF NATURAL HISTORY

COLLECTED DURING

AN EXPEDITION INTO THE INTERIOR OF SOUTH AFRICA,

IN THE YEARS 1834, 1835, AND 1836;

FITTED OUT BY

"THE CAPE OF GOOD HOPE ASSOCIATION FOR EXPLORING CENTRAL AFRICA:"

TOGETHER WITH

A SUMMARY OF AFRICAN ZOOLOGY,

AND AN INQUIRY INTO THE GEOGRAPHICAL RANGES OF SPECIES
IN THAT QUARTER OF THE GLOBE.

BY ANDREW SMITH, M.D.,

SURGEON TO THE FORCES, AND DIRECTOR OF THE EXPEDITION.

Published under the Authority of the Lords Commissioners of Her Majesty's Treasury.

ANNULOSA.

BY W. S. MACLEAY, ESQ. M.A., F.L.S.,

HIS LATE MAJESTY'S COMMISSIONER AND JUDGE IN THE MIXED COURT OF JUSTICE
ESTABLISHED AT THE HAVANA.

Smithsonian Institution
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LONDON:

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MDCCCXXXVIII.

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ON THE BRACHYUROUS DECAPOD CRUSTACEA.

BROUGHT FROM THE CAPE BY DR. SMITH.

The most interesting observations on Crustaceous animals which have of late years been given to the public are those of Dr. Vaughan Thompson, relating to their metamorphosis. It had been long recorded that many *Entomostraca* undergo metamorphosis; but no naturalist before Thompson ever ventured to affirm that crabs, lobsters, and the higher *Crustacea* generally, pass through certain changes of form after leaving the egg. It is true, that in consequence of the publications of Professor Rathke, some persons disputed the truth of Dr. Thompson's assertions; but so far as my own observations allowed me to form an opinion on the subject, I was ever inclined to think that this gentleman merited well of science, which is far more than could be said of any of those persons who by crude inferences, but never by direct observation, ventured to attack him.* I have never myself lived sufficiently near the sea-side to enable me conveniently to repeat Dr. Thompson's experiments; but looking merely to what I have seen with my own eyes, I think it will eventually be found that the *Ptilota* of Aristotle may be characterized by their change of form taking place during their last two or three stages of ecdysis; while the metamorphosis of all other *Annulosa* only occurs during the first or second moult after leaving the egg. When I come to treat of the *Macrourous Decapods*, I shall return to this subject. At present my attention must be more particularly confined to the classification of the *Brachyura*, as being the best known groupe of all *Crustacea*.

M. Latreille and Dr. Leach left systems behind them for the arrangement of *Crustacea*, which were professedly artificial, although the former naturalist made several praiseworthy attempts to arrange these animals naturally. Since the death of these eminent naturalists, two authors have appeared with higher pretensions to acquaintance with the class. The first of these, M. Milne Edwards, having previously made some ingenious observations on the economy and internal anatomy of *Crustacea*, has lately, in the "*Suites de Buffon*," produced a classification, of which I can only say, that it makes an approach to be a rare exception to the well-known fact, that professed comparative anatomists are the persons, of all others, who in general are the most incapable of using their own observations for purposes of natural arrangement. And indeed this very arrangement of Edwards is not natural, since he unfortunately conceives that every groupe he can invent, provided he can furnish it with a character, must be therefore a good one. As, on the contrary, the true definition of a complete natural groupe is, that it must be a series returning into itself, many of the groupes of Milne Edwards, when weighed by this scale, will be found wanting. For instance, of his four grand groupes, *Oxyrhynques*, *Cyclometopes*, *Catomètopes*, and *Oxystomes*, perhaps only his *Cyclomètopes* form a

* The credit of confirming Thompson's observations belongs to my friend Captain Ducane, R. N., who has made at Southampton most interesting observations on the Metamorphosis of *Crustacea*, which I trust he will soon give to the Public.

complete natural groupe. Still the "*Histoire Naturelle des Crustacés*" is a book full of facts, which ought to be in the hands of every carcinologist. The second naturalist, above alluded to, is Professor Dehaan of Leyden. He has treated the subject in another manner, and deserves to be considered of a more philosophic stamp. What he has published on *Crustacea* in the *Fauna Japonica* is a magnificent tribute to science. Milne Edwards rarely takes notice of any of the maxillæ, except the external or fifth pair; and if any objection can be made to Dehaan's arrangement, it is that he likewise is not sufficiently eclectic, and appears to make too much use of the organs of manducation. Nevertheless, as he rigorously follows the mode in which these organs vary, and not that by which they might arbitrarily be combined, it is satisfactory to find that the result, generally arrived at, very nearly approaches to the plan of nature. Nothing further has been published on *Crustacea* of late years, unless we except some interesting descriptions of new species by MM. Say, Guerin, Bell and others. As for M. Dehaan's system, it is not completely worked out; so that I am obliged to offer the following arrangement, provisionally, as being that by which I have been able to express the affinities which exist among the *Decapods* of my own collection. It will at least serve to unite all those relations, whether of affinity or analogy, which have been recorded by Latreille, Milne Edwards, and Dehaan, and will prove that, by means of a moderate exercise of patience, order may sometimes be made to arise out of an apparent chaos.

1. The modern art of describing is too often insufferably long, while human life remains short as ever. I shall endeavour, therefore, as in the former paper, to condense my descriptions as much as possible.

Order DECAPODA, Lat.

Tribes.

Normal Groupe. — Brachyura, Lat. Abdomen having no appendages attached to the penultimate segment. Internal antennæ lodged in fossulæ.	1 Tetragonostoma.	Oral orifice broad in front. The afferent canals of the branchial cavity opening behind the month. Epistome distinct.
	2 Trigonostoma.	Oral orifice triangular and narrow in front. The afferent canals of the branchial cavity opening in front of the mouth. Epistome in general rudimentary.
Aberrant Groupe. — Macroura, Lat. Abdomen having appendages attached to the penultimate segment. No fossulæ for the reception of the internal antennæ.	3 Anomura, M.E.	Abdomen not furnished with false natatory feet. Abdominal appendages not forming a natatorial tail. Branchiæ lamellate. Peduncle of external antennæ not covered by any moveable scale.
	4 Sarobranchia.	Abdomen furnished with false natatory feet. Abdominal appendages forming a natatorial tail. Branchiæ penicilliform. Peduncle of external antennæ with its scale null or rudimentary.
	5 Caridea, Lat.	Abdomen furnished with false natatory feet. Abdominal appendages forming a natatory tail. Branchiæ lamellate. Peduncle of external antennæ covered by a large moveable scale.

2. It is only with the normal groupe that we for the present have to concern ourselves. I shall therefore proceed provisionally to arrange the *Brachyura* into Stirpes, merely observing, that in

the following descriptions I shall rarely allude to colour, since experience has taught me that in this respect dried specimens of *Crustacea* are not to be trusted. I would also observe, that as the groupes of degree next inferior to families—namely, genera—have never been worked out in this class, I have for the present considered almost all the various groupes under families to be sub-genera, although some of them, such as *Plagusia*, may possibly be a true genus, and others again may prove to be only sections of some sub-genus. I do not think that our collections, as yet, possess a sufficient quantity of species to allow us to decide what are the genera and what are the sub-genera of Decapod *Crustacea*. Professor Dehaan, however, has offered some valuable hints on the subject, and to those I refer the reader. We appear to enter among the *Brachyura* by the genus *Mycteris*, and to leave it by means of the genus *Ranina*. There are ten Brachyurous stirpes, which may be placed in two columns, so as to shew those analogies which by Milne Edwards and others have too often been taken for affinities.

TETRAGONOSTOMA.	*Analogies.*	TRIGONOSTOMA.
Mycteris .. PINNOTHERINA.	Shell orbicular.	DROMIINA—Ranina.
GRAPSINA.	Shell quadrilateral.	DORIPPINA.
CANCRINA.	Shell arcuated with feet often natatory.	CORYSTINA.
PARTHENOPINA.	Shell uneven with crested feet.	CALAPPINA.
INACHINA.	Shell sub-triangular and generally spined.	LEUCOSINA.

3. The analogy between certain *Inachina*, such as *Acanthonyx*, and certain *Leucosina*, such as *Nursia*, is so great as to have induced M. Latreille to imagine that a direct affinity existed between the two groupes. In general, the above analogies appear reversed; but the Tetragonostomous stirpes may be characterized as follows:—

TRIBE TETRAGONOSTOMA.

Stirpes.

Normal Groupe.

OXYRHYNCHA, M. E.

Epistome very large. Clypeus generally advanced in front.

1 INACHINA. Triangular Crabs. — First joint of external antennæ very large, forming the greater part of the lower side of the orbit, and always soldered to the clypeus.

2 PARTHENOPINA. Rocky Crabs. — First joint of external antennæ small, not soldered to the clypeus and not aiding to form the lower side of the orbit of the eye.

Aberrant Groupe.

BRACHYRHYNCHA.

Epistome short. Clypeus rarely advanced in front.

3 CANCRINA. Arched Crabs. — Tigellus of external pedipalps always inserted at the inner angle of their third joint. The scapes of the palpi unidentated on the inside. Shell arched in front.

4 GRAPSINA. Square Crabs. — Tigellus of external pedipalps inserted at the outer angle, or at the middle of the third joint. The scapes of palpi not dentated. Shell quadrilateral.

5 PINNOTHERINA. Parasitical Crabs. — Tigellus of external pedipalps always inserted at the summit, or at the outer angle of their third joint. The scapes of the palpi not dentated. Shell orbicular.

4. By *Eurynome* we pass from the *Inachina* to the *Parthenopina*; by means of *Æthra* we pass from the *Parthenopina* to the *Cancrina*; from these to the *Grapsina* by *Thelphusa*; from the *Grapsina* to the *Pinnotherina* by means of *Doto*; and from the *Pinnotherina* we return to the *Inachina* by means of *Elamene*. The following appear to be the families of *Ina-*

china, which, as well as the *Parthenopina*, have the genital organs of the male hollowed out in the first joint of the hind feet.

Stirps INACHINA, *or* Triangular Crabs.

Families.

Normal Groupe. — Macropodiæ, M. E. Feet long and slender.	1 Inachidæ, M'L.	Tigellus of external pedipalps inserted at the outer angle of their third joint.
	2 Eurypodinæ, M'L.	Tigellus of external pedipalps inserted at the inner angle of their third joint.
Aberrant Groupe. — Maiæ, M. E. Feet of the ordinary size.	3 Epialtidæ, M'L.	Eyes not concealable; no orbitary groove.
	4 Mithracidæ, M'L.	Eyes concealable in an orbitary groove. Clypeus bifurcate in the middle.
	5 Huenidæ, M'L.	Eyes concealable in an orbitary groove. Clypeus pointed in the middle.

5. Of the two first families I have no species from the Cape to describe. I proceed therefore to the third

Fam. EPIALTIDÆ, Mihi.

Sub-genus. Antilibinia, M'L.

Cephalothorax short, convex, pear-shaped, as broad almost as long, with the sides dentated in front, and the clypeus short, triangular, with a bidentated apex, having a smaller tooth on each side.

Orbit without any distinct fossula.

Eyes minute, somewhat prominent, but scarcely moveable, and having a very short peduncle.

Exterior antennæ longer than the clypeus, with their first joint reaching its middle, and being three-sided at the apex, while the second and third joints are cylindrical, and the rest are short and setaceous.

Internal antennæ inserted at the base of the rostrum, and having their basilar joint obconical and rather three-sided, while their second joint is shorter and cylindrical.

External pedipalpi, or fifth pair of maxillæ, with their outer palpus semifusiform, and the inner palpus having the second joint elongated with parallel sides, the third joint subquadrate, and the tigellus very small, inserted at its inner angle.

Feet, first pair twice as long as body, with the chelæ thick, having subacute digits, which are serrulated on the inside. The hinder pairs of feet are more slender.

Abdomen wanting in my specimen, which is a male.

This groupe I have called *Antilibinia*, because it is in the family *Epialtidæ* exactly what *Libinia* is in the family *Mithracidæ*. It is only analogous to *Libinia*, for it has no grooves or orbit for the concealment of the eyes, which besides are neither moveable nor retractile. *Libinia* is a groupe peculiar to the New World; but whether it and *Antilibinia* are sub-genera, or only sections of sub-genera, remains to be proved.

Sp. 1. (———) Antilibinia Smithii, *n. s.*

Descr. *Antilibinia* testæ margine laterali anticè tridentato, clypeo bifurcato cornubus intùs pilosis.

Note. The shell of this species is without hairs, almost circular, and has the regions in general distinct. The clypeus is bifurcated with a tooth on each side of the base. The anterior lateral margin of the shell has three teeth, of which the foremost is situated behind the eyes; the second or middle tooth is the greatest, and directed forwards, while the last is little more than a tubercle. The digestive region has an eminence marked on each side. The branchial region has five or more tubercles on each side. The cardial region has a tubercle in the middle behind, and on each side of it there is an oblique portion of the shell scabrose. The horns of the clypeus are pilose on the inside. The digits of the chelæ have seven or more teeth on the inside. The four pair of hind feet have their third joints thick, and are armed with long curved claws. This crab resembles the *Libinia spinosa* of Milne Edwards so closely, that at first sight it might be taken for it.

Sub-genus. Acanthonyx, Lat.

Sp. 2. (———) Acanthonyx dentatus, *M. E.*

Acanthonyx dentatus, Hist. Nat. des Crust. vol. i. p. 343.

Sp. 3. (———) Acanthonyx scutellatus, *n. s.*

Descr. *Acanthonyx* fere duplo longior quam latus, orbitæ angulo externo unidentato, clypeo ad basin tuberculis duobus setiferis suprà instructo, testæ margine laterali bidentato dente posteriori minimo apice subsetifero.

Note. The shell of this fine species, which is more than an inch long, is shaped like an heraldic shield. It is depressed. The two horns of the clypeus are pilose at their apex, and have two setiferous tubercles at their base. On each side of these horns, and at the external angle of the orbits, there is a triangular tooth also pilose at the apex. The anterior lateral margins of the shell are bidentated. The fore teeth on each side are large, triangular, and blunt. From their points the sides of the carapace proceed towards the posterior margin, nearly parallel to each other, until they arrive at the second tooth, which is rudimentary, and reduced to a setiferous tubercle. The posterior margin of the thorax is rounded.

Fam. MITHRACIDÆ, Mihi.

Sub-genus. Dehaanius, M'L.

Cephalothorax subtriangular, with the lateral margins in front dentated, and behind rounded; the clypeus being quadridentate.

Orbit simple, with globose moveable eyes, thicker than their peduncles.

Exterior antennæ with the basilar joint broad at the base, then narrower and reaching the middle of the clypeus; while the second joint is shorter and obconical.

Internal antennæ with the basilar joint subcylindrical, and the second subtriangular.

External pedipalpi with the outer palpus falciform, and the inner palpus having its second joint with subparallel sides, the third joint sub-quadrate, emarginate at the apex, with the tigellus conspicuous, inserted at its inner angle.

Feet, first pair thicker than the rest, and having the digits serrulated on the inside; the second pair longer than the first, and, as well as the three posterior pair, it is furnished with a subcheliform penultimate joint, which is truncated at the apex, and unidentated.

Abdomen of male has seven segments.

This groupe is in the family *Mithracidæ* exactly what *Acanthonyx* is in the family *Epialtidæ*. Both are analogous groupes in contiguous families; but whether they ought to be considered as sub-genera, or only sections of sub-genera, remains yet to be discovered.

Sp. 4. (———) Dehaanius acanthopus, *n. s.*

Descr. *Dehaanius* testâ glabrâ, margine laterali anticè tridentato, dente medio majore, clypeo fossulâ inter dentes duos medios majores longitudinali.

Note. Carapace pyriform and without hair, having the digestive, cardiac, and branchial regions distinct. Anterior lateral margin tridentate, the middle tooth being much the largest. Clypeus short, with four triangular divergent teeth, the two in the middle being the largest and farthest advanced. From the middle bifurcation of the clypeus there is a deep groove continued about half its length backwards. The feet are without hairs. The chelæ of fore-feet are thick, and serrulated on the inside. The other four pair of feet have thick knees, and subcheliform claws. The only specimen brought home by Dr. Smith has lost of the external antennæ all but the two first joints.

Sub-genus. Mithrax, Leach.

Sp. 5. (———) Mithrax quadridentatus, *n. s.*

Descr. *Mithrax* cornubus rostri divergentibus ad apicem arcuatis, extus bidentatis dente apicali multo majore; testâ triangulari supra granulosâ, haud spinosâ, marginibus lateralibus anticis quinquidentatis.

Note. Carapace and feet exactly like those of *Mithrax dichotomus*, Lat., to which this species comes exceedingly close. The anterior lateral edges of the shell are armed on each side, as in *M. dichotomus*, with seven spiniform teeth; but the hinder two of these teeth are evanescent, and are placed more on the back. There are, moreover, no points on the hinder edge of the carapace, as in *M. dichotomus*. The eyes are globular, and larger than the base of the pedicles. The antennary fossa has no tubercle at the posterior edge. The anterior feet are long, having the third and fourth joints covered with short spines: the fifth joint or hand is slender and smooth, as is also the moveable finger without teeth. The other feet have no tooth at the extremity of the third joint. The size is $1\frac{1}{2}$ inch.

6. By means of *Eurynome* we proceed to the Parthenopina; but of this groupe no species has been brought from the Cape; so we avail ourselves of *Cryptopoda* to pass on to *Æthra*, and so among the *Cancrina*, of which the families appear to be as follow. All these families are distinguished by having the scapes of the palpi of the fifth maxillæ unidentated on the outside; and their males have the genital orifices hollowed out in the first joints of the hind feet.

Stirps. CANCRINA, *or* Arched Crabs.

Families.

Aberrant Groupe.

Canceriæ, M. E. Hind feet with claws. Body thick.

- 1 Xanthidæ, M'L. — Outer lacinia of third maxillæ dilated at the apex. Shell arched in front.
- 2 Cancridæ, M'L. — Outer lacinia of third maxillæ narrow at the apex. Shell arched in front.
- 3 Eriphidæ, M'L. — Outer lacinia of third maxillæ narrow at the apex. Shell quadrilateral, or at least but little arched in front.

Normal Groupe.

Portuniæ, M. E. Hind feet dilated, and formed for swimming. Body depressed.

- 4 Portunidæ, M'L. — Outer lacinia of third maxillæ with the inner apex emarginate. Last joint of hind feet more or less round.
- 5 Carcinidæ, Leach. — Outer lacinia of third maxillæ with the inner apex entire. Last joint of the hind feet more or less acuminate at the apex.

I proceed to enumerate the following Cape species, which belong to this Stirps :—

Fam. XANTHIDÆ, Mihi.

Sub-genus. Atergatis, Dehaan.

Sp. 6. (———) Atergatis compressipes, *n. s.*

Descr. *Atergatis* testâ rubrâ lævi fulvo-maculatâ clypeo vix quadrilobo ; chelis intus compressis, digitis suprà carinatis extus lineis elevatis duabus instructis, pedibus brevibus latis compressis fulvô-maculatis.

Note. The shell of this crab is about two inches long, and about twice as wide as long, of an oval form, very convex, and having only the branchial regions distinctly marked. The surface is quite smooth, of a dirty orange hue, marked with brick-red spots. Of these, one large spot, of an irregular form, reaches over the genital region almost the whole width of the shell. Another smaller spot marks the cardiac region, and the remainder of the shell is covered with small round spots of the same hue, which are also found on the feet. The seven-jointed abdomen of the female is also marked with small fulvous spots.

The margin of the clypeus is sinuated so as almost to show four rudimentary lobes. The chelæ at their points are blackish ; on the fixed joint there are two elevated lines on the outside. The other feet are very much compressed and dilated. In other respects the characters are those common to all the species of the groupe named *Atergatis* by Professor Dehaan. This species is two inches long.

Sub-genus. Chlorodius, Leach.

Sp. 7. (———) Chlorodius perlatus, *n. s.*

Descr. *Chlorodius* testâ rugis divisâ, suprà granulosâ granulis albis, marginibus lateralibus anticis quadrilobis ; clypeo quadrilobo manibus pedibusque crassis rugosis verrucosis, chelis apice translucentibus, pedibus brevissimis.

Note. This species comes very near the *Chlorodius areolatus* of Milne Edwards, but may be

distinguished from it by the anterior lateral margin being in this crab scolloped, instead of having four triangular teeth. The whole of the feet also are granulose, which is not the case in *C. areolatus*. The length is about eight lines. This is not the *Chlorodius* of Dehaan.

Sub-genus. Halimede, Dehaan.

Sp. 8. (———) Halimede pisifer, *n. s.*

Descr. *Halimede* testâ villosâ antice tuberculatâ postice scabrosâ, clypeo subacuminato, manibus pedibusque infrà glaberrimis lævissimis, hirsutie tuberculisque pisiformibus extus opertis, chelis nigris.

Note. This species is only seven lines long. The thorax is convex in the middle, having the anterior lateral margins scolloped by four blunt tubercles. The front is sub-acuminate, with the apex crenated. The chelæ are unequal in size, but both large. The abdomen is covered with hairs, except the last joint.

This species has affinity to the *Polydectus cupulifer* of Milne Edwards, agreeing with it, in having three great tubercles surrounding each orbit, one occupying its external angle, and the two others the lower edge of the orbit.

7. Of the family Cancridæ we have no species; we pass on therefore to the following—

Fam. ERIPHIDÆ, Mihi.

Sub-genus. Eriphia, Lat.

Sp. 9. (———) Eriphia Smithii, *n. s.*

Descr. *Eriphia* testâ posticè albopunctatâ regionibus distinctis, lateribus antice tuberculatis, clypeo haud spinoso, lobis duobus mediis quinque-tuberculatis, manibus tuberculosis chelis concoloribus, pedibus hispidis.

Note. This species of *Eriphia* has its carapace well marked by the regions. The whole of it towards the margin, except behind, is covered with tubercles; the rest of the surface is granulose. The lateral margin is strongly tuberculated, and the two last tubercles behind the orbits are almost spines. The margin of the orbit is tuberculated. The margin of the two middle lobes of the four-lobed clypeus has five tubercles for each. The fore-feet are one larger than the other. The larger being marked above by tubercles sparingly scattered, and the smaller being strongly verrucose above and below. The chelæ of the former has strong teeth; those of the latter have scarcely any, and cross each other. The feet are spotted with white above, are hispid, but have no tubercles. The length is more than two inches. The abdomen of the male is seven-jointed.

Sp. 10. (———) Eriphia Fordii, *n. s.*

Descr. *Eriphia* testâ postice fulvomaculatâ regionibus distinctis, lateribus anticè sub-sexspinosis, clypeo haud spinoso, lobis duobus mediis 6-tuberculatis, manibus lævibus chelis nigris, pedibus hispidis.

Note. This species also, like the *Eriphiæ* in general, has the regions well marked out. The fore margin of the carapace is tubercled, but not so much so as in the *Eriphia Smithii*. The rest of the surface is very finely granulose. The lateral margin has six distinct teeth or spines

before, and some minute tubercles behind. The margin of the orbit is also tuberculated, four of the tubercles becoming almost teeth. The margin of the two middle lobes of the four-lobed clypeus has six tubercles for each. The fore-feet are one larger than the other. Both are almost smooth, although the smaller presents some vestiges of tubercles. The digits of the chelæ are black; those of the larger hand have three teeth above and below; those of the lesser hand being almost without teeth. The feet are without spots or tubercles, but are very hispid. The length is two inches. The abdomen of the female has seven joints.

The two foregoing species of *Eriphia* both come close to their congeners, the *Gegarcinus hirtipes* of Lamarck, and the *Eriphia lævimana* of Milne Edwards. But these last species are natives of the Isle of France.

Sub-genus. Curtonotus, Dehaan.

Sp. 11. (———) Curtonotus vestitus, *Dehaan.*

Curtonotus vestitus, Faun. Jap. tab. 5. fig. 3.

This last groupe appears to be the same as that which is named *Pseudorhombida* by Milne Edwards.

Fam. PORTUNIDÆ, Mihi.

Sub-genus. Achelous, Dehaan.

Sp. 12. (———) Achelous crassimanus, *n. s.*

Descr. *Achelous* testâ glabrâ regionibus distinctis lateribus antice dentatis, clypeo sexdentato, orbitis subtus unidentatis, manibus articulo tertio intus tridentato extus bidentato, quarto supra ad apicem bidentato adque basin unidentato.

Note. This large crab has a shell which is about five inches long by seven wide. The teeth of the cephalothorax are triangular, sharp, and nearly equal. The fore feet are nearly equal in size. The abdomen of male has seven joints. It has been only known, as yet, to occur in deep holes, which it makes in the mud islands near the mouth of the Zwartkops River,—islands that are only visible at low water.

Sub-genus. Charybdis, Dehaan.

Sp. 13. (———) Charybdis Smithii, *n. s.*

Descr. *Charybdis* testâ glabrâ, regionibus indistinctis, lateribus anticè sexdentatis, clypeo 8-dentato, orbitis haud dentatis, manibus articulo secundo intus tridentato, quarto suprà bidentato intus et extus lineis tribus granulatis longitudinaliter carinato, digitis sulcatis.

Note. Although I have here placed *Charybdis* as a sub-genus, I suspect that when the family *Portunidæ* is worked out, it will be found that the *Charybdis* of Dehaan is only a section of some sub-genus of the genus *Portuninus*. M. Dehaan is here splitting very fine; for between the groupes named by him *Oceanus*, *Charybdis*, and *Thalamita*, the differences are very minute. Our crab comes between *Oceanus crucifer* of Dehaan and his *Charybdis 6-dentatus*. The cephalothorax has no transverse granulated lines like the latter, nor are the teeth of the clypeus blunt like those of *Oceanus crucifer*. The six teeth of the anterior lateral margin are

equal, the tooth nearest the eye being sharp. So are the teeth of the clypeus, and the four middle of these teeth are scarcely separated from the lateral ones by a deeper incision. The fore-feet are equal in size, having two apical teeth on the upper margin of the fourth joint. The length is about two inches. The abdomen of the female has six joints.

Fam. CARCINIDÆ, Leach.

Sub-genus. Anisopus, Dehaan.

Sp. 14. (———) Anisopus trimaculatus, *Dehaan.*

Anisopus 3-maculatus, Faun. Jap. p. 13.

Platyonychus bipustulatus, M. E. Hist. Nat. des Crust. vol. i. p. 437. tab. 17. fig. 7. 10.

Note. This crab has a strong relation to the *Corystidæ*, which Professor Dehaan has pointed out with his usual acumen. By *Anisopus*, in fact, we pass off to the *Corystina* among the Trigonostomous *Brachyura*.

Sub-genus. Xaiva, M'L.

Cephalothorax rather depressed, as broad as long, but narrower behind, being broadest in the middle, and having the sides in front arched with a five-toothed margin; the tooth behind the eyes being broad and truncated. The sides behind are entire, rather concave, and with a margin. The shell behind is also entire and margined. The clypeus is triangular, advanced with an acute point, and having the sides undated, while it is furnished above on each side at its base with an orbital tooth.

Orbit with two teeth below, the outer one of which is triangular, and larger than the other.

External antennæ inserted within the orbit, and having their basilar joint short and subtriangular.

External pedipalpi, with the second joint, almost twice as long as the third, which is subquadrate, carinated at the base, with the point obliquely truncated, acuminated on the outside; the inner margin having a piece cut out, as it were, above its middle.

Feet, first pair with the chelæ bicarinated above; second, third, and fourth pair with slender nails, while the hind pair has the nails or ungues dilated and pointed as in the genus *Carcinus*.

Abdomen of male has seven segments; but the third, fourth, and fifth appear soldered together.

Xaiva is the Spanish name for all crabs which have the posterior feet natatory. This will be seen on referring to the curious work of Parra on the natural history of the Gulf of Mexico. The present sub-genus comes close to *Carcinus* of Leach; but is easily distinguished by the third joint of the external pedipalpi.

Sp. 15. (———) Xaiva pulchella, *n. s.*

Descr. *Xaiva* testâ margine anteriore subreflexo, tuberculis quatuor in regione stomachali, lineâ utrinque elevatâ in tuberculum lateralem desinente, chelis suprà bicarinatis et extus tricarinatis.

Note. The stomachal region in this pretty little crab is marked by four tubercles, which are situated on an elevated ridge, stretching on each side towards a lateral tubercle, which is almost on the middle tooth of the anterior lateral margin of the shell. The genital region is marked by

two minute tubercles at the base of a longitudinal carina. An irregular transverse carina stretches out on each side from the last lateral marginal tooth towards the middle of the shell, marking out the upper limit of the branchial region. The chelæ are marked above with five keels on the fixed digit, and three or four longitudinal furrows on the middle finger. The second, third, and fourth pair of feet, are compressed, having their third and fourth joints bicarinated, and their ungues furrowed. The fifth pair of feet are less bicarinated, and the last joint or claw is like the posterior claw of *Carcinus mœnas*, Leach, only more broad. The length is less than an inch.

8. We now return to the aberrant family *Eriphidæ*, by means of which we pass to *Thelphusa* among the *Grapsina*. It becomes therefore necessary to point out the families of a stirps which is very common in warm climates, and the study of whose manners afforded me much amusement whilst I resided in the West Indies. Dr. Milne Edwards calls them *Catamètopes*, and says that some of them are "*complètement terrestres*." This is an error, however; for all these crabs must lay their eggs in water, must pass their infant state in water, and must, during their future life, return periodically to the vicinity of water. The land-crab *par excellence*, *Gegarcinus ruricola*, Lat., in this respect, does not differ in economy from other Brachyurous Decapods, nor does it retire many leagues from the sea. In our small West India islands it may be found all over them; but in Cuba it has its limits, which are confined to a certain distance from the shore.

Stirps. GRAPSINA, *or* Square Crabs.

Families.

Aberrant Groupe. — Tigellus of external pedipalps never inserted at the middle of the apex of third joint.	1 Thelphusidæ, M. E. Fresh Water Crabs.	Ocular peduncles short. Tigellus of external pedipalps never inserted at the outer angle of third joint. Scape of the palpi unidentated on the inside.
	2 Gonoplacidæ, M. E. Deep Shore Crabs.	Ocular peduncles long. Tigellus of external pedipalps inserted at the inner angle of third joint. Scape of the palpi unidentated on the inside.
	3 Ocypodidæ, Leach. Low Shore Crabs.	Ocular peduncles long. Tigellus of external pedipalps always inserted at the outer angle of third joint. Scape of the palpi not dentated.
Normal Groupe. — Grapsi, Dehaan. Tigellus of external pedipalps inserted at the middle of the apex of third joint. Palpi never dentated.	4 Grapsidæ, M. E. Salt Water Crabs.	Shell depressed, and the whole structure such as to render these crabs unable to retire far from the sea.
	5 Gegarcinidæ, M. E. True Land Crabs.	Shell convex in order to contain a certain quantity of water, enabling these crabs to travel great distances on land.

9. Dr. Smith has brought specimens of all the above families of *Grapsina* except of the *Gegarcinidæ*. The first family *Thelphusidæ* has the genital organs of the male placed nearly as in the last stirps *Cancrina*, with which it is osculant. But the other families of *Grapsina* have the genital orifices of the male placed in a transverse groove hollowed out on the sternum. Both the *Thelphusidæ* and *Gonoplacidæ* being aberrant families, agree with the *Cancrina* in having the scape of their palpi unidentated on the inside.

Fam. THELPHUSIDÆ, M. E.

Sub-genus. Thelphusa, Lat.

Sp. 16. (———) Thelphusa perlata, *M. E.*
Thelphusa perlata, M. E. Hist. Nat. des Crust. vol. ii. p. 13.

Note. This crab is common in all the rivers of southern Africa, and grows to the size of nearly three inches long. The male has a much more convex shell than the female, and in aspect resembles much a *Gegarcinus*. The pearly tubercles of the anterior margin of shell are also still more small and evanescent than in the female. I may take this occasion to observe, that in my cabinet I separate those species of *Thelphusa*, which, like the present, have a transversal crest in front of the shell, and call them *Potamonautes*. They are easily distinguished from true *Thelphusæ*, of which the type is the European species *Thelphusa fluviatilis*.

Fam. GONOPLACIDÆ, M. E.

Sub-genus? Cleistotoma, Dehaan.

Sp. 17. (———) Cleistotoma Edwardsii, *n. s.*
Descr. *Cleistotoma* oculis magnis, testâ lævi haud pilosâ lateribus integris nec granulosis nec postice divergentibus, manibus brevibus; pedum pari tertio longiori, femoribus infra lævibus.

Note. This species comes very near to the *Cleistotoma Leachii* of Milne Edwards; but differs from it in the surface being altogether smooth. The length is four lines.

Fam. OCYPODIDÆ, Leach.

Sub-genus. Ocypode, Fab.

Sp. 18. (———) Ocypode cordimana, *Lat.*
Ocypode cordimana, M. E. Hist. Nat. des Crust. vol. ii. p. 48.

Note. The *Ocypode cordimana* of Dehaan appears to be a very different species.

Sub-genus. Ceratophthalma, Dehaan.

Sp. 19. (———) Ceratophthalma cursor, *Herbst.*
Cancer cursor, Herbst. vol. i. tab. 1. fig. 8 and 9.

Sub-genus. Gelasimus, Lat.

Sp. 20. (———) Gelasimus chlorophthalmus, M. E.
Gelasimus chlorophthalmus, M. E. His. Nat. des Crust. vol. ii. p. 54.

Fam. GRAPSIDÆ, M. E.

Sub-genus? Gnathochasmus, M'L.

Cephalothorax sub-quadrate, with the back convex, and entire sides which are arched towards the eyes; the clypeus between the eyes is plane, entire, truncated and deflexed.

Exterior Antennæ produced as far as the middle between the eyes, and having the first joint transverse.

External Pedipalpi very distant from each other; with the second joint very oblique at the base, at the point sinuated, and of the same length as the third joint, which is concave in the middle, and has a bearded crest continuous along its inner edge as far as the outer part of the base of the second joint.

Feet; first pair with thick and equal chelæ.

Abdomen in both sexes has seven segments.

10. Dehaan has noticed the affinity between the two groupes, which he names *Chasmagnathus* and *Pachysoma*. By them he passes from the family *Ocypodidæ* to the family *Grapsidæ*. The sub-genus or sub-section which I have just characterized under the name of *Gnathochasmus* comes exactly between *Chasmagnathus* and *Pachysoma*. It agrees with both in the remarkable elevated crest, which stretches down obliquely from the inner angle of the third joint of the external pedipalp to the outer angle of the base of its second joint. It has the thorax with arched sides, like those of *Chasmagnathus;* but then these sides are entire, like those of *Pachysoma*. I may here observe, that Dehaan's name *Pachysoma* ought to be changed, as it was assigned, long ago, by Mr. Kirby, to a division of the genus *Scarabæus*. See Horæ Entomologicæ, part 2, p. 507.

Sp. 21. (———) Gnathochasmus barbatus, *n. s.*

Descr. *Gnathochasmus* testâ lævi, utrinque ad oculos deflexâ regionibus sub-distinctis, lateribus clypeoque marginatis integris; manibus lævibus glaberrimis crassis chelis sub-concoloribus latis convexis, pedibus lævibus sub-compressis nigro-punctatis tarsis sulcatis.

Note. This crab is about an inch and a quarter long.

Sub-genus. Sesarma, Say.

Sp. 22. (———) Sesarma reticulata, *Say.*

Grapsus cinereus, Bosc. Hist. Nat. des Crust. vol. i. p. 204. tab. 6. fig. 1.

Sesarma reticulata, Say, Trans. Acad. Phil. vol. i. p. 73. tab. 4. fig. 5.

Note. It is singular that I can find no good character whereby to separate this Cape crab from the American species described by Bosc and Say. The latter, however, I only know from description. It is six lines long, whereas the Cape crab is more than an inch. Both are distinguished from the *Sesarma quadrata* by their epistome being covered with granulations, so as to appear finely reticulated. I dare say if we could compare the two crabs together we should be able to discover a specific difference. The Cape crab has not the slightest vestige of granulation on the shell of the cephalothorax. I have found in Cuba the species of *Sesarma* to live generally under stones on the banks of the muddy mouths of rivers. Say's name, *Sesarma,* is adopted

by me instead of *Pachysoma*. It distinguishes a groupe which is the most quadrilateral form of the family *Grapsidæ*, and easily known from the true *Grapsus* by its sides deflexed vertically, being parallel to each other from the eyes. In the Cape species the clypeus has four lobes, the two middle ones being separated by a deep furrow.

Sub-genus. Plagusia, Lat.

Sp. 23. (———) Plagusia tomentosa, *M. E.*
Plagusia tomentosa, M. E. Hist. Nat. des Crust. vol. ii. p. 92.

Note. In the younger specimens of this species the feet are wholly tomentose; but in the more adult specimens we find the two ridges of the upper side of the second joints of the feet appearing white, from the tomentum being worn off.

Sp. 24. (———) Plagusia spinosa, *n. s.*
Descr. *Plagusia* testâ subtomentosâ valde depressâ, longiore quam latâ, lateribus arcuatis anticè quadridentatis, clypeo medio angusto quadridentato dentibus mediis porrectioribus, clypei lateribus bidentatis, manibus brevissimis gracilibus, pedibus articulis secundis extus spinosis, pari secundo longiore.

The length of this *Plagusia* is about three quarters of an inch. It comes very near to the *Plagusia clavimana* of Desmarest.

Sub-genus. Goniopsis, Dehaan.

Sp. 25. (———) Goniopsis strigosa, *Herbst.*
Cancer strigosus, Herbst. tab. 47. fig. 7.

Sp. 26. (———) Goniopsis flavipes, *n. s.*
Descr. *Goniopsis* testâ glaberrimâ nitidâ nigrolividâ lateribus antice bidentatis, epistomate brevissimo cristâ utrinque transversâ tuberculatâ, manibus sanguineis bicarinatis, pedibus flavis nitidissimis.

Note. This species is nearly three inches long, and very handsome. The manners of the various species of *Goniopsis* are very interesting. There are no crabs more active, more vigilant, or more beautiful. The type of this genus is the *Grapsus ruricola* of Degeer, a crab whose manners are detailed by me in the first volume of the Transactions of the Zoological Society. The name, *Grapsus ruricola*, Deg., was wrongly altered from my manuscript by some person who superintended the press during my absence at the Havana, and changed the name to *Gegarcinus ruricola*, Desm. The *Grapsus ruricola*, Deg., is the *Grapsus cruentatus* of Latreille, and the true *Crabe des Paletuviers* of French travellers, although Milne Edwards erroneously makes this to be the *Goniopsis picta*, a species which on the contrary is always found on reefs, and which is therefore by Parra called "*Cangrejo de Arrecife.*"

Sub-genus. Nautilograpsus, M. E.

Sp. 27. (———) Nautilograpsus major, *n. s.*
Descr. *Nautilograpsus* testâ depressiusculâ longiore quam latâ, anticè lævi, lateribus posticè rugis transversis, margine antico pone oculos subemarginato, clypeo lato ultra laterum angulos porrecto.

Note. This species is ten lines long by seven wide; whereas the true *Nautilograpsus minutus*,

the *Cancer minutus* of Fabricius, of which I have taken abundance in the Atlantic ocean, adhering to the gulf-weed, is only three lines long.

Sp. 28. (———) Nautilograpsus Smithii, *n. s.*

Descr. *Nautilograpsus* testâ convexâ lævi, tam latâ quam longâ, margine laterali antico pone oculos vix emarginato, clypeo lato vix ultra laterum angulos porrecto.

Note. This species is seven lines long, and as broad as long. I believe that many species of this sub-genus are confounded with the *Cancer minutus* of Fabricius. *Nautilograpsus* is an excellent groupe, which appears to have escaped the notice of M. Dehaan. It is in general found in the wide ocean, adhering to chelonian reptiles or masses of floating sea-weed. The feet therefore are almost natatorial. *Grapsus pusillus* of Dehaan appears to be a species of the sub-genus near to *Nautilograpsus major* above described.

Sub-genus. Grapsillus, M'L.

Cephalothorax heart-shaped, depressed, with the back plane and the sides arched, almost forming the quadrant of a circle; the clypeus is broad, truncated, and situated in front.

Orbits placed at the fore angles of the shell, with great depressed eyes.

Exterior Antennæ placed without the orbit towards the middle of the clypeus.

Internal Antennæ rather thick.

External Pedipalpi with the second and third joints quadrate, almost equal, the third being a little shorter; the third joint also has its inner apex rounded off, the tigellus is thick, and the outer palpus has its sides almost parallel.

Feet; first pair almost twice as long as body with very large joints; the chelæ being without teeth and the other feet being short with hairy tarsi.

Abdomen in males has five segments, in females it has six.

11. This groupe is very distinct from any described one with which I am acquainted. It approaches in many respects to *Nautilograpsus*, and appears to connect that groupe with *Plagusia*. It is remarkable for the large size of the fore feet.

Sp. 29. (———) Grapsillus subinteger, *n. s.*

Descr. *Grapsillus* testaceus; thoracis lateribus versus medium vix emarginatis; clypeo medio emarginato denteque utrinque ad oculos obtuso; manibus articulo secundo intus tridentato, chelis apice purpureis ad marginem unistriatis.

Note. This species is about four lines long, and rather broader than long.

Sp. 30. (———) Grapsillus dentatus, *n. s.*

Descr. *Grapsillus* rufo-testaceus; thoracis lateribus medio unidentatis, dente acuto; clypeo medio sub-bilobo denteque distincto utrinque ad oculos obtuso; manibus articulo secundo intus septem-dentato, chelis apice sub-purpureis ad marginem unistriatis.

Note. This species is about half an inch long, and about the same width.

Sp. 31. (———) Grapsillus maculatus, *n. s.*

Descr. *Grapsillus* testaceus suprâ et infra rufo-maculatus maculis rotundis; thoracis lateribus medio unispinosis, spinâ brevi acutâ; clypeo medio sub-bilobo utrinque ad oculos emarginato;

manibus articulo secundo intus quinque-dentato, chelis apice concoloribus ad marginem haud striatis.

Note. This beautiful little species is four lines long, by more than five broad.

12. The above great number of *Grapsidæ* at the Cape shews that the carcinology of South Africa agrees with that of intratropical climates more than it does with that of the temperate zones in general. But we now proceed to the stirps *Pinnotherina*, and for that purpose we must return to the family *Ocypodidæ*. Milne Edwards has shewn that a small crab of the Red Sea, called by him *Doto sulcatus*, makes the passage from the *Ocypodidæ* to the *Pinnotherina*.

Stirps. PINNOTHERINA, Dehaan, *or* Parasitical Crabs.

13. This stirps contains so few known species, that I shall not attempt its arrangement at present, more particularly as Dr. Smith has only brought home one species, which has long been known as a native of the Cape of Good Hope. M. Dehaan makes the distinguishing characteristic of this stirps, which he calls *Pinnotheridea*, to consist in the sixth joint of the fourth pair of maxillæ being inserted at the base of the fifth joint. The groupe consists of singular crabs, among which we find the last pair of feet to be sometimes evanescent, as in the genus *Hexapus* of Dehaan.

Fam. HYMENOSOMIDÆ.

Genus. HYMENOSOMA, Leach.

Sub-genus. Leachium, M. E.

Sp. 32. (Hymenosoma) Leachium orbicula. *Leach*, MSS.
Hymenosoma orbiculare, Desm. Cons. p. 163. tab. 26. fig. 1.

Note. Milne Edwards has shewn that the *Hymenosoma Leachii* of Guerin belongs to another sub-genus.

14. Perhaps when the attention of collectors shall have been more directed to these small, though curious crabs, we may discover their natural arrangement. The difficulties pointed out by Milne Edwards, who complains that his genera are so distinct from each other, evidently proceeds from almost every one of his genera belonging to a distinct family. Perhaps indeed, if we consider his arrangement in this light—in other words, that most of his genera represent families—the table he gives (vol. 2, p. 29) may not be found so far wrong. But however this may be, I shall now return to the stirps *Cancrina* and family *Carcinidæ*. From these we pass directly to the osculant stirps *Corystina*, belonging to the interesting tribe of Trigonostomous *Brachyura*, which may be displayed to view in the following manner:—

Tribe. TRIGONOSTOMA.

Stirpes.

Aberrant Groupe.

MACROCERA.

External antennæ long, or at least conspicuous.

1 CORYSTINA. — External antennæ long. Hind feet of the more usual structure, and serving for locomotion. Oral orifice triangular.

2 DORIPPINA. — External antennæ long. Hind feet raised up over the back and serving for organs of prehension. Oral orifice triangular.

3 DROMIINA. — External antennæ moderate. Hind feet raised up over the back and serving for organs of prehension. Oral orifice not always triangular.

Normal Groupe.

BRACHYCERA.

External antennæ more or less rudimentary and always inconspicuous.

4 LEUCOSINA. — Anterior feet not elevated into a crest. No branchial afferent apertures in front of the fore feet.

5 CALAPPINA. — Anterior feet compressed and elevated into a crest. Branchial afferent apertures in front of fore feet.

15. From the *Corystina* we pass to the *Calappina*, by means of *Matuta*. By *Oreophorus* we leave the *Calappina* for the *Leucosina*. The passage from the *Leucosina* to the *Dromiina* is not so clear; but these last are close to the *Dorippina*, which last again are approximated naturally to the *Corystina*. Still the tribe has never been worked out, and I think it more than possible that the *Dromiina* which I have here considered to be an aberrant groupe of Trigonostomous *Brachyura*, will, in the end, be found to be an aberrant groupe of Anomurous *Macroura*. Nay, this last is the position assigned to it by Milne Edwards, and the arguments for such a location of *Dromiina* are their rudiment abdominal appendages, and the oral orifice being rarely triangular. On the other hand, however, they differ from all *Macroura* in having fossulæ for the reception of their internal antennæ. The question therefore of their true place can only be determined when the groupe shall have been worked out, which I fear cannot be done at present, on account of the paucity of species which are known to belong to this essentially tropical tribe. One thing, nevertheless, is established, namely, that the *Dromiina* are osculant, or, in other words, they stand on the limits of the Trigonostomous *Brachyura* and Anomurous *Macroura*. Into which of these circles the stirps truly enters, must be left for future investigation; but I shall provisionally consider it as belonging to the *Brachyura*. As for the families of Trigonostomous *Brachyura*, I shall not at present attempt to indicate them, but proceed at once to characterize the sub-genera brought from the Cape, which are only three.

Stirps. CORYSTINA.

Of the stirps *Corystina* we have no species from the Cape; but the following is very close to it, being aberrant in the next stirps.

Stirps. CALAPPINA.

Fam. MATUTIDÆ.

Genus. MATUTINUS.

Sub-genus. Matuta, Fab.

Sp. 33. (Matutinus) Matuta Victor, *Fab.*

Matuta victor, M. E. Hist. Nat. des Crust. vol. ii. p. 115. tab. 20. fig. 3 and 6.

Note. I agree entirely with my lamented friend Dr. Leach in thinking, that there are many species confounded together under the name of *Matuta victor*. I do not consider the above names of the family and genus to possess any authority, and merely publish them in order that the reader may understand the relation which the sub-genus bears to the stirps *Calappina*.

Stirps. LEUCOSINA.

Here likewise I shall not pretend to characterize the families, or to describe the genera of a stirps in which so few species are as yet known; but shall merely content myself with the following description of the only sub-genus of the groupe which is known to be found at the Cape of Good Hope :—

Sub-genus. Leucisca, M'L.

Body in front slender and compressed, but behind thick.

Cephalothorax smooth, plane, depressed, sub-elliptical, broader than long, and having a thin reflexed margin; while the clypeus is advanced with a round sub-reflexed apex, which is scarcely emarginate.

Orbits small, sub-circular, and hidden under the clypeus; while the eyes are deeply set, very minute and globose.

Exterior Antennæ very small and rather tri-articulate.

Interior Antennæ hidden under the clypeus in transverse reniform fossulæ.

External Pedipalpi very large, and closing a triangular buccal cavity; their second joint is oblong, quadrate, and broader in front than the third, which is triangular, with a sharp point, while the external palpus is lunate.

Feet; first, second, and third pairs have been lost in the only specimen before me; but the two remaining pair are short, and all are inserted under the margin of the cephalothorax.

Abdomen of the female with four segments.

The nearest crab to this is one from the Red Sea, which is described by Rüppell under the name of *Oreophorus horridus*. Both come near to *Calappina*.

Sp. 34. (———) Leucisca squalina, *n. s.*

Descr. *Leucisca* alba, dorso medio convexiusculo, oculis glaucis, pedipalpis externis palpisque margine externo granulatis, pedibus articulo quarto extus sulcato, unguibus longis acutis.

Note. The length of this curious little crab is only about three lines; and my specimen is much injured, having lost the chelæ, and several other of the feet. The abdomen also is in a damaged state.

Stirps. DROMIINA.

Sub-genus. Dromia, Fab.

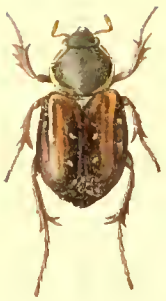
Milne Edwards has described the form of this sub-genus in one of its early stages of metamorphosis, and has also very distinctly pointed out the various points in which the adult state of *Dromia* differs from that of the *Brachyura* in general.

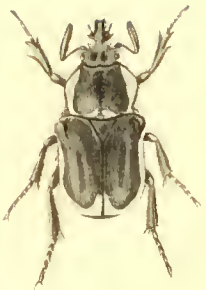
Sp 35. (———) Dromia hirtissima, *Lam.*
Dromia hirtissima, Lam. Hist. Nat. des An. sans Vert. vol. v. p. 264.

Sp. 36. (———) Dromia rotunda, *n. s.*
Descr. *Dromia* villosa, minime tuberculata, tam longa quam lata, globosa regione hepaticâ fossulâ obliquâ utrinque munitâ, lateribus anticis haud dentatis, clypeo antice bidentato.

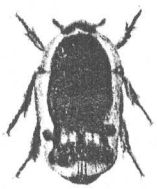
Note. This species comes very near one from the Red Sea, described by Rüppell under the name of *Dromia unidentata;* but the anterior sides of the shell have not an unidentated margin. The crab is all, except the tips of the fore feet, covered with a close, short, brown tomentum. The shell is round, with a convex globular back. Besides the two middle triangular teeth of the clypeus, there is a short blunt one above the inner side of the orbit, and vestiges of another blunt tooth above the outer side. The length is about sixteen lines.

Dr. Smith has brought no species of the stirps *Dorippina* from the Cape.

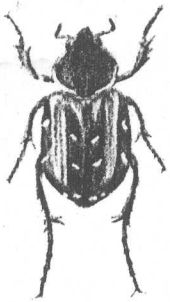




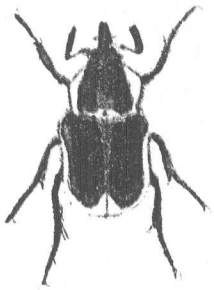
(Invertebrata Plate 1.)



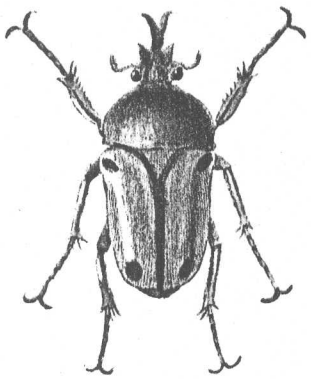
Cetonia leonina.



Campulipus Horsfieldii.



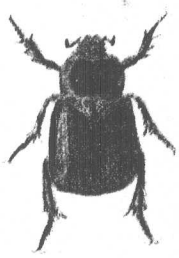
Ischnostoma pica.



Goliathus Smithii.

Anoplocheilus spinitarsis.

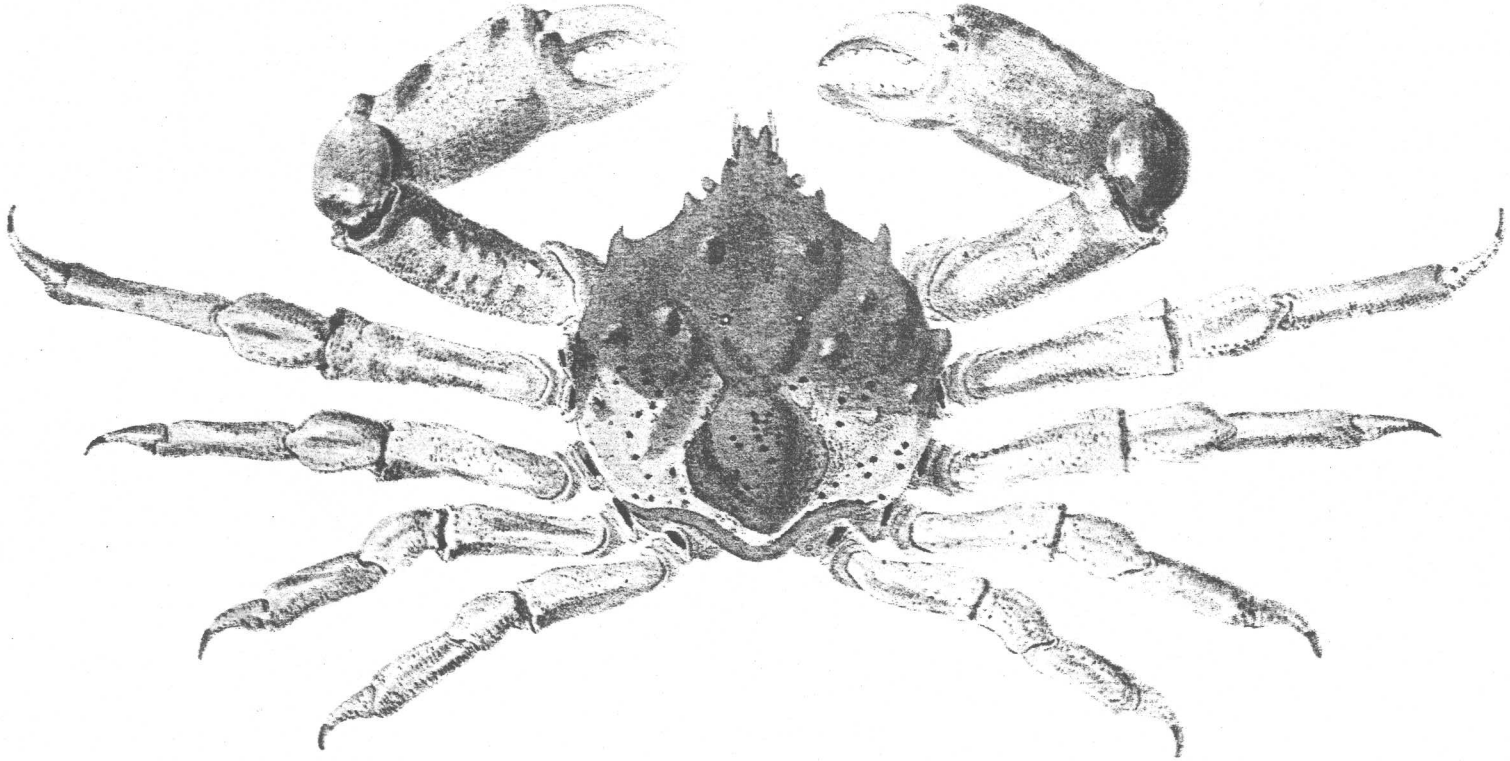
Fig. a.



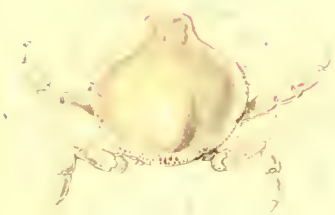
Ischnostoma spatulipes.

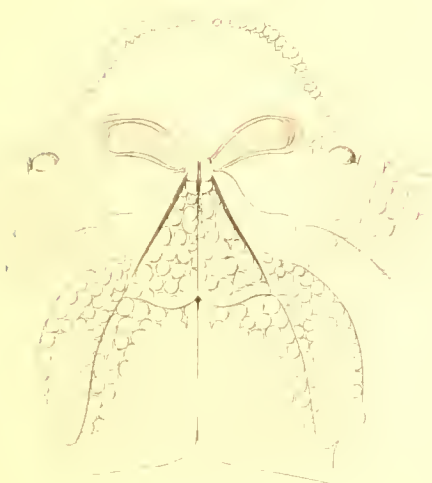
Fig. a, hind leg.

Published by Smith Elder & Cº 65, Cornhill.



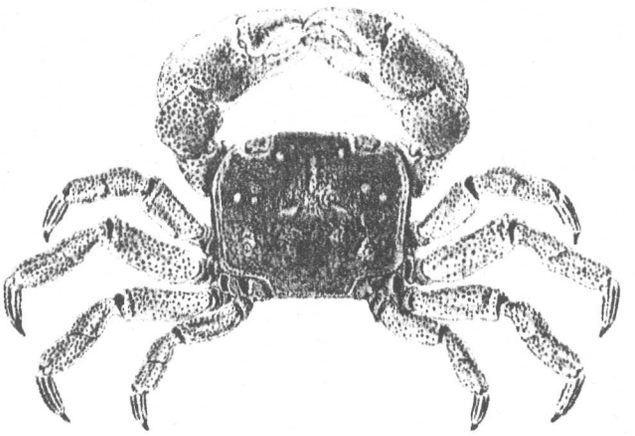
Antilibinia Smithii.





Grapsillus dentatus.

Xaiva pulchella.



Gnathochasmus barbatus.

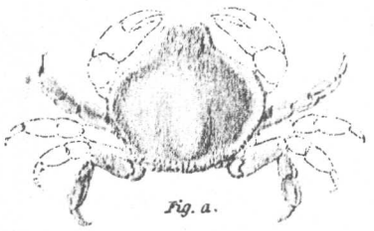


Fig. a.

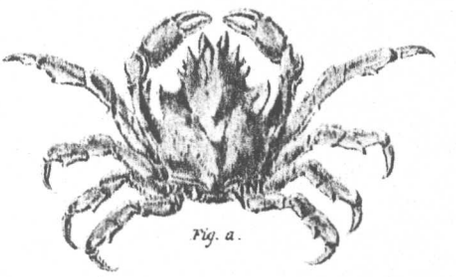


Fig. a.

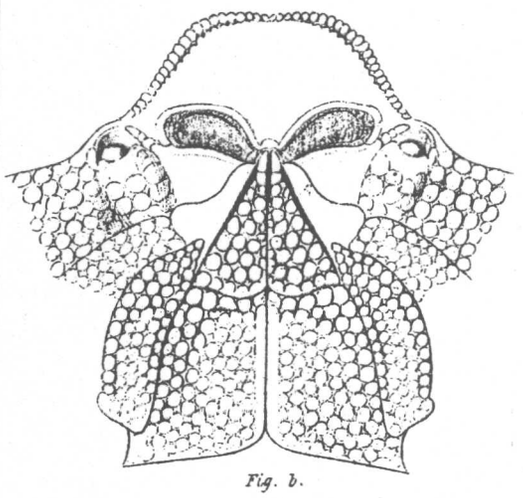


Fig. b.

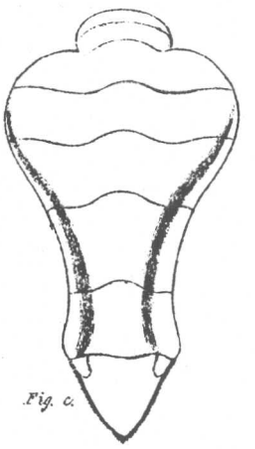


Fig. c.

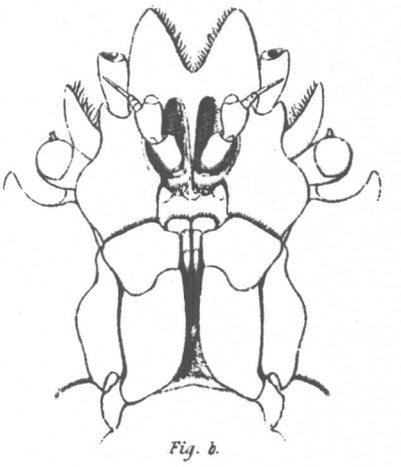
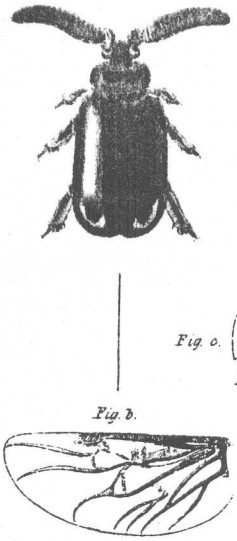


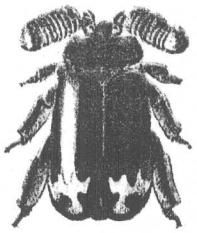
Fig. b.

Fig. a. Leucisca squalina magnified.
Fig. b. Under surface of head.

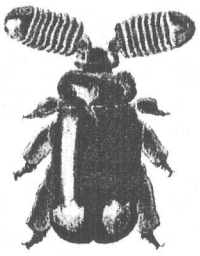
Fig. a. Dehaanius acanthopus magnified.
Fig. b. Under surface of head. Fig. c Abdomen of M



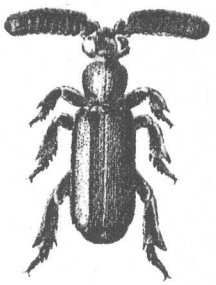
Cerapterus Smithii.
Fig. a antenna Fig b. wing.
Fig. c fore foot.



Cerapterus Horsfieldii.



Cerapterus latipes.



Arthropterus Macleaii.
Fig. a antenna