

minute incisions, instead of crenatures, on the posterior edge of the carapace. Their species, the locality of which is unknown to Messrs. Edwards and Lucas, is probably a native of the Eastern Archipelago, and with our new *C. dorsalis* forms a very interesting addition to a genus which has been hitherto limited to but one species.

2. CRYPTOPODIA FORNICATA, Junr. *Herbst.* t. 6. f. 4.

In juniore thorax multo triangularior, ad angulos rotundior, postice directior, et superficies dorsalis pluribus pustulis obsita est, quam in animalibus adultis; chelæ etiam breviores et crassiores sunt, frons latior, rotundatior et distinctius crenulata, oculi majores, juga dorsalia eminentiora.

HAB. Mare Sinense; vadis submersis concharum mortuarum et lapidum.

Our figure represents, most probably, the young of this species; the carapace is more decidedly triangular, more rounded at the angles, straighter behind, and the dorsal surface more covered with pustules than in the adult individuals; the chelæ, moreover, are shorter and comparatively thicker, and the front is wider, more rounded and distinctly crenulated, the eyes are of comparatively greater size and the dorsal ridges more prominent.

HAB. China Sea; submerged banks of dead shells and stones.

3. GONATONOTUS, *Adams & White.*

*Thorax* pentagonalis, depressus; anguli laterales acutissimi.

*Frons* latissima, lamelliformis, dilatata, rotundata, ad fines subnictata; oculi magni, eminentes, pedunculi breves in nictu profundiore ad latus inserti; antennæ exteriores, appendice terminali elongatâ.

*Chelæ* subcrassæ; carpus rotundatus et interne spinosus; ungues in margine serrati.

*Pedes* tertii et quarti paullo longiores secundis et quintis; articuli tarsales secundi, tertii, quarti et quinti parium, æquali magnitudine et crassitudine; quinto pedum pari supra quartum inserto.

*Abdomen* femine septem articulis, tribus vel quatuor articulorum basaliun supra conspiciendis. Mas ignotus.

*Carapace* pentagonal, depressed; lateral angles very sharp.

*Front* very wide, lamelliform, dilated, rounded, slightly notched at the end; eyes large, prominent, peduncles short, inserted in a rather deep notch on the side. Outer antennæ with the terminal appendage elongated.

*Fore-legs* rather thick; fourth joint or wrist, rounded and spined on the inside, claws serrated on the edge.

Third and fourth pairs of legs rather longer than the second and fifth, tarsal joints of second, third, fourth and fifth pairs of equal size and thickness; fifth pair of legs inserted above the fourth pair.

*Abdomen* of female, seven-jointed, three or four of the basal joints seen from above. Male unknown.

This genus is allied to *Eumedonus*.

1. GONATONOTUS PENTAGONUS, *Adams & White*. (Tab. VI. Fig. 7.)

*Thorace* supra confertim verrucoso, verrucis depressis; robustâ carinâ dorsali, ab uno laterali angulo ad alterum pertinente, duobus tuberculis in medio.

*Fronte* medio sulcatâ, medio dorsi duabus longitudinalibus impressionibus; ultimo articulo abdominis in feminâ verrucoso. Primo pedum pari verrucoso, digitis sulcatis.

HAB. Oram Brunensem.

*Gonatonotus pentagonus*, Adams and White, Proc. Zool. Soc.

*Carapace* above closely verrucose, the warts depressed; a rather strong ridge across the back, extending from one lateral angle to the other, with two tubercles in the middle; the front grooved down the middle; the centre of the back with two longitudinal impressions; terminal joint of abdomen, in the female, verrucose.

HAB. Coast of Borneo.

When alive, this species is of a brick-red colour, with the chelæ crimson, and the under surface rufous.

4. CERATOCARCINUS, *Adams & White*.

*Thorax* subpentagonalis; latera supra insertionem chelarum in magnam spinam paululum prorsum directam producta.

*Frons* lata et prominens, cornibus conicis inter se valde distantibus utrinque eminens; oculi parvuli, pedunculis brevibus, sulcis in lateribus rostri aptatis. Exteriores antennæ permagnæ, terminales appendices certe dimidiâ longitudine antennarum, et ultra cornua rostri prominentes.

*Chela* valde elongatæ; latera fere parallela, carpus subpyriformis, sine spinis in parte interiore; acies digitorum convenientes et serratæ. Secundum par pedum longius et gracilius quam postrema tria paria; articulus tarsalis gracilis et elongatus; quartum et quintum æqualia longitudine; quintum par, ut in *Eumedono*, tam alte positum ut quarti paris insertionem fere celet; tarsales articuli horum pedum crassi; unguis ad extremitatem translucidus.

Abdomen maris ut in *Eumedono*: femina incognita.

HAB. Maria Orientalia.

*Carapace* somewhat pentagonal; the sides, over the insertion of the first pair of legs, produced into a large spine directed slightly forwards.

*Front* wide and prominent, projecting on each side in the form of conical horns, widely separate from each other. Eyes rather small, peduncles short, the eye fitting into a groove on the side of the front; outer antennæ considerably developed; the terminal appendages at least half the length of the whole antennæ, and projecting beyond the horns of the front.

*First pair of legs* much elongated, the sides nearly parallel, the wrist somewhat pear-shaped, without spines on the inside, the edges of the pincers meeting and serrated. Second pair of legs longer and more slender than the last three pairs; the tarsal joint slender and elongated; fourth and fifth pairs of legs of equal length; the fifth pair, as in *Eumedonus*, placed so high as nearly to conceal the insertion of the fourth pair; the tarsal joints of these legs thick; the claw at the end translucent.

Abdomen of male, as in *Eumedonus*; that of female unknown.

This genus is closely allied to *Eumedonus* of Professor Milne Edwards (Crust. vol. i. p. 349), and, like it, comes from the Eastern Seas.

1. CERATOCARCINUS LONGIMANUS, *Adams & White*. (Tab. VI. Fig. 6.)

Duobus acuminatis transversis tuberculis, ad extremitatem pilis cristatis, in dorso thoracis, post oculos; primo pedum pari minutis verrucis obsito compluribus altis longitudinalibus sulcis; digitis basi exceptâ nigro-fuscis.

HAB. Oram Brunensem (Balambangan).

*Ceratocarcinus longimanus*, Proc. Zool. Soc.

Two pointed transverse tubercles, tufted with hair at the end, on the back of the carapace, behind the eyes; the first pair of legs covered with minute warts and with several deep longitudinal grooves; the pincers blackish brown, except at the base.

HAB. North coast of Borneo (Balambangan).

When alive, the colour of this species is blood-red, with five light bands across the carapace.

5. PARTHENOPE, *Fabricius*.

1. PARTHENOPE CALAPPOIDES, *Adams & White*. (Tab. V. Fig. 5.)

*Thorace* subtrigono postice truncato, antice rotundato, dorso verrucosiformibus subdepressis tuberculis obsito; lateribus in parte anteriore obtuso rotundato lobo; alto sinu post lobum; branchialibus regionibus permagnis, compluribus tuberculis, jugo majorum tuberculorum ad angulos latero-posteriores pertinentium et brevibus æquis intervallis circum margines alte incis. Medianâ regione serie magnorum rotundatorum tuberculorum, anterioribus tuberculis proxime appropinquantibus, posterioribus distantibus; duabus caveis inter laterales et medianas regiones, et post caveas duabus altis foveis.

*Fronte* latâ, obtusâ, antice rotundatâ, ad extremitatem subemarginatâ, denticulis in lateribus, tuberculiferâ in dorso.

*Chelis* breviusculis et crassis; brachio verrucoso, validâ anteriore spiniferâ cristâ; carpo externe lævi, serie tuberculorum in superficie interiore; manu serie magnorum tuberculorum pertinentium a digito superiore intus ad basin articuli, exteriore carinâ lævi et sine spinis; digitis magnis et validis, inferiore tribus magnis dentibus.

Abdomine in feminâ septem articulis, depressis tuberculis obsito.

HAB. Maria Orientalia.

*Carapace* subtrigonal, truncate behind, rounded in front, upper surface covered with wart-like, rather depressed tubercles; sides at the forepart with an obtuse rounded lobe, behind which is a deep notch; branchial regions very much developed, covered with tubercles, with a ridge of larger tubercles extending to the latero-posterior angles, and deeply incised at short regular intervals round the edges; the middle region with a row of large rounded tubercles, the anterior of which are close together, and the posterior isolated; two hollows between the lateral and middle regions, and two deep pits behind the hollows.

*Front* wide, obtuse, rounded anteriorly, slightly emarginate at the end, faintly dented on the sides, and tuberculiferous on the upper surface.

*Fore-legs* rather short and stout; third joint verrucose, with a strong anterior spiniferous crest; fourth joint smooth externally, with a row of tubercles on the inner surface; fifth joint with a row of large tubercles, extending from the upper claw to the base of the joint, on the inner surface, outer keel smooth and without spines; claws large and strong, the lower one with three large teeth.

*Abdomen*, in the female, seven jointed, and covered with flattened tubercles.

HAB. Eastern Seas.

2. PARTHENOPE TARPEIUS, *Adams & White*. (Tab. VII. Fig. 2.)

*Thorace* subtrigono, compluribus lævibus depressis rotundatis tuberculis, in regionibus medianâ et laterali majoribus obsito: lobo rotundato integro, in margine latero-anteriore; alto sinu lobum a lateralibus regionibus dividente; lateralibus regionibus dilatatis, rotundatis, postice angustatis, magnis superficialibus crenationibus circum margines; posteriore margine serie validorum obtusorum subconicalium tuberculorum extrorsum et retrorsum directis.

*Fronte* latâ obtusâ rotundatâ subcrenulatâ, alte sulcatâ, vix lævi in superiore superficie.

*Chelis* validis tuberculiferis, brachiis uno magno et compluribus minoribus tuberculis in acie anteriore; carpo lævi, externe noduloso; manu subtuberculifero latere in interiore superficie; pedibus posterioribus depressis, marginatis depressis subtriangularibus obtusioribus processibus.

*Abdomine* in feminâ septem-articulato, obsito tuberculis, fimbriato crebris setis.

HAB. Maria Orientalia.

*Carapace* subtrigonal, covered with numerous smooth, depressed tubercles, larger in the middle and lateral regions; a rounded entire lobe on the latero-anterior margin, and a deep notch, which separates it from the lateral regions, which are dilated, rounded, narrowed posteriorly, with large superficial crenations round the edges; the hind margin with a row of strong, obtuse, sub-conic tubercles, directed outwards and backwards.

*Front* wide, obtuse, rounded, subcrenulate, deeply channelled, and nearly smooth on the upper surface.

*Fore-legs* strong, tuberculiferous; third joint with one large and several smaller tubercles on the front edge; fourth joint smooth, externally nodulous; fifth joint with a rather faint tuberculiferous ridge on the inner surface; hind-legs flattened, edged with flattened, sub-triangular, bluntish processes.

*Abdomen*, in the female, seven-jointed, covered with tubercles, fringed with close-set setæ.

HAB. Eastern Seas (Caramatta Passage).

LAMBRUS, *Leach*.

[*Additional Species.*]

11. LAMBRUS HOPLONOTUS, *Adams & White*. (Tab. VII. Fig. 3.)

*Thorace* subpentagono, antice acuminato, ad latera subangulato, postice lato, obsito rotundis æquis tuberculis, majoribus et crebrioribus in regionibus medianâ et branchiali; lateribus crenatis antice, armatis

in medio crassis obtusis tuberculiformibus processibus, postice desinentibus in longâ prominente acuminatâ spinâ extrorsum et paululum retrorsum directâ; acie posteriore octo validis spinis instructâ, marginibus thoracis, cum tuberculis et spinis, fimbriatis longis rigidis subcurvatis setis.

*Fronte* acuminata triangulari, aciebus subcrenulatis et validâ spinâ supra canthum.

*Chelis* ter thorace longioribus; brachiis serie crebrorum æquorum tuberculorum antice; quatuor vel quinque magnis rotundatis tuberculis, paululum inter se distantibus in latere exteriori, quinque validis spinosis processibus a margine posteriore retrorsum et extrorsum tendentibus; carpo serie tuberculorum supra, et tribus validis spinis externe; manu cristâ octo validarum spinarum supra, serie tuberculorum interne, et serie fere duodecim crassarum obtusarum spinarum in acie inferiore.

Pedibus posterioribus gracilibus minoribus, duobus posterioribus paribus longis subcurvatis setis fimbriatis.

*Abdomine* (in mare) quinquarticulato, crebris setis circum margines.

HAB. Maria Orientalia.

*Carapace* subtriangular, anteriorly acuminate, somewhat angulated at the sides, wide behind, covered with rounded equal-sized tubercles, larger in the middle and branchial regions, the sides anteriorly crenated, armed in the middle with thick, obtuse, tuberculiform processes, and ending posteriorly in a long, prominent, acuminate spine, directed outwards and a little backwards; posterior edge with eight strong spines and tubercles, the spines fringed with long, rigid, slightly curved hairs.

*Front* acuminately triangular, the edges subcrenulated, and with a strong spine above the orbit.

*Fore-legs* three times longer than the carapace, the third joint with a row of equal-sized tubercles anteriorly; four or five large rounded tubercles slightly separated from each other on the outer surface; five strong spiny processes, extending backwards and outwards from the hinder margin; the third joint with a row of tubercles above and three strong spines externally; the fifth joint with a crest of strong spines above, a row of tubercles internally, and a row of about twelve thick, obtuse spines on the lower sharp edge.

Hind-legs slender, rather small, the two posterior fringed with long slightly curved setæ.

*Abdomen* (in the male) five-jointed, the crenated margins beset with short hairs.

HAB. Eastern Seas.

#### IV. CANCERIDÆ.

In their habits, the *Canceridæ* are evasive and prone to concealment, passive in defence, and though voracious and predatory, they do not exhibit the same activity, intelligence, and cunning as the *Ocypodidæ*, the *Gonoplacidæ*, or the *Grapsidæ*. The *Æthra* inhabit deep water, living in sandy mud, among shells and coral débris, while such genera as *Carpilius*, *Atergatis*, *Xantho*, and *Chlorodius*, select shallow waters along the shores, preferring weedy and rocky bottoms, where they hide among the stones, and prey on shrimps and small fishes. *Pilumnus* and *Trapezia* are tolerably lively in their movements; the latter genus having the

same habit of hiding and shuffling under stones as *Porcellana*, but unlike that genus it inhabits the coral branches of deep sunken reefs and the cavities of madrepores.

At the island of Koo-kien-san a species of *Eriphia* was common, hiding under stones below high-water mark, having the carapace, legs, and chelæ covered with stiff red hairs, the colour of the shell itself being dark greenish brown, the legs lighter and banded with dark brown, while the under surface of the body was ultramarine blue, and the terminal joint of the abdomen the same colour.

The *Zozymus* lives among rocks, hiding in holes, while *Pilumnus* is sluggish in its movements, hiding in the crevices and cavities of the under surface of stones below high-water mark.

### 1. CARPILIUS, *Leach*.

#### 1. CARPILIUS CINCTIMANUS, *White*. (Tab. VII. Fig. 4.)

*Thorace* sine dente laterali, latissimo; lateribus in quatuor lobos divisus; digitis nigris, subalbis ad extremitatem; manu in medio latâ nigri fasciâ cum nigro digiti immobilis commixtâ; thorace et pedibus lævibus, intense rubris.

HAB. Insulas Philippinas.

*Carapace* without lateral tooth; very wide; the side divided into four lobes; claws of fore-legs black, whitish at the tip; fifth joint of fore-legs with a broad black band in the middle which runs into the black of the immovable claw.

Carapace and legs smooth, of a rich red colour.

HAB. Philippine Islands.

#### 2. CARPILIUS SIGNATUS, *Adams & White*. (Tab. X. Fig. 1.)

*Thorace* valde convexo, supra punctis carinisque latiusculis impresso, aurantiaco, signaturis pallide-citrinis variegato.

HAB. In littore Mauritiano.

*Carapace* very convex, the upper surface distinctly punctulated and beautifully marked, in the dried specimen, with symmetrical figures of a pale yellow on an orange ground, which are well expressed in our figure; the several regions are separated from each other by shallow grooves, rendering them much more prominent than in other species of the genus; the anterior convex margin is furnished with long crenulations, the crenulation in front being longer than the one behind.

*Front* slightly projecting, deeply notched in the middle line with an obtuse tubercle before, and a smaller one behind the eyes.

*Fore-legs* large, with the claws very black, the under claw with four obtuse tubercles, the hind-legs as in *C. corallinus*, but the fifth pair are unfortunately wanting.

HAB. Isle of France.

2. ATERGATIS, *De Haan*.1. ATERGATIS SINUATIFRONS, *Adams & White*.

*Thorace* marginali membro integerrimo, crassiore, omnino subfusco-rubro colore.

*Fronte* tribus lobis, unoquoque in medio nictato; digitis chelarum cristis pilorum, nigris, summâ extremitate albâ.

*Thorace* quatuor digitorum latitudine.

HAB. Mauritium.

*Carapace* with the marginal limb very entire, rather thick, and of a uniform brownish red.

*Front* with three lobes, each notched in the middle; claws of fore-legs with tufts of hair; claws of a black colour, with the extreme tip white.

Width of carapace four inches.

HAB. Mauritius.

2. ATERGATIS SUBDIVISUS, *Adams & White*. (Tab. VIII. Fig. 3.)

*Thorace* membro marginali quatuor lobis valde indistinctis diviso; majore parte summi thoracis intense rubrâ, postice subrubrâ; digitis nigris, basi digitorum mobilium flavâ.

*Fronte* thoracis duobus rectis lobis, proxime oculum sinuatâ.

*Thorace* trium digitorum octo linearum latitudine.

HAB. Insulas Philippinas.

*Carapace* with the marginal limb divided into four very indistinct lobes; the greater part of upper surface of carapace deep red with yellowish spots, behind paler. Claws of fore-legs black, base of movable one yellow; front of carapace with two rather straight lobes, sinuated close to the eye.

Width of carapace three inches, eight lines.

HAB. Philippine Islands.

This species comes near *A. marginatus*.

3. ATERGATIS INSULARIS, *Adams & White*. (Tab. VIII. Fig. 2.)

*Thorace* anterioribus lateribus acie incisore; parte thoracis post hanc punctatâ; reliquâ superiore superficie fere levi, tribus vel quatuor lineis impressis antice.

*Manibus* rugosis præsertim supra; digitis et mobilibus et fixis profunde sulcatis. Flaveolo rubro, pedibus colore intensiore; digitis chelarum pallidis; cornu colorato.

HAB. Insulas Philippinas.

Latero-anterior sides of carapace with a cutting edge; part of carapace behind this punctate, the rest of upper surface very nearly smooth, with three or four impressed lines in front; fifth joint of fore-legs rugose, especially above; claws, both movable and fixed, deeply channelled. Pale yellowish-red; legs darker; claws of fore-legs pale horn-colour.

HAB. Philippine Islands. Cuming.

4. *ATERGATIS LATERALIS*, *Adams & White*. (Tab. VIII. Fig. 1.)

*Thorace* lævi irregulari, lineis impressis, lateribus latero-anterioribus in tres dentes latos divisus.

*Fronte* latâ, denticulatâ, in medio submarginatâ.

HAB. *Maria Orientalia*.

*Carapace* smooth, irregular, with numerous impressed lines; latero-anterior margins divided into three broad teeth.

*Front* wide, denticulated, submarginate in the middle; fifth joint of fore-legs rugose, claws tipped with dark brown.

HAB. *Eastern Seas*.

3. *ACTÆA*, *De Haan*.1. *ACTÆA NODULOSA*, *Adams & White*. (Tab. VIII. Fig. 4.)

*Thorace* et pedibus supra dense obsitis rotundatis tuberculis maximis in chelis et anterioribus marginibus; tuberculo in cantho inferiore; thorace in medio longitudinaliter impresso; acie posteriore rectâ et duabus lineis transversis parvorum tuberculorum instructâ. Chelis et superiore et inferiore carinis longitudinalibus; cornu colorato.

HAB. *Mauritium*.

*Carapace* and legs, above, thickly covered with rounded tubercles, largest on fore-legs and fore-margins of carapace; a tubercle on the under orbit; carapace, in the middle, longitudinally impressed; the posterior edge straight and furnished with two transverse lines of small tubercles; claws, both upper and under, with longitudinal keels, and horn coloured.

HAB. *Mauritius*.

4. *XANTHO*, *Leach*.1. *XANTHO DEPRESSA*, *Adams & White*.

*Thorace* valde depresso, antice tuberculato, compluribus tuberculorum acuminatis.

*Fronte* in medio profunde nictatâ; lateribus tribus dentibus. Manibus extra tuberculatis, tribus posterioribus articulis pedum parvis tuberculis, paucis capillis.

HAB. *Insulas Philippinas*.

*Carapace* much depressed; in front tuberculated, many of the tubercles sharp-pointed.

*Front* deeply notched in the middle; sides with three teeth; fifth joint of fore-legs tuberculated on the outside; the three last joints of legs slightly tuberculated, and with a few hairs.

HAB. *Philippine Islands*.

2. *XANTHO CULTRIMANUS*, *Adams & White*.

*Thorace* supra convexiore; fronte nictatâ; lateribus quatuor dentibus; parte anteriore et lateribus parvulis tuberculis; thorace post oculos impressis lineis quæ in medio conveniunt; manibus quatuor longitudinalibus impressis lineis in superficie exteriori quæ parvis subasperis tuberculis exornatur; thorace et pedibus flaveolis rubro commixtis.

HAB. *Insulas Philippinas*.



*Carapace* slightly convex above, front notched, sides with four teeth; front part and sides with very slight tubercles; carapace, behind the eyes, with impressed lines, which meet in the middle; fifth joint of fore-legs with four longitudinal impressed lines on the outside, which is covered with small roughish tubercles; carapace and legs pale yellowish varied with red.

HAB. Philippine Islands. Cuming.

3. XANTHO LAMELLIGERA, *Adams & White*.

*Thorace* supra convexiore, quatuor dentibus in utroque latere; superiore parte ad latera subsuberculari. Manibus extra asperis; acie carpi superiore margine dentato; acie manuum et supra et infra margine lamellari; pedibus posterioribus in acie superiore lamellaribus.

HAB. Mauritium.

*Carapace* rather convex above, with four teeth on each side, upper part on the sides slightly tubercular, fifth joint of fore-legs rough on the outside, edge of fourth joint, above, with a toothed margin; edge of fifth joint, both above and below, with a lamellar border; hind-legs, on the upper part, lamellar.

HAB. Mauritius.

5. CHLORODIUS, *Edwards*.

1. CHLORODIUS HIRTIPES, *Adams & White*. (Tab. XI. Fig. 4.)

*Thorace* levi.

*Fronte* latissimâ, vix in medio nictatâ; lateribus quatuor dentibus obtusis.

*Chelis* longis, brachio crassissimo; acie superiore ad basin uno crasso dente; pedibus posterioribus multis fuscis capillis.

HAB. Insulas Philippinas.

*Carapace* smooth.

*Front* very broad, scarcely notched in the middle; the sides with four blunt teeth.

*Fore-legs* long; fourth joint very thick, upper edge, at the base, with one thick tooth; hind-legs with many brownish hairs.

HAB. Philippine Islands.

2. CHLORODIUS FRAGIFER, *Adams & White*. (Tab. XI. Fig. 2.)

*Thorace* obsito tuberculis rotundatis bacciformibus gregatim dispositis, definitis impressis lineis separatis; pediculo oculi duabus spinis prope oculum dispositis; pedibus tuberculis oryziformibus obsitis, albis, latâ carmineâ longitudinali lineâ per medium in fronte; quinque carmineis notis in posteriore thoracis parte.

HAB. Insulas Philippinas.

*Carapace* covered with roundish berry-like tubercles, arranged in groups and separated by definite impressed lines; pedicel of eye with two spines close to the eye; legs covered with rice-like tubercles; white, with a broad pinkish longitudinal line down the middle in front; five pink marks on hind part of carapace.

HAB. Philippine Islands.

3. CHLORODIUS PILUMNOIDES, *Adams & White*. (Tab. IX. Fig. 3.)

*Thorace* et pedibus fuscis pilis obsitis; thorace depressiore; lateribus tribus dentibus, spinis exornatis, priore parte thoracis compluribus eminentiis et spinosis tuberculis asperâ. *Manibus* magnis; acie superiore serratâ extra et supra tuberculis majoribus; digitis extra et supra sulcatis compluribus tuberculis ad basin digiti mobilis; digitis nigris; concavis extremitatibus albis; pedibus posterioribus supra serratis.

HAB. Singhapuram et Insulas Philippinas.

*Carapace* and legs covered with brown hair; carapace somewhat depressed; sides with three teeth covered with spines; fore part of carapace with several bosses, and rough with spiny tubercles; four transverse raised lines on hind part; the inmost the shortest; fifth joint of fore-legs large, upper edge serrated on the outside and top with rather large tubercles. *Claws* on the outside and top channelled; several tubercles at the base of the movable claw: claws black, the hollowed ends white; hind-legs serrated above; second and third joints with three rows of serratures.

HAB. Singapore. Philippine Islands.

4. CHLORODIUS AREOLATUS, *Milne Edwards*. (Tab. XI. Fig. 3.)

*Thorace* tuberculis et granulis multis obsitis.

*Fronte* latâ, in lobos quatuor distinctos incisâ; margine latero-anteriori in quatuor dentes triangulares diviso, hiatu anguli cantli interno angusto.

*Chelis* granulosis, pedibus posterioribus sublævibus.

*Abdomen* (feminæ) articulis septem.

HAB. Insulas Philippinas.

*Chlorodius areolatus*, *Milne Edwards*, *Crust.* vol. i. p. 400.

*Carapace* covered with tubercles and granules.

*Front* wide, divided into four distinct lobes; latero-anterior margins short, nearly straight, and divided into four triangular teeth; fissure of orbital angle internal, narrow, lodging the movable joint of the outer antennæ.

*Fore-legs* granular; hind-legs and lower surface of body nearly smooth.

*Abdomen* (of female) seven-jointed, fringed with setæ.

HAB. Philippine Islands.

6. PANOPEUS, *Edwards*.1. PANOPEUS DENTATUS, *White*. (Tab. XI. Fig. 1.)

*Thorace* rotundato, lævi, postice coarctato, lateribus productis tuberculis postfrontalibus transversis irregularibus; margine latero-anteriore lobis quinque magnis dentiformibus, lineis elevatiusculis duabus ab angulo latero-anteriore porrectis.

*Fronte* in lobos quatuor divisâ; angulo externo cantli acuto.

*Chelis* in carpo dentibus duobus conicis, manu externe granulatâ, interne valde reticulatâ, ad basin lineâ tuberculatâ; digito superiore inermi, digito inferiore tuberculis quinque depressis.

*Abdomine* (maris et feminæ) articulis septem.

HAB. Insulas Philippinas.

*Carapace* rounded in front, produced at the latero-anterior angles, and contracted behind, upper surface smooth, marbled with a row of irregular transverse tubercles extending across the postfrontal portion; latero-anterior margin with five large, prominent, dentiform lobes, the anterior three obtuse, the two posterior acute; two curved, slightly elevated lines proceeding inwards from the latero-anterior angle.

*Front* divided into four lobes, the two inner wide and obtuse, the two outer narrower and more prominent, upper surface slightly concave, outer angle of orbit acute.

*Fore-legs* with two strong teeth on the inner and upper part of the fourth joint, the fifth joint slightly granulated externally, coarsely reticulated internally, and with a tubercular ridge at the base; upper claw unarmed, under claw with five round depressed tubercles.

*Hind-legs* transversely rugose, fringed with short, stiff setæ.

*Abdomen* (both of male and female) seven-jointed, the former fringed with long, the latter with short, setæ.

HAB. Philippine Islands.

2. PANOPEUS CAYSTRUS, *Adams & White*. (Tab. IX. Fig. 2.)

*Thorace* subtrigonalis, antice convexo, marginibus rotundatis lineis impressis obsitis; margine latero-anteriore serratulis tribus subdistantibus.

*Fronte*, in medio, emarginatâ, supra sulcatâ, angulo externo canthi obtuso.

*Chelis* lævibus, digito superiore arcuato inermi, digito inferiore tuberculis quatuor parvis acutis.

*Abdomine* (feminæ) articulis septem.

HAB. Maria Orientalia.

*Carapace* subtrigonal, rounded in front and at the sides, surface smooth, marked with faintly impressed lines; latero-anterior margin with three rather distant sharp serrations.

*Front* emarginate in the middle, without lobes, a trifid groove on the upper surface; outer angle of orbit rather obtuse.

*Fore-legs* smooth, upper claw strong, arched, unarmed; lower claw with three or four small acute tubercles.

*Hind-legs* smooth, fringed on the last and penultimate joints with long hairs.

*Abdomen* (of female) seven-jointed, the second joint narrower than the rest, fringed with short stiff setæ.

HAB. Eastern Seas.

3. PANOPEUS FORMIO, *Adams & White*. (Tab. IX. Fig. 1.)

*Thorace* latiore quam longiore, lateribus rotundatis, lineâ valde distinctâ ab angulo latero-anteriore projectâ; margine latero-anteriore lobis quatuor longis rotundatis, dente parvo ad angulum latero-anteriorem.

*Fronte* lobis quinque subobsoletis, supra sulcatâ, angulo externo canthi fissurâ parvâ.

*Chelis* manu subtuberculatâ, digito inferiore tuberculo magno cum multis tuberculis parvis.

*Abdomine* (maris) articulis septem, articulo tertio ad latera dilatato.

HAB. Maria Orientalia.

*Carapace* transversely oval, the sides rounded, surface smooth, marked with faintly impressed lines, a strongly marked line extending across the middle from the latero-anterior angle, and a fainter line posteriorly; latero-anterior margin with four long, rounded crenulations, and a small tooth at the latero-anterior angle.

*Front* with four slightly developed lobes, a bifurcate groove on the upper surface, outer angle of orbit slightly fissured.

*Fore-legs* smooth, with the upper and outer surface of fifth joint faintly tuberculated, upper claw unarmed, lower claw with one large and several small tubercles.

*Hind-legs* transversely rugose and slightly granulated, not fringed with hairs.

*Abdomen* (of male) seven-jointed, the third joint dilated at the sides; fringed with short stiff setæ.

HAB. Eastern Seas.

#### 7. *ÆGLE*, *De Haan*.

##### 1. *ÆGLE RUGATA* (sp.), *Milne Edwards*. (Tab. VIII. Fig. 5.)

*Thorace* granulis minutis dense dispositis; margine latero-anteriore lobis quatuor rotundatis distinctis.

*Chelis* sublævibus.

*Abdomine* (feminæ) articulis septem.

HAB. Insulas Philippinas.

*Zozymus rugatus*, Edw. Crust. vol. i. p. 385.

*Carapace* covered with small close-set granulations; latero-anterior margins divided into four rounded very distinct lobes.

Surface of body and fore-legs comparatively smooth.

*Abdomen* (of female) seven-jointed, and fringed with long, close-set, coarse setæ.

HAB. Philippine Islands.

#### 8. *GALENE*, *De Haan*.

##### 1. *GALENE OCHTODES* (*junior*), *Herbst*. (Tab. X. Fig. 2.)

*Cancer* thorace lævi, lateribus verrucosis.

*Fronte* bilobâ, brachiis, carpis, manibus, digitisque verrucosis.

HAB. Maria Orientalia.

*Galene ochtodes*, Mus. Cat. p. 18. *Cancer ochtodes*, Herbst. vol. 1. p. 158. t. 8. f. 54.

*Carapace* smooth, sides verrucose.

*Front* bilobed, second, third, and fourth joints of chelæ, and the claws, verrucose.

HAB. Indian Ocean.

We have figured a young specimen of this species, which does not seem to be common in collections.

## 9. PILUMNUS, *Leach*.

### 1. PILUMNUS DILATIPES, *Adams & White*. (Tab. IX. Fig. 4.)

*Thorace* latiore quam longiore, granulis multis distinctis setigeris obsito; regionibus lineis depressis distinctis separatis; margine latero-anteriore dentibus quatuor, magnis denticulatis.

*Fronte* emarginatâ, antice crenulatâ fasciulis duobus pilosis; margine superiore canthi multidentato.

*Chelis* externe tuberculis multis rotundatis obsitis, margine superiore setifero.<sup>2</sup>

*Pedibus* posterioribus valde dilatatis, tuberculis lineisque setigeris instructis.

*Abdomine* (maris) articulis septem, lævi.

HAB. Maria Orientalia.

*Pilumnus dilatipes*, White, Pro. Zool. Soc.

*Carapace* wider than long, covered with coarse granulations, each beset with several short setæ; the different regions divided by distinct shallow grooves; latero-anterior margin with four prominent denticulated teeth, the first small, the second wide, and the two posterior equal and triangular.

*Front* emarginate, with numerous serrations and with two tufts of straight setæ; upper margin of orbit with numerous dentations.

*Fore-legs* covered with granules and short stiff hairs on the outer and upper surface, smooth internally.

*Hind-legs* considerably dilated, beset with fine granulations and numerous rows of short bristles, the edges fringed with long hairs.

*Abdomen* (of male) seven-jointed and smooth.

HAB. Eastern Seas.

### 2. PILUMNUS SCABRIUSCULUS, *Adams & White*. (Tab. IX. Fig. 5.)

*Thorace* vix longiore quam latiore, granulis multis parvis setigeris obsito, regionibus lineis depressis vix distinctis separatis; marginibus latero-anterioribus dentibus tribus denticulatis.

*Fronte* prominente triangulari crenulatâ, margine superiore canthi unidentato.

*Chelis* tuberculis granulosis distinctis obsitis, parte superiore setis brevibus rigidis fimbriatâ.

*Pedibus* posterioribus scabriusculis, pilosis.

*Abdomine* (feminæ) lateribus subparallelis, septem articulis.

HAB. Maria Orientalia.

*Carapace* nearly as long as wide, covered with numerous granulations, each beset with several short setæ; the regions of carapace separated by several faintly impressed grooves, antero-lateral margins with three wide denticulated teeth fringed with stiff hairs.

*Front* subtriangular, slightly produced, finely crenulated on the margin, which is furnished with a single fringe of stiff setæ; upper edge of orbit with a single rounded dentation.

*Fore-legs* covered with numerous distinct granular tubercles on the upper and outer surface, and fringed with short hairs.

*Hind-legs* rough with granules and short hairs, arranged in transverse rows.

*Abdomen* (of female) villose, seven-jointed, the sides subparallel.

HAB. Eastern Seas.

3. PILUMNUS URSULUS, *Adams & White*. (Tab. IX. Fig. 6.)

*Thorace* vix longiore quam latiore, dense tomentoso, granulis multis rotundatis setigeris obsito, marginibus latero-anterioribus dentatis.

*Fronte* denticulatâ, fasciculis quinque pilosis longis instructâ.

*Chelis* granulosis, pilis longis dense coopertis.

*Abdomine* (maris) dense tomentoso, articulis septem.

HAB. Maria Orientalia.

*Carapace* nearly as long as wide, densely tomentose, covered with numerous large close-set granules beset with very long coarse hairs, latero-anterior margins dentated.

*Front* toothed, with five tufts of long straight hairs.

*Fore-legs* covered with coarse granulations, and very long, coarse, slightly curved hairs.

*Hind-legs* granular, thickly beset with numerous, long, coarse hairs.

*Abdomen* (of male) densely tomentose, seven-jointed.

HAB. Eastern Seas.

## V. PORTUNIDÆ.

The large species of this family are much esteemed as food among the poor islanders of the Meïa-co-shimahs, and in the markets of China large species of *Neptunus* (*N. pelagicus*), are frequently offered for sale. Two well-marked genera have been added to this group by our researches in the Eastern Seas, besides numerous species. The island of Balambangan, at the north end of Borneo, harbours the *Lupeocylus*, which is very active in its habits, keeping close in shore like *Lupea*, *Oceanus*, and other swimming crabs; it swims by rapid jerks along the bottom, and, when caught, will wound the fingers by striking side-ways with its spiny fore-legs. The other new genus, *Lissocarcinus*, was obtained at some considerable distance from land, concealed in the internode of a fragment of floating bamboo, and is a powerful swimmer. The *Cancer* (*Thalamita*) *admete* of Herbst, and the *Cancer* (*Thalamita*) *prymna* of the same Crustaceologist, besides three new species of *Amphitrite*, and a new species of *Neptunus*, were likewise procured.

1. LISSOCARCINUS, *Adams & White*.

*Pedipalpi externi* articulo tertio, ad basin, latiore quam longiore, ad marginem anteriorem non incisum prope angulum.

*Thorax* trapezoidalis, postice coarctatus.

*Frons* prominens, lamellaris, in medio valde incisa. Antennæ internæ articulo secundo elongato, usque ad fissuram porrecto.

*Pedes posteriores* pedibus *Portuno* simillimi.

*Abdomen* (feminæ) articulis septem lateribus subparallelis. Mas adhuc latet.

*External pedipalps* with the third joint broader at the base than long, and not notched at its anterior margin near the angle.

*Carapace* trapezoidal, considerably contracted posteriorly.

*Front* projecting, lamellar, deeply cleft in the middle. Inner antennæ with the second joint elongated and reaching to the commencement of the notch.

*Legs* very much as in *Portunus*.

*Abdomen* (of female) seven-jointed, the sides nearly parallel.

This generic group, described from a female, will be found an interesting connecting link between the genera *Portunus*, *Platyonychus*, and *Polybius*. We have named it *Polybioides* from its resemblance to the genus of Leach, which, as Professor Bell remarks, is of a more decided natatory character than any other Brachyurous form found on the British coast.

#### 1. LISSOCARCINUS POLYBIOIDES, *Adams & White*. (Tab. XI. Fig. 5.)

*Thorace* pentagonali, in fronte producto, postice coarctato, lævissimo, multis parvis rotundatis maculis, lineâ distinctâ ab angulo latero-anteriore projectâ; margine latero-anteriore valde dentato, dentibus prorsum inclinatis.

*Fronte* lamellari, prominente, antice bifidâ, antennis lateralibus fronte occultis.

*Chelis* articulo quinto bicarinato; carinâ antice valde dentatâ. Pedibus posterioribus depressis, pari ultimo unguibus valde dilatatis.

HAB. *Maria Orientalia*.

*Carapace* five-sided, produced in front, narrowed behind, very smooth on the upper surface, and covered with numerous small round markings, a strong line extending from the latero-anterior angle across the carapace towards the middle line; latero-anterior margin strongly toothed, the teeth directed forwards.

*Front* lamellar, projecting, bifid anteriorly, covering and concealing the lateral antennæ, a wide space between the eyes.

*Fore-legs* with the fourth joint doubly keeled, the keels strongly toothed anteriorly.

*Hind-legs* flattened, the fifth pair with the penultimate joint more flattened than the corresponding joint of the other pairs, and with a greatly dilated flattened claw.

HAB. *Eastern Seas*.

#### 2. LUPOCYCLUS, *Adams & White*.

*Pedipalpi externi* articulo secundo ad apicem tenuiore (quam in *Lupâ*—*L. forceps*), articulo tertio minore (quam in *Lupâ*).

*Thorax* suborbicularis, postice coarctatus, margine latero-anteriore spinis acutis conicis prorsum inclinatis.

*Frons* semicircularis, in lobos quinque equales divisa; canthi margine superiore subfisso postice, dente magno, conico, curvato:

*Chela* longæ, spiniferæ, pedes posteriores graciles, compressæ, pari quinto valde dilatato.

*Abdomen* (maris) triangulare, articulis quinque; femina adhuc latet.

*External pedipalps* with the second joint rather more slender towards the tip (than in *Lupa forceps*), the third joint considerably smaller.

*Carapace* suborbicular, contracted posteriorly, latero-anterior margin with sharp conical spines directed forwards.

*Front* divided into five equal dentiform lobes, orbit with the upper margin slightly notched, a large curved conical tooth behind it.

*Fore-legs* long and spiniferous.

*Hind-legs* slender and compressed, the fifth pair greatly dilated.

*Abdomen* (of male) triangular, five-jointed.

#### 1. LUPOCYCLUS ROTUNDATUS, *Adams & White*. (Tab. XII. Fig. 4.)

*Thorace* minutissime punctulato, tuberculis parvis aggregatis lineisque granulosis adperso, marginibus latero-anterioribus spinis quinque magnis, spinis quinque parvis interpositis; regionibus lateralibus pallidulo-luteo, corneo-fusco discoloratis; in medio thoracis tæniâ latâ rubrâ.

HAB. Balambangan.

*Carapace* subcircular, slightly narrowed behind, surface irregular, very finely punctulated, and covered with isolated clusters of minute tubercles and transverse granulated lines; the latero-anterior margin with five large, sharp, conical spines directed forwards, and an equal number of small intermediate spines.

*Front* semicircular, divided into five equal dentiform lobes; orbit with a slight notch at the upper margin, and bounded behind by a strong, curved, conical tooth, directed forwards.

*Fore-legs* with the third joint furnished with a row of five sharp, curved, conical spines on the anterior margin, numerous transverse ridges of small tubercles on the upper surface, and a longitudinal granulated line ending externally in a sharp spine; fourth joint with a strong spine on the upper edge; upper surface of fifth joint with a large spine at the base, and two ridges each ending anteriorly in a prominent spine; claws long, slender, grooved, and slightly curved.

*Hind-legs* slender, compressed, finely punctulated and granulated, the last pair with all the joints horizontally flattened, the last and penultimate joint greatly dilated and fringed with close-set stiff hairs.

*Abdomen* (of male) triangular, five-jointed.

HAB. Island of Balambangan, north end of Borneo.



In colour this pretty and curious genus is of a pale yellow, marbled with light pinkish brown on the lateral regions of the carapace, and a broad scarlet longitudinal stripe extending from the front to the hind margin, narrowed opposite the orbits and in the middle of the back. The fore-legs are marbled with scarlet and yellow, with a broad scarlet band in the middle of the fifth joint, and two broad bands of the same colour on each claw. The hind-legs are light pinkish yellow, with broad transverse scarlet bands.

### 3. CHARYBDIS, *De Haan*.

#### 1. CHARYBDIS DURA, *Adams & White*.

*Thorace* valde duro, lævi, marginibus lateralibus quinque-dentatis, primo et secundo dentibus ad basin denticulo minuto instructo.

*Fronte* sex dentibus obtusis, dente externo prominentiore quam in speciebus aliis.

*Chelis* carpo externe scabro, tuberculato, interne spinâ longâ crassâ in medio, manu margine superiore spinis sex in serie duplicatâ parallelâ dispositis, externe carinis tribus longitudinalibus.

*Pedibus* posterioribus externe spinâ magnâ prope extremitatem.

HAB. Mauritium.

*Carapace* very hard and smooth, lateral margin five-toothed, the first and second teeth with a minute tooth at the base.

*Front* with six large bluntish teeth, the external tooth rather more prominent than in the other species.

*Fore-legs* with the fourth joint rough and tubercular on the outside, with a very long thick spine on the middle of the inside, the fifth joint with six spines, in two parallel rows, on the upper edge, and three longitudinal keels on the outside.

*Hind-legs* with a large spine on the outside near the end.

HAB. Mauritius.

## VI. OCYPODIDÆ.

Species of *Ocypode* and *Gelasimus* are extremely numerous throughout the islands of the China Sea. Every sandy shore is perforated above high-water mark with the holes of the former, and the banks of the rivers, the mangrove swamps, damp forest margins, and muddy places near the sea, are peopled with the latter, which form oblique burrows frequently penetrating to a considerable depth. The *Ocypodes* appear to be chiefly crepuscular in their habits, remaining concealed in their holes during the heat of the day, but as evening approaches running side-ways in a curvilinear manner at the edge of the sea, where the waves break along the sandy shores. The *Gelasimi* remain concealed in their burrows during the high tide or in the dry hot part of the day, but delight to come out of their holes after a shower, or when the tide has receded and left their mud banks moist, but they never