
XXXI. *A tabular View of the external Characters of Four Classes of Animals, which Linné arranged under INSECTA; with the Distribution of the Genera composing Three of these Classes into Orders, &c. and Descriptions of several New Genera and Species. By William Elford Leach, M.D.*

Read April 19, May 3, and June 1, 1814.

THE object of this paper is chiefly to call the attention of Entomologists to examine into the propriety of constituting a new class to comprehend the *Syngnatha* and *Chilognatha* of Fabricius, which Latreille and Lamarck have arranged with the *Arachnides*.

As the leading characters of the classes which were considered by Linné as Insecta are very obvious, I shall in the first place content myself with submitting to the Society the external characters, through the medium of a table, and shall then consider three of the classes separately.

All the animals in question agree in having articulated limbs for motion, and they all have their spinal mass of nerves composed of ganglia, which are formed as it were on a cord; or, in other words, are brought into communication with each other.

By the following table the most obvious points of distinction may readily be learnt.

A. Bran-

A, *Branchiis pro respiratione.*

Classis 1. - - - - - CRUSTACEA.

B. *Tracheis pro respiratione.*

Classis II. Pedibus ultra 8. Capite distincto; antennis 2. MYRIAPODA.

Classis III. Pedibus 6 aut 8. Capite thoraceque coalitis; antennis 0. ARACHNIDES.

Classis IV. Pedibus 6. Capite distincto; antennis 2. INSECTA.

Classis I. CRUSTACEA.

The *Crustacea* are arranged by Latreille into two orders, viz. *Entomostraca* and *Malacostraca*. These orders in my opinion should rather be considered as subclasses; to the latter of which the *Tetracera* (placed by Latreille with the *Arachnides*) may be added, as they agree with the sessile-eyed *Malacostraca* in every essential point of internal organization.

The *Entomostraca* are but little known, and consequently their arrangement is extremely imperfect.

The *Malacostraca* have occupied a very considerable portion of attention, the result of which shall be given in the following pages.

Subclassis. M A L A C O S T R A C A .

Legio I. PODOPHTHALMA. Oculi pedunculati.

Ordo I. BRACHYURA. Cauda brevis, inermis.

Ordo II. MACROURA. Cauda elongata, appendiculata.

Legio II. EDRIOPHTHALMA. Oculi sessiles.

Legio I. P O D O P H T H A L M A.

Ordo I. BRACHYURA.

Latreille arranges the *Brachyura* (from the proportional breadth and length of the thorax or shell) into two families ; but the discovery of genera unknown to that illustrious entomologist has convinced me that such a distribution is extremely unnatural ;

and although from the infant state of our knowledge I cannot venture to propose named divisions, yet I shall endeavour to dispose the genera into what appear to be natural groups.

A. *Abdomen maris 5-articulatum articulo medio longiore, fœminæ 7-articulatum. Pedes 2 antici didactyli.*

Genera.

DIVISIO I. Testa subrhomboidalis. Pedes duo antici longissimi, digitis deflexis. 1. LAMBRUS.

DIVISIO II. Testa postice truncata. Pedes duo antici maris elongati, fœminæ mediocres.

Subdivisio 1. Antennæ elongatæ utrinque ciliatæ.

Testa elongato-ovata. Pedipalpi gemini externi articulo secundo longiore. 2. CORYSTES.

Testa subcircularis; orbita integra. Ungues acuti, flexuosi. Pedipalpi gemini externi caulis interni articulo secundo brevior. 3. THIA.

Testa subcircularis; orbita fissuris 2. Ungues recti. Pedipalpi gemini externi caulis interni articulo secundo longiore. 4. ATELECYCLUS.

Subdivisio 2. Antennæ mediocres simplices. Pedes postici unguibus compressis, natatoriiis.

Orbita integra. Ungues omnes compressi. 5. PORTUMNUS.

Orbita superne fissura 1. Ungues postici subcompressi, acuti. 6. CARCINUS.

Orbita superne fissuris 2. Ungues postici valde compressi. Pedes 2 antici inæquales. 7. PORTUNUS.

Orbita superne fissuris 2. Ungues postici valde compressi. Pedes 2 antici æquales. 8. LUPA.

Subdivisio 3. Antennæ mediocres simplices. Pedes 8 postici natatorii. 9. MATUTA.

Subdivisio 4. Antennæ simplices, breves. Pedes 8 postici consimiles, simplices.

Pedes 2 antici simplices, inæquales. Antennæ externæ inter oculorum canthum et frontem insertæ. 10. CANCER.

Pedes 2 antici simplices, inæquales. Antennæ in oculorum cantho interno insertæ. 11. XANTHO.

Pedes 2 antici cristati, æquales. 12. CALAPPA.

B. *Abdomen in utroque sexu 7-articulatum. Pedes duo antici didactyli.*

DIVISIO

DIVISIO III. Pedes 8 postici simplices, consimiles.

Subdivisio 1. Testa antice arcuata, lateribus in angulum convergentibus. (Pedes duo antici inæquales).

Genera.

Pedipalpi gemini externi caulis interni articulo secundo ad apicem 13. PILUMNUS.
internum palpigero. Ungues et tibiæ inermes.

Pedipalpi gemini externi caulis interni articulo secundo subtus pal- 14. GECARCINUS.
pigero. Ungues et tibiæ spinosæ.

Subdivisio 2. Testa quadrata aut subquadrata. Oculi fronte inserti.

* Testa subquadrata oculi pedunculo brevi.

Pedipalpi gemini externi cauli interno uniarticulato. 15. PINNOTHERES.

** Testa quadrata oculi pedunculo elongato.

Oculi pedunculo ultra illorum apicem producto. Pedes 2 antici in- 16. OCYPODE.
æquales.

Oculi pedunculo ultra illorum apicem non producto. Pedes 2 antici 17. UCA.
inæquales.

Oculi pedunculo ultra illorum apicem non producto. Pedes 2 antici 18. GONEPLAX.
æquales.

Subdivisio 3. Testa subquadrata. Oculi ad angulos anticos inserti. 19. GRAPSUS.

DIVISIO IV. Pedes duo postici saltem dorsales.

Subdivisio 1. Pedes duo postici dorsales. Oculi pedunculo biarticu- 20. HOMOLA.
lato.

Subdivisio 2. Pedes quatuor postici dorsales. Oculi pedunculo uni-
articulato.

Pedes quatuor postici monodaetyli. 21. DORIPPE.

Pedes quatuor postici didaetyli. 22. DROMIA.

DIVISIO V. Testa antice rostrata. Pedes 8 postici simplices, consimiles.

Subdivisio 1. Digiti deflexi. 23. EURYNOME.

Subdivisio 2. Digiti haud deflexi.

* Antennæ externæ articulo primo externe haud dilatato.

a. Pedum par anticum aliis vix crassius.

Antennæ externæ articulis duobus primis subæqualibus. Testa spino- 24. MAIA.
sissima.

b. Pedum par anticum aliis distincte crassius.

Ungues interne denticulati. Testa villosa. 25. PISA.

** Antennæ externæ articulo primo externe dilatato.		Genera.
Testa subtuberculata, lateribus pone oculos hastato-productis.		26. HYAS.
C. <i>Abdomen in utroque sexu 6-articulatum. Pedes 2 antichi didactyli.</i>		
DIVISIO VI. Pedes parium 2, 3, 4 et 5 consimiles, graciles.		
Subdivisio 1. Oculi retractiles.		27. INACHUS.
Subdivisio 2. Oculi nudi haud retractiles.		
Rostro fisso.		28. MACROPODIA.
Rostro integro.		29. LEPTOPODIA.
DIVISIO VII. Pedum par quintum minutum, spurium.		30. LITHODES.
D. <i>Abdomen fœminæ (marisque ?) 5-articulatum. (Testa antice rostrata.)</i>		31. PACTOLUS.
E. <i>Abdomen in utroque sexu 4-articulatum. Pedes 2 antichi didactyli.</i>		
Testa rotundata aut subrhomboidalis.		32. LEUCOSIA.
Testa transversissima, cylindrica.		33. IXA.

DIVISIO I.

Abdomen MARIS 5-articulatum articulo medio longiore; FÆMINÆ 7-articulatum. *Testa* rhomboidalis. *Antennæ* exteriores simplices. *Pedipalpi gemini externi* caulis interni articulo secundo latere interno emarginato pro insertione palporum. *Pedes* duo antichi didactyli longissimi; digitis deflexis; pedes alii simplices, consimiles.

Gen. 1. LAMBRUS.

Maja, Bosc, Latreille.

Spec. 1. *Lambrus longimanus.*

Maja longimana, Bosc *Hist. Nat. des Crust.* i. 250.

DIVISIO II.

Abdomen MARIS 5-articulatum articulo medio longiore: FÆMINÆ 7-articulatum. *Testa* postice truncata: *Antennæ exteriores* triarticulatæ

triariculatæ articulo ultimo e segmentis plurimis minutis efformato. *Pedipalpi gemini externi* caulis interni articulo secundo laterc interno emarginato aut apice interno truncato. *Pedes* duo antici didactyli, maris longiores.

SUBDIVISIO 1.

Antennæ longissimæ utrinque ciliatæ. Pedum paria 2, 3, 4 et 5 consimilia ; par anticum digitis deflexis.

Gen. 2. CORYSTES, Latreille.

ALBUNEA, Fabr.

Antennæ exteriores corpore longiores, segmento tertio articulis elongatis, cylindricis. *Pedipalpi gemini externi* caulis interni articulo secundo (primo longiore) angusto apice angustiore rotundato, latere interno late emarginato. *Pedum par anticum* MARIS corpore duplo longius, subcylindricum, manu gradatim subcrassiore, subcompressâ ; FÆMINÆ corporis longitudine manu compressa : *paria reliqua* tibiis tarsisque longitudine subæqualibus, unguibus elongatis, rectis, acutis longitudinaliter sulcatis instructa. *Abdomen* MARIS articulo primo lineari transverso, secundo longiore utrinque postice producto, tertio æqualiter subquadrato, quarto præcedente angustiore transverso, quinto angustiore subtriangulari apice rotundato ; FÆMINÆ articulis sex primis transversis antice arcuatis, quinto triangulari apice rotundato. *Testa* oblongo-ovata antice subrostrata, postice marginata. *Oculi* pedunculo reclivi haud crassiores ; *orbita* superne fissurâ unâ.

Spec. 1. *Corystes Cassivelaunus.*

C. testâ granulari postice subcrenulatâ ; fronte bifido ; lateribus tridentatis.

Cancer Cassivelaunus. *Penn. Brit. Zool.* iv. 6. t. 7. ♂ ♀.

Herbst 1. 195. t. 12. f. 72. ♂.

Cancer

Cancer personatus. *Herbst* 1. 193. t. 12. f. 71. ♀.

Albunea dentata. *Fabr. Sup. Ent. Syst.* 398.

Corystes dentatus. *Latr. Gen. Crust. et Ins.* 1. 40.

Habitat in Europeo mari.

Gen. 3. THIA.

Antennæ exteriores corpore longiores segmento tertio articulis elongatis cylindricis. *Pedipalpi gemini externi* caulis interni articulo secundo primo multo brevior ad apicem internum truncato-submarginato. *Pedum par anticum* MARIS corpore paululum longius manu compressa; *paria alia* tarsis tibiis duplo brevioribus, unguibus acutis, flexuosis longitudinaliter sulcatis. *Abdomen* MARIS articulo primo transverso arcuato, lineari, secundo paululum longiore antice arcuato-subproducto, tertio valde elongato apicem versus paululum angustiore apice submarginato, quarto subquadrato apice submarginato, quinto triangulari. *Testa* subcircularis lateribus sensim postice in angulum convergentibus, postice granulati-submarginata, fronte subproducta. *Oculi* minimi vix prominuli; *orbita* postice haud fissa.

Spec. 1. *Thia polita.*

T. testâ convexâ politâ sparse punctatâ; orbitâ postice emarginatâ; lateribus utrinque obscure quadriplicatis; fronte integrâ arcuatâ.

Cancer residuus. *Herbst* 3. 53. t. 48. f. 1?

Gen. 4. ATELECYCLUS.

CANCER (Hippa), *Montagu.*

Antennæ exteriores corporis ad dimidium longitudinis, segmento tertio articulis cylindricis elongatis. *Pedipalpi gemini externi* caulis interni articulo primo brevior ad apicem internum producto et ad latus internum apicem versus emarginato ad palporum

porum insertionem. *Pedum par anticum* MARIS corpore longius manu compressa; FÆMINÆ corporis longitudine manu compressa; *paria* reliqua tarsi tibiisque longitudine æqualibus, unguibus rectis, elongatis, quadratis, longitudinaliter sulcatis, acutis ad apices teretibus nudis (posticis obscure subcompressis). *Abdomen* MARIS articulo primo transverso, lineari, secundo duplo longiore, tertio valde elongato apicem versus angustiore apice subrecto, quarto subquadrato angulis anticis productis, quinto lageniformi apice acutissimo; FÆMINÆ articulis 1, 2, 3, 4 et 5 transversis longitudine vix diversis, articulo sexto transverso-quadrato antice emarginato, articulo ultimo elongato-subtriangulari postice subproducto. *Testa* subcircularis lateribus sensim postice in angulum convergentibus postice truncata et granulati-marginata. *Oculi* pedunculo angustiores; *orbita* postice externe fissuris duabus, inferne externe fissurâ unâ.

Spec. 1. *Atelecyclus septemdentatus*.

Cancer hippa 7-dentatus. *Montagu Linn. Trans. vol. xi. tab. 1.*
Habitat in Danmoniæ mari profundo.

SUBDIVISIO 2.

Antennæ simplices, mediocres. Pedum paria 2, 3 et 4 *consimilia*, unguibus acutis; *par quintum compressum, natatorium*.

Gen. 5. PORTUMNUS.

CANCER, *Planci, Penn., Herbst.*

Oculi pedunculo haud crassiores; *orbita* integra. *Pedum par anticum* æquale; *paria* 2, 3 et 4 unguibus compressis interneque basin versus dilatatis; *par quintum* ungue foliaceo, compresso, lanceolato. *Abdomen* MARIS articulo quarto elongato. *Testa* diametro transverso longitudinalem æquante.

Spec. 1.

Spec. 1. *Portumnus variegatus*.

P. testâ obscure subgranulatâ, utrinque 5-dentatâ dentibus 2 et 3 subobsoletioribus; fronte 3-dentatâ; carpis interne unidentatis.

Portumnus variegatus. Leach, *Edin. Encycl.* vii. 391.

——, *Malac. Podophth. Brit. t.* iv. ♂ et ♀.

Cancer latipes variegatus. Planc. *de Conch. min. notis*, p. 34. tab. iii. fig. 7. B. C. ♂.

Cancer latipes. Penn. *Brit. Zool.* iv. p. 3. tab. 1. fig. 4. ♀.

Cancer Lysianassa. Herbst 54. fig. 6?

Habitat in littoribus arenosis Britanniae vulgatissime.

Spec. 2. *Portumnus monodon*.

P. testâ obscure subgranulatâ, lateribus utrinque unidentatis; fronte tridentatâ; carpis interne unidentatis.

Habitat ———.

Mus. Brit.

Ad hoc genus *Cancer latipes* Herbst (i. 267. tab. xxi. fig. 126.) pertinere videtur.

Gen. 6. CARCINUS.

CANCER *auctorum*.

Oculi pedunculo angustiores; orbita postice et inferne unifissa.

Pedum par anticum inæquale manibus externe glabris; par posticum compressum, subnatatorium. *Abdomen* MARIS articulo quarto transverso præcedente vix angustiore. *Testa* (diametro transverso submajore) utrinque 5-dentata.

Spec. 1. *Carcinus Mænas*.

C. testâ granulari; fronte tridentatâ; lateribus 5-dentatis.

Cancer Mænas auctorum.

Gen. 7. PORTUNUS, *Fabr., Latr., Bosc, &c.*

Oculi pedunculis multo crassiores; *orbita* postice fissuris duabus, inferne externe fissurâ unicâ. *Abdomen* MARIS articulo quarto transverso. *Pedum* par anticum subinæquale, manibus externe elevato-lincatis, brachiis sæpius inermibus; par posticum compressum, natatorium, foliaceum. *Testa* (diametro transverso submajore) utrinque 5- (rarius 6-) dentata.

* *Ungues postici lineâ elevatâ longitudinali; palporum geminorum externorum caulis interni articulus secundus ad apicem internum truncatus.*

a. *Orbita* interne ad oculorum insertionem imperfecta; *carpis* bidentatis.

Spec. 1. *Portunus puber.*

P. *antennis* corporis dimidio longioribus, *testâ* pubescente, *fronte* multidentato.

Cancer puber. Linn. *Cancer velutinus.* Penn. *Portunus puber.* Latr.

Habitat in oceano Europæ.

b. *Orbita* interne subimperfecta; *carpis* unidentatis.

Spec. 2. *Portunus corrugatus.*

P. *testâ* convexâ, lineis transversis serrato-granulatis ciliatis utrinque 5-dentatis: *dentibus* tribus posticis acutioribus, *fronte* trilobo, lobis subgranulato-serratis: medio majore subacuminato, *manibus* supra unidentatis, *unguibus* posticis apice acutis.

Cancer corrugatus. Pennant, *Herbst.*

Portunus corrugatus. Leach, *Edin. Encycl.* vii. 390.

Habitat in Britannia rarissime.

Mus. Montagu, *Nost.*

Mr. C. Prideaux sent me the young of this species from the Plymouth Sound.

The fissure in the under part of the orbit is wide enough to admit a knife; in the two following species the sides of the fissure touch each other.

Spec. 3. *Portunus emarginatus.*

P. testâ convexiore lineis abbreviatis e granulis compositis, dentibus tribus utrinque: penultimo minore, fronte emarginato, manibus supra unidentatis, unguibus posticis acutis.

Portunus emarginatus. Leach, *Edin. Encycl.* vii. 390.

Habitat ad Danmoniæ littora, semel obvius.

Mus. Nostr. ♀.

Abdomen FEMINÆ latum, tenuè ciliatum, angustius quam in *P. Depuratore*, articulo penultimo minus arcuato, ultimo angustiore, acutiore, secundo tertioque minus carinatis, quarto vix carinato.

Spec. 4. *Portunus arcuatus.*

P. testâ convexiore lineis abbreviatis e granulis compositis, dentibus utrinque tribus; penultimo minore, fronte arcuato integro, manibus supra unidentatis, unguibus posticis acutis.

Portunus arcuatus. Leach, *Edin. Encycl.* vii. 390.

Testæ fronte arcuato integro, a Portuno emarginato tantum differt; forte varietas?

Habitat in Angliæ mari rariùs.

Mus. Sowerby, Leach. ♂.

** *Ungues postici ecostati; palporum geminorum externorum caulis interni articulus secundus ad latus internum emarginatus; orbita internè sub antennæ externæ insertionem imperfecta.*

Spec. 5. *Portunus marmoreus.*

P. testâ convexâ obsoletè tenuè granulata, utrinque dentibus quinque

que subæqualibus, fronte dentibus tribus æqualibus apice rotundatis, manibus glabris supra unidentatis, tarsis posticis apice acutioribus.

Cancer *pinnatus* marmoreus. *Montagu, Mss.*

Portunus marmoreus. *Leach, Edin. Encycl.* vii. 390.

——, *Malac. Podophth. Brit. tab.* viii.

Habitat ad Danmoniæ Australis littora frequens.—*Detexit* Montagu.

Abdominis articuli 2 et 3 transversim carinati.

Spec. 6. *Portunus Depurator.*

P. testâ subcomplanatâ lineis elevatis obliquis et transversis abbreviatis e granulis compositis, utrinque dentibus quinque : secundo brevior : postico subremotior, fronte dentibus tribus : medio subacutior sublongior, manibus supra unidentatis, tarsis posticis apice acutioribus sæpe subemarginatis.

Cancer Depurator. *Linn. Syst. Nat.* xii. 1043. 23.

Fab. Ent. Syst. ii. 451. 44.

Cancer depurator, var. *Penn. Brit. Zool.* iv. tab. iv. fig. 6. A.

Portunus depurator. *Fab. Sup. Ent. Syst.*

Habitat in oceano Europæo frequentissime.

Abdomen MARIS triangulare ; FEMINÆ latum, late ciliatum, articulis 3, 4, 5 et 6 basilaribus latioribus, penultimo lateribus arcuatis, ultimo præcedente abrupte angustior.—Abdominis articuli 2-3 in utroque sexu (maris præsertim) transversim acute carinatis.

Spec. 7. *Portunus lividus.*

P. testâ complanatâ tenuè subgranulatâ utrinque dentibus quinque : secundo subbrevior : postico remotior, fronte dentibus tribus acutis : medio longior, manibus supra unidentatis, tarsis posticis apice abrupte producto.

Cancer depurator. Penn. Brit. Zool. iv. tab. ii. fig. 6??

Portunus lividus. Leach, Edin. Encycl. vii. 390.

Habitat in oceano Scotico; apud Newhaven prope Edinburgum semel tantum obvius.

Abdomen FEMINÆ articulis 4-5 abrupte angustioribus, penultimo quinto paululum latiore lateribus arcuatis, ultimo penultimo subabrupte angustiore; MARIS articulo tertio ad apicem dilatatore; quarto ad basin paululum dilatato; ultimo penultimo subabrupte angustiore.

This species a good deal resembles *P. Depurator* at first sight; but a very slight examination will evince the characteristic distinctions. The surface is minutely granulated, the shell is narrower behind, the eyes smaller, and the antennæ shorter.

When alive the shell was livid, with a slight tinge of blueish, the hinder feet of the same colour. Other feet greenish-livid inclining to blueish. Fingers obscure with white tips.

Spec. 8. *Portunus pusillus.*

P. testâ subrugosâ, fronte productâ trilobâ, lateribus 5-dentatis: dente postico acutiore.

Habitat in mari Danmoniæ Australis; et apud Frith of Forth in Caledonia.

The fingers of this species, which does not exceed an inch in length, are generally annulated with red and white. The back also has often a red streak or spot.

Gen. 8. LUPA.

PORTUNUS. Fabr., &c.

Oculi pedunculis multo crassiores; *orbita* supra externe fissuris duabus, inferne externe fissurâ unicâ. *Pedum* par anticum æquale, brachiis antice spinosis; par posticum valde compressum. *Abdomen* MARIS articulo quarto valde elongato præcedente

dente multo angustiore. *Testa* transversa utrinque 9-dentata, dente postico longiore.

* *Testa utrinque spina postica longissima.*

a. *Digitis* longissimis filiformibus, *manibus* externe glabris.

Spec. 1. *Lupa Forceps.*

Lupa forceps. *Leach, Zool. Miscel.* i. 123. tab. 54.

Portunus forceps. *Fabr., &c.*

Habitat in mari Carribeano.

b. *Digitis* mediocribus, *manibus* externe elevato-lineatis.

Spec. 2. *Lupa trispinosa.*

L. testâ granulatâ, *brachiis* antice trispinosis.

Mus. Brit.

** *Testa spina laterali postica haud longissima.*

Spec. 3. *Lupa Banksii.*

L. pubescens, fronte 4-dentato, *brachiis* antice 5-dentatis.

Mus. Brit. ex dono Josephi Banks, Baroneti.

SUBDIVISIO 3.

Antennæ simplices mediocres. Pedum paria 2, 3, 4 et 5 unguibus compressis, natatoriis.

Gen. 9. *MATUTA*, *Dald., Fabr., Lam., Bosc, Latr.*

Pedipalpi gemini externi cauli interno elongato-subtriangulari, articulo secundo latere interno excavato palpigero. *Pedum* par quartum ungue angustiore, acuto.

Spec. 1. *Matuta Victor.*

Matuta victor. *Latr. Gen. Crust. et Ins.* i. 42. 31. 1.

SUBDIVISIO 4.

Antennæ simplices breves. Pedum paria 2, 3, 4 et 5 consimilia simplicia.

plicia. Testa transversa, margine antico in lineam semiellipticam arcuato.

Gen. 10. *CANCER auctorum.*

Antennæ externæ breves, inter oculorum canthum internum et frontem insertæ; *internæ* clypei medio in foveolis receptæ, pedunculo sublunari. *Palpi* gemini externi caulis interni articulo secundo ad apicem internum emarginato. *Testa* postice marginata: *orbita* postice fissurâ unicâ externe uniplicatâ, subtus fissurâ unicâ et externe uniplicatâ. *Pedum* par anticum inæquale.

Spec. 1. *Cancer Pagurus.*

C. testâ granulatâ utrinque novemplicatâ, fronte trilobo.

Cancer pagurus auctorum.

Gen. 11. *XANTHO.*

CANCER, Montagu, (Herbst?)

Antennæ externæ brevissimæ, in oculorum cantho interno insertæ; *internæ* sub clypei prominentis margine antico foveolis receptæ, pedunculo sublineari. *Pedipalpi* gemini externi caulis interni articulo secundo ad apicem internum emarginato. *Testa* postice submarginata. *Orbita* supra integra inferne externe fissurâ unicâ. *Pedum* par anticum inæquale.

Spec. 1. *Xantho florida.*

X. carpis supra bituberculatis, testâ utrinque dentibus quatuor obtusis: interstitiis excisis, digitis nigris.

Cancer floridus. Montagu, Trans. Linn. Soc. ix. p. 85. t. 2. fig. 1.

Var. β. Digitis concoloribus.

Habitat in Danmoniæ Australis littora passim.

Mr. Montagu has considered this species to be the *Cancer floridus* of Linné; but an examination of the characters in the
Amœnitates

Amanitates Academicæ will readily convince the naturalist of the incorrectness of this opinion: nor is this the *floridus* of Herbst; which induces me to believe that some one must have misled Mr. Montagu with regard to the synonym, as he could never have considered them the same had he examined the reference.

Cancer Dodone of Herbst seems to be referable to the genus *Xantho*; and, if his figure be correct, the only distinction is in the number of teeth on the sides of the shell, which in *C. Dodone* is only three.

Gen. 12. CALAPPA, Latr., ♂c

Pedum par anticum cristatum, æquale.

DIVISIO III.

Abdomen in utroque sexu 7-articulatum. *Pedum* par anticum didactylum; *paria* reliqua consimilia.

SUBDIVISIO 1.

Testa antice arcuata, lateribus in angulum convergentibus. (*Pedum* par anticum inæquale).

Gen. 13. PILUMNUS.

CANCER, Pennant.

Pedipalpi gemini externi caulis interni articulo secundo minore ad apicem internum truncato-emarginato. *Ungues* simplices, apice nudi.

Spec. 1. *Pilumnus hirtellus*.

Cancer hirtellus. Penn. Brit. Zool. iv. tab. 6

Gen. 14.

Gen. 14. GECARCINUS.

OCYPODE, *Latr., &c.*

Pedipalpi gemini externi caulis interni articulis duobus subæqualibus; palpi inferne inserti. *Pedum* par anticum inæquale. *Ungues* et tibiæ spinosi.

Spec. 1. *Gecarcinus Ruricola.*

Cancer ruricola. *Linn., Fabr.*

Ocypode tourlourou. *Latr. Herbst, tab. iii. fig. 36.*

SUBDIVISIO 2.

Testa quadrata aut subquadrata; oculi fronte inserti.

* *Testa subquadrata; oculi pedunculo brevi.*

Gen. 15. PINNOTHERES, *Latr., Bosc.*

CANCER, *Linn.*

Antennæ brevissimæ (articulis tribus primis majoribus) in oculorum cantho interno insertæ. *Pedipalpi gemini externi* caulis internus uniarticulatus. *Pedum* par anticum æquale. *Oculi* crassi. The indigenous species of this interesting genus are described and figured in *Malacostraca Podophthalma Britannicæ* (Tab. 14-15).

** *Testa quadrata; oculi pedunculo elongato.*

Gen. 16. OCYPODE, *Dald., Fabr., Latr., &c.*

Oculi pedunculo ultra illorum apicem in spinam producto. *Pedum* par anticum inæquale.

Spec. 1. *Ocypode ceratophthalma.* *Fabr., Latr., &c.*

Gen. 17.

Gen. 17. UCA.

OCYPODE, *Latr., &c.*

Oculi pedunculo ultra illorum apicem non producto. *Pedum* par anticum valde inæquale.

Spec. 1. *Uca Una.*

Cancer vocans major. *Herbst, i. tab. i. fig. 10.*

Gen. 18. GONEPLAX.

OCYPODA, *Bosc.*

CANCER, *Pennant.*

Oculi pedunculo ultra illorum apicem haud producto. *Pedum* par anticum æquale; MARIS longissimum; FÆMINÆ corpore duplo longius. *Antennæ* corporis dimidio longiores, ad oculorum canthum internum insertæ.

Spec. 1. *Goneplax bispinosa.*

G. testâ utrinque bispinosâ, brachiis supra carpisque interne unispinosi.

Cancer angulatus. *Penn., Fabr.*

Ocypoda angulata. *Bosc.*

Habitat in mari Britannico, apud Salcombe et Plymouth in Danmoniâ, et Redwharf in Monâ.

SUBDIVISIO 3.

Testa subquadrata. Oculi ad angulos externos inserti.

Gen. 19. GRAPSUS, *Lam., Latr.*

Spec. 1. *Grapsus pictus.*

Cancer grapsus. *Linn., Fabr.*

Grapsus pictus. *Latr.*

DIVISIO IV.

Abdomen in utroque sexu 7-articulatum. *Pedum* par anticum didactylum: par quintum saltem dorsale.

SUBDIVISIO 1.

Pedum par quintum dorsale. *Oculi* pedunculo biarticulato.

Gen. 20. HOMOLA.

Testa elongato-quadrata, fronte sub-producto. *Oculi* magni subglobosi, pedunculo elongato biarticulato, articulo secundo brevissimo primo abrupte crassiore. *Antennæ externæ* infra oculos insertæ, articulis duobus primis valde elongatis primo crassiore; *internæ* intra orbitas insertæ, et in oculorum cantho interno reponendæ. *Pedipalpi gemini externi* caule interno articulis duobus angustis, elongatis, articulo secundo ad apicem palpigero; *palpi triarticulati* utrinque hirsuti, articulo primo brevior. *Pedum* paria 2, 3 et 4 consimilia, unguibus compressis, acutis interne spinosis instructa; par quintum dorsale monodactylum ungue spinuloso brevior, tarso brevi interne spinuloso.

Spec. 1. *Homola spinifrons*.

II. testâ antice spinosâ, lateribus antice spinulosis, femoribus posticis interne trispinosis.

Habitat ———

Mus. Britann.

SUBDIVISIO 2.

Pedum paria 4 et 5 dorsalia. *Oculi* pedunculo simplici.

Gen. 21. DORIPPE.

Pedipalpi gemini externi articulo primo interno dilatato, articulo secundo

secundo angusto et ad apicem palpigeri. *Testa* subtriangulari antice truncata. *Pedum* paria 2 et 3 consimilia, unguibus elongatis subquadratis, simplicibus acutis: paria 3 et 4 breviora, dorsalia, monodactyla. *Antennæ exteriores* supra et intra oculos insertæ, articulis duobus primis longioribus; *interiores* intra et infra oculos insertæ.

Spec. 1. *Dorippe quadridens*, Latr.

Gen. 22. DROMIA.

Pedipalpi gemini externi biarticulati articulo secundo sublatiore, brevior ad apicem internum palpigerum. *Pedum* paria 2 et 3 simplicia; 4 et 5 didactyla, breviora. *Antennæ exteriores* infra oculos insertæ; articulis duobus primis majoribus, reliquis abrupte crassioribus; *interiores* infra oculos internum versus insertæ.

DIVISIO V.*

Abdomen in utroque sexu 7-articulatum. *Pedum* par anticum didactylum; paria 2, 3, 4 et 5 simplicia, consimilia. *Testa* triangularis, antice rostrata. (*Antennæ interiores* in fossulis sub rostro reponendæ.)

SUBDIVISIO 1.

Digiti deflexi.

Gen. 23. EURYNOME.

CANCER, *Pennant*.

Antennæ externæ articulo primo secundo brevior. *Testa* verrucosa, rostro laciniis divaricatis. *Pedes* antichi maris valde elongati.

Spec. 1. *Eurynome aspera*.

E. pedibus anticis femoribusque tuberculatis, testa dorso tuber-

* I shall merely treat of the indigenous genera of this division.

culis octo elevatioribus 2, 1, 2, 3 cum plurimis aliis irregularibus depressis pilis marginatis, lateribus utrinque lamellis quatuor, rostro laciniis simplicibus acuminatis.

Cancer asper. *Penn. Brit. Zool. vol. iv.*

Eurynome aspera. *Leach, Edin. Encycl. vii. 431.*

——, *Malac. Podophth. Brit. tab. xvii.*

SUBDIVISIO 2.

Digiti subrecti, haud deflexi.

* Antennæ externæ articulo primo secundo haud multo crassiore.

a. *Pedes antici aliis haud crassiores.*

Gen. 24. MAJA, *Lam., Latr., Bosc.*

CANCER, *Oliv., Scop., Herbst, Sowerby.*

Antennæ articulis duobus primis crassioribus et longitudine sub-æqualibus. Testa convexa ovato-subtriangularis, spinosissima. Oculi pedunculo elongato haud crassiores. Pedipalpi gemini externi caulis interni articulo secundo ad apicem internum profunde emarginato. Pedes antici aliis haud aut vix crassiores: ungues omnes ad apicem nudi, acuti.

Spec. 1. *Maja Squinado.*

M. testâ fasciculato-pilosâ, orbitâ superne spinâ unicâ, lateribus valide 5-spinosis, clypeo infra frontem spinâ breviusculâ superne excavatâ.

Cancer Squinado. *Herbst, tom. iii. tab. 56. senior.*

——, *tom. i. tab. 14. f. 85—84. junior.*

Cancer Maja. *Scop.*

Sowerby, Brit. Miscell. tab. 39.

Maja

Maja Squinado. *Latr. Gen. Crust. et Ins.* i. p. 37.

Bosc, Hist. Nat. des Crust. i. 257.

Leach, Edin. Encycl. vii. 394—431.

Anglice, *King-crab, Thornback.*

Habitat in Mari Angliæ australi et occidentali vulgatissime.

b. *Pedes antici aliis distincte crassiores.*

Gen. 25. PISA.

CANCER, *Herbst, Gmelin, Montagu.*

INACHUS, *Fabr.*

MAJA, *Latr.*

PISA, *Leach.*

BLASTUS, *Leach.*

Testa villosa, rostro laciniis divaricatis. Antennæ pilis clavatis, articulo primo secundo longiore. Oculi pedunculo vix crassiores. Pedipalpi gemini externi caulis interni articulo secundo ad apicem internum truncato aut emarginato. Ungues interne denticulati, apice nudi.

† *Testa dense villosa, lateribus utrinque postice spinâ terminatis.*

Spec. 1. *Pisa Gibbsii.*

P. rostro descendente, testâ spinâ utrinque pone oculos, brachiis femoribusque simplicibus.

Cancer biaculeata. *Montagu, Linn. Trans.* xi. 2. tab. i. fig. 1.

Pisa biaculeata. *Leach, Edin. Encycl.* vii. 431.

Habitat in Danmonix mari profundo.

Detexit assiduus Dom. Gibbs, cujus nomen gerit.

Spec. 2.

Spec. 2. *Pisa nodipes.*

P. rostro horizontali, femorum apice brachiisque nodosis.

Pisa nodipes. Leach, *Zool. Miscel.* vol. ii. tab. 78.

Mus. Britan.

Habitat ——— ?

†† *Testa villosa lateribus spinosis.*

Spec. 3. *Pisa Tetraodon.*

P. testâ lateribus utrinque 6-spinosis : spinis duabus minoribus ; quatuor majoribus.

Cancer tetraodon. Penn. Brit. *Zool.* iv. 7. tab. viii. fig. 15.

Cancer Prædo. Herbst, tab. xlii. fig. 2 ?

Maja tetraodon. Bosc, *Hist. Nat. des Crust.* i. 254.

Blastus tetraodon. Leach, *Edin. Encycl.* vii. 431.

Habitat in Angliæ australi-occidentalis mari.

Ad hanc sectionem forte pertinet *Maja armata*, Latreille.

** Antennæ externæ articulo primo externe dilatato.

Gen. 26. HYAS.

CANCER, Herbst.

MAJA, Bosc, Latr.

INACHUS, Fabr.

Testa elongato-subtriangularis, subtuberculata, lateribus pone oculos hastato-productis ; rostro fisso laciniis approximatis. *Antennæ externæ* articulo primo dilatato secundo longiore. *Pedipalpi gemini externi* articulo secundo ad apicem internum emarginato.

Spec. 1. *Hyas araneus.*

H. testâ processu hastiformi postice tuberculato.

Cancer araneus. Linn. *Syst. Nat.* 1044.—*Fn. Sv.* 493. 2030.

Cancer

Cancer Bufo. *Herbst*, i. 242. *tab. xvii. fig. 59*.

Inachus araneus. *Fabr. Sup. Ent. Syst.* 356.

Hyas araneus. *Leach, Edin. Encycl.* vii. 431.

Habitat in mari Scotico vulgarissime, in mari Angliæ rarior.

Cancer araneus. *Penn. Brit. Zool.* iv. *tab. ix. fig. 16.* an distincta species?

Spec. 2. *Hyas coarctatus.*

II. testâ tuberculatâ lateribus coarctatis, processu hastiformi postice valde dilatato inermi.

Habitat in mari Britannico; apud Frith of Forth, Plymouth Sound et Salcombe.

DIVISIO VI.

Abdomen in utroque sexu 6-articulatum. *Pedes* duo antichi didactyli; paria 2, 3, 4 et 5 consimilia, gracillima, simplicia.

Testa triangularis antice rostrata. *Antennæ* internæ in fossulis sub clypeo receptæ.

SUBDIVISIO 1.

Oculi retractiles.

Gen. 27. INACHUS, *Fabr.*

CANCER, *Herbst, Penn.*

MAJA, *Bosc, Latr.*

Testa parce spinosa, spinâ utrinque ad latera oculos retractos protegente. *Oculi* distantes pedunculo vix crassiores. *Pedipalpi* gemini externi caulis interni articulo secundo ad apicem internum truncato. *Antennæ externæ* articulis tribus basilaribus crassioribus. *Pedum* par secundum sequentibus crassius. *Ungues* curvati.

Spec. 1. *Inachus Dorsettensis.*

I. rostro brevi emarginato, clypeo infra in spinam producto
testâ

testâ antice tuberculis quatuor parvis æqualibus transversim dispositis : deinde spinis tribus (anticâ dorsali validiore); postea spinis tribus validis acutis (mediâ sæpius majore acutiore) lineam subrecurvam delinientibus, margine postico tuberculis duobus distantibus obsoletis.

Cancer Dorsettensis. *Penn. Brit. Zool.* iv. p. 8. pl. ix. A. fig. 18.

Cancer Scorpio. *Fabr. Sp. Ins.* i. 504

Gmel Syst. Nat. i. 2978.

Herbst, i. 237, 130.

Inachus Scorpio. *Fabr. Ent. Syst. Suppl.* 358.

Macropus Scorpio. *Latr. Hist. Nat. des Crust. et des Ins.* vi p. 109.

Maja Scorpio. *Bosc, Hist. Nat. des Crust.*

Inachus Dorsettensis. *Leach, Edin. Encycl.* vii. 431.

——, *Malac. Podophth. Brit. t. xxii. f. 1—6.*

Habitat in Britannicæ mari.

Spec. 2. *Inachus Dorynchus.*

I. rostro hastiformi fisso, testâ antice spinis tribus triangulum delinientibus : posticâ majore ; deinde tuberculo utrinque ; postea tuberculis quinque tribus mediis approximatis obtusioribus in triangulum dispositis pone lateralia et cum illis lineam retrorsum arcuatam delinientibus, margine postico tuberculis duobus distantibus obsoletis.

Cancer Phalangium. *Fabr. Ent. Syst.* ii. 463. 84?

Inachus Dorynchus. *Leach, Edin. Encycl.* vii. 431.

——, *Malac. Podophth. Brit. t. xxii. f. 7, 8.*

SUBDIVISIO 2.

Oculi haud retractiles.

Gen. 28.

Gen. 28. MACROPODIA.

MACROPUS, Latr.

INACHUS, Fabr.

MAJA, Bosc.

CANCER, Penn., Herbst.

Testa parce spinosa, rostro longo fisso. *Oculi* distantes subreniformes pedunculo multo crassiores. *Antennæ externæ* corporis dimidio longiores, articulo secundo primo triplo longiore. *Pedipalpi gemini externi* tenues, caule interno biarticulato, articulis longitudine subæqualibus. *Palpi* hirsutissimi, articulo medio brevior, tertio primo paululum longior. *Ungues* 4 antiqui ad apicem arcuati, 4 postici ad basin abrupte curvati.

Spec. 1. *Macropodia Phalangium*.

M. rostro acuminato antennis multo brevior, testâ pone rostrum tuberculis duobus triangulum delinientibus: postico majore, brachiis interne subscabrosis hirsutis.

Cancer phalangium. Penn. Brit. Zool. iv.

Macropus longirostris. Latr. Gen. Crust. et Ins. i. 39.

Macropodia longirostris. Leach, Edin. Encycl. vii. 395.

——, Zool. Miscell. ii. 18.

Habitat in estuariis Britannicæ vulgarissime.Spec. 2. *Macropodia tenuirostris*.

M. rostro longissimo tenui, antennis rostro vix longioribus, testâ pone rostrum tuberculis duobus spinâque unicâ in triangulum dispositis, brachiis interne spinulosis.

Habitat in Angliæ occidentalis mari profundo vulgarissime.

Gen. 29. LEPTOPODIA.

INACHUS, Fabr.

MAJA, Latr., Bosc.

CANCER, Herbst.

Testa haud spinosa, rostro longissimo integro. *Oculi* distantes globosi. *Antennæ externæ* corporis dimidio longiores, articulo secundo primo triplo longiore. *Pedipalpi gemini externi* tenues, caule interno biarticulato, articulo secundo primi dimidio brevior. *Palpi* hirsuti, articulo ultimo longiore, articulis duobus primis subæqualibus. *Ungues* longiores, subarcuati, consimiles.

Spec. 1. *Leptopodia sagittaria*.

L. manibus granulosis, rostro utrinque brachiis femoribusque antice spinosis.

Inachus sagittarius. *Fabr. Supp. Ent. Syst.* 359.

Cancer sagittarius. *Herbst, tom. iii.*

Macropus sagittarius. *Latr. Hist. Nat. des Crust. et des Ins.* vi. 112.

Maja sagittaria. *Latr. Gen. Crust. et Ins.* i. 38. 4.

Leach, Edin. Encycl. vii. 395.

Maja sagittis. *Bosc, Hist. Nat. des Crust.* i. 253.

Leptopodia sagittaria. *Leach, Zool. Miscel.* ii. 16, tab. 67.

Habitat in mari Caribæo.

DIVISIO VII.

Abdomen (in utroque sexu ?) 6-articulatum. *Pedum* paria 2, 3 et 4 consimilia, simplicia, par quintum minutum spurium. *Testa* triangularis antice rostrata.

Gen. 30. LITHODES, *Latr.*

MAJA, *Bosc.*

INACHUS, *Fabr.*

CANCER, *Linn.*

Spec. 1. *Lithodes Maja*.

Cancer Maja. *Linn. Syst. Nat.* i. 1046. 41.

Cancer horridus. *Pennant, Brit. Zool.*

Lithodes arctica. *Latr. Gen. Crust. et Ins.* i. 40.

DIVISIO VIII.

Abdomen (in utroque sexu?) 5-articulatum. *Testa* triangularis antice rostrata.

Gen. 31. *PACTOLUS*, *Leach*.

INACHUS, *Fabr.*?

Testa haud spinosa, rostro longissimo integro. *Pedes* mediocres; paria 1, 2 (et 3?) ungue simplici instructa, paria 4 et 5 didactyla. (*Abdomen* FEMINÆ 5-articulatum, articulo primo angusto, 2, 3 et 4 transverso-linearibus, 5 amplissimo, subrotundato.)

Spec. 1. *Pactolus Boscii*.

P. rostro utrinque spinuloso, pedibus ciliato-punctatis.

Habitat ———?

Mus. Britann.

An sit *Fabricii* *Inachi* sagittarii sexus alter?

DIVISIO IX.

Abdomen in utroque sexu quadriarticulatum. *Antennæ* externæ minutissimæ. *Pedipalpi* gemini externi caule interno acuminato.

Gen. 32. *LEUCOSIA**.

LEUCOSIA, *Fabr.*, *Latr.*, *Bosc*.

CANCER, *Linn.*, *Herbst*, *Mont*.

Testa rotundata aut rhomboidalis antice subproducta. *Pedipalpi* gemini externi caulis interni articulo secundo simplici. *Pedum* par anticum aliis distincte crassius.

Obs. Hoc genus elaborandum.

* *Ad hoc genus pertinent species indigenæ* *Cancer tuberosus*, *Penn. Brit. Zool. vol. iv.* et *Cancer tumefactus*, *Montagu, Trans. Linn. Soc. vol. ix.*

* *Pedipalpi gemini externi caulis externi articulo secundo externe dilatato.*

Spec. 1. *Leucosia anatum.*

Cancer anatum. *Herbst*, i. 93. tab. ii. fig. 19.

** *Pedipalpi gemini externi caulis externi articulo secundo sublineari.*

Spec. 2. *Leucosia craniolaris.*

Cancer craniolaris. *Herbst*, i. 90. tab. ii. fig. 17.

Gen. 35. Ixa.

CANCER, *Herbst.*

LEUCOSIA, *Latreille.*

Testa transversissima, subcylindrica, multo latior quam longa.

Pedipalpi gemini externi caulis interni articulo secundo excavato. Pedum par anticum aliis vix crassius.

Spec. 1. *Ixa cylindrus.*

I. testâ bicanaliculatâ lateribus scabris spinâ terminatâ.

Leucosia cylindrus. Latr. Hist. Nat. des Crust. et des Ins. vi. 119.

Cancer cylindricus. *Herbst*, i. 108. tab. ii. fig. 29. 30. 31. ♂.

Habitat in mari Indico.

Ordo II. MACROURA.

This order contains the families *Pagurii*, *Palinurini*, *Astacini*, and *Squillares* of Latreille.

SYNOPSIS GENERUM.

A. *Cauda utrinque appendiculis simplicibus nec natatoriis nec foliaceis.*

DIVISIO I. Pedes 10, pari antico majore didactylo.

Genera.

Abdomen membranaceum; cauda triarticulata.

1. PAGURUS.

Abdomen crustaceum; cauda biarticulata.

2. BIRGUS.

B. *Cauda utrinque appendicibus foliaceis, pinnam flabelliformem efformantibus.*

a. *Antennæ interiores pedunculis longissimis.*

DIVISIO II. Antennæ exteriores squamiformes. Pedes 10 consimiles, simplices.

Pedes postici tarso infra in indicem producto. Oculi pone antenas exteriores inserti, haud marginales. 3. SCYLLARUS.

Pedes postici tarso simplici. Oculi ad thoracis angulos anticos inserti. 4. THENUS.

DIVISIO III. Antennæ exteriores setaceæ, longissimæ. Pedes 10 consimiles, simplices. 5. PALINURUS.

DIVISIO IV. Antennæ exteriores setaceæ longissimæ. Pedes 10, pari antico didactylo, pari quinto spurio.

Pedipalpi gemini externi caulis interni articulo primo interne dilatato. Testa orbiculato-quadrata. 6. PORCELLANA.

Pedipalpi gemini externi caulis interni articulo primo simplici. Testa ovata. 7. GALATHEA.

b. *Antennæ interiores pedunculis mediocribus.*

DIVISIO V. Cauda lamellâ exteriore simplici. Antennæ in eadem lineâ horizontali insertæ, interiores setis duabus, exteriores simplices. Pedes 10.

Pedes duo antichi didactyli pollice abbreviato.

8. GEBIA.

Pedes quatuor antichi didactyli, pari tertio monodactylo.

9. CALLIANASSA.

Pedes quatuor antichi didactyli, pari tertio simplici.

10. AXIUS.

DIVISIO VI. Cauda lamellâ exteriore bipartitâ. Antennæ in eadem lineâ horizontali insertæ, interiores setis duabus, exteriores pe-

dunculi

dunculi articulo primo squamâ spiniformi instructo. Pedes 10,
pari antico majore didactylo.

Oculi subglobosi pedunculo haud crassiores.

11. ASTACUS.

Oculi reniformes pedunculo multo et abrupte crassiores.

12. NEPHROPS.

DIVISIO VII. Antennæ exteriores squamâ magnâ, latâ ad basin. Abdomen articulo secundo antice et postice producto. Pedes decem.

Subdivisio 1. Antennæ exteriores infra interiores insertæ; interiores setis duabus; cauda lamellâ exteriori bipartitâ.

Pedes quatuor antiqui articulo ultimo fisso; par tertium majus, inæquale, adactylum. 13. ATYS.

Subdivisio 2. Antennæ in eadem fere lineâ horizontali insertæ, interiores setis duabus. Cauda lamellâ exteriori unipartitâ.

Pedes duo antiqui majores, monodactyli.

14. CRANGON.

Subdivisio 3. Antennæ exteriores infra exteriores insertæ; interiores setis duabus. Cauda lamellâ exteriori unipartitâ.

* *Antennæ internæ setâ superiore infra excavatâ. Ungues spinulosi.*

Pedum par anticum adactylum, par secundum inæquale didactylum. 15. PANDALUS.

Pedes quatuor antiqui didactyli. Palpi pediformes articulo ultimo penultimo multo breviores. 16. HIPPOLYTE.

Pedes quatuor antiqui didactyli. Palpi pediformes articulo ultimo penultimo triplo longiores. 17. ALPHEUS.

** *Antennæ internæ setâ superiore haud excavatâ. Ungues edentuli.*

Pedes sex antiqui didactyli.

18. PENEUS.

Subdivisio 4. Antennæ exteriores infra interiores insertæ; interiores setis tribus. Cauda lamellâ exteriori unipartitâ.

Pedes quatuor antiqui didactyli pari antico minore.

19. PALÆMON.

Pedes quatuor antiqui didactyli pari antico majore.

20. ATHANAS.

DIVISIO VIII. Antennæ exteriores infra interiores insertæ squamâ magnâ ad basin. Pedes sexdecim.

Pedes bifidi, pari antico laciniâ interiori articulo ultimo compresso uniarticulato. 21. MYTIS.

C. *Cauda setis duabus terminata.*

DIVISIO IX. Pedes duodecim. Antennæ duæ apice bifidæ.

Thorax antice rostro mobili instructus. Pedum par anticum longius, simplex; aliis remotioribus æqualibus articulo ultimo bifido. 22. NEBALIA.

OBS. SQUILLA, Fabr., Latr., &c. genus incertæ sedis.

Ordo II.

Ordo II. MACROURA.

DIVISIO I.

Cauda utrinque appendiculata, appendiculis nec foliaceis nec natatoriis. *Pedes* 10, par anticum majus didactylum; paria 2 et 3 ungue valido instructa.

Gen. 1. PAGURUS, *Fabr., Latr., &c.*

CANCER, *Linn., Gmel.*

ASTACUS, *Penn.*

Antennæ articulo secundo ad apicem supra spinâ mobili instructo.

Abdomen membranaceum. *Cauda* triarticulata crustacea, articulo secundo utrinque appendiculato. *Pedes* quatuor postici spurii, breves, didactyli.

Spec. 1. *Pagurus Bernhardus.*

Pagurus Bernhardus auctorum.

Gen. 2. BIRGUS.

PAGURUS, *Fabr.*

CANCER, *Linn.*

Antennæ articulo secundo cristato. *Abdomen* crustaceum. *Cauda* biarticulata crustacea, articulo primo utrinque appendiculato. *Pedum* par quartum didactylum; par quintum (didactylum?).

Spec. 1. *Birgus Latro.*

B. testâ antice rostro acuminato simplici.

Cancer Latro. *Linn. Syst. Nat.* 1049.

Cancer (*astacus*) Latro. *Herbst*, ii. 34. *tab.* xxiv.

Pagurus Latro. *Latr. Gen. Crust. et Ins.* i. 46.

DIVISIO

DIVISIO II.

Cauda utrinque lamellis duabus foliaceis pinnam flabelliformem efformantibus. *Oculi* distantes. *Antennæ interiores* pedunculis longissimis; *extiores* squamiformes. *Pedes* decem consimiles ungue simplici instructi.

Gen. 3. SCYLLARUS, *Fabr., Latr., &c.*

CANCER, *Linn.*

Pedes postici tarso infra in pollicem producto. *Thorax* convexus, sublinearis. *Oculi* pone antennis exteriores inserti.

Spec. 1. *Scyllarus arctus*.

Cancer arctus. *Linn. Syst. Nat.* 1053.

Scyllarus arctus. *Latr. Gen. Crust. et Ins.* i. 47.

Gen. 4. THENUS.

Pedes postici tarsis aliis consimilibus. *Thorax* subdepressus antice latior. *Oculi* ad thoracis angulos anticos inserti.

Spec. 1. *Thenus Indicus*.

T. antennis serratis, thorace granulato carinato trispinoso, abdomine granulato: granulis transversim digestis.

Habitat in mari Indico.

DIVISIO III.

Cauda utrinque lamellis duabus foliaceis flabellum efformantibus. *Oculi* basi approximati. *Antennæ interiores* pedunculis longissimis; *extiores* setacæ, longissimæ. *Pedes* decem consimiles, ungue simplici instructi.

Gen. 5.

Gen. 5. PALINURUS, Dald., Fabr., &c.

CANCER, Linn.

ASTACUS, Pennant.

Spec. 1. *Palinurus Homarus*.

Astacus homarus. Pennant, Brit. Zool. iv.

DIVISIO IV.

Cauda utrinque lamellis duabus foliaceis flabellum efformantibus.

Antennæ interiores pedunculo longissimo; exteriores longissimæ, setaceæ. Pedes decem; par anticum majus didactylum: par quintum spurium.

Gen. 6. PORCELLANA, Lam., Latr., Bosc, &c.

CANCER, Linn.

Pedipalpi gemini externi caulis interni articulo primo interne dilatato. Testa orbiculato-subquadrata.

Spec. 1. *Porcellana platycheles*.

Cancer platycheles. Pennant, Brit. Zool. iv. 6. pl. 6. and 12.

Porcellana platycheles. Latr. Gen. Crust. et Ins. i. 49.

Gen. 7. GALATHEA, Fabr., Latr., &c.

CANCER, Linn.

ASTACUS, Pennant.

Pedipalpi gemini externi caulis interni articulo primo interne haud dilatato. Testa ovata.

* *Rostrum acuminatum, acutum, utrinque 4-spinosum. Pedes antici compressi. Abdomen segmentis lateraliter obtusis. Cauda lamellâ intermediâ triangulari apice emarginata laciniis apice rotundatis. Antennæ interiores pedunculi articulo primo trispinoso.*

a. Pedipalpi gemini externi caulis interni articulo secundo primo longiore.

Spec. 1. *Galathea squamifera*.

G. pedibus anticis granulato-squamosis, manibus externe carpis brachiisque interne spinosis.

Cancer (*astacus*) squamifer. *Montagu, Mss.*

Galathea squamifera. *Leach, Edin. Encycl.* vii. 398.

——, *Malac. Podophth. Brit. tab.* xxviii. A.

Habitat in Angliæ occidentalis mari vulgatissime.

Spec. 2. *Galathea Fabricii*.

G. pedibus anticis granulato-squamosis, manibus externe subserratis, carpis brachiisque internis spinosis.

Habitat ———

Mus. Brit.

The fingers of the fore-feet are more bent than in *Galathea squamifera*.

b. Pedipalpi gemini externi caulis interni articulo primo secundo longiore.

Spec. 3. *Galathea spinigera*.

G. pedibus anticis subgranulato-squamosis supra et utrinque spinosis, brachiis externe inermibus.

Astacus strigosus†. *Penn. Brit. Zool.* iv. 18. pl. 14.

Herbst, tab. xxvi. fig. 2.

† *Alia et distincta species est Cancer strigosus Linnæi, ut hæc indicant verba.* “Thorax obovatus margine utrinque spinis octo acuminatis antrorsum porrectis ciliatis, dorso rugis numerosis antrorsum imbricatis. Chelæ oblongæ, depressæ, margine aculeatæ, supra scabræ, subtus quasi squamosæ; pedes apice rubri.”—*Fn. Sv.* 2036. “Brachia introrsum aculeata; chelæ oblongæ, margine aculeatæ, latere superiore antrorsum imbricatæ scabritie ciliari.”—*Syst. Nat.* 1053.

Galathea

- Galathea strigosa.* *Fabr. Ent. Syst.* ii. 471.—*Suppl.* 414.
Latr. Gen. Crust. et Ins. i. 49.
Leach, Edin. Encycl. vii. 398.
 —, *Malac. Podophth. Brit. t.* xxviii. B.
Habitat in mari Europæo vulgate.

** *Rostrum elongatum spiniforme, basi utrinque bispinoso. Pedes antiqui subcylindrici. Abdomen segmentis lateraliter acutis. Cauda lamellâ intermediâ transverso-quadratâ apice subemarginatâ. Antennæ interiores pedunculi articulo primo 4-spinoso. (Pedipalpi gemini externi caulis interni articulo primo secundo longiore.)*

Spec. 4. *Galathea rugosa.*

- G. pedibus anticis introrsum præsertim spinosis, abdomine segmento secundo antice 6- tertio 4-spinosis.*
Astacus Bamffius. Penn. Brit. Zool. iv. t. 27.
Galathea rugosa. Fabr. Suppl. Ent. Syst. 415.
Bosc, Hist. Nat. des Crust.
Latr. Hist. Nat. des Crust. et des Ins. vi. 199. 2.
Cancer rugosus. Gmel. Syst. Nat.
Galathea longipeda. Lam. Syst. des Anim. sans Vert. 158.
Galathea Bamfia. Leach, Edin. Encycl. vii. 398.
Galathea rugosa. Leach, Malac. Britan. tab. xxix.
Habitat in maribus Europæo et Mediterræno.

DIVISIO V.

Cauda utrinque lamellis duabus foliaceis flabellum efformantibus, lamellâ exteriori simplici. Antennæ in eâdem fere lineâ horizontali insertæ; interiores setis duabus; exteriores simplices. Pedes decem.

Animalia subterranea, pedibus variis sæpissime spuriis, compressis.

Gen. 8. GEBIA.

CANCER (Astacus), Montagu.

Pedes duo antichi æquales, subdidactyli, pollice abbreviato. *Antennæ interiores* pedunculo elongato : articulis secundo brevior, tertio longior cylindrico. *Pedipalpi gemini externi* caulis interni articulo tertio brevior. *Cauda* lamellis latis, exterioribus costatis, medio quadrata.

Spec. 1. *Gebia stellata*.

G. abdomine toto crustaceo, cauda lamellâ exteriori rotundatâ interiore subacuminatâ.

Cancer *astacus* stellatus. Montagu, *Trans. Linn. Soc.* ix.

Gebia stellata. Leach, *Edin. Encycl.* vii. 400.

Habitat in Danmoniâ australi sub arenâ ad littora maris.

Spec. 2. *Gebia Deltaura*.

G. abdomine dorso membranaceo, cauda lamellâ exteriori apice subrotundatâ dilatatâ : interiore truncatâ deltoideâ.

Habitat cum præcedente. Observavit J. Sowerby jun.

Gen. 9. CALLIANASSA.

CANCER (Astacus), Montagu.

Pedes quatuor antichi didactyli; *par anticum* majus valde inæquale; *par secundum* minus; *par tertium* monodactylum; *paria quartum* et *quintum* spuria. *Antennæ interiores* pedunculo elongato, biarticulato, articulo secundo longior. *Pedipalpi gemini externi* caulis interni articulo secundo compresso longior. *Cauda* lamellis latis, medio elongato-triangulari apice rotundata.

OBS. *Thorax* antice abrupte subacuminatus processu rostriformi suturâ distincto. *Pedum* par anticum valde compressum manu articulatâ, pede majore carpo processu curvato ad basin.

Spec. 1.

Spec. 1. *Callianassa subterranea*.

C. processu rostriformi unicarinato apice rotundato.

Cancer (astacus) subterraneus. *Montagu, Linn. Trans.* ix.

Callianassa subterranea. *Leach, Edin. Encycl.* vii. 400.

Habitat sub arenâ ad littora maris ; in Danmoniâ australi haud valde infrequens.

Gen. 10. *AXIUS*.

Pedes quatuor antiqui didactyli ; *par anticum* majus subinæquale ; *paria* 3, 4 et 5 compressa, ungue compresso instructa. *Antennæ interiores* pedunculo triarticulato, articulo primo longiore. *Pedipalpi gemini externi* articulis duobus primis sublongioribus, æqualibus. *Cauda* lata, lamellâ intermediâ elongato-triangulari.

Spec. 1. *Axius Stirynchus*.

A. rostro marginato mediò carinato, thorace pone rostrum lineis duabus elevatis abbreviatis posticè emarginato.

Habitat in Danmoniæ mari rariùs ; apud Sidmouth et prope Plymouth bis obvius.

DIVISIO VI.

Cauda utrinque lamellis duabus foliaceis flabellum efformantibus, lamellâ exteriori bipartitâ. *Antennæ* in eâdem fere lineâ horizontali insertæ ; *interiores* setis duabus ; *exteriores* pedunculo articulo primo ad apicem squamâ acutâ instructo. *Pedes* decem, *par anticum* in omnibus majus, inæquale, didactylum.

Gen. 11. *ASTACUS*, *Fabr., &c.*

Oculi subglobosi pedunculo haud crassiores. *Antennæ exteriores* pedunculi articulo primo squamâ spiniformi ad pedunculi apicem haud attingente. *Pedum coræ* paris tertii. *FEMINÆ, MARIS* quinti paris perforatæ.

* *Abdomine*

* *Abdomine segmentorum lateribus obtusis.*

Spec. 1. *Astacus Gammarus.*

Cancer Gammarus. *Linn. Syst. Nat.* i. 1050.

Astacus Gammarus. *Penn. Brit. Zool.* iv.

Astacus marinus. *Fabr. Suppl. Ent. Syst.* 406.

Latr. Gen. Crust. et Ins. i. 51.

** *Abdomine segmentorum lateribus acutis.*

Spec. 2. *Astacus fluviatilis.*

Cancer astacus. *Linn. Syst. Nat.* i. 1051.

Astacus astacus. *Penn. Brit. Zool.* iv.

Astacus fluviatilis. *Fabr. Suppl. Ent. Syst.* 406.

Latr. Gen. Crust. et Ins. i. 51.

Gen. 12. NEPHROPS.

ASTACUS, *Fabr., &c.*

Oculi reniformes, pedunculo abrupte et multo crassiores. Antennæ exteriores pedunculi articulo primo squamâ ultra pedunculi apicem prodeunt. Pedum coræ FEMINÆ paris tertii, MARIS paris quinti perforatæ.

Spec. 1. *Nephrops Norvegicus.*

Cancer Norvegicus. *Linn. Syst. Nat.* i. 1053.

Astacus Norvegicus. *Penn. Brit. Zool.* iv.

Nephrops Norvegicus. *Leach, Edin. Encycl.* vii.

DIVISIO VII.

Cauda utrinque lamellis duabus foliaceis flabellum efformantibus.

Antennæ eteriores squamâ magnâ ad basin. Abdomen articulo secundo infernè anticè et posticè producto. Pedes decem.

SUBDIVISIO

SUBDIVISIO 1.

Antennæ exteriores infra inferiores insertæ; *interiores* setis 2 in eâdem lineâ horizontali insertæ. *Cauda* lamellâ exteriore bipartitâ.

Gen. 13. *ATYS.*

Pedes quatuor antiqui æquales, articulo ultimo fisso; *par tertium* majus, inæquale, adactylum, ungue simplici instructum; *paria* 4 et 5 simplicia, ungue simplici terminata. *Cauda* lata, lamellâ intermediâ apice subacuminatâ, rotundatâ.

Spec. 1. *Atys scaber.*

A. rostro carinato trifido: dente medio longiore, pedibus sex posticis scabris.

Habitat ———

Mus. Britann.

Obs. *Pedes* quatuor antiqui articulo fisso pilosissimo.

SUBDIVISIO 2.

Antennæ in eâdem fere lineâ horizontali insertæ: *interiores* setis duabus in eâdem lineâ horizontali. *Cauda* lamellâ exteriore unipartitâ.

Gen. 14. *CRANGON, Fabr., Latr., &c.*

ASTACUS, Penn.

CANCER, Linn.

Pedum par antiquum majus, manu compressâ monodactylâ, ant indice spurio instructâ, paria 2 et 3 tenuiora, alia simplicia, ungue terminata; paria 4 et 5 subrobustiora.

Spec. 1. *Crangon vulgaris.*

C. thorace pone rostrum et utrinque unispinoso.

Cancer

Cancer crangon. *Linn. Syst. Nat.* i. 1052.

Astacus crangon. *Pennant, Brit. Zool.* iv.

Crangon vulgaris. *Fabr., Latr., Bose.*

Leach, Edin. Encycl. pl. 221. fig. 5.

Habitat in Oceano Europæo vulgaris.

Spec. 2. *Crangon spinosus*.

C. thorace tricarinato: carinis trispinosis.

Habitat in Danmoniæ australi mari. Apud Plymouth Sound
semel observavit Dom. C. Prideaux.

Mus. Nostr.

SUBDIVISIO 3.

Antennæ exteriores infra inferiores insertæ; *interiores* setis duabus
unâ super aliam insertâ. *Cauda* lamellâ exteriore unipartitâ.

* *Palpi pediformes apice spinulosi. Abdomen segmento tertio supra
gibboso producto. Antennæ interiores setâ superiore infra exca-
vatâ. Ungues spinulosi.*

Gen. 15. PANDALUS.

Pedum par anticum adactylum; par secundum didactylum, in-
æquale. *Palpi pediformes* articulo ultimo penultimo longiore.

Spec. 1. *Pandalus annulicornis*.

P. rostro multidentato ascendente apice emarginato, antennis
inferis rubro annulatis internè spinulosis.

Pandalus annulicornis. *Leach, Malac. Podophth. Brit. tab.* xl.

Habitat in mari Britannico. Detexit D. J. Fleming.

Gen. 16. HYPPOLYTE.

Pedes quatuor antichi didactyli. *Palpi pediformes* articulo ultimo
penultimo multo brevior.

Spec. 1.

Spec. 1. *Hippolyte varians*.

H. rostro recto superne ac inferne biserrato, testâ supra et infra oculos unispinosâ.

Habitat in Danmoniae australis mari.

Spec. 2. *Hippolyte inermis*.

H. rostro inermi basi utrinque unispinoso.

Habitat cum præcedente. Communicaverunt Dom. C. Prideaux et J. Cranch cum copiâ specierum ineditarum; ejus characteres nondum accuratissime elaboravi.

Gen. 17. ALPHEUS, *Fabr., Latr.*

Pedes quatuor antiqui didactyli. *Palpi pediformes* articulo ultimo penultimo triplo longiore.

Spec. 1. *Alpheus Spinus*.

Cancer Spinus. *Sowerby, Brit. Miscel.*

Habitat in mari Scotico.

** *Palpi pediformes apice inermes. Abdomen segmento tertio haud gibboso-producto. Antennæ interiores setâ superiore haud excavatâ. Ungues edentuli.*

Gen. 18. PENÆUS, *Fabr., Latr.*

Palpi pediformes articulis quinque exsertis, articulo ultimo obtusiusculo. *Pedes* sex antiqui didactyli.

Spec. 1. *Penæus trisulcatus*.

P. thorace postice trisulcato, rostro descendente supra multidentato.

Habitat in Cambriae mari.

Mus. Sowerby, Nostr.

SUBDIVISIO 4.

Antennæ exteriores infra interiores insertæ ; *interiores* setis tribus.

Cauda lamellâ exteriori unipartitâ.

Gen. 19. PALÆMON, *Fabr., Latr., &c.*

ASTACUS, *Penn.*

CANCER, *Linn.*

Pedes quatuor antici didactyli, pari antico minore. *Palpi* pediformes articulo ultimo penultimo brevior.

Spec. 1. *Palæmon serratus*.

P. rostro ascendente supra 6- 7- aut 8-dentato apice emarginato ; infra 4- 5- vel 6-dentato.

Astacus serratus. *Penn. Brit. Zool.* iv. 19. pl. 16. fig. 28.

Palæmon Squilla. *Latr. Gen. Crust. et Insect.* i. 54.

Habitat in Mari Britannico.

Spec. 2. *Palæmon Squilla*.

P. rostro recto apice emarginato supra 7- aut 8- infra 2- vel 3-dentato.

Cancer Squilla. *Linn. Syst. Nat.* i. 1051.

Habitat cum præcedente in Danimoniâ australi vulgate.

Linnæus, in the second edition of *Fauna Suecica*, thus describes the above species : "Thorace lævi rostro supra serrato ; subtus 3-dentato, manuum digitis æqualibus."—"Rostrum lanceolatum perpendiculare, acutum, supra octo-crenis, infra tribus serratum ; manus, quæ tertio pedum pari insident, digitis sunt æqualibus." In the last edition of *Systema Naturæ* this character is again repeated ; and as it applies exactly to the most frequent variety of this species, there cannot be the least doubt as to the correctness

ness of the quotation. I may observe (although I scarcely conceive it to be necessary) that when Linnæus made use of the term "the fingers of the third pair of feet" in the above character, he included the pediform palpi as a pair of feet. Unless the language be familiar to the reader, he might conceive that the Linnean species was not even referable to this genus, as the two interior pair of feet only have fingers.

Spec. 3. *Palæmon varians*.

P. rostro recto supra 4- 5- aut 6-dentato apice integro ; infra bidentato.

Habitat in Danmoniæ, Norfolciæ mari vulgatissime.

An sit *Astacus Squilla Pennant*?

Gen. 20. *ATHANAS*.

Pedes quatuor antici didactyli, pari antico majore. *Palpi pediformes* articulo ultimo penultimo longiore.

Spec. 1. *Athanas nitescens*.

A. rostro recto inermi.

Cancer (*astacus*) nitescens. *Montagu, Mss.*

Habitat in Danmoniæ australis mari.

DIVISIO VIII.

Cauda utrinque lamellis duabus foliaceis flabellum efformantibus.

Antennæ exteriores squamâ magnâ ad basin. *Pedes* sexdecim.

Gen. 21. *MY SIS*, *Latr., Leach.*

CANCER, *Oth. Fabr.*

PRAUNUS, *Leach.*

Pedes bifidi parium 4 anticorum articulo ultimo laciniâ interiore uniarticulato, ovato, compresso, pedum aliorum multiarticulato.

lato. *Palpi pediformes* 3-articulati, articulo medio longiore, primo brevissimo.

Ad fœminæ abdominis basin est uterus externus e membranis duobus concavis valvuliformibus efformatus, quo pulli nuper ex ovo exclusi vivunt, crescunt.

* *Cauda lamellâ intermediâ emarginatâ.*

Spec. 1. *Mysis spinulosus.*

M. caudâ lamellâ intermediâ externe spinulosâ apice acutè emarginatâ: lamellis exterioribus acuminatis latissime ciliatis.

Praunus flexuosus. Leach, *Edin. Encycl.* vii. 401.

Habitat in mari Scotico apud the Frith of Forth.

Spec. 2. *Mysis Fabricii.*

M. caudâ lamellâ intermediâ apice obtusè emarginatâ: lamellis exterioribus apice rotundatis.

Habitat in mari Grœnlandico.

** *Cauda lamellâ intermediâ integrâ.*

Spec. 3. *Mysis integer.*

Praunus integer. Leach, *Edin. Encycl.* vii. 401.

Habitat apud Loch Ranza in Arran insulâ, frequentissime.

Length one-third of an inch. Colour pellucid cinereous spotted with black and reddish-brown. Eyes black. Females more abundant than the males.

At low tide near Loch Ranza the pools were full of this species, swimming with its head uppermost and its eyes spread; making a most grotesque appearance.

DIVISIO IX.

Cauda setis duabus terminata. Pedes duodecim.

Gen. 22. NEBALIA.

MYSIS, *Latr.*

CANCER, *Oth. Fabr., Herbst.*

MONOCULUS, *Montagu.*

Thorax antice rostro mobili instructus. *Pedum* par anticum longius, simplex; paria alia æqualia, approximata, articulo ultimo bifido. *Antennæ* duæ supra oculos insertæ, articulo ultimo bifido, multiarticulato.

Spec. 1. *Nebalia Herbstii.*

N. grisea aut cinereo-flavicans, oculis nigris.

Cancer bipes. *Oth. Fabr. Græn. no. 223. fig. 2.*

Herbst, ii. tab. xxiv. fig. 7.

Monoculus rostratus. *Mont. Trans. Linn. Soc. ii. 14. tab. ii. f. 5.*

Nebalia Herbstii. *Leach, Zool. Miscel. 1. 100. tab. 44.*

Habitat in oceano Europæo.

Legio II. EDRIOPHTHALMA.

Latrcille considered the animals which compose the first and part of the second section of this Legion as a family of the MACROURA; but had he been acquainted with the following new and curious genera, he would doubtless have formed a very different opinion.

Genera.

SECTIO I. *Corpus lateraliter compressum. Pedes 14. Antennæ 2 in frontem insertæ, una utrinque. (Cauda stylis instructa.)* 1. PHRONYMA.

SECTIO II. *Corpus lateraliter compressum. Pedes 14 coxis lamelliformibus. Antennæ 4 per paria insertæ. (Cauda stylis instructa.)*

DIVISIO I. Antennæ 4-articulatæ, articulo ultimo e segmentis plurimis efformato; superiores brevissimæ.

Antennæ superiores articulis duobus inferiorum basilaribus breviores. 2. TALITRUS.
Antennæ superiores articulis duobus basilaribus inferiorum haud longiores. 3. ORCHESTIA.

DIVISIO II. Antennæ 4-articulatæ, articulo ultimo e segmentis plurimis efformato; superiores subbreiores.

Pedes 4 antici monodactyli, manu parvulâ compressâ. 4. ATYLUS.

DIVISIO III. Antennæ 3-articulatæ, articulo ultimo e segmentis plurimis efformato; superiores longiores.

Pedes 4 antici subæquales monodactyli, manu compressâ. 5. DEXAMINE.
Pedum par anticum didactylum pollice biarticulato, par secundum monodactylum. 6. LEUCOTHÖE.

DIVISIO IV. Antennæ 4-articulatæ, articulo ultimo e segmentis plurimis efformato; superiores longiores.

Subdivisio 1. Pedes quatuor antici monodactyli, par secundum manu valdè dilatatâ, compressâ.

Pedum par secundum digito in palmam inflectendo. 7. MELITA.
Pedum par secundum digito in latus anticum inflectendum. 8. MÆRA.

Subdivisio 2. Pedum paria duo antica monodactyla conformia.

Antennæ superiores ad basin articuli quarti setulâ instructæ. 9. GAMMARUS.

Antennæ

- Genera.*
- Antennæ superiores simplices. Manus ovatæ. 10. AMPITHOË.
 Antennæ superiores simplices. Manus filiformes. 11. PHERUSA.
- DIVISIO V. Antennæ 4-articulatæ, inferiores longiores, pediformes.
 (Pedes quatuor antiqui monodactyli.)
- Subdivisio 1. Pedum par secundum manu magnâ.
 Oculi prominuli. 12. PODOCERUS.
 Oculi haud prominuli. 13. JASSA.
- Subdivisio 2. Pedum par secundum manu haud magnâ.
 (Oculi haud prominentes. Antennæ inferiores maximæ.) 14. COROPHIUM.
- SECTIO III. *Corpus depressum. Antennæ 4. Pedes 14.*
A. Cauda inermis.
- DIVISIO I. Corpus segmentis omnibus pedigeris.
- Subdivisio 1. Corpus lineare.
 Pedes omnes validi unguiculati, paria 3 et 4 basi appendiculata. 15. PROTO.
 Pedum paria 3 et 4 spuria. 16. CAPRELLA.
- Subdivisio 2. Corpus latum. 17. LARUNDA.
- DIVISIO II. Corpus segmentis omnibus haud pedigeris.
 Antennæ exteriores articulis tertio quartoque æqualibus. Corpus 18. IDOTEA.
 ovatum.
 Antennæ exteriores articulo tertio quarto longiore. 19. STENOSOMA.
- B. Cauda lamellâ 1 aut 2 utrinque instructa.*
- DIVISIO III. Antennæ in eâdem fere lineâ horizontali insertæ.
 Antennæ interiores sublongiores. Pedes 2 antiqui submonodactyli. 20. ANTHURA.
- DIVISIO IV. Antennæ per paria uno super alium positæ.
- Subdivisio 1. Cauda lamellâ unicâ utrinque.
 Cauda appendice curvato, compresso. 21. CAMPECOPÆA.
 Cauda appendice recto, subcompresso. 22. NÆSA.
- Subdivisio 2. Cauda lamellis 2 utrinque.
- * *Antennæ superiores pedunculo amplissimo. Ungues bifidi.*
 Cauda emarginata interjectâ lamellâ, appendicibus haud foliaceis. 23. CYMODICE.
 Cauda emarginata, appendicibus compressis foliaceis. 24. DYNAMENE.
 Cauda integra, appendicibus compressis foliaceis. 25. SPHÆROMA.

** *Antennæ*

****** *Antennæ superiores pedunculo amplissimo. Ungues simplices.* Genera.
 Oculi granulati, magni, laterales. 26. *ÆGA*.

******* *Antennæ superiores pedunculo mediocri.*
 Oculi distincti, non granulati. Caput segmenti corporis antici latitudine. 27. *EURYDICE*.
 Oculi granulati. Caput segmenti corporis antici latitudine. 28. *LINNORIA*.
 Oculi obscuri. Caput segmento corporis antico angustius. 29. *CYMOTHOA*.

C. Cauda setis duabus terminata.

DIVISIO V. - - - - - 30. *APSEUDES*.

D. Cauda stylifera.

DIVISIO VI. *Antennæ interiores distinctæ.*

Subdivisio 1. Styli caudales exserti. Pedes antici monodactyli.
 Ungues bifidi. 31. *JANIRA*.
 Ungues simplices. 32. *ASELLUS*.

Subdivisio 2. Styli caudales haud exserti. Pedes antici simplices. 33. *JERA*.

DIVISIO VII. *Antennæ interiores haud distinctæ.*

Subdivisio 1. Styli caudales bini, caule duplici.
Antennæ articulo ultimo multiarticulato. 34. *LIGIA*.

Subdivisio 2. Styli caudales quatuor, lateralibus biarticulatis.

***** *Corpus in globum haud contractendum.*

a. Antennæ externæ articulis octo.
 Antennæ externæ basi nudæ. *Cauda* abrupte corpore angustior. 35. *PHILOSCIA*.
 Antennæ externæ sub capitis margine antico insertæ. 36. *ONISCUS*.

b. Antennæ externæ articulis septem.
 Antennæ externæ sub capitis margine antico insertæ. 37. *PORCELLIO*.

****** *Corpus in globum contractile.*

Antennæ externæ 7-articulatæ, in capitis cavitate marginibus insertæ. 38. *ARMADILLO*.

SECTIO I.

Corpus lateraliter compressum. *Pedes* 14. *Antennæ* 2 in frontem insertæ, unâ utrinque. (*Cauda* stylis instructa.)

Gen. 1.

Gen. 1. PHRONIMA, Latr.

Caput magnum, nutans; *antennæ* biarticulatæ, articulo primo parvo. *Thorax* 7-articulatus, segmentis omnibus pedigeris. *Pedes* compressi; paria duo antica articulo antepenultimo ad apicem processu foliaceo instructa; articulo penultimo apice bifido, ungue minuto terminato: paria 3 et 4 simplicia longiora, subcrassiora ungue arcuato terminata: par quintum magnum longissimum, crassius, didactylum, articulo primo ad apicem gradatim subincrassato; secundo subtrigono; tertio ovato ad basin subabrupte angustato; ultimo ad basin angustato digitis curvatis interne unidentatis; paria 6 et 7 simplicia, ungue subrecto terminata. *Abdomen* triarticulatum, segmento singulo utrinque appendice duplici pedunculo insistente instructo. *Cauda* biarticulata; articulo primo infra utrinque processu biarticulato stylis duobus terminato; articulo secundo processibus quatuor stylis duobus instructis, processu inferiore biarticulato, superiore triarticulato.

Spec. 1. *Phronima sedentaria*.

P. pedibus quintis pollice apice indiceque basi interne denticulatis.

Phronima sedentaria. Latr. *Gen. Crust. et Insect.* i. 57.

Leach, *Edin. Encycl.* vii. 403-433.

Cancer gammarellus sedentarius. *Herbst*, ii. 136. *tab.* 37. *fig.* 8.

Cancer sedentarius. *Forsk. Fn. Arab.* 95.

Apud Burray in Zetlandiâ, Nov. 3, 1809, detexit Rev. Dr. Fleming, qui summâ cum benignitate mihi communicavit.

SECTION II.

Corpus lateraliter compressum. *Cauda* stylis plurimis. *Pedes* quatuordecim; *coxæ* lamelliformes. *Antennæ* quatuor per paria insertæ.

DIVISIO I.

Antennæ 4-articulatæ, articulo ultimo e plurimis segmentis minutis efformato; *superiores* brevissimæ, *inferiorum* pedunculo breviores.

Gen. 2. TALITRUS, *Latr.*, *Bosc.*

Pedes quatuor antici in utroque sexu subæquales, monodactyli.

Antennæ superiores articulis duobus *inferiorum* basilaribus breviores.

Spec. 1. *Talitrus Locusta.*

T. antennis subtestaceo-rufis maris corpore longioribus *fœminæ* brevioribus, corpore cinereo: colore saturatiore vario.

Oniscus Locusta. *Pallas?*

Talitrus Locusta. *Latr. Gen. Crust. et Insect. i. 58.*

Leach, Edin. Encycl. vii. 402.

Cancer gammarus saltator. *Montagu, Trans. Linn. Soc. ix. 94.*

Astacus Locusta. *Penn. Brit. Zool. iv. 21.*

Habitat in arenosis maritimis passim. *Talitrus littoralis*, *Leach, Edin. Encycl. vii. 402. fœmina.*

Gen. 3. ORCHESTIA.

TALITRUS, *Latr.*

Pedum paria quatuor antica MARIS monodactyla, pari secundo manu compressâ magnâ; *FÆMINÆ* pari antico monodactylo, secundo didactylo. *Antennæ* superiores articulis duobus basilaribus *inferiorum* haud longiores.

Spec. 1. *Orchestia littorea.*

Cancer (littoreus) Gammarus. *Montagu, Trans. Linn. Soc. ix. 96.*

Pulex marinus. *Bast. Opusc. Subs. ii. 31?*

Talitrus gammarellus. *Latr. Gen. Crust. et Ins. i. 57?*

Orchestia littorea. *Leach, Edin. Encycl. vii. 402.*

Habitat ad littora maris passim, rejectamentis, cadaveribus victitans.

DIVISIO II.

Antennæ quadriarticulatæ, articulo ultimo e segmentis plurimis aliis distinctis efformato; superioribus subbrevioribus.

Gen. 4. ATYLUS.

Antennæ superiores articulo secundo tertio longiore; *inferiores* articulo secundo tertio subbreviore. *Oculi* subprominentes, rotundati, inter *antennas* in capitis processum utrinque inserti. *Cauda* utrinque stylis duplicibus tribus, et superne stylulo utrinque mobili instructa.

Obs. Generi Dexamini valde affine est hoc genus.

Spec. 1. *Atylus carinatus*.

A. capite rostro descendente, abdomine segmentis quinque ultimis carinatis posticeque acute productis.

Gammarus carinatus. *Fabr. Ent. Syst.* ii. 515. 3.

Atylus carinatus. *Leach, Zool. Miscell.* ii. 22. tab. 69.

Habitat ———

Mus. Britan.

DIVISIO III.

Antennæ triarticulatæ, articulo ultimo e plurimis aliis distinctis confecto, superioribus longioribus.

Gen. 5. DEXAMINE.

Pedes quatuor antici subæquales, monodactyli, manu compressâ filiformi-subovatâ, armati. *Antennæ* segmento primo secundo brevior. *Oculi* oblongi, haud prominentes, pone *antennas* superiores inserti. *Cauda* utrinque stylis duplicibus tribus, superneque stylo utrinque mobili instructa.

Spec. 1. *Dexamine spinosa*.

D. segmentis abdominis posticis in spinis productis.

Cancer *Gammarus spinosus*. Montagu, *Linn. Trans.* vol. xi. 3.

Dexamine spinosa. Leach, *Edin. Encycl.* vii. 433.

——, *Zool. Miscell.* ii. 24.

Habitat in Angliæ occidentali mări rarior.

Gen. 6. LEUCOTHÖE.

Pedum par anticum didactylum, pollice biarticulato, articulo basilari subovato; par secundum manu dilatatâ, compressâ, pollice curvato instructâ.

Spec. 1. *Leucothœe articulosa*.

Cancer articulosus. Montagu, *Linn. Trans.* vii. 71. t. 6. f. 6.

Leucothœe articulosa. Leach, *Edin. Encycl.* vii. 403.

Habitat in mari Britannico, rarissime.

DIVISIO IV.

Antennæ 4-articulatæ, articulo ultimo e plurimis articulis efformato; superiores longiores.

SUBDIVISIO 1.

Pedum par secundum maris manu dilatatâ compressâ.

Gen. 7. MELITA.

Pedum paria duo antica monodactyla; par secundum digito in palmam inflexo. Cauda lamellâ utrinque elongatâ, foliaceâ.

Spec. 1. *Melita palmata*.

M. corpore nigricante, antennis pedibusque pallido annulatis.

Cancer palmatus. Montagu, *Linn. Trans.* vii. 69.

Melita palmata. Leach, *Edin. Encycl.* vii. 403.

Habitat maris Danmonix littora sub lapidibus passim.

Gen. 8.

Gen. 8. MÆRA.

Pedum paria duo antica monodactyla, par secundum digito in
latus inflexo. *Cauda* stylis nullis foliaceis.

Spec. 1. *Mæra grossimana*.

Cancer *Gammarus grossimanus*. Montagu, *Tr. L. Soc.* ix. 97. t. 4. f. 5.

Mæra grossimana. Leach, *Edin. Encycl.* vii. 403.

Habitat ad Danmoniæ littora scopulosa sub lapidibus vulgatissime.

SUBDIVISIO 2.

Pedum paria duo antica in utroque sexu monodactyla conformia.

Gen. 9. GAMMARUS.

Antennæ superiores ad basin articuli quarti setâ parvulâ articulatâ
instructæ. *Cauda* superne fasciculato-spinosa.

* *Cauda stylis geminatis superioribus stylo supero brevissimo.*

Spec. 1. *Gammarus aquaticus*.

G. processu inter antennis obtuso rotundato.

Gammarus Pulex. Leach, *Edin. Encycl.* vii. 402—432.

Habitat in rivulis et stagnis vulgatissime.

Spec. 2. *Gammarus marinus*.

G. processu inter antennis subacuminato.

Habitat in Danmoniæ australis mari.

** *Cauda stylis geminatis superioribus stylis subæqualibus.*

Spec. 3. *Gammarus Locusta*.

G. oculis lunatis.

Cancer *Gammarus Locusta*. Montagu, *Linn. Trans.* ix. 92.

Gammarus Locusta. Leach, *Edin. Encycl.* vii. 403.

Habitat in Britanniæ mari vulgatissime.

Spec. 4.

Spec. 4. *Gammarus Campylops.**G. oculis flexuosis.**Gammarus campylops. Leach, Edin. Encycl. vii. 403.**Habitat* in mari prope Loch-Ranza in Arran Insulâ.

Gen. 10. AMPITHŌE.

Antennæ superiores setâ nullâ ad articuli quarti basin. Cauda
*superne haud fasciculato-spinosa. Manus ovatæ.*Spec. 1. *Ampithœ rubricata.**Cancer Gammarus rubricatus. Montagu, Linn. Trans. ix. 99.**Gammarus rubricatus. Leach, Edin. Encycl. vii. 402.**Ampithœ rubricata. Leach, Edin. Encycl. vii. 432.*

Gen. 11. PHERUSA.

Antennæ superiores setâ nullâ ad articuli quarti basin. Cauda
*superne haud fasciculato-spinosa. Manus filiformes.*Spec. 1. *Pherusa fucicola.**P. testaceo-cinerea aut griseo-cinerea rubro-varia.**Pherusa fucicola. Leach, Edin. Encycl. vii. 432.**Habitat* inter fucos in Danmoniæ australis mari rariùs.

DIVISIO V.

Antennæ 4-articulatæ, inferiores longiores, pediformes. (Pedes
quatuor antichi monodactyli.)

SUBDIVISIO 1.

Pedum par secundum manu magnâ.

Gen. 12. PODOCERUS.

Oculi prominuli. Pedum paria duo antica monodactyla.

Spec. 1.

Spec. 1. *Podocerus variegatus*.

P. albo rufoque variegato.

Podocerus variegatus. Leach, *Edin. Encycl.* vii. 433.

Habitat inter confervas marinas.

Gen. 13. JASSA.

Oculi haud prominuli. *Pedcs* quatuor antici monodactyli, manibus ovatis; par secundum majus latere interno armato aut subrecto dentibus instructo.

Spec. 1. *Jassa pulchella*.

J. pollice secundo latere interno ad basin emarginato.

Var. α. manu secundâ dente elongato, obtuso ad interni lateris basin.

Var. β. manu secundâ latere interno tridentatâ.

Jassa pulchella. Leach, *Edin. Encycl.* vii. 433.

Habitat inter fucos in Danmoniaë australis mari. Color albicans, rufo pictus.

Spec. 2. *Jassa pelagica*.

J. manu secundâ latere interno lunato-emarginato.

Corpus cinereo-subpellucidum fusco variegatum.

Habitat in mari Scotico apud the Bell Rock. Cum copiâ animalium communicavit amicus R. Stephenson.

Obs. *Gammarus falcatus*, Montagu, *Trans. Linn. Soc.* ix. ad hoc genus pertinere videtur.

SUBDIVISIO 2.

Pedum par secundum manu haud magnâ.

Gen. 14. COROPHIUM, Latr.

CANCER, Linn.

ASTACUS, Penn.

Spec. 1.

Spec. 1. *Corophium longicorne.*Cancer grossipes. *Linn. Syst. Nat.* i. 1055.Astacus grossipes. *Penn. Brit. Zool.* iv. pl. 16. f. 31.Corophium longicorne. *Latr. Gen. Crust. et Ins.* i. 59.*Leach, Edin. Encycl.* vii. 403—432.

SECTIO III.

*Corpus depressum.**A. Cauda inermis.*

DIVISIO I.

Corpus 6-articulatum, segmentis omnibus cum capitis basi pedigeris. *Pedes* 14; *paria duo antica* ungue mobili, (pollice) instructa; *par anticum* minus, ad caput annexum, carpo articulo; *paria tertium et quartum* sæpius spuria; *paria sex posteriora* coxis aliquot productis, *unguibus* validis armata. *Antennæ* quatuor, superiores longiores. *Os* palpis duobus apice unguulatis. *Anus* tuberculis parvis obscuris. *Bursa (uterus externus)* valvulis imbricata inter *scæminæ* pedum *paria tertium et quartum* sita est, quâ ova, pullique post exclusionem educantur.

ANIMALIA parasitica in Oceano degentia, Fucis, Cetaceis (Piscibusque?) arcte affigentia.

SUBDIVISIO I.

Corpus lineare. *Oculi pone antennas superiores siti.* *Antennæ* 4-articulatæ: superiores segmento ultimo aliorum longitudine, e plurimis aliis compositis: inferiores subcompressæ, superioribus dimidio minores. *Pedum par anticum (Palpi Montagu)* os prope situm; secundum manu sæpius intus dentatâ.

Gen. 15. PROTO.

Pedum paria secundum, tertium et quartum basi appendiculata.

Pedes omnes validè unguiculati.

Ad

Ad hoc genus pertinet *Squilla pedatu*, forte etiam *ventricosa*? Mülleri.

Gen. 16. CAPRELLA.

Pedum paria secundum, tertium et quartum haud appendiculata ad basin; paribus tertio et quarto spuriiis, globosis, subgelatinosis.

Ad hoc genus *Astacus atomos* Pennant, *Squilla lobata* Müller, et *Cancer Phasma* Montagu pertinent.

Habitat in mari inter fucos, geometricè movens.

The specific characters may be taken from the number and situation of spines in the head and back, form of the second pair of feet, &c. The synonyms are at this time so confused that I cannot venture to describe or name those in my collection, amounting to four indigenous species,

SUBDIVISIO 2.

Corpus latum. Oculi in verticem siti. Antennæ 4-articulatæ, superiores longiores, articulo basilari paulo majore, secundo tertioque æqualibus basilari paululum minoribus, ultimo minuto penultimo quadruplo minore; inferiores articulo basilari superiorum breviores articulo ultimo minuto. Pedes compressi valide unguiculati; paria duo antica pollice instructa; par anticum minimum ad capitis basin adnexum, carpo articulado, secundum majus manu intus dentatâ, tertium et quartum coriaceo-membranacea, cylindrica, elongata, spuria. Anus productus, tuberculis obscuris parvis.

Bursa (uterus externus) valvulis quatuor imbricata.

Gen. 17. LARUNDA.

CYAMUS, Latreille, Lamarck.

PANOPE, Leach.

Spec. 1. *Larunda Ceti*.

Oniseus Ceti. *Linn. Syst. Nat.* i. 1060.

Squille de la Baleine. *De Geer, Mém. sur les Ins.* vii. pl. 42. f. 6. 7.

Pycnogonum Ceti. *Fabr. Suppl. Ent. Syst.* 670.

Cyamus Ceti. *Latr. Gen. Crust. et Ins.* i. 60.

Panope Ceti. *Leach, Edin. Encycl.* vii. 404.

Habitat in balænis (*etiam in scombris*, Latreille).

DIVISIO II.

Corpus segmentis omnibus haud pedigeris; segmentum ultimum caudæ maximum. *Antennæ* filiformes, mediæ brevissimæ, exteriores ad corporis dimidium longitudinis et ultra. *Ungues* validi.

Gen. 18. IDOTEA.

Antennæ exteriores dimidium aut minus corporis longitudinis æquantes, articulis tertio quartoque æqualibus. *Corpus* ovatum.

Spec. 1. *Idotea Entomon*.

I. corpore elongato-ovato, caudâ apice tridentatâ: dente intermedio majore, antennis dimidium corporis longitudinem fere æquantibus.

Oniscus Entomon. *Linn. Syst. Nat.* i. 1060.

Penn. Brit. Zool. iv. pl. 18. fig. 5.

Habitat in mari Britannico passim inter fucos.

Color cinereus, fusco-punctatissimus, sæpe cremore maculatus.

This species, which is very common on all our rocky coasts, varies much in the form of the extremity of the tail, often occurring without the lateral teeth, which is ever the case (as far as I have examined) in younger specimens. *Oniscus marinus* of Pennant, plate xviii. fig. 3, appears to be the variety above mentioned. Length one inch and a quarter.

Spec. 2.

Spec. 2. *Idotea pelagica*.

I. corpore lineari-ovato, caudâ rotundatâ medio dente obsoletissimo antennis tertiam corporis longitudinem æquantibus.

Habitat in mari Scotico; ab amico R. Stephenson, Armigero, cum animalium copiâ, accepi.

Mr. Stephenson sent me this species from the Bell Rock, and afterwards in the most obliging manner procured for me a large log perforated by *Limnoria terebrans*, which contained a vast number of them in the deserted cavities formed by that animal.

Colour when alive ash-gray or fuscous, speckled with darker fuscous, and often variegated or mottled with white spots; legs pale. The female seems very rare, as amongst four hundred only one occurred. Length one inch and a quarter.

Spec. 3. *Idotea Œstrum*.

I. corpore elongato-ovato, caudâ truncatâ emarginatâ, antennis tertiam corporis longitudinem æquantibus.

Oniscus Œstrum. *Penn. Brit. Zool.* iv. pl. 18. fig. 6.

Long. Corp. $1\frac{1}{4}$ unc.

We have never met with a living specimen of this animal, but have received it from our liberal friend Montagu, who considers it as a mere variety of *Entomon*; it differs from *Entomon* in wanting the teeth at the extremity of the tail, and having a deep notch instead. The antennæ, too, are evidently shorter.

Gen. 19. STENOSOMA.

Antennæ exteriores corporis longitudine, articulo tertio quarto longiore. *Corpus* lineare.

Spec. 1. *Stenosoma lineare.*

S. caudâ segmento ultimo basi subangustato apicem versus dilatâ: apice truncato emarginato.

Oniscus linearis. Penn. Brit. Zool. iv. pl. 18. fig. 2.

Spec. 2. *Stenosoma acuminatum.*

S. caudâ segmento ultimo acuminato.

Stenosoma acuminatum. Leach, Edin. Encycl. vii. 433.

Habitat in mari Danmoniæ: semel obvium.

B. *Cauda lamellis duabus utrinque instructa.*

DIVISIO III.

Caudæ segmentum penultimum brevissimum; ultimum angustius elongatum, utrinque lamellis duabus elongatis. *Antennæ* subæquales, unâ post alteram in lineâ fere horizontali insertæ.

Gen. 20. ANTHURA.

Antennæ breves, interioribus paululum longioribus. *Pedes* anteriores manu ungue seu pollice instructi. *Corpus* lineare. *Cauda* lamellis duabus foliaceis utrinque instructa.

Spec. 1. *Anthura gracilis.*

Oniscus gracilis. Montagu, Linn. Trans. vol. ix. tab. 5. fig. 6.

Anthura gracilis. Leach, Edin. Encycl. vii. 404.

It is probable that *Oniscus cylindricus* of Montagu, Linn. Trans. vol. vii. tab. 6. fig. 8. is referable to this family.

DIVISIO IV.

Caudæ segmentum ultimum maximum utrinque appendiculatum.

Antennæ per paria uno super alium positæ.

SUBDIVISIO

SUBDIVISIO 1.

Caudæ segmentum ultimum appendice utrinque simplici.

Gen. 21. CAMPECOPEA.

Cauda segmento ultimo appendice curvatâ compressâ utrinque instructa. *Corpus* 6-articulatum, articulo ultimo aliorum magnitudine. *Antennæ* setacæ, superæ longiores, pedunculo biarticulato. *Spatium* inter antennas amplissimum. *Ungues* (antici saltem) bifidi; reliquas haud vidi.

Spec. 1. *Campecopea hirsuta*.

Oniscus hirsutus. Montagu, *Linn. Trans.* vol. vii. tab. 6. fig. 8.

Campecopea hirsuta. Leach, *Edin. Encycl.* vii. 405.

Gen. 22. NÆSA.

Cauda segmento ultimo utrinque appendice rectâ subcompressâ, pedunculo adnexo. *Corpus* 6-articulatum, articulo ultimo majore. *Antennæ* setacæ, subæquales, superiores pedunculo amplissimo, biarticulato, articulo basilari majore. *Spatium* inter antennas facillime discernendum. *Ungues* bifidi.

Spec. 1. *Næsa bidentata*.

Oniscus bidentatus. Adams, *Linn. Trans.* vol. v. 8. tab. 2. fig. 3.

Næsa bidentata. Leach, *Edin. Encycl.* vii. 405.

SUBDIVISIO 2.

Caudæ segmentum ultimum appendicibus duabus foliaceis, stylove bifido, instructum.

* *Antennæ superiores pedunculo amplissimo. Ungues bifidi. (Caput postice ad latera subbilobatum, lobis oculiferis.)*

Gen. 23.

Gen. 23. CYMODICE.

Oculi ad segmenti attingentes marginem anteriorem antici. *Corpus* 7-articulatum. *Cauda* basi utrinque appendicibus duabus subcompressis, haud foliaceis, exterioribus majoribus; *apex* emarginatus, interjectâ lamellâ. *Ungues* bifidi.

Speciem indigenam possideo (*Oniscus truncatus*, *Montagu*, *Mss.*).
Cymodyce truncata. *Leach*, *Edin. Encycl.* vii. 433.

Gen. 24. DYNAMENE.

Oculi ad segmenti antici marginem anteriorem haud attingentes. *Corpus* 7-articulatum. *Cauda* basi utrinque appendicibus duabus æqualibus foliaceis instructa; *apex* emarginatus, lamellâ nullâ interjectâ. *Ungues* bifidi.

Dynamene. *Leach*, *Edin. Encycl.* vii. 433.

Species tres Britannicas possideo.

Gen. 25. SPHÆROMA, *Latr.*

Oculi ad marginem anteriorem corporis segmenti primi haud attingentes. *Corpus* 7-articulatum. *Cauda* apice integra, basi utrinque appendicibus duabus foliaceis æqualibus instructa. *Ungues* bifidi.

Spec. 1. *Sphæroma serrata*.

S. corpore lævi inermi, caudâ lævissimâ utrinque oblique truncatâ, lamellis ellipticis acutis; externis externe serratis.

Oniscus Globator. *Pallus Sp. Zool. fasc. ix. tab. 4. fig. 18.*

Cymothoa serrata. *Fabr. Ent. Syst. ii. 510.*

Sphæroma cinerea. *Latr. Gen. Crust. et Ins. i. 65.*

Habitat ad oceani Europæi littora.

Oculi nigri. *Antennæ* fulvæ. *Pedes* cinerei, unguibus fulvis, apice nigro. *Corpus* cinereum vel albidum rufo-marmoratum.

This species is very common on the rocky shores of Devonshire, Kent, and Cornwall.

Spec. 2.

Spec. 2. *Sphæroma rugicauda*.

S. corpore lævi inermi, caudâ rugulosâ: lateribus oblique truncatis, lamellis ellipticis; externis margine externo vix denticulatis.

Sphæroma rugicauda. Leach, *Edin. Encycl.* vii. 405-433.

Habitat in oceano Atlantico.

Mus. Leach.

Statura et magnitudo præcedentis, et satis distincta, caudâ rugosâ, lamellis rotundatis nec acutis, antennarum inferiorum pedunculo longè minus crasso. Color cinereus, nigro lineatus, maculatusque. Oculi nigri.

I discovered this species on the Isle of Ulva, one of the Western Isles, over against Mull, in the month of August. It was much more agile than *S. serrata*, which called my attention to minute examination. I met with several, but owing to an accident only one remains.

Spec. 3. *Sphæroma Hookeri*.

S. corpore lævi, caudæ articulo ultimo tuberculis duobus oblongatis subobscuris.

Sphæroma Hookeri. Leach, *Edin. Encycl.* vii. 433.

Habitat in Suffolciâ ad littora maris; color cinereus aut rufescens, punctulis nigris sparsus. Cum copiâ crustaceorum benignissime communicavit amicus W. J. Hooker, cujus nomen gerit.

** *Antennæ superiores pedunculo amplissimo. Ungues simplices.*

Gen. 26. ÆGA.

Oculi magni, granulati, oblongi, obliqui, marginales. Corpus 7-articulatum. Cauda 6-articulata, articulo ultimo majore, basi utrinque appendicibus duabus foliaceis instructa.

Spec. 1.

Spec. 1. *Æga emarginata*.

Æ. caudâ articulo ultimo acuminato; processu interiore apice internè obliquè truncato externè emarginato.

Habitat ———

An sit *Oniscus Psora*. *Penn. Brit. Zool.* iv. pl. 18. fig. 1?

Spec. 2. *Æga tridens*.

Æ. caudâ articulo ultimo tricarinato: carinis ultra apicem in dentes productis; processu interiore truncato.

Habitat in Mari Scotico.

Mus. Sowerby.

*** *Antennæ superiores pedunculo mediocri.*

Gen. 27. EURYDICE.

Oculi distincti, laterales, non granulati. *Caput* segmenti antici corporis latitudine. *Corpus* 7-articulatum. *Cauda* 6-articulata, articulo ultimo majore. *Ungues* simplices. *Antennæ inferiores* corporis longitudine.

Spec. 1. *Eurydice pulchra*.

E. caudâ articulo ultimo semiovali.

Habitat in mari apud Bantham in Danmoniâ australi vulgatissimè, celerrimè natans.

Color cinereus pulcherrimè nigro irroratus.

Gen. 28. LIMNORIA.

Caput corporis segmento antico latitudine æquale. *Oculi* distincti granulati. *Cauda* segmentis plurimis corpore vix angustioribus, ultimo subrotundato.

Antennæ

Antennæ infernè per paria insertæ, unâ super alteram positâ.
 Oculi e granulis (*octo aut septem) efformati.

Spec. 1. *Limnoria terebrans*.

L. corpore cinereo, oculis subpiceo-atris.

Limnoria terebrans. Leach, *Edin. Encycl.* vii. 433.

Long. Corp. 1 lin. et $1\frac{1}{2}$ aut 2 lin.

This new and highly interesting species I received through the politeness of my attentive and worthy friend R. Stephenson, Esq. It occurs in the greatest abundance at the Bell Rock, in the old wood-work used whilst the lighthouse was building, which it perforates in a most alarming manner, entering to the depth of two inches or more, boring in every direction. They seldom or never deviate from a straight line in their perforations, unless interrupted in their progress by a knot in the wood, when they pass round it. The female is one-third larger than the male, and may be readily distinguished by its pouch, which is easily seen, and in which the eggs and young ones after their exclusion are carried. The young ones in those I examined were generally seven in number, in some few nine, and in one instance only five. When alive it can contract nearly into a ball. I was at first induced to place it in the genus *Cymothoa*, but a more careful observation clearly proved it not to be referable to that genus.

Gen. 29. *CYMOTHOA*, *Fabr.*, *Dald.*, *Latr.*

Caput angustum, parvum. *Segmentum* secundum anticè emarginatum ad caput recipiendum, angulis anticis porrectis cum capite lineam rectam delinientibus. *Cauda* segmentis plurimis corpore angustioribus, ultimo majori transversè subquadrato, basi utrinque stylis duobus pediculo impositis. *Oculi* obscuri.

* I mention the number with some doubt; seven granules are arranged in a circle, and in a certain light there seems to be another in the centre.

Spec. 1. *Cymothoa Œstrum*.

Cymothoa Œstrum. *Fabr. Ent. Syst.* ii. 505.

Latr. Gen. Crust. et Ins. i. 66.

C. *Cauda setis duabus terminata.*

DIVISIO V.

Corpus sexarticulatum. *Cauda* sexarticulata, articulo ultimo majore, setâ utrinque instructa. *Pedes* 14; par anticum didactylum, par secundum compressum dentatum, paria tertium et quartum consimilia, simplicia, par quintum ungue duplici? paria sextum et septimum spuria. *Antennæ* quatuor, superiores pedunculo biarticulato apice setâ multiarticulatâ armatæ, inferiores bifurcatæ.

Gen. 30. *APSEUDES*.

Spec. 1. *Apseudes Talpa*.

A. testâ anticè acutâ rostriformi lineis tribus longitudinalibus, exaratis.

Cancer Gammarus Talpa. *Montagu, Trans. Linn. Soc.* ix. t. 4. f. 6.

Apseudes Talpa. *Leach, Edin. Encycl.* vii. 404.

Color flavicante-albus.

Habitat in oceano Britannico rariùs.

D. *Cauda stylifera.*

DIVISIO VI.

Antennæ quatuor, interiores distinctæ.

SUBDIVISIO 1.

Styli exerti. Pedes antiqui majores, manu monodactylâ.

Gen. 31.

Gen. 31. JANIRA.

Ungues bifidi. *Oculi* mediocres lateraliter subverticales. *Antennæ* interiores articulo setifero exteriorum breviores.

Spec. 1. *Janira maculosa*.

J. corpore cinereo fusco maculato.

Oniscus maculosus. *Montagu, Mss.*

Janira maculosa. *Leach, Edin. Encycl.* vii. 434.

Habitat inter fucos et ulvas.

Gen. 32. ASELLUS. *Geof., Oliv., Latr., Lam.*

Ungues simplices. *Oculi* minuti laterales. *Antennæ* interiores articulo setifero exteriorum longitudine.

Spec. 1. *Asellus aquaticus*.

Oniscus aquaticus. *Linn. Syst. Nat.* i. 1061.

Asellus vulgaris. *Latr. Gen. Crust. et Ins.* i. 63.

Leach, Edin. Encycl. vii. 404.

Idotea aquatica. *Fabr. Suppl. Ent. Syst.* 303.

SUBDIVISIO 2.

Styli minutissimi vix exserti. Pedes antici aliis haud crassiores.

Gen. 33. JÆRA.

Oculi mediocres laterali-subverticales.

Spec. 1. *Jæra albifrons*.

J. cinereus fronte albicante.

Oniscus albifrons. *Montagu, Mss.*

Jæra albifrons. *Leach, Edin. Encycl.* vii. 434.

Habitat inter fucos et sub lapidibus vulgatissimè.

DIVISIO VII.

Antennæ quatuor, interiores brevissimè vix conspicuæ.

SUBDIVISIO 1.

"*Styli caudales bini caule duplici, stipitis articulive communis baseos apice inserto.*" Latr.

Gen. 34. *LIGIA*, Latr.

Antennæ externæ articulo ultimo e pluribus aliis composito.

Spec. 1. *Ligia oceanica.*

L. antennis corporis longitudine, dorso subscabroso.

Ligia oceanica. Fabr. *Suppl. Ent. Syst.* 301.

Habitat ad littora maris; colore, magnitudine, et articulorum antennarum exteriorum numero valde varians.

The illustrious Latreille, in describing the species of this genus, has considered the number of joints in the last segment of the antennæ an unerring mark of specific distinction; but we have found on examination that these parts are subject to great variety, not only in the same species, but even in the same individual, the antennæ of the left side having two or three joints more or less than those of the right side. Other marks must therefore be looked for; and probably sculpture or degree of roughness is that which will be found to distinguish the species.

Ligia oceanica and *L. Scopulorum* of the Edinburgh Encyclopedia are merely varieties of this species.

SUBDIVISIO 2.

Styli caudales quatuor, lateralibus biarticulatis.

* *Corpus in globum haud contractile.*

a. *Antennæ externæ articulis octo.*

Gen. 35. *PHILOSCIA*, Latr.

Antennæ externæ basi nudæ. Cauda corpore abruptè angustior.

Spec. 1.

Spec. 1. *Philoscia Muscorum.*

Oniscus Muscorum. *Scopoli, Ent. Carn.* 1105.

Oniscus sylvestris. *Fabr. Ent. Syst.* ii. 397.

Philoscia Muscorum. *Latr. Gen. Crust. et Ins.* i. 69.

Leach, Edin. Encycl. vii. 406.

Habitat in Galliâ, Germaniâ, Sueciâ, Angliâ, sub lapidibus.

Gen. 36. *ONISCUS.*

Antennæ externæ sub capitis margine antico prominulo insertæ.

Spec. 1. *Oniscus Asellus.*

Oniscus Asellus auctorum.

Oniscus murarius. *Fabr. Suppl. Ent. Syst.* 300.

b. *Antennæ* externæ articulis septem.

Gen. 37. *PORCELLIO, Latr.*

Antennæ externæ sub capitis margine antico prominuloque insertæ. *Styli* caudales laterales prominuli, conici.

Spec. 1. *Porcellio scaber.*

P. corpore scabro.

Oniscus Asellus. *Fabr. Suppl. Ent. Syst.* 300.

Porcellio scaber. *Latr. Gen. Crust. et Ins.* i. 70.

Leach, Edin. Encycl. vii. 406.

Habitat in Europâ sub ligno putrido, et sub lapidibus passim.

Spec. 2. *Porcellio lævis.*

P. corpore lævi.

Porcellio lævis. *Latr. Gen. Crust. et Ins.* i. 71.

Leach, Edin. Encycl. vii. 406.

Habitat cum præcedente. In Britanniâ semel obuius.

Mus. Nostr.

** *Corpus*

** *Corpus in globum contractile.*

Gen. 38. ARMADILLO, *Latr.* ONISCUS, *Linn.*

Antennæ externæ 7-articulatæ, in cavitate marginibus prominula insertæ. *Styli* caudæ laterales haud prominuli, articulo apicis triangulari, cum ultimi segmenti margine connivente. *Latr.*

Spec. 1. *Armadillo vulgaris.*

Armadillo vulgaris. *Latr. Gen. Crust. et Ins.* i. 71.

Oniscus Armadillo. *Linn. Syst. Nat.* i. 1062.

Classis II. MYRIAPODA*.

Ordo I. CHILOGNATHA, *Latr.*

Maxillæ nullæ. *Palpi* indistincti. *Labium* inerme.

Ordo II. SYNGNATHA.

Maxillæ duæ distinctæ, basi connatæ. *Palpi* duo maxillares filiformes; duo labiales unguâ terminati.

Ordo I. CHILOGNATHA.

Fam. I. GLOMERIDES.

Corpus in globum contractile. *Antennæ* capitis paginæ supernæ insertæ. *Oculi* distincti.

Gen. 1. GLOMERIS, *Latr.*

Pedes utrinque 16.

* This class was arranged with the *Arachnides* by Latreille.

Spec. 1. *Glomeris pustulata*, Latr.

Habitat in Lusitaniâ frequens.

Spec. 2. *Glomeris marginata*.

Oniscus marginatus. Vill. *Entom.* iv. 187. t. 11. f. 15.

Oniscus zonatus. Panz. *Fn. Ins. Germ.* ix. 25.

Glomeris limbata. Latr. *Gen. Crust. et Ins.* i. 74.

Julus oniscoides. Town.

Stew. *Elem. Nat. Hist.* ii.

Habitat in Europâ sub lapidibus.

Fam. II. JULIDES.

Corpus in globum haud contractile. *Antennæ* capitis paginæ supernæ insertæ. *Oculi* distincti.

Gen. 2. JULUS.

Corpus serpentiforme, cylindricum. *Antennarum* articulus secundus tertio longior.

The following species were all described from living specimens. The principal characters of distinctions are colour, size, and the form of the anal segment. The number of legs, which has been considered the most permanent character, is of no value, as it varies continually in the same species.

Spec. 1. *Julus sabulosus*.

J. nigro-cinereus lineis duabus dorsalibus rufescentibus, segmento ultimo mucronato, pedibus luteis.

Julus sabulosus. Linn., Fabr., Latr.

Long. Corp. $1\frac{1}{2}$ unc.

Habitat in Europæ sabulosis inter muscos et sub lapidibus passim.

Corpus longitudinaliter lineolatum, lineis vix subundulatis.

Facies flava nigro-punctulata.

This

This species may readily be distinguished from all the rest by the thickness of its body, by the form of the mucro, which resembles the corniculus of many of the genus *Sirex*, and by its colour, which after death often changes to a bluish violet, with testaceous instead of red lines.

Spec. 2. *Julus Londinensis*.

J. brunneo-nigricans segmento ultimo submucronato: mucrone ano brevior, pedibus rufescentibus articulis pallidis.

Long. Corp. $2\frac{1}{4}$ unc.

Habitat in sylvis Londinum prope inter muscos haud infrequens.

Corpus lineolis longitudinalibus tenuissimis rectis exaratum.

After death it is frequently banded with brassy rings.

Spec. 3. *Julus niger*.

J. segmento ultimo mucronato, pedibus pallidè rufescentibus.

Long. Corp. $1\frac{1}{2}$ lin.

Habitat prope Edinburgum sub lapidibus passim; in Arran Insulâ semel observavi.

Corpus fortius lineolatum, lineolis inæqualibus.

After death the body assumes a blueish tint.

Spec. 4. *Julus terrestris*.

J. cinereo-fuscus annulis dilutè brunneis, capite anoque dilutioribus, ventre pedibusque sublutescente-albis, segmento ultimo mucronato.

Long. Corp. 1 unc.

Julus terrestris. Linn., Fabr., Latr.

Habitat in Europæ sabulosis, sylvis.

Dorsum striis longitudinalibus rectis exaratum. Pedes articulis subfuscis.

I con-

I considered this species formerly but a mere variety of *J. niger*, but later observations have induced me to consider them as most decidedly distinct. The striæ are much stronger in this species, although it is a much smaller animal, and the colour is totally different.

Spec. 5. *Julus punctatus*.

J. segmento ultimo mucronato, corpore subpellucido pallidè subcarneo, segmentorum lateribus posticè puncto nigro.

Long. Corp. 10 lin.

Habitat sub cortice arborum et inter muscos passim.

Dorsum et latera pallidè carnea, lineis longitudinalibus tenuibus exaratis. Latera utrinque lineâ punctorum nigrorum. Venter pallidus. Pedes lutescentes. Oculi atri.

Spec. 6. *Julus pulchellus*.

J. corpore pallidissimè flavescente-albido, lateribus utrinque lineâ punctorum coccineorum, segmento ultimo inermi.

Long. Corp. $7\frac{1}{2}$ lin.

Habitat in Caledoniæ, Angliæ muscis.

This beautiful species I first noticed near Edinburgh, and I have since that time found it in the Highlands of Scotland, Wales, and England, under moss. It sometimes occurs in gardens. Some of the segments near the head want the red spots. The back is very smooth, and not striated.

Spec. 7. *Julus pusillus*.

J. segmento ultimo submucronato, corpore cinerascete-nigro aut fusco-brunneo lineis duabus rufescentibus.

Long. Corp. 5 ad 6 lin.

Habitat prope Edinburgum sub lapidibus; in Battersea fields, Londinum prope, inter graminum radices. Copulatione observavi.

β. Corpus rufescens lateribus lineâque longitudinali dorsali fusco-brunneis.

Dorsum lineis fortioribus exaratis, distantibus, rectis subinæqualibus. Antennæ fuscae articulis dilutis. Pedes lutescentes.

Gen. 3. CRASPEDOSOMA †.

Corpus lineare, depressum, segmentis lateraliter compressis, marginatis. Antennæ articulo secundo tertio brevior.

* *Segmentis lateribus medio prominulis.*

Spec. 1. *Craspedosoma Rawlinsii.*

C. dorso fusco-brunneo lineis quatuor punctorum albidorum, ventre pedibusque rufescentibus.

Long. Corp. 7 lin.

Habitat inter muscos et sub lapidibus prope Edinburgum vulgarissima. Detexit R. Rawlins, cujus nomen gerit.

** *Segmentis lateribus posticè productis.*

Spec. 2. *Craspedosoma polydesmoides.*

C. dorso rufo griseo, ventre pallido, pedibus rufescentibus basi pallidis, angulo segmentorum postico setigero.

Habitat in Danmoniâ prope Plymouth, sub lapidibus passim. Detexit Dom. Montagu.

Corpus rufo-griseum, pedibus pallidioribus. Dorsum lineâ longitudinaliter impressum. Segmenta valdè prominentia, angulo antico rotundato, postico retrorsum producto, setifero, setâ conicâ albâ. Facies saturate rufo-grisea. Oculi atri. Antennæ rufo-griseæ, subpilosulæ. Venter pallidus, albidus. Pedes rufescentes, basi pallidi.

† This genus was proposed by my much lamented friend Richard Rawlins, Esq. who discovered the first species.

Fam. III. POLYDESMIDES.

Oculi obsoleti.

Gen. 4. POLYDESMUS, Latr.

Spec. 1. *Polydesmus complanatus*, Latr.*Julus complanatus*. Linn., Fabr.Obs. Genus *Pollyxenus* Dom. Latr. mihi invisum.

Ordo II. SYNGNATHA.

Fam. I. CERNATIDES.

Corporis segmenta tetrapoda.

Gen. 5. CERNATIA, Illig.

SCUTIGERA, Latr.

Fam. II. SCOLOPENDRIDES.

Corporis segmenta duopoda. *Pedum* par posticum reliquis manifestè longius.Stirps 1. *Pedes utrinque* 15.

Gen. 6. LITHOBIUS.

Antennæ conico-setaceæ, articulis (45 circiter) subconicis, duobus basilaribus majoribus. *Labium* inferius latè anticè emarginatum, margine valdè denticulato. *Oculi* granulati.Spec. 1. *Lithobius forficatus*.

L. capite lato, labio inferiore toto profundè impresso-punctato, pedibus testaceo-flavicantibus.

Scolopendra forficata. Linn.*Habitat* in Angliâ, Hiberniâ rarior.

Long. Corp. 1 unc.

Antennæ sordidè testaceæ. Mandibulæ basi sordidè testaceæ, apice piceo-ferrugineæ. Labium sordidè testaceum, lineâ longitudinali profundius impressum, margine antico dentibus basi ferrugineis, apice piceo-atris. Antennæ pilosulæ.

Spec. 2. *Lithobius variegatus.*

L. capite corpore paulum latiore, labio toto punctis læviter impressis, pedibus flavo-testaceo-pallidis fuseo-maculatis.

Habitat in Danmoniâ australi sub lapidibus passim.

Long. Corp. 8-9 lin.

A præcedente differt, capite angustiore, labio minus crebrè punctato, pedibusque variegatis nec concoloribus.

Spec. 3. *Lithobius Lævilabrum.*

L. capite lato (fœminæ angustiore), labio glaberrimo polito antice leviter obscurius punctulato, pedibus testaceo-flavis.

Habitat in Caledoniâ et Insulis adjacentibus, sub lapidibus frequens.

Labium glaberrimum, antice obscure punctulatum, laciniis marginibus anterioribus rotundatis, dentibus ferrugineis extremo apice piceo-nigris, medio longitudinalitè impresso. Mandibulæ apice piceo-atræ. Antennæ pilosulæ.

Stirps 2. *Pedes utrinque 21.*

Gen. 7. SCOLOPENDRA.

Antennæ conico-setaceæ, 17-articulatæ, articulis subconicis. *Os* galeis hemisphæricis tectum. *Palpi* exteriores cauli duplici, ultimo articulo internè compresso, apice unguibus duobus armata. *Mandibulæ* validæ, corneæ, edentulæ. *Labium* inferius fissurâ divisum, margine antico angustiori, recto, denticulato. *Corporis* segmenta marginata. *Pedes* pari antico minimo, ultimo

timo majore, articulo basilari intùs spinoso. *Oculi* octo, quatuor utrinque in capitis margine antico figuram subrhomboidalem delinientibus.

Of this genus we have no indigenous species. All the species (which I suspect to be numerous) have been confounded together under the title of *Scolopendra morsitans*, and the character given as specific applies to all the species of the genus.

* *Corporis segmenta subæqualia.*

Spec. 1. *Scolopendra Gigas.*

S. segmentis transverso-quadratis angulis rotundatis ferrugineo-brunneis posticè luteis, antennis palpis galeis pedibusque testaceis: pedibus (pari antico excepto) articulo basilari (secundoque rariùs) spinulosis.

Habitat———

Long. Corp. $9\frac{1}{2}$ unc.

Mus. Dom. Jameson.

Labium ferrugineum. Mandibulæ basi ferrugineæ, apice nigræ. Totum corpus sub lente punctulatum. Ungues calcesque subpiceo-atrici.

** *Corporis segmenta transversa alternantia, quinto et sexto subæqualibus.*

Spec. 2. *Scolopendra alternans.*

S. pedibus posticis articulo primo tereti internè spinuloso.

Scolopendra alternans. Leach, *Edin. Encycl.* vii.

Habitat———

Spec. 3. *Scolopendra subspinipes.*

S. pedibus posticis articulo primo subtereti supra plano ad apicem internè pauci-spinoso.

Habitat———

Mus. Britan.

Spec. 4.

Spec. 4. *Scolopendra trigonopoda*.

S. pedibus posticis trigonis articulo primo internè spinifero.

Habitat——

Mus. Britan.

*** *Corporis segmenta elongata aut subelongata irregularia.*

Spec. 5. *Scolopendra morsitans*.

Habitat in India.

Gen. 8. CRYPTOPS.

Antennæ conico-setaceæ, 17-articulatæ, articulis globoso-subconicis. *Labium* inferius non denticulatum, margine antico vix emarginato. *Pedes* postici articulo basilari inermi. *Oculi* obscuri.

Spec. 1. *Cryptops hortensis*.

C. testaceo-ferrugineus dorso saturatiore, antennis pedibusque pilosis.

Scolopendra hortensis. Leach, Mss. in Donovan's Brit. Ins.

Habitat in hortis in com. Devon. haud infrequens.

Fam. III. GEOPHILIDES.

Corporis segmenta duopoda. *Pedes* duo postici haud manifestè aliis longiores.

Gen. 9. GEOPHILUS.

Pedes plurimi. *Oculi* obscuri. (*Labium* fissurâ divisum?) *Mandibulæ* validæ. *Antennæ* cylindricæ, in his apicem versus sensim subangustiores, in illis 14-articulatæ, articulis omnibus subcylindricis, basi paululum angustioribus.

* *Antennæ articulis brevibus.*

Spec. 1. *Geophilus carpophagus*.

G. capite antennis anoque fulvescentibus, corpore violascente anticè flavicante, pedibus pallidè subflavis.

β. Corpore

β. Corpore obscurè subviolascēte-testaceo anticè subtestaceo, alias α simillima.

Long. Corp. 2—2½ unc.

Habitat in fructibus Danmoniæ passim.

Caput flavum, fulvo varium; antennæ fulvescentes, articulis apice pallidis: mandibulæ fulvescentes, punctis apiceque atris. Dorsum anticè flavicans lineâ longitudinali flavâ utrinque violascente, parte ante medium usque ad segmentum ultimum violascente; lineâ longitudinali pallidâ; latera pallida lineâ undulatâ, sinuosâ, cinereo-violascente. Venter dorsi coloris absque lineis marginalibus, parteque violascente pulcherrimè colore saturatiore maculatâ. Pedes subflavi, pallidi, articulis saturatioribus, unguibus nigris.

Variat parte anticâ laud flavâ, pedibusque posterioribus magis elongatis. Fortè sexus alter.

Spec. 2. *Geophilus subterraneus*.

G. corpore flavo, capite subferrugineo.

Scolopendra subterranea. *Shaw*.

Long. Corp. 3½ unc.

Dorsum segmentis lateraliter prominulis, lineis duabus longitudinalibus abbreviatis impressis. Pedes articulis subferrugineo-tinctis. Ungues nigricantes.

In the living state this species may at all times be distinguished from the preceding, by its colour, and by the longitudinal abbreviated lines, which are only to be seen whilst the animal is alive.

I observed whilst turning over some garden earth in the month of January, a female of this species in a cavity, (apparently formed by itself,) with twenty-six young ones, which were pale yellow, with the head a little darker in colour, and the articulations of the legs slightly ferruginous.

Spec. 3.

Spec. 3. *Geophilus acuminatus*.

G. corpore toto ferrugineo antice sensim angustiore, capite antice pedibusque dilutioribus.

Long. Corp. $1\frac{1}{2}$ unc.

Habitat inter muscos rarior.

Mus. Nostr.

I first observed this interesting species on Roborough Down, near Flynouth, under a stone, and was afterwards favoured by Mr. Sowerby with several living specimens, which he received along with some moss. It has once occurred in Battersea fields amongst moss.

The antennæ were of equal diameter throughout. The anterior part of the head paler than the legs, which are slightly paler than the back.

Observation. To this division of the genus *Geophilus*, *Scolopendra electrica* of authors with two other indigenous and some exotic species belong; but as I have not had opportunities of examining the living animals, I shall at present forbear from giving any account of them.

** *Antennæ articulis valdè elongatis.*

Spec. 4. *Geophilus longicornis*.

G. corpore flavo, capite ferrugineo, antennis longioribus.

Long. Corp. $2\frac{1}{2}$ unc.

Habitat prope Edinburgum et Londinum sub lapidibus.

Classis III. ARACHNIDES.

From this class I have not only removed the *Tetracera* and *Myriapoda* of Latreille as before mentioned, but also the *Parasita* and *Thysanoura* of the same author, which consist of genuine INSECTS; and to the ARACHNIDES I have added the genus *Nycteribia*, which agrees with them in general structure.

Subclassis I. CEPHALOSTOMATA.

Os frontale ad caput adnexum, (Pedes octo aut sex.)

* *Pedes coxis, femoribus, tibus tarsisque formâ distinctis.*

Ordo I. Podosomata.

Corpus 4-articulatum, et quasi e coxarum junctione efformatum.

Os tubulosum. Oculi quatuor tuberculo impositi. Pedes octo.

Ordo II. Polymerosomata.

Corpus e serie segmentorum efformatum, abdomine haud pedunculato. Os mandibulis didactylis et maxillis instructum. Oculi duo, quatuor, sex aut octo. Pedes octo.

Ordo III. Dimerosomata.

Corpus e segmentis duobus efformatum, abdomine pedunculato.

Os mandibulis et maxillis armatum. Oculi sex aut octo. Pedes octo.

**** *Pedes coxis, femoribus, tibiis tarsisque formâ speciali haud distinctis.***

Ordo IV. MONOMEROSOMATA.

Corpus e segmento unico efformatum. *Os* sæpius rostriforme, in nonnullis maxillis aut mandibulis instructum. *Pedes* octo aut sex.

Subclassis II. NOTOSTOMATA.

Os dorsale ad dorsum affixum. (*Pedes* sex.)

Subclassis I. CEPHALOSTOMATA.

Ordo I. Podosomata.

OBS. FEMINÆ organa ovigera palpiformia, elongata, articulata, ad rostri basin prope inserta. *Pedes* coxis triarticulatis; femoribus 1-articulatis; tibiis biarticulatis; tarsis biarticulatis, *unguibus* instructis.

Fam. I. PYCNOGONIDES.

Mandibulæ nullæ.

Gen. 1. PYCNOGONUM *auctorum*.

Pedes subrobusti. *Coxæ* articulis subæqualibus; *tibiæ* articulo primo longiore; *tarsi* articulo primo minimo; *ungues* simplices, validi, acuti.

ORGANA OVIGERA 10-articulata, articulo ultimo acutissimo, unguiformi, ad rostri basin segmento corporis antico annexa.

Spec. 1. *Pycnogonum Balænarum*, auctorum.

Habitat in oceano Europæo, et ad littora sub lapidibus.

Gen. 2. PHOXICHILUS, *Latr.*

NYMPHON, *Fabr.?*

PYCNOGONUM, *Oth. Fabr.*

PHALANGIUM, *Montagu.*

Pedes

Pedes gracillimi; *coxæ* articulo medio longiore subclavato; *tibiæ* articulo primo brevior; *tarsi* articulo primo minimo; *ungues* duplices, inæquales, acuti.

ORGANA OVIGERA 7-articulata, articulo ultimo tuberculiformi, in segmento antico ad rostri basin uno utrinque subtus inserta.

Ad hoc genus pertinent *Pycnogonum spinipes*, Oth. Fabr. Fn. Græn. 232, *Nymphon hirtum*, Fabr. ? et *Phalangium spinosum*, Montagu, Trans. Linn. Soc. ix. tab. 5. fig. 7.

Obs. Species multas indigenas possideo, at characteres nondum elaboravi.

Fam. II. NYMPHONIDES.

Mandibulæ duæ, biarticulatæ, didactylæ.

Gen. 3. AMMOTHEA.

Mandibulæ rostro multo breviores, articulis æqualibus, digitis arcuatis apice conniventibus. *Palpi* 9-articulati, articulo tertio longissimo. *Pedes* graciles; *coxæ* articulo medio longiore; *tibiæ* articulo primo subbreviore; *tarsi* articulo primo minimo; *ungues* duplices inæquales.

ORGANA OVIGERA 9-articulata, pone rostrum sub pedibus anticis fere inserta.

Spec. 1. *Ammothea carolinensis*.

Ammothea carolinensis. Leach, Zool. Miscell. i. 34. t. 13.

Habitat in Americæ mari.

Mus. Britan.

Gen. 4. NYMPHON.

NYMPHON, Fabr., Latr.

PYCNOGONUM. Müll., O. Fabr.

PHALANGIUM. Linn., Gmel., Mont.

Mandibulæ rostro longiores articulis æqualibus, digitis curvatis et per totam illorum longitudinem conniventibus, ad apicem abruptius

Palpi 6-articulati, articulo secundo elongato, sexto minimo. *Pedes* gracillimi, corac articulo medio longiore; *tibiæ* articulo secundo sublongiore; *tarsi* articulo primo subbreviore; *lingues* simplices.

ORGANA LOCOMOTIVA 10-articulata, pone rostrum sub pedibus antice ferè inserta.

Spec. 1. *Nymphon femoratum*.

Nymphon femoratum, Leach, Zool. Miscell. i. 45. t. 19. f. 2.

Habitat in mari Britannico.

Species adhuc elaborandæ.

Ordo II. POLYMEROSOMATA.

Pedes octo. *Oculi* 2, 4, 6 aut 8.

Fam. I. SIRONIDES. *Palpi* simplices. *Mandibulæ* didactylæ.

Gen. 1. *SIRO*, Latr.

Spec. 1. *Siro rubens*.

Siro rubens, Latr.

Fam. II. SCORPIONIDES.

Mandibulæ didactylæ. *Pedes* conformes. *Palpi* brachiiiformes.

Stirps 1.

Cauda nulla. *Oculi* 2 aut 4.

Gen. 2. *OBISIUM*, Illg.

CHELIFER, Latr.

Corpus cylindricum. *Thorax* unipartitus. *Mandibulæ* porrectæ.

Oculi 4.

Spec. 1.

Spec. 1. *Obisium trombidoides*, Latr.

Montagu has confounded this species with another, under the title of *Acaroides**.

Gen. 3. CHELIFER, Geoffroy.

Corpus depressum. Thorax tripartitus. Mandibulæ breves. Oculi 2.

Spec. 1. *Chelifer fasciatus*.

C. manu ovatâ, abdomine segmentis margine albidis.

Habitat sub cortice arborum.

This species is mentioned by Geoffroy (Hist. des Ins. ii. 618.)

Stirps 2.

Cauda articulata, elongata, aculeo curvato terminata. Oculi 6 aut 8.

Gen. 4. BUTHUS.

SCORPIO auctorum.

Oculi octo.

Spec. 1. *Buthus occitanus*, Latr.

Gen. 5. SCORPIO, Latr., Fabr., &c.

Oculi sex.

Spec. 1. *Scorpio europæus*, Latr.

Fam. III. TARANTULIDES.

Mandibulæ monodactylæ. Pedes duo antici antennæformes, gracillimi; sex postici consimiles. Oculi octo. Palpi brachiiformes.

*Phalangium acaroides, p. 7 of this volume.

Stirps 1.

Stirps 1.

Cauda filiformis.

Gen. 6. THELIPHRONUS, Latr.

TARANTULA, Fabr.

*Palpi breves, crassi, didactyli. Corpus oblongum, cylindricum.**Thorax ovalis.*

Stirps 2.

Cauda nulla.

Gen. 7. TARANTULA, Fabr.

PHRYNUS, Oliv., Latr., &c.

*Palpi elongati, monodactyli. Corpus breve, depressum.*Spec. 1. *Tarantula lunata.*

T. lunata. Fabr. Ent. Syst. ii. 433.

Ordo III. DIMEROSOMATA.

Fam. I. SOLPUGIDES.

Oculi quatuor. Anus simplex.

Gen. 1. SOLPUGA, Fabr.

GALEODES, Latr.

Spec. 1. *Solpuga araneoides, Fabr.*

Fam. II. PHALANGIDES.

Oculi duo. Anus simplex.

Gen. 2. PHALANGIUM, Linn., Fabr., Latr.

OPILIO, Herbst.

Fam. III.

Fam. III. ARANEIDES, Latr.

Oculi sex aut octo. *Anus* papillis texoriis.

Araneides. Latr., Walck.

For the genera of this family see *Latreille's Genera Crustaceorum et Insectorum*; and his *Considérations Générales sur l'Ordre Naturel des Crustacés, &c.*

Having been favoured with some very valuable and highly interesting remarks on the growth of the legs of a species of this family, by that learned and indefatigable naturalist Sir Joseph Banks, I take this opportunity of communicating them to the public.

As Sir J. Banks was writing at Spring Grove, on the 2d of September, one of the web-spinning species, of more than the middle size, passed over some papers on the table, holding a fly in its mouth. Much surprised to see a spider of this description walking about with its prey, and struck with somewhat unusual in the gait of the animal, he caught it, and placed it in a glass for examination; when instead of eight, he perceived that it had but three legs, which accounted for the inability of the creature to spin its web. But the curious circumstance of its having changed its usual œconomy, and having become a hunting instead of a spinning one, as well as a wish to learn whether its legs would be renewed, induced him to keep the animal in the glass, from whence it could not escape, and to observe its conduct.

On the following morning the animal ate two flies given to it, by sucking out the juices, but left the carcasses whole. Two or three days after it devoured the body and head of a fly, leaving only the wings and legs. After this time it sometimes sucked and sometimes ate the fly given it. This probably depended on the
state

state of the fly. At first it consumed two flies in a day, afterwards not more than one in two days. Its excrement, which it voided from the extremity of the abdomen, was at first of a milky-white colour; but afterwards the white had a black spot in the centre, of a more solid appearance than the surrounding fluid.

Soon after its confinement it attempted to form a web on the side of the vessel, but performed the business very slowly and clumsily, from the want of the proper number of legs. In about a fortnight it had completed a very small web, upon which it generally sat.

A month after having been caught, it shed its skin, leaving the slough hanging on the web. After this change five new legs appeared, not half as long as the other three legs, and of very little use to the animal in walking. These new members, however, extended themselves a little in about three days, and became half as long as the old ones: the web was now increased, and the animal continued almost immoveably sitting upon it in the day-time, unless drawn from it or attracted by a fly thrown to it as its usual provision.

Twenty-nine days afterwards it again lost its skin, leaving the slough hanging in the web, in front of a hollow cell it had woven so as to prevent it from being completely seen when lodged in it: the legs were now longer than before the change of skin, and they grew somewhat longer still in three or four days, but did not attain the size of the old legs.

The animal now increased its web, and, being put into a small bowl as a more commodious residence, soon renewed a better web than the first. In this state it was left on the 1st of November, in the hope of being found alive in the next summer, when flies re-appear, and being subjected to further observations.

On observing this animal, it appeared to this acute naturalist, that

that those organs called palpi were used by the animal in grasping and changing the position of its food whilst applied to the action of the mandibules, serving in fact the purposes of hands. Hence it occurred to Sir Joseph Banks that these parts were improperly named, and that they were really similar in function to the claws of scorpions; which opinion is firmly supported by analogy, as shall on some future occasion be shown, when the subject has undergone further examination.

Clerk calls the *palpi*, brachia, and asserts that they contain the organs of generation; an opinion entertained also by Linné, who says "*Penes in palpis gerunt*;" but, as Sir J. Banks observes, this opinion is no where supported by a statement of facts, or of anatomical examination. That the palpi of all male spiders are clavate at their extremities, every naturalist well knows; but if they really contain the sexual organs of the male, it is a circumstance of a most curious nature, and well worth the attentive examination of the physiologist; and we shall feel much obliged to any naturalist who can give any information as to the truth or falsity of this anomalous statement.

Ordo IV. MONOMEROSOMATA.

SECTIO I.

Pedes ambulatorii.

Fam. I. TROMBIDIDES.

Os mandibulis instructum. Palpi porrecti ad apicem appendice mobili instructi.

Stirps 1.

Oculi duo in pedunculum inserti. Corpus lineâ transversâ quasi bipartitum, parte anticâ os, oculos, pedesque quatuor anticos gerente.

Gen. 1. TROMBIDIUM, *Fabr.*, &c.*Pedes octo.*

Gen. 2. OCYPETE.

*Pedes sex.*Spec. 1. *Ocypete rubra.*

O. corpore rubro, dorso pilis longis raris pedibusque pilis brevibus plurimis rufo-cinerascentibus obtectis, oculis nigro-fuscis.

Habitat in Tipularidibus frequentissimè.

I have taken no less than sixteen specimens of this animal from one gnat.

Stirps 2.

Oculi sessiles. Corpus lineâ transversâ haud impressum.

Gen. 3. ERYTHREUS, *Latr.*

Fam. II. GAMMASIDES.

Os mandibulis instructum. Palpi porrecti simplices.

Gen. 4. GAMMASUS, *Latr.*

Fam. III. ACARIDES.

Os mandibulis instructum. Palpi simplices brevissimi haud porrecti.

Gen. 5. ORIBITA, *Latr.*

Corpus coriaceum.

Gen. 6. ACARUS, *Linn., Latr.*

Corpus molle.

Fam. IV. IXODIDES.

Os rostro instructum. Oculi absconditi aut obscuri.

Stirps 1.

Stirps 1.

Rostrum et palpi exerti.

Gen. 6. ARGAS, Latr.

Gen. 7. IXODES, Latr.

The following species (five of which are new) were described from living specimens.

Spec. 1. *Ixodes plumbeus*.

Ix. scuto cordiformi, rostro cum vaginâ pedibusque pallidè ferrugineis, abdomine plumbeo.

Long. Corp. $\frac{1}{4}$ unc.

Habitat in corpore et nido Hirundinis ripariæ.

Rostrum et vagina breves, pallidè ferrugineæ. Scutum parvum subrugulosum ferruginatum, cordiforme, margine antico angustè pallido. Coxæ pedumque articuli pallidi.

Spec. 2. *Ixodes hexagonus*.

Ix. scuto obscurè hexagono cum vaginâ pedibusque ferrugineis ; abdomine testaceo-albido aut subplumbeo-pallido.

Long. Corp. 5 lin.

Habitat in Erinaceo europæo, gluteis tenaciter adhærens.

Rostrum pallidum. Vagina ferruginea, apice pallida. Clypeus fusco-ferrugineus utrinque triangulatim excavatus. Scutum saturatè ferrugineum, punctatum, lineolis duabus utrinque impressis quæ ultra medium paululum prodeunt. Pedes ferruginei, articulis apicibusque pallidis ; coxæ pallidiores.

Spec. 3. *Ixodes ricinus*.

Ix. scuto rotundo minore cum vaginâ pedibusque fuscis, abdomine majore colore variante.

Acarus ricinus. Linn., Fabr.

Ixodes ricinus. Latr.

Long. Corp. $\frac{1}{2}$ unc.

Habitat in canibus, arctè se affigens.

Rostrum pallide ferrugineum. Vagina ferrugineo-fusca. Clypeus utrinque lineolâ transversâ excavatâ. Scutum fuscum, rotundatum, punctatum, utrinque lineolis duabus impressis, unâ a margine antico ad medium, alterâ internâ ultra medium tendentibus. Pedes fusci, articulis apiceque pallidis.

Spec. 4. *Ixodes megathyreus*.

Ix. scuto majore obovato cum vaginâ pedibusque fuscis, abdomine rufescente.

Long. Corp. vix $\frac{1}{4}$ unc.

Habitat in canibus et in Erinaceo europæo cum præcedente frequentissimè, cujus forte mas.

Rostrum pallidè ferrugineum. Vagina fusca. Clypeus utrinque puncto transverso, excavato. Scutum majus punctatum, fuscum, anticè submarginatum, utrinque lineolis duabus impressis quæ ultra medium tendunt. Pedes fusci, apice articulisque pallidis.

Spec. 5. *Ixodes autumnalis*.

Ix. scuto ovato-subhexagono subferrugineo-fusco, vaginâ pedibusque ferrugineis: articulis albidis.

Habitat in canibus (præcipuè in illis Anglicè *Pointers* dictis) tempore autumnali, rariùs.

Vagina ferruginea, ferrugineo-fusca marginata. Clypeus utrinque excavatus. Scutum subferrugineo-fuscum. Pedes ferruginei, articulis pallidis, albidis, internè et externè subfusci. Abdomen plumbeum, lineis tribus obscurioribus impressis. Tarsi pallidi, albidì, articulis saturatoribus.

Spec. 6.

Spec. 6. *Ixodes Pari.*

Ix. scuto elongato-subhexagono fusco : disco subferrugineo-fusco, rostro ferrugineo-fusco, vaginâ fuscâ, pedibus fuscis articulis dilutioribus et albidis.

Habitat in *Paro* majore. Tempore autumnali, vernali.

Rostrum ferrugineo-fuscum. Vagina fusca. Clypeus utrinque obscurissimè subexcavatus. Scutum elongato-subhexagonum anticè angustius, disco pallidiore. Pedes fusci, articulis pallidis et albidis ; tibiæ articulis extimis ad apicem subferrugineis ; tarsi albidi, articulis obscurè subfuscis.

The *Acarus* mentioned by Montagu in his Paper on Bats. (*Trans. Linn. Soc. vol. ix.*) belongs to this genus.

Stirps 2.

Rostrum et palpi absconditi.

Gen. 8. *UROPODA*, Latr.

Fam. V. *CHEYLETIDES*.

Os rostro instructum. *Oculi* distincti.

This tribe still requires to be examined ; it contains the genera 9. *Cheyletus*, 10. *Smaris*, 11. *Bdella*, and 12. *Sarcoptes* of Latreille.

SECTION II.

Pedes natatorii.

Fam. I. *EYLAIDES*.

Os mandibulis instructum.

Gen. 13. *EYLAIS*, Latr.

Fam. II. *HYDRACHNIDES*.

Os mandibulis nullis.

Gen. 14.

Gen. 14. HYDRACHNA, Müll., Latr.

Palpi porrecti, appendice mobili instructi.

Gen. 15. LIMNOCHARES, Latr.

Palpi incurvati, simplices.

Subclassis II. NOTOSTOMATA.

To this subclass belongs the genus *Nycteribia* of Latreille and Montagu, which I suspect will be found to constitute two very distinct genera.