PROCEEDINGS

OF THE

ACADEMY OF NATURAL SCIENCES

OF

PHILADELPHIA.

1879.

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ACADEMY OF NATURAL SCIENCES,
S. W. Corner Nineteenth and Race Streets.
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EDWARD J. NOLAN,
Recording Secretary.

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CONTENTS.

COLLINS, PRINTER.

ON A COLLECTION OF CRUSTACEA FROM VIRGINIA, NORTH CAROLINA, AND FLORIDA, WITH A REVISION OF THE GENERA OF CRANGONIDÆ AND PALÆMONIDÆ.

BY J. S. KINGSLEY.

The specimens enumerated below were collected, with a few exceptions, by Prof. H. E. Webster, of Union College, at Northampton County, Virginia (eastern shore, Atlantic side), beach of Chesapeake Bay, opposite Fort Monroe, Va., in the vicinity of Beaufort, N. C., and Marcou Pass, Florida Bay, Harbor Key, Plantation Key, and Key West, Southern Florida, and Oyster Bay, Charlotte Harbor, Sarasota Bay and Little Sarasota Bay, on the west coast of Florida. I have endeavored to indicate to a certain extent the geographical distribution of the species by giving, in most instances, a list of localities from which specimens have been reported, with the authority for the statement. In cases where I have personally examined specimens, I have placed an exclamation mark (!) after the locality followed by the name of the collector. The arrangement followed in the Maioidea is that of Miers (Jour. Linn. Soc'y, xiv. pp. 634–673, 1879). In the remaining groups of the Brachyura, mainly that of Dana, the Anomura, according to Stimpson (Proc. Acad. Nat. Sci. Philadelphia, 1858, pp. 225–238), while the order of the Macrura is essentially that of Dana. A short notice of some of the new forms will be found in the American Naturalist, vol. xiii. p. 584, September, 1879.

Order DECAPODA.

Sub-Order MAIOIDEA *vel* OXYRHYNCHA.

Family **INACHIDÆ** Miers.

Sub-Family **Leptopodiinæ** Miers.

Genus **LEPTOPODIA** Leach.

Leptopodia sagittaria Leach.

Cancer sagittarius Fabr., Ent. Syst., ii. p. 442.
Inachus sagittarius Fabr., Suppl. Ent. Syst., p. 359.
Macropus sagittarius Latreille, Hist. Crust. et Insects, ii p. 112.
Leptopodia sagittaria Leach, Zool. Misc., ii. pl. lxvii.

Leptopodia ornata Guilding, Trans. Linn. Soc'y London, xiv. p. 335 (1823).

Leptopodia lanceolata Brullé in Webb and Berthelot's Hist. Canaries, pl. i. (1836–1844).

Five specimens were collected at Sarasota Bay, Fla. This species has quite an extended range in the tropics. Stimpson reports it from the Florida Reefs and Madeira Is.; von Martens from Cuba; Guadeloupe (Latr., Martens, and Desbonne), Gulf of Mexico and Antilles (Edw. and Gibbes), Canary Is. (Brullé), Cayenne and Bahia, Brazil (A. M. Edw.). Alphonse Milne Edwards maintains the identity of *Leptopodia debilis* Smith[1] with this species. If it prove identical, the following localities on the west coast of America will have to be added to the list: Valparaiso (Bell, Edw., and Lucas), Panama (Smith), Realijo, west coast of Nicaragua! (McNiel).

I find among the Guerin collection in the Museum of the Academy of Natural Sciences of Philadelphia, a specimen labelled "*Leptopodia vittata* Guer., Senegal." I have not been able to find any description of this species under that name, and possibly it was a MS. one. However I am unable to separate it from Floridan forms.

Genus **METOPORHAPIS** Stm.

Metoporhapis calcarata Stm.

Leptopodia calcarata Say, Journ. Acad. Phila., i. p. 445. Edw., Hist. Crust., i. p. 276.

Metoporhapis calcarata Stm., Ann. Lyc., vii. p. 198.

Nine specimens of this rare species were collected at Sarasota Bay and one, young, at Charlotte Harbor. The other localities are Beaufort, N. C. (Stm.); Charleston, S. C. (Say, Edwards, Gibbes).

Sub-Family **Achæinæ**.

Genus **CORYRHYNCHUS** Kingsley. (*Podonema* Stm., præoc.)

Coryrhynchus riisei Kingsley.

Podochela riisei Stm., Ann. Lyc., vii. p. 196, pl. ii. f. 1.

Podonema riisei Stm., B. M. C. Z., ii. p. 126.

Coryrhynchus riisei Kingsley, Am. Naturalist, xiii. p. 585.

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[1] *Leptopodia sagittaria* Bell; Edw. et Lucas in D'Orbigny, Voyage dans l'Amérique Meridionale, p. 3, pl. iv. f. 3.

Leptopodia debilis Smith, Second and Third Report, Peabody Acad. Sci., p. 87.

Specimens were collected at Sarasota Bay. Stimpson had it from St. Thomas and Tortugas. I have seen specimens from Key West (A. S. Packard, Jr.).

Sub-Family **Inachinæ** Miers.

Genus **CHORINUS** Leach.

Chorinus heros Leach.

Cancer heros Herbst, Krabben und Krebse, pl. 42, f. 1.
Chorinus heros Leach MS., M. Edw., Crust., i. p. 315. Von Martens, Arch. für Naturgesch., xxxviii. p. 80, pl. iv. f. 2.

Specimens in the Museum of the Peabody Academy (Florida, C. J. Maynard) afford the following measurements:—

Length of Carapax.	Breadth.	Ratio.
44 mm.	22.5 mm.	100 : 51
42 mm.	22. mm.	100 : 52

It has been reported from Key West (Gibbes), Cuba (Martens, A. M. Edw.), Antilles (M. Edw.), Martinique and Barbadoes (A. M. Edw.), Guadeloupe (Desbonne).

Sub-Family **Acanthonychinæ** Miers.

Genus **EPIALTUS** Edw

Epialtus longirostris Stm.

Epialtus longirostris Stm., Ann. Lyc., vii. p. 199. A. M. Edw., Crust. Mex. et Ant. Cent., p. 141, pl. xxvii, f. 5.

Two specimens of this species were collected at Sarasota Bay.

Epialtus minimus Lockington (Proc. California Acad., 1877, p. 77) is a closely allied species, and possibly both should be separated from the species with a shorter rostrum.

Key West (Stm.), St. Thomas (Stm., A. M. Edw.).

Family **MAIIDÆ.**

Sub-Family **Maiinæ.**

Genus **PELIA** Bell.

Pelia mutica Stm.

Pisa mutica Gibbes, Proc. Am. Assoc., iii. p. 171.
Pelia mutica Stm., Ann. Lyc., vii. p. 177. A. M. Edw., Crust. Mex. et Am. Cent., p. 73, pl. xvi. f. 2.

Specimens were collected at Northampton Co., Va., Beaufort, N. C., and Florida Bay, Fla. Prof. Gibbes' types were from

Charleston, S. C. Stimpson found it at Martha's Vineyard, Mass. Dr. Packard collected specimens at Key West, Fla.!

FAMILY **PERICERIDÆ** Miers.

Sub-Family **Pericerinæ** Miers.

Genus **LIBINIA** Leach.

Libinia dubia M. Edw.

Libinia dubia M. Edw., Hist. Crust., i. p. 300, pl. xiv bis, f. 2. Streets, Proc. Phila. Acad., 1870, p. 104. A. M. Edw., Crust. Mex. et Am. Cent., p. 129, pl. xviii, f. 5.

Libinia distincta, Guerin in de Sagra's Cuba, p. 12.

Northampton Co., Va., Morehead Depot and Beaufort, N. C., Little Sarasota Bay, Fla. Two males from the latter locality have the following dimensions:—

Length of Carapax.	Breadth.	Ratio.	Length of 2d feet.
73 mm.	65 mm.	100 : 89	143 mm.
64 mm.	50 mm.	100 : 78	104 mm.

Other localities are Cape Cod to Florida (Smith); Nantucket, Mass.! (Packard), Long Island (Streets), Charleston, S. C. (Gibbes), Key West! (Packard).

Libinia emarginata Leach.

Libinia emarginata Leach, Zoological Miscellany, iii. p. 130, pl. 108 (1815).

Libinia canaliculata Say, Jour. Phila. Acad., i. p. 77, pl. iv. f. 1. M. Edw., Hist. Crust., i. p. 300. Dekay, N. Y. Fauna, Crustacea, p. 2, pl. iv. f. 4.

Libinia affinis Randall, Jour. Phila. Acad., viii. p. 107 (1839).

Randall's types show no characters of specific importance separating them from *L. emarginata*, and hence his name will have to pass into synonymy.

Prof. Webster's localities are North Hampton Co., Va.! Sarasota Bay! and Mareou Pass, Fla.! Other stations are Casco and Cape Cod Bays (Smith), Massachusetts Bay! Nantucket, Mass.! (Packard), Key West, west coast of Fla., and Nassau, N. P. (Smith), W. C. North America! (Nuttall).

Genus **MICROPHRYS** M. Edw. (= *Milnia* Stm.)

Microphrys bicornuta.

Pisa bicornuta Latr., Encyc. Method, t. x. p. 141.

Pericera bicorna M. Edw., Hist. Crust., i. p. 337.

Pisa bicorna Gibbes, Proc. Am. Assoc., iii. p. 170.
Pericera bicornata Guerin in Raman de Sagra, p. 12. Von Martens, Arch. für Naturgesch., xxxviii. p. 85, pl. iv. f. 4.
Pericera bicornis Sauss., Crust. Mex et Antilles, p. 12, pt. i. f. 3.
Milnia bicornuta Stm., Ann. Lyc., vii. p. 180.
Microphrys bicornuta A. M. Edw., Mission Sci. Mex. et Am. Cent. Crust., p. 61, pl. xiv. f. 2–4.
Pisa galbica et *Pisa purpurea* Desbonne and Schramm, Crust. Guad., p. 18.
Omalacantha hirsuta Streets, Proc. Phila. Acad., 1871, p. 238.

Specimens were collected at Plantation Keys, Florida Bay, Key West. Specimens from Plantation Keys gave the following measurements:—

Sex.	Length of Carapax.	Breadth.	Ratio.
♂	27.4 mm.	18.7 mm.	100 : 68
♂	31. mm.	21.2 mm.	100 : 68
♀	22. mm.	14.8 mm.	100 : 68

An examination of the single specimen which formed Streets' type of *Omalacantha hirsuta*, which is preserved (in a dry state) in the Museum of the Philadelphia Academy, convinces me that Alphonse Milne Edwards was correct in supposing it a variety of *M. bicornutus*. It stands midway between the typical form (fig. 3, of A. Edw.) and that described by Desbonne as *Pisa galbica* (fig. 4, of A. Edw.). It, however, differs from both in a much smaller chiliped.

Tortugas (Stm.), Key West! (Packard), Antilles (Edwards, Saussure), Bermudas (Smith), Guadeloupe (Desbonne), Mexico (A. M. Edw.), Aspinwall! (McNiel), Desterro, Brazil (A. Edw.), Abrolhos, Brazil (Smith).

Genus **MACROCOLŒMA** Miers.

Macrocœloma trispinosa Miers.

Pisa trispinosa Latreille, Encyc. Method, x. p. 142.
Pericera trispinosa M. Edw., Hist. Crust., i. p. 336. Von Martens, l. c., xxxviii. p. 84, pl. iv. f. 4. Schramm, Rev. et Mag. de Zool. III., ii. p. 342.
Pericera nodipes Desbonne and Schramm, op. cit., p. 15, pl. v. f. 13.
Macrocœloma trispinosa Miers, Jour. Linn. Soc'y, xiv. p. 665.

A single male was collected at Key West. Key West (Gibbes, Stim.), Tortugas (Stm.), Cuba (Martins), Guadeloupe (Desbonne).

Sub-Family **Othoniinæ.**

Genus **OTHONIA,**[1] Bell.

Othonia aculeata Stm.

Hyas aculeatus Gibbes, Proc. Am. Assoc., iii. p. 171.
Othonia aculeata Stm., Ann. Lyc., vii. p. 49. A. M. Edw., Crust. Mex. et Am. Cent., p. 115, pl. xxiv. f. 4.
Othonia lherminieri Desbonne and Schramm, op. cit., p. 20. A. M. Edw., op. cit., p. 116, pl. xxiv. f. 5.
Othonia anisodon von Martens, l. c., xxxviii. p. 83, pl. iv. f. 2.

Professor Webster collected specimens of this species at Sarasota Bay and Harbor Key, Fla. I have examined others in the Museum of the Peabody Academy from Florida (C. J. Maynard) and Key West (A. S. Packard). I can see no constant differences to separate the forms described as *lherminieri* and *anisodon* from typical forms. The teeth of the antero-lateral margin are variable, and differ frequently on the two sides of the same specimen. A young specimen from Sarasota Bay had but four teeth on the anterolateral margin besides the angle of the orbit, but I could find no other differences. In ten specimens the ratio of the length to the breadth ranged from 100 : 81 to 100 : 94, with an average of 100 : 86. Other localities are Key West (Gibbes, Stm.), Tortugas (Stm., A. M. Edw.), Cuba (Martens), Guadeloupe (Desbonne), St. Thomas (A. M. Edw.).

Sub-Family **Mithracinæ.**

Genus **MITHRACULUS** White.

Mithraculus coronatus White.

Cancer coronatus Herbst, pl. xi. f. 63.
Mithraculus coronatus White (pars), List Brit. Mus. Crust., p. 7. A. M. Edw., Crust. Mex. et Am. Cent., p. 105, pl. xx. f. 1.

Five specimens were collected at Key West, from which place I have examined others collected by Dr. A. S. Packard, Jr.

Sex.	Length of Carapax.	Breadth.	Ratio.
♂	14.5 mm.	17.9 mm.	100 : 123
♂	10.8 mm.	14.9 mm.	100 : 138
♀	12. mm.	14.5 mm.	100 : 121

[1] The generic name *Othonia* was used by Johnston (Loudon's Magazine of Natural History, viii. p. 181, 1835) for a genus of worms, but since he has been followed by no other author, with the exception of Gosse, and as his single species has been assigned to the genus *Amphicora*, I refrain from proposing a new name for Bell's genus.

Other localities are Tortugas and Aspinwall, Abrolhos, Brazil (Smith), St. Thomas and Guadeloupe (A. M. Edw.).

Mithraculus sculptus Stm.

Maia sculpta Lamarck, An. sans Vertebres, v. p. 242.
Mithrax sculptus Edw., Mag. de Zool., 1832, pl. v.; Hist. Crust. i. p. 322.
Mithraculus sculptus Stm., Am. Jour. II., xxix. p. 132. A. M. Edw., Crust. Mex. et Am. Cent., p. 105, pl. xx. f. 2.

Specimens were collected at Key West. I have seen others from the same locality collected by Dr. Packard, and from Tortugas (Lieut. Jacques). It has been reported from Antilles (Edw.), Cuba, Surinam, and Venezuela (Martens), Guadeloupe, St. Thomas, Martinique, Woman Key, Fla., and Cumana (A. Edw.).

Mithraculus cinctimanus Stm.

Mithraculus cinctimanus Stm., Am. Jour. Sci. and Arts. II., xxix. p. 132 (sine descr.); Ann. Lyc., vii. p. 186. A. M. Edw., Crust. Mex. et Am. Cent., p. 112, pl. xxiii. f. 3.

The twelve specimens of this species that I have examined agree well with Stimpson's description, except in the coloration of the hands. In these specimens (alcoholic), the hands are white with the basal two-thirds darker; there is also a band of darker on the fingers. Prof. Webster collected specimens at Plantation and Harbor Keys. In the Peabody Academy are specimens from Key West (Packard). Other localities are Tortugas (Stm.), St. Thomas (Stm., A. Edw.), Guadeloupe (A. M. Edw.).

Mithraculus hirsutipes Kingsley. Pl. xiv. f. 1.

Mithraculus hirsutipes Kingsley, Proc. Bost. Soc'y, xx. 147.

Two males were collected at Sarasota Bay, which agree well with my types, except in the comparatively narrower carapax.

Length of Carapax.	Breadth.	Ratio.
11 mm.	11.8 mm.	100 : 107
9 mm.	9.6 mm.	100 : 107

There were two young specimens collected at Sarasota Bay, which may be the young of either of the last two species. They differ, however, from *cinctimanus* in the absence of the large tooth at the base of the dactyli of the cheliped, and in having the ridge running backward from the palatal region broken; from *hirsutipes* in the smoother carapax, more prominent frontal horns, and in having the antennal spines as in *cinctimanus*, etc.

Genus **MITHRAX** Leach.

Mithrax spinosissimus Edw.

Maia spinosissima Lamarck, An. sans Vert., v. p. 241.
Mithrax spinosissimus Edw., Mag. de Zool., ii. pls. ii. and iii.; Hist. Crust., i. p. 321.

Two young specimens from Key West. Other localities are Martinique, Antilles (M. Edw.), Key West (Gibbes), Florida Keys (Stm.), Cuba (Martens), Santa Cruz! (Charles Lawrence), Guadeloupe (Desbonne).

Mithrax hispidus Edw.

Cancer hispidus Herbst, op. cit., pl. xviii. f. 100.
Maia spinicincta Lamarck, op. cit., v. p. 241.
Mithrax spinicincta Desmarest, op. cit., p. 150, pl. xxiii. f. 1, 2.
Mithrax hispidus Edw., Mag. de Zool., ii.; Hist. Crust. i. p. 322. A. M. Edw., Crust. Mex. et Am. Cent., p. 93, pl. xxi. f. 1.
Mithrax sp. Desbonne and Schr., op. cit., p. 8, pl. ii. f. 4 and 5.

Prof. Webster collected a single specimen of this well-known species at Key West. It has been reported from S. Carolina (Gibbes), Key Biscayne (Stm.), Key West! (Packard), Tortugas! (Lieut. Jacques), Antilles (Edw.), Cuba (Martens), Guadeloupe (A. M. Edw., Desbonne, Saussure), Martinique (A. M. Edw.), Abrolhos, Brazil (Smith).

Mithrax pleuracanthus Stm.

Mithrax pleuracanthus Stm., B. M. C. Z., ii. p. 116. A. M. Edw., Crust. Mex. et Am. Cent., p. 93, pl. xx. f. 3.

Specimens were collected at Sarasota Bay. Stimpson's types were from Key West and St. Thomas; Alphonse Milne Edwards had specimens from Martinique and Guadeloupe.

Family **PARTHENOPIDÆ.**

Sub-Family **Parthenopinæ.**

Genus **PLATYLAMBRUS** Stm.

Platylambrus serratus A. M. Edw.

Lambrus serratus Edw., Hist. Crust., i. p. 357 (teste A. M. Edw.).
Lambrus crenulatus Saussure, l. c., p. 13, pl. i. f. 4.
Platylambrus crenulatus Stm., B. M. C. Z., ii. p. 129.
Platylambrus serratus A. M. Edw., op. cit., p. 156, pl. xxx. f. 1.

A female was collected at Charlotte Harbor. (?) Indian Ocean (Edw.), Antilles (Saussure), Loggerhead Key and Tortugas (Stm.),

Cuba (von Martens), Vera Cruz (A. M. Edw.), Guadeloupe (Desbonne and A. M. Edw.).

M. Alphonse Milne Edwards considers this the same as the *Lambrus serratus* described by H. Milne Edwards, and the description applies well to the specimen now before me. Milne Edwards, Sr., gives the Indian Ocean as the habitat of *L. serratus*, and Adams and White (Voyage of the Samarang, Crustacea, p. 30, 1841) report it from the Philippine Islands.

Sub-Family **Cryptopodiinæ**.

Genus **HETEROCRYPTA** Stm.

Heterocrypta granulata Stm.

Cryptopodia granulata Gibbes, Proc. Am. Assoc., iii. p. 173; Proc. Elliot Soc'y, i. p. 36 (fig.).

Heterocrypta granulata Stm., Ann. Lyc., x. p. 102. A. M. Edw., Crust. Mex. et Am. Cent., p. 186, pl. xxix. f. 4.

Specimens were collected at Northampton Co., Va.; near Piver's Island, Beaufort, N. C., Florida Bay, and Sarasota Bay. Fort Macon! (Packard), Charleston, S. C. (Gibbes), St. Thomas (Stm., A. M. Edw.).

CANCROIDEA.

Family **CANCRIDÆ**.

Sub-Family **Cancrinæ**.

Genus **CANCER** Leach (restr.).

Cancer irroratus Say.

Cancer irroratus Say, l. c., i. p. 59 (pars), pl. iv. f. 2.

Platycarcinus irroratus Edw., Hist. Crust., i. p. 414.

Cancer sayi Gould, Invert. Mass., p. 323.

Platycarcinus sayi Dekay, N. Y. Fauna Crust., p. 7.

Platycarcinus irroratus Dekay, op. cit., pl. ii. f. 2.

Cancer borealis Packard, Memoirs Bost. Soc'y, i. p. 303.

A young specimen was taken at Northampton Co., Va. It was rather more advanced than the form described by Prof. Smith (Fish Comm., p. 533); the length was 5 mm., breadth 6 mm.; the front is more produced, and the teeth of the anterolateral margin are more irregular than in the adult, but not to such an extent as in the younger form. I have not thought it worth while to enumerate all the reported localities for this species. I have examined specimens from Labrador (Packard), Eastport, Me. (Hyatt),

Casco Bay (Cooke), Is. of Shoals (R. H. Wheatland), Salem, Mass., Nantucket (Packard), Narragansett Bay, R. I., So. Shore, Long Island. Dr. Coues reports it from Fort Macon, Prof. Gibbes from Charleston Harbor, S. C., and Mr. Faxon writes me that there are specimens in the Museum of Comparative Zoology, at Cambridge, Mass., from Florida and Hayti (Dr. Weinland). In the Museum of the Peabody Academy of Science, Salem, Mass., is a fossil carapax of this species from the Post Pleiocene deposits of Gardiner, Maine.

Sub-Family **Xanthinæ**.

Genus **ACTÆA** De Haan.

Actæa spinifera, sp. nov.

Closely resembles *A. hirsutissima*, of the eastern seas, as figured and described by Rüppell[1] and Dana.[2] Carapax everywhere above areolate, more prominently so in front. Each areolet with small prominent rounded tubercles, which are covered with numerous stiff hairs, the spaces between the tubercles and between the areolets are smooth and naked; front with two depressed and produced lobes, the margins of which are armed with tuberculiform teeth; orbits with traces of two fissures above, spined above and below. Antero-lateral margins with five subequal teeth separated by rather deep grooves, the first three of which are continued on the under surface of the carapax; the teeth themselves have their margins armed with small spines. The postero lateral margin is strongly concave, as much so as in *A. hirsutissima*. Cheliped stout, of moderate length, inner surface of the joints smooth and naked, meros compressed, upper edge acute and haired, outer surface naked, upper and outer surfaces of carpus and hand with spiniform tubercles and stiff hairs, on the hand these tubercles tend to arrange themselves in rows; fingers short, stout, gaping, acute, black, their tips being white. Meral joints of the ambulatory feet compressed, upper margin acute, and terminating in an acute spine, sides smooth, remaining joints and posterior surface of the meros of the last pair with spines and hairs similar to those on the chelipeds; dactyli terminating in a small acute claw.

[1] Beschreibung und Abbildung von 24 Arten Kurzschwänzigen Krabben * * * des rothen Meeres, Frankfurt, 1830, p. 26, pl. v. f. 6.

[2] U. S. Expl. Exped., p. 164, pl. viii. f. 3.

Abdomen and sternum granulate, the granulations being more prominent on the basal joints of the abdomen.

A single male was collected at Plantation Key, from which I derive the following measurements: Length, 14.2 mm.; breadth, 21 mm.; ratio, 100 : 148. This species is readily separated from all other North American species by the spines on the anterolateral teeth.

Actæa nodosa Stm.

Actæa nodosa Stm., Ann. Lyc., vii. p. 203. A. M. Edw., Nouv. Arch. du Mus , i. p. 266, pl. xvii. f. 6.

A specimen from Plantation Key affords the following measurements: Length, 17.5 mm.; breadth, 23.7 mm.; ratio, 100 : 135.

Tortugas (Stm.), Guadeloupe (Desbonne).

Genus **MENIPPE** De Haan.

Menippe mercenaria Stm.

Cancer mercenaria Say, l. c., i. p. 448.
Cancer (*Xantho*) *mercenaria* Edw., Hist. Crust., i. p. 399.
Pseudocarcinus ocellatus Edw., Hist. Crust., i. p. 409 (?).
Pseudocarcinus mercenaria Gibbes, Proc. Am. Assoc., iii. p. 176.
Menippe mercenaria Stm., Ann. Lyc., vii. p. 53.
Menippe ocellata Von Martens, l. c., xxxviii. p. 87.

Prof. Webster collected specimens of this well-known but synonymically abused species at Beaufort, N. C., Florida Bay, Plantation Key, Charlotte Harbor, Oyster Bay, Little Sarasota and Sarasota Bays.

Other localities are Fort Macon! (Coues, Packard), Charleston, S. C. (Gibbes), Key West! (Packard), Isthmus of Panama (Streets), Cuba (Martens). Mr. Faxon tells me there are specimens in the Museum of Comp. Zoology from Cuba (Poey), and Galveston, Texas (Boll).

Genus **PANOPEUS** M. Edw.

Panopeus herbstii Edw.

Cancer panope Say, Jour. Acad. Nat. Sci. Philadelphia, i. p. 58, pl. iv. f. 5 (nec Herbst).
Panopeus herbstii Edw., Hist. Crust., i. p. 403. Dekay, op. cit., p. 5, pl. ix. f. 26. Smith, Proc. Bost. Soc'y, xii. p. 276.

Occurs in this collection from Northampton Co., Va., Beaufort, N. C., Sarasota, Little Sarasota, Florida, and Oyster Bays, and Charlotte Harbor, Florida. Other localities are Fort Macon, N.

C.! (Packard), Bluffton, S. C.! (Dr. Mellichamp), Key West! (Packard), Aspinwall! (McNiel), Long Island Sound and Bahamas (Smith), Cuba (Martens), Rio Janeiro (Heller). According to Mr. Faxon there are specimens in the Museum of Comparative Zoology from Boston (Gould?, 1853) and Providence River, R. I.

Panopeus packardii Kingsley.

Panopeus packardii Kingsley, Proc. Bost. Soc'y, xx. p. 152.

Specimens occur from Sarasota Bay, Harbor Key, and Charlotte Harbor, Fla. The majority of these specimens have the sinus between the angle of the orbit and the second normal tooth more shallow than did my types, which were from Key West (Packard).

Panopeus texanus Stimpson.

Panopeus texanus Stm., Ann. Lyc., vii. p. 55.
Panopeus sayi Smith, Proc. Bost. Soc'y, xii. p. 284.

Specimens occur in the Union College collection from Northampton Co., Va., Beaufort, N. C., and Sarasota Bay, Fla. I have also seen specimens from Eastham, Mass. (W. C. Fish), Wood's Holl, Mass. (Packard, Verrill), New Haven, Conn. (Yale College). A careful examination of a large series has led me to unite these two forms, as I cannot find constant differences to separate them. There is all variation in the subhepatic tubercle, from one as prominent as typical specimens of *P. herbstii* to complete absence; the form of the anterolateral teeth varies, while the terminal segment of the male abdomen is the same in each form; in some the fingers of both hands were slender, some had them pointed on one hand and excavate on the other, while others had the fingers of both hands excavate. I am the more ready to unite them since Prof. Smith suggests their possible identity.

Panopeus depressus Smith.

Panopeus depressus Smith, Proc. Bost. Soc'y, xii. p. 283; Fish Com., p. 547, pl. i. f. 3.

Specimens occur from Northampton County, Va., Beaufort, N. C., and Charlotte Harbor, Fla. Other localities are Provincetown, Mass. (Smith), New Haven! (Yale College), Maryland! (C. Cooke), West Florida! (Col. Jewett).

Genus **EURYTIUM** Stm.

Eurytium limosum Stm.

Cancer limosus Say, l. c., i. p. 446.
Panopeus limosus Edw., Hist. Crust., i. p. 404.
Eurytium limosum Stm., Ann. Lyc., vii. p. 56.

Prof. Webster collected specimens at Sarasota and Little Sarasota Bay, Fla. Other localities, New York (Dekay), So. Carolina (Gibbes, Stm.), Key West, Fla.! (Packard), Smyrna, Fla. (Gibbes), Key Biscayne, Fla. (Stm.). Mr. Faxon tells me that there are specimens in the Museum of Comparative Zoology from Hayti (Dr. Weinland) and Brazil (Thayer Expedition).

Genus **CHLORODIUS** Leach.

Chlorodius floridanus Gibbes.

Chlorodius floridanus Gibbes, l. c., iii. p. 175.
Leptodius floridanus A. M. Edw., Hist. Crust. Fossiles, i. p. 228.

But a single specimen of this common species was collected by Prof. Webster, at Plantation Key, Fla. I have examined others from Key West! (Packard), Aspinwall! (McNiel), and Abrolhos, Brazil! (Hartt).

Chlorodius longimanus M. Edw.

Chlorodius longimanus M. Edw., Hist. Crust., i. p. 401.

A single specimen was collected at Key West, by Prof. Webster. I have seen others from the same locality collected by Dr. A. S. Packard, which differ from Edwards's description in having the meros of the chelipeds armed with five distant tuberculiform teeth. Edwards's specimens were from Porto Rico.

Chlorodius dispar Stm.

Chlorodius dispar Stm., B. M. C. Z., ii. p. 140.

Eighteen specimens were collected at Key West, and as they show a considerable range of variation, I give a description of a specimen varying most widely from Stimpson's type.

Carapax transversely oval, very broad, smooth, naked; antero-lateral margin almost entire, the three last teeth alone showing, and they but very slightly. Front sinuate, four lobed, resembling that of *Panopeus herbstii*, a straight fringe of hairs above the margin. Orbits entire above and below, the inner inferior angle prominent. Chelipeds long, about equal in length, but differing greatly in diameter, the right being usually the larger. Fingers of the larger about half the length of the palm, short, stout, gaping, with the extremities acute, not at all excavate. Smaller cheliped, with the carpus and propodus polished and deeply punctate. Hand long, no stouter than the preceding joint, subcylindrical, fingers about half as long as the palm, closing completely,

and spoon excavate. Smaller specimens agree perfectly with Stimpson's description, while the smallest specimen has all the antero-lateral teeth obsolete.

Sex.	Length of Carapax.	Breadth.	Ratio.
♂	7.8 mm.	13.2 mm.	100 : 169
♂	3.9 mm.	5.5 mm.	100 : 149

Stimpson's types, two in number, were from Cruz del Padre, Cuba.

Family **ERIPHIDÆ** Dana.

Sub-Family **Oziinæ** Dana.

Genus **HETERACTÆA** Lockington.[1]

In the two species which I have examined the following characters may be noted. Form similar to that of *Pilumnus*, which it closely resembles in the antennæ and external maxillipeds. It, however, differs in the absence of a palatal ridge and in the curious naked crests on the meral joints of the ambulatory feet. The orbits have the external hiatus more or less distinct, and below have two lobes. It forms one of these synthetic forms, which like *Xanthodius*, *Eurytium*, *Eurycarcinus*, *Pilumnopeus*, *Micropanope*, etc., combine the characters of both Cancroid and Eriphioid Crustacea. The type is *Heteractæa lunata*.[2]

Heteractæa ceratopus Kingsley.

Pilumnus ceratopus Stm., Ann. Lyc., vii. p. 215.
Pilumnus sp. Desbonne et Schramm., op. cit., p. 33, pl. iii. f. 9-10.

A male was collected at Key West, Fla. Key Biscayne, Fla. (Stimpson), Guadeloupe (Desbonne).

Genus **PILUMNUS** Leach.

Pilumnus aculeatus M. Edw.

Cancer aculeatus Say, l. c., i. p. 449.
Pilumnus aculeatus Guerin, Iconog. Regne Animal, Crust., pl. iii. f. 2. Edw. Hist. Nat. Crust., i. p. 420. Gray, in Griffith's Cuvier, vol. 13, pl. iv. f. 2, 1833. Martens, l. c., xxxviii. p. 91, pl. iv. f. 6.

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[1] Proceedings of the California Academy of Sciences, vol. vii. p. 97, 1876.

[2] **Heteractæa lunata** Kingsley.

Pilumnus lunatus Edwards et Lucas in D'Orbigny's Voyage dans l'Amérique Meridionale, Crustaces, p. 20, pl. ix. f. 2.
Heteractæa pilosa Lockington, Proc. Cal. Acad., vii. p. 97.

Gulf of California! (Fisher), C. St. Lucas and Central America (Stimpson), Chili (Edw. et Lucas, Nicollet).

Specimens were collected at Sarasota Bay and Marcou Pass.

Pilumnus dasypodus Kingsley.

Pilumnus dasypodus Kingsley, Proc. Bost. Soc'y, xx. p. 155.

Harbor Key and Sarasota Bay, Fla. My types were from Key West.

Pilumnus gemmatus Stm.

Pilumnus gemmatus Stm., Ann. Lyc., vii. p. 214.

Specimens were collected at Plantation and Harbor Keys, Charlotte Harbor, and Florida Bay. I have seen others from Key West (Packard). Stimpson's types were from St. Thomas.

Genus **EUPILUMNUS** (nov.).

Carapax depressed. Basal joints of antennæ as in *Pilumnus*. External maxillipeds with the meral joint short and narrow, it being only about two-thirds as wide as ischial joint, which is short and broad.

Eupilumnus websteri, sp. n., plate xiv. f. 3.

Carapax depressed, nearly flat, regions not indicated, above with a short, sparse pubescence, front slightly arcuate, the margin with fine spiniform teeth. Orbits above smooth, not toothed. External angle spiniform, below with spines near the inner angle. Antero-lateral margin with three prominent spiniform teeth, with smaller ones between them, several small spines on the hepatic region, and one on the branchial behind the lateral teeth. Anterior margin of palate spined. The chelipeds are lacking in the single specimen. Ambulatory feet compressed, spined above, dactyli short, curved, spined below.

Key West, Fla. Length, 6 mm.; breadth, 8.1; ratio, 100 : 135.

Sub-Family **Eriphiinæ** Dana.

Genus **ERIPHIA** Latreille.

Eriphia gonagra M. Edw.

Cancer gonagra Fabr., Suppl. Ent. Syst., p. 337.
Eriphia gonagra Edw., Hist. Crust., i. p. 426, pl. xvi. f. 16, 17.

Specimens were collected at Plantation Key, Fla. Other localities are Key West! (Packard), Tortugas (Stm.), Florida Keys, Bahamas (Smith), Aspinwall! (McNiel), Abrolhos, Brazil! (Hartt), Rio Janeiro (Dana, Heller), Cuba (von Martens), Jamaica et Carolina (Bosc).

Family **PORTUNIDÆ.**

Sub-Family **Lupinæ.**

Genus **ACHELOUS** De Haan, Stm.

Achelous spinimanus De Haan.

Portunus spinimanus Latr., Encyc. Methodique, x. p. 189.
Lupa spinimana Desmarest, op. cit., p. 98. Edw., Hist. Nat. Crust., i. p. 452.
Achelous spinimanus De Haan, Fauna Japonica Crust., p. 8. A. M. Edw., Archives du Museum, x. p. 341, pl. xxxii. f. 1.

Little Sarasota Bay.

Achelous gibbesii Stm.

Lupa gibbesii Stm., Ann. Lyc., vii. p. 57.
Achelous gibbesii Stm., Ann. Lyc., vii. p. 222.
Neptunus gibbesii, A. M. Edw., Nouv. Archives du Museum, x. p. 326, pl. xxxi. f. 1.

Beaufort, N. C.; Oyster Bay and Sarasota Bay, Fla. The range of this species so far as known is included within the limits of the above localities.

Genus **CALLINECTES** Stm.

Callinectes hastatus Ordway.

Lupa hastata Say, l. c., i. p. 65.
Lupa diacantha Dekay, op. cit., p. 10, pl. iii. f. 3.
Callinectes hastatus Ordway, Jour. Bost. Soc'y, vii. p. 568.

Three sterile females were collected at Beaufort, N. C.

Genus **NEPTUNUS** De Haan.

Neptunus sayi Stm.

Portunus pelagicus, Bosc, Hist. Nat. Crust., edit. i. t. i. p. 220, pl. v. f. 3 (teste A. Edw.), edit. ii. t. i. p. 235, pl. v. f. 3 (non Linne).
Lupa pelagica Say, Jour. Acad. Nat. Sci., i. p. 97. Dekay, op. cit., p. 11, pl. vi. f. 8.
Lupa sayi Gibbes, l. c., iii. p. 178. Dana, op. cit., p. 273, pl. xvi. f. 8.
Neptunus sayi Stm., Ann. Lyc., vii. p. 92. A. M. Edw., Arch. du Mus. x. p. 317, pl. xxix. f. 2.

Plantation Key, Fla.

Family **PLATYONICHIDÆ.**

Genus **CARCINUS** Leach.

Carcinus mœnas Leach.

Cancer mœnas Linne, Syst. Nat., edit. xii. p. 1043. Herbst, pl. vii. f. 46.
Portunus mœnas Leach, Edinburg, Encyclopedia, vii. p. 390 (teste Bell).

Carcinus mœnas Leach, op. cit., vii. p. 429 (teste Auct.); Malacos. Podophth. Brit., pl. v. f. 1–4. Dekay, op. cit., p. 8, pl. v. f. 5–6. Alph. M. Edw., Arch. du Mus., x. p. 391.
Cancer granulatus Say, l. c., i. 61.
Carcinus granulatus Smith, Fish Comm., p. 547.

A single male from Northamptom Co., Va. This is the farthest south on the Atlantic coast of the United States from which this species has been reported.

Genus **PLATYONICHUS** Latreille.

Platyonichus ocellatus (Herbst sp.) Latreille.

Portunus pictus Say.

Beach of Chesapeake Bay, opposite Fort Monroe. Mr. James Hector (Trans. New Zealand Inst., ix. p. 473, pl. xxviii. f. 1, 1877) reports this species from Wellington, New Zealand.

OCYPODOIDEA.

Family **CARCINOPLACIDÆ.**

Genus **EURYPLAX.**

Euryplax nitida Stm.

Euryplax nitida Stm., Ann. Lyc., vii. p. 60; B. M. C. Z., ii. p. 150. Smith, Trans. Conn. Acad., ii. p. 162.

Specimens collected by Prof. Webster, at Sarasota Bay, Fla., have the front slightly arcuate with a slight sinus at the middle, but not emarginate. The carpi of the chelipeds are not flattened. Otherwise the specimens agree perfectly with the descriptions quoted above. Proportions of a male: length, 14.7 mm.; breadth, 23.5 mm.; ratio, 100 : 160. There is a single specimen in the Museum of the Peabody Academy of Science, which came with *Platyonichus ocellatus*, *Squilla empusa*, and two or three other species with the label New Orleans. Other localities are Florida Keys and St. Thomas (Stm.), Egmont Key, Fla. (Smith).

Family **OCYPODIDÆ.**

Genus **GELASIMUS** Latr.

Gelasimus minax Le Conte.

Northampton Co., Va.

Gelasimus pugillator (Bose sp.) Latreille.

Beaufort, N. C., and Sarasota Bay, Fla.

Gelasimus vocator (Herbst) Martens.

Northampton Co., Virginia; Fort Macon, N. C., and Sarasota Bay, Fla.

Genus **OCYPODA.**

Ocypoda arenaria Say.

Beach of Chesapeake Bay, opposite Fortress Monroe, and Sarasota Bay, Florida.

FAMILY **GRAPSIDÆ.**

Sub-Family **Grapsinæ.**

Genus **GONIOPSIS** De Haan, Edw.

Goniopsis cruentatus De Haan.

Cancer ruricola De Geer, Mémoires pour servir à l'Histoire des Insectes, vii. p. 417, pl. xxv. (non Linne).
Grapsus cruentatus Latreille, Hist. Crust. et Insects, vi. p. 70. Edw., Hist. Crust., ii. p. 85.
Grapsus longipes Randall, l. c., vii. p. 125.
Goniopsis cruentatus De Haan, Fauna Japonica, p. 33. Edw., Am. Sci. Nat. III., xx. p. 164, pl. vii. f. 2.
Goniopsis ruricola White, List Crust. Brit. Museum, p. 40. Saussure, op. cit., p. 30, pl. ii. f. 18.
Goniograpsus cruentatus Dana, U. S. Expl. Exped. Crust., p. 342, pl. xxi. f. 7.
Grapsus (*Goniopsis*) *cruentatus* von Martens, l. c., xxxviii. p. 105.

A male was collected at Sarasota Bay. Other localities are Florida Keys (Smith), Cuba (Saussure, Martens), Antilles, Brazil (M. Edw.), Guadeloupe (Desbonne), Surinam (Randall), Venezuela, Liberia (Martens), Abrolhos, Brazil (Smith), Rio Janeiro (Dana, Heller), ? Gulf of Fonseca, west coast of Nicaragua (Smith).

Genus **PACHYGRAPSUS** Randall.

Pachygrapsus transversus Gibbes.

Grapsus transversus Gibbes, l. c., iii. p. 181.
Pachygrapsus transversus Gibbes, l. c., p. 182. Kingsley, Proc. Bost. Soc'y, xx. p. 158.
Metopograpsus dubius Saussure, op. cit., p. 29, pl. ii. f. 16.
Metopograpsus miniatus Saussure, op cit., p. 28, pl. ii. f. 17.
Grapsus (*Leptograpsus*) *rugulosus* Martens, l. c., xxxviii. p. 108.
Grapsus (*Leptograpsus*) *miniatus* Martens, l. c., xxxviii. p. 109.

Sarasota Bay. Other localities are Florida Keys and Texas (Stm.), Key West! (Packard, Gibbes), St. Thomas (Saussure),

Cuba (Martens), Gulf of Fonseca, west coast Nicaragua! (McNiel), Panama (Smith).

Genus **GRAPSUS** Lamarck.

Grapsus maculatus Edw.

Pagurus maculatus Catesby, Natural History of the Carolinas, ii. pl. xxxvi. f. 1. 2d edit., l. c.
Cancer grapsus Fabr., Suppl., p. 342.
Grapsus pictus Latr., Hist. Crust. et Ins., vi. p 69, pl. 47, f. 2.
Goniopsis pictus De Haan, Fauna Japonica, Crustacea, p. 33 (1833).
Grapsus maculatus M. Edw., Am. Sci. Nat. III., xx. p. 167, pl. vi. f. 6.
Grapsus altifrons Stm., Ann. Lyc., vii. p. 230.

Specimens were collected at Plantation Key, Fla. According to Martens, the *Cancer tenuicristata* of Herbst, on examination of his types, proves to be *Grapsus rudis*, Edw., from the East Indies.

Santa Cruz! (Charles, Lawrence), Cuba (Saussure, Martens), Guadeloupe (Desbonne), Tortugas (Stm.), Madiera, Cape Verdes, Peru, Paumotu Is., Sandwich Is. (Dana), C. St. Lucas (Stm.), Mazatlan (Saussure), Gallapagos Is. (Miers), Chili (Nicolet), Tahiti! (A. Garrett).

Genus **PLAGUSIA** Latreille, Miers.

The species of this genus have been recently revised by Mr. Miers (Ann. and Mag. Nat. Hist., Feb. 1878, pp. 147–154).

Plagusia depressa Say.

?Cancer depressus Fabr.; *?Cancer squamosus* Herbst; *Plagusia sayi* Dekay; *Plagusia squamosa* Latr.; *Plagusia gracilis* Sauss.

A single specimen (length 42.2, breadth 45.2 mm.) was found at Plantation Key.

Sub-Family **Sesarminæ**.

Genus **SESARMA** Say.

Sesarma cinerea Say.

Grapsus cinereus Bosc, op. cit., edit. 1, p. 204, pl. v. f. 1 (teste auct.).
Sesarma cinerea, Say, l. c., i. p. 442 (non *Grapsus cinereus*, p. 99), Edw., Hist. Crust., ii. p. 75.

Northampton Co., Va., Beaufort, N. C., Sarasota and Little Sarasota Bays, Florida.

Sesarma reticulata Say.

Sesarma reticulata Say, l. c., i. pp. 73, 76, 442, pl. iv. f. 6; Edw., Ann. Sci. Nat., III. xx. 182.
Sesarma cinerea Dekay, op. cit., p. 15.

Northampton Co., Va., and Little Sarasota Bay, Fla.

Genus **ARATUS.**

Aratus pisonii M. Edw.

Sesarma pisonii M. Edw., Hist. Crust., ii. p. 76, pl. xix. f. 4–6.
Aratus pisonii M. Edw., Ann. Sci. Nat., II. xx. p. 187; Stm., Ann. Lyc., vii. p. 232.
Sesarma (*Aratus*) *pisonis* von Martens, Wieg. Arch., xxxv. p. 12, pl. 1, f. 4 (1869); id., xxxviii. p. 111.

Specimens were collected at Sarasota Bay, Florida. It ranges south to Rio Janeiro (Heller). I am unable to separate specimens from the west coast of Nicaragua (McNeil) from the east coast forms.

FAMILY **PINNOTHERIDÆ.**

Genus **PINNOTHERES.**

Pinnotheres ostreum Say.

Pinnotheres ostreum Say, l. c., i. p. 67, pl. iv. f. 5.

Beaufort, N. C.

Pinnotheres maculatus.

Pinnotheres maculatus Say, l. c., i. p. 450.
Pinnotheres ostreum Smith, Fish Commisson, pl. i. f. 2.

Beaufort and Morehead Depot, N. C.

Genus **PINNIXA** White.

Pinnixa cylindrica White.

Pinnotheres cylindrica Say, l. c., i. p. 452.
Pinnixa cylindrica White, List Crust. Brit. Mus., p. 33; Ann. and Mag. Nat. Hist., xviii. p. 177; Smith, Fish Comm., p. 546, pl. 1, f. i.
Pinnixa lævigata Stm., Ann. Lyc., vii. p. 68.

Specimens were collected at Florida and Sarasota Bays, Fla. It has previously been known from Vineyard Sound (Smith) to South Carolina (Stimp.).

Pinnixa chætopterana Stm.

Pinnixa cylindrica Stm., Ann. Lyc., vii. p. 68 (non Say).
Pinnixa chætopterana Stm., Ann. Lyc., vii. p. 235.

Eastern shore Virginia, Beaufort, N. C., and Florida Bay, Fla.

LEUCOSOIDEA.

FAMILY **CALAPPIDÆ.**

Genus **CALAPPA** Fabr.

Calappa marmorata Fabr.

Calappa marmorata Fabr., Suppl. Ent. Syst. p. 346; M. Edw., Hist. Crust. ii. p. 104.

Prof. Webster collected specimens at Beaufort, N. C., Key West, and Sarasota Bay, Fla. Other localities are Antilles (Auct.), Pensacola, Tortugas, and Key West (Stm.), Charleston, S. C. (Gibbes), Cuba (Martens), Bermudas (Goode), Guadeloupe (Desborne). Mr. Faxon tells me he has taken specimens at Newport, R. I.

Family **MATUTIDÆ.**

Genus **HEPATUS** Latreille.

Hepatus decorus Gibbes.

Cancer decorus Harbst, op. cit., p. 154, pl. xxxvii. f. 6.
Hepatus decorus Gibbes, Proc. Am. Assoc., iii. p. 183.
Hepatus vanbenedeni Herklots, Bidjr. tot de Dierkunde, I. p. 35, pl. 1, f. 1 (1852).

Specimens were collected at Beaufort, N. C., Charlotte Harbor, Marcou Pass, and Sarasota Bay, Fla. Dr. Stimpson suggests a comparison of the young of this species with *H. tuberculatus* Saussure, but, on examination, the difference is as great as in the adult.

Family **LEUCOSIDÆ.**

Sub-Family **Iliinæ.**

Genus **PERSEPHONE.**

Persephone punctata Stm.

Cancer punctata Brown, Natural History of Jamaica, pl. 42, f. 3.
Persephone latreillei et P. lamarckii Leach, Zool. Mis., iii. p. 22.
Guaia punctata Edw., Hist. Crust., ii. p. 127.
Persephone guaia Bell, Trans. Linn. Soc'y, xx. p. 292.
Persephone punctata Stm., Ann. N. Y. Lyc., vii. p. 70.

Beaufort, N. C., Sarasota and Florida Bays, Fla.

Sub-Family **Ebaliinæ.**

Genus **LITHADIA.**

Lithadia cariosa Stm.

Lithadia cariosa Stm., Ann. Lyc., vii. p. 238.

Beaufort, N. C., Harbor Key, Fla., and Sarasota Bay, Florida. The Floridan forms have a less irregular carapax, but otherwise I can detect no difference.

Lithadia lacunosa, sp. n.

Carapax convex, with small circular depressions, similar in form and appearance to those on a lady's thimble. Closely re-

sembling *L. cariosa* in form. Inner portions of branchial and cardiac regions moderately protuberant. Hepatic region but slightly excavate, the ridge crossing it being broad, low, and rounded, otherwise as in *L. cariosa*. Front elevated, and connected with cardiac region by a broad rounded ridge (in *cariosa* this ridge is narrow and more abrupt); a small tooth on the postero-lateral margin. The sulcus separating the cardiac from the branchial region is well marked, but not so much as in *cariosa*. Chelipeds with small tubercles. Abdomen of the male with a strong tooth directed backward, arising from the proximal margin of the penult joint.

A male from Sarasota Bay gives the following measurements: Length of carapax 9.7 mm., breadth 11.1 mm., ratio 100 : 135.

This species differs from *cariosa* in the broader carapax, the ornamentation, and more even surface; from *pontifera* in lacking the "bridged" fossæ between the cardiac and brachial regions; from *cadaverosa* in more even carapax and ornamentation, and in having but one tooth on the antero-lateral margin; from *cubensia* in having the meros of the chelipeds subcylindrical, and not expanded behind.

DROMIOIDEA.

Family **DROMIIDÆ.**

Genus **DROMIDIA** Stm.

Dromidia antillensis Stm.

Dromidia antillensis Stm., Proc. Phila. Acad., 1858, p. 225; Ann. Lyc. vii. p. 71.

A single specimen from Key West. Other localities are Tortugas and Key Biscayne (Stm.), St. Thomas, and Abrolhos, Brazil (Smith).

Genus **HYPOCONCHA** Guerin.

Hypoconcha arcuata Stm.

Hypoconcha arcuata Stm., Proc. Phila. Acad., 1858, p. 226; Ann. Lyc., vii. p. 72.

Professor Webster collected specimens at Florida and Sarasota Bays. I have seen others from Key West (A. S. Packard, Jr.). Stimpson had specimens from South Carolina and St. Thomas. It seems to me that both Guerin and Stimpson are right in explaining the manner in which this crab holds the protecting shell,

that the two posterior pairs of feet and the projecting abdomen each do their part.

PORCELLANOIDEA.

FAMILY **POCELLANIDÆ.**

Genus **PETROLISTHES** Stm.[1]

Petrolisthes sexpinosus Stm.

Porcellana galathina Say, l. c., i. p. 458? (non Bosc).
Porcellana sexspinosa Gibbes, Proc. Am. Assoc., iii. p. 190.
Petrolisthes sexpinosus Stm., Proc. Phila. Acad., 1858, p. 227.

Professor Webster collected specimens at Key West, Harbor Key, Florida Bay, and Sarasota Bay.

I am inclined to follow Stimpson in supposing that this is not the *Porcellana galathina* of Bosc, as it differs considerably from his figure, which represents a species with smaller hands, shorter fingers, the ridges of the carapax different, while the carapax itself is nothing like that of this species. This species has been reported from Georgia and Florida (Say), South Carolina and Key West (Gibbes) and Florida Keys (Stm.).

Petrolisthes jugosus Streets.

Petrolisthes jugosus Streets, l. c., 1872, p. 134.

I refer, with a doubt, a single specimen collected at Key West to this species, as it presents the following points of difference from Dr. Streets' description: The lobes of the front are indistinct. (The right hand is missing.) The posterior border of the hand is not pubescent, and there is no trace of a furrow on the upper portion of the hand; the anterior margin of the carpus has four teeth. In every other respect it agrees perfectly. Dr. Streets' specimens came from the Island of St. Martins, W. I.

[1] I would here straighten the synonymy of two species of this genus—

Petrolisthes danæ.

Porcellana bosii Dana, U. S. Expl. Exped. Crust., p. 421, pl. xxvi. f. 2 (non Savigny).
Porcellana danæ Gibbes, Proc. Elliot Soc'y, i. p. 11.
Petrolisthes braziliensis Smith, Trans. Conn. Acad., ii. p. 38.
Rio Janeiro (Dana).

Petrolisthes Helleri.

Porcellana danæ Heller, Reise der Osterreich Fregatte Novara, Crustaceen, p. 74 (non Gibbes).
Nicobars (Heller).

Petrolisthes armatus Stm.

Porcellana armata Gibbes, Proc. Am. Assoc., iii. p. 90; Proc. Elliot Soc'y, i. f. 11, pl. i. f. 4; Martens' Wieg. Arch., xxxviii. p. 121, pl. v. f. 11.

Petrolisthes armatus Stm., Proc. Phila. Acad., 1858, p. 227, vii. p. 73.

Specimens were collected at Sarasota, Charlotte, and Florida Bays. Other localities are Key West! (Packard), Florida (Gibbes), Aspinwall, St. Thomas, and Panama (Stm.), Cuba (Martens), Fonseca, west coast Nicaragua! (McNiel), Gulf of California (Lockington).

Dr. von Martens quotes *P. galathina* Bosc as a synonym of this species, which is surely erroneous.

Genus **PISOSOMA** Stm.

Pisosoma glabra, sp. n. Plate xiv. fig. 2.

Carapax convex, a little broader than long, polished, microscopically punctate. Front advanced, broad, three lobed, the median lobe being slightly more advanced than the lateral ones. Antennæ about twice as long as the carapax, the basal joints similar to those of *Petrolisthes*. Chelipeds short, stout; meros subcubical, its anterior margin distally armed with an acute tooth directed toward the carpus; carpus stout, broader than long, its anterior margin expanded, with a strong tooth on the proximal portion, the remainder with rounded teeth, the posterior portion of the upper surface is roughened, and the posterior margin distally armed with minute rounded teeth. Hand twice as long as broad, microscopically granulate, a shallow sulcus on the posterior portion of the palm producing a cristate appearance of the posterior margin; fingers not so long as palm, completely closing, the dactylus with a shallow groove above. Beneath, the chelipeds are smooth and polished. Ambulatory feet sub-cylindrical, hairy above. This species differs from Stimpson's description of his imperfect specimen of *P. riisei* in the simple, not bimarginate character of the front, etc.

Five specimens were collected at Key West.

Length of carapax 4.1 mm., breadth 4.5 mm., ratio 100 : 110.

Genus **PORCELLANA** Lamarck, Stimpson.

Porcellana pilosa Edw.

Porcellana pilosa Edw., Hist. Crust., ii. p. 255.

Carapax longitudinally convex, surface even, and covered with

short stiff hairs arranged in transverse rows. Front advanced, three-lobed, median lobe projecting beyond the others. Chelipeds short, stout, unequal, and clothed above with a short pubescence, interspersed in which are stiff hairs, similar to those of the carapax. Carpus short, length and breadth about equal, the inner margin expanded, and armed with four or five acute teeth. Hands short and broad, almost sub-chelate, the thumb being very short, and the dactylus strongly curved. Ambulatory feet with pubescence and hairs similar to those on the carapax.

Specimens were collected at Sarasota Bay and Key West.

Length of Carapax.	Breadth.	Ratio.
4 mm.	5.1 mm.	100 : 128
6 mm.	6.2 mm.	100 : 103

Edwards's specimens were from Charleston, S. C.

Porcellana sayana.

Pisidia sayana Leach, Dict. Sci. Nat., xviii. p. 54.
Porcellana ocellata Gibbes, Proc. Am. Assoc., iii. p. 190. Ibid., Proc. Elliot Soc., i. p. 12, pl. i. f. 2.

Quite a number appear in this collection from Sarasota Bay. Gibbes' types came from South Carolina; Stimpson reports it from Fort Macon, N. C., Florida Keys, and St. Thomas.

At my request Mr. Edward J. Miers very kindly examined Leach's type in the British Museum, which was sent by Say under the name *Porcellana galathina*. He says: "Leach's specimens of *Porcellana* (*Pisidia*) *sagana* are certainly not referable to *P. sexspinosa*, as described by Gibbes, but appear to belong to *P. ocellata* of the same author. They agree well with Gibbes' description and with specimens of *P. ocellata* received by the British Museum from the Smithsonian Institution, differing only in being of smaller size and in no longer presenting any traces of the pink reticulations."

Porcellana sociata Say.

Porcellana soriata Say, Journ. Phila. Acad., i. p. 456.
Pisidia socia Leach, Dict. Sci. Nat., xviii. p. 54.
Porcellana sociata Gibbes, Proc. A. A. A. S., iii. p. 190. Ibid., Proc. Elliot Soc., i. p. 12, pl. i. f. 6.

Professor Webster collected specimens at Florida Bay and Harbor Key. Other localities are Fort Macon (Stm.), South Carolina, and Key West (Gibbes), Georgia, and Florida (Say, Leach).

Genus **POLYONYX** Stm.

Polyonyx macrocheles Stm.

Porcellana macrochelcs Gibbes, Proc. Am. Assoc., iii. p. 191. Ibid., Proc. Elliot Soc., i. p. 6, pl. i. f. 5.

Polyonyx macrocheles Stm., Proc. Phila. Acad., 1858, p. 229. Faxon, B. M. C. Z., v. 256, pls. II. and III. (Development).

In this species the males are smaller, with a narrower carapax and with the chelipeds proportionately longer than in the female, as will be seen by the following measurements:—

Locality.	Sex.	Length.	Breadth.	Ratio.	Length of Larger Hand.
Sarasota Bay	♀	8.2 mm.	13.2 mm.	100 : 161	23.2
"	♀	7.5 mm.	12 mm.	100 : 160	22
"	♂	5.5 mm.	7.6 mm.	100 : 138	20.4
"	♂	6.4 mm.	9.2 mm.	100 : 144	24.5
Beaufort, N. C.	♂	6 mm.	9 mm.	100 : 150	23.7

According to Prof. Webster's labels, this species was found at Beaufort, N. C., and Shark Shoal, N. C., in tubes of *Chætopterus*, as was noticed by Stimpson. Stimpson and Gibbes had specimens from South Carolina. Newport, R. I. (Faxon).

Genus **EUCERAMUS** Stm.

Euceramus prælongus Stm. Plate xiv. fig. 4.

Euceramus prælongus Stm., Am. Journ. Sci. and Arts, II. xxix. p. 445.

Professor Webster obtained specimens of this curious crustacean at Beaufort, N. C. (7 faths.), and Florida and Sarasota Bays, Fla., from which the following description is drawn:—

Carapax nearly cylindrical, the sides but slightly arcuate; surface even, with minute transverse striæ, which curve forward on the sides. Front, between the eyes, about one-third the width of carapax, three toothed, median tooth longer and projecting further than the laterals. There is a slight excavation of the anterior margin over the eyes and antennæ. A minute acute spine at the antero-lateral angle, and a little posterior to this is a slight emargination of the lateral margin. Eyes minute, but little prominent.

Antennal flagella about three-fourths the length of the carapax. Feet stout; chelipeds stout; hands slightly roughened, fingers about as long as the palm, not gaping; second pair shorter than the third and fourth; fifth pair small, and curved in the same manner as in the other *Porcellanidæ*. Terminal segment of ab-

domen and its appendages resembling those of the allied genera, but narrower. Length of carapax 12 mm., breadth 6 mm., ratio 100 : 50.

Genus **HIPPA** Fabr., Edw.

Hippa emerita Fabr.

?Cancer emerita Linne, Syst. Nat. Ed., xii. p. 1055.

Cancer testudinarius Herbst, pl. xxii. f. 3.

Hippa emerita [*us*] Fabr., Suppl. Ent. Syst., p. 370. Desmarest Consid., p. 174, pl. xxix. f. 2. Edw. Hist. Crust., ii. p. 209. Dana, U. S. Ex. Ex. Crust., p. 409, pl. xxv. f. 9. Miers, Journ. Linn. Soc., xiv. p. 313, pl. v. f. 9.

Hippa talpoida Say, l. c., i. p. 160. Dekay, op. cit., p. 18, pl. vii. f. 17. Smith, U. S. Fish Comm., p. 548, pl. ii. f. 5. Ibid., Trans. Conn. Acad., iii. p. 311.

In the Union College collection appear specimens from the beach of Chesapeake Bay opposite Fort Monroe, Beaufort, N. C., Sarasota Bay, Fla. Specimens from the first locality measure 26 mm. in length of carapax. Mr. Miers has made a mistake in quoting Prof. Gibbes, as this species does not occur at Boston except in collections.

Cape Cod to Florida (Smith), Venezuela (Miers), Cuba and Mexico (Guerin), Rio Janerio (Dura, Heller, Miers), Corinto, West Coast Nicaragua! (McNiel). These specimens are certainly *H. emerita*, and not *H. analoga*, Stm.

FAMILY **ALBUNEIDÆ.**

Genus **ALBUNEA** Fabr., Stm.

Albunea paretii Guerin.

Albunea paretii Guerin, Revue et Magazin de Zoologie, II. v. p. 48, pl. i. f. 10.

Albunea oxyophthalma Leach (MS.), White, List Crust. Brit. Museum, p. 57 (sine descr., teste Miers). Miers, Journ. Linn. Soc., xiv. p. 329, pl. v. f. 14-15.

A single specimen from Sarasota Bay agrees with Mr. Miers's description and figures, except that the median emargination is less deep and the lateral portion of the front more advanced and more curved, the eyes also appear to be rather more slender. It agrees well with Guerin's short description, and, as his was the first published description, his name will of course hold. Miers gives as localities St. Christophers, Cayenne, and Brazil. Guerin was not certain of the locality of his specimens, they were either

from Genoa or America. His types do not exist in the collection of the Philadelphia Academy.

Genus **LEPIDOPS** Stm.

Lepidops venusta Stm.

Lepidops venusta Stm., Proc. Phila. Acad., 1858, p. 230. Ibid., Ann. Lyc., vii. p. 79. Miers, Journ. Linn. Soc , xiv. p. 332.

A single specimen, which I refer without a doubt to this species, was dug up on the beach near Fort Macon, N. C. It agrees well with Stimpson's description, and certainly is not *L. scutellata*, from which it differs in the shape of the eyes, the form of the front, the dactyli of the second pair of feet, etc. Stimpson's type was from St. Thomas.

PAGURIOIDEA.

Professor Webster collected a large number of specimens belonging to this sub-order, but I am unable to report on them.

THALASSINOIDEA.

Family **GEBIDÆ.**

Genus **GEBIA.**

Gebia affinis Say

Gebia affinis Say, l. c., i. p. 241. Smith, Fish Comm., p. 549, pl. ii. f. 7.

Specimens were collected at Beaufort, N. C., and Sarasota Bay, Fla. Long Island Sound to South Carolina (Smith), Charleston, S. C. (Gibbes).

Family **CALLIANASSIDÆ.**

Genus **CALLIANASSA.**

Callianassa stimpsoni Smith.

Callianassa stimpsoni Smith, Fish Comm., 1871-2, p. 549, pl. ii. f. 8.

Professor Webster collected specimens at Beaufort, N. C., and Northampton County, Va., Atlantic side. Southern States to Long Island Sound (Smith).

ASTACOIDEA.

Family **PALINURIDÆ.**

Genus **PANULIRUS** Gray.

Panulirus americanus Streets.

Palinurus americanus Lamarck, Ms.; Edw., Hist. Crust., ii. p. 298.
Panulirus americanus Streets, l. c., 1871, p. 242.

A single specimen was collected at Plantation Key, Fla., Antilles (Edw.), Key West (Gibbes), Isthmus of Panama (Streets).

I give below a revision of the genera of *Caridea* belonging to the families *Crangonidæ*, *Atyidæ*, and *Palæmonidæ*. It is founded on the arrangement of Dana. The genera of which I have seen specimens I have designated by the letter "o." As I have recently published a synonymical list of the North American Shrimps (Bulletin Essex Institute, x. pp. 53–71, 1878), I have refrained in most cases from giving the synonymy of the species collected by Prof. Webster.

CARIDEA.

Body generally laterally compressed, the carapax not united to the epistome, usually a broad lamelliform appendage (antennal scale) on the basal joint of the antennæ, sometimes, however, it is wanting; antennulæ bi- or tri-flagellate; mandibles varying in form, sometimes with, sometimes without a palpus; external maxillipeds generally pediform; feet generally long and slender; gills composed of lamellæ, five to eight pairs; abdomen long, the sides produced downwards.

Family **CRANGONIDÆ.**

Mandibles slender, incurved, cutting edge narrow, not dilate or bifid, without a palpus, first and second pairs of feet unequal.

Sub-Family **Crangoninæ.**

First pair of feet stouter than the second. Hand sub-chelate, the dactylus closing on the margin of the palm, the pollex being spiniform. External maxillipeds pediform.

o Genus Crangon Fabr.[1] Rostrum very short, eyes free, antennulæ biflagellate, first pair of pereiopoda stout, but little longer than the second, second pair slender, elongate, chelate, remaining pairs acuminate. Branchiæ five on each side. Type *Crangon vulgaris* Fabr.

Crangon vulgaris Fabr. Several specimens were collected at Northampton Co., Va.

[1] Including *Steiracrangon* Kinahan, Proc. Royal Irish Acad., viii. p. 68 (1862).

o Genus PONTOPHILUS Leach, Sars.[1] Rostrum short, eyes free; antennulæ biflagellate; first pair of pereiopoda stout, second pair very short, slender, chelate. Branchiæ seven, including a rudimentary one on the second maxillipeds. Type *Pontophilus spinosus* Leach.

o Genus SABINEA Owen.[2] Rostrum very short, eyes free, stout; second pair of pereiopoda very short, not chelate, dactylus minute. Branchiæ as in *Pontophilus*.

o Genus NECTOCRANGON Brandt.[3] Rostrum wanting; eyes nearly hidden by the carapax; second pair of pereiopoda chelate; dactyli of fourth and fifth pairs dilated, natatorial. Branchiæ five on each side, none on the second maxilliped. Type *Nectocrangon lar* (Owen sp.).

o Genus PARACRANGON Dana.[4] Rostrum elongate, eyes free; second pair of pereiopoda obsolete, fourth and fifth pairs acuminate gressorial. Type *Paracrangon echinatus* Dana.

Sub-Family **Lysmatinæ**.

First pair of pereiopoda stouter than the second, both pairs chelate, fingers subequal, carpus of the second pair annulate. External maxillipeds pediform.

o Genus NIKA Risso.[5] Rostrum short, antennulæ biflagellate Hands of first pair of pereiopoda dissimilar, one being chelate, the other not; carpus of second pair elongate, multiarticulate; hand minutely chelate. Type *Nika edulis* Risso.

o Genus LYSMATA Risso.[6] Rostrum elongate, sub-ensiform, dentate; antennulæ triflagellate; first pair of pereiopoda stout, of medium length, chelate; second pair elongate, carpus multiarticulate; hand rudimentary. Type *Lysmata seticauda* Risso.

o Genus HIPPOLYSMATA Stm.[7] Rostrum elongate, antennulæ biflagellate. External maxilliped elongate, furnished with exog-

[1] Forhandlingar i Vedenskabs Selskabet i Christiania, 1861, f. 183. Including *Ægeon* Risso.

[2] Appendix to the voyage of Captain Ross, p. 82 (1835).

[3] *Argis* Kroyer Naturhistorisk Tidsskrift. iv. p. 267 (1842-3) (nom. præoc.). *Nectocrangon* Brandt, in Middendorff's Reise in den Ausserten Norden und Osten Siberiens, Band II. Zoologie, Theil I. p. 114 (1851).

[4] U. S. Exploring Expedition, Crustacea, p. 537.

[5] *Processa* Leach.

[6] *Melicerta* Risso.

[7] Proc. Phila. Acad., 1860, p. 26.

nath; first four pairs of feet with exopodite; first pair rather stout, chelate, second filiform chelate, carpus multiarticulate. Type *Hippolysmata vittata* Stm.

Hippolysmata wurdemanni (Gibbes, sp.) Stm. Professor Webster collected a large number of this species at Sarasota and Florida Bays, Fla. There also occur in the collection some young specimens from Bird Shoal, Beaufort, N. C., which I doubtfully refer to this species. I have seen specimens from Fort Jefferson (Lieut Jacques), and Key West (Packard).

o Genus TOZEUMA Stm.[1] Body greatly elongate, slender, compressed; rostrum slender, very long, sometimes scarcely shorter than the body; antennulæ short, biflagellate; external maxillipeds very short, without exognath or flagellum, pereiopoda without palpi; first pair very short, stout, chelate, second filiform, chelate; carpus triarticulate, telson elongate, lanceolate. Type *Tozeuma lanceolatum* Stm.

Tozeuma carolinensis Kingsley (Plate xiv. fig. 8), was collected at Charlotte Harbor, Fla., and Beaufort, N. C.; at the latter place in a surface net.

o Genus LATREUTES Stm.[2] Carapax with a dorsal median spine. Rostrum elongate, lamellate, antennulæ biflagellate, basal scale short, orbiculate, hidden under the eyes; antennal scale acute; external maxillipeds short, with exognath; first four pairs of pereiopoda with palpi, first two pairs chelate, second with the carpus triarticulate. Type *Latreutes ensiferus* (Edw., sp).

Genus RHYNCHOCYCLUS Stm.[3] Rostrum large, lamellate, obiculate, antennulæ biflagellate, peduncle short; external maxillipeds short, with exognath; first four pairs of pereiopoda palpigerous; first two chelate, second with the carpus triarticulate. Type *Rhynchocyclus planirostris* (De Haan, sp.).

o Genus CONCORDIA,[4] nov. Dorsum of carapax strongly protuberant; rostrum very short, eyes free; antennulæ with two very short flagella; antennal scale very small; flagellum moderate; external maxillipeds short, stout; first pair of pereiopoda shorter

[1] Proc. Phila. Acad., 1860, p. 26. *Angasia* White, Sp. Bate Proc. Zool. Soc. London, 1863, p. 498.

[2] Proc. Phila. Acad., 1860, p. 27.

[3] *Cyclorhynchus* De Haan, Fauna Japonica, Crustacea, p. 174 (nom. præoc.) *Rhynchocyclus* Stm., Proc. Phila. Acad., 1860, p. 27.

[4] Named in honor of Union College, to which the specimens belong.

and stouter than the second pair, which in turn are shorter than the remaining pairs; the carpus two articulate. Type *Concordia gibberosus*, sp. n.

Concordia gibberosus, sp. n. (Plate xiv. fig. 5). Carapax with the dorsum strongly elevated, and armed with five spiniform teeth; the first of which is on the rostrum, the last at about the middle of the carapax; carapax between the teeth ecarinate; rostrum very short, not exceeding the short and stout eyes; antennulæ with two very short flagella, the outer swollen and ciliate; antennal scale extending slightly beyond the peduncle of the antennulæ; flagella short, small, regularly tapering, about twice the length of the carapax. First pair of pereiopoda short, stout; fingers about as long as the palm, second pair longer and more slender; carpus two-jointed, first joint longer than the meros, and about twice as long as the second, remaining feet slender, elongate, the propodal joints with a few spines on the posterior margin; dactyli short, curved, with spines on the concave margin; abdomen strongly bent at the middle; telson narrow, tapering, sides straight, extremity acute.

A female with eggs from Fort Macon was about 8 mm. long.

Sub-Family **Gnathophyllinæ.**

Second pair of pereiopoda larger than the first pair, external maxilliped broad, operculiform.

o Genus GNATHOPHYLLUM, Latr. Rostrum short, compressed, antennulæ with two very short flagella, carpus of the second pair of pereiopoda not annulate.

FAMILY **ATYIDÆ.**

Mandibles stout, not palpigerous, crown broad, dilated, slightly divided. Second pair of maxillipeds short and broad; first two pairs of pereiopoda nearly equal, the carpus of the second not annulated.

Sub-Family **Atyinæ.**

Pereiopoda without exopodite.

o Genus ATYA Leach Rostrum short, depressed; antennulæ biflagellata; external maxillipeds small, slender; first two pairs of pereiopoda similar, carpus lunate, bearding the propodus on the

lower portion, fingers with long pencils of hairs; third, fourth, and fifth pairs much larger and stouter. Type *Atya scabra* Leach.

o Genus Evatya Smith.[1] Rostrum prominent, carinate, with spines above, anterior portion of carapax with scattered spines and spiny carinations. Third pair of pereiopoda very stout and tuberculate, basis and coxa anchylosed, ischium and meros firmly united, propodus much shorter than carpus, dactylus very short, unguiform. Type *Evatya crassa* Smith.

o Genus Atyoida Randall.[2] Rostrum, antennæ, antennulæ, and the two anterior pairs of pereiopoda as in *Atya;* third pair of pereiopoda elongate, scarcely stronger than the two anterior pairs.

Known species:—

Type *A. bisulcata* Randall. l. c. p. 140. *Sandwich Islands.*
A. tahitensis Stm. Proc. Phila. Acad., 1860, p. 28. *Society Islands.*
A. mexicana Stm. Am. Journ. Sci. and Arts, II., xxvii. p. 446. Caradina mexicana Saussure, op. cit., p. 45, pl. iv. f. 26, *Mexico.*
A poeyi Guerin, in Raman de Sagra Hist. Cuba, *Cuba.*
A. glabra Kingsley. Proc. Phila. Acad., 1878, p. 93, *West Coast Nicaragua.*

o Genus Caradina M. Edw. Rostrum moderate, antennulæ biflagellate; second pair of pereiopoda longer than first, fingers of both pairs with pencils of hairs, carpus of first pair very short, excavate in front, of second pair oblong, subcylindrical. Type *Caradina typus* M. Edw.

Genus Atyephyra Brito Capello.[3] Rostrum many toothed, carapax with supraorbital and antennal spines; hands hairy, and resembling those of Atya; eyes well developed.[3] Type *A. rosiana.*

Genus Troglocaris Dormitzer.[4] Rostrum thin, with fine teeth on the borders; supraorbital and antennal spines present; eyes rudimentary, pereiopoda much as in Caradina. Type *Troglocaris schmidtii* Dorm.

[1] Second and third Reports Peabody Academy of Science, p. 95 (1871).

[2] Journ. Phila. Acad., viii. p. 140 (1839). According to E. von Martens (Archiv für Naturgeschichte, xxxiv. pl. i. p. 47, 1868), this is not a valid genus, as the young of *Atya* have the third pair of pereiopoda as in *Atyoida.*

[3] Diser. esp. nov. de Crustaceos de Portugal, p. 5, 1866.

[4] Lotos, III. p. 85 (1853).

Sub-Family **Ephyrinæ.**

Pereiopoda with an exopodite.

Genus MIERSIA Kingsley.[1] Rostrum toothed, antennulæ biflagellate, two anterior pairs of pereiopoda, chelate small; the carpus of the second pair not annulate; the three posterior pairs slender. Type *Miersia pelagica* (Risso sp.).

The known species are:—

pelagica (Risso sp.). *Mediterranean.*
punctulata (Risso sp.). *Mediterranean.*
compressa (De Haan sp.). *Japan.*

FAMILY **PALÆMONIDÆ.**

Mandibles stout, incurved, deeply bipartite, apical process narrow, oblong.

Sub-Family **Alpheinæ.**

First pair of feet the larger, chelate; second slender, filiform, generally chelate, carpus frequently annulate.

Section I. MANDIBLES WITH A PALPUS.

o Genus ALPHEUS Fabr.[2] Rostrum very short or wanting, antennulæ biflagellate, eyes hidden under the carapax; mandibles with a two-jointed palpus; external maxillipeds slender, moderate; first pair of pereiopoda generally greatly differing in size; carpus of second pair annulate. Type *Alpheus rapax* Fabricius.

Alpheus minus Say. Numerous specimens were collected. The localities are Beaufort, N. C., Key West, Harbor Key, Sarasota, and Florida Bays, and Marcou Pass. Three specimens from Harbor Key were the largest that I have ever seen, measuring respectively 40.3 mm., 40.8 mm, and 42.3 mm. in length. Among those collected at Key West were several of the form described by Gibbes as *A. formosus*, and two which approached *A. floridanus* in size, form of front, and hand.

Alpheus websteri, sp. n. Carapax slender, compressed, rostrum acute, separated from the orbital hoods by deep sulci. Orbital hoods acute, but not spinose. Penult joint of antennular peduncle

[1] *Ephyra* Roux, Edwards, De Haan, Dana, Heller (nom. præoc.).

[2] Including *Betæus* Dana. Vide Kingsley, Bulletin U. S. Geol. and Geog. Survey, iv. p. 189, 1878.

about twice as long as the last joint. Antennal scale narrow, regularly tapering, lamellar portion not extending to the spine terminating the external margin. External maxillipeds elongate, extending beyond the antennal peduncle, the last joint with a long pencil of hairs. Larger hand inflated, the upper outer proximal portion circumscribed by an impressed line, a slight constriction of the margins near the articulation of the dactylus; thumb short, with a shallow groove on the outer surface, which extends a short distance on the palmar portion. Dactylus contorted, extending beyond the thumb, extremity rounded. The dactylus and distal portions of the propodus punctate and setose, especially on the inner surface. Smaller hand subcylindrical, fingers about as long as palm, gaping, tips acute, margins fringed. Carpus of second pair five-jointed, first joint three times, and second twice as long as the third or fourth, which are subequal and slightly shorter than the fifth. The telson regularly tapering, the extremity sinuate-truncate. The exopodite of the sixth pair of pleopoda (abdominal feet) bears on the external distal angle of the penultimate joint, an articulated conical black spine, the color persisting in alcohol, and which will readily separate this from any species with which I am acquainted. Its affinities are with *A. sulcatus* of Panama and Peru.

Three specimens from Key West, the largest 25 mm. in length.

Alpheus heterochelis Say. Specimens were collected at Sarasota Bay, Charlotte Harbor, Marcou Pass, Harbor Key, and at Northampton County, Virginia, Eastern Shore, Atlantic side; this last being the farthest north from which the species has been reported.

Alpheus packardii, sp. n. Front, antennulæ and antennæ as in *A. heterochelis* except that the sulci between the base of the rostrum, and the ocular hoods are deeper, and last joint of antennular peduncle longer than in that species. External maxillipeds short, not reaching to the tip of antennal scale. Chelipeds unequal, meros with an acute tooth on the upper distal angle; larger hand strongly compressed, with a sharp tooth above near the articulation of the dactylus, beyond this the hand becomes narrower by means of a sharp bend of the inferior margin, dactylus contorted, and working at an angle of about 30° with the plane of the hand. Smaller hand more slender, but similarly ornamented and armed, the dactylus, however, being spatulate, working vertically, and with its margins and those of the opposing thumb densely fringed with hairs. Car-

pus of the second pair with the first two joints equal, and each as long as the third and fourth together, which, in turn, are subequal, and each slightly shorter than the fifth joint. This species, in a systematic arrangement of the North American forms, would stand between *A. heterochelis* and *A. transversodactylus*, but more nearly to the former. The differences from that species are not easy to describe, but are well marked in the specimens.

I have dedicated this species to my friend and former instructor, Dr. Alpheus S. Packard, Jr., not only as a token of esteem, but also from a recognition of the appropriateness of the name. Three males from Key West. Length, 22 mm.

Alpheus candei Guerin in de Sagra's Historia de Cuba Crustaces (p. L. pl. ii. f. 9). *Alpheus transversodactylus* Kingsley. Two specimens were taken at Key West.

Bes des these species of *Alpheus* there is a single specimen approaching *A. candei* most nearly in form, but differing from that species in form of front, and in having a large swollen pyriform hand without grooves, etc., which I hesitate to describe as new.

o Genus ALOPE White.[1] Rostrum short, toothed above, and placed in a groove formed by two spines which arise at the anterior portion of the carapax, and extend nearly as far as the rostrum. Eyes but little salient, antennulæ biflagellate; external maxilliped very long; hands of first pair of pereiopoda equal; carpus of second pair annulate. Type *Alope palpalis* White.

Genus ARETE Stimpson.[2] Rostrum short, rounded above; eyes free, antennulæ biflagellate; antennal scales larger. External maxillipeds slender, moderate; hands of first pair of pereiopoda large, equal, inversely depressed; dactyli external; second pair short; carpus 4-articulate. Type *Arete dorsalis* Stm.

o Genus ATHANAS Leach. Rostrum short; antennulæ triflagellate; eyes but little salient; external maxillipeds short, slender. Frst pair of pereiopoda long, stout, unequal; second filiform; carpus 5-articulate.

o Genus HIPPOLYTE Leach.[3] Rostrum moderate, more or less

[1] Annals and Magazine of Natural History, second series, vol. i. p. 225, 1848.

[2] Proc. Acad. Nat. Sci. Philadelphia, 1860, p. 32.

[3] *Bellidia* Gosse. Annals and Magazine of Natural History, 4th series, vol. xx. p. 313 (1877). I have not seen Costa's description of *Periclemenes* (Annal. del Accad. degli Aspiraz. Natur di Napoli II. p. 285, 1844). Erichson

ensiform, not articulated to the carapax; antennulæ biflagellate; external maxillipeds slender; first pair of feet short, equal; second pair slender; carpus multiarticulate. Type *Hippolyte spinus* (Sowerby sp.).

Genus CARIDION Göes.[1] Rostrum elongate, cultrate; mandibles with a three-jointed palpus: antennulæ biflagellate; first two pairs pereiopoda nearly equal, chelate, carpus of the first pair very short; of the second elongate, obsoletely biarticulate. Type *Caridion gordoni* (Spence Bate sp.).

Genus BYTHOCARIS G. O. Sars.[2] Rostrum very small, simple, unarmed; antennulæ biflagellate; antennal scale large and broad; external maxilliped with the last joint dilated, obliquely truncate, and armed with teeth, a minute exognath present. First pair of feet as in *Hippolyte*; second pair slender, weak; carpus multiarticulate. Type *Bythocaris simplicirostris* G. O. Sars.

Genus CRYPTOCHELES G. O. Sars.[3] Rostrum small, narrow, toothed above; antennulæ biflagellate; antennal scale large, externally dentate; last joint of external maxillipeds with the apex somewhat bipartite, a small exognath present. First pair of pereiopoda very short; hand very elongate and attenuate, digits very short, and with difficulty visible; second pair slender; carpus 7-jointed. Type *Cryptocheles pygmæa* G. O. Sars.

o Genus RHYNCHOCINETES M. Edw. Resembling *Hippolyte*. Rostrum ensiform, movable, articulated to the carapax; antennulæ biflagellate; carpus of second pair of pereiopoda not jointed. Type *Rhynchocinetes typus* M. Edw.

o Genus OGYRIS Stm.[4] Carapax not rostrate, or with rostrum very small, as in the genus *Alpheus*. Eyes very long; antennulæ

in the Archiv für Naturgeschichte, 1846, pt. 2, p. 310-311, says that there are no points mentioned by Costa which would not apply to *Hippolyte*. On the other hand Heller (Crustaceen des südlichen Europa, p. 256, 1863) regards one of Da Costa's species (*P. elegans*) as belonging to the genus *Anchistia* of Dana. For remarks on the synonymy of *Hippolyte* and that of *Virbius*, attention is called to Smith, Trans. Conn. Acad. v. pp. 62 and 63, 1879.

[1] Öfversigt af K. Vetensk. Akad. Förhandl. 1863, p. 170. *Doryphorus* Norman, Ann. et Mag. Nat. Hist. 3d series, viii. p. 276, 1861 (nom. præoc.).

[2] G. O. Sars, Saerskilt aftrykt af Vidensk. Selsk. Forhandlinger, p. 5, 1869.

[3] Vidensk. Selsk. Forhandlingar, p. 150, 1868.

[4] Stimpson, Proc. Acad. Nat. Sci. Philadelphia, 1860, p. 36.

biflagellate, the peduncle with a spine externally on the basal joint; antennal scale shorter than antennal peduncle; mandible with a two-jointed palpus; external maxilliped long, with a slender exognath; pereiopoda without epipodites; carpus of the second pair triarticulate. Type *Ogyris orientalis* Stm.

Ogyris alphærostris, sp. n. (Plate xiv. fig. 7.) Carapax smooth, without dorsal carina; rostrum very small. triangular, reminding one of that of *Alpheus*. Eyes resembling those of *Hippa*, elongate, slender, half as long as the carapax, and extending slightly beyond the antennal peduncles, the cornea but slightly larger than the ocular peduncle. Antennulæ with a spine on the outer surface of the basal joint; biflagellate, flagella equal, and about as long as the peduncle. Antennæ with the basal scale narrow, lanceolate, reaching nearly to the tip of the penult joint of the peduncle; flagella three times as long as the peduncle, or one and one-half times the length of the carapax. External mallipeds long, stout, the distal joint being very small, and furnished with long hairs, exopodite slender. First pair of pereiopoda slender, chelate; meros, carpus, and hand nearly equal, fingers slightly longer than the palm. Second pair very long, slender, chelate; carpus triarticulate, hand similar to that of first pair. Third and fourth pairs subequal, slender; the dactyli slender and narrow, being not over one-third the width of the preceding joints. Fifth pair very slender, more so than any of the preceding with the ischium longer than the meros, which in turn is about as long as the three last joints; carpus, propodus, and dactylus subequal. The three last pairs of pereiopoda have long hairs on the distal joints. Abdomen smooth, rounded above; telson short, with the sides arcuate, and the tip rounded.

Union College, No. 407, Northampton Co., Va., Eastern shore, Atlantic side. H. E. Webster.

Length 19.5 mm.

Having but a single specimen, and that in poor condition, I have not been able to study it as thoroughly as I could wish. It agrees, as far as I have been able to examine it, with Stimpson's diagnosis of the genus except in the following particulars. The carapax is not cristate, and has a minute rostrum; the antennal flagella are much longer than in the type species; the mandibles, as the specimen is unique, I have not been able to examine. It is the second species of the genus known, and is interesting on ac-

count of its habitat; the other species, *O. orientalis* Stm., coming from China and Japan.

Genus PTEROCARIS Heller.[1] Carapax and abdominal segments broadly expanded at the sides. These expansions lamellate and three-lobed, corresponding one to the antennal segments, one to the mandibular, and the third to the abdominal segments. Eyes small, just visible in front of carapax; antennulæ biflagellate; antennæ with basal scale; external maxillipeds with exopodite and rudimentary epipodite. Type *P. typica* Heller.

Section II. MANDIBLES WITHOUT A PALPUS.

Genus AUTONOMEA Risso.[2] Rostrum short, eyes prominent, antennulæ biflagellate, antennal scale wanting. First pair of pereiopoda stout, chelate; second not chelate; carpus not annulate. Type *Autonomea olivii*.

o Genus VIRBIUS Stimpson[3] Dorsum of carapax and rostrum ecarinate; antennulæ biflagellate; antennal scale present. External maxillipeds short, with exopodite. Pereiopoda without epipodites. Carpus of first pair of pereiopoda excavate in front; carpus of the second pair triarticulate. Type *Virbius acuminatus* (Dana sp.).

o Sub-genus THOR Kingsley.[4] Rostrum short; antennulæ, antennæ, and external mallipeds as in *Virbius*. Carpus of first pair of pereiopoda not excavate; carpus of second pair 5-articulate. Type *Thor floridanus* Kingsley.

Thor floridanus Kingsley. (Pl. xiv. fig. 6.) Specimens were collected by Professor H. E. Webster at Harbor Key and Sarasota Bay, Florida.

[1] Sitzungsberichte der k. Akad. Wissenschaft. Wien. XLV. pt. i. p. 395, pl. i. f. 7–18 (1862).

[2] I take the fact that the mandible of *Autonomea* is without a palpus from Heller (Crust. Südlichen Europa, p. 223), though in his generic diagnosis on p. 249 he makes no mention of the mandible, but takes his description from Desmarest. Heller had never seen specimens of this genus. Risso (Crust. Nice, pp. 166–169, 1816) does not mention the mandibles.

[3] Proc. Acad. Nat. Sci. Philadelphia, 1860, p. 35. For remarks on this genus, vid. Smith, Trans. Conn. Acad. v. p. 62, 1879. *Caradina tenuirostris* Spence Bate, Proc. Zool. Soc'y, London, 1863, p. 501, pl. xl. f. 4, from Australia, belongs to this genus.

[4] Proc. Acad. Nat. Sci. Philadelphia, 1878, p. 94.

Sub-Family **Pandalinæ.**

Antennulæ biflagellate, mandibles with a palpus, anterior pereiopoda very slender, not chelate; second filiform chelate; carpus multiarticulate.

o Genus PANDALUS Leach.[1] Type *Pandalus montagui* Leach.

Sub Family **Palæmoninæ.**

Two anterior pairs of pereiopoda chelate; carpus of none annulate; second pair larger than the first, pereiopoda without palpi.

Section I. MANDIBLES WITHOUT A PALPUS.

A. Antennulæ biflagellate.

Genus TYPTON Costa.[2] Rostrum small, eyes free, antennal scale absent, external maxillipeds pediform, with exognath. Type *Typton spongiola* Costa.

o Genus PONTONIA Latreille. Rostrum short, eyes prominent, antennulæ with the outer flagellum bifid at the extremity; antennal scale moderate. External maxillipeds suboperculiform with exognath; second joint broad, longer than remaining joints together, these last cylindrical. Type *Pontonia custos* (Forskal sp.). Guerin. *Pontonia tyrrhena* (Risso sp.) Latreille.

Pontonia unidens, sp. n. (Pl. xiv. f. 9.) Carapax pubescent, depressed; rostrum short, acute, slightly depressed, not extending as far forward as the eyes; orbital spine present though small; cervical suture well marked; eyes stout, reaching the last joint of the antennular peduncle. Antennulæ with the joints of the peduncle sub-equal; the flagella very short, not as long as the peduncle. Antennal scale about twice as long as broad, extremity rounded and reaching to the last joint of antennular pe-

[1] *Pontophilus* Risso, Hist. Nat. Europe Merid. t. v. p. 63, 1826; Brandt in Middendorff's Reise in den Aussersten Norden und Osten Siberiens, Bd. ii. Theil i. p. 122, 1851.

[2] Annali dell' Acad. Segli Aspir. Natur di Napoli ii. 1844 (Teste Heller). *Pontonella* Heller, Verhandlungen des Zool. Bot. Verein in Wein, 1856, p. 624. Rev. A. M. Norman (Ann. and Mag. Nat. Hist. IV. ii. p. 176, 1868) compares this genus with *Alpheus*. It is far more nearly related to *Pontonia*. Its resemblance to *Antonomea*, in the absence of the antennal scale, was noticed by Heller.

dunele. First pair of pereiopoda slender, longer than the carapax; meros, carpus, and hand nearly equal, the fingers half as long as the palm. Second pair of feet unequal; larger hand inflated, longer than the carapax, pubescent; fingers one-third the length of the palm, incurved and slightly depressed; the dactylus with a large obtuse tooth near the base, which fits into a corresponding cavity in the pollex (as in many species of *Alpheus*); pollex without teeth. Smaller hand three-fourths as long as the larger, cylindrical straight fingers one-third as long as the palm. Remaining pereiopoda moderate, minutely unguiculate. Telson about twice as long as broad, sides strongly arcuate.

Key West, Fla., A. S. Packard, Jr.

Length 10 mm.

This species differs from *P. domestica* Gibbes in the pubescence of the carapax and hands, and in having but one tooth on the dactylus of the larger hand of the second pair and none on the thumb, etc. etc. It may prove to be the *Pontonia mexicana* of Guerin-Meneville in Ramen de la Sagra's Historia fisica, politica y natural de la Isla de Cuba, 1856. The types are in the Museum of the Peabody Academy of Science at Salem, Mass. None were collected by Prof. Webster.

Genus CORALLIOCARIS Stm.[1] Rostrum small; eyes large and prominent; antennal scale very broad; external maxillipeds operculiform; all the joints of nearly equal width; second pair of pereiopoda large, long, subequal; dactyli of posterior pairs with a protuberance on the under side near the base. Type *Corallio-caris superbus* Dana, sp.

Genus HARPILIUS Dana.[2] Closely allied to *Pontonia*, but differing in having the distal joints of the external maxillipeds together longer than the second joint; second pair of pereiopoda long, slender, equal. Type *Harpilius lutescens* Dana.

o Genus ANCHISTIA Dana.[3] Rostrum long, slender, frequently ensiform; eyes prominent; antennulæ with one flagellum partly bifid; extenal maxillipeds slender, pediform; second pair of pe-

[1] Proc. Acad. Nat. Sci. Philadelphia, 1860, p. 38. *Œdipus* Dana, U. S. Ex. Ex. Crust., p. 572, 1851 (nom. præoc.).

[2] Op. cit., p. 574, 1851.

[3] Op. cit., p. 577 (1851), *Pelius* Roux, Memoire sur le Salicoques, p. 25 (1831). Heller, Sitzungsber. der K. Akad. Wiss. Wien, xlv. pt. 1, p. 406 (1862), non Merrian (1820).

reiopoda slender, long, equal; dactyli of posterior pairs long, slender, nearly straight. Type *Anchistia gracilis* Dana.

B. Antennulæ triflagellate.

Genus EURYHYNCHUS Miers.[1] "Rostrum triangular, broad at base, acute, very short, barely reaching the extremity of the eyes; anterior margin of carapax with a small spine between the eyes and the rostrum and another below the point of insertion of the peduncle of the antennæ; antennæ with a small basal scale; antennulæ triflagellate; outer maxillipeds slender, second pair of legs nearly as in *Anchistia;* tarsi of last three pairs of legs nearly straight, acute." Type *E. wrzesnowski* Miers.

I am uncertain as to the exact position of this genus, as the author says nothing concerning the mandibles. There also exist several discrepancies between the description and figures (Plate lxvii. f. 2–2 a). The spine on the anterior margin being represented as external to the eyes, and the first pair of feet being the larger, which, if true, would remove it to the *Alpheinæ*, from all genera of which, however, it is separated by the triflagellate antennulæ. Miers compares it with *Anchistia* and *Harpilius*, and in that locality I allow it to remain.

Genus PALÆMONETES Heller.[2] Antennæ, antennulæ, and pereiopoda as in *Palæmon;* carapax with antennal and branchiostegal spines, hepatic spine wanting; rostrum long, lamellate. Type *Palæmonetes varians* (Leach, sp.).

Palæmonetes carolinus Stm. Specimens were collected by Prof. Webster at Beaufort, N. C., and Marcou Pass, Fla.

Palæmonetes vulgaris (Say, sp.), Stm. Beaufort, N. C., Northampton Co., Va., and Charlotte Harbor, Fla.

o Genus UROCARIS Stm.[3] Body slender, compressed; rostrum cristate and toothed above, beneath straight, and edentulous; ocular peduncles long; abdomen slender, elongate, the sixth segment very much so. Type *Urocaris longicaudata* Stm.

Urocaris longicaudata Stm. (l. c., p. 39.). As Stimpson's description is very short, and as this species has not been noticed by subsequent writers, I append a short description, based upon speci-

[1] Proceedings of the Zoological Society of London, 1877, p. 662.

[2] Zeitschrift für Wissenschaftliche Zoologie, xix. p. 157.

[3] Proc. Acad. Nat. Sci. Philadelphia, 1860, p. 39.

mens collected by Prof. Webster at Beaufort, N. C., Marcou Pass, and Charlotte Harbor, Fla. Only four specimens were obtained, two male and two female.

Rostrum compressed, not reaching the extremity of the antennular peduncles; above arcuate, with seven or eight teeth, the second of which is directly above the insertion of the eyes; antennal scale large, extending beyond the antennular peduncle, the sides parallel, the extremity obliquely rounded, truncate; first pair of pereiopoda reaching the tip of the antennal scale, the second longer, the fingers of each about as long as the palm, remaining feet bi-unguiculate, all very slender and almost filiform; abdomen between four and five times the length of the carapax; third segment (and sometimes the fourth also) of the abdomen swollen, fifth short, sixth about the length of the carapax; telson slender, elongate, sides straight, regularly tapering to the acute tip. The female appears to be rather stouter than the male. Length 15.5–20 mm.

Section II. Mandibles with a Palpus.

A. Antennulæ biflagellate.

Genus Palæmonella Dana.[1] Body not depressed; rostrum moderate; eyes of medium size; mandibular palpus two-jointed, very short; antennulæ biflagellate, one flagellum with the apex bifid; external maxillipeds slender, pediform. Type *Palemonella tenuipes* Dana.

o Genus Hymenocera Latreille. Antennulæ biflagellate, one flagellum membranous, dilated, and foliaceous; first pair of pereiopoda very slender, hand minute, second stouter, very broad, hand and dactylus membranous.

B. Antennulæ triflagellate.

o Genus Palæmon Fabr.[2] Rostrum lamellate, dentate; eyes free; mandibles with a three-jointed palpus; external maxillipeds slender. Type *Palæmon squilla* (Linne, sp.).

[1] U. S. Expl. Exped. Crust., p. 582.

[2] *Leander*, Desmarest, Annales Société Entomologique de France, vii. p. 87, 1849. *Bithynis*, Philippi, Archiv für Naturgeschichte, xxvi. pt. 1, pp. 161–164 (1860). *Macrobrachium*, Spence Bate, Proc. Zool. Soc'y London, 1868, p. 363.

Genus CRYPHIOPS Dana.[1] Rostrum of medium size; eyes wholly hidden under the carapax, as in *Alpheus;* external maxillipeds slender. Type *Cryphiops spinulosimanus* Dana.

Sub-Family **Oplophorinæ.**

First pair of pereiopoda either didactyle or vergiform, second stouter, chelate; antennulæ biflagellate.

Genus OPLOPHORUS M. Edw. Rostrum long, dentate, pereiopoda all palpigerous; four anterior chelate; antennal scale with the external margin spined; abdomen armed above with one or more long spiniform processes. Type *Oplophorus typus* M. Edw.

Genus CAULURUS Stm.[2] Rostrum long or short; basal scale of antennulæ wanting; basal scale of antennæ externally unarmed; external maxillipeds pediform, with exognath; pereiopoda furnished with exopodite, the first two pairs chelate, the second pair slender and long; dorsum of abdomen unarmed; sixth abdominal segment long and slender. Type *Caulurus pelagicus* Stm.

As there is nothing except the length of the rostrum to separate *Xiphocaris* from *Caulurus*, I have thought best to unite them. *Xiphocaris* has but a single species, *Hippolyte elongata* Guerin = *Oplophorus Americanus* Saussure.

Genus THALASSIOCARIS Stm.[3] Rostrum and antennulæ as in *Oplophorus*. Feet not palpigerus, anterior pair not chelate; second pair stout, chelate; mandibular palpus triarticulate; third segment of abdomen prolonged into a long spine above. Type *Thalassiocaris lucidus* (Dana, sp.).

FAMILY **PENÆIDÆ.**

Genus SICYONIA Edw., Stm.

Sicyonia lævigata Stm. A single specimen of this species was collected at Sarasota Bay, Fla.

Sicyonia carinata M. Edw.

Palæmon carinatus Olivier, Encyclopédie Méthodique, viii. p. 667 (teste Edw.).

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[1] Op. cit., p. 594.

[2] Proc. Acad. Nat. Sci. Philadelphia, 1860, p. 42. *Xiphocaris*, E. von Martens, Archiv für Naturgeschichte, xxxviii. Bd. i. p. 139 (1872).

[3] Proc. Acad. Nat. Sci. Philadelphia, 1860, p. 42. *Regulus*, Dana, op. cit., p. 597 (nomen præoccupatum).

Sicyonia carinata M. Edw., Hist. Nat. Crust., ii. p. 410. Dana, U. S. Ex. Ex. Crust., p. 602. Smith, Trans. Conn. Acad., ii. p. 40. Von Martens, Archiv für Naturgesch. xxxviii. p. 142.

Of this species, which is reported from Rio Janeiro by Edwards and Dana, and from Cuba by von Martens, two specimens were collected by Prof. Webster, one at Sarasota Bay and the other at Charlotte Harbor.

Genus PENEUS Fabr.

Peneus constrictus Stm. A single specimen was collected at Marcou Pass.

Peneus braziliensis Latreille. From Beaufort, N. C., Marcou Pass, Charlotte Harbor, and Sarasota Bay, Fla. I would here say that the specimens described by me as *Peneus brevirostris* (Proc. Acad. Nat. Sci. Philadelphia, 1878), from the west coast of Nicaragua, prove to be *P. braziliensis*, thus adding another to the list of species common to both coasts.

In my "List of Decapod Crustacea of the Atlantic Coast, whose range embraces Fort Macon" (Proceedings Philadelphia Academy, 1878, pp. 316–330), I enumerated sixty-five species, of which fifty-three had at that time been reported from Fort Macon. In this paper six more of these species are reported from there, while *Polyonyx macrocheles*, *Lepidops venusta*, *Hippolysmata wurdemanni*, and *Concordia gibberosa*, which were not enumerated in my list, were found there by Prof. Webster, and *Ogyris alphærostris*, from its near locality, may reasonably be expected there.

EXPLANATION OF PLATE.

Fig. 1. *Mithraculus hirsutipes;* 1*a*. Antennal region.

Fig 2. *Pisosoma glabra.*

Fig. 3. *Eupilumnus websteri;* 3*a*. External maxilliped.

Fig. 4. *Euceramus prælongus;* 4*a*. External maxilliped. 4*b*. Telson.

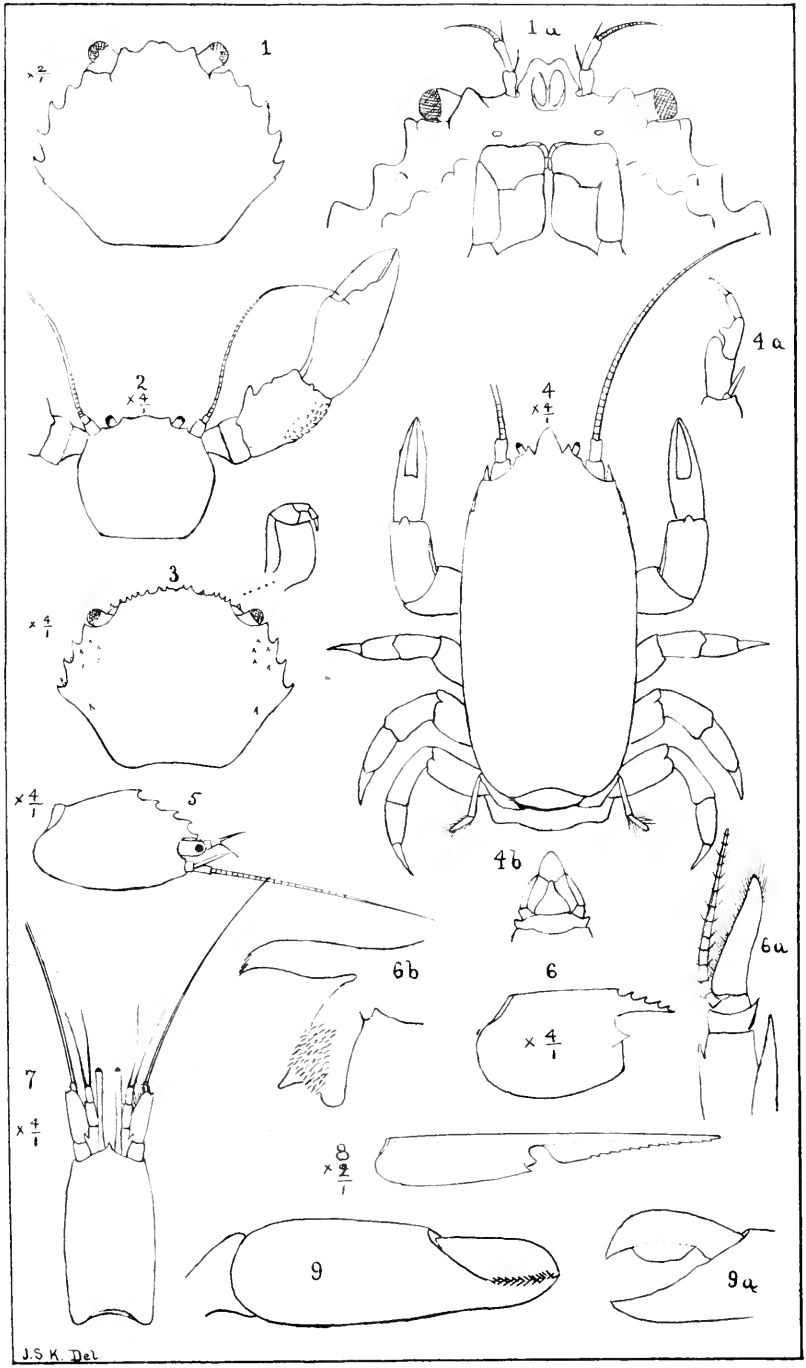
Fig. 5. *Concordia gibberosa.*

Fig. 6. *Thor floridanus;* 6*a*. Antennula. 6*b*. Mandible.

Fig. 7. *Ogyris alphærostris.*

Fig. 8. *Tozeuma carolinensis.*

Fig. 9. *Pontonia unidens;* larger hand outside; 9*a*. Ditto inside.



KINGSLEY ON CRUSTACEA.