

Article XXXI.—INSECTS OF FLORIDA.**II. HEMIPTERA.****H. G. BARBER, ROSELLE PARK, N. J.**

Mr. E. P. Van Duzee in his "Observations on Some Hemiptera taken in Florida, in the Spring of 1908," published in the Bulletin of the Buffalo Society of Natural Sciences, 1909, pp. 149-230, included mainly those species which he had collected during his four weeks' trip in that state. He refrained from incorporating the material in Mrs. Annie Trumbull Slosson's collection, for the determination of which he is so largely responsible. The reason for this was that he hoped she could be induced to publish independently a list of the species in her very fine collection which she has gathered as a result of her own efforts on her numerous trips to Florida. Mrs. Slosson, feeling rather disinclined to publish such a list and learning that the American Museum of Natural History proposed to make a much needed general survey of the insects of the state, very generously allowed me to make free use of her records of capture in the hemiptera. As will be observed the bases of this list are the records of Mr. Van Duzee and Mrs. Slosson's collection. I have been able to add numerous species, several of them new, from the study of material taken by Mr. William T. Davis who has made three trips to Florida and from the results of the two expeditions of the American Museum of Natural History. The hemiptera obtained by Mr. George P. Engelhardt in the fall of 1911, those collected by Mr. Charles E. Sleight in the early autumn of 1913 and the collection of the Florida Experiment Station, situated at Lake City, also passed through my hands for study. Professor C. W. Johnson of the Boston Society of Natural Sciences, kindly transmitted a list of hemiptera taken by him, chiefly at St. Augustine, a number of years ago and identified by Mr. P. R. Uhler. Likewise Mr. W. L. McAtee of the U. S. Biological Survey furnished me some valuable records. With the kindly coöperation of the authorities at the U. S. National Museum I was allowed to examine and make notes of the Florida material in the collection largely gathered by Schwarz, Hubbard and Ashmead. Mr. Otto Heidemann and Mr. Nathan Banks also kindly gave me some records from their collections. I have been able to supply a number of additional records by searching through the publications of the principle hemipterists, notably Uhler, Bergroth, Ball, Baker, Osborn and Kirkaldy. There are also included a number of hemiptera from my own

collection which have been generously presented to me by Professor E. B. Wilson of Columbia University and Mr. William Beutenmüller.

I am much indebted to Mr. E. P. Van Duzee who has taken considerable pains to go over my list of homoptera, correcting it and adding a number of records. In fact he is chiefly responsible for this group in my list, having determined all of the species in the collection of Mrs. Slosson and those in the collection of the American Museum of Natural History. Mr. William T. Davis, who is studying the Cicadidæ was of considerable assistance to me in this group.

This aims to be a complete list of the hemiptera of Florida with the exception of the Aphididæ, Psyllidæ, Coccidæ and allied families. It contains a total of 666 species and varieties, 372 heteroptera and 294 homoptera or 300 more than are found in Mr. Van Duzee's list of 1909. It may be of interest to note in comparison that Gillette and Baker's List of the Hemiptera of Colorado contained a total of 546 species and Smith's New Jersey List has 683 species and varieties of hemiptera.

In common with the remainder of the fauna of Florida there has been considerable speculation as to the sources of its hemipteron fauna. Being so situated, geographically, its fauna shows peculiar West Indian and Central American affinities intermixed with a much larger proportion of familiar species occurring more or less widely distributed in the United States. In order to throw some light on this subject I have given some study to the dispersal of the heteroptera in the Floridian fauna. I have confined my investigation to the heteroptera because, being more especially interested in it, I have collected data sufficient to draw certain deductions therefrom. The following diagram will best serve to graphically represent the source of each of the geographical groups, represented in the fauna, in their proper proportion.

An analysis of these figures shows that about $12\frac{1}{3}\%$ or 46 species are strictly Floridian, so far as the records are known; only 23 or a little over 6% are common to Florida and the West Indies and the greatest number, 141 or about 38% are restricted to Florida and the United States. The remaining 162 species are largely contributed from Central America either by way of the United States or by the West Indies. It is a well recognized fact that the vast majority of our hemiptera have spread northwardly from Mexico, extending as far as the conditions of environment would suit them, in the United States. It is comparatively easy to trace one line of this dispersal by way of the gulf strip into Florida. The West Indian contingent in the Floridian fauna can be accounted for only by accidental introduction mainly through the various channels of commerce. I am much inclined to doubt the possibility of hemiptera surviving the long submergence necessary for the water transit over the intervening distance. Wind currents

can have been responsible for the possible introduction of a few of the larger, stronger fliers among the hemiptera, especially when this wind attains the violence of a West Indian hurricane and provided, of course, that the wind is in the right direction.

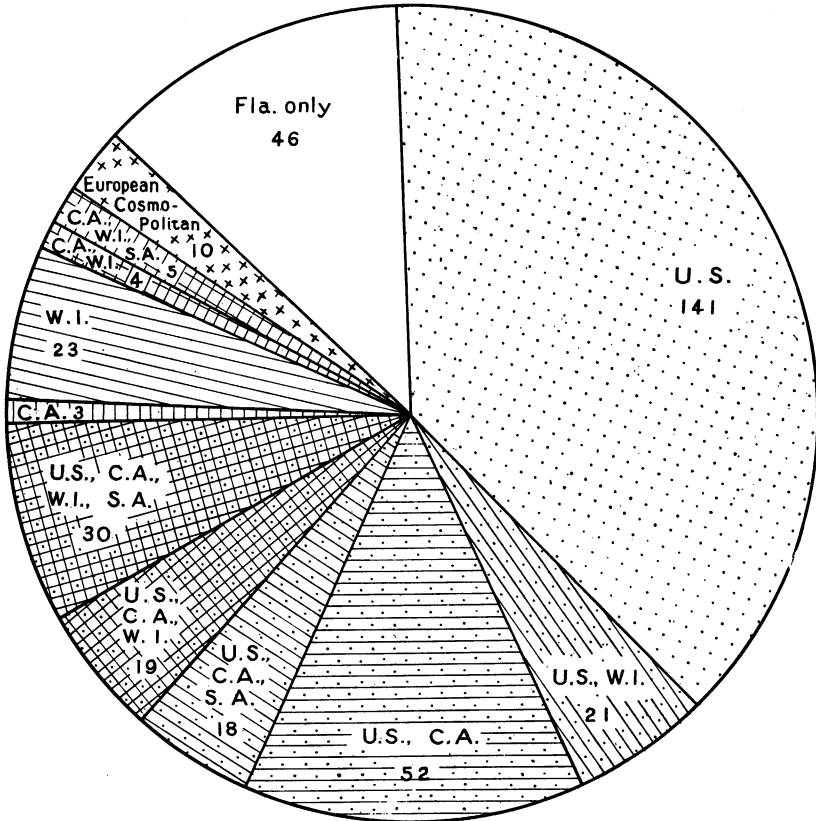


Fig. 1. The area of the circle represents the number of species of Heteroptera recorded from Florida. Each segment is approximately proportional to the number of species in the respective geographic group. The figures give the actual number of species. By "U. S." should be understood the United States exclusive of Florida.

Sub Order HETEROPTERA.

CORIXIDÆ.

- Callicorixa kollarii* Fieb. "Florida" (Kirkaldy and Bueno Cat.).
- Arctocorisa (Corixa) abdominalis* Say. "Florida" (Bank's Cat.).
- Arctocorisa (Corixa) reticulata* Guér. Charlotte Harbor and Biscayne Bay (Mrs. Slosson); Punta Gorda, Nov., Ft. Myers Nov., Titusville, Nov. (A. M. N. H.).

OCHTERIDÆ.

- Ochterus americanus* Uhl. Lake Worth, Belleair, Biscayne Bay, (Mrs. Slosson).
Ochterus flaviclavus Barb. Ormond (Mrs. Slosson).

NERTHRIDÆ.

Gelastocoris oculatus Fab. Crescent City, Apr., St. Petersburg, Apr., Ft. Myers, May (Van Duzee); Biscayne Bay (Mrs. Slosson); St. Augustine (Johnson); Lake Okechobee, Apr., Ft. Myers, Nov. (A. M. N. H.); Sanford, Lake City (Fla. Exp. Sta.); Jacksonville, Miami, Tampa, Feb. (U. S. N. M.); La Grange, Nov., Deep Lake, Apr., Everglade, Apr., Lake Okechobee, Apr. (Davis).

Nerthra stygica Say. Charlotte Harbor (Mrs. Slosson); Ft. Myers, Nov. (A. M. N. H.); Enterprise (My coll. from Wm. Beutenmüller).

BELOSTOMATIDÆ.

Benacus griseus Say. Clearwater, Apr. (Van Duzee); Ft. Myers, Nov. (A. M. N. H.); Ft. Myers, Apr. (Davis); Daytona, Nov. (Engelhardt); St. Augustine (Johnson); "Florida" (Kirkaldy and Bueno Cat.); "Florida" (Uhler).

Lethocerus (Belostoma) americanus Leidy. Jacksonville (Mrs. Slosson); "Florida" (Uhler).

Lethocerus (Belostoma) uhleri Mont. Clearwater, Apr., (Van Duzee); Ft. Myers, Apr., Nov. (A. M. N. H.); Lake City (Fla. Exp. Sta.); Daytona Nov. (Engelhardt); Lake Worth (Mrs. Slosson); Ft. Myers, Apr., Ortega, Sept. (Davis); Ortega Sept. (Sleight).

Belostoma (Zaitha) bosci Lep. et Serv. "Florida" (Uhler).

Belostoma (Zaitha) aurantiacum Leidy. Biscayne Bay (Mrs. Slosson); Titusville, Nov. (A. M. N. H.); Everglade, June (Davis); "Florida" (Kirkaldy and Bueno Cat.).

Belostoma (Zaitha) flumineum Say. Biscayne Bay (Mrs. Slosson); St. Augustine (Johnson); Everglade, June (Davis).

Belostoma testaceum Leidy. Titusville, Nov. (A. M. N. H.).

NEPIDÆ.

Ranatra americana Mont. Titusville, Nov. (A. M. N. H.); St. Augustine, Nov. (Engelhardt).

Ranatra fusca Beauv. "Florida" (U. S. N. M.); Kissimmee, (U. S. N. M.); "Florida" (Kirkaldy and Bueno Cat.).

Ranatra protensa Mont. "Florida" (U. S. N. M.).

NAUCORIDÆ.

Pelocoris carolinensis Bueno. St. Augustine, Nov. (Engelhardt); Titusville, Oct. (A. M. N. H.); Lake City (Fla. Exp. Sta.); "Florida" (Kirkaldy and Bueno Cat.).

Pelocoris femoratus Pal. Beauv. Biscayne Bay, Belleair (Mrs. Slosson); St. Augustine, Nov. (Engelhardt); St. Augustine (Johnson); "Florida" (Uhler); "Florida" (Kirkaldy and Bueno Cat.).

NOTONECTIDÆ.

Notonecta irrorata Uhl. St. Augustine (Johnson).
Notonecta uhleri Kirk. "Florida" (Kirkaldy and Bueno Cat.).
Notonecta undulata Say. Lakeland, Nov. (Davis); St. Augustine (Engelhardt); Lake City (Fla. Exp. Sta.).
Notonecta variabilis Fieb. "Florida" (Johnson).
Buenoa carinatus Champ. Lakeland, Nov. (Davis).
Buenoa margaritacea Bueno. Titusville (A. M. N. H.).
Plea striola Fieb. "Florida" (Uhler).

ACANTHIADÆ.

Acanthia humilis Say. Jacksonville (Mrs. Slosson); Northern Florida (Uhler); Florida (K. and B. Cat.).
Acanthia interstitialis Say. Biscayne Bay, Ormond (Mrs. Slosson); "Florida" (Uhler).
Acanthia pallipes Fab. Biscayne Bay (Mrs. Slosson); Lakeland, May (Davis); Everglade, Apr.; Ft. Myers, Mch. (A. M. N. H.).
Acanthia signoretti Guér. Biscayne Bay (Mrs. Slosson); Marco, Apr., Punta Gorda, Nov. (A. M. N. H. and Davis); Key West, Sept. (Davis); Pablo Beach, Sept., (Sleight); St. Augustine (Johnson).
Acanthia sphaclata Uhl. Biscayne Bay (Mrs. Slosson); Marco, Apr. (A. M. N. H.); Marco, Apr., Ft. Myers, Mch. (Davis).
Acanthia xanthochila var. *limbosa* Horv. Biscayne Bay (Mrs. Slosson); Everglade, Apr., May, Ft. Myers, Mch., Marco, Apr. (Davis); Everglade, Apr., Ft. Myers, Mch., Marco, Apr., Lakeland, May, Lake Okechobee, May (A. M. N. H.).
Saldoidea cornuta Osb. Punta Gorda, Belleair (Mrs. Slosson).
Saldoidea slossoni Osb. Punta Gorda, Belleair (Mrs. Slosson).

GERRIDÆ.

Gerris canaliculatus Say. Titusville (A. M. N. H.); St. Augustine (Johnson); Daytona, Nov. (Engelhardt).
Limnogonus hesione Kirkaldy. Daytona, Nov. (Engelhardt); "Florida" (K. and B. Catalogue).
Halobates micans Esch. Lake Worth (Mrs. Slosson); Ocean Beach at Miami, Sept. (Davis); Florida Coast (K. and B. Cat.).

VELIIDÆ.

Velia brachialis Stål. Pemberton (Johnson).
Rhagovelia plumbea Uhl. Indian River (U. S. N. M.); Marco, Apr. (Davis); Ten Thousand Islands (A. M. N. H.); Florida (K. and B. Cat.); "A common species on the surface of salt water around the inlets of the Florida Keys" (Uhler).

Rhagovelia collaris Burm. "Florida" (Uhler).

Microvelia marginata Uhl. "From Florida to northern New Jersey" (Uhler); "New Jersey to Florida" (K. and B. Cat.).

HYDROMETRIDÆ.

Hydrometra australis Say. Jacksonville (Mrs. Slosson); Florida (K. and B. Cat.).

Hydrometra martini Kirk. Titusville, Nov. (A. M. N. H.); "Florida" (K. and B. Cat.).

MIRIDÆ OR CAPSIDÆ.

Apocremnus (Psallus) sulphureus Reut. Sevenoaks, Tampa, Estero (Van Duzee).

Apocremnus (Psallus) juniperi Heid. Crescent City, (U. S. N. M.).

Apocremnus (Psallus) guttulatus Reut. Belleaire, Jacksonville (Mrs. Slosson).

Atomoscelis seriatus Reut. Sevenoaks, Tampa (Van Duzee); Atlantic Beach (Mrs. Slosson).

Cylloceps pellicia Uhl. Biscayne Bay (Mrs. Slosson).

Europiella rubidus Uhl. Belleair (Mrs. Slosson).

Leucopoecila ablofasciata Reut. Belleair (Mrs. Slosson).

Plagiognathus politus Uhl. Biscayne Bay (Mrs. Slosson).

Reuteroscopus ornatus Reut. Sanford, Crescent City (Van Duzee); East Florida (U. S. N. M.).

Rhinocloa forticornis Reut. Lake Worth, Biscayne Bay (Mrs. Slosson).

Halticus citri Ashm. Crescent City, Sanford (Van Duzee); Biscayne Bay (Mrs. Slosson).

Lomatopleura hesperus Kirk. St. John's Bluff, East Florida (Walker's Cat.); "Florida" (Banks' Cat.).

Ceratocapsus pumilus Uhl. Crescent City, Sanford (Van Duzee).

Ceratocapsus setosus Reut. Lakeworth, Atlantic Beach (Mrs. Slosson).

Pseudoxenetes regalis Uhl. Belleair, Jacksonville (Mrs. Slosson).

Coquillettia mimetica Osborn. Crescent City, Jacksonville (Mrs. Slosson); Sanford (A. M. N. H.).

Engytatus (Cyrtopeltis) varians Dist. Biscayne Bay (Mrs. Slosson).

Macrolophus separatus Uhl. Ft. Myers (Van Duzee).

Cyrtoapsus caliginus Stål. Crescent City (Van Duzee).

Monalocoris filicis Linn. Sanford (Van Duzee).

Pycnoderes 4-maculatus Guer. Biscayne Bay (Mrs. Slosson).

Sixeonotus insignis Reut. Crescent City, Sanford, Sevenoaks, Ft. Myers (Van Duzee); Archer (U. S. N. M.); Everglade, Apr., Lake Okechobee, May (Davis).

Sixeonotus tenebrosus Dist. Clearwater (Van Duzee); Belleair (Mrs. Slosson); La Belle, Apr. (Davis).

Fulvius atratus Dist. Biscayne Bay (Mrs. Slosson).

Collaria explicata Uhl. Biscayne Bay (Mrs. Slosson).

Collaria oculata Reut. Crescent City, Sevenoaks (Van Duzee); Belleair, Jacksonville (Mrs. Slosson); Miami, Sept., Lakeland, May (Davis).

Trigonotylus pulcher Reut. Crescent City, Sanford, Ft. Myers, St. Petersburg (Van Duzee); Lakeworth, Biscayne Bay, Belleair, Ormond (Mrs. Slosson); Everglade Apr. (Davis).

Lopidea floridanus Walk. "Florida" (Banks' Cat.).

Resthenia incisus Walk. "Florida" (Banks' Cat.).

- Resthenia insignis* Say. "Widely distributed in Florida" (Van Duzee); Florida U. S. N. M.).
- Resthenia insitiva* Say. Crescent City (Van Duzee); Sanford (A. M. N. H.); Biscayne Bay (Mrs. Slosson).
- Resthenia intercidenda* Dist. Biscayne Bay (Mrs. Slosson); Ft. Myers, Apr. (Davis).
- Resthenia rubrovittata* Stål. Sanford (A. M. N. H.).
- Creontiades filicorne* Walk. "Florida" (Banks' Cat.).
- Creontiades rubrinervis* Stål. "Not uncommon at all localities" (Van Duzee); La Grange, Sept. (Davis); Jacksonville, Sanford, Lakeland, Crescent City (A. M. N. H.).
- Dichroscytus maculatus* Van Duz. Sevenoaks (Van Duzee).
- Eustictus grossus* Uhl. Crescent City (Van Duzee); Biscayne Bay (Mrs. Slosson); "Florida" (Uhler).
- Eustictus mundus* Uhl. Crescent City (Van Duzee); "Florida" (Uhler).
- Eustictus venatorius* Van Duzee. Key West, Sept. (Sleight); Crescent City (Van Duzee); Lakeland, May (Davis).
- Garganus fusiformis* Say. Crescent City (Van Duzee); Jacksonville (Mrs. Slosson); Crescent City (A. M. N. H.).
- Lygus apicalis* Fieb. Sanford, Tampa, Sevenoaks, Ft. Myers (Van Duzee); Belleair, Biscayne Bay (Mrs. Slosson); Punta Gorda, Lakeland, Sanford, Newberry (A. M. N. H.).
- Lygus olivaceus* Reut. "Abundant everywhere in Florida" (Van Duzee); Crescent City, Clearwater, Sanford (A. M. N. H.).
- Lygus pratensis* Linn. Jacksonville, Clearwater (A. M. N. H.).
- Lygus tenellus* Van Duz. Sevenoaks, Crescent City (Van Duzee); Ft. Myers, Apr. (Davis).
- Neurocolpus nubilus* Say. Sevenoaks (Van Duzee).
- Phytocoris bipunctatus* Van Duzee. "Common on the dry sparse grasses in the pine barrens everywhere south of Sanford" (Van Duzee); "East Florida" (U. S. N. M.); Ft. Myers, Apr., La Grange, Sept. (Davis).
- Phytocoris eximius* Reut. Crescent City, Sevenoaks (Van Duzee); Jacksonville (A. M. N. H.).
- Phytocoris rufus* Van Duz. Sevenoaks (Van Duzee).
- Poecilocapsus lineatus* Fab. Jacksonville, Atlantic Beach (Mrs. Slosson); Lakeland, May (Davis).
- Poecilocapsus nigricornis* Stål. "Not uncommon at all localities" (Van Duzee).
- Poeciloscytus americanus* Reut. Sanford (Van Duzee).
- Poeciloscytus basalis* Reut. "Abundant everywhere I collected in Florida" (Van Duzee); Jacksonville, Newberry, Sanford (A. M. N. H.).
- Poeciloscytus cuneatus* Dist. Biscayne Bay (Mrs. Slosson); Ft. Myers, Apr. (Davis).
- Poeciloscytus obscurus* Uhl. "Southern Florida" (Banks' Cat.).
- Tropidosteptes cardinalis* Uhl. Jacksonville (Mrs. Slosson).

ANTHOCORIDÆ.

- Lasiochilus pallidulus* Reut. Lake Worth, Biscayne Bay (Mrs. Slosson); Silver Springs, Nov. (Engelhardt); Everglade (A. M. N. H. and Davis).
- Piezostethus galactinus* Fieb. Biscayne Bay (Mrs. Slosson).

Triphleps insidiosus Say. Biscayne Bay, Jacksonville (Mrs. Slosson); Lakeland, Nov., Punta Gorda, Nov. (A. M. N. H.).

Triphleps tristicolor B. White. Lake Worth (Mrs. Slosson).

Cardiastethus assimilis Reut. Lakeland, Nov., Marco, Apr., (Davis).

CIMICIDÆ.

Cimex lectularius Linn. "Florida" (Schwartz).

NABIDÆ.

Reduviolus capsiformis Germ. Biscayne Bay, Belleair (Mrs. Slosson). Tampa, Everglade, Apr., Miami, Nov., Lakeland, Nov., Titusville, Nov. (A. M. N. H.); Ft. Myers, Apr., (Davis).

Reduviolus sordidus Reut. Newberry, Apr., (A. M. N. H.).

Pagasa pallipes Stal. Newberry, Nov., Jacksonville (A. M. N. H.); Jacksonville (Mrs. Slosson); Key Largo, Dec., (U. S. N. M.).

Metatropiphorus belfragii Reut. Clearwater, Apr. (A. M. N. H.).

NÆOGIDÆ.

Næogeus concinnus Uhl. Biscayne Bay (Mrs. Slosson).

Næogeus consolidus Uhl. Lake Worth (Mrs. Slosson).

MESOVELIADÆ.

Mesovelia mulsanti B. White. Lake Worth, Belleair (Mrs. Slosson); Titusville, Nov., Punta Gorda, Nov., Jacksonville, Nov. (A. M. N. H.); "Florida" (K. and B. Cat.).

REDUVIIDÆ.

Barce fraterna Say. Lake Worth (Mrs. Slosson).

Emesa longipes De Geer. Crescent City, Apr. (Van Duzee) La Belle, Apr., Jacksonville, Nov. (A. M. N. H.); Lakeland, Nov., Jacksonville, Nov., La Belle, Apr., Ortega, Sept., (Davis); Silver Springs, Nov. (Engelhardt).

Ploiariodes errabunda Say. Crescent City, Apr., Sanford, Apr., Tampa, May, Ft. Myers, May (Van Duzee).

Ploiaria carolina H. Schf. Pablo Beach (Sleight).

Stenolaemus spiniventris Sign. Miami, Sept. (Davis). A single specimen which agrees with the description of Signoret, except in having a single spine on the scutellum which is shorter than in Signoret's illustration and directed obliquely to the rear; and the ventral spines are reduced. The fine silky hairs on the antennæ and legs are much longer than figured. Uhler has reported this species from Arizona and Cuba. It was described from Mexico.

Ghilianella productilis sp. nov.

Sordid fulvo-testaceous, with antennæ, second and third pairs of legs paler, not annulate with fuscous. Head granulated on the sides and with the thorax and abdomen provided with fine pale pubescence. Head long, cylindrical with the sides

parallel, converging more sharply on the basal third, infuscated on the sides; eyes small; the division behind the transverse stricture slightly longer than the anterior one; the pale frontal spine very slightly decurved, almost horizontal. The antennæ are pale with the base of the first joint and the last two darker; these last two segments closely set with fine whitish hairs, with the basal fourth of the last, smooth and hairless; first joint of antennæ reaching about midway on the metanotum. Prothorax scarcely granulose, obscurely infuscated on the sides, slightly longer than the mesothorax and the metathorax, while these two latter are subequal in length; meso- and metathorax are dorsally fattened and furnished with three carinae, a median one and one limiting the margin on each side; the posterior margin of the metanotum widely cut out behind. Basal half of the anterior coxæ pale, apical half and femora darker becoming infuscated beneath and provided with fine, pale incumbent hairs; fore tibiæ pale except at apex; coxæ about one third longer than pronotum; fore femoræ about as long as pro- and mesothorax together; tibiæ and tarsi about subequal in length, these latter slightly curved and faintly serrated within; the spines of femoræ pale, black tipped. Second and third pairs of legs pale, with apex of tibiæ and tarsi fuscous. Abdomen a little longer than head and thorax together and linear in both sexes, but in the female this part gradually widens posteriorly from a narrow basal portion; darker both above and below than the thorax; longitudinally sharply depressed next each side leaving a median convex ridge and sharply elevated margins; dorsally, the incisures are transversely straight and the posterior apical angles are not produced, except in the sixth segment in the female; a minute black tubercle is placed in the middle just before the posterior margin of the first five segments; the spiracles are tuberculately elevated just beneath the impressed lateral edge and visible from above. Beneath, the abdomen is somewhat mottled with fuscous, provided with fine, pale appressed hairs; slightly carinate in the middle, more obviously so, posteriorly; the incisures curved. In the male, the last dorsal segment of the abdomen ends in an acute, rugulose, flattened process or flap which curves upward and extends well beyond the genital segment; this process is infuscated, pale and smoother on the edges and somewhat carinate in the center; the ventral genital plate somewhat compressed, subcarinate. In the female, the genital segment appears truncate, with the apical angles of the sixth segment produced in short spines; the median dorsal convex ridge becoming more carinate on the sixth segment and ending in a small black tooth posteriorly; the first genital segment obtusely triangular, transversely rugulose and keeled; the second genital segment also keeled, rugulose and narrowly rounded at apex. ♂ 23 mm. and ♀ 25 mm. long.

The male specimen, from Big Pine Key, has the dorsal prolonged upturned flap of the last abdominal segment, pale and differently shaped than in the type male specimen described from Marco. This part is almost quadrate gradually rounded behind and with a minute blackish tubercle at each posterior angle.

I have not seen specimens of *G. angulata* described by Uhler from the West Indies, but judging from the description, this new species is more closely related to that species, from which it can be separated by the subequal length of the meso- and metathorax, the non toothed outer angles of the abdominal segments with the exception of the sixth, and the non-annulate antennæ and legs. The type male is in the collection of Mr. William T. Davis of Staten Island and the type female in the collection of the American Museum of Natural History.

Saica Am. et Serv.

The members of this genus are slender. The ocelli are absent; the anterior tibiæ are curved and unarmed; the pronotum and scutellum are armed with long spines; the intermediate and hind legs are long and slender and the anterior femora are provided with setæ, which sometimes adhere and appear to be spines. Five species are characterized by Champion from Mexico and Central America, Amyot and Serville have described *S. rubella* from Guiana and Dr. Bergroth, *S. cruenta* from French Guiana.

Saica fusco-vittata sp. nov.

Body elongate, narrow. Smooth, shining stramineous in color, dorsally with a broad ill-defined fuscous stripe, beginning on the vertex of the head and running through to the tip of the membrane; on the sides is another poorly defined fuscous stripe beginning back of the eyes and continued along the sides of the sternum, sometimes extended along the sides of the venter to the apex. The femoræ with apreapical and the tibiæ with a prebasal and apical fuscous band, with close set fine hairs underneath on the venter and on antennæ and tibiæ, more scattering on the sternum and femoræ. Head is stramineous, infuscated, swollen behind the eyes. Rostrum stramineous, sometimes apically infuscated, its apex ending between the two anteriorly projecting acute (not spinose) prosternal processes; second joint swollen at base. Antennæ long, slender, dirty stramineous, with apex of second joint which is about one third the length of first, and the remainder infuscated; first two joints with rather close set fine hairs, the last two with finer, appressed hairs. Pronotum smooth, shining and glabrous, the anterior lobe slightly longer than the posterior, and longitudinally deeply sulcate in the middle, with two tuberosities at each anterior angle and one on each side margin before the transverse furrow which are not so prominent; humeri elevated in a longitudinal elongate tuberosity; the anterior part of each is armed with an elongate, straight, acute, outwardly directed spine, infuscated at tip. Sternum smooth, with a few fine scattered hairs; the prosternal processes diverging, acute. The fore femoræ are pale with a preapical and the fore tibiæ with preapical and apical fuscous band; the trochanters are armed with a single short blunt spine; these legs are provided with close set fine hairs and the femoræ beneath and the tibiæ within have close set longer and stouter setose hairs; the middle femoræ have a conspicuous preapical and a faint median fuscous band; the hind femoræ have a faint apical and median and a more conspicuous preapical band; the middle and hind tibiæ have a prebasal band and apex fuscous; tarsi pale. Scutellum black, elevated at base into a black strong tubercle surmounted at apex with a long pale backwardly inclined slightly curved spine as long as the pronotal spines; at apex of the scutellum is a short, acute less inclined black spine; midway between these two scutellar spines is a very short black blunt tubercle. Corium smooth, duller than the pronotum, glabrous through the center broadly infuscated, some of the stronger nervures faintly rosaceous, the few nervures of the infuscated membrane pale. Venter smooth, shining, finely pubescent, along the sides sometimes with a fuscous stripe; the genital segment of the female infuscated.

Length 8 mm. Described from a male in the collection of the American Museum

of Natural History and a female in the collection of Mr. William T. Davis. Both from Everglade, Florida; April, 1912. This species seems to be most closely related to *Saica erubescens* Champ.

Oncerothelus acuminatus Say. Charlotte Harbor, Ormond (Mrs. Slosson); St. Augustine (Johnson).

Pnirontis infirma Stål. La Belle, Apr., Everglade, Apr., Ft. Myers, Mch. (A. M. N. H.); Ft. Myers, Mch. (Davis).

Pnirontis languida Stål. Ft. Myers (A. M. N. H.); St. Augustine (Johnson); "Florida" (Uhler).

Pnirontis modesta Banks. Titusville, Nov. (A. M. N. H.).

Pygolampis pectoralis Say. Ft. Myers, Nov.; Jacksonville, Belleair, Biscayne Bay (Mrs. Slosson); St. Augustine (Johnson); Ft. Myers, Apr., Lakeland, May, Everglade, July (Davis); Baldwin (U. S. N. M.); Florida (Uhler).

Stenopoda culiciformis Fabr. "Florida" (Uhler); Ft. Myers (Van Duzee); St. Augustine (Johnson); Punta Gorda, Apr., Marco, Apr., South Jacksonville, Sept., Miami, Sept. (Davis).

Oncocephalus geniculatus Stål. Everglade, Apr. (A. M. N. H.); Florida (Brooklyn Museum).

Narvesus carolinensis Stål. Lake City (Exp. Stat. Florida).

Reduvius personatus Linn. Belleair, Jacksonville (Mrs. Slosson).

Conorhinus sanguisugus Le Conte. Sevenoaks, May (Thurston); Estero, May (Van Duzee); Jacksonville, Nov. (A. M. N. H.); Lake City (Florida Exp. Sta.); Biscayne Bay, Belleair, Jacksonville (Mrs. Slosson); Fernandino (U. S. N. M.); St. Augustine (Johnson); "Florida" (Uhler); Chokoloskee (my coll.).

Melanolestes pictipes H. Schf. Jacksonville (Davis); Silver Springs (Engelhardt).

Rasahus biguttatus Stål. Ormond, Biscayne Bay, Belleair; Charlotte Harbor (Mrs. Slosson); St. Augustine (Johnson); Ft. Myers, Mch. (A. M. N. H.); Everglade, Apr. (Davis); Cedar Keys, June (McAtee).

Rasahus hamatus Fabr. Punta Gorda, Nov. (A. M. N. H.); Ft. Myers, Apr., Everglade, July (Davis); Silver Springs, Nov. (Engelhardt).

Sirthenea stria Fab. Clearwater, Apr., (Van Duzee) Enterprise (U. S. N. M. and my collection).

Ectrichodia cruciata Say. Crescent City, Apr. (Van Duzee) Atlantic Beach (Mrs. Slosson); Palm Beach, Nov. (Engelhardt); Everglade, June (Davis); St. Augustine (Johnson); Georgiana (U. S. N. M.).

Hammatocerus purcis Drury. Ormond, Tarpon Springs (Mrs. Slosson); Silver Springs, Nov. (Engelhardt); St. Augustine (Johnson); Jacksonville, Enterprise (My collection).

Apiomerus crassipes Fabr. Crescent City, Apr., St. Petersburg, Apr., Clearwater, Apr., Tampa, May, Estero, May (Van Duzee); Charlotte Harbor, Ormond, Biscayne Bay, Jacksonville, Lake Worth (Mrs. Slosson); St. Augustine (Johnson); Jacksonville, Sept., Ortega, Sept. (Davis); Enterprise (My collection).

Apiomerus spissipes Fab. Ft. Myers, Mch. (A. M. N. H.); Lakeland, May, Ft. Myers, Apr., Miami, Sept., La Grange, Sept., Big Pine Key, Sept. (Davis); Georgiana, Marathon, Dec. (U. S. N. M.); Elliott's Key, Enterprise (My collection).

Zelus bilobus Say. Crescent City, Apr., Sanford, Apr., Estero, May (Van Duzee); Charlotte Harbor, Ormond (Mrs. Slosson); Key Largo, Nov., Ft. Myers, Nov., Miami, Nov., Punta Gorda, Nov., Newberry, Nov. (A. M. N. H.); Lake City (Florida Exp. Sta.); Silver Spring, Nov., Daytona, Nov., St. Augustine, Nov., Key

West, Nov. (Engelhardt); Punta Gorda, Nov., Lakeland, May, Nov., Newberry, Nov., Ft. Myers, Apr., Marco, Apr., Everglade, Apr., Big Pine Key, Sept., Miami, Sept., Pablo Beach, Sept., Key West, Sept., La Grange, Sept., So. Jacksonville, Sept. (Davis); Biscayne Bay, Kissimmee (Banks); St. Augustine (Johnson); Marathon, Little River, Archer, Rock Ledge (U. S. N. M.).

Zelus cervicalis Stål. "Abundant everywhere I collected in Florida" (Van Duzee); Biscayne Bay, Jacksonville, Ormond (Mrs. Slosson); Punta Gorda, Nov., Lakeland, May, Nov., Newberry, Nov., Ft. Myers, Apr., Ortega, Sept., So. Jacksonville, Sept., La Grange, Sept., Pablo Beach, Sept. (Davis); Sanford, Apr., Lakeland, May, Nov., Ft. Myers, Apr., Nov., La Belle, Apr. (A. M. N. H.); St. Augustine (Johnson).

Zelus socius Uhl. Crescent City, Apr. (Van Duzee); Allen River to Deep Lake, Apr. (Davis).

Zelus luridus Stål. "Florida" (Uhler).

Pselliopus cinctus Fab. Crescent City, Apr. (Van Duzee); Jacksonville (Mrs. Slosson).

Repipta taurus Fab. Crescent City, Apr., Sanford, Apr., Clearwater, Apr. (Van Duzee); Jacksonville, Atlantic Beach, Lake Worth, Charlotte Harbor (Mrs. Slosson); Sanford, Apr., Lakeland, May (A. M. N. H.); St. Augustine (Johnson); Kissimmee (Banks); "Florida" (Uhler).

Fitchia spinosula Stål. Newberry, Nov. (A. M. N. H. and Davis).

Atrachelus cinereus Fab. "Not uncommon at most places where I collected" (Van Duzee); Punta Gorda, Nov. (A. M. N. H. and Davis); Lakeland, Nov. (Davis); Belleair, Ormond (Mrs. Slosson); St. Augustine (Johnson); Kissimmee (Banks).

Doldina praetermissa Bergroth. Charlotte Harbor (Mrs. Slosson); Ft. Myers, Apr., Everglade, Apr. (Davis); St. Augustine (Johnson); Georgiana (U. S. N. M.).

Arilus cristatus Linn. Crescent City, Apr. (Van Duzee); Jacksonville, Nov., Ft. Myers, Apr. (A. M. N. H.); Biscayne Bay (Mrs. Slosson); Lake City (Florida Exp. Sta.); Lakeland, May (Davis); St. Augustine (Johnson).

Sinea diadema Fab. Biscayne Bay (Mrs. Slosson); "Florida" (Uhler).

Sinea rileyi Mont. "Taken at nearly all stations where I collected in Florida" (Van Duzee); Charlotte Harbor (Mrs. Slosson).

Sinea spinipes H. Schf. Key Largo, St. Petersburg, Apr. (Van Duzee); Sanford, Apr., Newberry, Nov., Lakeland, May, Nov., Ft. Myers, Apr., Miami, Nov., Punta Gorda, Nov., Titusville, Nov. (A. M. N. H.); Silver Springs, Nov., St. Augustine, Nov., (Engelhardt); Jacksonville, Nov., Lakeland, Apr., Nov., Ft. Myers, Apr. Marco, Apr., Punta Gorda, Nov. (Davis); Little River, Miami (U. S. N. M.).

MACROCEPHALIDÆ OR PHYMATIDÆ.

Phymata erosa Linn., var. *guerini* Leth. and Sev. Ft. Myers, May, Estero, May, Crescent City, Apr., Key Largo (Van Duzee); Punta Gorda, Nov., Lakeland, May, Nov., Ft. Myers, Apr., Marco, Apr., Big Pine Key, Sept., La Grange, Sept., So. Jacksonville, Sept. (Davis); Lake Worth, Biscayne Bay (Mrs. Slosson); St. Petersburg, Sanford, Newberry, Nov., Ft. Myers, Apr., Nov., Key Largo, Nov., Punta Gorda, Nov., Lakeland, May, Nov., Jacksonville, Nov., Titusville, Nov., La Belle, Nov., Marco, Apr. (A. M. N. H.); Lake City (Florida Exp. Sta.); Little River, Fernandino, Archer (U. S. N. M.); Daytona, Nov., Miami, Nov., Silver Springs Nov. (Engelhardt).

Phymata erosa Linn., var. *fasciata* Gray. "Florida" (Handlirsch 1897).

Phymata erosa Linn., var. *pennsylvanica* Handl. "Florida" (Handlirsch 1897).

Phymata noualhierii Handl. Biscayne Bay (U. S. N. M.).

Phymata vicina Handl. Sanford, Apr. (Van Duzee); "Florida" (Handlirsch 1897).

Macrocephalus cimicoides Swed. Tampa, May (Van Duzee); Ft. Myers, Nov., Jacksonville, Nov. (A. M. N. H.); Charlotte Harbor, Biscayne Bay (Mrs. Slosson); Archer (U. S. N. M.); "Florida" (Handlirsch 1897).

Macrocephalus prehensilis Fab. Sanford, Apr., St. Petersburg, Apr. (Van Duzee); Jacksonville (Mrs. Slosson); Crescent City, St. Petersburg (A. M. N. H.); St. Augustine (Johnson); St. Nicholas, Archer, Capron (U. S. N. M.); Runnymede (Banks).

HENICOCEPHALIDÆ.

Henicocephalus biceps Say (= *culicis* Uhl.). "Florida" (Uhler).

PIESMIDÆ.

Piesma cinerea Say. Lake Worth (Mrs. Slosson).

TINGIDIDÆ.

Corythuca floridana Heid. Crescent City, Apr. (Van Duzee); Ormond, Biscayne Bay (Mrs. Slosson); Bartow, June (Heidemann).

Corythuca gossypi Fab. Biscayne Bay (Mrs. Slosson); Miami, Key West (U. S. N. M.).

Corythuca marmorata Uhler. Ft. Myers, May (Van Duzee); Lake Worth (Mrs. Slosson).

Teleonemia belfragei Stål. Crescent City, Apr. (Van Duzee); Biscayne Bay (Mrs. Slosson); Lakeland, May (Davis).

Teleonemia sacchari Fab. Biscayne Bay (Mrs. Slosson); Key West (U. S. N. M.).

Teleonemia scrupulosa Stål. Key West (U. S. N. M.).

Atheas austroriparius Heid. Duval Co. (Heidemann).

Atheas exiguus Heid. Sevenoaks, Apr. (Van Duzee). "Florida" (Uhler).

Leptoypha mutica Say. Jacksonville (Mrs. Slosson).

Acanthochila exquisita Uhl. Biscayne Bay (Mrs. Slosson); Key West (U. S. N. M.).

Acysta perseæ Heid. Eustis, July, Ft. Myers, July, Cutler, Aug., Baldwin, Mch., Orlando, Miami, Feb., St. George, Apr. "On Alligator pears and camphor trees" (Heidemann).

PYRRHOCORIDÆ.

Largus davisii sp. nov.

Head, antennæ, rostrum, anterior lobe of pronotum in the center, apical half of femoræ, tibiæ and tarsi, and for the most part the scutellum and venter, black. Anterior margin of the pronotum, narrowly, the lateral margin and posterior lobe of pronotum, apex of scutellum, hemelytra, bucculæ faintly, margins of the acetabulæ, ostiolum, posterior margin of metathorax obscurely, trochanter and basal half

of all femoræ, narrow margin of abdomen, genital segment of the males posteriorly, yellowish-red. Greyish-sericeous especially on the head, anterior lobe of pronotum and beneath. Head black densely sericeous, bucculæ sometimes pale reddish. Antennæ more slender than in *L. succinctus*, black throughout, second joint a little more than twice as long as third, third joint about one third as long as the fourth, second and third joint subequal to the first joint, none of the joints as prominently hairy as *L. succinctus*. Pronotum a trifle wider than long; the anterior lobe subequal in length to the posterior lobe but not plainly demarked from it; seen from the side, the pronotum is gradually rounded, declivous, from the posterior margin forward; the anterior lobe somewhat more depressed than usual; the anterior margin depressed, with a few large, black, submarginal punctures; the yellowish-red posterior lobe furnished with fine, scattered, black punctures. Legs with the trochanters and basal half of all femoræ reddish-yellow; the second and third femoræ unarmed, the fore femoræ armed beneath, preapically, by a prominent acute, forwardly inclined spine, before which and situated closer to it and the apex is a one-half shorter spine, similarly inclined and tipped with a short seta. Hemelytra yellowish-red with rather evenly placed, fine, black punctures all over except on the lateral margins which are flattened and very little expanded, the basal third, obsolete concave. The membrane not quite reaching the apex of the abdomen, brownish-yellow, paler at the basal inner angles, nervures concolorous, branching much as in *L. succinctus*. Venter black with narrow lateral margins and genital segment of male posteriorly, yellowish-red. Seen from below the abdomen is more compressed posteriorly than in *L. succinctus*.

Length ♂♂ 10–11 mm. Pronotum 2.75 mm. long and 3 mm. wide; width of hemelytra 4.5 mm.; length of corium 5.5 mm. Length of ♀♀ 12–13 mm.

Described from ♂ St. Augustine, Nov. 8, 1911, collected by Mr. G. P. Engelhardt; ♀ Indian River District, July, 1896, collected by Mr. William Beutenmuller (Both of these in my collection as types); two ♂♂ and one ♀ from Miami, Sept. 24, 1913, collected by Mr. Charles E. Sleight; three ♂♂ and two ♀♀ from Miami, Sept. 24, 1913, two ♂♂ Big Pine Key, Sept. 20, 1913 collected by Mr. William T. Davis for whom this species is named.

This species comes in the *cinctus*, *succinctus*, *convivus*, *longulus* group as arranged by Stål in the Enum. Hem. I, pp. 93–94, 1870. It is most closely related to *L. succinctus* Linn. from which it can be distinguished by the different coloring, the relatively shorter pronotum with the subequal lobes and as seen from the sides, the anterior lobe of *succinctus* is more elevated and abruptly rounded declivous before, while in *davisi* the whole pronotum is gradually rounded from the posterior margin. The relative thickness and length of the antennal joints is also different in the two species. The punctures on the posterior lobe of pronotum and hemelytra are more sparse and finer than in *succinctus*. From *longulus* Stål it differs in being relatively shorter and differently colored. The anterior lobe of *cinctus* is much more elevated than in *davisi*. The specimens of *succinctus* which I have used for comparison came from New Jersey and Virginia but I have also seen specimens of this species from Florida.

Largus succinctus Linn. Sanford, Apr., Sevenoaks, Apr., Estero, May (Van Duzee); Lake City (Florida Exp. Sta.); Charlotte Harbor, Jacksonville (Mrs. Slosson); Ft. Myers IV (Davis); Miami, Tallahassee (U. S. N. M.); Ft. Myers, Nov., Lakeland, Nov., Newberry, Nov. (A. M. N. H.).

Largus sellatus Guér. St. Augustine (Johnson).

Dysdercus andreæ Linn. Biscayne Bay (Mrs. Slosson).

Dysdercus minus Say. Biscayne Bay (Mrs. Slosson).

Dysdercus suturellus Say. Charlotte Harbor, Belleair, Ormond (Mrs. Slosson); Punta Gorda, Nov., Ft. Myers, Nov., Titusville, Nov. (A. M. N. H.); Daytona, Nov. (Engelhardt); Ft. Myers, Apr., Everglade, Apr., Miami, Sept., Big Pine Key, Sept. (Davis); Runnymede (Banks); Lake City (Florida Exp. Sta.); Miami, Sept. (Sleight); St. Augustine (Johnson); Miami, Estero, Little River (U. S. N. M.); Lignum Vitae Key, Chokoloskee, Miami (My Collection).

MYODOCHIDÆ OR LYGÆIDÆ.

Oncopeltus fasciatus Dall. Sanford, Apr., Sevenoaks, Apr. (Van Duzee); Biscayne Bay, Charlotte Harbor, Jacksonville (Mrs. Slosson); Ft. Myers, Apr., Key, West, Sept., Big Pine Key, Sept. (Davis); Ft. Myers, Apr. (A. M. N. H.).

Oncopeltus sex-maculatus Stål. Lake Worth (Mrs. Slosson); Miami, Sept. (Davis). This is a Mexican and Central American species which has not hitherto been recorded from the United States. The three specimens collected by Mr. Davis at Miami are typical with the exception that the head and membrane are entirely black.

Lygæus albulus Dist. (= ?*Lygæosoma solida* Uhl). Crescent City, Apr. (Van Duzee); Newberry, Nov. (A. M. N. H.).

The specimens of *Lygæus albulus* Dist. which I have seen from Florida agree with specimens in my collection from Spearfish, So. Dakota and Wood's Hole, Mass. I am inclined to agree with Mr. Van Duzee that Distant's species is identical with *Lygæosoma solida* Uhler which was described from Mariposa Co., California in May, 1893. In this case, then Uhler's name must give way to that of Distant's which was described from Guatemala in January 1893.

Lygæus bicrucis Say. Charlotte Harbor, Atlantic Beach (Mrs. Slosson).

Lygæus facetus Say. Tampa, May (Van Duzee); Orange Grove (A. M. N. H.); Lake Worth, Charlotte Harbor (Mrs. Slosson); Lakeland, Mch. (Davis). This species has often been confused with *L. lateralis* Dall. which occurs in the western United States.

Lygæus formosus Blanch. Biscayne Bay (Mrs. Slosson); Miami, Sept. (Davis). I can find no record of this species having been reported from the United States. The specimens secured by Mr. Davis agree perfectly with others from Mexico and Lower California with which I have compared them.

Lygæus kalmii Stål. "Florida" (Ashmead's collection). I have not seen specimens of this species from Florida in any of the collections which I have examined and Mr. Van Duzee does not report it in his list. Uhler reported *L. turcicus* Fab. throughout the Atlantic and Gulf regions but as he did not differentiate this species from *L. kalmii* his records undoubtedly refer to the latter. Although *L. kalmii* and *L. reclinatus* may be varieties of the same species, it seems certain to me that *L. turcicus* is distinct and I have never seen it from south of Virginia.

Lygæus lineola Dall. "This insect seems to be a general inhabitant of the state

and was abundant especially toward the south." Crescent City, Sanford, Estero, St. Petersburg, Ft. Myers (Van Duzee); Jacksonville, Nov., Marco. Apr., Ft. Myers, Apr., Everglade, Apr. (Davis); Biscayne Bay, Lake Worth, Ormond, Jacksonville (Mrs. Slosson).

Lygæus mimulus Stål. "Common on the prairies at Haw Creek near Crescent City," St. Petersburg, Estero (Van Duzee); Miami, Nov., Ft. Myers (A. M. N. H.); Ormond (Mrs. Slosson); Daytona, Nov. (Engelhardt); La Grange, Sept., Big Pine Key, Sept. (Davis and Sleight).

Lygæus tripligatus sp. nov. (Ms. name of Uhler).

Dull brownish-black or obscure fuscous. Head with a small, pale spot at base. Antennæ concolorous, finely pilose, with the terminal joint a trifle paler; the first joint short, extended one-third its length beyond apex of head, second joint about three times as long as first and a trifle longer than third joint, fourth only a trifle longer than second joint. The bucculæ pale. The apex of rostrum reaching the posterior coxæ, first and second joint subequal, third almost one-third longer than second joint. Pronotum broader than long with the anterior and posterior angles rounded and the posterior margin straight; posterior lobe with three orange-red marks, the median one, elongate-triangular, reaching about mid-way on the pronotum, the two lateral marks extending forward from the humeral angles to the middle line almost evenly expanded, posteriorly these humeral fasciæ are narrowly extended a short distance along the posterior margin; the lateral margins are impressed from base to apex forming a paler brown dividing line separating the reddish humeral spots from similar spots on the propleural angles beneath; the extreme anterior margin sometimes narrowly pale and lightly curved. Sternal parts slightly paler brown than the corium. Prosternum with the extreme narrow anterior and posterior margins and the acetabulæ pale luteous, the posterior angle reddish-orange; mesosternum with narrow posterior margin and acetabulæ pale luteous; acetabulæ of the metasternum pale and the rim of the stink gland orifices orange colored. Legs obscure fuscous, with fine pale pubescence; coxæ, trochanters and sometimes the bases of the femoræ pale luteous, the tarsi paler than the femoræ. Scutellum carinate, concolorous, narrowly and obsoletely pale margined with the apex and faint median stripe, pale. Corium with the apical angles reddish orange and the extreme costal edge paler. Membrane brownish-black, veins concolorous. Venter brown-black, a little shining provided with golden brown pubescence, the lateral margins not conspicuously paler. Length ♂♂, 6-7 mm.

Described from two males. One in the collection of Mrs. Annie Trumbull Slosson which she took at Lake Worth, Florida and the other in my collection from Punta Gorda, Florida, and kindly presented to me by Mr. Otto Heidemann. I have seen other specimens in the Uhler collection at the U. S. N. M. For a long time this has remained in collections under the ms. name *tripligatus* of Uhler and I have thought best to adopt that name for this species. It belongs in the subgenus *Ochrostomus* Stål and should be arranged close to *lineola* Dall.

Nysius californicus Stål. "Abundant everywhere I collected in Florida" (Van Duzee); Sanford, Crescent City, Punta Gorda, Nov., Titusville, Nov., Key Largo, Nov., Lakeland, May and Nov. (A. M. N. H.); Biscayne Bay, Jacksonville, Atlantic Beach (Mrs. Slosson); Punta Gorda, Nov., Lakeland, May, Nov., Newberry, Nov., Jacksonville, Nov. (Davis); St. Augustine (Johnson); "Florida" (Uhler).

Nysius ericæ Schill. Miami, Nov. (A. M. N. H.).

Nysius inæqualis Uhl. "Florida" (Uhler); So. Jacksonville, Sept. (Davis).

Nysius longiceps Stål. Biscayne Bay (Mrs. Slosson).

Belonochilus koreshanus Van Duz. Ft. Myers, May, Estero, May (Van Duzee); Biscayne Bay, Charlotte Harbor (Mrs. Slosson); Lakeland, Nov., Jacksonville, Nov., Punta Gorda, Nov. (A. M. N. H. and Davis); Miami, Nov. (A. M. N. H.); Ft. Myers, Mch. (Davis).

Ninus notabilis Dist. "I found this insect very abundant everywhere I collected in Florida" (Van Duzee); Belleair, Ormond, Biscayne Bay, Lake Worth (Mrs. Slosson); Lakeland, Nov., Titusville, Nov., Punta Gorda, Nov. (A. M. N. H.).

Ischnorhynchus geminatus Say. Jacksonville, Nov. (A. M. N. H.).

Cymus angustatus Stål. Lake Worth (Mrs. Slosson).

Cymus bellus Van Duz. Sevenoaks, Apr., St. Augustine, Apr. (Van Duzee); Jacksonville (Mrs. Slosson).

Cymus breviceps Stål. Sanford, Apr., Crescent City Apr., Tampa, May, St. Petersburg, Apr. (Van Duzee); Biscayne Bay (Mrs. Slosson).

Ischnodemus badius Van Duz. Tampa, May, St. Petersburg, Apr. (Van Duzee); Clearwater (A. M. N. H.).

Ischnodemus lobatus Van Duz. Estero, May (Van Duzee).

Ischnodemus rufipes Van Duz. Crescent City, Apr., Clearwater, Apr., Estero, May (Van Duzee); Lake Worth, Ormond (Mrs. Slosson); Lakeland, Nov., South Bay of L. Okechobee, May (Davis).

Ischnodemus slossoni Van Duz. Jacksonville (Mrs. Slosson); Little River, Dec. (U. S. N. M.).

Blissus leucopterus Say. Ft. Myers, May, Sanford, Apr. (Van Duzee); Miami, Punta Gorda, Nov. (A. M. N. H.); Lake Worth, Biscayne Bay, Belleair, Ormond (Mrs. Slosson); So. Jacksonville, Nov., Everglade, Apr. (Davis).

Geocoris bullatus Say. Crescent City, Apr., Tampa, May, Estero, May, (Van Duzee); Biscayne Bay, Lake Worth (Mrs. Slosson); Lakeland, Nov. (Davis).

Geocoris piceus Say. Biscayne Bay (Mrs. Slosson).

Geocoris punctipes Say. "Abundant everywhere I collected in Florida" (Van Duzee); Jacksonville, Nov., Crescent City, Apr., Clearwater, Apr., Tampa, May, Sanford, Apr. (A. M. N. H.); Belleair, Biscayne Bay (Mrs. Slosson); Punta Gorda, Nov., Lakeland, Nov. (Davis).

Geocoris uliginosus Say. Crescent City, Apr., Sanford, Apr., Ft. Myers, May (Van Duzee); Charlotte Harbor, Belleair (Mrs. Slosson); Lakeland, Nov., La Grange, Sept. (Davis).

Phlegyas annulicrus Stål. "Florida" (Ashmead Collection).

Edanacala dorsilinea A. et S. "I found this species abundant everywhere I collected in Florida" (Van Duzee); Punta Gorda, Nov., Titusville, Nov., Lakeland, Nov., Jacksonville, Nov., La Belle, Apr., Ft. Myers, Apr., Crescent City, Apr. (A. M. N. H.); Lakeland, Nov., Punta Gorda, Nov., Ft. Myers, Apr., La Grange, Sept., So. Jacksonville, Sept. (Davis); Jacksonville (Mrs. Slosson).

It is probable that other records in literature, of *O. dorsalis* Say and *O. cubana*

Stål belong here as I have not been able to discover either of these species in the great amount of material I have looked over.

Paromius longulus Dall. Crescent City, Apr., St. Petersburg, Apr., Ft. Myers, May, Estero, May (Van Duzee); Biscayne Bay, Lake Worth, Jacksonville, Ormond (Mrs. Slosson); Silver Springs, Nov., Tampa, Nov. (Engelhardt); St. Augustine (Johnson); Lake City (Florida Exp. Sta.); Jacksonville, Apr., Sept., Nov., Lakeland, Mch., Nov., Punta Gorda, Nov., Newberry, Nov., Everglade, Apr., Ft. Myers, Mch., Apr. (A. M. N. H. and Davis); Key Largo, Nov., Titusville, La Belle, Miami, Clearwater, Sanford and Marco (A. M. N. H.); La Grange, Nov. (Davis); Duval Co. (U. S. N. M.).

Ligyrocoris abdominalis Guér. Ft. Myers, May (Van Duzee); Biscayne Bay, Lake Worth (Mrs. Slosson). This is the species recorded as *L. constrictus* Say, by Uhler who states that it "extends as far south as Mexico and Central America. It seems to be abundant in Cuba, and occasionally in the other large islands of the Antilles." From all of the evidence I can gather, I believe that *constrictus* Say belongs to the genus *Perigenes* Dist. and occurs only in the northern United States. I have seen specimens of *L. abdominalis* from Brazil and Venezuela in the collection of the U. S. N. M.

***Ligyrocoris confraternus* sp. nov.**

Narrowly oval. Dull fuscous, sparingly setose. Head black with golden-yellow incumbent pubescence and sparsely setose, gradually constricted back of the eyes, this marginal part about one-half the length of the eyes. Ocelli are about twice as far apart as the space between them and the eyes and placed on an imaginary line drawn across the posterior boundary of the eyes. The antennæ infuscated, all of the joints more or less pale at base, the fourth, with the basal third conspicuously pale ringed; the basal joint extends for its apical one third beyond the apex of the head, the second joint about twice as long as the first, third joint about one-fourth shorter than second, the fourth joint about one fourth longer than third and almost subequal to second joint. Rostrum pale. Pronotum fuscous, setose, deeply constricted behind middle leaving the anterior lobe about one-fourth longer than posterior lobe, the latter finely punctate and with a short pale fascia either side of the middle before the posterior margin which is slightly concave. The sternum is fuscous, with the posterior angle of prosternum, the posterior margin of the metasternum and the acetabulæ fusco-ferrugineous. The coxæ are fuscous with the precoxal spine acutely prominent; the anterior femoræ are fuscous at base, the remainder of these and the apex of the second and third femoræ are spotted and marked with fuscous, apices of all tibiæ, tibial spines, and apices of first tarsal joint and all of the third joints infuscated. The anterior femoræ are furnished, in their apical two-thirds with a double row of spines, the inner row consists of three larger spines, the basal one about one-third distant from the base, the second one a little beyond the middle, the third, a little closer to the apex than to the post-median spine, between these last two and beyond the apical one are a number of smaller spines; the outer row has a tooth set midway opposite the space between the inner two larger teeth of the outer row and another opposite the space between the post-median and preapical spines, between which and the apex are several smaller teeth; these femoræ almost devoid of long setæ between the teeth. Scutellum fuscous, apex pale, long triangular, finely punctate, apically slightly carinate. Corium concolorous, finely punctate and finely

pubescent, the costal margins narrowly pale, interrupted by an elongate fuscous fascia behind middle and apical angle fuscous; near the inner angle before the posterior margin is a small round, pale spot. Commissure over a third as long as the scutellum. Membrane fuscous, broadly paler at base and sometimes with a few of the veins paler. Venter fusco-ferrugineous, somewhat shining and finely pubescent; genital segment of male more ferrugineous.

Length ♂ 5, ♀ 6 mm.

Described from two males from Everglade, Fla., Apr. 1912 and two females, one from Everglade, May 1912 and the other from Ft. Myers, Apr. 1912 collected by Mr. William T. Davis.

This species is closely related to *L. abdominalis* and with its pale ringed terminal antennal joint has, I believe, been mistaken for it. Besides being smaller it is less setose and more finely punctured than that species. The head is less suddenly constricted behind; the ocelli are placed relatively closer together; the first joint of the antennæ does not extend so far beyond the apex of the head; the first joint of the rostrum is pale; the anterior lobe of the pronotum is obviously longer than the hind lobe and the posterior margin not so concave; the legs are quite differently marked and the spines and setae of the fore femoræ are very characteristically different, for in *abdominalis* these are armed with a single row of teeth in their apical half as indicated by Stål, and provided with a number of long setæ; the commissure in *abdominalis* is very much shorter. *L. confraternus* agrees with *L. multispinus* Stål in having two rows of femoral spines.

***Ligyrocoris slossoni* sp. nov.**

Rather elongate, narrow, dull. Head above and below red; eyes far removed from base, placed about midway between apex and base, the margins back of the eyes gradually contracted for a very short distance, thence sub-parallel to the base forming a wide neck; the ocelli are placed just back of the middle line of the eyes and a trifle closer to the eyes than to an imaginary longitudinal line midway between them. Apex of head reaching the middle of the basal joint of antennæ, all of first, second and base of third joints pale, apical two-thirds of the third infuscated, the fourth reddish with fine pale hairs; second joint about two and one-half times longer than basal and one-fourth longer than third, fourth a little shorter than the third joint. First joint of rostrum concolorous with head, its apex just reaching posterior line of eyes, a little shorter than second joint (the remainder hidden.) Pronotum constricted back of the middle, leaving the anterior lobe about one-third longer than the posterior lobe and a trifle narrower than the width of head across the eyes; this lobe castaneus, impunctate, the anterior collar reddish; the posterior lobe is much paler marked and sparsely punctured with castaneus. The sternum castaneus, the collar, the posterior angles, the acetabulæ, and posterior margins of the metasternum ochraceous-red. The first and second femoræ are red, paler at base; the tibiæ pale. (The hind pair of legs are missing.) The anterior femoræ are not much swollen and provided with a few small teeth arranged in a single row as follows: one-third

the distance from apex a single tooth and midway between this and apex a larger tooth, between the first two and beyond the pre-apical one are two or three minute teeth. The scutellum castaneus, reddish at apex and posteriorly keeled. The corium is pale-stramineous with a broad transverse post-median fascia, lines of punctures on the basal half and clavus and the apical angle, castaneus. Membrane entirely infuscated. Venter reddish-castaneus, somewhat shining.

Length of ♂ 5 mm.

Described from a single male in the collection of Mrs. Annie Trumbull Slosson, taken by her at Lake Worth, Florida.

This species is most closely related to *L. nitidicollis* Stål which was placed by that author in the genus *Pamera*. Stål likewise placed *L. setosa* in the same genus but it belongs undoubtedly to *Ligyrocoris* of which I am confident *Heraeus percultus* Distant is a synonym.

Ligyrocoris litigiosus Stål. Biscayne Bay (Mrs. Slosson).

Myodocha serripes Oliv. "Larva taken at St. Petersburg" (Van Duzee); "Florida" (Uhler).

Heraeus plebejus Stål. Sanford, Apr. (Van Duzee); Everglade, Apr. (A. M. N. H. and Davis).

Heraeus triguttatus Guér. Biscayne Bay (Mrs. Slosson).

Pamera basalis Dall. Crescent City, Apr. (Van Duzee); Biscayne Bay (Mrs. Slosson); Lakeland, Nov., Jacksonville, Nov. (A. M. N. H.).

Pamera bilobata Say. "Another common species found everywhere in the state" (Van Duzee); Charlotte Harbor, Jacksonville, Biscayne Bay, Atlantic Beach (Mrs. Slosson); Lakeland, Nov., Jacksonville, Nov., Titusville, Nov., Punta Gorda, Nov., Ft. Myers, Mch. (A. M. N. H.); Jacksonville, Nov., Ft. Myers, Apr., Everglade, May, Punta Gorda, Nov., L. Okechobee, May, La Grange, Nov., (Davis); Tampa, Nov. (Engelhardt); Miami, Nov. (U. S. N. M.); Leon Co. (my coll.).

There is quite evidently, to my mind, two distinct but closely related species placed in lists, as synonyms under this species. Scarcity of West Indian and Mexican material does not enable me to make a positive confirmation of my strong belief in this respect. Mr. Van Duzee in his list of Florida Hemiptera distinguishes one of these as probably *scutellatus* Dallas. This form always has the fourth antennal joint pale ringed at base, the anterior lobe of the pronotum relatively shorter than the typical *bilobata* and less swollen and the head a trifle more porrect. I should, however, call it *Pamera servillei* Guér. redescribed by Stål as belonging to *Plociomera* in his Hemiptera Mexicana, 312, 1862.

Pamera vineta Say. "Common everywhere I collected in Florida" (Van Duzee); Biscayne Bay, Lake Worth, Jacksonville, Belleair (Mrs. Slosson); Clearwater, Apr., Crescent City, Apr., Sanford, Apr., St. Petersburg, Apr., Ft. Myers, May, Lakeland, Nov., Key Largo, Nov., Punta Gorda, Nov., Miami, Nov., La Belle, Nov. (A. M. N. H.); Everglade, Apr., Lakeland, May (Davis); Daytona, Nov. (Engelhardt); Lake City (Florida Exp. Sta.).

Ptochiomera antennata Van Duz. Tampa, May (Van Duzee); Miami (A. M. N. H.).

Ptochiomera minima Guér. Titusville, Nov. (A. M. N. H.); Everglade, May, Miami, Sept. (Davis); St. Augustine (Johnson); "Florida" (Uhler).

Ptochiomera nodosa Say. Crescent City, Apr. (Van Duzee); Jacksonville, Lake Worth, Biscayne Bay (Mrs. Slosson); Titusville, Nov. (A. M. N. H.); "Florida" (Uhler).

Cnemodus mavortius Say. Punta Gorda, Nov. (A. M. N. H.); Jacksonville (Mrs. Slosson); Cleveland, Nov. (Davis).

Ozophora burmeisteri Guér. Everglade, Apr. (Davis); St. Augustine (Johnson).

***Ozophora trinotatus* sp. nov.**

Dull, dark castaneus. Rather narrow elongate. Head sparsely setose, becoming fulvous anteriorly, gradually constricted back of eyes. Ocelli vitreous, about twice as far apart as each is removed from the eyes and set in an imaginary line running across posterior boundary of eyes. Apex of head not quite reaching middle point of basal antennal joint. Antennæ with the first three segments pale ochraceous, extreme apex of third and apical two-thirds of terminal joint infuscated; second joint about two and one-half times longer than basal, the third joint two-thirds the length of second, fourth joint almost as long as second and with the basal third pale ringed. Rostrum same color as the antennæ with apex of first joint reaching base of head, and subequal to second joint, third joint a little shorter. Pronotum concolorous with head, sparsely setose, the side margins narrowly carinate and shallowly constricted in the middle but dorsally, the anterior lobe appears slightly shorter than the posterior lobe; narrow collar is distinct; the anterior lobe impunctate, the posterior lobe finely and rather evenly punctate. The sternum only slightly darker castaneus than the pronotum, with the acetabulæ and sometimes with posterior margins of the metanotum pale; episternum anteriorly and the propleura back of the stricture punctate. Legs sordid ochraceous not banded with fuscous, all of the femoræ provided with long setæ; the anterior femoræ not much swollen, armed in their apical third with about three fine teeth. Scutellum with extreme apex pale, punctured in the center and along the sides, leaving a V-shaped smooth callosed area occupying the submargins. Corium more fuscous with the costal margins to beyond the middle, a subapical, irregularly quadrate spot and extreme apical angle minutely and contiguous part of membrane pale ochraceous; the clavus anteriorly and the base of the corium sometimes paler than the general surface; the fine punctures are arranged in linear series, especially on the clavus and along the veins, becoming more profuse beyond the subcostal vein. Membrane dark brown except for the paler marks along the outer basal margin. Venter only slightly darker castaneus than the sternum and finely setose.

Length 6 mm.

Described from ♂, Marco, Florida, Apr. 17, 1912 and ♀, Everglade, Florida, Apr., 11, 1912 (Coll. A. M. N. H.); 2 ♀'s, Ft. Myers, Florida, Mch. 31, 1912, and ♀, Everglade, Florida, Apr. 10, 1912 (Coll. Mr. William T. Davis); ♂, Ormond, Florida (Coll. Mrs. Annie T. Slosson). Mrs. Slosson also has this species from Biscayne Bay and Belleair.

This species is more closely related to *O. picturata* Uhl but besides being quite differently colored and marked it differs principally in having the pronotum less evidently constricted, in having long setæ on the femoræ and the spines on the fore femoræ arranged differently. In *burmeisteri* the fore femoræ are more swollen and differently spined.

Ozophora picturata Uhl. Biscayne Bay (Mrs. Slosson); Kissimmee (Banks); "Florida" (Ashmead).

Salacia pilosula Stål. Biscayne Bay (Mrs. Slosson).

Pygæus pallidus Uhl. Biscayne Bay (Mrs. Slosson); "Florida" (Uhler).

***Peritrechus paludemaris* sp. nov.**

Elongate, oval; dull black and ochraceous, with very fine pale pubescence. Head sub-shining black, remotely punctate, about as long as the width across the eyes, its apex reaching just beyond the middle point of the basal joint of the antennæ. Antennæ piceous-black, rather thickly coated with fine hairs, second joint about twice as long as the basal joint, the third about one-third shorter than the second and the fourth subequal to the second joint. Apex of the rostrum reaching between the middle coxæ. Pronotum with the anterior lobe black, finely and very sparsely punctate, the region of the collum ochraceous, back of which is a cluster of punctures; the posterior lobe ochraceous, rather evenly and profusely punctured with fuscous; the pronotum is contracted anteriorly so that its diameter just back of the rounded anterior angles is very obviously less than the width of head across the eye; the side margins slightly sinuate just back of the middle point. Sternum dull black, sparsely punctate, the acetabulæ, anterior pro-sternal and posterior metasternal margins castaneous. Legs, with the coxæ, bases and extreme apices of the femoræ, the tibiæ, except at apex, castaneous; the tarsi, except at apex, paler; the fore femoræ for the most part, the median and hind femoræ on their apical halves, except the knees and apices of the tibiæ and tarsi piceous; the swollen fore femoræ armed midway with a short tooth, frequently absent, midway between which and the apices is a longer tooth. Scutellum fuscous, rather sparsely punctate posteriorly and provided apically with a V-shaped ochraceous mark. Corium mostly ochraceous with some fuscous patches contiguous to the posterior margin; fuscous punctures arranged in rows on the clavus and along the nervures, more profuse and irregularly placed without the subcostal nervure behind the middle. Membrane, especially at base pale, general surface faintly smudged with fuscous. Venter shining black, very minutely punctate and provided with a rather dense coat of incumbent pale hairs. Length 5-6 mm.

Described from numerous specimens in my collection taken along the edges of the salt marshes of Staten Island, Chesapeake Beach, Md. collected by Mr. Nathan Banks and one specimen from Everglade, Florida collected by Mr. William T. Davis in July.

So far as my knowledge goes this species is confined to the salt-marshes along the Atlantic coast. It is very closely related to *P. fraternus* Uhl., a widely distributed species in the United States. Besides being longer and relatively narrower, the head and antennæ are longer in proportion. The

most evident character by which to distinguish it from *fraternus* is the obviously narrower pronotum just back of the rounded anterior angle.

Aphanus umbrosus Dist. Florida (Mrs. Slosson); "Florida as *Microtoma carbonaria* Goeze."

Embethis vicarius Horv. Atlantic Beach (Mrs. Slosson).

NEIDIDÆ OR BERYTIDÆ.

Jalysus multispinus Ashm. (= *perclavatus* Van Duz.). Crescent City, Apr., Sanford, Apr., Tampa, May, St. Petersburg, Apr. (Van Duzee); "Florida" (Ashmead).

Jalysus spinosus Say. "Not at all abundant" (Van Duzee); Crescent City, Apr., Clearwater, Apr. (Van Duzee); Lakeland, Nov. (A. M. N. H. and Davis).

Metacanthus decorus Uhl. Estero, May (Van Duzee).

ARADIDÆ.

Aradus abbas Bergr. Atlantic Beach (Mrs. Slosson).

Aradus acutus Say. "Florida" (Uhler).

Aradus breviatus Bergr. Baldwin on *Toxodium* (U. S. N. M.).

Aradus falleni Stål. Crescent City, Apr., Sanford, Apr., St. Petersburg, Apr., Clearwater, Apr. (Van Duzee); Belleair (Mrs. Slosson); La Belle, Apr. (A. M. N. H. and Davis); Lemon City, Dec. (U. S. N. M.).

Aradus gracilicornis Stål. Crescent City, Apr. (Van Duzee); Lake Worth, Atlantic Beach (Mrs. Slosson).

Aradus minutus Bergr. "Southern Florida" (Heidemann).

Aradus quadrilineatus Say. "Florida" (Bergroth).

Aradus lugubris Fall. "Florida" (Uhler); "Florida" (Say).

Aradus similis Say. Charlotte Harbor, Biscayne Bay, Jacksonville (Mrs. Slosson).

DYSODIDÆ OR BRACHYRHYNCHIDÆ.

Calisius anæmus Bergr. Biscayne Bay (Bergroth).

Calisius contubernalis Bergr. St. Goerge's Island (Bergroth).

Proxius gypsatus Bergr. "Florida" (Bergroth); St. Augustine (U. S. N. M. and Johnson).

Proxius schwarzi Heid. Tampa (Heidemann).

Mezira emarginata Say. Jacksonville (Mrs. Slosson).

Mezira granulata Say. Crescent City, Apr. (Van Duzee); Enterprise, Fernandina (U. S. N. M.); "Florida" (Uhler).

Mezira lobatus Say. "Florida" (H. Osborn).

Pictinus arivillii Bergr. Crescent City (Heidemann).

Neuroctenus simplex Uhl. Biscayne Bay (Mrs. Slosson); Lakeland, Apr. on Live Oak (Heidemann); "Florida" (Uhler).

Anewrus politus Say. Belleair (Mrs. Slosson); St. Augustine (Johnson).

CORIZIDÆ.

Harmostes affinis Dall. Ft. Myers, May (Van Duzee); Biscayne Bay (Mrs. Slosson); Key Largo, Nov. (A. M. N. H.); "Florida" (Bank's Cat.).

Harmostes reflexulus Say. "Common everywhere in Florida" (Van Duzee); Punta Gorda, Nov., Lakeland, May, Ft. Myers, Apr. (Davis); Jacksonville, Charlotte Harbor, Atlantic Beach (Mrs. Slosson); Lakeland, May and Nov., Titusville, Nov., Ft. Myers, Apr., St. Petersburg, Apr., Sanford, Apr., Clearwater, Apr. (A. M. N. H.); "Florida" (Uhler).

Corizus bohemani Sign. Lakeland, Nov., Miami, Nov., (A. M. N. H.); La Grange, Sept., Pablo Beach, Sept. (Davis); St. Augustine, Nov., Daytona, Nov. (Engelhardt).

Corizus hyalinus Fab. Estero, May (Van Duzee); Lake Worth, Biscayne Bay (Mrs. Slosson); Newberry, Nov. (A. M. N. H.); Jacksonville, Nov. (Davis).

Corizus lateralis Say. Sanford, Apr., (Van Duzee); Tampa, Nov. (A. M. N. H.).

Corizus punctatus Sign. Crescent City, Apr. (Van Duzee).

Corizus sidæ Fab. Crescent City, Apr., St. Petersburg, Apr. (Van Duzee); Ft. Myers, Apr. (Davis); "Florida" (Uhler).

Pyrrhotes hæmatoloma H. Schf. Sanford, Apr. (Van Duzee); Lakeland, May (A. M. N. H.); Everglade, Apr., May, June, Chokoloskee, Apr., Key West, Sept. (Davis); Lignum Vitæ Key, Feb. (My coll. from Prof. E. B. Wilson); "Florida" (Uhler).

COREIDÆ.

Corynocoris distinctus Dall. Crescent City, Apr., Estero, May (Van Duzee). "Florida" (Uhler). There is strong probability that these may be the next species.

Corynocoris typhæus Fab. Ft. Myers, Apr., Lakeland, May (Davis); Indian River District (My collection).

Because of their very close resemblance in color and markings this and the foregoing species have been much confused by entomologists. They are in fact so closely related that only a very careful study with the lens will show that principal characters for differentiation are found in the head as indicated by Dallas. *C. distinctus* occurs generally distributed over almost the entire United States, at least east of the Rocky Mts., extending south into Texas, Arizona and Mexico as shown by specimens in my collection. Like so many of our hemiptera the lines of dispersal of this species must have started in Mexico, one line proceeding around the Gulf strip of the lower austral zone and thence northwardly along the coast as far as New England and Canada, another line proceeding northward to spread out through all of the great Mississippi Valley. *C. typhæus* is confined so far as my knowledge goes to the extreme southeastern United States as I have only seen it from Florida. It differs from *C. distinctus* in having the head appearing much less quadrate, drawn out more in front between the bases of the antennæ which are a little more closely set together; the lateral spines are also placed closer together. The basal joints of the antennæ are not so stout, less hairy and more clavate shaped, being gradually narrowed from apex to base and slightly curved while in *distinctus* they are stouter and less narrowing from apex and more sharply constricted at base; the apical joint is relatively shorter in *typhæus*, more spindle shaped being quite evidently widest beyond the middle while in *dis-*

tinctus this joint is not so stout and almost parallel sided, suddenly constricted at base. In *typhaeus* the rostrum is a little longer, its apex reaching just beyond the middle coxæ. I can find little difference in the curvature of the hind tibiæ in the two species.

Archimerus ashmeadi Mont. "Florida" (Montandon).

Archimerus calcarator Fab. Crescent City, Apr., Tampa, Apr., Ft. Myers, May, Estero, May (Van Duzee); Lakeland, Nov., Ft. Myers, Mch. and Apr. (A. M. N. H. and Davis); Biscayne Bay, Charlotte Harbor (Mrs. Slosson); Sanford (A. M. N. H.); Pablo Beach, Sept. (Sleight).

Mr. Van Duzee has already pointed out the differences between this and our more northerly *alternatus* Say.

Mozena obesa Mont. "Florida" (Montandon); Jacksonville (Mrs. Slosson); Enterpris (My collection from Wm. Beutenmuller.)

Euthochoa galeator Fab. "Taken at all stations but more abundant toward the south" (Van Duzee); Jacksonville, Biscayne Bay (Mrs. Slosson); Key Largo, Miami, Nov., Everglade, Apr., Lakeland, Mch. (A. M. N. H.); Lakeland, Nov., Ft. Myers, Apr., Everglade, Apr., Marco, Apr., Miami, Sept., La Grange, Sept., Key West, Sept., Big Pine Key, Sept. (Davis); Miami, Marathon, Dec. (U. S. N. M.); Leon Co., Mch., Miami, Feb., Indian River District, Apr., Chokoloskee (My collection).

Acanthocephala declivis Say. Chokoloskee (My collection); "Florida" (Uhler).

Acanthocephala confraterna Uhl. Biscayne Bay (Mrs. Slosson); Pablo Beach, Nov., Lakeland, Mch., Marco, Apr. (Davis); La Grange, Sept. (Davis and Sleight); Silver Springs, Daytona, Nov. (Engelhardt); Lake City (Florida Exp. Station); "Florida" (Uhler); Enterprise (My collection).

This species is closely related to and much resembles *femorata* in appearance but the abdomen is narrower, almost covered by the hemelytra while in *femorata*, considerable of the connexivum is exposed. The pronotum though granulated is not covered with small tubercles as in *femorata* and the lateral margins are not furnished with such evident teeth. In *confraterna* the first three antennal joints are brownish with the apical joint ferruginous red; in *femorata* the joints are all concolorously reddish brown. In the male *confraterna* the hind femora are not nearly so much inflated, nearly straight and longer and though toothed beneath are unprovided with the enlarged median curved tooth so prominent in *femorata*; the hind tibiæ in this sex are also more expanded in *confraterna*.

Acanthocephala femorata Fab. "Not uncommon at most places where we collected" (Van Duzee); Ft. Myers, Apr., Nov., Lakeland, Mch., Nov., Miami, Nov., Key Largo, Nov., Sanford, Apr., St. Petersburg, Apr., Everglade, Apr., Chokoloskee, Apr., Punta Gorda, Apr. (A. M. N. H.); Biscayne Bay, Belleair, Atlantic Beach (Mrs. Slosson); Lake City (Florida Exp. Station); St. Augustine (Johnson and Engelhardt); Jacksonville, Nov., Everglade, Mch., Apr., Chokoloskee, Apr. (Davis); Pablo Beach, Sept. (Sleight); Enterprise, Apr. (My collection); "Florida" (Uhler).

Uhler has also recorded *A. terminalis* Dall. from Florida but I have been unable to confirm this.

Chondrocera laticornis La Porte. "Florida" (A. M. N. H.); Palm Beach, Georgiana, Key Largo (U. S. N. M.); Key Largo, Lignum Vitæ Key (Van Duzee collection).

Leptoglossus balteatus Fab. "Florida" (U. S. N. M.).

Leptoglossus corculus Say. Ft. Myers, Nov. (A. M. N. H.); Miami Nov. (Engelhardt); "Florida" (Uhler).

Leptoglossus gonagra Fab. Daytona, Nov. (Engelhardt); Cutler (U. S. N. M.).

Leptoglossus magnoliæ Heid. "Florida" (U. S. N. M.).

Leptoglossus oppositus Say. Lake Worth (Mrs. Slosson).

Leptoglossus phyllopus Linn. Common throughout Florida and reported from every locality visited.

Although Banks has reported *zonatus* in his catalogue as occurring in Florida I am unable to confirm this and have considerable doubt about its occurrence there. This record probably refers to *balteatus* which it very closely resembles.

Phthia picta Drury. Punta Gorda, Nov. (A. M. N. H. and Davis); Big Pine Key, Sept. (Davis); Biscayne Bay (Mrs. Slosson); Miami, Nov. (Engelhardt); "Florida" (Uhler).

Spartocera confluenta Say. Crescent City, Apr., Clearwater, Apr. (Van Duzee); Biscayne Bay, Charlotte Harbor (Mrs. Slosson); Key Largo, Miami, L. Okechobee, May (A. M. N. H.); Everglade, Apr., June, Lee Co., Apr., Miami, Sept. (Davis); Lake City (Florida Exp. Station); Lake Worth (Heidemann); Chokoloskee (My collection).

Although *diffusa* Say has been reported from Florida by Uhler it is probably referable to the preceding species. I am firmly convinced that *diffusa* Say is distinct from *cinnamonea* Hahn from South America. *S. diffusa* Say occurs in North Carolina.

Sephina grayi Van Duz. "Florida" (Van Duzee); Miami, Sept. (Davis and Sleight); Georgiana (U. S. N. M.).

I have not seen a specimen of *S. gundlachi* from Florida although it is recorded in Bank's Catalogue. It should probably be referred to the preceding species.

Chariesterus antennator Fab. Estero, May (Van Duzee); Key Largo, Punta Gorda, Nov. (A. M. N. H.); Charlotte Harbor, Lake Worth, Biscayne Bay, Atlantic Beach (Mrs. Slosson); Lakeland, Nov., Miami, Sept., Big Pine Key, Sept. (Davis); Indian River District (My collection); "Florida" (Uhler).

Margus obscurator Fab. Sanford, Apr., Crescent City, Apr., St. Petersburg, Apr., Ormond (Van Duzee); Lakeland, May, South Jacksonville, Sept. (Davis.).

Namacus annulicornis Stål. Ft. Myers (A. M. N. H. and Davis); Enterprise (U. S. N. M.).

This is a Mexican species hitherto unknown from the United States.

Catorhintha guttula Fab. Crescent City, Sevenoaks, Apr. (Van Duzee); Biscayne Bay (Mrs. Slosson); Miami, Nov. (Engelhardt); Jacksonville (Davis); "Florida" (Uhler).

Catorhintha mendica Stål. Biscayne Bay (Mrs. Slosson); Miami, Sept. (Davis); "Florida" (Uhler).

Anasa andresi Guér. "Florida" (Uhler).

Anasa armigera Say. "Florida" (Uhler).

Anasa scorbutica Fab. Biscayne Bay (Mrs. Slosson); "Southern Florida" (Uhler).

Anasa tristis de Geer. South Bay of L. Okechobee, Mch., Everglade, Apr. (A. M. N. H. and Davis); Jacksonville (Mrs. Slosson); Lee Co., Apr., Big Pine Key, Sept. (Davis); Miami, Silver Springs, Nov. (Engelhardt).

Ceraleptus americanus Stål. Lakeworth (Mrs. Slosson).

ALYDIDÆ.

Protenor belfragei Hagl. Ft. Myers, Apr. (Davis).

Leptocorisa tipuloides de Geer. Crescent City, Clearwater, Apr., (Van Duzee); Jacksonville, Sept., Nov., Lakeland, Nov., Punta Gorda, Nov. (A. M. N. H. and Davis); Pablo Beach, Sept., Nov., Ortega, Sept. (Davis); Daytona, Nov., Silver Springs, Nov. (Engelhardt); Belleair (Mrs. Slosson); Lake City, Nov. (Florida Exp. Station); St. Augustine (Johnson); Orland, May, on egg plant, Palm Beach (U. S. N. M.).

Hyalmenus longispinus Stål. Miami, Nov., Everglade, Apr. (A. M. N. H.); Biscayne Bay (Mrs. Slosson); Big Pine Key, Sept., Miami, Sept. (Davis); Little River (U. S. N. M.); Miami, Nov. (Engelhardt); Chokoloskee (My collection).

Alydus (Burtinus) notatipennis Stål. (= *A. femoralis* Dist). Miami, Sept. (Sleight). I have reported this Central American species from the Huachuca Mts., Arizona (Journ. N. Y. Ent. Soc., 37, 1910). Mr. Sleight's Florida specimen although somewhat darker, agrees in other particulars with the Arizona specimen. I have also very carefully compared this specimen with Distant's description and figure of *Alydus femoralis* in the Biologia and am convinced that this must be placed as a synonym of Stål's species *notatipennis*. In the specimens before me however the first segment of the antennae is longer than the second or third segment.

Alydus pilosulus H. Schf. "Common and widely distributed in Florida." (Van Duzee); Jacksonville, Nov., Lakeland, May and Nov. (Davis); Jacksonville, Nov., Titusville, Nov., Miami, Nov., St. Petersburg, Sanford, Crescent City (A. M. N. H.); St. Augustine, Nov., Daytona, Nov. (Engelhardt); Biscayne Bay, Ormond, Charlotte Harbor (Mrs. Slosson); St. Augustine (Johnson); "Florida" (Uhler).

Stachyocnemis apicalis Dall. St. Petersburg, Apr., Estero, May (A. M. N. H.); "Florida" (Uhler).

PENTATOMIDÆ.

Amarochochrous dubius P. Beauv. Everglade, May (Davis). This West Indian species is almost two millimeters longer than the largest *A. cinctipes* I have seen, and easily distinguished from that species by the anterior angles of the pronotum being prolonged into oblique, elongated, stout, blunt processes which project well beyond the eyes; the humeral angle is sub-emarginate and the process before this is more prominently prolonged into a blunt tubercle; the lateral margins much more deeply sinuated. It has been reported from Virginia by Mr. Van Duzee.

Brochymena annulata Fab. Newberry, Nov., Jacksonville, Nov., Ft. Myers, Apr. (A. M. N. H. and Davis); Pablo Beach, Nov., La Grange, Sept. (Davis); Jacksonville (Mrs. Slosson and Engelhardt); Lake City (Florida Exp. Station); Archer, Mch. (U. S. N. M.); Barqueton (McAtee); Enterprise, Apr. (My collection).

Brochymena arborea Say. Lakeland, Apr. (A. M. N. H.); Silver Springs, Miami, Nov. (Engelhardt); Lake City (Florida Exp. Station); St. Augustine (Johnson); Georgiana (U. S. N. M.); Enterprise, Apr. (My collection); "Florida" (Uhler).

Brochymena cariosa Stål. Biscayne Bay, Tampa (Mrs. Slosson); "Florida" (Van Duzee).

Brochymena marginella Stål. "Florida" (Van Duzee).

Brochymena poeyi Guér. Biscayne Bay, Tampa (Mrs. Slosson); Orlando, Sept. (U. S. N. M.); Big Pine Key, Sept. (Sleight).

Brochymena quadripustulata Fab. Pablo Beach, Nov. (Davis); La Grange, Sept. (Sleight); Enterprise, Apr. (My Collection).

Trichopepla semivittata Say. Crescent City, Apr. (Van Duzee); "Florida" (My collection).

Pentatoma persimilis Horv. "Florida" (Mrs. Slosson).

Pentatoma saucia Say. St. Petersburg, Apr. (Van Duzee); Charlotte Harbor (Mrs. Slosson). This is a salt-marsh species occurring all along the Atlantic coast.

Mormidea lugens Fab. "Common everywhere we collected" (Van Duzee); Biscayne Bay (Mrs. Slosson); Lakeland, Crescent City, Clearwater, St. Petersburg, Titusville, Jacksonville, Ft. Myers (A. M. N. H.); Lake City (Florida Exp. Station); Pablo Beach, Sept., La Grange, Sept., Jacksonville, Sept., Ft. Myers, Mch., Lakeland, May, Sept. (Davis); Ortega, Sept. (Sleight); Enterprise, Apr. (My collection); "Florida" (Uhler).

Mormidea guerini L. and S. Everglade, June (Davis); This is what I take to be the *M. geographica* described by Guérin from Cuba and it has not hitherto been reported from the United States. It has much the appearance of *M. ypsilon* Linn. when fully colored but it is somewhat larger. Specimens from Cuba in the collection of the American Museum of Natural History show considerable variation in the extent of the yellow markings on the corium and scutellum; in some cases the corium and scutellum are unmarked with yellow.

Solubea pugnx Fab. "Taken occasionally at all stations" (Van Duzee); Jacksonville, Charlotte Harbor (Mrs. Slosson); Titusville, Punta Gorda, La Belle, Lakeland, May, Key Largo, Ft. Myers, Apr., Nov., Marco, Apr. (A. M. N. H.); Jacksonville, Punta Gorda, Lakeland, Nov., Marco, Apr., Everglade, Apr., La Grange, Sept., Big Pine Key, Sept. (Davis); Lake City (Florida Exp. Station); St. Augustine (Johnson); Indian River District (My collection); "Florida" (Uhler).

Euschistus bifibulus Pal. Beauv. Crescent City, Sanford, Apr., Estero, May (Van Duzee); South Bay of L. Okechobee, May, Everglade, Ft. Myers, Apr. (A. M. N. H.); Punta Gorda, Lakeland, May, Nov., Ft. Myers, Mch., Chokoloskee, Apr., Big Pine Key, Sept., La Grange, Sept., Miami, Sept. (Davis); Daytona, Nov. (Engelhardt); Lake City (Florida Exp. Station); Enterprise, Indian River Dist. (My collection).

Euschistus crassus Dall. Sanford, Apr. (Van Duzee); Clearwater, Ft. Myers, Apr., Lakeland, May (A. M. N. H.); La Grange, Sept. (Davis); Jacksonville (Mrs. Slosson); Leon Co. (My collection).

Euschistus crenator Uhl. Dade City, Nov. (U. S. N. M.); "Florida" (Uhler).

Euschistus ictericus Linn. Crescent City, Apr., Sanford, Apr., Ft. Myers, May, (Van Duzee); Lakeland, Nov., Ft. Myers, Apr., South Bay of L. Okechobee, May (A. M. N. H.); Ortega, Sept. (Davis); St. Augustine (Johnson); Enterprise (My collection); Kissemmee (Banks).

Euschistus servus Say. "Common everywhere in Florida" (Van Duzee); Crescent City, Sanford, Apr., Tampa, May, Ft. Myers, Mch., South Bay of L. Okechobee, May, La Belle, Apr., Lakeland, May (A. M. N. H.); Lakeland, May and Nov., Jacksonville, Nov., Newberry, Nov., Ft. Myers, Apr., La Grange, Sept., Miami, Sept. (Davis); Daytona, Nov. (Engelhardt); Lake City (Florida Exp. Station); Pablo Beach, Sept. (Sleight); Enterprise, Apr., Leon Co., Mch. (My collection); "Florida" (Uhler).

Euschistus tristigmus Say. Sanford, Apr. (Van Duzee); Jacksonville, Nov. (Davis); "Florida" (Uhler).

Euschistus variolarius Pal. Beauv. Sanford, Apr. (A. M. N. H.); St. Augustine (Johnson).

Proxys punctulatus Pal. Beauv. Sanford, Apr. (Van Duzee); La Belle, Nov., Ft. Myers, Mch., Apr. (A. M. N. H.); Chokoloskee, Apr., Ft. Myers, Apr., Everglade, June, La Grange, Sept. (Davis); St. Augustine (Johnson); La Grange, Sept. (Sleight); Chokoloskee (My collection); "Florida" (Uhler).

Hymenarcys nervosa Say. Ft. Myers, May (Van Duzee); "Florida" (Uhler).

Thyanta antiquensis West. Florida (Mrs. Slosson).

Thyanta casta Stål. Miami, Punta Gorda, Nov. (A. M. N. H.); Key West, Sept., Miami, Sept. (Davis); Miami, Feb. (My collection from Prof. E. B. Wilson).

Thyanta custator Fab. "Found at all points where I collected," Apr. May (Van Duzee); Lakeland, St. Petersburg, Jacksonville, Tampa, Clearwater, Ft. Myers, Miami, Newberry, Titusville, Nov. (A. M. N. H.); Lake City (Florida Exp. Station); Lake Worth, Charlotte Harbor, Jacksonville (Mrs. Slosson); Jacksonville, Lakeland, Punta Gorda, Nov., Ft. Myers, Mch., Lakeland, May, Miami, Sept., Coconut Grove, Sept. (Davis); St. Augustine, Miami, Nov. (Engelhardt); "Florida" (Uhler).

Thyanta perditor Fab. Key Largo, Nov. (A. M. N. H.).

I believe that this species is confined to the extreme southernmost part of Florida, although I have seen records from other parts of the state.

Loza florida Van Duz. Crescent City, Apr. (Van Duzee); Biscayne Bay, Lake Worth (Mrs. Slosson); Jacksonville, Nov., Big Pine Key, Sept. (Davis and Sleight); Lignum Vitae Key, Feb. (My collection from Prof. E. B. Wilson).

The West Indian *L. flavicollis* Drury probably confused with the above has been reported from Florida.

Murgantia histrionica Hahn. Lake City (Florida Exp. Station); "Florida" (Uhler).

Murgantia violascens Westw. Key Largo (Van Duzee); Lignum Vitae Key, Feb. (My collection from Prof. E. B. Wilson).

Vulsirea violacea Fab. Biscayne Bay (U. S. N. M. and Mrs. Slosson); "Florida" (Van Duzee).

Nezara hilaris Say. Crescent City, Apr. (Van Duzee); Ormond (Mrs. Slosson); Newberry, Nov. (Davis); Daytona, Nov. (Engelhardt); St. Augustine (Johnson); "Florida" (Uhler).

Nezara marginata Pal. Beauv. "Southern Florida" (Uhler). I have been unable to confirm this record.

Nezara pennsylvanica De Geer. Sanford, Apr. (Van Duzee); Ft. Myers, Mch., Everglade, July (Davis); Jacksonville, Nov. (Davis and Engelhardt); Biscayne Bay (U. S. N. M.); Indian River Dist. (My collection).

Nezara viridula Linn. Crescent City, Clearwater, Sevenoaks, Apr. (Van Duzee); Pablo Beach, Newberry, Lakeland, Nov. (A. M. N. H. and Davis); Ft. Myers, Nov. (A. M. N. H.); Miami, Silver Springs, St. Augustine, Daytona, Nov. (Engelhardt); Lake City (Florida Exp. Station); Biscayne Bay (Mrs. Slosson); Everglade, May, So. Jacksonville, Sept. (Davis); Seven Oaks (Thurston); South Bay of L. Okechobee, May (A. M. N. H.).

Banasa dimidiata Say. Walton Co. (U. S. N. M.); Leon Co. (My collection from T. O'Connor); "Florida" (Say).

Banasa euchlora Stål. "Florida" (Uhler).

Banasa lenticularis Uhl. Crescent City, Apr. (Van Duzee); Lakeland, Jacksonville, Nov. (Davis); Silver Springs, Nov. (Engelhardt).

Banasa packardi Stål. St. Augustine (Van Duzee).

Piezodorus guildingi Westw. Green Springs, Apr. (Van Duzee); Punta Gorda, Nov. (Davis); St. Augustine (Johnson); Duval Co. (U. S. N. M.); "So. Florida" (Uhler).

Piezodorus incarnatus Germ. Jacksonville (Van Duzee).

Arvelius albopunctatus de Geer. Crescent City, Apr. (Van Duzee); Biscayne Bay (Mrs. Slosson); Key West, Miami, Sept. (Davis); Miami, Mch. (My collection); "Florida" (Uhler).

Neopharnus fimbriatus Van Duz. Florida (Van Duzee).

Brepholozoa heidemanni Van Duz. Biscayne Bay (Van Duzee).

Dendrocoris fruticicola Bergr. Sevenoaks, Apr., Tampa, Estero, Ft. Myers, May (Van Duzee); Jacksonville, Nov., Marco, Apr., Lakeland, May (A. M. N. H.); Lakeland, Nov., Marco, Apr., Ortego, Sept. (Davis); Lake City (Florida Exp. Station); Key West (Van Duzee); Palm Beach, Feb. (My collection); Duval Co. (Bergroth).

I believe that Uhler was in error in recording this species from the arid southwest.

Edessa bifida Say. Crescent City, Clearwater, Apr., Ft. Myers, May (Van Duzee); Ormond, Biscayne Bay (Mrs. Slosson); South Bay of L. Okechobee, La Belle, May (A. M. N. H. and Davis); Miami, Sept. (Davis and Sleight); Pablo Beach, Sept. (Sleight); Miami, Nov. (Engelhardt); St. Augustine (Johnson); Kissimmee (Banks); Key Largo, Mch., Little River, Feb. (U. S. N. M.); Miami, Feb. (My collection); "Florida" (Uhler).

Stiretrus anchorago Fab. Var. *fimbriatus* Say. Charlotte Harbor, Lake Worth, Jacksonville (Mrs. Slosson); Sanford, Apr. (A. M. N. H.); Little River, Feb. (U. S. N. M.).

Var. *pulchellus* Westw. Crescent City, Apr., Ft. Myers, May (Van Duzee); Lakeland, May (A. M. N. H. and Davis); Indian River Dist., Apr. (My collection).

Var. *violaceus* Say. Sanford, Apr. (Van Duzee); St. Augustine (Johnson); Biscayne Bay, Atlantic Beach (Mrs. Slosson); Lakeland, May, La Grange, Sept. (Davis); South Bay of L. Okechobee, May (A. M. N. H.); "Florida" (Uhler).

Perilloides bioculatus Fab. Florida (My collection).

Mineus strigipes H. Schf. Florida (Brooklyn Museum).

Alcæorhynchus grandis Dall. Southern Florida (Van Duzee); Ft. Myers, Mch., Lakeland, Nov. (Davis); Archer (U. S. N. M.).

Alcæorhynchus phymatophora Pal. Beauv. Lake Worth, Biscayne Bay (Mrs. Slosson).

Apateticus cynicus Say. Jacksonville, Nov. (A. M. N. H.).

Apateticus maculiventris Say. St. Petersburg, May (Van Duzee).

Apateticus mucronatus Uhl. Ft. Myers, May (Van Duzee); Charlotte Harbor, Biscayne Bay, Lake Worth (Mrs. Slosson); St. Augustine (Johnson); Dade City, Sept. (U. S. N. M.); Palm Beach, Feb. (My collection); "Southern Florida" (Uhler).

Apateticus sagittata Fab. St. Augustine (Johnson); Miami, Sept. (Davis).

Apateticus serieiventris Uhl. Ft. Myers, Apr. (Davis).

Euthyrhynchus floridanus Linn. Lakeland, Nov. (A. M. N. H.); Lakeland, Newberry, Pablo Beach, Nov., Miami, Sept. (Davis); Biscayne Bay, Lake Worth (Mrs. Slosson); Miami (U. S. N. M., Engelhardt, Sleight and My collection); Umattilla (Florida Exp. Station); St. Augustine (Johnson).

THYREOCORIDÆ.

Thyreocoris ciliata Uhl. Lake Worth (Mrs. Slosson); Ocean Beach, Sept. (Davis).

Thyreocoris lateralis Fab. "Common and widely distributed in Florida" (Van Duzee); Lakeland, Orange Grove, Sanford, Crescent City, Clearwater, Nov. (A. M. N. H.); Jacksonville, Nov., Ft. Myers, Apr. (Davis); Lake City (Florida Exp. Station); Orange Grove, May (My collection).

Thyreocoris minuta Uhl. Jacksonville (Van Duzee).

Thyreocoris pucicaria Germ. "Taken in abundance everywhere I collected in Florida" (Van Duzee); Jacksonville, Biscayne Bay, Belleair (Mrs. Slosson); Lake City (Florida Exp. Station); Punta Gorda, La Belle, Titusville, Tampa, Sanford, Ocean Grove, Nov., Ft. Myers, Marco, Apr., Lakeland, May (A. M. N. H.); Lakeland, Punta Gorda, Jacksonville, Nov. (Davis); Walton Co. (McAtee).

Thyreocoris unicolor Pal. Beauv. Crescent City, Sanford, Clearwater, Apr., Ft. Myers, May (Van Duzee); Ft. Myers, Apr. (A. M. N. H.).

Cyrtomenus mirabilis Perty. Clearwater, Apr. (Van Duzee); Biscayne Bay (Mrs. Slosson); Ft. Myers, Lakeland, Nov., Enterprise, Apr. (A. M. N. H.); Lakeland, May, Nov. (Davis); Daytona, Nov. (Engelhardt); St. Augustine (Johnson); "Florida" (Uhler).

Cydnus communis Uhl. St. Johns River. Orange Springs (Uhler).

Cydnus indentatus Uhl. Lakeland, Steinhatchee, Nov., Key West, Sept. (Davis); St. Augustine (Engelhardt); "Florida" (Uhler).

Pangæus bilineatus Say. Ft. Myers, Apr., Nov., Miami, Marco, Everglade, Apr., Lakeland (A. M. N. H. and Davis); Lake City (Florida Exp. Station); Atlantic Beach, Biscayne Bay (Mrs. Slosson).

Pangæus uhleri Sign. Key West, Nov. (Engelhardt).

Geotomus robustus Uhl. Tampa, May (Van Duzee); Lakeland, May, Nov. (A. M. N. H. and Davis); Jacksonville, Nov. (Davis); Florida (Mrs. Slosson).

Amnestus pusillus Uhl. Crescent City, Apr. (Van Duzee); Biscayne Bay (Mrs. Slosson); La Belle, Everglade, Apr. (Davis).

Sehirus cinctus Pal. Beauv. Florida (U. S. N. M.).

SCUTELLERIDÆ.

Tetyra arcuata Fab. Biscayne Bay (Mrs. Slosson); Key West, Sept. (Sleight); Key West (U. S. N. M.).

Tetyra bipunctata H. Schf. Lakeland, Nov. (A. M. N. H.); Biscayne Bay (Mrs. Slosson); Palm Beach, Daytona, Nov. (Engelhardt); St. Augustine (Johnson); Lake City (Florida Exp. Station); Capron (U. S. N. M.).

Chelysoma guttatum H. Schf. Ft. Myers, May (Van Duzee); Ormond (Mrs. Slosson); Lake City (Florida Exp. Station); Miami, La Belle, Rital, Nov. (A. M. N. H.); Lakeland, Jacksonville, Nov. (Davis); St. Augustine (Johnson and Engelhardt); Georgiana (U. S. N. M.); Indian River Dist. (My collection).

Diolcus chrysorrhæus Fab. Green Springs, Apr. (Van Duzee); Jacksonville (A. M. N. H.); St. Augustine (Johnson); Indian River Dist. (My collection).

Diolcus irroratus Fab. Punta Gorda, Nov. (A. M. N. H. and Davis); Biscayne Bay (Mrs. Slosson); Fernandino (U. S. N. M.).

Homœmus grammicus Wolff. Crescent City, Sanford, Sevenoaks, Apr., Estero, May (Van Duzee); Punta Gorda, Newberry, Lakeland, Jacksonville, Nov., Ft. Myers, Apr. (A. M. N. H.); Charlotte Harbor, Jacksonville (Mrs. Slosson); Lakeland, May and Nov., Ft. Myers, Apr. (Davis).

Sphyrocoris obliquus Germ. Ft. Myers, Estero, May (Van Duzee); Key Largo, Miami, Titusville, Nov. (A. M. N. H.); Biscayne Bay (Mrs. Slosson); St. Augustine (Johnson); Ft. Myers, Apr. (Davis); Capron, Apr., Georgiana, Little River, Feb. (U. S. N. M.).

Symphylus deplanatus H. Sch. Enterprise (U. S. N. M.).

Camirus porosus Germ. Estero, May (Van Duzee); Biscayne Bay (Mrs. Slosson); Key Largo, Nov. (A. M. N. H.); "Florida" (Uhler).

Sub Order HOMOPTERA.

CICADIDÆ.

Cicada biconica Walk. Key West, June (Acad. Nat. Sci. Phil.); Key West (Uhler); "Florida" (Macgillivray).

Cicada bicosta Walk. La Grange, Sept. (Davis); "Southern Florida" (Uhler); "Florida" (Macgillivray).

Cicada davisii Sm. and Gr. Miami, Georgiana (U. S. N. M.); Miami, Jan. (Davis); Miami, Sept. (Acad. Nat. Sci. Phil.).

Cicada erratica Osb. Pablo Beach, Sept., Big Pine Key, Sept. (Davis).

Cicada grossa Fab. (= *marginata* Say) Ormond (Mrs. Slosson).

Cicada hieroglyphica Say. "Apparently common throughout the southern portion of Florida" (Van Duzee); Ormond (Mrs. Slosson); Lakeland, Mch., May, La Belle, Apr., La Grange, Sept. (Davis); St. Augustine (Johnson).

Cicada lycicen de Geer. Lake City (U. S. N. M.); "Florida" (Sm. and Gr.).

Cicada reperta Uhl. "Florida" (Uhler).

Cicada sayi Sm. and Gr. La Belle, Apr. (Davis); "Florida" (U. S. N. M.).

Cicada sayi var. *australis* Davis. La Grange, Sept. (Davis).

Cicada similaris Sm. and Gr. Fernandino (U. S. N. M.); Jacksonville, Sept., La Grange, Sept. (Davis).

Cicada viridifascia Walk. (= *sordidata* Uhl, Distant.) "Southern Florida" (Uhler).

Cicada vitripennis Say. "Florida" (Uhler).

Melampsalta parvula Say. Tampa (Van Duzee); Lakeland, May (Davis).

FULGORIDÆ.

Cyrpoptus belfragei Stal. Tampa (Van Duzee); St. Augustine, Nov. (Engelhardt and Johnson).

Cyrpoptus reineckeii Van Duz. "Taken at all places where I collected in Florida" (Van Duzee); Estero (Mrs. Slosson); Jacksonville (Sleight); Sanford, Clearwater, St. Petersburg, Apr., Jacksonville, May (A. M. N. H.).

Nersia lingula Van Duz. Estero (Van Duzee); Punta Gorda, Lakeland, Nov. (Davis); Ormond (Mrs. Slosson); Punta Gorda, Nov. (A. M. N. H.).

Nersia microrhina Walk. Jacksonville, Lakeland (Davis); Ft. Myers, Lakeland, Nov. (A. M. N. H.); St. Augustine (Johnson).

- Scolops angustatus* Uhl. St. Augustine (Johnson).
Scolops desiccatus Uhl. Crescent City, Sanford (Van Duzee).
Scolops sulcipes Say. "Florida" (Uhler).
Phylloscelis atra Germ. St. Petersburg, Sevenoaks, Ft. Myers and Estero (Van Duzee); Ft. Myers, Jacksonville, Miami, Nov. (A. M. N. H.).
Phylloscelis pallescens Germ. Estero (Van Duzee).
Pelitropis rotulata Van Duz. Ft. Myers, Estero (Van Duzee); Lake Worth, Biscayne Bay (Mrs. Slosson).
Tangia sponosa Uhl. "Southern Florida" (Uhler).
Monopsis tabida Spin. "Florida" (Van Duzee).
Catonia picta Van Duz. Estero (Van Duzee).
Ellidiptera floridae Walk. Newberry (Davis).
Ellidiptera pallida Say. "Florida" (Say).
Monarchis sordulenta Uhl. Lake Worth (Mrs. Slosson).
Bothriocera tinealis Burm. Charlotte Harbor, Biscayne Bay (Mrs. Slosson).
Bothriocera undata Fab. "Was taken everywhere I collected in Florida" (Van Duzee); Lake Worth, Biscayne Bay, Ormond (Mrs. Slosson).
Oliarus complectus Ball. St. Petersburg, Sevenoaks, Estero (Van Duzee); Key Largo, Nov. (A. M. N. H.).
Oliarus difficilis Van D. Belleair (Mrs. Slosson).
Oliarus placitus Van D. Ft. Myers, May (Van Duzee).
Oliarus quinquelineatus Say. Jacksonville (Mrs. Slosson).
Oliarus slossoni Van D. Belleair, Biscayne Bay (Mrs. Slosson).
Oliarus vicarius Walk. Estero, Ft. Myers, St. Petersburg, Clearwater, Sevenoaks, (Van Duzee); Jacksonville, Ormond, Charlotte Harbor (Mrs. Slosson); Marco, Apr. (A. M. N. H.); St. Augustine (Johnson).
Cixius dorsivittatus Van D. Crescent City (Van Duzee); Biscayne Bay (Mrs. Slosson); Everglade, Apr. (A. M. N. H.).
Ecleus borealis Van D. "Abundant at all places, especially towards the southern end of the state" (Van Duzee); Jacksonville, Ormond, Atlantic Beach (Mrs. Slosson) Clearwater, Apr., Sanford, May (A. M. N. H.).
Myndus slossoni Ball. Crescent City (Van Duzee); Biscayne Bay, Charlotte Harbor (Mrs. Slosson); Crescent City, Sanford, Apr. (A. M. N. H.).
Myndus delicatus Van D. "Florida" (Van Duzee)
Myndus enotatus Van D. Crescent City, Apr. (Van Duzee, Mrs. Slosson and A. M. N. H.); Ormond, Charlotte Harbor, Biscayne Bay (Mrs. Slosson); Sanford, Apr. (A. M. N. H.).
Myndus lunatus Van D. Sanford, Sevenoaks, Ft. Myers, Estero (Van Duzee).
Myndus pusillus Van D. Crescent City, Sevenoaks (Van Duzee); Ormond, Atlantic Beach, Charlotte Harbor (Mrs. Slosson).
Bruchomorpha jocosus Stål. Crescent City, Sanford, Sevenoaks, St. Petersburg, Tampa, Ft. Myers (Van Duzee); Lakeland, Nov. (A. M. N. H.).
Bruchomorpha pallidipes Stål. Crescent City, Estero (Van Duzee).
Bruchomorpha suturalis Melich. "Common throughout Florida." (Van Duzee); Ft. Myers, Lakeland, Newberry, Nov. (A. M. N. H.).
Bruchomorpha tristis Stål. Crescent City, Estero, Sevenoaks (Van Duzee).
Naso robertsoni Fitch. Estero (Van Duzee).
Aphelonema decorata Van D. Crescent City, St. Petersburg, (Van Duzee); Charlotte Harbor (Mrs. Slosson).

- Hypteropterum punctiferum* Walk. "Everywhere I collected in Florida" (Van Duzee); Jacksonville (Mrs. Slosson); Clearwater, Sanford, Tampa (A. M. N. H.).
- Thionia bullata* Say. Jacksonville (Mrs. Slosson).
- Thionia simplex* Germ. Sevenoaks (Van Duzee).
- Acanalonia bivittata* Say. Estero (Van Duzee).
- Acanalonia latifrons* Walk. Tampa, Ft. Myers, Estero (Van Duzee); St. Augustine (Johnson); Biscayne Bay (Mrs. Slosson); Lakeland (A. M. N. H.).
- Acanalonia pumila* Van D. Estero Island (Van Duzee); Biscayne Bay (Mrs. Slosson).
- Acanalonia servillei* Spin. "Florida" (Uhler).
- Ormenis proxima* Walk. "East Florida" (Walker).
- Ormenis pruinosa* Say. Sevenoaks, Estero (Van Duzee); Clearwater, Apr. (A. M. N. H.); St. Augustine (Johnson).
- Ormenis ruffascia* Walk. Ft. Myers, Estero, Clearwater (Van Duzee); La Grange, Sept. (Sleight); Sanford, Apr. (A. M. N. H.).
- Ormenis septentrionalis* Spin. St. Augustine (Johnson).
- Cyarda melichari* Van D. "Common everywhere in Florida" (Van Duzee); Sanford, Crescent City, St. Petersburg, Everglade, Tampa, Jacksonville, Newberry, Lakeland, Punta Gorda, Ft. Myers (A. M. N. H.).
- Flatoides punctatus* Walk. "Taken occasionally at all places where I collected in Florida" (Van Duzee); Biscayne Bay, Jacksonville (Mrs. Slosson); Marco, Ft. Myers, Clearwater, Lakeland, Punta Gorda (A. M. N. H.).
- Otiocerus abbotti* Kirby. Jacksonville (A. M. N. H.).
- Otiocerus degeeri* Kirby. Sevenoaks (Van Duzee); Jacksonville (A. M. N. H. and Davis); "Florida" (Uhler).
- Cenchrea fulva* Van D. Estero (Van Duzee).
- Lamenia obscura* Ball. Crescent City, Haw Creek (Van Duzee and A. M. N. H.).
- Copiocerus irroratus* Schwartz. Biscayne Bay (Mrs. Slosson).
- Stenocranus dorsalis* Fitch. Crescent City, Sanford (Van Duzee); Biscayne Bay (Mrs. Slosson); Crescent City (A. M. N. H.).
- Stenocranus palætus* Van D. Crescent City (Van Duzee and A. M. N. H.); Everglade, Apr. (A. M. N. H.).
- Stenocranus saccharivorus* Westw. Tampa (Van Duzee).
- Kelisia parvula* Ball. "Florida" (Van Duzee).
- Megamelanus elongatus* Ball. Crescent City, St. Petersburg, Estero Island (Van Duzee); Belleair, Biscayne Bay, Ormond (Mrs. Slosson).
- ?*Megamelanus spartini* Osb. St. Petersburg (Van Duzee); Belleair (Mrs. Slosson).
- Megamelus marginatus* Van D. Estero (Van Duzee); Ormond (Mrs. Slosson).
- Megamelus seminigra* Stål. "Florida" (Van Duzee).
- Perigrinus maidis* Ashm. Estero (Van Duzee).
- Macrotomella carinata* Van D. Crescent City, Ft. Myers (Van Duzee).
- Pissonotus ater* Van D. Crescent City, Tampa, Sevenoaks, Ft. Myers (Van Duzee); Titusville, Nov., Ft. Myers, Nov. (A. M. N. H.).
- Pissonotus basalis* Van D. Ft. Myers, Estero (Van Duzee).
- Pissonotus brunneus* Van D. Crescent City (Van Duzee).
- Pissonotus delicatus* Van D. Crescent City, Sevenoaks, Estero (Van Duzee).
- Pissonotus marginatus* Van D. Sevenoaks (Van Duzee).
- Pissonotus pallipes* Van D. "Florida" (Van Duzee).

- Phyllodinus nitens* Van D. St. Petersburg, Estero (Van Duzee).
Stobæra affinis Van D. Crescent City, Ft. Myers (Van Duzee); Biscayne Bay (Mrs. Slosson).
Stobæra concinna Stal. Biscayne Bay, Belleair (Mrs. Slosson).
Stobæra pallida Osb. Ft. Myers, Estero (Van Duzee); Newberry (A. M. N. H.); Nassau (Crawford).
Stobæra quadripustulata Van D. Estero (Van Duzee).
Bostæra nasuta Ball. Tampa, Sevenoaks (Van Duzee).
Liburnia albolineosa Fowler. Sevenoaks, Estero (Van Duzee); Titusville, La Belle (A. M. N. H.).
Liburnia andromeda Van D. Sevenoaks, Tampa (Van Duzee); Lakeland (A. M. N. H.); Biscayne Bay, Belleair (Mrs. Slosson).
Liburnia basivitta Van D. Crescent City (Van Duzee); Jacksonville (Mrs. Slosson).
Liburnia culta Van D. Biscayne Bay (Mrs. Slosson).
Liburnia detecta Van D. Crescent City, St. Petersburg (Van Duzee); Ormond, Biscayne Bay, Lake Worth (Mrs. Slosson); Titusville (A. M. N. H.).
Liburnia foveata Van D. Lake Worth (Mrs. Slosson).
Liburnia humilis Van D. Sanford, St. Petersburg (Van Duzee).
Liburnia laminalis Van D. Crescent City (Van Duzee); Belleair (Mrs. Slosson).
Liburnia osborni Van D. Estero (Van Duzee); Lakeland (Bradley).
Liburnia ornata Stål. Crescent City (Van Duzee).
Liburnia puella Van D. Crescent City, Sevenoaks (Van Duzee); Biscayne Bay, Belleair (Mrs. Slosson).
Liburnia pumila Van D. Belleair (Mrs. Slosson).
Liburnia seminigra Stål. Crescent City, Estero (Van Duzee); Miami (A. M. N. H.); Belleair, Ormond (Mrs. Slosson).
Liburnia slossoni Ball. Crescent City, Estero (Van Duzee); Biscayne Bay, Belleair, Lake Worth, Ormond (Mrs. Slosson).
Liburnia teapæ Fowl. Biscayne Bay (Mrs. Slosson).
Liburnia tuckeri Van D. St. Petersburg (Van Duzee).
Liburnia weedi Van D. Sanford, Crescent City (Van Duzee); Punta Gorda (A. M. N. H.).

CERCOPIDÆ.

- Tomaspis bicincta* Say. Sanford, Ft. Myers (Van Duzee); Lake Worth, Biscayne Bay (Mrs. Slosson); Clearwater, Apr., Ft. Myers, Nov., Mch., Everglade, Apr. (A. M. N. H.).
Lepyronia angulifera Uhl. "Found in moderate numbers at all places where I collected in Florida" (Van Duzee); Biscayne Bay (Mrs. Slosson); Sanford, Clearwater, Crescent City, Ft. Myers, La Belle, Tampa, Punta Gorda, Lakeland, Newberry (A. M. N. H.).
Lepyronia quadrangularis Say. "Florida" (Ball).
Aphrophora quadrinotata Say. "Florida" (Ball).
Aphrophora saratogensis Fitch. Crescent City (Van Duzee); Jacksonville (Mrs. Slosson).
Clastoptera proteus var. *saint-cyri* Prov. Crescent City (Van Duzee).
Clastoptera proteus var. *vittata* Ball. Sevenoaks (Van Duzee).
Clastoptera xanthocephala Germ. "Abundant everywhere in Florida" (Van

Duzee); Biscayne Bay, Belleair (Mrs. Slosson); Clearwater, Sanford, Crescent City, Jacksonville (A. M. N. H.).

Clastoptera xanthocephala var. *glauca* Van D. Ormond, Biscayne Bay (Mrs. Slosson); St. Petersburg, Miami (A. M. N. H.).

MEMBRACIDÆ.

Ceresa aculeata Van D. Estero (Van Duzee); Ormond, Jacksonville (Mrs. Slosson).

Ceresa brevitylus Van D. Crescent City, Sanford (Van Duzee and A. M. N. H.).

Ceresa patruelis Stål. "Florida" (Van Duzee).

Stictocephala diminuta Van D. Biscayne Bay (Mrs. Slosson).

Stictocephala festina Say. Crescent City, St. Petersburg (Van Duzee).

Stictocephala lutea Walk. Walton Co. (McAtee).

Stictocephala substriata Walk. "Abundant everywhere I collected in Florida" (Van Duzee); Belleair, Jacksonville, Ormond, Atlantic Beach (Mrs. Slosson); Sanford, Miami, Titusville, Lakeland, Jacksonville, Crescent City, La Belle, Ft. Myers (A. M. N. H.); St. John's Bluff, E. Florida (Walker).

Acutalis inornata Ball. Biscayne Bay (Mrs. Slosson).

Acutalis semicrema Say. St. Augustine (Johnson).

Acutalis tartarea Say. "Taken at all stations" (Van Duzee); Atlantic Beach, Jacksonville, Ormond (Mrs. Slosson); Sanford, Crescent City (A. M. N. H.).

Micruialis calva Say. "Generally distributed in the state" (Van Duzee); Newberry (A. M. N. H.); Biscayne Bay, Belleair, Lake Worth, Ormond (Mrs. Slosson).

Telemona collina Walk. St. John's Bluff. E. Florida (Walker).

Telemona conica Walk. St. John's Bluff, E. Florida (Walker).

Telemona monticola Fab. Sevenoaks (Van Duzee).

Telemona praealta Fowl. Tampa (Van Duzee).

Telemona subfalcata Van D. Belleair (Mrs. Slosson).

Archasia glaeata Fab. Estero (Van Duzee); Jacksonville (Mrs. Slosson); St. Augustine (Johnson).

Smilia camelia Fab. Jacksonville (Mrs. Slosson).

Smilia fasciata A. and S. Lake Worth, Jacksonville (Mrs. Slosson).

Cyrtolobus arcuatus Emm. Ormond (Mrs. Slosson).

Cyrtolobus fenestratus Fab. Jacksonville (Mrs. Slosson).

Cyrtolobus nitidus Van D. Jacksonville (Mrs. Slosson).

Cyrtolobus ovatus Van D. Sanford, Estero (Van Duzee); Marco, Apr. (A. M. N. H.).

Cyrtolobus sculptus Fairm. Jacksonville (Mrs. Slosson).

Cyrtolobus tuberosus Fairm. Belleair (Mrs. Slosson).

Cyrtolobus tumidus Walk. St. John's Bluff, E. Florida (Walker).

Cyrtolobus vou Say. Belleair, Jacksonville (Mrs. Slosson).

Atymna inermis Emm. Jacksonville (Mrs. Slosson).

Antianthe expansa Germ. "Florida" (Van Duzee).

Ophiderma flavicephala Godg. "Florida" (Van Duzee).

Ophiderma sclamandra Fairm. Tampa, Sevenoaks (Van Duzee); Jacksonville (Mrs. Slosson).

Idioderma virescens Van D. "Taken occasionally at all places where I worked" (Van Duzee); Estero (Van Duzee); Sanford, Clearwater (A. M. N. H.).

- Idioderma varia* Van D. Estero (Van Duzee).
Vanduzeeia triguttata Burm. St. Petersburg, Estero, Sevenoaks (Van Duzee); Jacksonville (Mrs. Slosson).
Entylia concisa Walk. Crescent City (Van Duzee).
Entylia sinuata Fab. Crescent City, Sanford, Ft. Myers (Van Duzee); St. Augustine (Johnson).
Umbonia orizimbo Fairm. "Florida" (Amy. and Serv.).
Platycotis quadrivittata Say. "Florida" (Goding); St. Augustine (Johnson).
Platycotis sagittata Germ. Crescent City, Sevenoaks (Van Duzee).
Enchenopa binotata Say. St. Augustine (Johnson).
Tylopelta brevis Van D. Crescent City (Van Duzee).
Centruchooides perdita A. and S. Jacksonville (Mrs. Slosson).

BYTHOSCOPIDÆ.

- Bythoscopus robusta* Uhl. Sanford, Ft. Myers (Van Duzee); Belleair (Mrs. Slosson).
Agallia constricta Van D. Crescent City, Sanford (Van Duzee and A. M. N. H.); Ormond, Jacksonville, Atlantic Beach (Mrs. Slosson).
Agallia deleta Van D. Crescent City, Sanford, Ft. Myers (Van Duzee); Belleair (Mrs. Slosson).
Agallia lyrata Baker. Crescent City (Van Duzee).
Agallia novella Say. Crescent City (Van Duzee).
Agallia sanguinolenta Provanch. Crescent City, Sanford (Van Duzee); Lake Worth (Mrs. Slosson).
Agallia variata Uhl. Lake Worth (Mrs. Slosson).
Idiocerus nervatus Van D. Crescent City (Van Duzee).

TETTIGONIELLIDÆ.

- Aulacizes guttata* Uhl. Ft. Myers (Van Duzee); Biscayne Bay (Mrs. Slosson); Ft. Myers, Deep Lake, Apr. (A. M. N. H.).
Aulacizes irrorata Fab. Lake Worth, Biscayne Bay (Mrs. Slosson); Crescent City, Sanford, Apr. (A. M. N. H.).
Oncometopia lateralis Fab. Crescent City, Sanford, Tampa (Van Duzee); Sanford, Clearwater, Jacksonville (A. M. N. H.); St. Augustine (Johnson).
Oncometopia undata Fab. "Found commonly throughout Florida" (Van Duzee); Jacksonville, Ormond (Mrs. Slosson); Clearwater, Sanford, Lakeland, Miami, Key Largo (A. M. N. H.); St. Augustine (Johnson).
Homalodisca triquetra Fab. Sanford, Sevenoaks (Van Duzee); Sanford, Clearwater (A. M. N. H.).
Tettigoniella occatoria Say. Crescent City, Sanford (Van Duzee); Crescent City (A. M. N. H.); Atlantic Beach, Jacksonville (Mrs. Slosson); "Florida" (Ball).
Kolla bifida fasciata Walk. (= *fuscolinella* Fowler). "Common everywhere in Florida" (Van Duzee); Biscayne Bay, Jacksonville, Belleair (Mrs. Slosson); Crescent City, La Belle, Ft. Myers, Lakeland (A. M. N. H.); "Florida" (Ball.).

Kolla geometrica Sign. "Common in Florida" (Van Duzee); Crescent City, Sanford (A. M. N. H.); Belleair (Mrs. Slosson).

Kolla hartii Ball. Ft. Myers, Estero (Van Duzee); Ormond, Biscayne Bay, Lake Worth (Mrs. Slosson); Ft. Myers, La Belle (A. M. N. H.).

Kolla similis Walk. Biscayne Bay (Mrs. Slosson); Miami (A. M. N. H.).

Diedrocephala coccinea Forst. Crescent City, Sanford, (Van Duzee and A. M. N. H.); Ft. Myers (Van Duzee); Jacksonville, Atlantic Beach (Mrs. Slosson); St. Augustine (Johnson).

Diedrocephala flaviceps Riley. St. Augustine (Johnson).

Diedrocephala versuta Say. "Taken everywhere in Florida" (Van Duzee); Biscayne Bay, Ormond (Mrs. Slosson); Sanford, South Bay of L. Okechobee (A. M. N. H.).

Draculocephala acuta Walk. South Bay of L. Okechobee (A. M. N. H.); St. John's Bluff, E. Florida (Walker).

Draculocephala floridana Ball. Charlotte Harbor (Mrs. Slosson); Everglade (A. M. N. H.).

Draculocephala mollipes Say. Crescent City, Clearwater (Van Duzee); Belleair, Ormond, Lake Worth (Mrs. Slosson) South Bay of L. Okechobee (A. M. N. H.).

Draculacephala mollipes minor Walk. "Taken in damp places and near water in most localities where I collected in Florida" (Van Duzee); Ormond (Mrs. Slosson); Ft. Myers, Lakeland, Crescent City, Sanford (A. M. N. H.).

Draculacephala reticulata Sign. St. Petersburg, Estero (Van Duzee); Belleair. Biscayne Bay, Ormond, Jacksonville (Mrs. Slosson); Everglade, Marco, La Belle, Ft. Myers (A. M. N. H.).

Draculacephala 7-guttata Walk. "Generally distributed but not common in Florida" (Van Duzee); Jacksonville, Ormond, Biscayne Bay, Belleair, Lake Worth (Mrs. Slosson); Titusville, Punta Gorda, Sanford (A. M. N. H.).

Penthima americana Fitch. "Taken everywhere in Florida" (Van Duzee); Charlotte Harbor, Biscayne Bay, Jacksonville (Mrs. Slosson); Clearwater, Sanford, Ft. Myers, Jacksonville (A. M. N. H.); St. Augustine (Johnson).

Gypona albosignata Uhl. Jacksonville (Mrs. Slosson).

Gypona cana Burm. "Common everywhere in Florida" (Van Duzee); Biscayne Bay, Jacksonville (Mrs. Slosson); Lakeland, Ft. Myers, Crescent City, Sanford, Jacksonville (A. M. N. H.).

Gypona citrina Spangb. Crescent City, Sanford (Van Duzee); Atlantic Beach (Mrs. Slosson).

Gypona flavilineata Fitch. St. Augustine (Johnson).

Gypona irrorella Spangb. Ft. Myers (Van Duzee); La Belle, Ft. Myers (A. M. N. H.).

Gypona rugosa Spangb. Belleair (Mrs. Slosson); Lakeland, Jacksonville (A. M. N. H.).

Gypona sanguinolenta Spangb. Sanford, Ft. Myers (Van Duzee); Jacksonville (Mrs. Slosson).

Gypona scarlatina Fitch. Miami (A. M. N. H.).

Gypona striata Burm. "Florida" (Van Duzee); Ormond, Biscayne Bay, Jacksonville (Mrs. Slosson).

Gypona tenella Spangb. Sanford, Sevenoaks (Van Duzee); Lakeland, May (A. M. N. H.); Biscayne Bay (Mrs. Slosson).

Xerophloea viridis Fab. Biscayne Bay (Mrs. Slosson); St. Augustine (Johnson).

JASSIDÆ.

Xestocephalus pulicarius Van D. Crescent City, Ft. Myers (Van Duzee); Everglade (A. M. N. H.).

Xestocephalus tessellatus Van D. Jacksonville, Belleair, Biscayne Bay, Charlotte Harbor (Mrs. Slosson); La Belle, Apr. (A. M. N. H.).

Dorycephalus vanduzeei Osb. and Ball. Clearwater (Van Duzee).

Hecalus apicalis Van D. Crescent City, St. Petersburg, Estero (Van Duzee); Punta Gorda (A. M. N. H.).

Neoslossonia putnami Osb. Sanford (Van Duzee); Jacksonville (Mrs. Slosson).

Spangbergiella mexicana Baker. Biscayne Bay (Mrs. Slosson).

Spangbergiella vulnerata Uhl. Crescent City, Sanford, St. Petersburg, Ft. Myers (Van Duzee); Belleair, Ormond (Mrs. Slosson); Lakeland, Nov. (A. M. N. H.).

Parabolocratrus flavidus Sign. "Taken at most of the places where I collected but not at all common" (Van Duzee); Punta Gorda, Nov. (A. M. N. H.).

Platymetopius cinereus Osb. and Ball. "Taken occasionally at all stations" (Van Duzee); Belleair, Jacksonville (Mrs. Slosson); Jacksonville, Nov. (A. M. N. H.).

Platymetopius frontalis Van D. Jacksonville, Biscayne Bay (Mrs. Slosson); Ft. Myers, Apr. (A. M. N. H.).

Platymetopius loricatedus Van D. Sevenoaks, St. Petersburg, Ft. Myers (Van Duzee); Belleair (Mrs. Slosson).

Platymetopius nasutus Van D. Belleair (Mrs. Slosson).

Platymetopius slossoni Van D. Jacksonville (Mrs. Slosson); Jacksonville, Newberry (A. M. N. H.).

Platymetopius verecundus Van D. Crescent City, Sanford, Sevenoaks, Clearwater, Estero (Van Duzee); Sanford (A. M. N. H.).

?*Deltocephalus capreatus* Ball. Sevenoaks (Van Duzee).

Deltocephalus colonus Uhl. Lake Worth, Biscayne Bay (Mrs. Slosson).

Deltocephalus flavicosta Stål. Biscayne Bay, Atlantic Beach (Mrs. Slosson); Lakeland, La Belle, Titusville, Key Largo, Everglade, Sanford (A. M. N. H.).

Deltocephalus fraternus Ball. Jacksonville (Mrs. Slosson); Lakeland, Newberry, Clearwater, Jacksonville (A. M. N. H.).

Deltocephalus fraternus mendosus Ball. Estero (Van Duzee).

Deltocephalus inflatus Osb. and Ball. Crescent City, Estero, Sevenoaks (Van Duzee).

Deltocephalus littoralis Ball. St. Petersburg (Van Duzee); Everglade, Apr. (A. M. N. H.).

Deltocephalus micarius Ball. Sevenoaks, Sanford (Van Duzee).

Deltocephalus miscellus Ball. Jacksonville, Nov. (A. M. N. H.).

?*Deltocephalus nigrifrons* Forbes. Lake Worth (Mrs. Slosson).

Deltocephalus obtectus Osb. and Ball. "Taken occasionally at nearly all places where I worked in Florida" (Van Duzee); Belleair, Biscayne Bay (Mrs. Slosson); Newberry, Jacksonville, Lakeland, Nov. (A. M. N. H.).

Deltocephalus reflexus Osb. and Ball. Belleair (Mrs. Slosson).

Deltocephalus slossoni Ball. Biscayne Bay (Mrs. Slosson).

Deltocephalus sonorus Ball. Estero, St. Petersburg (Van Duzee); Ormond, Belleair, Biscayne Bay (Mrs. Slosson).

Deltocephalus weedi Van D. Crescent City, Clearwater, Sevenoaks, Estero (Van Duzee); Biscayne Bay (Mrs. Slosson); Jacksonville, Nov. (A. M. N. H.).

Lonatura (?) *bicolor* Van D. Ft. Myers, Estero (Van Duzee).

- Phrynomorphus bicolor* Van D. Crescent City, Tampa, St. Petersburg (Van Duzee).
Phrynomorphus exitiosus Uhl. "Common everywhere in Florida" (Van Duzee); Biscayne Bay, Belleair, Ormond, Lake Worth, Jacksonville (Mrs. Slosson); Punta Gorda, Marco (A. M. N. H.).
Phrynomorphus obtusus Van D. Crescent City (Van Duzee).
Eutettix bartschi Van D. Sevenoaks, Estero (Van Duzee); Ormond, Biscayne Bay, Atlantic Beach (Mrs. Slosson); St. Petersburg, Miami (A. M. N. H.).
Eutettix lurida Van D. Titusville, Nov. (A. M. N. H.); St. Augustine (Johnson).
Eutettix marmoratus Van D. "Florida" (Ball).
Eutettix nitens Van D. Sevenoaks, Estero (Van Duzee).
Eutettix picta Van D. "Florida" (Ball).
Eutettix slossoni Van D. Sanford, St. Petersburg, Sevenoaks, Ft. Myers (Van Duzee); Biscayne Bay (Mrs. Slosson); Clearwater (A. M. N. H.).
Eutettix tristis Ball. "Florida" (Ball).
Phlepsioides attractus Ball. Jacksonville (Mrs. Slosson).
Phlepsioides cinereus Van D. Biscayne Bay (Mrs. Slosson).
Phlepsioides collitus Ball. Jacksonville (Mrs. Slosson).
Phlepsioides costomaculatus Van D. Belleair, Biscayne Bay (Mrs. Slosson); Crescent City, Sanford, Sevenoaks, St. Petersburg, Ft. Myers (Van Duzee); La Belle (A. M. N. H.).
Phlepsioides decorus Osb. and Ball. Tampa (Van Duzee).
Phlepsioides exultus Uhl. Crescent City, Sanford, Sevenoaks, Ft. Myers (Van Duzee); Jacksonville, Biscayne Bay (Mrs. Slosson); Crescent City, Sanford, Marco (A. M. N. H.); St. Augustine (Johnson).
Phlepsioides floridanus Ball. Biscayne Bay (Mrs. Slosson).
Phlepsioides fulviflorsum Fitch. "Florida" (Van Duzee).
Phlepsioides fuscipennis Van D. "Common everywhere in suitable locations" (Van Duzee); Lake Worth, Belleair, Biscayne Bay, Jacksonville (Mrs. Slosson); Newberry, Punta Gorda, Nov. (A. M. N. H.).
Phlepsioides irroratus Say. Jacksonville (Mrs. Slosson).
Phlepsioides lippulus Ball. Biscayne Bay (Mrs. Slosson).
Phlepsioides mimus Baker. Crescent City (Van Duzee).
Phlepsioides nebulosus Van D. "Florida" (Van Duzee).
Phlepsioides nudus Ball. Sevenoaks, Ft. Myers (Van Duzee).
Phlepsioides punctiscriptus Van D. Belleair, Charlotte Harbor (Mrs. Slosson).
Phlepsioides slossoni Ball. Biscayne Bay (Mrs. Slosson).
Phlepsioides truncatus Van D. Crescent City, Sevenoaks (Van Duzee).
Dorydiella floridana Baker. "Florida" (Baker).
Acinopterus acuminatus Van D. Tampa, Sanford (Van Duzee); Biscayne Bay (Mrs. Slosson); Jacksonville, Newberry, Miami, Nov. (A. M. N. H.).
Scaphoideus albonatus Van D. Estero (Van Duzee).
Scaphoideus auronitens Prov. Biscayne Bay (Mrs. Slosson); Crescent City, Apr. (A. M. N. H.).
Scaphoideus consors Uhl. Crescent City (Van Duzee).
Scaphoideus cruciatus Osb. Marco, Everglade, Apr. (A. M. N. H.); Clearwater, Ft. Myers (Van Duzee); Biscayne Bay (Mrs. Slosson).
Scaphoideus immistus Say. Crescent City, Apr. (A. M. N. H.).
Scaphoideus jucundus Uhl. Estero (Van Duzee).
Scaphoideus neglectus Osb. Crescent City, St. Petersburg (Van Duzee); Biscayne Bay (Mrs. Slosson).

- ?*Scaphoideus obtusus* Osb. Crescent City, Sanford, Sevenoaks, Ft. Myers (Van Duzee).
- Scaphoideus opalinus* Osb. Sevenoaks (Van Duzee).
- Scaphoideus scalaris* Van D. Jacksonville, Nov. (A. M. N. H.).
- Scaphoideus unicolor* Osb. Sanford (Van Duzee).
- Thamnotettix cornata* Ball. Crescent City, Sanford, Sevenoaks, St. Petersburg (Van Duzee); Belleair (Mrs. Slosson); La Belle, Nov. (A. M. N. H.).
- Thamnotettix orbonata* Ball. Biscayne Bay (Mrs. Slosson).
- Thamnotettix perpunctata* Van D. Crescent City, Sanford, St. Petersburg (Van Duzee); Jacksonville, Ormond, Belleair, Atlantic Beach (Mrs. Slosson); Crescent City, La Belle, Titusville (A. M. N. H.).
- Thamnotettix subcuprea* Prov. Sanford, Sevenoaks, Ft. Myers (Van Duzee); Jacksonville (Mrs. Slosson).
- Chlorotettix galbanata* Van D. Ft. Myers (Van Duzee).
- Chlorotettix minima* Baker. Estero (Van Duzee).
- Chlorotettix necopina* Van D. Crescent City, Sanford, Sevenoaks, Clearwater (Van Duzee); Biscayne Bay, Ormond (Mrs. Slosson); La Belle, Titusville, Jacksonville, Sanford (A. M. N. H.).
- Chlorotettix rugicollis* Ball. "Taken at most places where I worked" (Van Duzee); Jacksonville (Mrs. Slosson); Jacksonville, Lakeland, Newberry, Ft. Myers (A. M. N. H.).
- Chlorotettix spatulata* Osb. and Bak. Jacksonville (Mrs. Slosson).
- Chlorotettix tergata* Fitch. "Florida" (Van Duzee).
- Chlorotettix tunicata* Ball. Sanford, Clearwater, Estero, St. Petersburg (Van Duzee); Belleair, Biscayne Bay (Mrs. Slosson); Marco, Sanford, Miami (A. M. N. H.).
- Chlorotettix viridia* Van D. "Taken at all places where I worked," St. Petersburg, Sevenoaks (Van Duzee); Belleair (Mrs. Slosson); Sanford, Clearwater (A. M. N. H.).
- Jassus oliterius* Say. "Common everywhere in Florida" (Van Duzee); Ormond, Belleair, Charlotte Harbor (Mrs. Slosson); Sanford, Estero, Clearwater, Crescent City, La Belle, Marco, Lakeland, Titusville, Jacksonville (A. M. N. H.); St. Augustine (Johnson).
- Neocelidia tumidifrons* Gill. and Bak. Jacksonville (Mrs. Slosson).
- Paracelida tuberculata* Baker. Sevenoaks (Van Duzee); Jacksonville (A. M. N. H.).
- Tinobregmus vittatus* Van D. Biscayne Bay (Mrs. Slosson).
- Cicadula 6-notata* Fall. Sanford, Ft. Myers (Van Duzee).
- Balclutha impicta* Van D. Crescent City (Van Duzee).
- Eugnathodus abdominalis* Van D. Sanford, Clearwater, Ft. Myers (Van Duzee); Biscayne Bay, Ormond (Mrs. Slosson).
- Protobra braziliensis* Bak. Belleair, Biscayne Bay (Mrs. Slosson).
- Empoasca flavescens* Fab. Crescent City, Estero (Van Duzee).
- Empoasca mali* LeB. Crescent City, Sanford, Ft. Myers, Estero (Van Duzee); Jacksonville (Mrs. Slosson).
- Empoasca unicolor* Gill. Ormond (Mrs. Slosson).
- Typhlocyba flavoscuta* Gill. Sanford, Sevenoaks (Van Duzee).
- Typhlocyba rubricata* Van D. Crescent City (Van Duzee).
- Erythroneura comes* Say. Crescent City, Sevenoaks, Estero (Van Duzee); Jacksonville (A. M. N. H.).

