

JASSIDAE OF NEW YORK STATE

BY HERBERT OSBORN

A comprehensive list of the Jassidae of New York State seems specially warranted because so large a number of species occurring in the United States have been described from that State, owing to the work of Dr Fitch and Mr Van Duzee and, moreover, the fact that its fauna is fairly representative for the eastern United States. The present report is based on previous lists or descriptions by Fitch, Van Duzee, Felt, Southwick, Slingerland and others; the material submitted to the writer by these parties or examined in the collections at Cornell University and the New York State Museum and personal collections in the summer of 1904, when the writer had the opportunity to visit different parts of New York State, examining collections and collecting new material in the vicinity of Buffalo, Ithaca, Albany, Salem, Long Island and Staten Island. Representative sections of the State were thus covered and with the material previously accumulated or reported, covers, it is believed, quite thoroughly the Jassid fauna of the State. Furthermore, collections by Mr E. P. Van Duzee in the Adirondack region extends the area covered still more thoroughly.

The economic importance of the Jassidae was recognized by Dr Fitch in his various writings and he described a large number of the species as injurious to forest trees, grasses, etc. The importance of these insects is not yet fully appreciated owing to the nature of their work but they will undoubtedly become more fully recognized as farmers become aware of the more insidious sources of loss to their various crops. Attention has been called elsewhere to the destructive effect of these insects in pastures and meadows but observations during the past summer in the pastures and lowlands of New York indicated less loss of this sort than has frequently been noted in other localities. This may have been in part due to the season, the constant moisture affording opportunity for the crop to grow continuously. In some cases the hillside pastures were pretty badly infested and the growth of the crop evidently much reduced, also in low ground, marshy pastures, certain species swarmed in such numbers that the vegetation must have been drained to a serious extent.

It may be noted that the mode of feeding in the group consists in puncturing the tissues of various plants, sucking the juices and thus draining their vitality though not necessarily causing the

death of the plant or any considerable portion of it. The drain, however, if the insects are plentiful is constant for pretty much the entire season and there can be no question that a large part of the growth is devoted to the nutrition of these insects.

In the following list we have endeavored to include all the species known to occur in the State with notes on their abundance, food plants, distribution, life history, and habits; in short, the essential facts related to their effect on different crops and furnishing the basis for further detailed study of such species as may seem to demand more thorough investigation.

I am under special obligation to Dr E. P. Felt for the opportunity to study these insects in various parts of the State and get together the material for this paper and for his interest in its publication. Mr Van Duzee has furnished me with numerous records and specimens and given me free access to his collection. Professor Comstock placed the Cornell collections at my disposal. The authorities of the American Museum afforded me free opportunity to examine collections there. Prof. C. B. Davenport placed the facilities of the Cold Spring Harbor laboratory at my disposal and Mr J. R. De la Torre Bueno has furnished me with many specimens from the vicinity of New York.

I was particularly glad to be able to collect at Salem, the locality where Dr Fitch lived and did much of his entomological work. The collections there brought to light include a large proportion of species which he had described and these have been of particular value and interest as a basis of recognition for his species and for comparison of specimens from other localities.

Of the New York species of Jassidae 12 were described by Say all of which are satisfactorily referred. 30 were described by Fitch and 28 definitely placed by types or descriptions. Eight have been described by Uhler, 28 were described by Van Duzee, others by Osborn and Ball, Fallen, Gillette, Linnaeus, Fabricius, Provancher and others. There are very few that may now be considered in question.

All the species in this group known to Dr Fitch comprised 45. Van Duzee's list of Buffalo Hemiptera includes 93 species. The number brought into the present list all of which are based on authentic records or specimens in hand is about 175. Doubtless there are some species to be added—that are known for New Jersey or Maryland, Maine and Canada but I believe it safe to say that the list presents a fairly complete presentation of the Jassidae of the State.

The group Jassidae in its wider sense, or the superfamily Jassoidea of Van Duzee, includes insects distinguished by having antennae setaceous, situated in front of the eyes, the pronotum well developed, scutellum triangular, wings generally opaque but with distinct nervures and the tibiae with a double row of spines on the dorsal side and without a circlet of spines on apex. The group as so defined includes four well marked families distinguished by shape of head and position of antennae.

A synopsis of these families and genera somewhat modified from the scheme proposed by Mr Van Duzee is offered below. The changes suggested are in part due to the description of new genera proposed since Mr Van Duzee's valuable key was published 10 years ago, partly to different value placed on some of the characters used in generic separation which the examination of material in the new species and genera seems to confirm. Thus, I have revised the grouping of genera under Deltocephalini to include Scaphoideus and adapted his Athysanini to the inclusion of several new genera. These changes while not solving all the difficulties apparent in these complicated groups are believed to permit a more natural grouping than is possible under the old system.

Synopsis of families, Jassoidea

- A Elytral veins branching on the disk, forming fork inclosing anteapical cells.
 - a Head very short, vertex sloping or rounding on to the front and ocelli on front. Bythoscopidae
 - aa Head more or less prominent, the ocelli located on the disk of the vertex Tettigonidae
 - aaa Head produced or rounded, ocelli on margin between vertex and front Jassidae
- AA Elytral veins branching at base and passing without fork to the apical cells. Ocelli usually wanting Typhlocyidae

Genera represented in New York

- Superfamily Jassoidea
 - Family *Bythoscopidae*
 - Bythoscopus
 - Idiocerus
 - Pediopsis
 - Agallia
 - Family *Tettigonidae*
 - Subfamily TETTIGONINAE
 - Aulacizes
 - Oncometopia
 - Tettigonia
 - Helochara

- Diedrocephala
- Draeculacephala
- Eucanthus
- Subfamily GYPONINAE
- Xerophloea
- Gypona
- Penthimia
- Family Jassidae
- Subfamily ACOCEPHALINAE
- Strongylocephalus
- Acocephalus
- Spangbergiella
- Parabolocratus
- Paramesus
- Subfamily JASSINAE
- Platymetopius
- Deltocephalus
- Scaphoideus
- Athysanus
- Driatura
- Athysanella
- Goniagnathus
- Eutettix
- Phlepsius
- Thamnotettix
- Chlorotettix
- Jassus
- Paracoelidia
- Cicadula
- Gnathodus
- Family Typhlocybidae
- Alebra
- Dicraneura
- Empoasca
- Eupteryx
- Typhlocyba

FAMILY BYTHOSCOPIDAE

Genus BYTHOSCOPIUS Germ.

Bythoscopus variabilis Fitch

- ♀ *Athysanus variabilis* Fitch. Homop. N. Y. State Cab. 1851. p. 60; reprinted in Lintner. 9th Rep't. 1893. p. 400; N. Y. State Agric. Soc. Trans. 1858. 18: 853
- ♂ *Bythoscopus variabilis* Walk. Homop. 1851. 3: 876; Van Duzee, Am. Ent. 1890. 6: 223; Psyche, 5: 390; reprinted in Lintner. 9th Rep't. 1893. p. 410
- ♂ *Athysanus abietis* Fitch. Homop. N. Y. State Cab. 1851. p. 60; reprinted in Lintner. 9th Rep't. 1893. p. 400
- Bythoscopus variabilis* Van Duzee. Buf. Soc. Nat. Hist. Bul. 4, p. 144

The type¹ specimens are well preserved and leave no question as to the identity of the species. A very full series including representatives of 13 varieties is contained in the Fitch material in the National Museum.

Reported from Buffalo on birch [Van Duzee, Buf. Hemip. p. 144]. Evidently generally distributed.

***Bythoscopus sobrius* Walk.**

Bythoscopus sobrius Walk. Homop. 1851. 3: 874; Fitch, reprinted in Lintner. 9th Rep't. 1893. p. 400; N. Y. State Agric. Soc. Trans. 1858. 18: 853

Bythoscopus sobrius Van Duzee. Buf. Soc. Nat. Hist. Bul. 4, p. 195.

Recorded by Van Duzee for Colden, Lancaster.

¹ There is an interesting question regarding the types of Fitch's species and one which it seems rather difficult to settle. The paper on Homoptera published in the New York State Cabinet Catalogue in 1851 includes the numbers arranged serially according to the species described. These numbers agree with numbered specimens which were deposited in the State Cabinet of Natural History, which specimens have since remained in the custody of the Museum. So far as preserved they are unquestionable examples of these species as indicated by Dr Fitch himself and whether termed "types" or not they must be considered as equivalent to types in their authority. Dr Fitch's private collection which included examples of species that he described was broken up but the Homoptera were finally purchased by the United States National Museum and specimens of Jassidae bearing Fitch's labels which have for Fitch's species been marked with type labels, stand now in the National Museum collection.

They do not, however, bear numbers which correspond with the published catalogue so that it has appeared to me that the published evidence would favor the Albany specimens as the types. Mr Schwarz tells me, however, that Fitch's descriptions were drawn from specimens numbered to correspond with numbers in his notebooks and that these numbers are the most positive basis of recognition of the specimen from which the original description was drawn. Such numbers occur on the Psyllidae and specimens in some other groups but on examination with this point in view it turned out that the Jassids, at least for all species examined, do not contain a Fitch number.

It is to be noted that in certain species, as for instance *Idiocerus lachrymalis*, the Albany series is complete for not only typical forms but for all of the described varieties, whereas the Washington series includes an example of but one form. On the other hand, for *Bythoscopus variabilis* the Washington series is by far the most complete including representatives for the described varieties whereas the Albany collection includes but one (?) form, all the varieties having been omitted or subsequently lost. Fortunately so far as observed, there is close agreement between these specimens in the two collections, a fact which would be expected from Dr Fitch's well known care and hence the question of the validity of the type specimen becomes less important.

It appears to me, however, that on the whole it would be best since the Albany species bear definite numbers agreeing with the published descriptions to consider these as types and the other specimens as cotypes. It at least seems the rational course to pursue for such specimens in the National Museum as, while bearing labels written by Dr Fitch, do not possess numbers which would identify them as the particular specimens from which the descriptions were written.

Bythoscopus cognatus Van Duzee

Bythoscopus cognatus Van Duzee. Am. Ent. 1890. 6:

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Bythoscopus cognatus Van Duzee. Buf. Soc. Nat. Sci. Bul. 5, p. 195

Van Duzee's record for this species at Lancaster, 1904 records for Lake Placid and Phoenicia and a specimen from Albany are the only ones which have come to notice for the State.

Bythoscopus fenestratus Fitch

Athysanus fenestratus Fitch. Homop. N. Y. State Cab. 1851. p. 60; Fitch, reprinted in Lintner. 9th Rep't. 1893. p. 400; N. Y. State Agric. Soc. Trans. 1858. 18: 853

Bythoscopus fenestratus Walker. Homop. 1852. 4: 1162
Pediopsis fenestratus Van Duzee. Can. Ent. 1889. 21: 9

Type in the New York Museum is faded but the hyaline spots of wing arranged in accord with cells is evident. Specimen in the National Museum has only elytra and wings remaining but shows clearly five hyaline cells in disk and anteapical area of elytra.

Bythoscopus pruni Prov.

Bythoscopus pruni Prov. Pet. Faune Ent. Can. 1890. 3: 290; Van Duzee, Am. Ent. 1890. 6: 226

Bythoscopus pruni Van Duzee. Buf. Soc. Nat. Hist. Bul. 5, p. 195

Van Duzee records for Buffalo "one spec." and reports it for Lake Placid. Specimens in hand from Albany. National Museum material includes representative of typical form and varieties a, b, d and e. The color is brownish, the cells subhyaline specially in varieties a and b. It is smaller than *fenestratus*.

Bythoscopus minor Fitch

Bythoscopus minor Fitch. Homop. N. Y. State Cab. 1851. p. 60; Fitch, reprinted in Lintner. 9th Rep't. 1893; p. 400; N. Y. Agric. Soc. Trans. 1858. 18: 583

Bythoscopus minor Walk. Homop. 1851. 3: 876; Van Duzee, Am. Ent. 1890. 6: 227; Psyche. 1890. 5: 390; reprinted in Lintner. 9th Rep't. 1893. p. 410

Bythoscopus minor Van Duzee. Buf. Soc. Nat. Hist. Bul. 4, p. 195

Recorded for Buffalo and reported for Lake Placid by Van Duzee.

Bythoscopus nigrinasi Fitch

Athysanus nigrinasi Fitch. Homop. N. Y. State Cab. 1851. p. 61; reprinted in Lintner. 9th Rep't. 1893. p. 401

Bythoscopus nigrinasi Walker. Homop. 1852. 4: 1162;
 Van Duzee, Am. Ent. 1890. 6: 228; Psyche, 1890. 5: 390; reprinted
 in Lintner. 9th Rep't. 1893. p. 410
 "June to August. Abundant everywhere on hornbeam" [Van
 Duzee, Buf. Hemip. p. 195].

***Bythoscopus distinctus* Van Duzee**

Bythoscopus distinctus Van Duzee. Am. Ent. 1890. 6: 224
Bythoscopus distinctus Van Duzee. Buf. Soc. Nat. Hist.
 Bul. 5, p. 195
 Given by Mr Van Duzee for Buffalo and vicinity.

***Bythoscopus fagi* Fitch**

Athysanus fagi Fitch. Homop. N. Y. State Cab. 1851. p. 61;
 Fitch, reprinted in Lintner. 9th Rep't. 1893. p. 401
Bythoscopus fagi Walk. Homop. 1852. 4: 1162; Van Duzee,
 in Lintner. 9th Rep't. 1893. p. 410

Specimens which I have referred to this species are of a uniform
 deep brown color, somewhat larger than *fenes altus*. The
 type appears to be lost.

***Pediopsis trimaculata* Fitch**

Pediopsis trimaculata Fitch. Homop. N. Y. State Cab.
 1851. p. 60
Bythoscopus trimaculata Walk. Homop. B. M. 1852. 4:
 1162
Pediopsis insignis V. D. Review, Am. Ent. 1889. 5: 171
Pediopsis trimaculata Osborn & Ball. Dav. Acad. Nat. Sci.
 Proc. 7: 116

Recorded for Highland [Felt coll.], Gowanda, Hamburg [Van
 Duzee, Buf. Hemip. p. 195].

***Pediopsis viridis* Fitch**

Pediopsis viridis Fitch. Homop. N. Y. State Cab. 1851. p. 59;
 reprinted in Lintner. 9th Rep't. 1893. p. 399
 Reported for Karner [N. Y. State Mus.]. I took it at Hamburg,
 July 8, 1904, from Salem, Aug. 14, 1904, and Van Duzee reports
 it for Lake Placid.

Type in Fitch collection in New York State Museum, is a female
 and our specimens agree except that the type has faded. Also
 reported for Buffalo [Van Duzee, Buf. Hemip. p. 195].

A frequent insect on willows though it will escape attention
 unless beaten from the twigs as its color blends perfectly with that
 of the leaves.

***Pediopsis canadensis* Van Duzee**

Pediopsis floescens Van Duzee. Am. Ent. Review. 1889.
 p. 173
Pediopsis canadensis Van Duzee. Can. Ent. 1890. 22: 111
 Reported for Lancaster [Van Duzee, Buf. Hemip. p. 195] and
 Lake Placid.

***Pediopsis bifasciata* Van Duzee**

Pediopsis bifasciata Van Duzee. Am. Ent. Review. 5: 173
Pediopsis trimaculata Van Duzee. Am. Ent. Review. 5:

Pediopsis bifasciata Osborn & Ball. Dav. Acad. Nat. Sci. Proc. 7: 118

Aside from the New York record by Van Duzee under the name *trimaculata*, I have seen specimens from Karner in the New York collection and secured others at Salem that I believe must be placed here though they vary from typical examples. Occurs on cottonwood and poplar.

***Pediopsis suturalis* O. & B.**

Studies of N. Am. Jassoidea. Pr. Dav. Acad. Nat. Sc. 7: 67.

Reported for Colden N. Y. (VanDuzee, collector) in original description.

***Pediopsis reversalis* O. & B.**

Studies of N. Am. Jassoidea. Pr. Dav. Acad. Nat. Sci. 7: 69.

Collected at Colden N. Y. by Mr E. P. VanDuzee.

***Pediopsis basalis* Van Duzee**

Pediopsis basalis Van Duzee. Am. Ent. Review. 1889. p. 171; Cat., p. 260; Prov., Pet. Faune Ent. Can. 1890. 3: 295

Pediopsis fumipennis G. & B. Hemip. Colorado, p. 73

Reported for Buffalo [Van Duzee, Buf. Hemip. p. 195] and Lake Placid.

This is a fairly distinct species and fully characterized by the describer. The dark color of the base of clavus is the most striking character.

***Pediopsis virescens* var. *graminea* Fabr.**

Body slender, sides parallel. Color, light green, a bright black spot at tip of vertex and one on base of hind tibia.

Length of female, 4.5 mm to tip of elytra.

Head strongly produced, vertex very narrow. Front broad, sutures indistinct, pronotum subangular anteriorly, deeply concave posteriorly. Elytra weak, transparent; nervures distinct.

Color. Light green. Head and wings somewhat yellowish. Extruded portion of ovipositor orange. A bright round black spot at apex of vertex and base of hind tibia. Eyes embrowned.

Genitalia. Female, last ventral segment narrowing posteriorly, indented posteriorly. Pygofer broad, not reaching tip of ovipositor.

Two specimens, females, collected on willow at Fitch Point, near the Fitch home, Salem N. Y., Aug. 14, 1904.

They agree so perfectly with the descriptions of var. *graminea* of the European species *virescens* that it seems safe to so refer it.

This is the first instance of any European species of this genus being found in America.

***Idiocerus pallidus* Fitch**

Idiocerus pallidus Fitch. Homop. N. Y. State Cab. 1851. p. 59

Bythoscopus pallidus Walker. Homop. 4: 1162

Idiocerus obsoletus Walker. Homop. 1851. 3: 873

Collected in Buffalo during July and August [Van Duzee, Buf. Hemip. p. 194].

I took it also at Hamburg and Van Duzee reports it for Lake Placid.

This also occurred pretty abundantly on willows at Salem. The types are wanting in New York collection. The National Museum collection contains a specimen of the typical form and of varieties "a" and "b." Specimens collected at Fitch Point, Salem that agree with the description and come from Fitch's locality have the pallid greenish color, the spots on vertex and a length of 5.5 mm.

Idiocerus nervatus Van Duzee

Buf. Soc. Nat. Sci. Bul. 5. 1894. p. 194; Cat., p. 261

Reported for Albany [N. Y. State coll.] Staten Island and Lancaster [Van Duzee].

Idiocerus alternatus Fitch

Idiocerus alternatus Fitch. Homop. N. Y. State Cab. 1851.

p. 59

Bythoscopus alternatus Walk. Homop. 1851. 3: 876

Idiocerus alternatus Van Duzee. Can. Ent. 1889. 21: 8;

Psyche, 5: 388

Idiocerus alternatus Van Duzee. Buf. Soc. Nat. Sci. Bul. 5;

p. 194

The Fitch type in New York State collection somewhat faded, is easily identifiable. The National Museum collection contains 6 specimens, one with original Fitch label and varieties a, b and c, none of them however with numbers to connect them with manuscript or published description. They agree with the specimens generally recognized under this name and which have been fully described in recent papers.

A common species over a wide range of country, occurring on willows. I secured specimens at Fitch Point, Salem, also at Hamburg.

Idiocerus suturalis Fitch

Idiocerus suturalis Fitch. Homop. N. Y. State Cab. 1851.

p. 59

Bythoscopus suturalis Walk. Homop. 1852. 4: 1162

Idiocerus suturalis Van Duzee. Can. Ent., 21: 8; Psyche, 5:

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Idiocerus suturalis Van Duzee. Buf. Soc. Nat. Sci. Bul. 5,

p. 194

I found it fairly common on willows at Salem and took it also at Hamburg. Van Duzee reports it for willow, poplar and birch. A specimen from Karner is in the New York State collection and Van Duzee reports it for Lake Placid and Phoenicia.

There is no type specimen in the New York State collection but in the National Museum there is a specimen with label, "*Idiocerus suturalis* Fitch, New York" evidently in Fitch's handwriting. The label "Fitch type" has been added in recent years. This specimen has the dusky sutural border without an interruption.

Idiocerus suturalis var. lunaris Ball

Occurs with the typical form on willows. Van Duzee reports it for Lake Placid and I took it commonly at Salem and elsewhere.

Idiocerus crataegi Van Duzee

Can. Ent. 1890. 22: 110; Buf. Soc. Nat. Sci. Bul. 5, p. 194

Collected at Buffalo on thornbushes [Van Duzee]. Apparently less widely distributed than some of the other species.

Idiocerus lachrymalis Fitch

Idiocerus lachrymalis Fitch. Homop. N. Y. State Cab. 1851. p. 58; reprinted in Lintner. 9th Rep't. 1893. p. 398; Van Duzee, Can. Ent. 1889. 21: 8; Psyche. 1890. 5: 388

Bythoscopus lachrymalis Walk. Homop. 1851. 4: 1161

Abundant at Salem on poplar. I secured a large series of this species from a little patch of scrubby poplars on the crest of a hill near Salem on Aug. 14. They agree perfectly with the well preserved types in the New York State Museum and fit the Fitch description which for this species is quite distinctive. Mr Van Duzee secured it at Lake Placid and Phoenicia and has heretofore reported it for Lancaster and Hamburg. A single specimen in the National Museum is representative for the typical form, while the New York State collection includes representatives for the varieties under numbers and letters precisely as given in the published description.

Idiocerus maculipennis Fitch

Idiocerus maculipennis Fitch. Homop. N. Y. State Cab. 1851. p. 59

Bythoscopus maculipennis Walk. Homop. 1852. 4: 1161

Idiocerus maculipennis Van Duzee. Psyche, 5: 388

Idiocerus maculipennis Van Duzee. Buf. Soc. Nat. Sci. Bul. 5, p. 194

Collected in July and August on thorn [Van Duzee] and at Mosholu [Bueno]. Fitch's description is represented now by fragments of broken specimens in the National Museum. A full recent description is given in a paper on the Genus *Idiocerus* [Osborn and Ball. Dav. Acad. Nat. Sci. Proc. 7: 73].

Idiocerus provancheri Van Duzee

Idiocerus provancheri Van Duzee. Buf. Soc. Nat. Sci. Bul. 5, p. 194

Bythoscopus clitellarius Prov. Pet. Faune Ent. Can. 1890. 3: 288

Idiocerus provancheri Van Duzee. Can. Ent. 1890. 23: 111

Collected at Buffalo and Lake Placid [Van Duzee] and Severence [N. Y. State coll.]. Occurs on different species of *Crataegus*.

Idiocerus verticis Say

Jassus verticis Say. Acad. Nat. Sci., Phila. Jour. 1831. 6: 308

Bythoscopus verticis Uhler. U. S. Geol. & Geog. Sur. Bul. 3. 1877. p. 465

Idiocerus verticis Van Duzee. Psyche. 1890. 5: 389

I took at Salem one specimen which agrees much better with this species than with *alternatus*. Previous records place the species west of the Mississippi river.

Genus AGALLIA Curtis

Agallia 4-punctata Prov.

Bythoscopus 4-punctatus Prov. Nat. Can. 1872. 4: 376
Agallia 4-punctata Van Duzee. Am. Ent. 1889. 5: 167
Agallia 4-punctata Van Duzee. Buf. Soc. Nat. Sci. Bul. 5, p. 196

Records for Poughkeepsie [N. Y. State coll.], Ithaca [Cornell coll.], Buffalo [Van Duzee], Forest Park, June 7, 1902 [Bueno].

I collected it at Cold Spring Harbor and Jamaica; Van Duzee at Lake Placid in 1904.

Agallia sanguinolenta Prov.

Bythoscopus sanguinolentus Prov. Nat. Can. 1872. 4: 376
Agallia sanguinolenta Van Duzee. Am. Ent. 1889. 5: 166
Bythoscopus siccifolius Uhler. U. S. Geol. & Geog. Sur. Bul. 2, p. 359
Agallia siccifolia Van Duzee. Can. Ent. 1889. 21: 9; Buf. Soc. Nat. Sci. Bul. 5, p. 196

Generally distributed over the State as well as elsewhere over the United States. Records for Ithaca [Cornell Univ.], Buffalo [Van Duzee], Karner [N. Y. State coll.], Mosholu, Oct. 1, 1902. [Bueno].

I collected it at Eagle Bridge, Nassau, Jamaica and Cold Spring Harbor, and Mr Van Duzee reports it for Lake Placid, Phoenicia, Staten Island and Jamaica.

Agallia novella Say

Jassus novellus Say. Acad. Nat. Sci. Phila. Jour. 1831. 6: 309
Agallia novellus Van Duzee. Can. Ent. 21: 8; Buf. Soc. Nat. Sci. Bul. 5, p. 196

Reported for Buffalo Van Duzee, Buf. Hemip. p. 196.

Recorded for Buffalo and reported in 1904 for Lake Placid and Phoenicia but doubtless well distributed over the State.

Agallia constricta Van Duzee

Can. Ent. 26: 90; Osborn and Ball, Dav. Acad. Nat. Sci. Proc. 7: 52

Aside from the record of Long Island given in the review of this genus by Osborn and Ball, I have specimens collected at Cold Spring Harbor in August 1904, and Mr Van Duzee reports it for Staten Island. Its distribution is evidently to the southward and Long Island is probably about its northern limit.

Family TETTIGONIDAE

Genus ONCOMETOPIA

Oncometopia undata Fabr.

Proconia undata Fabr. [For full synonymy see Van Duzee's *Catalogue*]

The general range for this species is stated by Van Duzee as New Jersey to Michigan and south to Florida and Mexico. Only one record "Oswego" given on a specimen in the N. Y. State Museum collection has come to notice for the State.

Oncometopia lateralis Fabr.

Cicada lateralis Fabr. Ent. Syst. sup. p. 524

Cicada marginella Fabr. Syst. Rhyng. p. 96

Cicada costalis Fabr. Syst. Rhyng. errata following p. 314

Oncometopia lateralis Ball. Ia. Acad. Sci. Proc. 8: 44

This is a northern form and the only trustworthy record I know for the State is from Mr Van Duzee who reports it for Lake Placid. I have specimens from Montreal Can. and it may be expected to occur over the northern part of the State.

Genus AULACIZES

Aulacizes irrorata Fabr.

Cicada irrorata Fabr. Ent. Syst. 1794. 4: 33

Cicada nigripennis Fabr. Ent. Syst. 1794. 4: 32

Aulacizes rufiventris Walk. Homop. 1851. 3: 796

Aulacizes guttata Uhl. Stand. Nat. Hist.; Van Duzee, Cat. [nec. Sign.]

Aulacizes pollinosa Fowl. Biol. Homop. 2: 218, pl. 15, fig. 18

A specimen secured at Cold Spring Harbor. One also in the American Museum, New York city and credited to "N. Y." and it was very likely secured at some point near the city. This is also a southern species but its distribution extends a little farther north than that of the preceding species.

Genus TETTIGONIA

Tettigonia bifida Say

Tettigonia bifida Say. Acad. Nat. Sci. Phila. Jour. 1831. 4:

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Tettigonia tenella Walk. Homop. 1851. 3: 770

Tettigonia fasciata Walk. Homop. 1851. 3: 780

Tettigonia bifida Osborn & Ball. Ia. Acad. Sci. Proc. 1897. 4: 175; Van Duzee. Buf. Soc. Nat. Sci. Bul. 5, p. 196

Reported for Ithaca. [Cornell Univ.]. Keene Valley, [N. Y. State coll.]. New York city, Sep. 2, 1902. [Bueno]. Phoenicia, Buffalo. [Van Duzee].

A fairly common species and examples were taken during my trip at Hamburg, Salem, Cold Spring Harbor and Jamaica. It occurs in wooded localities and is found on grasses and other low herbaceous plants.

***Tettigonia gothica* Sign.**

Tettigonia gothica Sign. Ann. Soc. Ent. Fr. 1854. p. 345
Tettigonia hieroglyphica, in reference from Eastern states
 [nec. Say].

Tettigonia similis Woodw. Ill. State Lab. Bul. 3. 1887. p. 25
 Keene Valley, Karner, Clinton Heights. I took it at Salem,
 Nassau, and Oyster Bay. Mr Van Duzee at Lake Placid, Phoenicia
 and Kingston.

As Ball has pointed out this species must have been the basis
 for records of *hieroglyphica* in localities east of Illinois.

It is light reddish or grayish green, the head with several lines
 on the vertex doubled on each other and nearly parallel with
 median line, and prominent spot at apex black. Length 5.5 mm
 to 6 mm.

It occurs in great numbers in the undergrowth along the margin
 of thickets and may be collected by thousands in almost any
 suitable locality.

The larva is light yellow with a dark stripe on each side, a broad
 median stripe light, narrowing at tip of vertex and on last seg-
 ment of abdomen. Eye black anteriorly and posteriorly with
 vertical yellow band including black dot. Beneath with eyes
 light greenish yellow, tips of tarsi black. Collected on hill near
 Salem N. Y., on Aug. 15, 1904.

***Tettigonia tripunctata* Fitch**

Tettigonia tripunctata Fitch. Homop. N. Y. State Cab.
 1851. p. 55.
 Not *Tettigonia tripunctata* Sign. Monogr. 175; Fowler, Biol.
 p. 253

In collections at Ithaca [Cornell Univ.], Albany, Mosholu and
 Phoenicia.

This is so distinct and well marked a species that it has never
 been in doubt and the types are still in fair state of preservation.
 The whitish color with light brown stripes and three conspicuous
 black dots on the head at once characterize it. While not an
 abundant species in collections it is pretty generally distributed
 and I secured specimens during August at Salem, Jamaica and
 Staten Island and Mr Barber has sent a specimen from Cold Spring
 Harbor.

Diedrocephala* Spinola**Diedrocephala coccinea* Forst.**

Cicada coccinea Forst. Nov. Sp. Ins. 1781. p. 96
Tettigonia quadrivittata Say. Acad. Nat. Sci. Phila. Jour.
 1831. 6: 312
Tettigonia picta Walk. Homop. 1851. 3: 158
Tettigonia teliformis Walk. Homop. 1851. 3: 764
Diedrocephala coccinea Osborn & Ball. Ia. Acad. Sci. Proc.
 1897. 4: 177
Tettigonia quadrivittata Fowl. Biol. Homop. 1900. 2:
 276, pl. 18, fig. 22

New York, Mosholu, Buffalo, Ithaca, Albany, Salem, Pough-
 keepsie, Wilmington, Saranac Inn, Lake Placid, Keene Valley,
 Forest Park. I took it at Hamburg, Nassau, Salem, Eagle Bridge,

Oyster Bay, Jamaica and Staten Island, mostly adults but a few larvae during 9th to 22d of August. Buffalo, "especially on blackberry bushes" [Van Duzee].

One of the most beautiful of the Tettigonids, having brilliant yellow color with bright red and blue or green stripes. An abundant species over the entire eastern United States and occurring on a variety of forest plants. The larvae are yellow with dark wing pads and found in July and August.

DRAECULACEPHALA Ball

Draeculacephala mollipes Say

Tettigonia mollipes Say. Acad. Nat. Sci. Phila. Jour. 1831.

6: 312

Tettigonia innotata Walk. Homop. 1851. 3: 770

Tettigonia antica Walk. Homop. 1851. 3: 771

Tettigonia producta Walk. Homop. 1851. 3: 772

Tettigonia acuta Walk. Homop. 1851. 3: 773

Acopsis viridis Prov. Nat. Can. 1872. p. 352

Diedrocephala mollipes Osborn & Ball. Ia. Acad. Sci. Proc.

1897. 4: 176

Tettigonia mollipes Fowl. Biol. Homop. 1900. 2: 273, pl.

18, fig. 15

Aulacizes lineata Fitch. Mss.

Draeculacephala mollipes Ball. Ia. Acad. Sci. Proc. 8

Hamburg, Buffalo [Van Duzee], New York [Fitch], New York city [Bueno], Albany Karner, Poughkeepsie [N. Y. State Mus.], Ithaca [Cornell Univ.], Phoenicia [Van Duzee].

I took it at Hamburg, Nassau, Eagle Bridge, Salem, Cold Spring Harbor, Jamaica and Staten Island and it may be expected in all parts of the State.

An almost universal species, occurring in grasses and often in such numbers as to be an undoubted source of injury.

Draeculacephala angulifera Walk.

Tettigonia angulifera Walk. Homop. 3: 771

Diedrocephala angulifera Van Duzee. Ent. News. 5: 156

Diedrocephala sp. Southwick. Science. 19: 318

Draeculacephala angulifera Ball. Ia. Acad. Sci. Proc. 8: 69

Aside from records of "New York" given by both Van Duzee and the record by Mr Southwick, I know of no records for the State.

The species is larger than *mollipes* with a shorter, blunter vertex.

Draeculacephala novaeboracensis Fitch

Aulacizes novaeboracensis Fitch. Homop. N.Y. State Cab. 1851. p. 56

Tettigonia prasina Walk. Homop. 1851. 3: 768

Diedrocephala mollipes Prov. Pet. Faune Ent. Can. 1889. 3: 266

Diedrocephala novaeboracensis, Osborn & Ball. Ia. Acad. Sci. Proc. 1897. 4: 177, 189

Keene Valley, Lake Placid, Piseco lake, Nassau and Cold Spring Harbor.

I found it abundant at Salem in low sedgy localities and these specimens agreed perfectly with the Fitch specimens.

The types are well preserved.

Helochara communis Fitch

Helochara communis Fitch. Homop. N. Y. State Cab. 1851.

p. 56
Tettigonia herbida Walk. Homop. 1851. 3: 769.

Swept at Salem, Aug. 15, 1904, in large numbers on swampy land. Adults and larvae also taken at Eagle Bridge and New York State Museum records show it for Albany, Nassau, Karner, Buffalo, Phoenicia, Kingston, Staten Island, etc. The types though faded are unmistakable.

This is a very widely distributed species and is certain to be found in every locality in the State where grassy swamp land is present. It doubtless serves to reduce the growth of the grass where it occurs since it frequently swarms in immense numbers but as it works on places having an abundance of moisture, the effects of the drain are not specially noticeable.

Eucanthus acuminatus Fabr.

Cicada acuminata Fabr. Ent. Syst. 1794. 4: 36, 40

Eucanthus orbitalis Fitch. Homop. N. Y. State Cab. p. 57

Eucanthus acuminatus Osborn & Ball. Ia. Acad. Sci. Proc.

4: 182

This insect has a wide distribution in Europe and America and no essential differences can be detected between the Old World form and ours described by Fitch under the name *orbitalis*. Van Duzee reports it for Lake Placid.

Xerophloea viridis Fabr.

Cercopis viridis Fabr. Ent. Syst. 1794. 4: 13, 50

Xerophloea grisea Germar. Zeits. F. G. Entom. I, 1901, 1839.

Xerophloea virescens Stal. Öfvers Vet. Akad's Förh. 1854.

p. 30, 94

Xerophloea viridis Fabr. Stal., Hemip. Fabriciana. 2: 59

Parapholis peltata Uhler. U. S. Geol. & Geog. Sur. Bul. 1877.

3: 461

Xerophloea peltata Uhler. Stand. Nat. Hist. 1884. 2: 248

Xerophloea viridis Osborn & Ball. Ia. Acad. Sci. Proc. 4: 179

I have received specimens from Mr Bueno taken at Mosholu, July 26, 1902, and Mr Van Duzee reports it for Kingston.

It appears to be recorded so far only for the southern part of the State.

Xerophloea major Baker

Xerophloea major Baker. Psyche, 3: 285

A specimen referred here has been received from Mr J. R. de la Torre Bueno, collected at Mosholu near New York city; also a male and female from Cold Spring Harbor from Mr H. G. Barber.

Gypona octo-lineata Say

Tettigonia octo-lineata Say. Compl. Wr. 2: 257

Gypona striata Burmeister. Gen. Ins. pl. 16, no. 9

Gypona flavilineata Fitch. Homop. N. Y. State Cab. p. 57

Gypona quebecensis Provancher. Nat. Can. 4: 352

Gypona cana Burm. Gen. Ins. pl. 16, no. 10

Gypona flavilineata. Spangberg. Spec. Gyponae, p. 8

Reported for Mosholu, July 26, 1902 [Bueno], Keene Valley, Hamburg, Hope [N. Y. State Mus.].

A widely distributed and extremely variable species. Some of the forms seem fairly constant and have been named as distinct species with what propriety is still a matter of dispute. Salem, Hamburg, Jamaica, Karner.

***Gypona bipunctulata* Woodw.**

Gypona bipunctulata Woodworth. Ill. State Lab. Nat. Hist. Bul. 3. 1887. p. 30(♀)

Gypona nigra Woodworth. Ill. State Lab. Nat. Hist. Bul. 3. 1887. p. 31(♂)

Reported for Mosholu, Staten Island [Bueno].

***Gypona melanota* Spang.**

Gypona melanota Spang. Spec. Gyponae. 1878. p. 23

Reported for Staten Island [Bueno].

This may be a melanotic form of *bipunctulata* Woodw. in which case this name has priority.

***Gypona scarlatina* Fitch.**

Gypona scarlatina Fitch. Homop. N. Y. State Cab. 1851. p. 57; reprinted in Litner. 9th Rept. 1893. p. 397; Van Duzee, Buf. Soc. Nat. Sci. Bul. 5, p. 197

This has been a rare species in recent years judging by the small number of specimens that have passed through my hands. Van Duzee mentions it for Buffalo as "Occasional on hickory trees through July and August."

***Gypona rugosa* Spangb.**

Gypona rugosa Spangb. Spec. Gyponae, p. 6

One specimen swept from whortleberry bushes in pine barrens near Oyster Bay, Aug. 18, 1904, is referred to this species on the strongly rugose character of the elytral veins. The species was originally described from Mexico and the female measurements given as 9 mm for body, 12 mm with elytra. This specimen is smaller, 8 mm for body and 10 mm to tip of elytra.

***Gypona geminata* n. sp.**

Similar to *octolineata* but without distinct stripes. Head shorter, color deep green, length of female 8.5-9 mm, male 8 mm.

Vertex twice as wide as length at middle, front nearly round or very faintly parabaloid, the ocelli situated at middle and as far from each other as from eye. Front depressed, clypeus scarcely longer than wide; pronotum nearly twice as long as vertex, hind border concave, surface whitish transversely striate except on anterior border; anterior femora beneath and outer portions of tibiae with series of strong setae. Scutellum of deep curved line; elytra opaque, clavus not reticulate but with series of punctures parallel to the veins, corium reticulate beyond apex of clavus. Costal border whitish.

Color deep green, slightly tinged with orange but without definite orange or red stripes; ocelli and eyes bright red, beneath uniformly green, tarsal claws embrowned.

Genital segment of female narrowed to apex, slightly longer laterally than preceding segment, posterior border concave, simple. Male valve not visible, plates slender, bluntly pointed, extending to tip of pygofer.

Specimens of this species were beaten from pinetrees at Oyster Bay, Long Island. They differ distinctly from *octolineata* and I have been unable to refer them to any described species and have therefore stated the distinctive characteristics under above name.

Genus *PENTHIMIA* Germ

Penthimia americana Fitch

Penthimia americana Fitch. Homop. N. Y. State Cab. 1851, p. 57; reprinted in Lintner. 9th Rep't. 1893. p. 397

Penthimia vicaria Walk. Homop. 1851. 3: 841 (♂)

Penthimia picta Prov. Nat. Can. 1872. 4: 352

Penthimia americana Van Duzee. Buf. Soc. Nat. Sci. Bul. 5, p. 197

This insect is noteworthy on account of its strong resemblance to species of the family Cercopidae. The color varies from red to black. It is seldom found in abundance but probably occurs in all parts of the State. Hickory, maple and other trees or shrubs are its food plants.

Family Jassidae

Genus *STRONGYLOCEPHALUS* Flor.

Strongylocephalus agrestis Fall.

Cicada agrestis Fallen. Acta. Holm. 1806. 27: 23

Selenocephalus agrestis Burm. Gen. Ins. 1. 1840. pl. 12

Strongylocephalus agrestis Flor. Rhynch. Livl. 1861. 2: 210

Strongylocephalus agrestis Van Duzee. Buf. Soc. Nat. Hist. Bul. 5, p. 197 (1894).

This is evidently very rare in New York as the only record of its occurrence is based on a single specimen collected by Mr Van Duzee "from a swampy meadow at East Concord, May 18, 1889."

Genus *ACOCEPHALUS* Germ.

Acocephalus striatus Linn.

Acocephalus striatus Linn. See Walker, Homop. 3: 848 for synonymy; Edwards, Lond. Ent. Soc. Trans. 1888. p. 19; Puton, Cat. Hemip. Palae. 1886. p. 79.

Acocephalus nervosus Schrank. Uhler. Stand. Nat. Hist. 1884. 2: 247

This is an Old World species and is credited to New York by Mr Van Duzee but without specific locality. I have specimens from Maine and it is recorded also for Canada.

Acocephalus flavostriatus Donovan.

A. flavostriatus Donovan. Brit. Ins. 1799

A. rivularis Germar. Mag. Ent. 1821. p. 89

A. flavostrigatus Sign. Essai sur le Jassides, p. 39

I took one specimen at Eagle Bridge, Aug. 13, 1904, and Mr Van Duzee has sent me a specimen which he secured at Phoenicia, Aug. 25, 1904.

It is a European species not hitherto recorded for America though I have a specimen from Dr C. M. Weed, collected at Woodstock Vt.

Acocephalus albifrons Linn.

Acocephalus albifrons Linn.

Tettigonia mixta Say. Acad. Nat. Sci. Phila. Jour. 1825. 4: 341; reprinted in Compl. Wr. 2: 258; Walker, Homop. 1852. 4: 1157 (mention)

Acocephalus mixtus Van Duzee. Psyche, 1890. 5: 390; Southwick, Science. 1892. 19: 318

This is another species distributed in both the old and new world but which has stood under separate names for the two regions.

It is quite dark and nearly black for the female, the male lighter brown with whitish or transparent spots in the elytra.

It has been recorded for New York city by Southwick and Buffalo by Van Duzee and collected at Salem [H. O.] Hamburg and Phoenicia [Van Duzee] and Cold Spring Harbor [Barber].

Genus **XESTOCEPHALUS** Van Duzee**Xestocephalus pulicarius** Van Duzee

Xestocephalus pulicarius Van Duzee. Buf. Soc. Nat. Sci. Bul. 5. 1894. p. 215.

Aside from the localities mentioned in the original description, Buffalo and New York city, this species has been collected at Jamaica and Phoenicia, in August.

It is doubtless generally distributed over the State in suitable localities where its food plant, *Carex vulpinoidea*, is present.

Xestocephalus fulvocapitatus Van Duzee

Xestocephalus fulvocapitatus Van Duzee. Buf. Soc. Nat. Sci. Bul. 5. 1894. p. 25

Van Duzee in his description records this species for Lancaster. "In company with the preceding (*pulicarius*) of which it may prove a variety."

Genus **PARABOLOCRATUS** Fieb.**Parabolocratus viridis** Uhler

Glossocratus viridis Uhler. U. S. Geol. & Geog. Sur. Bul. 3. 1877. p. 462

Parabolocratus viridis Uhler, Stand. Nat. Hist. 1884. 2: 247; Van Duzee, Buf. Soc. Nat. Sci. Bul. 5, p. 198

Common over wide extent of United States. Recorded for vicinity of Buffalo and Jamaica [Van Duzee].

Genus SPANGBERGIELLA

Spangbergiella vulnerata Uhler

Glossocratus vulneratus Uhler. U. S. Geol. & Geog. Sur. Bul.
3, p. 464

Spangbergiella vulneratus Sign. Am. Soc. Ent. Fr. ser. 5,
9: 274

Two specimens of this rare form have been noted in the National Museum labelled "N.Y." It is a southern species and while we might expect it to be found on Staten Island or Long Island it seems hardly probable that it will be found to occur further north.

Genus PARAMESUS Fieb.

Paramesus vitellinus Fitch

Acoccephalus vitellinus Fitch. Homop. N. Y. State Cab.
1851. p. 57. reprinted in Lintner. 9th Rep't. 1893. p. 397; Van
Duzee. Can. Ent. 1889. 91: 9

Selenocephalus vitellinus Ashm. Smith, Ins. N. J. 1890.
p. 445; Van Duzee. Psyche. 1890. 5: 390

Parabolocratus vitellinus Southwick. Science. 1892.
19: 318

Paramesus vitellinus Van Duzee. Am. Ent. Soc. Trans.
21: 290

To the original description we may add that the species is to be distinguished from its allies by the bright fulvous color with yellowish transparent round spots and the short rather thick and scarcely notched median process of the last ventral segment in the female. It is a handsome species but usually rare. It was probably secured by Dr Fitch in the vicinity of Salem and Van Duzee has recorded it for Buffalo and reports it for Lake Placid.

Genus PLATYMETOPIUS Burm.

Platymetopius acutus Say.

Jassus acutus Say. Acad. Nat. Sci. Phila. Jour. 1831. 6: 306; reprinted in Compl. Wr. 1869. 2: 382; Fitch, Homop. N. Y. State Cab. 1851. p. 62 (mention); reprinted in Lintner. 9th Rep't. 1893. p. 402

Platymetopius acutus Uhler. U. S. Geol. & Geog. Sur. Bul. 1877. 3: 473; Van Duzee, in Lintner. 9th Rep't. 1893. p. 410

Say's description of this species is quite accurate and fortunately no synonyms have been created.

It is an abundant species from Maine to the Rocky mountains and in New York has been recorded for Buffalo and collected the past summer at Karner [Felt], Salem, Eagle Bridge, Cold Spring Harbor and Jamaica by myself, Lake Placid, Phoenicia and Kingston by Van Duzee.

Platymetopius cuprescens n. sp.

Form of *acutus*, face entirely yellow, color more coppery, elytral spots less numerous or indistinct. Length of female, 5 mm.

Vertex long, acute, about twice as long as width between eyes, front long narrowed at apex, clypeus widening gradually from basal fourth. Pronotum about two thirds as long as vertex, hind border slightly emarginate, elytra flaring at tips, with a few hyaline spots near apex and in costal border.

Color. Vertex brownish with dark elytral area, a narrow wedge-shaped apical line and two narrow spots on the disk of vertex. Face entirely yellow, eyes brownish, pronotum coppery brown, a faint median line and lateral border yellowish. Scutellum brown with yellowish discal spots and two short parallel lines on apical portion. Elytra coppery with rather faint dark ramose lines and minute dots and reflexed veinlets fuscous, yellowish hyaline spots on base of apical cells, apex of anteapical cells. Costal space subhyaline, beneath yellowish with fuscous markings on abdominal segments and dots on tibiae.

Genitalia. Last ventral segment of female elongate, narrowed and rounded at apex with another prominent carina on posterior half, pygoferes reaching nearly to tip of ovipositor.

A single specimen collected by Mr E. P. Van Duzee at Phoenicia N. Y. It resembles *acutus* in size and shape, the hyaline spots much less pronounced, lacks the brown borders of face and has a distinctly carinate female ventral segment. From *latus* Baker which it resembles in genital segment, it differs in being darker, more coppery, elytra more hyaline on costa, the profile of head not so curved.

Platymetopius frontalis Van Duzee

Platymetopius frontalis Van Duzee. Can. Ent. 1890. 22:112; Southwick, Science. 1892. 19:318; Van Duzee, Buf. Soc. Nat. Sci. Bul. 5, p. 198

Platymetopius albopunctatus Fitch. Ms Ashm.; Smith. Cat. Ins. N. J. 1890. p. 445

Specimens have been noted in the collections for Poughkeepsie, Karner, New York city, Mosholu and Cold Spring Harbor. It was recorded for Buffalo by Mr Van Duzee who says: "With *acutus*, but much less abundant. June to Sep. most frequently on oak bushes." He reports it in 1904 from Phoenicia, Kingston and Staten Island.

Apparently much more abundant in recent years. Plentiful in 1904 on oaks. Probably a grass feeder but collecting on oaks at maturity.

It is readily separated from a *c u t u s* by the smaller size, darker color, and strong contrast of bright yellow front against the dark border of face. I collected it last summer at nearly every point where collections were made—Hamburg, Eagle Bridge, Nassau, Salem, Cold Spring Harbor, Jamaica and Staten Island and at all places it seemed more plentiful than a *c u t u s*. It must have been very rare to have escaped Dr Fitch's attention during his work a half century ago.

***Platymetopius obscurus* Osborn**

Ohio Nat. 5: 274

Taken at Cold Spring Harbor August 1904.

***Platymetopius angustatus* n. sp.**

Slender; light olivaceous green, length of female 4 mm.

Vertex acutely pointed nearly twice as long as width between eyes. Front very narrow, tapering to clypeus, long, slender, twice as long as wide, apex rounded, lorae, elongate nearly reaching margin of genae, pronotum strongly arched in front a little more than half as long as vertex, posterior margin slightly sinuate. Scutellum large, median impression deep, strongly curved, elytra truncate at apex, costal cells hyaline.

Color. Light greenish olivaceous somewhat tinged with cupreus; vertex with dusky lines somewhat diverging toward apex and front light yellowish green, more greenish at apex where there are three angular lines extending to border of the front; ocelli yellow, eyes black, pronotum greenish mottled with dusky, elytra greenish coppery with round hyaline spots in anteapical and apical cells; dorsum of abdomen black, margins yellow; costal cells hyaline, margined with black, beneath yellowish green, legs pale, base of spines and the tarsal claws dusky.

Genitalia. Last ventral segment of female rounded behind, pygofers reaching tip of ovipositor. What appears to be the male of this species collected at the same time and from the same trees differs from the above described in that the vertex is shorter, less acute, about $1\frac{1}{2}$ times as long as width between the eyes, the angular lines on front somewhat less conspicuous. The color more inclined to yellowish. The pronotum, scutellum and elytra somewhat more coppery, the genitalia having the valve large, convex, posterior border angulate, plates triangular, short, about $\frac{1}{2}$ length of pygofers. Length 3.75 mm. Described from one female and five male specimens beaten from pinetrees, Oyster Bay, Aug. 18, 1904.

Platymetopius fulvus n. sp.

Black, fulvous with scattered white spots on elytra. Length of female 5 mm, male 4.5 mm.

Vertex acute but not very long about $1\frac{1}{4}$ times as long as width between eyes and about equal to pronotum. Frontal sutures sinuous, clypeus about $1\frac{2}{3}$ times as long as wide. Pronotum slightly concave on hind border; scutellum with broad median impression.

Color. Vertex, pronotum, angles of scutellum and elytra bright fulvous with divergent lines on vertex. Five parallel lines on pronotum and numerous dots on elytra whitish. Central portion of scutellum yellow; costal cells hyaline or faintly whitish, beneath lighter, yellowish or pallid.

Genitalia. Last ventral segment of female elongate, posterior border rounded with small black spots close to hind border. Pygofer extending almost to tip of ovipositor, brown. Male valve triangular, hind border with distinct sharp angle.

Described from a number of specimens, 10 females and six males beaten from pine and huckleberry, Oyster Bay, Aug. 18, 1904. As all are adults it is impossible to determine the food plant with certainty though it seems likely that it is the huckleberry and that the individuals taken from pines were resting accidentally on the trees.

Deltocephalus sayi (Fitch)

Amblycephalus sayi Fitch. Homop. N. Y. State Cab. 1851. p. 61; reprinted in Lintner. 9th Rep't. 1893. p. 401

Jassus sayi Walker. Homop. 1852. 4: 1158

Deltocephalus sayi Uhler. U. S. Geol. & Geog. Sur. Bul. 4. 1878. p. 511; Southwick, Science. 1892. 19: 288; Van Duzee, in Lintner. 9th Rep't. 1893. p. 410

Deltocephalus sayi Fitch. Van Duzee, Buf. Soc. Nat. Hist. Bul. 4, p. 198

Reported for Buffalo, Poughkeepsie, Otto, Karner, Lake Placid, Phoenicia and Kingston. I collected it in numbers at Hamburg, Eagle Bridge, Salem, Cold Spring Harbor, Jamaica and Staten Island.

Fitch's types are in fair preservation and represent the small and rather dark form of the species.

Deltocephalus sylvestris O. & B.

Deltocephalus sylvestris Osborn & Ball. Ia. Acad. Sci. Proc. 4: 213

Collected at Lake Placid by Mr Van Duzee.

***Deltocephalus minki* Fieb.**

Deltocephalus minki Fieb. Verh. Zool. Bot. Ges. in Wien. 1869
19: 217

Reported for Lake Placid [Van Duzee].

Hitherto recorded for Canada and Mr Van Duzee has specimens collected at Lake Placid in the Adirondacks determined by Mr Ball. I collected it at Salem, Eagle Bridge and Cold Spring Harbor.

***Deltocephalus apicatus* Osborn**

Deltocephalus apicatus Osborn. Can. Ent.

This species was found in considerable numbers within a patch of grass (*Panicum lanuginosum* Ell.) a few rods square at Hamburg N. Y., Aug. 7. I also collected it at Salem at Fitch Point close to Fitch's home place and Mr Van Duzee reports it for Lake Placid.

***Deltocephalus flavicosta* Stal.**

Deltocephalus flavicostatus Van Duzee. Can. Ent. 24: 116
Deltocephalus flavicosta Baker. Psyche 8: 117

This was found in considerable abundance at points where I collected and specially at Cold Spring Harbor, Salem, Eagle Bridge, Nassau and Jamaica.

The dark color with the bright yellow costal line is very distinctive for this species.

***Deltocephalus areolatus* Ball**

Can. Ent. 31: 188

A specimen of this species has been sent to me in a collection of Jassids from Mr J. R. de la Torre Bueno collected in vicinity of New York city and I have one from Mr Van Duzee labelled Woodbine N. J.

***Deltocephalus debilis* Uhler**

Deltocephalus debilis Uhler. U. S. Geol. & Geog. Sur. Bul.
1867. 2: 360; Van Duzee, Can. Ent. 1889. 21: 11
Deltocephalus debilis Van Duzee. Buf. Soc. Nat. Hist. Bul.
4: 198

Reported for Lancaster, Buffalo and Colden, also Lake Placid [Van Duzee].

This is a low ground species and by no means uniform in its occurrence or distribution.

***Deltocephalus compactus* O. & B.**

Deltocephalus compactus Osborn and Ball. Ia. Acad. Sci.
Proc. 4: 217

Lake Placid, Phoenicia and Staten Island, collected by Mr Van Duzee. I took it at Cold Spring Harbor.

This is a very small species related to the southern weedi. It has now been recognized from the state of Washington to New York. The short, compact form, rather blunt head and mottled elytra are most apparent characters though in the latter point it resembles *inimicus*.

***Deltocephalus obtectus* O. & B.**

Deltocephalus obtectus Osborn & Ball. Dav. Acad. Nat. Sci.
Proc. 7: 78

Taken at Eagle Bridge, Hamburg and Salem.

This is the first time the species has been recorded from New York. It is however fairly common in certain grasses and on some hillside pastures was abundant enough to be considered an economic factor.

***Deltocephalus configuratus* Uhler**

Deltocephalus configuratus Uhler. U. S. Geol. & Geog. Sur.
Bull. 1871. 4: 511

Deltocephalus configuratus Van Duzee. Buf. Soc. Nat. Hist.
Bul. 4: 198

Reported for Buffalo and the Adirondacks.

Van Duzee speaks of this as "a common meadow insect from May to August" but except at Hamburg, I found it rare or absent during this summer's trip.

***Deltocephalus melsheimeri* Fitch**

Amblycephalus melsheimeri Fitch. Homop. N. Y. State Cab.
p. 61

The Fitch type of this species in the New York State collection is a female in fair state of preservation. It measures 2.5 mm in length, is narrow, the head distinctly pointed, elytra transparent. The female ventral segment margin straight with no teeth or sinuation and very narrowly bordered with black. While much faded it furnishes structural characters of value. The specimens in the National Museum for this species consist of three examples, the first, bearing the original Fitch label "*Amblycephalus melsheimeri* N.Y." is considerably broken with elytra and

end of abdomen present, the latter showing the female genitalia. Elytra are shorter than abdomen, rounded at apex, female segment truncate narrowly black on margin, (indistinct), size agreeing with other specimens. The second specimen bears the original label "var. A." and with added labels "Fitch's type," "Fitch's collection" is all gone but the abdomen. This shows the female ventral segment which is truncate, faintly sinuate with narrow black margin on middle. Fragments of elytra adhering to pin are shorter than abdomen. The third specimen is whole, in fair condition evidently remounted on paper point from the pinned specimen, labelled "Fitch type" "Fitch's collection." This measures nearly 3 mm to end of abdomen. The head is narrow, pointed as in the Albany specimen, elytral tip reaching end of abdomen, female ventral segment truncate with narrow black border. The whole form narrow. It appears to agree so far as parts are present to compare with the Albany specimen. The elytra are all hyaline slightly infuscated in the cells, specially bordering the veins.

I secured specimens at Eagle Bridge, Salem and other points that agree distinctly with these types. It appears from this comparison that the original *melsheimeri* of Fitch is not the insect that has been placed under this name by Van Duzee and others although the description, except for length, would apply equally as well to both forms.

***Deltocephalus affinis* Gillette & Baker**

Deltocephalus melsheimeri Van Duzee. Am. Ent. Soc. Trans.
21: 292

Deltocephalus affinis Gillette & Baker. Hemip. Colorado, p. 84

This species answers the brief description of *melsheimeri* perfectly except in the length. The type specimen of *melsheimeri* in the New York State collection is not only smaller than the average of this form but has a much narrower body and more pointed head as shown in the discussion of that species.

This is widely distributed in the State and during recent years has undoubtedly been a much more abundant species than *melsheimeri*. It is described fully under the name of *melsheimeri* in the review of *Deltocephalus* by Osborn and Ball.

***Deltocephalus nigrifrons* Forbes**

Collected at Hamburg, Aug. 8, 1904, in abundance; also "rare at Lancaster, June to August 1887" [Van Duzee, Buf. Hemip. p. 194].

I have retained the name and limits adopted in the review of the genus *Deltocephalus* by Osborn and Ball, notwithstanding the difficulty that is felt in adopting this as final.

This has been recorded several times as occurring in immense numbers in oats, lawn grass, etc. but it seems as a rule most abundant in annual grasses like foxtail and panic grasses.

Deltocephalus inimicus Say

Jassus inimicus Say. Am. Acad. Nat. Sci. Phila. Jour. 1831. 6:305; reprinted in Compl. Wr. 1869. 2:382
Amblycephalus inimicus Fitch. Homop. N. Y. State Cab. 1851. p. 61; reprinted in Lintner, 9th Rep't. 1893. p. 401
Tettigonia inimica Walker. Homop. 1852. 4:1158
Deltocephalus inimicus Van Duzee. Can. Ent. 1889. 21:11; Southwick, Science. 1892.. 19:288; Van Duzee, in Lintner 9th Rept. 1893. p. 410
Jassus 6-punctatus Prov. Nat. Can. 1872. 4:378
Deltocephalus inimicus Van Duzee. Buf. Soc. Nat. Hist. Bul. 4:199

Reported for Buffalo, Otto, Lake Placid, Phoenicia, Kingston and Karner. I collected it in numbers at Hamburg, Nassau, Salem, Cold Spring Harbor, Jamaica and Staten Island.

Taken everywhere that collections are made in grass land, at least where blue grass occurs. In many localities it becomes at times a serious pest in grass land and it has also been recorded as a pest in wheat fields.

Genus SCAPHOIDEUS

Scaphoideus consors Uhler

Scaphoideus consors Uhler. Md. Acad. Sci. Trans. 1. 1889. p. 56

Separated from *scalaris* by broader vertex. Uhler referred this species to New York, Maryland and Texas. It has been seldom noticed probably because of its limitation in food plant.

Scaphoideus sanctus Say ??

I mention under this name a specimen from Cold Spring Harbor sent me by Mr H. G. Barber which differs so much in size and genitalia that it can not be safely referred to either *sanctus* Say or *fasciatus* Osborn but still the elytral picture and general facies relates it closely to these species.

While additional specimens will in all probability show it to be distinct it seems undesirable to describe as new with but one sex and but one specimen of that in hand. As stated in my paper on "The Genus *Scaphoideus*" the real *sanctus* of Say is in some doubt."

Scaphoideus scalaris Van Duzee

Scaphoideus scalaris Van Duzee. Ent. Am. 6:51

Reported for Phoenicia by Mr Van Duzee.

Scaphoideus luteolus Van Duzee

Scaphoideus luteolus Van Duzee. Buf. Soc. Nat. Sci. Bul. 5, p. 210

This species was described from specimens taken near New York city and Anglesea N. J. It is closely related to *immitus* and either has been confused with that species or has been so rare as to escape notice.

Scaphoideus lobatus Van Duzee

Scaphoideus lobatus Van Duzee. Buf. Soc. Nat. Sci. Bul. 5, 1894. p. 199

Described from specimen collected at Lancaster, Sep. 8 and has since been collected at Hamburg, Ithaca, Mosholu, Jamaica, Cold Spring Harbor and Poughkeepsie. A well marked species but so far noticed in very small numbers.

Scaphoideus auronitens Prov.

Scaphoideus auronitens Provancher. Pet. Faune Ent. Can. 1889. 3: 277; Van Duzee. Cat.; Am. Ent. Soc. Trans. 21: 301; Osborn & Ball, Ia. Acad. Sci. Proc. 4: 232 (record)
Scaphoideus auronitens Van Duzee. Buf. Soc. Nat. Sci. Bul. 5, p. 199; Osborn, Cin. Soc. Nat. Hist. 19: 194

Recorded for New York by Van Duzee and Osborn, definite records based on specimens in collection at Albany, Lancaster and Albion. I took it at Hamburg and Jamaica. Van Duzee reports it for Phoenicia also and Mr H. G. Barber has sent me a specimen labeled Cold Spring Harbor.

At Hamburg it occurred in numbers on *Geranium robertsonium* and it seems quite probable that this is its food plant. Larvae occurring on same plants and without much doubt the immature form of this species.

Larva. Head sharply pointed, body fusiform. Length 4.5 mm. Two triangular black spots near apex of vertex. Transverse quadrate spbt on vertex, one anterior median, two lateral quadrate spots on pronotum, two on mesothorax, and two small narrow points on metathorax, orange red. Head and prothorax, front of head and metathorax, wing pads white. Abdomen fuscous, white points in series on segments 1-6. 4 and 5 with larger white patch in one specimen (more mature). Seventh segment ivory white above. Below whitish, eyes marked with black dots. Anterior margin of vertex and upper part of front bearing three black lines.

Scaphoideus jucundus Uhler

Scaphoideus jucundus Uhler. Md. Acad. Sci. Trans. 1. 1889. p. 34; Van Duzee, Can. Ent. 1889. 21: 11 (mention); Van Duzee, Am. Ent. Soc. Trans. 21: 300; Osborn, Cin. Soc. Nat. Hist. Jour. 19: 795

A specimen of this handsome species collected at Karner, Aug. 31, 1904 [N.Y. State coll.] Van Duzee mentions it as occurring in the vicinity of Buffalo.

Scaphoideus ochraceus Osb.

Scaphoideus ochraceus Osborn. The Genus *Scaphoideus*. Cin. Soc. Nat. Sci. Jour. 19: 202.

Reported for Gowanda by Mr E. P. VanDuzee.

Scaphoideus intricatus Uhl.

Scaphoideus intricatus Uhler. Trans. Md. Acad. Sci. 1: 34.

Collected at Albion by Mr E. P. VanDuzee.

Scaphoideus carinatus Osborn

Scaphoideus carinatus Osborn. Cin. Soc. Nat. Hist. Jour. 19: 201

This is a large and well marked species but evidently very rare as it has so far been noted for but three localities. Our New York record is based on a single specimen collected by Mr Van Duzee at Hamburg and one for Cold Spring Harbor [Barber] but it has been taken in New Hampshire and New Jersey and should occur in eastern New York.

Scaphoideus productus Osborn

Cin. Soc. Nat. Hist. Jour. 19: 200

A specimen of this species known hitherto only from Iowa, Kansas and Kentucky has been sent to me by Mr H. G. Barber, collected at "Cold Spring Harbor, July 25, 1900."

Scaphoideus immistus Say

Jassus immistus Say. Acad. Nat. Sci. Phila. Jour. 1831. 6: 306

Scaphoideus immistus Uhler. Md. Acad. Sci. Trans. 1. 1889. p. 33.

Scaphoideus immistus Southwick. Science, 1892. 19: 288

Scaphoideus immistus Van Duzee. Buf. Soc. Nat. Sci. Bul. 5. 1894. p. 190

Scaphoideus immistus Osborn. Cin. Soc. Nat. Sci. Jour. 19: 204

Collected at Hamburg, Eagle Bridge, Salem, Karner, Cold Spring Harbor and Jamaica. "Found most frequently on witch hazel and other bushes" Van Duzee, July to September. Reported also for Lake Placid, Phoenicia, Kingston and Jamaica by Mr Van Duzee.

This species presents great variability, and many of the variations seem to defy limitation, passing by such insensible grades as to make precise definition impossible.

Scaphoideus opalinus n. sp.

Belongs to *immistus* group and is possibly a rather extreme variety of that species although it has a broader, more robust appearance and the white is brighter, more milky, translucent. Gray; vertex, scutellum, two broad sutural spots of elytra and three roundish translucent spots bordering claval suture, opalescent white.

Length of female to tip of elytra 5. mm. Length of male to tip of elytra 4.75 mm.

Vertex subangulate about one and one half times as long at middle as next eye. Front narrowed below antennae, clypeus expanding from middle. Loes large, their borders almost touching margin of cheek. Pronotum broad, posterior border concave. Claval veins not very strongly recurved. Reflexed veins two or three, from anterior half of outer ante-apical cell.

Color. Grayish tinted with fulvous. Vertex ivory white crossed by a rather obscure brownish band. Prothorax with ivory white band between hind border of eyes. Scutellum polished ivory white, except outer angles which are black. Sutural border of clavus with broad circular milky or milky opalescent spots separated by a black bar on the slightly recurved claval vein and with a black spot anteriorly and posteriorly, the latter at the end of the clavus. The remainder of the elytra with fuscous, fulvous and milky white patches of general pattern of *immistus*.

Genitalia. Last ventral segment of female long, posterior borders, rounded, polished, black on apical portion. Male; valve short, rounded; plates short reaching a little more than half the length of pygofer, obliquely truncate, minutely ciliate.

This species was beaten from red cedar at Cold Spring Harbor and appears in some minute particulars to differ so distinctly from the varieties of *immistus* that it seems best to give it separate description. While there is little difference in genitalia or general color pattern, there is quite a marked difference in the width of the claval spots, angle of the claval vein, and shape of body as a whole. The two circular opalescent spots formed by the semicircles on each clavus present a quite distinctive picture.

***Athysanus obsoletus* Kirsch**

Athysanus obsoletus Kirsch. Die Athysanus Arten v. Wiesb. 1858. p. 7

Athysanus obsoletus Van Duzee. Buf. Soc. Nat. Sci. Bul. 5, p. 199

Reported for Buffalo and Lancaster.

***Athysanus venosus* n. sp.**

Robust, broad, elytra with very conspicuous pallid veins, apical cells nearly obsolete. Length of female to tip of ovipositor, 5 mm.

Vertex elongate, one and one third times as long at middle as at eye with a rather evident elevation paralleling the occipital margin from front border of eye, vertex rounding uniformly on to front, front broad, full, tapering evenly to the apex which is slightly broader near base, clypeus slightly rounded. Pronotum short, about three times as wide as its length at middle, almost lunate in form, the scutellar margin distinctly concave, elytra short reaching base of sixth dorsal segment, subhyaline, veins very conspicuous, a second cross vein between inner fork of the ulna and the radial, five apical cells, four lying next the subtruncate apical margin much reduced, wings about three fourths length of elytra.

Color. Light brown faintly lined on vertex and mottled on pronotum and scutellum with gray, ocelli red, frontal arcs almost obsolete, the sutural lines of face a little more intense, claval suture brown, elytral veins whitish, a series of points at base of apical spines. The apical portions of tarsi, the tarsal claws, the hind border of the last ventral segment and margin of ovipositor blackish.

Genitalia. Last ventral segment of female twice as long as preceding one, slightly produced into a tooth at the lateral posterior angle and roundly produced at the middle, pygofer tumid, very scantily ciliate, reaching to tip of ovipositor.

A single specimen of female collected by Mr E. P. Van Duzee at Lake Placid, Adirondacks. This species may be associated with the *extrusus* group, being very similar to *extrusus* in general shape, the vertex somewhat more produced and differing decidedly in the color and markings.

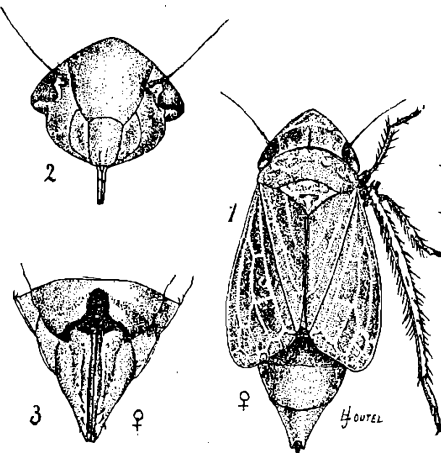


FIG. 22 *Athysanus venosus* Osb.
1=female dorsal view; 2=face;
3=female genitalia (Drawn by
L. H. Joutel)

Athysanus extrusus Van Duzee

Athysanus extrusus Van Duzee. Can. Ent. 1893. 25:283

Athysanus extrusus Van Duzee. Buf. Soc. Nat. Sci. Bul. 5, p. 199

Reported for Mosholu [American Museum], Adirondacks, Portage Falls [Van Duzee].

Athysanus striola Fall.

Cicada striola Fall. Acta Holm. 1806. 27:31

Athysanus striola Van Duzee. Can. Ent. 1889. 21:11; Cat., p. 303 (*Limnotettix*)

Athysanus striola Osborn & Ball. Dav. Acad. Nat. Sci. 1898. Proc. 7:91, pl. 5, fig. 4

Limnotettix striola Van Duzee. Buf. Soc. Nat. Sci. Bul. b. 300

Collected at Buffalo and Phoenicia by Van Duzee. A specimen from Karner, Aug. 31, 1904 and I took one at Hamburg, Aug. 8, 1904. Widely distributed in Europe and North America.

Athysanus osborni Van Duzee

Deltocephalus osborni Van Duzee. Am. Ent. Soc. Trans. 1882. 19:309; Buf. Soc. Nat. Sci. Bul. 5, p. 198

Athysanus osborni Osborn & Ball. Ohio Nat. 2:249

Described from Lancaster N. Y. but apparently quite rare.

***Athysanus simplarius* O. & B.**

Deltocephalus simplex Van Duzee. Am. Ent. Soc. Trans. 19:305; Am. Ent. Soc. Trans. 21:293
Athysanus simplarius Osborn & Ball. Ohio Nat. 2:249

The record by Mr Van Duzee is the only one for the State.

***Athysanus anthracinus* Van Duzee**

Athysanus anthracinus Van Duzee. Can. Ent. 1894. 26:136

This species was described as from Iowa, Kansas and Colorado, Osborn and Ball record in addition District of Columbia, Mr Van Duzee reports it as collected at Lake Placid and I have specimens from Mr H. G. Barber collected at Woods Hole Mass. so it may be added to the New York fauna.

***Athysanus plutonius* Uhler**

Jassus plutonius Uhler. U. S. Geol. & Geog. Sur. Bul. 3. 1877. p. 47
Athysanus plutonius Prov. Pet. Faune Ent. Can. 1889. 3:282
Athysanus plutonius Van Duzee. Buf. Soc. Nat. Sci. Bul. 5, p. 199

Reported for Hamburg, Buffalo and Lake Placid [Van Duzee, Buf. Hemip. p. 199], Mosholu [Bueno]. A small black or nearly black species usually quite rare. I collected it at Jamaica.

***Athysanus striatulus* Fallen**

Cicada striatula Hem. Suec. 1826. 2:45
Athysanus instabilis Van Duzee. Can. Ent. 1893. 25:284
Athysanus striatulus Osborn & Ball. Ohio Nat. 2:242

"Size and form of preceding species, but darker and lacking tawny tinge, legs dark, femora twice annulate with pale. Length ♀ 4.5 mm, ♂ 4 mm; width, 1 mm."

Closely related to *vaccinii* and occurring in similar range in this country but also found in Europe. Recorded for New York by Osborn and Ball. One specimen long winged, Cold Spring Harbor.

***Athysanus vaccinii* Van Duzee**

Athysanus striatulus Fall. (?) (or *vaccinii* nov.) Van Duzee. Am. Ent. 1890. 6:134
Athysanus striatulus Osborn & Ball. Dav. Acad. Nat. Sci. Proc. 1898. 7:91, pl. 5, fig. 3.
Athysanus vaccinii Osborn & Ball. Ohio Nat. 2:242

"Form and size of *striatulus*, but lighter colored. Smaller and narrower than *symphoricarpae*, which it approaches in color. Olive testaceous, darker below; the tips of the anterior and middle femora and all of the tibiae, orange. Length ♀ 4.5 mm, ♂ 4 mm; width 1 mm."

A rather common species and records for Karner and Poughkeepsie are based on New York State collection; Lake Placid, specimens from Van Duzee.

Athysanus curtisii Fitch

Athysanus curtisii Fitch. Homop. N. Y. State Cab. 1851. p. 61
reprinted in Lintner. 9th Rep't. 1893. p. 401

Tettigonia curtisii Walker. Homop. 1852. 4:1159

Deltocephalus curtisii Prov. Pet. Faune Ent. Can. 1889. 3:
278

Athysanus curtisii Van Duzee. Psyche. 1890. 5:290

Jassus nervatus Prov. Nat. Can. 1872. 4:378

Athysanus curtisii Van Duzee. Buf. Soc. Nat. Sci. Bul. 5, p. 199

Records from Buffalo, Otto, New York city, Ithaca, Karner, Nassau, Clinton Heights, Warwick, Lake Placid, Kingston, Phoenicia, Staten Island.

I took it at Hamburg, Nassau, Eagle Bridge, Salem, Cold Spring Harbor and Jamaica.

A very common species specially in or near woodland where it thrives on grasses. The Fitch types are in fair condition and leave no question as to the species.

Genus DRIATURA Osborn & Ball***Driatura gammaroidea* Van Duzee**

Athysanus gammaroidea Van Duzee. Buf. Soc. Nat. Sci. Bul
1894. 5:209

Driatura gammaroidea Osborn & Ball. Dav. Acad. Nat. Sci.
Proc. 7:89.

Taken at Cold Spring Harbor, Hamburg [O.], Jamaica and Mosholu [Bueno].

Originally described from Kansas. This species has not till recently been recognized from this State.

It is a small blackish insect with wide vertex, short elytra and extended ovipositor.

GENUS ATHYSANELLA Bak.***Athysanella acuticauda* Baker**

Psyche, 8: 187.

Reported for Lake Placid by Mr Van Duzee.

GENUS GONIognathus***Goniagnathus palmeri* Van Duzee**

Goniagnathus palmeri Van Duzee. Can. Ent. 1891. 23:171

Specimens from Forest Park, L. I. collected by Mr J. R. de la Torre Bueno.

Described from North Carolina, distribution South. I have specimens from Greensburg Pa. collected by Rev. Modesto Wirtner.

Genus EUTETTIX Van Duzee***Eutettix seminuda* Say**

Jassus seminudus Say. Acad. Nat. Sci. Phila. Jour. 1831.
6:307, reprinted in Compl. Wr. 1869. 2:383

Bythoscopus seminudus Fitch. Homop. N. Y. State Cab. 1851.
p. 58; reprinted in Lintner. 9th Rep't. 1893. p. 398

- Thamnotettix seminudus* Uhler. Stand. Nat. Hist. 1884.
 2:246
Athysanus seminudus Van Duzee. Psyche. 1890. 5:389
Eutettix seminudus Van Duzee. Psyche. 1892. 6:307
Eutettix seminudus Van Duzee. Buf. Soc. Nat. Sci. Bul. 5, p. 191

I have seen specimens in collections for Hamburg, Ithaca, Albany, Nassau and New York city. It has been reported for eastern New York, Lancaster, Buffalo [Van Duzee, Buf. Hemip. p. 199] and I took it at Eagle Bridge, Salem, Cold Spring Harbor and Staten Island.

***Eutettix cincta* Osborn & Ball**

- Eutettix cincta* Osborn & Ball. Dav. Acad. Nat. Sci. Proc. 1898.
 7:97
Eutettix jucundus Van Duzee. Psyche. 1890. 6:307

A specimen of this species collected at Jamaica, Long Island by Mr Van Duzee. It has hitherto been recorded for Iowa, Texas and Washington D. C.

***Eutettix lurida* Van Duzee**

- Thamnotettix lurida* Van Duzee. Can. Ent. 22:250
Eutettix lurida Van Duzee. Psyche, 6:307

Two specimens from Karner in the New York State collection. The species is probably rare or restricted to some particular food plant of restricted distribution.

***Eutettix brunneus* n. sp.**

Approaching *lurida* in general pattern but with elytra more hyaline, head and pronotum darker and sutural spot less evident. Length female 6 mm, male 5 mm.

Vertex rounded in front, scarcely longer at middle, transverse furrows very indistinct, front narrowing rapidly to clypeus, clypeus long widening to tip, apex subtruncate, lores large, wider than

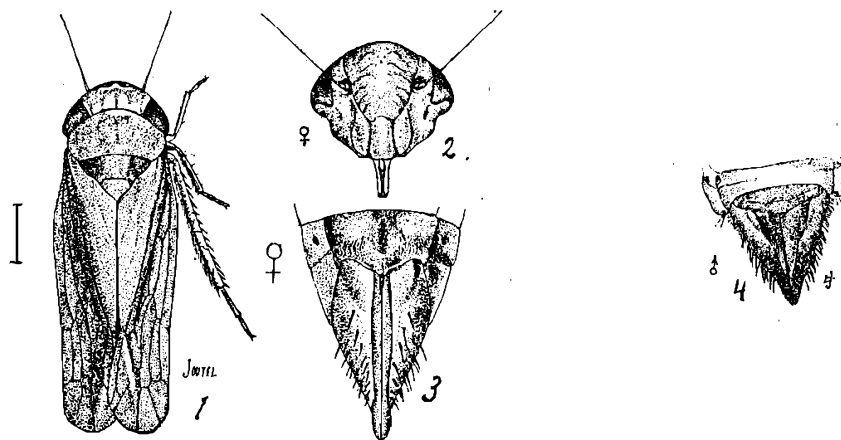


FIG. 23 *Eutettix brunneus* Osb. 1=female dorsal view; 2=face; 3=female genitalia; 4=male genitalia (Drawn by Joutel)

clypeus, pronotum about two and one half times as wide as length at middle, posterior border slightly concave. Elytra long, rather narrow distinctly flaring toward apex.

Color. Brown, vertex with lighter patches on occiput and interior margin. Front with about seven faint arcs, obsolete towards the center, sutural margins reddish, elytra subhyaline, tinged with yellowish brown infuscated toward the apex. A faint grayish spot on the sutural margins of posterior half of clavus. Legs with fine blackish lines, black dots at bases of spines.

Genitalia. Last ventral segment of female moderately long, simple, posterior border very faintly toothed at lateral angles and at middle. Dentated lateral margin and bidentated middle toothed. Male, valve short, broad, rounded behind, plates narrowing evenly to an acute apex, the margin rather densely ciliate.

Two specimens male and female from Mr E. P. Van Duzee, the former labeled Gowanda, Aug. 18, 1898, also one specimen, female apparently of the same species but with abdomen lost, labeled Karner, N. Y. from Dr E. P. Felt.

Eutettix strobi Fitch

Bythoscopus strobi Fitch. Homop. N. Y. State Cab. 1851. p. 58; reprinted in Lintner. 9th Rep't. 1893. p. 398; N. Y. State Agric. Soc. Trans. 1857. 17: 739
Phlepsius strobi Van Duzee. Ent. Soc. Trans. 21: 249
 Collected in eastern New York, [Fitch] Buffalo, [Van Duzee].

This species has suffered many generic changes due to its possessing in some degree characters relating it to many groups. While it shows some faint ramose lines on elytra, the character of the vertex and its general facies seem to place it more properly with the species included under *Eutettix*.

In Fitch's type the head is subangular, longer on middle than next the eye, narrower than pronotum, the transverse depression on vertex scarcely visible, no trace of irrorations on the elytra, the last ventral segment simple, very slightly convex, about twice as long as preceding.

Eutettix southwicki Van Duzee

Eutettix southwicki Van Duzee. Buf. Soc. Nat. Sci. Bul. 5, p. 209

Original description was from two male specimens taken near New York city by Mr Southwick.

A type specimen is in the Iowa State College and another in the Cornell University collection.

Eutettix johnsoni Van Duzee

Eutettix johnsoni Van Duzee. Can. Ent. 1894. 26: 137

This is a rather rare species originally described from the vicinity of New York and Philadelphia. I have seen specimens from Mosholu [Bueno]—June 28, 1902, and took it at Staten Island and Jamaica the past summer. It is fully described by Mr Van Duzee.

GENUS *PHLEPSIUS* Fieb.*Phlepsius humidus* Van Duzee

Phlepsius humidus Van Duzee. Am. Ent. Soc. Trans. 19:76;
Southwick, Science. 1892. 19:288
Paraphlepsius ramosus Baker. Can. Ent.

The type of the species is from Buffalo and it has been collected also near New York city and at Phoenicia. It is a broad species, the margin of the head acute so that it bears some resemblance to the Acocephalids but in all other characters it is closely associated with the Phlepsids.

It is found in low ground and may be swept from rank growth along streams. According to Mr Van Duzee its host plants are *Sagittaria* and *Polygonum*.

Phlepsius nebulosus Van Duzee

Phlepsius nebulosus Van Duzee. Am. Ent. Soc. Trans. 1892
19:78

One specimen of female of this large and interesting species has been received from Harry G. Barber collected at "Cold Spring Harbor, L. I." Van Duzee gave its distribution as Dakota, Iowa (?), Mississippi and Florida. I have a specimen from Nebraska and males from Angelsea N. J., and Durham N. H. so it appears to be quite widely distributed.

Phlepsius apertus Van Duzee

Phlepsius apertus Van Duzee. Am. Ent. Soc. Trans. 1892.
19:76

Originally described from Canada. This species has been taken at Keene Valley, July 1898, [Felt] and Lake Placid [Van Duzee].

Phlepsius fuscipennis Van Duzee

Phlepsius fuscipennis Van Duzee. Am. Ent. Soc. Trans. 1892.
19:70, pl. 1, fig. 2; Southwick, Science. 1892. 19:287

Van Duzee cites "New York" as habitat for the species. I have seen specimens from Albany in the New York State Museum from Mr Bueno. Mr Southwick has also reported it.

Phlepsius fulvidorsum Fitch.

Jassus fulvidorsum Fitch. Homop. N. Y. State Cab. 1851. p.62.
reprinted in Lintner. 9th Rep't. 1893. p. 402
Phlepsius fulvidorsum Van Duzee. Psyche. 1890. 5:390;
Am. Ent. Soc. Trans. 1892. 19:74, pl. 1, fig. 10; Southwick, Science,
1892. 19:287; Van Duzee, in Lintner. 9th Rep't 1893. p. 410; Van
Duzee, Buf. Hemip. p. 199

While the types of this species are too much changed for satisfactory comparison there is no doubt as to the correctness of Mr Van Duzee's reference and his full redescription furnishes a good basis for the identification of the species. The pronounced fulvous color of head, pronotum, and scutellum mark it off at once from other species.

Aside from Fitch's original locality, probably Salem, it has been recorded from Buffalo and vicinity, Colden, Lake Placid and Lancaster by Mr Van Duzee. His record that it occurs "always on hemlock, spruce or pines" seems to be supported by later collections.

***Phlepsius incisus* Van Duzee**

Phlepsius incisus Van Duzee. Am. Ent. Soc. Trans. 1892. 19: 73; Buf. Soc. Nat. Hist. Bul. p. 199

Specimens noted for Gowanda in addition to Buffalo and Lancaster. Previously recorded by Mr Van Duzee, also collected by him at Lake Placid in 1904.

***Phlepsius irroratus* Say**

Jassus irroratus Say. Acad. Nat. Sci. Phila. Jour. 1831. 6: 308; reprinted in Compl. Wr. 1869. 2: 1384; Fitch, Homop. N. Y. State Cab. 1851. p. 62; reprinted in Lintner. 9th Rep't. 1893. p. 402; N. Y. Agri. Soc. Trans. 856. 16: 449; Lintner. 1st Rep't. 1882, 133, (notice)

Allygus irroratus Uhler. Stand. Nat. Hist. 1884. 2: 245, fig 310
Phlepsius irroratus Van Duzee. Am. Ent. 1890. 6: 93; Psyche. 1890. 9: 389; Am. Ent. Soc. Trans. 1892. 19: 71, pl. 1, fig. 6, 7, 21; Van Duzee, in Lintner. 9th Rep't. 1893. p. 410

Buffalo [Van Duzee], New York city [Bueno], Salem, Nassau, Cold Spring Harbor, Staten Island, Jamaica.

Abundant everywhere that collections have been made. Occurs on a wide range of plants and in a wide range of conditions.

***Phlepsius majestus* Osborn & Ball**

A specimen of this interesting species has been received from Mr J. R. De La Torre Bueno, collected at Mosholu N. Y. Heretofore the species has been recognized from New Jersey, Iowa, and Ohio. It is very rare in collections due probably to the fact that it is extremely active and difficult to capture, often escaping from the net into which it may have been swept. It occurs on wet land being swept from the low vegetation but the particular food plant if it has a single host has not been determined. It is the largest and one of the most handsome species of the genus.

***Phlepsius decorus* Osborn & Ball**

Phlepsius decorus Osborn & Ball. Ia. Acad. Sci. Proc. 1894. 4: 230

Evidently a rare specimen in the State as it has been collected only at Hamburg by Mr Van Duzee. It has been taken at Brockville Ont. by Mr Metcalfe, Aug. 23, 1903.

It occurs in moist locations and probably feeds on some of the coarse grasses but the particular species has not been determined.

Phlepsius excultus Uhler

- Jassus excultus* Uhler. U. S. Geol. & Geog. Sur. Bul. 3. 1877.
p. 467
Phlepsius excultus Van Duzee. Am. Ent. Soc. Trans. 1892. 19: 80,
pl. 1, fig. 17

This species is included in the New York list on the authority of Mr Uhler. It has not come to light in any recent collections in the State that I have seen.

Thamnotettix kennicottii Uhl.

- Thamnotettix kennicottii* Uhl. Am. Ent. Soc. Proc. 1863.
2: 161
Thamnotettix kennicottii Uhler. Stand. Nat. Hist. 1884.
2: 246; Osborn, Ia. Acad. Su. Proc. 1, 1892. pt 2, p. 12; Van Duzee,
Psyche. 1892. 6: 306

Reported for Buffalo Plains and Hamburg "on oak and hickory bushes" [Van Duzee, Buf. Hem: p. 200], also for 1904 from Lake Placid.

Thamnotettix belli (Uhl.)

- Jassus belli* Uhler. U. S. Geol. & Geog. Sur. Bul. 1877. 3: 471
Thamnotettix belli Van Duzee. Psyche, 6: 306

A single specimen in the New York State collection at Albany is referred here, though the genitalia do not agree well with Uhler's description.

Thamnotettix eburata Van Duzee

- Thamnotettix eburata* Van Duzee. Can. Ent. 1889. 21: 10
Am. Ent. Soc. Trans. 21: 301

Evidently rare and having its distribution northward.

Thamnotettix clitellarius (Say)

- Jassus clitellarius* Say. Acad. Nat. Sci. Phila. Jour. 1831.
6: 309; reprinted in Compl. Wr. 1869. 2: 384; Walker Homop. 1852.
4: 1164 (mention); Harris, Hitchcock Geol. of Mass. 1835. ed 2, p. 580;
Smith, Cat. Ins. N. J. 1890. p. 446
Thamnotettix clitellarius Van Duzee. Psyche. 1893.
6: 306 (notice); in Lintner. 9th Rep't. 1893. p. 410

This has been very generally recognized over the country owing to its conspicuous appearance as well as its common occurrence on a variety of plants. New York collections have been noted for Albany, Highland, Clinton Heights, Poughkeepsie, Lake Placid, Phoenicia, Mosholu, Forest Park. I collected at it Hamburg, Eagle Bridge, Salem, Cold Spring Harbor, Jamaica and Staten Island the past summer.

Thamnotettix exquisitos n. sp.

Resembles *clitellarius* but is larger, the vertex distinctly angular, the sutural spot long and narrow, the frontal spots larger, closer together. A black spot at the base of antennae, the color

blackish, the female genital segment with broad triangular excavation within which the ligulate process shorter, not longer than segment. Length ♀ 6mm, ♂ 5.5mm.

Head broad, vertex about one and one half times as long as middle as at eye; subangulate, front narrowing evenly to clypeus, clypeus rounding at apex. Lores elongate, cheek rather broadly rounded at the sides, pronotum rather strongly arcuate in front, truncate behind.

Color. A deep fuscous black, vertex except at base, posterior part of pronotum, elongate spot on elytra, bright lemon yellow; costal half of elytra light yellowish, transparent, terminating abruptly and squarely near the apex; face and beneath light yellow; two conspicuous oval black spots just below the vertex almost meeting at the apex of the vertex. Small spot at base of antennae black.

Genitalia. Last ventral segment of female broad, with deep triangular excavation including a short ligulate process not reaching the hind border of the segment. Pygofer with rather coarse bristles, ovipositor reaching tip of pygofer and of the same color. Male valve small, plates elongate, triangular, acuminate, reaching beyond pygofer, the border ciliate.

A number of specimens were collected in a deep wood in a boggy swamp in Hamburg N. Y. by Mr E. P. Van Duzee and myself.

They occurred on underbrush but the particular food plant, if they are confined to a single species was not determined. The species has such a striking resemblance superficially to *clitellarius* that it is perhaps not strange that its distinctness has been overlooked. Moreover, it is very rare in collections and perhaps its occurrence in deep wood is responsible for this.

Three specimens of this species were observed also in Cornell University collection associated with *clitellarius* and a single specimen has stood for some years in the O. S. U. collection having been collected at Ithaca N. Y., by Mr J. S. Hine. This specimen bearing the determination of *clitellarius* by Mr Van Duzee.

The species may be at once separated by the genital character and furthermore by constant difference in shape of vertex, position of spots under vertex, shape of sutural spot and transparent costal area and blacker color.

The known distribution so far has been limited to the two points mentioned—Hamburg and Ithaca N.Y.

Thamnotettix fitchi Van Duzee

Thamnotettix fitchi Van Duzee. Am. Ent. 1890. 6: 133
Cicadula 4-punctata Fitch, M. Insect Life 1894. 6: 267

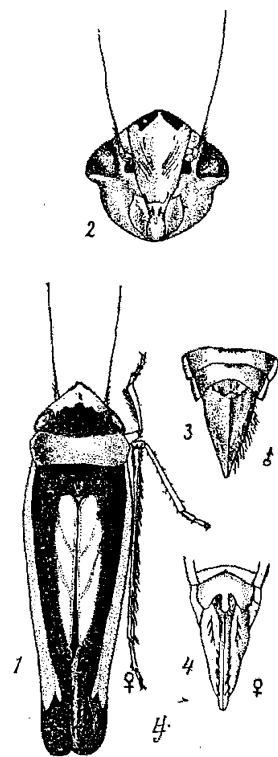


FIG. 24 *Thamnotettix exquisitos* Osb. 1=Female dorsal view; 2=face; 3=male genitalia; 4=female genitalia (Drawn by L. H. Joutel)

Recorded for Buffalo [Van Duzee, Buf. Hemip. p. 200], Lancaster, Hamburg, Colden, New York. Specimens are in collections for Albion, Phoenicia and Staten Island. I collected it at Cold Spring Harbor. This is fully characterized by Mr Van Duzee in the original description. It is sometimes quite common but I have never known it swarm in such abundance as some of the species.

***Thamnotettix decipiens* Prov.**

Thamnotettix decipiens Prov. Pet. Faune Ent. Can. 1890
3: 285.

Collected by Mr Van Duzee at Lake Placid.

***Thamnotettix inornata* Van Duzee**

Thamnotettix inornata Van Duzee. Am. Ent. Soc. Trans.
1892. 19: 303
Thamnotettix inornata Buf. Soc. Nat. Sci. Bul. 5, p. 300

Aside from the type locality, Lancaster, Mr Van Duzee has taken this at Lake Placid and I took it at Salem.

***Thamnotettix placidus* n. sp.**

Somewhat similar to *inornata* but distinctly more yellowish and with different genitalia. Length of female 5 mm.

Vertex rounded in front about one fourth longer at middle than at eye, front with lateral margins evenly curved, clypeus widening slightly toward tip, scarcely truncate, lores barely reaching margin of cheek, pronotum broadly rounded in front emarginate behind, elytra hyaline.

Color a rather deep straw yellow, a little more intense on the vertex and face and tip of pygofers, tip of ovipositors tinged with fulvus, margins of the abdominal segments tinged with fulvus, margins of the abdominal segments, sometimes most of the tergum blackish, tip of beak and a series of median and ventral spots black.

Last ventral segment of female emarginate, median border faintly striated, pygofers elongate reaching almost to tip of ovipositor with stiff setae, those toward tip stronger and tinged with fulvus.

Six specimens collected at Lake Placid by Mr E. P. Van Duzee. It differs from *fitchii* in the absence of any spots on the margin of the vertex and in the presence of black spots underneath and in the general color which, while hard to describe, is very evident in associated specimens. The shape of the genital segment is also different.

Thamnotettix infuscata Gill. & Bak.

Thamnotettix infuscata Gill & Bak. Hemip. Colo. p. 98.

Thamnotettix punctiscuta Gill & Bak. Hemip. Colo. p. 99.

Resembles *Athyсанus obsoletus* in general shape but with a more produced vertex and very long elytra and wings, these extending considerably beyond end of abdomen. Length of female 5.5 mm.

Vertex produced, angulate in front, one and one half to one and three fourths times as long at middle as at eyes, margin rounded over to front. Front broad, nearly as wide at antennae as its length, broader at apex than at base of clypeus, clypeus narrowing slightly at apex, apex broadly rounded, lores ovoidal, not reaching border of genae, pronotum semicircular in front, slightly concave behind, elytra with conspicuous nervures, one cross vein between the fork of the radial and ulnar veins, apical cells well developed, very narrow appendix.

Color. Greenish olivaceous to brownish. The vertex, anterior border of pronotum, scutellum, and costal border of elytra mostly greenish yellow, posterior portion of pronotum and elytra except costal margin a rather translucent greenish gray, the elytra in some specimens deeply infuscated. Front yellowish gray with faint arcs, the sutural lines infuscated, those between the apical portion of the lores and clypeus sometimes broadening slightly to a fairly distinct spot, thorax and end of abdomen below mostly black, yellow margins, the legs greenish with fuscous points and tarsal claws, all the colors more intense in the male.

Genitalia. Last ventral segment of female moderately long, polished, truncate at apex, slightly, produced at lateral angles and faintly notched at middle, pygofer extending almost to tip of ovipositor, scantily clothed with short setae. Male, last ventral segment with yellowish border, the valve short, obtuse, angulate behind, blackish, the plates angulate narrowing gradually to an obtusely rounded tip.

Three specimens of this species collected by Mr E. P. Van Duzee at Lake Placid in the Adirondacks. I have also a specimen from Sault Ste. Marie collected by Mr H. M. Parish.

While very distant from the locality where this species was originally described the fact of its occurrence in the mountain region and the intermediate locality of Sault Ste. Marie indicates that it has a rather wide distribution in boreal regions. It was thought to be undescribed but there seems little doubt that it belongs to this species.

Thamnotettix melanogaster Prov.

Jassus melanogaster Prov. Nat. Can. 1872. 4:378

Thamnotettix melanogaster Prov. Pet. Faune Ent. Can. 1890. 3:284

Thamnotettix melanogaster Van Duzee. Buf. Soc. Nat. Sci. Bul. 5, p. 200

Occurs in low damp places on coarse grass or sedges. Hamburg.

Thamnotettix cyperaceus Osb.

Thamnotettix cyperaceus Osb. Ia. Acad. Sci. Proc. 5: 246

Collected at Hamburg by Mr Van Duzee, Aug. 8, 1904, the first instance of its occurrence east of its original locality in Iowa.

Genus **CHLOROTETTIX** Van Duzee**Chlorotettix unicolor** Fitch

Bythoscopus unicolor Fitch. Homop. N. Y. State Cab. 1851. p. 58; reprinted in Lintner. 9th Rep't. 1893. p. 398; Walker, Homop. 1852. 4: 1161

Athysanus unicolor Southwick. Science. 1892. 19: 288

Chlorotettix unicolor Van Duzee. Psyche. 1892. 6: 306, 308. Lintner. 9th Rep't. 1893. p. 410

Chlorotettix unicolor Van Duzee. Buf. Hemip. p. 200

Specimens from Albany, Saranac Inn, Lake Placid, Keene Valley, Essex county, Phoenicia, Cold Spring Harbor, Oyster Bay, Eagle Bridge, Salem, Jamaica, Staten Island; Mosholu [American Museum]. Probably described from specimen collected at Salem. Buffalo, June to August [Van Duzee, Buf. Hemip. p. 200.]

Chlorotettix tergata Fitch

Bythoscopus tergatus Fitch. Homop. N. Y. State Cab. 1851. p. 58; reprinted in Lintner. 9th Rep't. 1893. p. 398; Walker, Homop. 1852. 4: 1161, (mention)

Athysanus tergatus Southwick. Science. 1892. 19: 288

Chlorotettix tergatus Van Duzee. Psyche. 1892. 6: 306, 309; Lintner. 9th Rep't. 1893. p. 410

Described from specimens probably collected at Salem and since recorded for Buffalo [Van Duzee, Buf. Hemip. p. 200] and New York city. I took it at Hamburg, Eagle Bridge, Salem, Cold Spring Harbor, Jamaica, Staten Island and have seen specimens in collections from Nassau, Karner, and Mosholu. It is a widely distributed species easily known by the smoky color with evenly rounded vertex.

Chlorotettix viridia Van Duzee

Chlorotettix viridia Van Duzee. Psyche. 1892. 6: 309; Weed, Can. Ent. 1892. 24: 278.

Athysanus viridius Southwick. Science. 1892. 19: 288

Mr Van Duzee reports it for Lake Placid, Jamaica and Staten Island and I collected two specimens at Jamaica, Aug 20 and Mr H. G. Barber sends me a specimen from Cold Spring Harbor.

Chlorotettix galbanata Van Duzee

Chlorotettix galbanata Van Duzee. Psyche. 1892. 6: 310

Athysanus galbanatus Southwick. Science. 1892. 19: 288

Occurs in southern part of the State, in vicinity of New York city. It is more abundant to south and west, I secured specimens at Salem and Nassau, and Mr Van Duzee reports collecting it at Jamaica and Staten Island.

***Chlorotettix balli* Osborn**

Chlorotettix balli Osborn. Ia. Acad. Sci. Proc. 5:247

One specimen collected at Jamaica, Aug. 20. This species was described from Iowa and this is the first record east of the Alleghanies.

***Chlorotettix lusoria* Osborn & Ball**

Thamnottettix lusoria Osborn & Ball. Ia. Acad. Sci. Proc. 1896. 4:226

This species resembles *tergatus* in color but is at once separated from that species by the more pointed head.

It appears to be rare in New York, only three instances of its occurrence, Lake Placid, Phoenicia, [Van Duzee] and Poughkeepsie, having come to my notice. Specimens in the Van Duzee collection and the State Museum.

***Jassus olitorius* Say**

Jassus olitorius Say. Acad. Nat. Sci. Phila. Jour. 1831. 6:310
Coelidia olitaria Fitch. Homop. State Cab. 1851. p. 58; reprinted in Lintner. 9th Rep't. 1893. p. 398
Jassus (*sens. strict.*) *olitorius* Van Duzee. Psyche. 1890. 5:389; reprinted in Lintner. 9th Rep't. 1893. p. 410
Jassus subbifasciatus Say. Acad. Nat. Sci. Phila. Jour. 1831. 6:310
Coelidia subbifasciata Fitch. Homop. N. Y. State Cab. 1851. p. 58; reprinted in Lintner. 9th Rep't. 1893. p. 398
Jassus subbifasciatus Southwick. Science. 1892. 19:288
Jassus olitorius Say. Van Duzee. Buf. Soc. Nat. Sci. Bul. 5:200

Reported for Karner, Staten Island, Aug. 15; Mosholu, Sep. 14, 1902 [Bueno]; Buffalo and Phoenicia [Van Duzee]. Fitch records it for beech and raspberry. This is an abundant species found on various bushes and shrubs. I took it at Hamburg, Salem, Cold Spring Harbor and Jamaica.

***Paracoelidia tuberculata* Baker**

Paracoelidia tuberculata Baker. Can. Ent. 1898. 30:292

I took a number of specimens by beating small pinetrees on the "barrens" near Oyster Bay.

The species is readily recognized by the prominence of the clypeus. Pine is evidently the host plant as I have never met it on other vegetation and Baker in his description states that the specimens from Baltimore [Uhler's] were taken on pine.

***Cicadula 6-notata* Fall.¹**

Cicada 6-notata Fallen. Acta Holm. 1806. 27:34
Cicadula 6-notata Southwick. Science. 1892. 19:288

This species common to Europe and North America has been noted for New York city, Karner, Poughkeepsie, Big Moose, Keene

¹For full bibliography and synonymy consult Van Duzee's Catalogue, Jassoidea, North America, Am. Ent. Soc. Trans. 16: 307

Valley [N.Y. State col.] Lake Placid, Phoenicia, Kingston [Van Duzee] and I collected it at Hamburg, Eagle Bridge, Salem, Cold Spring Harbor, Jamaica and Nassau.

It is unquestionably a species of economic importance as it often swarms in grass land. It seems to favor the annual grasses rather than the perennials.

Cicadula slossoni Van Duzee

Cicadula slossoni Van Duzee, Can. Ent. 1893. 25: 281; Buf. Soc. Nat. Sci. Bul. 5, p. 200

Evidently a rare species as Van Duzee says "a single example of this pretty little species was taken by me at Lancaster, July 12, 1889." He reports taking it in August 1904 at Lake Placid and Phoenicia.

Cicadula variata Fall.

Cicada variata Fall. Acta Holm. 1806. 27: 34
Jassus variatus H. Sch. Nom. Ent. 1835. p. 70
Limotettix variata Sahlbg. Cicad. 1871. p. 250
Cicadula variata Fieb. Revue d. Ent. 1885. 4: 51; Van Duzee, Psyche. 1892. 6: 305
Cicadula variata Van Duzee, Buf. Soc. Nat. Sci. Bul. 5, p. 200

Reported for Lancaster. June to September [Van Duzee].

While by no means so abundant as *6-notata* this species has a wide distribution and may doubtless be found in all parts of the State. I took it at Nassau in August and Mr Van Duzee at Lake Placid during the same month, also at Phoenicia.

Cicadula punctifrons var. *americana* Van Duzee

Cicadula punctifrons var. *americana* Van Duzee. Can. Ent. 1891. 23: 169; Buf. Soc. Nat. Sci. Bul. 5, p. 201

Recorded for Buffalo [Van Duzee], and specimens from "Keene Valley", "Essex Co.," are in the N.Y. State collection.

It occurs in abundance on low scrubby willows, usually most common on sandy margins of streams.

Cicadula punctifrons Fall.

Cicada punctifrons Fall. Hemip. Suec. Cicad. 1826. p. 42
Thamnotettix punctifrons Boh. K. Vet.—Akad. Handl. 1847
Jassus punctifrons Flor. Rhyng. Livl. 1861. p. 328
Cicadula punctifrons Fieb. Revue d. Ent. 1885. 4: 50. (For full synonymy see Van Duzee Catalogue.)

Represented for Ithaca [Cornell Coll.], Lancaster [Van Duzee, Buf. Hemip. p. 201]; one example [Van Duzee]

Apparently much less common than the variety listed below.

Cicadula lepida Van Duzee

Can. Ent. 1894. 26: 139

Described in part from a specimen collected in New York city.

***Cicadula macgillivrayi* Baker**

Collected at Hamburg N. Y. by Mr E. P. Van Duzee.

***Gnathodus punctatus* Thunb.**

Cicada punctata Thunb. Act. Ups. 1782. 6: 21
Jassus punctatus Walk. Homop. 3: 877
Gnathodus punctatus Fieb. Verh. Zool. Bot. Ges. in Wien. 16: 505
Typhlocyba punctata, Prov. Pet. Faune Ent. Can. 1890. 3: 301
Typhlocyba vernalis Fitch, M. (*vide* Van Duzee)
Gnathodus punctatus Van Duzee, Am. Ent. Soc. Trans. 21: 307

This abundant species has been taken at a number of points in the State; Ithaca [Cornell Univ.], Albany and Poughkeepsie [N. Y. State coll.]. I collected it at Hamburg and Jamaica in August and Mr Van Duzee reports it from Lake Placid, Phoenicia and Kingston.

***Gnathodus impictus* Van Duzee**

Can. Ent. 1892. 24: 113; Am. Ent. Soc. Trans. 21: 307

Credited to New York in Van Duzee's Catalogue.

***Gnathodus viridis* n. sp.**

Green, broader than *punctatus*; head less produced, not spotted. Length $\frac{9}{16}$ 4 mm.

Head slightly narrower than pronotum, slightly subangulate, rounded in front, scarcely longer at middle than at eye. Front broad, short; clypeus long slightly tumid. Pronotum wide, much rounded in front, hind border concave, elytra nearly hyaline.

Color green, elytra greenish, hyaline becoming transparent toward apex. Eyes, antennae, apex of beak, and tarsal claws touched with fuscous.

Female segment rather long, simple, truncate; pygofer with few bristles, ovipositor passing pygofer.

One specimen from Mr E. P. Van Duzee collected at Lake Placid, N. Y. "Summit." The clear green color and shape of pronotum are quite characteristic in this species.

Family TYPHLOCYBIDAE**Genus ALEBRA*****Alebra albostriella* Fallen**

Cicada albostriella Fallen. Hemip. Suec. Cicad. 1829. p. 54
Typhlocyba albostriella Flor. Rhynch. Livl. 1861. p. 373, 382
Alebra albostriella Fieber. Kat. d. eur. Cicad. 1872. p. 14
Typhlocyba aurata pallida, and *binotata* Walsh. Bost. Soc. Nat. Hist. Proc. 1864. p. 315
Alebra aurea, *pallida*, and *binotata* Woodworth. Psyche. 1889. 5: 213
Erythroneura mali Provancher. Pet. Faune Ent. Can. 1890. 3: 298
Alebra aurea Van Duzee. Buf. Soc. Nat. Sci. Bul. 5, p. 201

Taken at Hamburg by Mr Van Duzee, who also reports taking the variety *fulveola* at Phoenicia, Kingston and Jamaica in August 1904.

Alebra fumida Gillette

Alebra fumida Gillette. U. S. Nat. Mus. Proc. 20:714

Described from specimens taken at Ithaca.

Genus **DICRANEURA****Dicraneura cruentata** Gillette

Dicraneura cruentata Gillette. U. S. Nat. Mus. Proc. 20:717

Recorded for Ithaca by Gillette.

Dicraneura communis Gillette

Dicraneura communis Gillette. U. S. Nat. Mus. Proc. 20:718

Credited to Ithaca in Gillette's paper on the group, also collected at Lake Placid and Phoenicia by Mr Van Duzee.

Dicraneura Fieberi Löw.

Dicraneura fieberi Melichar. Cicadinen von Mittel-europa. 1896.
p. 325

Recorded for Ithaca, July 25 and Aug. 28.

Dicraneura flavipennis Fabr.

Collected at Hamburg N. Y. by Mr E. P. Van Duzee.

Genus **EMPOASCA****Empoasca obtusa** Walsh

Reported for Phoenicia and Kingston by Mr E. P. Van Duzee.

Empoasca smaragdula Fallen

Cicada smaragdula Fallen. Hemip. Suec. Cicad. 1829. p.53
Typhlocyba smaragdula Flor. Rhynch. Livl. 1861. 2:393.
Kybos smaragdulus Fieber. Verh. Zool. Bot. Ges. in Wien. 1866.
16:508
Empoasca smaragdula Gillette & Baker. Colo. Agric. Exp. Sta.
Bul. 31. 1895. p. 110

A common species throughout the State. I secured specimens at Hamburg and Salem.

Empoasca trifasciata Gillette

Empoasca trifasciata Gillette. U. S. Nat. Mus. Proc. 20:726

Gowanda collected by Mr E. P. Van Duzee.

Empoasca atrolabes Gill.

U. S. Nat. Mus. Proc. 20:736

Mr Van Duzee reports collecting this species at Lake Placid.

***Empoasca mali* Le Baron**

- Tettigonia mali* Le Baron. Prairie Farmer. 1853. 13:330
Empoasca mali Osborn. Ia. Acad. Sci. Proc. 1892. 2:12
Typhlocyba photophila Berg. Hemip. Argent. 1879. p. 273
Empoasca albopicta Forbes. Ill. State Ent. Rep't 13. 1883. p. 181,
 pl. 14
Empoasca albopicta Woodworth. Psyche. 1889. 5:213; Van
 Duzee, Buf. Soc. Nat. Sci. Bul. 5, p. 201

A very abundant and destructive species over a large part of the United States. Recorded for vicinity of Buffalo.

***Empoasca flavescens* Fabricius**

- Cicada flavescens* Fabricius. Ent. Syst., IV., Hafn., 1794
Chlorita flavescens Fieber. Kat. d. eur. Cicad. 1872. p. 14
Empoasca flavescens Gillette. U. S. Nat. Mus. Proc. 20:745

Recorded for Ithaca and Mr Van Duzee reports it for Lake Placid.

***Empoasca flavescens* var. *birdii* Goding**

- Empoasca birdii* Goding. Ent. News. 1. 1890. p. 123

Reported for Albany [N. Y. State coll.], also recorded for Ithaca [Gillette].

***Empoasca alboneura* Gill**

- U. S. Nat. Mus. Proc. 20:743

Reported for Jamaica by Mr E. P. Van Duzee.

***Empoasca viridescens* Walsh**

- Empoasca viridescens* Walsh. Bost. Soc. Nat. Hist. Proc. 1864. 9:316
Empoasca consobrina Walsh. Bost. Soc. Nat. Hist. Proc. 1864. 9:316.
Empoasca viridescens Gillette. U. S. Nat. Mus. Proc. 15:747

Gillette records it for Ithaca. Van Duzee reports it for Phoenicia and Staten Island.

Genus EUPTERYX***Eupteryx vanduzei* Gillette**

- Eupteryx vanduzei* Gillette. U. S. Nat. Mus. Proc. 20:748

Described from specimens collected by Mr E. P. Van Duzee at Hamburg, who also collected it at Lake Placid.

***Eupteryx nigra* n. sp.**

Above black except anterior portion of vertex and costal margin of elytra; below greenish white except pygofers which are smoky black. Length ♀ 3.75 mm.

Vertex produced, broadly subangulate, about half as long as pronotum; front moderately narrow, full, tapering to base of

clypeus; clypeus with sides nearly parallel narrowing at apex, about one and one third times as long as broad. Pronotum very convex in front, hind border truncate, costal apical cell very deep, extending half way across the elytron, central apical cell pedunculate, first sector evident on discal portion of elytron.

Color. Front part of vertex, all of face, thorax, legs and venter including last ventral segment of female greenish white. Costal border of elytra milky white, toward apex tinged with greenish. Posterior two thirds of vertex suffused with smoky brown, pronotum dead black, scutellum and all of elytra, except costal border, dark smoky brown or blackish, in one specimen showing faint lighter areas in apical portions of clavus and in apical cells.

Genitalia. Last ventral segment of ♀ broad, long, with hind borders evenly rounded, slightly tinged with yellowish; pygofer smoky black like the terga of abdominal segments, with a few marginal whitish cilia.

A specimen from Jamaica collected Aug. 20, 1904. I have also one specimen collected at Columbus O. Sep. 15, 1903.

***Eupteryx flavoscuta* Gillette**

Eupteryx flavoscuta Gillette. U. S. Nat. Mus. Proc. 20: 749

Collected at Hamburg with the preceding, and also at Lake Placid and Phœnicia.

Genus **TYPHLOCYBA**

***Typhlocyba coccinea* Fitch**

Empoia coccinea Fitch. Homop. N. Y. State Cab. 1851. p. 63;
reprinted in Lintner. 9th Rep't. 1893. p. 403
Typhlocyba coccinea Woodworth. Psyche. 1889. 5: 213

Dr Fitch described this as taken from pines.

***Typhlocyba tricineta* Fitch**

Erythroneura tricineta Fitch. Homop. N. Y. State Cab.
1851. 9: 63; N. Y. State Agric. Soc. Trans. 1856. 16: 392, 436.
reprinted in Lintner. 9th Rep't. 1893. p. 403
Typhlocyba tricineta Woodworth. Psyche. 1889. 5: 213

A common species occurring on a variety of plants. Fitch credited it to currant and raspberry, others have taken it on grape, elm etc.

***Typhlocyba trifasciata* Say**

Tettigonia trifasciata Say. Acad. Nat. Sci. Phil. Jour. 1825;
4: 343
Typhlocyba trifasciata Woodworth. Psyche. 1889. 5: 213

Common everywhere on grape.

***Typhlocyba tenerrima* H. S.**

Gillette. Nat. Mus. Proc. 20: 770

One specimen of this species has been sent to me by Mr E. P. Van Duzee who collected it at Lake Placid in the Adirondacks.

Typhlocyba obliqua Say

Tettigonia obliqua Say. Acad. Nat. Sci. Phila. Jour. 1825. 4:342

Erythroneura obliqua Fitch. Homop. N. Y. State Cab. 1851. p. 63; N. Y. State Agric. Soc. Trans. 1856. 16: 435; reprinted in Lintner. 9th Rep't. 1893. p. 403

Typhlocyba obliqua Woodworth. Psyche. 1889. 5:213

Another widely distributed species occurring on grape or other plants.

Typhlocyba comes Say

Tettigonia comes Say. Acad. Nat. Sci. Phila. Jour. 1825. 4:343; reprinted in Compl. Wr. 1891. 2:259.

Typhlocyba comes Woodworth. Psyche. 1889. 5:213.

Erythroneura vitifex Fitch. N. Y. State Agric. Soc. Trans. 1856. 16:392.

Typhlocyba vitifex Woodworth. Psyche. 1889. 5:213.

Everywhere common on grape and occurring also in a large number of varieties the following being well marked and noted for New York, *basilaris*, *vitis*, and the typical form *vitifex* of Fitch, *ziczac* Walsh, *rubra* Gill, and *8-nata* Walsh.

Typhlocyba vulnerata Fitch

Erythroneura vulnerata Fitch. Homop. N. Y. State Cab. 1851. p. 62; N. Y. State Agric. Soc. Trans. 1856. 16:393; reprinted in Lintner. 9th Rep't. 1893. p. 402

Typhlocyba vulnerata Woodworth. Psyche. 1889. 5:213

Abundant on grape vines and occurring everywhere that its food plant is found.

Typhlocyba querci Fitch

Empoia querci Fitch. Homop. N. Y. State Cab. 1851. p. 63; reprinted in Lintner. 9th Rep't. 1893. p. 403

Typhlocyba querci Woodworth. Psyche. 1889. 5:214.

Fitch says, "On oaks, sometimes excessively numerous." An interesting variety with long dusky spots in outer ends of discal cells was sent to me by Mr Van Duzee, collected at Lake Placid.

The variety *bifasciata* Gill is reported by Mr Van Duzee for Lake Placid, Phoenicia and Kingston.

Typhlocyba ulmi Linnaeus

Cicada ulmi Linnaeus. Fauna Suecica. 1761. p. 900.

Anomia ulmi Fieber. Kat. d. eur. Cicad. 1872. p. 15

Typhlocyba ulmi Puton. Cat. Hemip. Palae. 1886. p. 88

Gillette says, "I received a good many males and females of this species from Dr Lintner labelled, 'Albany, N.Y., 1886.'"

Typhlocyba rosae Linnaeus

Cicada rosae Linnaeus

Typhlocyba rosae Tollin. Ent. Zeit. v. Stett. 1851. p. 67

Tettigonia rosae (Harris) Harris. Ins. Inj. to Veg. ed. 2. 1852. p. 192

Typhlocyba rosae Woodworth. Psyche. 1889. 5:214

Abundant everywhere on roses and other plants.

Typhlocyba illinoiensis Gillette

Collected at Hamburg N. Y. by Mr E. P. Van Duzee.