

THE SPECIES OF THE NEW GENUS *NEOTETTIX* WITH A KEY TO THE GENERA OF NORTH AMERICAN *TETTIGIÆ*.

By J. L. HANCOCK.

(See Plate VIII.)

In the present notes are described several species of Tettigians of a hitherto unrecognized genus from the southern United States. I have, furthermore, outlined a table of the genera of Tettigiæ, including therein the new genus *Neotettix*, together with the three already known to occur within our borders. These are namely: *Nomotettix* Morse, *Neotettix* gen nov., *Paratettix* Bolivar, and *Tettix* Charpentier. The species of *Neotettix* are small in stature, in which particular they resemble *Nomotettix*. The wings are frequently abbreviated, and macropterous as well as brachypterous forms are represented among them without the apical process of the pronotum being much of it at all extended further backwards than the knee of the hind femora. These dimorphic phases of structure are not considered separately. It will be observed that Bolivar, in 1887, described a species in his *Essai sur les Acridiens de la tribu des Tettigidæ* p. 246, as *Tettix femoratus* Scudder. That there is a discrepancy regarding the identity of the species seems fairly certain. A specimen which was identified by Prof. Bolivar as strictly this species was previously kindly examined by Mr. Scudder, the author of the species, who informed me of a difference existing in the width of the vertex between the eyes as compared to the original *femoratus*. Partly on the strength of Mr. Scudder's assertion: "It is quite certain that the specimen you send cannot be that species from the width of the vertex between the eyes" and the knowledge gleaned from an examination of a considerable series, I have proposed the appellation *Neotettix bolivari* in deference to my distinguished colleague. The generosity of Mr. A. Bolter, of Chicago, who placed his collection of this group freely at my disposal made it possible to include two of the three species here described. One of these I take pleasure in naming in his honor. It is quite probable that the species described by Scudder as *Tettix femoratus* in "Transactions American Entomological Society" ii, p. 305, will, in the course of time, be restored, or as soon as sufficient material from Maryland, where the type came from, has been carefully studied. This species, of which the

type is lost, undoubtedly belongs to *Neotettix*, but being in doubt about its specific position in my table of species it is simply appended at the end.

Genera of Tettigiæ of North America.

Anterior femora more or less compressed, carinate above; antennæ 12-14 articles **Tettigiæ.**

1. (4) Pronotum with the front border anteriorly angulate produced, median carina strongly cristiform, arched longitudinally, median lobule of posterior lateral lobe small; vertex in profile angulate produced Gen. 1. **Nomotettix** Morse.
2. (3) Vertex in profile rounded anteriorly, a little advanced in front of the eyes; frontal costa strongly forked; median carina of pronotum distinctly elevated, more or less convexly curved longitudinally, not cristiform Gen. 2. **Neotettix** gen. nov.
3. (2) Vertex equal to or narrower than one of the eyes, not produced in front of them, truncate anteriorly Gen. 3. **Paratettix** Bol.
4. (1) Pronotum generally not advanced upon the head to the eyes, median lobule of posterior lateral lobe usually well developed; vertex in profile anteriorly angulate, projecting beyond the eyes. Gen. 4. **Tettix** Charp.

Neotettix gen. nov.

Frontal costa strongly forked, median lobule of posterior lateral lobe of pronotum but slightly developed; vertex in profile rounded anteriorly, from dorsal view wider than one of the eyes. Pronotum advanced upon the head to the eyes, median carina elevated, more or less arched longitudinally, dorsal front margin truncate, or scarcely angulate, dorsum transversely tectiform or convexed; hind femora broad, rather stout. Species small, with antennæ consisting of 12-13 articles. Type, *Tettix femoratus* Bolívar (not *Tettix femoratus* Scudder).

Members of this genus recall brachypterous forms of *Paratettix*, to which they seem to have a closer affinity than to either the *Nomotettix* or *Tettix* series. The crown of the head is posteriorly mammillate. Representatives can be distinguished from *Paratettix* by the character of the vertex, which is wider than one of the eyes and is not truncate anteriorly. The *Tettix* group has one or two additional antennal joints, the pronotum is not advanced upon the head to the eyes, while the species comprising the *Nomotettix* group have the pronotum distinctly cristiform, besides the vertex in profile appears angulate anteriorly. Not the least important distinction is the sudden widening of the

frontal costa in *Neotettix*, which, with the other characters we have shown, will separate, with little difficulty, its members from any of the others named.

Key to Species of Neotettix.

1. (2) Vertex in dorsal view with front border rounded, a little wider than one of the eyes Sp. 1. **N. rotundafrons** sp. n.
2. (1) Vertex in dorsal view with the front border slightly convexed, much wider than one of the eyes.
3. (4) Pronotum strongly rugose, scabrous; frontal costa scarcely protuberant Sp. 2. **N. bolteri** sp. n.
4. (3) Pronotum granulate or arenose; frontal costa rather strongly protuberant Sp. 3. **N. bolivari** nov. nom.
Position? Sp. 4. **N. femoratus** Scud.

1. **N. rotundafrons** sp. nov. (Figs. 3, 3a, 3b, 3c, 3d, Pl. VIII).—Slightly smaller than *bolivari*. Body granulate, or to a certain extent very little rugose; vertex not as broad as in *bolivari*, barely wider than one of the eyes, the front border rounded, crown inconspicuously mammillate posteriorly; frontal costa not so roundly protuberant, branches of fork about as widely separated; pronotum truncate in front, posterior process terminating acutely, reaching to or slightly overreaching apex of femora when considering dimorphic forms together; median carina toward the front slightly arched longitudinally, distinctly elevated; dorsulum transversely tectiform, not broad between the shoulders, humeral angles obtuse or sub-straight, lateral carina slightly present. Wings shortened, not quite reaching to, or passing a little beyond the apex of process. Elytra oval, rounded apically; second femur with margins somewhat undate, posterior femora broad, rather stout. Length entire 9 mm.; pronotum 7.5–8 mm.; post-femora 5.5 mm.

Described from two females. Locality Jacksonville, Florida (Bolter). In one specimen the body is reticulated with fuscous, contrasting with yellowish white; dimorphism occurs in the wing-lengths. This species probably nearest resembles *T. femoratus* Scud.

2. **N. bolivari** nov. nom. (Figs. 2, 2a, 2b, 2c, 2d, Pl. VIII).—Body granulate; vertex much broader than one of the eyes, crown mammillate on each side posteriorly, front border slightly convex, rounding abruptly into sides, mid-carina disappearing posteriorly on the crown a little beyond the middle, in profile rounded, advanced but little in front of the eyes, continued unbroken with the frontal costa; frontal costa produced, seen in front strongly forked; pronotum truncate or scarcely angulate anteriorly, advanced upon the head to the eyes, apical process acute, extended backwards to posterior knee, dorsum rather sharply tectiform, median carina distinctly raised, slightly arched longitudinally, humeral angles

obtuse. Elytra elongate. Wings slightly overreaching apex of process in macropterous examples, or sometimes but slightly developed in brachypterous forms. Length entire: ♀ 9-10 mm.; pronotum 7.5-8.5 mm.; post-femora 5.5-6 mm. ♂ 8 mm.; pronotum 7 mm.; post-femora 5 mm.

Locality Opelousas, La., Tifton, Ga., North Carolina (Bolivar). *T. femoratus* Scud., Bolivar Annales de la Soc. Entom. de Belgique, tome xxxi, p. 264, where an excellent description can be found.

Described from seventeen specimens in author's collection (procured by G. R. Pilate).

3. **N. bolteri** sp. nov. (Figs. 1, 1a, 1b, 1c, 1d, 1e, Pl. VIII).—Body small, rather stout, strongly rugose, scabrous; vertex much broader than one of the eyes, front broader, very slightly convex, mid-carina becoming obsolete posteriorly opposite middle of eyes, in profile very little produced in front of the eyes, sub-rotundate, occiput rather protuberant above, mammillate, frontal costa not sinuate, considerably forked; pronotum truncate anteriorly, process not reaching backwards as far as apex of posterior femora, obtuse at end, median carina of pronotum elevated, arched longitudinally, higher between the shoulders, dorsum transversely convex between the shoulders, strongly rugose, with conspicuous excrescences showing in transverse section or viewed in front, antehumeral carinae appearing very slightly, anterior lateral carinae in front short, slightly compressed. Elytra elongate, apex sub-acutely rounded. Wings undeveloped; middle femora with a row of minute swellings between the middle carinae, margins not undate, posterior femora broad cristate, rather short, with external pagina provided with strong diagonal rugose ridges between the middle carinae, between the superior margin and carinae with a curved row of sub-rounded rugose excrescences. Length entire: ♀ 9 mm.; pronotum 7.8 mm.; post-femora 5.5 mm.

Locality Jacksonville, Fla. (Bolter). Described from one specimen.

4. **N. femoratus** Scud.—Vertex but little broader than one of the eyes, barely projecting in advance of them; the front scarcely rounded; pronotum reaching to the tip of the abdomen not including the ovipositor; median carina very prominent, slightly arched; surface arenose. Elytra small, well rounded, with shallow punctures. Wings not longer than the elytra; hind femora very broad and stout. Length 9.5 mm.; pronotum 8 mm.; post-femora 5.2 mm.; elytra 1.6 mm.

Locality Maryland.

T. femoratus Scud.—Trans. Am. Ent. Soc. ii, p. 305.

T. femorata Scud.—Thomas, Synopsis Acrid. of N. Am. 1873, in Rep't U. S. Geol. Survey, p. 185.

The type was formerly in the collection of the American Entomological Society but was lost, and the species has not since been recovered, so I am told by Mr. Scudder.

EXPLANATION OF PLATE VIII.

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| Fig. 1. <i>Neotettix bolteri</i> Hanc. | Fig. 2b. Same, front view. |
| " 1a. Same, dorsal view. | " 2c. Enlarged greatly. |
| " 1b. Same, front view head and pronotum. | " 2d. Head, dorsal view. [Hanc. |
| Fig. 1c. Enlarged greatly. | " 3. <i>Neotettix rotundafrons</i> |
| " 1d. Head, dorsal view. | " 3a. Same, dorsal view. |
| " 1e. Posterior tarsus. | " 3b. Greatly enlarged. |
| " 2. <i>Neotettix bolivari</i> Hanc. | " 3c. Head, dorsal view. |
| " 2a. Same, dorsal view. | " 3d. Posterior tarsus. |

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CONCERNING THE NAMES OF SOME COMMON SPIDERS.

By NATHAN BANKS.

The replacement of modern and familiar specific names by those of an earlier period is one result of the application of the law of priority. Naturalists will doubtless always differ as to how closely this law shall be followed; whether in letter or in spirit. But the few cases to which I shall call attention do not, I think, require any defense. The works of De Geer and the papers of Lucas have always been accepted as of proper authority.

Lucas, in a paper entitled "Description d'une espece nouvelle d'arachnide appartenent au genre *Argyope* de M. Savigny," published in the *Ann. Soc. Entom. France*, 1833, pp. 86-88, describes *Argyope aurantia* from the vicinity of Philadelphia. The description is sufficient to recognize our common species described by Hentz as *Epeira riparia*; and the excellent figure on plate v fully confirms this determination. Walckenær and Koch have both described this species subsequent to Lucas, so that the synonymy of this species will be:

Argiope aurantia Lucas.

Epeira cophinaria Walck.

Epeira ambitoria Walck.

Nephila vestita Koch.

Epeira riparia Hentz.

Lucas, again in 1833, in a paper entitled "Sur plusieurs Arachnides nouvelles appartenent au genre *Atte* de M. de Walckenær,"

also published in the Ann. Soc. Entom. France, 1833, pp. 476-482, described a *Salticus variegatus* from New Orleans. The description and figure evidently apply to *Phidippus otiosus* Htz., well known from the Southern States. Koch, in Die Arachniden, placed the species in *Phidippus*, and gave a better figure. This species will then be:

Phidippus variegatus [Lucas].

Salticus variegatus Lucas.

Phidippus variegatus Koch.

Attus otiosus Hentz.

De Geer, in the seventh volume of his "Memoires pour servir a l'Histoire des Insectes," published in 1778, described several spiders from Pennsylvania.

Aranea mammeata De Geer, p. 318, pl. 39, fig. 5, is very plainly *Argiope argentata* Fab., which latter name has the priority. It could hardly have come from Pennsylvania, but is known from the extreme southern parts of our country.

Aranea rufa De Geer, p. 319, pl. 39, fig. 6, is evidently a *Dolomedes*, and I think, without doubt, *D. albineus* of Hentz. Koch described it as *Ocyale rufæ* from Pennsylvania and Georgia. So this spider will stand as:

Dolomedes rufa [De Geer].

Aranea rufa Koch.

Ocyale rufa Koch.

Dolomedes albineus Hentz.

Aranea undata De Geer, p. 320, pl. 39, fig. 8, is our common *Marptusa familiaris* Hentz. It was described three times by Koch under the genus *Marpissa*; by Blackwall as a *Salticus*, and probably by Walckenaër. This species must now be:

Marptusa undata [De Geer].

Aranea undata De Geer.

Marpissa undata Koch.

Marpissa conspersa Koch.

Marpissa varia Koch.

Attus familiaris Hentz.

Salticus sundevalli Blackwall.

Koch, in vol. xiv, p. 78, of Die Arachniden, published in 1848, described *Mævia tibialis* from Pennsylvania. This is plainly the *Admestina wheeleri* of Peckham, and should be known as:

Admestina tibialis [Koch].

Mævia tibialis Koch.

Admestina wheeleri Peck.

Some Rare Butterflies for Northwest Missouri.

By FRANK J. HALL, Kansas City, Mo.

The student of geographical distribution as well as the mere collector is always interested to hear of the rare species of a given locality. To know that it is always possible to run down a new species for one's own locality gives an increased interest in careful collecting. I don't believe that this city has been noted for careful naturalists, but we have a wonderfully rich insect fauna here and a handful of eager boys trying to land it in their cabinets. We consider the following species of butterflies among the rarities and invite any body to add to the number.

Callidryas argante.—During September, 1895, the orange-colored male of this species was taken from thistle blossom in company with *eubule*, which was exceedingly common that year; the condition of the specimen was excellent. The next year, on September 20th, I took a female specimen of the same species and at the same place; the specimen was a dirty white with darker shades along the middle of both wings, and was not in so good condition as the male. During this season (1897) no specimens of *eubule* were seen.

Terias mexicana.—On the 3d of September, 1894, a single male specimen was taken on a street in this city. The specimen was somewhat frayed. No more examples were seen until this year (1897), when a specimen was taken on the blossom of the golden-rod. It was a female, and was in poor condition. The species may be instantly recognized by the sharp anal angle, which gives to the species a tailed appearance; unique among our yellow butterflies.

Eresia texana.—On Oct. 24, 1897, I took from the blossom of *Aster* a perfect female specimen of this species. Not a blemish exists, so far as can be seen, hence I am persuaded that the specimen emerged in this locality. For the benefit of the tyro I may say that the species looks very much like *Phyciodes* at first sight, but is darker and has a curved excavation on the outer margin of the fore-wings, and is ornamented with pure white, rectangular spots; on the hind wings occurring in a row of six, quite square and close together, forming a band across the center of the wing.

Phyciodes carlota.—Three specimens of the species have been taken here. The first specimen taken May 10, 1896, in a meadow and was alone; the last two were taken in company with *nycteis* from the blossom of cone-flower in September, 1897. Condition of the September specimens very good.

A SPECIES OF ORTHOPTERA.

[Plate IX represents a species of Orthoptera captured in Philadelphia. We have received the following information in regard to it:]

To the NEWS:—At your request I furnish you with all the information that I possess concerning the capture of the large mantis figured in this number of the NEWS. The specimen was captured on the 16th of last October at Mt. Airy, Philadelphia, by my neighbor, Mr. Joseph Hindermeyer, who found the insect resting on the upper part of one of his tomato vines. Mr. H., not being familiar with the insect's harmless nature, was afraid to touch it, but at last managed to secure it in a paste-board box, in which condition it was brought to me. I found on dissecting the abdomen of the insect that it was a female. The eggs, which were oblong and of a whitish color, were contained in a glutinous mass, from which it was hard to separate them.

Although a careful search was made in the vicinity in which the specimen was found, no others were discovered.

Learning later that the native habitat of the insect was China and Japan, I made inquiry among those having nurseries and conservatories in the neighborhood where the specimen was captured, regarding the importation of plants from the above-named countries. At the nursery of Thomas Meehan & Sons—the largest nursery in the vicinity of where the insect was captured—I was informed that they were constantly receiving plants from all parts of the world, so that it is more than likely that the insect was introduced through this channel.

PHILIP LAURENT.

“I have examined your fine photographs of *Hierodulida*. There is no doubt that it is the *Tenodera sinensis* Saussure, from China and Japan.

“It is certainly very interesting that this large species has been transported to the United States. I suppose the bag of eggs has come over pasted on the leaves or on the branches of a Japanese plant. It is curious that it has supported the change of climate, for the *Tenodera* are only from the hot countries. It is, though, a question if the species will stand your winters. I suppose there must be many other specimens living in the neighborhood of the



Hancock, J L. 1898. "The species of the new genus *Neotettix* with a key to the genera of North American Tettigidae." *Entomological news, and proceedings of the Entomological Section of the Academy of Natural Sciences of Philadelphia* 9, 137–144.

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