

THE NORTH AMERICAN SPECIES OF ORPHULELLA.

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By the kindness of Prof. L. Bruner I have recently been able to study specimens of the South American *Orphula pagana* Stal., the type of the genus, and so to compare its structure with that of our native species latterly referred to *Orphula*. By this it appears, as Mr. Bruner has pointed out to me in correspondence, and as Mr. A. P. Morse has suggested (*Psyche*, VII., 407), that our species should be referred rather to *Orphulella*, separated by Giglio-Tos from *Orphula* in 1894, though this was afterwards regarded by him as having only a subgeneric value. *Orphula* in the stricter sense of the term is not, so far as I know, represented in the United States. *Orphulella* is the most widely distributed genus of North American Tryxalinæ and the most abundant in species. Those known to Prof. J. McNeill in his recent revision of our Tryxalinæ were well separated by a table which I have here made the basis of a new one to include a considerable number of new forms. Besides describing these, I have added notes of distribution of the others, based on the collections in my hands, and given their principal synonymy.

Table of the North American species of Orphulella.

*A*¹. Discoidal area of basal half of female tegmina generally plainly narrowed distally, where it is nearly always occupied by a single row of cells and is plainly narrower than the ulnar area at its widest part; ulnar area of male occupied by a single row of cells, rarely (*tepaneca**) partially divided into two sets by an irregular spurious vein.

*b*¹. Lateral carinæ of pronotum parallel or very faintly arcuate on the prozona.

*c*¹. Male antennæ no longer than head and pronotum together, basally depressed and apically acuminate or subacuminate.

*d*¹. Pronotum less obtusely angulate; prozona and metazona subequal in length; tegmina generally not surpassing the hind femora, the discoidal area in both sexes with a spurious vein running through the middle, dividing it into two sets of cells; ulnar area with a similar (♀) or interrupted (♂) spurious vein, making a similar division.....*tepaneca*.

*It is a little difficult to say into which division *tepaneca* should fall, as it is somewhat variable; by the male it falls best here; by the female under *A*².

- d*². Pronotum very obtusely angulate; prozona distinctly longer than the metazona; tegmina generally surpassing the hind femora, the discoidal area of both sexes more or less irregularly reticulate, but with no spurious vein; ulnar area with a spurious vein in the female but not in the male.....*compta*.
- c*². Male antennæ a little longer than head and pronotum together, of equal size throughout and nowhere flattened.....*decora*.
- b*². Lateral carinæ of pronotum distinctly, often greatly, divergent both in front and behind.
- c*¹. Anterior ulnar vein of male tegmina distally much nearer the radial than the lower ulnar vein.
- d*¹. Larger species. Narrowest (middle) portion of pronotal disk more than three-fourths as wide as widest (posterior) portion.....*obliquata*.
- d*². Smaller species. Narrowest (middle) portion of pronotal disk not more, generally less, than three-fourths as wide as the widest (posterior) portion.
- e*¹. More or less variegated, the tegmina usually with a median series of spots; male antennæ no longer than head and pronotum together; hind margin of pronotum obtusely angulate.
- f*¹. Fastigium of vertex less sharply angulate and less prominent, in the male advanced beyond the eyes by not more than a third the length of the eye as seen from above, in the female generally rounded obtusangulate.....*picturata*.
- f*². Fastigium of vertex more sharply angulate and more prominent, in the male advanced beyond the eyes by half or nearly half the length of the eye as seen from above, in the female generally distinctly rectangulate.....*affinis*.
- e*². Rarely variegated, the tegmina usually immaculate; male antennæ longer than head and pronotum together; hind margin of pronotum rounded, scarcely angulate.....*speciosa*.
- c*². Anterior ulnar vein of male tegmina distally equidistant between the radial and lower ulnar veins.....*desereta*.
- A*². Discoidal area of basal half of female tegmina scarcely narrowing distally and here nearly always occupied by more than one row of cells, and little if any narrower than the ulnar area at its widest part; ulnar area of male either divided into two series of cells by a more or less

distinct spurious vein, or irregularly reticulate, never occupied throughout by a single series of cells.

*b*¹. Lateral carinæ of pronotum arcuate, the disk of unequal width, being narrower, often considerably narrower, in the middle than behind and generally than in front.

*c*¹. Antennæ of male considerable longer than head and pronotum together.

*d*¹. Disk of pronotum only slightly clepsydral, the lateral carinæ diverging but little or not at all in front and not greatly behind; tegmina of male generally but little if at all surpassing the hind femora *salina*.

*d*². Disk of pronotum considerably clepsydral, the lateral carinæ diverging noticeably both in front and behind, but especially behind; tegmina of male generally considerably surpassing the hind femora *pratorum*.

*c*². Antennæ of male no longer or scarcely longer than head and pronotum together.

*d*¹. Fastigium of vertex generally rectangulate in front; disk of pronotum distinctly clepsydral, the lateral carinæ distinctly and often considerably divergent both in front and behind; ulnar area of tegmina, even in the male, but little wider than the discoidal area *pelidna*.

*d*². Fastigium of vertex usually acutangulate in front; disk of pronotum feebly clepsydral, the lateral carinæ scarcely or not diverging in front and not greatly behind; ulnar area of tegmina, especially in the male, distinctly wider than the discoidal area *olivacea*.

*b*². Lateral carinæ of pronotum subparallel, so that the disk is of subequal width throughout.

*c*¹. Antennæ of female no longer or scarcely longer than the pronotum, distinctly flattened; face little oblique *viridescens*.

*c*². Antennæ of female distinctly longer than the pronotum, cylindrical; face considerably oblique *Scudderi*.

Having seen no specimens of *O. orizabæ* McNeill, I am unable to give it a place in the table, but it will fall in the close vicinity of *O. tepaneca*.

ORPHULELLA TEPANECA.

Stenobothrus (Rhammatocerus) tepanecus Sauss., Rev. Mag. Zool., 1861, 319 (1861).

Stenobothrus tepanecus Walk., Cat. Derm. Salt. Brit. Mus., IV., 756 (1870).

Specimens in my collection come from Corpus Christi Bay, Tex., Dec., Palmer; Mexico, Sumichrast, Botteri; Venis Mecas, Mex., Palmer; San Mateo del Mar, Tehuantepec, Sumichrast; Guatemala, Van Patten; and Realejo, Nicaragua, McNeil.

The species described by McNeill under the name *Orphula tepanica*, and doubtfully referred by him to Saussure's species, belongs, I think, to another species which I have here named *Orphulella affinis*.

ORPHULELLA COMPTA, sp. nov.

Green or dead-leaf brown, frequently with a broad dusky occipital stripe on the head, and always with a postocular fuscous stripe, more or less conspicuous, generally rather broad, straight, and cut by the lateral carinæ of the metazona. Head generally more or less flavous on the face, of medium size, the face considerably oblique; fastigium considerably depressed behind the raised margins, which are rectangular (♀) or a little acutangulate (♂), with rounded apex, advanced in front of the eyes by less than the width between the eyes; frontal costa not very prominent, rather narrow, plane or faintly sulcate and sparsely punctate, percurrent or almost percurrent, and slightly enlarged below; lateral foveolæ faint, linear, brief; eyes moderately large, subovate; antennæ as long as (♂) or slightly shorter than (♀) the head and pronotum together, luteo-testaceous, the post-basal joints depressed but not broadened. Pronotum rather short, obtusely angulate behind, the prozona distinctly longer than the metazona, the lateral carinæ almost parallel on the prozona, considerably divergent on the metazona, luteous and noticeably dividing the postocular fuscous stripe. Tegmina generally slightly surpassing the hind femora, the discoidal area of basal half narrowed distally, more or less irregularly reticulate, but with no spurious vein; ulnar area without (♂) or with (♀) a spurious vein; median area often flecked or more or less clouded with fuscous. Hind femora considerably surpassing the abdomen, moderately slender, green or testaceous.

Length of body, ♂, 16 mm., ♀, 22 mm.; antennæ, ♂ ♀, 6.25 mm.; pronotum, ♂, 3.25 mm., ♀, 4.25 mm.; tegmina, ♂, 14 mm., ♀, 16.25 mm.; hind femora, ♂, 10.5 mm., ♀, 13.5 mm.

26 ♂, 19 ♀. Palm Springs, Cal., July 10-13; Yuma, Ariz., July 5, A. P. Morse.

ORPHULELLA DECORA.

Orphula decora McNeill, Proc. Dav. Acad. Nat. Sc., VI., 239-240, pl. 4, fig. 17d (1897).

I have specimens which I refer to this species taken by Belfrage in Bosque Co., Tex., and by myself at Pueblo, Col. It was originally described from Arkansas.

ORPHULELLA OBLIQUATA, sp. nov.

Green or brown, marked with fuscous. Head moderately large, flavo-testaceous with a greenish tinge, often green or brownish testaceous above, with a broad postocular fuscous or greenish fuscous stripe, deepest in colour above; vertex well arched, the fastigium rectangulate (♂) or obtusangulate (♀) in front, with raised margins, before which the surface is depressed; lateral foveolæ faint, linear; face arcuate, not very strongly retreating; frontal costa percurrent, rather narrow, faintly enlarging from apex to base, plane or in the female sometimes faintly sulcate; eyes moderate; antennæ castaneous, sometimes apically infuscated, scarcely depressed basally, in the female shorter than head and pronotum together. Pronotum of moderate length, the hind margin very obtusangulate, the lateral carinæ usually flavous, and cutting the generally broad fuscous postocular stripe, which lies anteriorly below, posteriorly within them, gently arcuate, the disk narrowest in advance of the middle, but here fully three-fourths as wide as posteriorly. Tegmina extending about as far back as the hind femora, the discoidal area of the basal half narrowing a little distally, and in this distal portion occupied by only a single row of cells, and much narrower than the widest part of the ulnar area, the latter occupied in the male by only a single row of cells, the anterior ulnar vein distally much nearer the radial than the lower ulnar vein; median area in basal two-thirds marked interruptedly with fuscous. Hind femora surpassing the abdomen, slender, compressed, green or brown, the outer face more or less infuscated.

Length of body, ♂, 19 mm., ♀, 21.5 mm.; antennæ, ♀, 5 mm.; pronotum, ♂, 3.6 mm., ♀, 4.1 mm.; tegmina, ♂, 17 mm., ♀, 13.5 mm.; hind femora, ♀, 14 mm.

1 ♂, 6 ♀. Dallas, Tex., Boll.; Fort Collins, Col., Baker.

ORPHULELLA PICTURATA, sp. nov.

Green or brown, marked with fuscous. Head of moderate size, lighter coloured below than above, with or without a generally slender postocular fuscous stripe; vertex gently arched, the fastigium depressed behind the raised margins, which are rectangulate (♂) or feebly obtusangulate (♀) in front, the fastigium not advanced beyond the eyes by more than a third the length of the eyes as seen from above; lateral foveolæ obsolete; frontal costa percurrent, narrow above, regularly enlarging to twice the width below, sparsely punctate, plane; eyes moderate; antennæ luteo-castaneous, apically infuscated, in both sexes much shorter than head and pronotum together, feebly depressed basally. Pronotum rather short, the hind margin obtusely angulate, the lateral lobes generally much infuscated, and obscurely and rather irregularly pictured, often with a slender fuscous stripe next the lateral carinæ, below them on the prozona, within them on the metazona, the carinæ somewhat arcuate, diverging posteriorly more than anteriorly, and the disk at its narrowest less than three-fourths as wide as posteriorly. Tegmina green or brown, usually with a median series of more or less confluent fuscous maculations, the discoidal area of the basal half of the tegmina narrowing a little distally in the female, and here occupied by one or sometimes partially by two rows of cells, narrower than the widest part of the ulnar area, the latter occupied in the male by a single row of cells, the anterior ulnar vein very much nearer the radial than the lower ulnar vein. Hind femora extending about as far as the tegmina, and, at least in the male, well beyond the abdomen, slender, compressed, green or brownish testaceous, more or less infuscated.

Length of body, ♂, 15.5 mm., ♀, 21 mm.; antennæ, ♂, 4.6 mm., ♀, 5.5 mm.; pronotum, ♂, 3.1 mm., ♀, 3.5 mm.; tegmina, ♂, 11.5 mm., ♀, 16 mm.; hind femora, ♂, 9 mm., ♀, 13.25 mm.

18 ♂, 20 ♀. Dallas, Tex., Boll.; Texas, Belfrage. Mr. A. P. Morse also took this species June 25th, by the railway in Texas, at Rosenberg, Walden, Pierson, Eagle Lake, and Flatonia.

ORPHULELLA AFFINIS, sp. nov.

? *Orphula tepanica* McNeill (nec *tepaneca* Sauss.), Proc. Dav. Acad. Nat. Sc., VI., 242-243, pl. 4, fig. 17a (1897).

Brown, rarely green, with the usual markings of the genus, the broad occipital dusky stripe generally darker at the margins, the fuscous postocular stripe cut on the metazona by the luteous lateral carinæ. Head of moderate size, the face considerably oblique, the fastigium advanced beyond the eyes in the male by half or nearly half the length of the eyes as seen from above, acutangulate in the male, rectangulate in the female, in both much depressed behind the strongly raised margins; frontal costa narrow, sulcate, enlarging below the ocellus, sparsely punctate; lateral foveolæ obsolete; eyes normal; antennæ slightly (♂) or much (♀) shorter than head and pronotum together, castaneous, apically infuscated, the post-basal joints depressed but not broadened. Pronotum not very long, the hind margin obtusely angulate, the prozona faintly longer than the metazona, the lateral carinæ divergent both in front and behind, and the narrowest part of the disk thus limited not more than three-fourths as wide as the posterior portion. Tegmina generally surpassed a little by the hind femora, the median area usually maculate, the discoidal area of the basal half narrowed distally in the female, and occupied by only a single series of cells, the anterior ulnar vein of male distally much nearer the radial than the lower ulnar vein, the ulnar area occupied by a single series of cells. Hind femora considerably surpassing the abdomen, the hind tibiæ dull luteous, with a very obscure pallid postgenicular annulus.

Length of body, ♂, 17 mm., ♀, 24 mm.; antennæ, ♂, 5.75 mm., ♀, 5 mm.; pronotum, ♂, 3.5 mm., ♀, 4.5 mm.; tegmina, ♂, 12 mm., ♀, 17 mm.; hind femora, ♂, 10.5 mm., ♀, 13.5 mm.

19 ♂, 23 ♀. San Diego, Cal., July 22; Coronado, Cal., July 24, and Kern City, Cal., Aug. 4, A. P. Morse; Colorado Desert, Cal., Aug. 13, Mus. Stanf. Univ.

ORPHULELLA SPECIOSA.

Stenobothrus speciosus Scudd.!, Bost. Journ. Nat. Hist., VII., 458 (1862).

Orphula speciosa McNeill, Proc. Dav. Acad. Nat. Sc., VI., 240-242, pl. 4, fig. 17c (1879).

Stenobothrus aequalis Scudd.!, Bost. Journ. Nat. Hist., VII., 459-460 (1862).

Stenobothrus bilineatus Scudd.!, Ibid., VII., 460-461 (1862).

Stenobothrus gracilis Scudd.!, Rep. U. S. Geol. Surv. Nebr., 250 (1871).

I have before me a series of specimens from Halifax, N. S., Piers; Moosehead Lake, Scudder; Norway, Smith; Mt. Desert, Scudder, and Brunswick, Me., Packard; the White Mt. Valleys and Hampton, N. H., Scudder; Brandon, Vt., Scudder; Summit of Graylock, Boston, Cape Cod and Nantucket, Scudder, and Blue Hills, Henshaw, and Wellesley, Mass., Morse; Farmington, Norton, and Thompson, Conn., Morse; Minnesota; Colona, McNeill and Ogle Co., Ill., Allen; Denison, Crawford Co., Dallas Co., and Jefferson, Iowa, Allen; Nebraska, Dodge, and West Point, Bruner, and the Valley of the Platte, Nebr., Hayden; and Bosque Co., Tex., Belfrage.

ORPHULELLA DESERETA, sp. nov.

Pale gray-green, the green prevailing in the female, the gray in the male, both marked with fuscous in the usual manner. Head moderately large and prominent, the face rather pallid and moderately oblique, more so in the male than in the female, marked behind the eyes with a sometimes slender, sometimes broad, postocular fuscous streak, sometimes edged above with luteous; vertex well arched, more or less sometimes very slightly infuscated, the infuscation often concentrated in a pair of longitudinal stripes; fastigium well advanced, depressed before the raised margins, which are rectangulate or slightly acutangulate (♂) or obtusangulate, the apex rounded (♀); frontal costa narrow above, broadening below the ocellus, plane or feebly sulcate near the middle; eyes moderate; antennæ a trifle longer (♂) or distinctly shorter (♀) than the head and pronotum together, luteous, apically considerably infuscated, the post-basal joints somewhat depressed. Pronotum of moderate length, broadly rounded obtusangulate behind, the lateral carinæ luteous, cutting the generally narrow postocular fuscous stripe, considerably arcuate, diverging more posteriorly than anteriorly, the disk at the narrowest about two-thirds as broad as the widest posterior part, the lateral lobes below the postocular stripe immaculate or clouded above with fuscous. Tegmina somewhat surpassing the abdomen, the median area maculate with fuscous, the discoidal area of the basal half in the female distally narrowed slightly and a trifle wider than the widest part of the ulnar area, occupied partly by a single, partly by a double row of

cells, the ulnar area of the male occupied by a single row of cells, one or two of which are sometimes divided to form part of a second row, the anterior ulnar vein running distally about midway between the radial and the lower ulnar vein. Hind femora extending about as far back as the tegmina, slender, compressed, generally immaculate, but occasionally obscurely bifasciate with fuscous.

Length of body, ♂, 18.5 mm., ♀, 24 mm.; antennæ, ♂, 7 mm., ♀, 6.5 mm.; pronotum, ♂, 3.25 mm., ♀, 4 mm.; tegmina, ♂, 14 mm., ♀, 18 mm.; hind femora, ♂, 10 mm., ♀, 13.5 mm.

19 ♂, 11 ♀. Salt Lake Valley, Utah, Aug. 1-4.

ORPHULELLA SALINA, sp. nov.

Green or brown, marked with fuscous. Head moderately large and prominent, the face paler than the rest and moderately oblique, the postocular fuscous stripe usually present and usually slender; vertex rarely infuscated, moderately convex, the fastigium considerably depressed behind the well elevated margins, which are rectangulate, well advanced, in the male sometimes acutangulate; lateral foveolæ obsolete; frontal costa narrow, faintly broadening below, more or less sulcate, especially in the male; eyes of medium size; antennæ somewhat longer (♂) or slightly shorter (♀) than head and pronotum together, pale testaceous, apically infuscated, slightly depressed in the basal half. Pronotum of moderate length, rounded subtruncate behind, the lateral carinæ luteous, cutting the narrow fuscous postocular stripe, gently arcuate, diverging but little, occasionally not at all in front, and but little behind. Tegmina but little if at all surpassing the hind femora, the median area especially in the female maculate with fuscous, the discoidal area of basal half not narrowed distally in the female, nor narrower than the ulnar area, and filled irregularly with a double row of cells, the ulnar area of the male with a spurious vein dividing it through at least most of its course so as to form a double row of cells. Hind femora reaching (♀) or surpassing (♂ ♀) the abdomen, only moderately slender and compressed, immaculate.

Length of body, ♂, 16 mm., ♀, 23 mm.; antennæ, ♂, 5.75 mm., ♀, 6.5 mm.; pronotum, ♂, 2.75 mm., ♀, 4 mm.; tegmina, ♂, 14 mm., ♀, 18 mm.; hind femora, ♂, 9.5 mm., ♀, 11.75 mm.

7 ♂, 17 ♀. White River, Col., at Utah boundary, July 24 to Aug.

13; Provo, Utah, Aug. 23-24; Salt Lake, Utah, Packard; Spring Lake Villa, Utah Co., Utah, Aug. 1-4, Palmer.

ORPHULELLA PRATORUM, sp. nov.

Green or brown, generally the latter, marked variably with fuscous, but generally with a broad and distinct blackish fuscous postocular stripe on head and pronotum, cut on the latter by the luteous lateral carinæ; head occasionally with a pair of vertical fuscous stripes, enclosing a median testaceous stripe, in which case the disk of the pronotum and anal area of the tegmina are also testaceous. Head rather large and prominent, the face not very oblique; fastigium well advanced, considerably depressed behind the well elevated margins, which are rectangular (σ) or obtusangulate (♀) in front; lateral foveolæ obscure, sub-linear; frontal costa much compressed and narrowed above, gently enlarging below, feebly sulcate; eyes rather large; antennæ somewhat longer (σ) or a little shorter (♀) than the head and pronotum together, testaceous, apically a little infuscated, the post-basal joints feebly depressed. Pronotum rather long, subtruncate but obtusangulate behind, the lateral carinæ arcuate, diverging considerably both in front and behind, but especially behind. Tegmina, at least in the male, generally considerably surpassing the hind femora, the median area often maculate with fuscous, the discoidal area of basal half of female tegmina not narrowed distally nor narrower than the ulnar area, irregularly reticulate with more than a single row of cells; ulnar area of male with a distinct spurious vein dividing it so as to form a double row of cells. Hind femora surpassing the abdomen, moderately slender, often clouded with fuscous, the hind tibiæ often with a pallid postgenicular annulus.

Length of body, σ , 21 mm., ♀ , 24 mm.; antennæ, σ , 7.5 mm., ♀ , 7.4 mm.; pronotum, σ , 4 mm., ♀ , 4.5 mm.; tegmina, σ , 18 mm., ♀ , 20 mm.; hind femora, σ , 12 mm., ♀ , 14.5 mm.

43 σ , 48 ♀ . Maryland, Uhler; Carolina, Schaum; North Carolina, Uhler; Smithville, N. C., Nov. 22, Maynard; South Carolina; Georgia, Morrison; Lakin, Kans., Sept. 1, Scudder; Canon City, Col.; Texas, Belfrage; Bosque Co., Tex., Oct. 15, Belfrage; Dallas, Tex., Boll.; Gulf Coast of Texas, Aaron.

Specimens from the Eastern United States are generally smaller than those from the West.

ORPHULELLA PELIDNA.

Gomphocerus pelidnus Burm. !, Handb. Ent., II., 650 (1838).

Stenobothrus pelidnus Thom., Rep. U. S. Geol. Surv. Terr., V., 95 (1873).

Orphula pelidna McNeill, Proc. Dav. Acad. Nat. Sc., VI., 235-239 (1897).

Stenobothrus maculipennis Scudd. !, Bost. Journ. Nat. Hist., VII., 458-459 (1862).

Stenobothrus propinquans Scudd. !, Ibid., VII., 461 (1862).

Specimens before me come from Boston, Blue Hills, Provincetown, Cape Cod and Nantucket, Mass.; Stamford, Conn., Morse; Staten Island, Davis, and Long Island; Minnesota; Fort Collins, Col., Baker; Capron and Fort Reed, Comstock, Appalachicola, Thaxter, Sandford, Frazer, Charlotte Harbor and Biscayne Bay, Mrs. Slosson, and Key West, Fla., Morrison, Palmer; La Firmina, Cuba, Wright; and the Isle of Pines, Scudder; Atmore, Ala., Morse; Mesilla, N. Mex., June 29, Morse; and Colton, July 17, Los Angeles, July 26, and Gazelle, Cal., Sept. 4, Morse.

ORPHULELLA OLIVACEA.

Stenobothrus olivaceus Morse. !, Psyche, VI., 477-478, figs. 1, 2 (1893).

Orphula olivacea Morse, Ibid., VII., 327, 411, pl. 7, figs. 10, 10a (1896); McNeill, Proc. Dav. Acad. Nat. Sc., VI., 239, pl. 4, fig. 17b (1897).

Orphula (Orphulella) olivacea Gigl.-Tos., Boll. Mus. Zool. Tor., XII., No. 301, 2 (1897).

Mr. Morse has given me specimens taken by him at Stamford and Norwich, Conn., and I have others from Maryland, Uhler, and Georgia, Morrison, besides a number taken by C. M. Weed on Bermuda. Giglio-Tos reports it from Panama and Venezuela.

ORPHULELLA VIRIDESCENS, sp. nov.

Green throughout, the head more or less flavescent, the disk of the metazona somewhat feebly infuscated, and the upper part of the lateral lobes bordering the carinæ with a slender purplish fuscous stripe extending to the eye. Head moderately large, the face only a little oblique; fastigium a little depressed within the rectangular margin; frontal costa moderately prominent, plane and delicately punctate, narrowed above,

very gradually enlarging to the ocellus, below which it is subobsolete; lateral foveolæ wanting; eyes moderate, subpyriform; antennæ about as long as the pronotum, with the post-basal joints distinctly depressed. Pronotum rather short, feebly rounded in front, slightly rotundato-angulate behind, the lateral carinæ subparallel, faintly sinuate, the disk narrowest behind the middle of the prozona, which is barely longer than the metazona. Tegmina barely surpassing the hind femora, the discoidal area scarcely narrowing distally and scarcely narrower than the widest part of the ulnar area, rather densely reticulate proximally, with two rows of irregular cells distally; wings with the veins of the anterior area more or less roseate. Hind femora as long as the abdomen, not very slender, green, feebly ferruginous beneath.

Length of body, 20 mm.; pronotum, 4 mm.; tegmina, 15.5 mm.; hind femora, 13 mm.

1 ♀. Mt. Alvarez, Mexico, E. Palmer.

ORPHULELLA SCUDDERI.

Ophula Scudderi Bol., Mém. Soc. Zool. France, I., 142 (1888).

I have specimens taken at La Firmina, near Bemba, Cuba, by Wright, and on the Isle of Pines by myself.

ERRATUM.

Page 121 (C. E., May, 1899), near the bottom, for "*Eudeopsylla*" and "*Eudeopsylla nigra*," read "*Udeopsylla*" and "*Udeopsylla nigra*."

SOME NEW SPECIES OF DELTOCEPHALUS.

BY E. D. BALL, FORT COLLINS, COLO.

DELTOCEPHALUS AREOLATUS, n. sp.

Resembling *imputans*, Osb. & Ball, but with a much longer vertex; vertex longer than in *producta*, Walk. Olive green, a spot on the middle and another at the tip of each elytron and all below black. Length, ♀, 4 mm.; ♂, 3.5 mm.; width, 1.75 mm.

Vertex flat, strongly acutely angled, the tip rounding, almost twice as long as the pronotum, fully twice longer than width between eyes, margin sharp, angle with the face acute; front depressed, almost as much above the ocelli as below, lateral margins straight, continuous with those of the clypeus; loræ small, two-thirds the width of the clypeus; pronotum



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