COSMOSOMA, Hübner.

Cosmosoma omphale.

Cosmosoma omphale, Hübner, Samml. Ex. Sch. Vol. 2, Lep. II, Sph. I, Pap. III, Glauc. D, Hyal. 3, figs. 1—4. (1806.)

Ægeria omphale, Say, Am. Entom. Vol. 2, p. 42, Pl. 19, lower figure. (1825.) Id. ed. Lec. (1859.)

Glaucopis (*Cosmosoma*) *omphale*, Harris, Cat. N. A. Sph. Sill. Journ. Vol. 36, p. 317. (1839.)

Glaucopis omphale, Walker, C. B. M. Part I, p. 168. (1854.)

Cosmosoma omphale, Clemens, Proc. Acad. N. S. Phil. p. 544. (1860.)

The specimens from Cuba agree with Hübner's and Say's figures. I have also received specimens of this species from Mexico. Say, Harris and Walker record their material of C. omphale from Florida. In addition, Dr. Clemens gives "Mexico, near Jalapa." The validity of the genus Cosmosoma seems to me indisputable, and Dr. Clemens (loc. cit.) has given a thorough diagnosis of its characters.

Habitat.—Cuba, (Poey). Coll. Ent. Soc. Phil.

Number 132, *Poey's MS. Catalogue.*

Under the Number 521, and with the determination "Læmocharis selecta," Prof. Poey sends several specimens of a species which differs structurally from Cosmosoma, by the absence of the discal fold of the primaries, but is otherwise closely allied to that genus. The species is variable, judging from this material, and none of the specimens accurately agree with Dr. Herrich-Schæffer's figure (Exot. Sch. fig. 256) under this specific name. In the present arrangement of the Cuban genera, this form should precede Cosmosoma, following Eunomia. For the moment, I leave these specimens undetermined.

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Descriptions of some New Species of Pselaphidæ.

BY EMIL BRENDEL, M. D.

FUSTIGER Lec., n. gen.

The description of the genus *Articerus* shows us an insect of the family of Clavigeridæ differing from *Claviger* by having eyes, and the antennæ consisting of but one joint, and even that joint was said to stick in the head without any articulation. Subsequently, several species of *Articerus* were described, which have not only a true articulation, but even two joints. These are *A. brazeliensis*, *A. syriacus*, and a new species from East Tennessee. As all these do not agree with the original *Articerus*, it was right to define them more properly. Accordingly Dr. John L. LeConte separated the genus *Fustiger* from *Articerus*.

The new species from Tennessee is

1. **Fustiger Fuchsii,** n. sp.—Testaceus, translucens, variolatus, pubescens, capite obconato, antennis 2-articulatis in fossa magna sub frontis margine insertis, articulo secundo obconico, oculis parvis lateraliter insertis, ocellis binis in occipite dispositis. Thorace rotundato, variolato, elytris truncatis, abdomine fovea magna ad basin impresso. Long. 2.0 m. m.

The stature of this insect resembles most that of *Adranes coecus* Lec. The head is conical, widest between the eyes; the front is slightly impressed in the middle; the antennæ are inserted in large grooves below the lateral margins of the front, which extend to the middle of the face, leaving only a small ridge running from the clypeus to the frontal impression; the vertex is variolate, thinly pubescent; the eyes are situated laterally near the base and consist of but eight facets; on the occiput are two ocelli consisting of but three small facets. The antennæ are 2-jointed, the first joint small, cylindrical, of equal dimensions, the second is obconical, 1½ times as long as the head, and at the end four times as wide as at the base, consisting of six false connate joints. The maxillary palpi are apparently two-jointed. The thorax is rounded, not longer than wide, variolate, pubescent, slightly depressed above, with a variolate scar at the base. The elytra are a little truncate at the posterior, exterior angles, variolate, pubescent, the sutural striæ distinct. The abdomen consists of three dorsal and five ventral segments; the first dorsal segment is very large and has a deep groove at the base, extending from side to side, in the depth of which are the coxal articulations shining through; behind the groove the segment is convex, smooth, thinly pubescent. The margin of the first segment is broad and shows beautiful convolutions and folds near the base. The anterior coxæ are conical, the intermediate more globose, the posterior transverse; the trochanters are half as long as the femur, the tibiæ are strongly pubescent; the tarsi are two-jointed and have but one claw.

This specimen seems to be a female. It was presented to me by Mr. Henry Ulke, and was discovered by Mr. Fuchs, of East Tennessee, to whose honor and for instigating him to work more in that line, it was named after him.

2. **Ctenistes monilicornis,** n. sp.—Castaneus, pubescens, minutissime punctulatus, capite 4-foveato, fronte elongata, antennis moniliformibus; palpis minutissimis appendiculatis, thorace obcordato trifoveato, elytris latis, tibiis posticis dilatatis. Long. 2.8 m. m.

The insect before me seems to be in every respect a *Ctenistes.* The general form agrees entirely with that genus; the palpi, though so very small that they cannot be seen but by a magnifier of 200 diame-

ters, are appendiculate with small setæ. The second palpal joint seems to be pedunculate, the third rounded, appendiculate, the fourth the largest, oval, not transverse, appendiculate. The head is broadest across the eyes, with two grooves before and between the eyes and two small punctures near the base of the occiput; the front is much elongated, split or sulcate in the middle and notched laterally behind the insertion of the antennæ. The antennæ are half as long as the body, the first joint emarginate at the base, obconical, and obliquely truncate at the end, the two following ones are more or less oblong, the 4th—8th are equal, rounded, nearly transverse, shorter than long, the 9th and 10th are equal, little larger than the preceding, the 11th is not thicker but more oblong. The thorax is rounded, obcordate, with the usual three impressions near the base, common to all *Ctenistes*. The elytra are broader than in other *Ctenistes* and somewhat more convex. The abdomen presents nothing unusual. The posterior tibiæ are dilated behind the middle; the second joint of the tarsi is rather inflated, thicker than usual. The ventral parts are entirely those of *Ctenistes*. The specimen before me is undoubtedly a male. It is still doubtfull whether it is not a new genus, which will only be apparent by sacrificing a specimen for dissection.

This insect was kindly presented to me by Mr. Henry Ulke, who found two specimens near Washington City.

3. **Bryaxis intermedia** is another climatical variety of *B. abdominalis*, taking range between the true *B. abdominalis* and *B. floridana*. Long. 1.9 m. m.

It will be only necessary to describe the abdominal dorsal segments, as it agrees in all other respects with *B. abdominalis* and *B. floridana*.

The first segment presents those cakes of *B. abdominalis* deminutif, leaving as large an excavation between them as in *B. floridana*; the second segment is but little emarginate in the middle, so that it presents only one lobe, the spaces each side of the median line are concave, while the middle part is elevated from behind the usual punctured groove near the base down to that slight emargination on the tip; the third segment is entire, one-lobed and overhanging the rest of the segments.*

* I do not regard all those as the present species and *B. floridana* as strictly true species, but as climatical abberrations of the most extreme form, that of *B. abdominalis*. Both *B. abdominalis* and *floridana* are truly maratime. There was till now none of them found in inland countries, while *Illinoiensis*, which could perhaps with more right be regarded as a true species,

Two specimens have been found; one in Tennessee and the other in Washington, D. C., the latter kindly presented to me by Mr. Henry Ulke.

4. **Bryaxis perforata.** n. sp.—Nigro-picea, polita, pubescens, capite 3-foveato, antennis breviusculis, thorace lævi, 3-foveato, foveis æqualibus magnis, elytris striis dorsalibus integris, abdomine segmento dorsali primo maximo striis abbreviatis distantibus, postice medio elevato, segmento secundo in medio ad basin foveato. Long. 1.5 m. m.

Hab.—Nov. Eboracum (New York).

This species belong to the neighborhood of *B. dentata*. It is much smaller, dark, shining. The head and thorax are smooth, pubescent, 3-grooved, the grooves are large and equal, the thorax is of equal dimensions, convex, subangulate, rounded. The elytra are piceous, shining, the striæ are all entire, the dorsal striæ converging. The abdomen is short, the first segment behind in the middle elevated nearly angulated, not overhanging the next segment; the abbreviated striæ are distant, well impressed. The second segment is deeply grooved in the middle of the base, somewhat depressed each side. The first ventral segment is very large. The antennæ are short, the first joint is cylindrical, equal in thickness with the second, which is oblong, rounded, the 3—5 equal, smaller, nearly globular, the 6th is a little larger, 7—8 the smallest, globular, 9—10 gradually thicker, not long-

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could never have tasted salt water. The present species comes from East Tennessee and approaches nearer to *B. abdominalis* than to *floridana*.

This series of varieties reminds me very much of the standard series of Cicindelidæ in the beautifully arranged collection of my friend Ulke, who takes so many varieties in his collection that nobody would find out the difference between the two next neighbors, but if you follow them up, you have at the end of the series a different species, which is nothing but a climatical variety.

Mr. Henry Ulke's collection is a truly scientific work, and the envied possessor and creator of it should give us, who are far from him, at least a show of his Cicindela-series by writing an Essay on climatical varieties and species, or something like it, for he is the only man in Columbia, who has the material to do it.

Other Bryaxes, as the *rubibunda*, shows just as many, but not so decided varieties. *Bryaxis punctirollis* and *propinqua* run into each other by varieties. The Batrisus-series of *scabriceps*, *globosus*, etc. up to *nigricans* and even *albionicus* and *spretus*, though they present a very different aspect, might in future be connected by apparent varieties.

Batrisus monstrosus, *ferox* and *cristatus* differ too little for clear species. Of others I need only mention the Northern and Southern form of *Ctenistes* (*piceus* and *Zimmermanni*) and *Pselaphus* (*Erichsoni* and *longiclavus*.) But notwithstanding, those varieties should be carefully designated and described.

er, transverse, the 11th oval, large. The antennæ, legs and palpi are testaceous.

Presented to me by Mr. Henry Ulke.

5. **Bryaxis clavata.**

To correct an error, I mention this insect again, which was reported as a variety of *conjuncta* and proved to be a true species inasmuch as it differs not only by the form of the antennæ, but more by having the anterior trochanters triangular and armed with a short, strong spine; further, the metasternum terminates in two acuminate tubercles, which is not the case in *conjuncta*.

6. **Bryaxis atlantica**, n. sp.—Elongata, contanea, nitida, capito trifoveato, occipite leviter sulcato, thorace longitudine latiore, lateribus rotundatis, fovea intermedia vix conspicua, elytris minutissime haud dense punctutalis, antennis brevibus, articulis 7mo, 8vo et 9no transversis. Long. 1.5 m. m.

This insect comes near to *B. rubicunda*, having the abbreviated striæ on the base of the first abdominal segment approximate and diverging, but differs in the thorax being rather depressed, transverse, the middle basal groove is hardly visible. The elytra are not densely and but slightly punctuated. The head is more uneven, very slightly and broadly sulcate at the base. The antennæ, which agree with those of *rubicunda* from the first to sixth joint, have the seventh smaller, globular, the eight and ninth not longer, transverse, the tenth of equal dimensions, larger, little connate, the last largest, oval. The whole length of the antennæ not exceeding the length of the head and thorax conjointed. Finally, the whole stature of the insect is more elongated than in *rubicunda*.

The specimens before me are a female from South Carolina and a male from Louisiana, which differs by the larger fifth joint of the antennæ.

7. **Bryaxis Ulkei**, n. sp.—Picea, minutissime pubescens, capite trifoveata, antennis longiusculis, thorace punctulato, foveis tribus æqualibus, elytris striis dorsalibus minus impressis, abdomine striis abbreviatis distantibus, tibiis posticis curvatis. Long. 1.6 m. m.

This interesting insect, belonging to the first section of *Bryaxis*, presents an entirely new form. The stature resembles that of *B. Illinoiensis* and takes its place between the latter and *B. floridana*. The head is broader than long, trifoveate, the frontal groove smaller than the vertical ones, the antennal tubercles are elongate, the eyes prominent. The antennæ are nearly half as long as the body, the joints are cylindrical, from the first to the eighth gradually smaller, the ninth is again larger, the tenth obconical, the last largest, ovate. The thorax

is punctulate, the grooves equal in size, the exterior ones connected by dilated, slightly impressed sulcus. The abdomen has the two first segments overlapping the rest; the first segment is 4-spinous and 5-sinuate, the emargination next to the parietal margin is the largest, the median notch the deepest, consequently the two median spines are very long, acuminate; the second segment is sinuous on each side, the hind margin nearly rectilinear, with three impressions corresponding to the three intermediate sinuses of the first segment. The posterior tibiæ are curved in the same manner as in all those species belonging to this section.

This is a male, the only specimen known, and was discovered near Washington, D. C. by my friend Mr. Henry Ulke, to whose memory I dedicate this valuable addition.

Comparison of the females of *Bryaxis abdominalis*, *floridana*, *intermedia*, *Illinoisensis*, *Ulkei*, *dentata* and *perforata*.

1. **B. abdominalis**:—Body convex, capital foveæ smaller, not very deeply impressed. The thoracical foveæ smaller in comparison to the size of the thoracical disk, the basal sulcus faintly impressed near the middle.

2. **B. floridana**:—Body depressed, elongated, smaller than *abdominalis*, capital and thoracical grooves well impressed, except the frontal groove, which is ample and very slghtly impressed. The thoracical sulcus the same as in *abdominalis*.

3. **B. intermedia**:—The supposed form of the ♀ comes nearer to *B. dentata*, is more convex than *floridana*, the frontal groove small, well impressed.

4. **B. Illinoiensis**:—Smaller than *B. dentata*, the capital and thoracical grooves ample, well impressed; the basal thoracical sulcus well impressed, nearly touching the intermediate groove. The thorax is more rounded than in the preceding and in *dentata*. The whole stature favors more *B. rubicunda* than any of this series.

5. **B. Ulkei**:—The supposed form of the ♀ favors most *B. dentata*. According to the ♂, the thorax is smaller in proportion, and the sides near the base are more emarginate than in *B. dentata*.

6. **B. perforata**:—The supposed form of the ♀ must come near *B. Illinoisensis*, but it is only one millimetre long, shining, black, somewhat depressed, the anterior tibiæ are not curved even in the ♂.

7. **B. dentata**:—The stature is musculous, strong in comparison to the preceding, convex, favors most a small specimen of *abdominalis*, the grooves are well impressed, the basal thoracical sulcus is not very ample, but obvious and even near the middle well impressed. The elytra are very visibly punctulate.

8. **B. clavata**:—This and *conjuncta* are hardly to be confounded with the preceding. *B. clavata* is smaller, black, legs testaceous.

9. **B. conjuncta**:—This differs in the ♀ chiefly by the size and color.