

the tubuliform glands furnish the spinning material for the cocoons. Thus we see the males are able to render their walking secure by the usual guy-rope, and the females can cover their cocoons safely. In consequence, the absence of these organs does not interfere with the life of the animals.

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The paper was discussed by Messrs. Gill, Ashmead, and Schwarz.

Dr. Marx stated in answer to a question by Mr. Schwarz that the *Attidæ* have the six normal spinnerets, for, although they spin no webs, they have occasion to elaborate a good deal of silk for their winter quarters. Dr. Marx further stated that he had learned from a correspondent near Baltimore that the common *Phydippus morsitans* had died in large numbers from cold during the past winter, thus showing that the idea he had presented at a previous meeting relative to the hibernation of Arctic spiders was probably correct.

Mr. Schwarz stated that he had observed a great mortality among the Scolytids affecting pine trees near Bladensburg, Md., the principal species being *Tomicus cacographus* and *T. cælatus*. Last fall these insects and their larvæ were extremely abundant in the trees, but at the present time hardly a living individual was to be found. Specimens of a coleopterous enemy of the species, viz., *Hypophlæus parallellus*, are alive at the present time, and it may be that the work of this insect accounts in some degree for the disappearance of the injurious forms, but he is inclined to think that the unusual cold of the past winter was the principal cause of the great mortality. Dr. Smith stated that as these species occur also much further north, the mortality could hardly have been caused by the cold; to which Mr. Schwarz replied that in his opinion a more or less extensive mortality from unusual cold must occur occasionally to keep the numbers of the beetles within bounds. Mr. Ashmead spoke incidentally of the hibernation of a large spider of the genus *Attus* under the bark of trees in Florida.

—Mr. Ashmead presented the following:

#### A SYNOPSIS OF THE SPALANGIINÆ OF NORTH AMERICA.

BY WILLIAM H. ASHMEAD.

Head large oblong or ovate, often tricornuted in front, the occipital line usually complete. Ocelli 3, always present, tri-



angularly arranged. Mandibles bidentate at tips. Maxillary and labial palpi 2-jointed. Antennæ clavate or subclavate, variable in the number of joints from 8 to 12. Prothorax usually large, well developed, narrowed before or subquadrate. Mesonotum usually with short, triangular, convex scapulæ. Scutellum flat and sometimes with an impressed cross-line before apex. Wings often absent, when present with a marginal fringe, the marginal vein most frequently long, linear, rarely short and thickened, the postmarginal and stigmal veins usually very short; hind wings narrowed toward base, not lobed, with a distinct marginal vein. Abdomen distinctly petiolated, the tip compressed into a horn-like point with the ovipositor exerted or subexserted. Legs rather slender, the tarsi 5-jointed, the claws simple.

The *Spalangiinæ* represent a small group in the family *Chalcididæ*, section *Macrocentri*, that is closely allied to the *Pireninæ* and *Tridyminæ*, and in which the occipital line is usually complete, the mandibles bidentate, while the antennæ are never more than 12-jointed.

The group is further distinguished by the very short, well-defined parapsides, a distinctly petiolated abdomen, by the venation, and by the apex of the abdomen being compressed into a small projecting horn-like process.

Of the five genera here brought together, the parasitism of four is known: *Isocratus* Först. is parasitic on different Aphids; *Cerocephala* Westw. attacks the larvæ of wood-boring beetles, belonging to the family *Scolytidæ*; *Chætospila* Westw. was reared from a beetle in seed of *Zea mays*; while *Spalangia* Latr. is parasitic on Dipterous larvæ.

The different genera may be distinguished by the aid of the following table:

#### TABLE OF GENERA.

Prothorax subquadrate, not or scarcely narrowed anteriorly.

Head transverse, normal, the antennæ 12-jointed, inserted far above the clypeus; marginal vein very short, . . . *Isocratus* Förster.

Prothorax long, narrowed anteriorly.

Head tridentate with deep antennal furrows, a sharp high-pointed carina between base of antennæ; marginal vein long.

Head with a long spear-like process; mandibles very large—three-fourths the length of the head; antennæ 10-jointed in both sexes,\* . . . *Paralæsthia* Cameron.

Head without a long spear-like process; mandibles not large.

Antennæ in ♀, 9-, in ♂ 10 or 11-jointed, *Cerocephala* Westw.

Antennæ in ♀ 8-jointed; ♂ unknown, . *Chætospila* Westw.

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\* In Cresson's synopsis the mandibles are said to be three *times* as long as the head, instead of three *fourths* as long—plainly a copyist's or printer's error, but a serious one.



Head smooth, not tridentate, without distinct antennal furrows; antennæ inserted close to the mouth, in ♀ 10-, in ♂ 12-jointed, *Spalangia* Latr.

**ISOCRATUS** Förster, Hym. Stud., ii, p. 53 (1856).

Syn. *Asaphes* Walk., Ent. Mag., ii, p. 151 (1834).

(Type *A. vulgaris* Walk.)

Head transverse, wider than the thorax, with the frons impressed; viewed from in front it is subtriangular. Eyes moderate, broadly oval, bare. Ocelli on the vertex, triangularly arranged. Mandibles curved, bidentate, the teeth rather long, acute. Maxillary and labial palpi 2-jointed.

Antennæ clavate, 12-jointed in both sexes, inserted slightly below the middle of the face, all the funicular joints transverse. Thorax sub-ovoid, the pronotum large, nearly quadrate; the mesonotum with two distinct furrows, the parapsides subconvex, the metanotum small, rugulose.

Wings hyaline, the margins delicately fringed, the marginal vein shorter than the stigmal vein, the former slightly thickened towards apex. Legs slender, the tibial spurs 1, 1, 1, the last pair weak; tarsi 5-jointed.

Abdomen ovate, depressed above, distinctly petiolated, terminating in a small compressed process, the second segment about  $1\frac{1}{2}$  times as long as the third, the following segments short, subequal.

Only a single species, having several synonyms, is known, as follows:

**I. *vulgaris* Walker.**

*Asaphes vulgaris* Walk., Ent. Mag., ii, p. 152.

Ann. and Mag. Nat. Hist., x, p. 114.

List. Brit. Mus. Chalc. 1846, p. 23.

*Eurytoma aenea* Nees, Hym. Ich. Aff. Monog. ii, p. 42.

*Colax aphidii* Curt., Jour. Roy. Agric. Soc., iii.

*Pteromalus petiolatus* (?) Zett., Ins. Lapp., xiv, p. 332.

*Chrysolampus suspensus* Nees, Monog., ii, p. 127.

*altiventris* Nees, l. c.

*Isocratus vulgaris* Thoms., Skand. Hym., iv, 208.

Riley, U. S. Agric. Rep. 1889, p. 35, pl. vi, f. 2.

♂ ♀.—Length, 1.6 to 2.3 mm. Aeneous black and most frequently with a decided metallic tinge on the thorax, pleura and coxæ; antennæ usually black, but the flagellum varies from brownish-yellow to brown and black; legs, except coxæ, brownish-yellow with sometimes the femora and tibiæ obfuscated; coxæ aeneous black or submetallic; wings hyaline, the venation pale brownish-yellow, the marginal vein shorter than the stigmal vein, a little thickened at apex.

The whole surface, except the middle mesothoracic lobe anteriorly and the metathorax, is smooth, shining; middle mesothoracic lobe



anteriorly feebly punctate, metathorax finely rugose, its pleura with long greyish hairs. Antennæ 12-jointed, clavate, the funicular joints transverse. Abdomen ovate, petiolate, depressed above, its tip compressed into a little point, the petiole about  $2\frac{1}{2}$  times as long as thick, rugulose, the ruguosities longitudinally directed, or striated; rest of abdomen smooth polished, the second segment the longest— $1\frac{1}{2}$  times as long as the third, the segments after the third short, subequal; ♂ abdomen smaller, more depressed and with the tip truncate.

Hab.—Europe, North and South America, and Australia.

This species is a common parasite on different species of Aphids; the only exception is a specimen reared by myself from *Dactylopius adonidum* Linn.

**PARALÆSTHIA** Cameron, Biol. Cent. Am., Hymn., p. 110.

(Type *P. mandibularis* Cam.)

“Head elongate, broad, produced in front into a spear-head process, the apex of which is blunt, and its base produced into a blunt tooth-like process. Eyes small, oval, situated on the sides. Vertex with a wide and deep furrow extending from behind the ocelli to the antennæ and carinated in the middle, the keel running down to the centre. Mandibles very large, three-fourths of the length of the head, curved, bidentate. Antennæ 10-jointed, clavate, situated a little below the middle of the head; scape shorter than the first two joints of the flagellum, the first joint shorter than the second, fourth and fifth shorter and thicker; the rest become thicker towards apex. Prothorax large, a little broader than long, distinctly separated from the mesothorax, the sides scarcely straight, transverse behind, rounded and narrowed in front. Mesonotum rather flat above, the scutellum not clearly defined. Metanotum comparatively large, closely amalgamate with the mesonotum. Petiole long, curved, broader at the base than at the apex, round. Abdomen ovoid, flat, contracted before and behind; second segment longer than the next, fourth much longer than any of the others; apical a little shorter than the third. Ulna shorter than the marginal branch (which is prolonged a little beyond the cubitus); at its junction with ulna is a thickened spot of hairs; the marginal branch is provided with projecting hairs; the margins of the wings with long cilia. Coxæ large, thickened, widely separated; femora stout; tarsi longer than the tibiæ.

The female has a stout laterally compressed ovipositor, which is about half the length of the abdomen. The head over the mouth is broadly incised, the edges of the incision being tooth-like; the front below the antennæ is produced into a broad keel, which overhangs the mouth-region, terminating in a blunt thick tooth.” (Cameron.)

This genus is unknown to me in nature; the type *P. mandibularis* Cam. is described from Panama. Mr. Cameron in



speaking of it says: "The affinities of this genus are clearly with *Theocolax* Westw., with which it agrees in the structure of the thorax and abdomen and of its wings; but the enormous development of the mandibles, the very deep and long suture on the head, and the greater development of the basal abdominal segments sufficiently differentiate the two."

**CEROCEPHALA** Westwood, Mag. d. Zool. i., p. (1831).

(Type *C. cornigera* Westw.)

*Syn. Theocolax* Westw., Lond. Edin. Phil. Mag., 3d ser., i, p. 127 (1832).

*Epimacrus* Walk., Ent. Mag., i, p. 369 (1833).

*Læsthia* Hal., Ent. Mag., i, p. 335 (1833).

*Sciatheras* Ratzb., Ich. d. Forstins., ii, p. 209 (1848).

*Tricoryphus* Först., Hymn. Stud., ii, p. 209 (1856).

*Head* oblong oval, tridentate before from deep antennal furrows and a sharp carina between. Ocelli 3, in a triangle. Eyes oval.

*Antennæ* clavate, inserted away from the clypeus, in the ♂ 10- or 11-jointed, the last two joints sometimes connate and apparently reducing the number of joints; in the ♀ 9-jointed, the club in the ♀ sometimes jointed and giving a corresponding increase in the number of joints.

*Maxillary* and labial palpi short, 2-jointed.

*Thorax* long, the prothorax large, triangular, or quadrate, the mesonotum with short, triangular scapulæ, the scutellum without a transverse impressed line before the tip, the metathorax more or less rounded off posteriorly.

*Front wings* fringed, the marginal vein rather long, the stigmal and poststigmal veins short. Females often wingless.

*Abdomen* suboval or conic-ovate, longly petiolated, the ovipositor exerted.

*Legs* rather stout, hairy.

Förster, as early as 1856,\* united *Theocolax* with *Cerocephala* and says: Walker hat in dem Ent. Mag., vol. ii, p. 149, Zwei Arten angeführt, *cornigera* Westw. und *formiciformis* Westw. Beide halte ich für dieselbe Art, die in Bezug auf Färbung und selbst auf die Kopfbildung, sowie nicht minder in der Grösse bedeutend variirt. Oft sind nicht zwei Exemplare völlig gleich gebildet. Der Name *cornigera*, als der ältere, würde beibehalten werden müssen und die Synonymie wäre folgende:

*Cerocephala cornigera* Westw., Guerin Mag. d. Zool., prem. Livr., pl. 4 (1831) ♂.

*Theocolax formiciformis* Westw., Lond. and Edin. Phil. Mag., 3d ser. i, no. ii, p. 127 (1832) ♀.

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\* Hymen. Stud. ii, p. 41.



*Læsthia vespertina* Hal., Ent. Mag., i, p. 335 (1833) ♂ ♀.  
*Epimacrus rufus* Walk., Ent. Mag., i, p. 369 (1833) ♀.  
*Sciatheras trichotus* Ratzb., Ichn. der. Forstins., ii, Bd. p. 209,  
 (1848) ♀ alata.

Notwithstanding this, Thomson, in his *Skandinaviens Hymenoptera*, vol. iv, p. 207 (1875), gives a table of the Spalangiina, based entirely on the color, the absence or presence of wings, and the smoothness of the mesonotum, in which he again separates *Theocolax* from *Cerocephala* and also recognizes the genus *Tricoryphus* Förster, as belonging to the group which was originally placed by Förster in his family *Cleonymoidæ*. In my studies in the group, I am convinced that color, punctuation, and the absence of wings are of no generic value, and I have united all of these genera under the older name *Cerocephala*.

The three species in our fauna may be separated as follows:

#### TABLE OF SPECIES.

Wingless or with rudimentary wings, . . . . . 2

Winged.

Pale brown disk of mesonotum and scutellum metallic brown.

Abdomen bronzy black; head and prothorax with iridescent reflections; wings hyaline with a broad brown band beyond the middle. ♀ Length, 1 mm., . . . . *C. pityophthori*, sp. n.

Reddish-yellow or honey-yellow. ♂ with a brownish metallic blotch across mesonotum and scutellum.

Abdomen in ♀ with the apical half metallic brown, in ♂ with a brownish transverse band.

Wings hyaline in ♂ with a slight brownish blotch below the stigmal vein; in ♀ with a larger discal blotch and a slight brownish streak below the juncture of the submarginal with the marginal. Length, 1.5 to mm.,

*C. scolytivora*, sp. n.

2.—Metallic brownish red; mesothorax broad, longitudinally aciculated.

Length, 2 mm., . . . . . *C. canadensis*, Prov.

*C. pityophthori*, sp. n.

♀.—Length, 1 mm. Pale brown, polished, impunctured; the disk of mesothorax and the scutellum metallic brown; the abdomen bronzy black; the head and prothorax with iridescent reflections; the tip of the antennæ black; ovipositor not quite half the length of the abdomen; the legs pale brownish-yellow, the posterior femora sometimes metallic.

Antennæ 9-jointed, clavate, moniliform, the pedicel longer than the first funicle joint; club large, usually inarticulate, but sometimes with one or two indistinct sutures. Wings hyaline with a broad brown band beyond the middle; the marginal vein is longer than the submarginal, the stigmal and postmarginal veins very short.

Hab.—Haw Creek, Florida.

Types in National Museum.



Described from four specimens, reared by Mr. E. A. Schwarz, in April, 1887, from *Pityophthorus consimilis* Lec.

**C. scolytivora**, sp. n.

♂ ♀.—Length, 1.5 to 2 mm. Reddish-yellow or honey-yellow, highly polished, impunctured; in the ♂ with a brownish submetallic blotch across the mesonotum and the scutellum, and a brownish transverse band on the abdomen; the coxæ, trochanters, tarsi, and petiole, white; antennæ 10- or 11-jointed gradually incrassated toward tips, submoniliform; wings hyaline, except a slight brownish blotch below the stigmal vein; in the ♀ the apical half or more than the apical half of the abdomen is metallic-brown, sometimes with purplish reflections, the ovipositor projects with stout valves, its basal half yellow, its apical half black; the antennæ are stout, moniliform, 9-jointed, the club usually not jointed; wings hyaline with a brown blotch on its disk below the stigmal vein and a much narrower brown streak below the juncture of the submarginal with the marginal; the marginal vein is longer than the submarginal, the stigmal and postmarginal short, the former oblique and thickened at tip. The eyes, in both sexes, are brown, bare, ocelli in a triangle. The head anteriorly is tricornuted, the keel between the antennæ sharp, triangularly pointed.

Hab.—South Florida.

Types in National Museum.

Described from 16 specimens, reared April 14, 1884, by Mr. E. A. Schwarz, from *Loganius ficus* Schwarz, MS., found on *Ficus aurea*.

**C. canadensis** Prov.

*Theocolax canadensis* Prov., Faun. Hym. Can. ii, p. 809.

♀.—Length, 2 mm. Metallic brownish-red with coppery reflections. Antennæ kneed after the scape, which is long and lodged in a groove of the face, brown, the scape testaceous, the last joints thickened, clavate. Prothorax in the form of an elongate collar; mesothorax broad, longitudinally aciculated before. Rudiments of wings short. Legs testaceous; the extremity of the femora and the anterior tibiæ brownish. Abdomen thickened at the extremity; the ovipositor one-quarter the length of the abdomen, testaceous, the extremity black.

Hab.—Cap Rouge, Canada.

Type in Coll. Provancher.

Unknown to me. The Abbé says: “Nous ne sommes pas certain que cet insect soit réellement un *Théocolax*, ce sont bien les antennes de ce genre tel que décrit par Westwood, mais le prothorax n'est pas triangulaire.”



**CHÆTOSPILA** Westwood, Thes. Ent. Oxon., p. 137.

(Type *C. elegans* Westw.)

“Caput quadratum antice trilobatum; mandibulæ subtrigonæ apice obliquo 4-dentato (pl. xxv, fig. 10a); maxillæ lobo apicali membranaceo rotundato setoso, palpis maxillaribus 4-articulatis articulis primo et tertio brevibus (fig. 10b); mentum oblongo-ovale; labium oblongum in medio paullo constrictum apice rotundato, palpis labialibus biarticulatis articulis aequalibus (fig. 10c); antennæ 8-articulatæ (absque articulis annuliformibus) articulis 2-7 longitudine fere aequalibus at sensim crassioribus, ultimo majori longo-ovali (fig. 10d); collare semiovale capite angustius; mesonoti scutum breve, scutellum magnum; pedunculus abdominalis brevis; abdomen magnum ovale; alæ amplæ, setis longis marginatæ, vena subcostali trientem costæ vix attingente, apice ejus in fasciculum setarum erectarum terminato, ramo stigmaticali minuto; pedes graciles.”

Unknown to me. Prof. Westwood further says: “The remarkable fascicles of short erect bristles at the junction of the subcostal vein with the costa is quite peculiar, and, so far as I have observed, does not occur in any other insect. The insect is closely allied to *Cerocephala*, from which it differs in the short peduncle to the abdomen and the 8-jointed antennæ, these organs in *Cerocephala* being distinctly 10-jointed, the eighth and ninth being equal in size to the two preceding joints.”

The type *C. elegans* is figured l. c. supra, on pl. xxv, fig. 10, and was reared from *Zea mays*. It is undoubtedly parasitic on some Coleopteron living in the corn.

The peculiar fascicles of short erect bristles to which Prof. Westwood calls especial attention is likewise at times present in *Cerocephala*. It is a peculiar feature of *Sciatheras trichotus* Ratz., and is very distinctly shown in his figure of this insect, Ichn. der Forstins, Bd. ii, Taf. iii, fig. 1. Moreover, on page 209 he has called especial attention to it in the following words: “Weit eigenthümlicher und ganz einzig ist die Verzierung der Flügel-Junktur. Hier steht ein Flauch von feinen Börstchen (Fig. a, schwach vergrößert und Fig. 6, jener Flauch in einer etwas veränderten Richtung stark vergrößert).”

The genus appears to me scarcely distinct from *Cerocephala*.

**SPALANGIA** Latreille, Gen. Crust. et Ins., iv, p. 29.

(Type *S. niger* Latr.)

*Head* oblong or ovate, anteriorly truncate. *Eyes* ovate, hairy. *Ocelli* 3, in a triangle.

*Mandibles* oblong, bidentate at tips.

*Maxillary* and labial palpi 2-jointed.

*Antennæ* elbowed, inserted at the mouth, 10- or 12-jointed, in ♀ clavate or subclavate, in ♂ filiform, the third joint elongated.



*Thorax* long, the prothorax long, narrowed anteriorly, mesonotum prominent anteriorly, the scapulæ prominent, the scutellum flat with a transverse impressed or punctate line before the tip, metathorax subquadrate, the posterior angles obtusely dentate, the dorsum with a medial sulcus.

*Wings* narrowed basally, the margins fringed; the marginal vein is very long, and the postmarginal and stigmal veins are very short.

*Abdomen* ovate, convex, the apex obtuse, ovipositor sub-exserted, short, stout, and slightly compressed.

*Legs* rather long and slender, the coxæ large, compressed, the femora most frequently attenuated, tibial spurs 1, 1, 1, the tarsi shorter than the tibiæ, the intermediate joints very minute, metatarsus anteriorly dilated, the posterior tarsi elongate.

This genus is distinguished at once by the long head, the antennæ inserted at the mouth, and by the cross-furrow before the tip of the scutellum.

Five species have been recognized in our fauna, only three of which are known to me, which may be separated as follows:

#### TABLE OF SPECIES.

##### Females.

Blue-black species, . . . . . 2  
 Bluish-green, the tergum with a cupreous band at base, densely punctured.

Wings hyaline, slightly dusky, . . . . . *S. polita* Say.

Black, more or less bronzed, the thorax rugoso-punctate.

Wings dusky with brownish nervures, . . . . . *S. ænea* Prov.

##### 2. Mesonotum and scutellum æneous.

Head and prothorax with large, close, umbilicate punctures; wings hyaline, the marginal vein a little more than half the length of the submarginal, . . . . . *S. rugosicollis*, sp. n.

Head with coarse, distant punctures, the prothorax smooth; wings hyaline, the marginal vein long, . . . . . *S. drosophilæ*, Ashm.

Head and prothorax smooth, impunctured; wings hyaline, the marginal vein two-thirds the length of the submarginal,

*S. hæmatobiæ*, sp. n.

*S. polita* Say. Leconte Ed. Say's Works, vol. i, p. 382.

"Bluish-green; tergum with a cupreous band at base. Inhabits Virginia.

"Body bluish-green, varied with violaceous, densely punctured; front grooved to receive the basal joint of the antennæ; flagellum fuscous; wings hyaline, slightly dusky; scutel somewhat prominent; abdomen a little depressed; first segment brilliant cupreous; incisures glabrous; terminal segment longer than the others together, forming at tip a nar-



rowed, carinated black process for the reception of the tip of the oviduct; feet dull honey-yellow. Length ♀ seven-twentieths of an inch." (Say.)

Hab.—Virginia.

Mr. Say further says:

"I found this species on the sea beach of Sempuxent Island."

*S. ænea*, Prov. Add. à la Faun. Hym., p. 200.

♂.—Length, 2 mm. Black, more or less bronzed, with the mouth and antennæ reddish. Antennæ very long, filiform, pubescent, the joints distinct. Thorax rugoso-punctate, the prothorax very short. Wings generally obscured with brownish nervures. Legs brown, more or less reddish. Abdomen with a short and stout petiole, the rest oval, depressed; the third segment the largest, polished, shining, rounded at the extremity. (Provancher.)

Hab.—Ottawa (Harrington).

Unknown to me and probably not a *Spalangia*.

*S. rugosicollis* sp. n.

♀.—Length, 2.5 mm. Blue-black, the mesonotum and scutellum, æneous; the head and prothorax with large, close, umbilicate punctures; the mesonotum with a large, polished, impunctate space anteriorly, but rugoso-punctate posteriorly; the parapsides and scutellum with some sparse round punctures; mesopleura smooth with a fovea at the middle.

Legs blue-black, the tarsi, except the last joint and the claws, reddish-yellow; the second joint of posterior trochanters is dilated above. Scutellum with a transverse row of punctures before the tip. Metathorax carinated, the space on each side of the central carina, rugoso-punctate.

Abdomen oval, the petiole very long, longitudinally striated, the second and fourth segments the longest, the latter longer than the second, the third about half the length of the second. Wings hyaline, the venation brown; the marginal vein is a little more than half the length of the submarginal, the postmarginal and the stigmal veins very short, about equal, thrice as long as thick.

Hab.—Missouri.

Type in National Museum.

Described from a single specimen. The species seems to come nearest to the European *S. hirta* Hal., but it is decidedly smaller and not so distinctly metallic.

*S. drosophilæ*, Ashm. Trans. Am. Ent. Soc., xiv, p. 199.

♀.—Length, 2 mm. Blue-black, shining. The oblong, flattened head has a longitudinal medial groove, with coarse, *distant* punctures and a sparse pubescence. Antennæ 10-jointed. Prothorax elongate, narrowed before; the scutellum is divided by a transverse row of punctures before the tip; the metathorax has two lateral longitudinal grooves and its disk with a double row of coarse punctures confluent behind. The abdominal



petiole is moderately long, longitudinally striated; the third abdominal segment very slightly shorter than the fourth, the second the longest. Legs clavate, black, pubescent, the tarsi reddish. Wings hyaline, the marginal vein long.

Hab.—Jacksonville, Fla.; Savannah, Ga.

Type in Coll. Ashmead.

The type was reared by me from a dipterous larva, *Drosophila* sp., feeding in decaying oranges; there is also another specimen in the National Museum, reared by Dr. Riley, August 29, 1881. from a dipterous puparium found by Mr. Howard on rice at Savannah, Ga.

**S. hæmatobiæ, sp. n.**

♀.—Length, 2 mm. Blue-black, highly polished, impunctured, except a small oval space on the mesonotum just in front of the scutellum; the parapsides or shoulders are metallic. The oblong head is smooth, impunctured, with a central longitudinal grooved line.

Mandibles and palpi black. Antennæ 10-jointed (scape, pedicel, 7 funicle joints and club), subclavate, black; the scape is almost as long as the head, slender and cylindrical; the pedicel long, twice the length of the first funicle joint; the second funicle joint is a little shorter than the first, the joints beyond to the club quadrate; club inarticulate and about as long as the three preceding joints together.

The prothorax is about twice the length of the mesonotum, polished, except the narrow neck-like process at the juncture of the head, which is finely, opaquely rugose. Scutellum large, smooth, with a transverse subapical impressed line; the post-scutellum is followed by a row of round punctures. Metathorax as long as the scutellum, tricarinated, smooth and shining. Legs blue-black, the posterior femora æneous; tarsi above fuscous, beneath with a short, dense, pale pubescence. Wings hyaline, strongly iridescent, the venation black; the submarginal vein reaches the costa at about one-third of the length of the wing, its tip a little incrassated; marginal vein long, more than two-thirds the length of the submarginal; the postmarginal and stigmal very short, equal, about thrice as long as thick.

Hab.—Warrenton, Virginia.

Type in National Museum.

Described from a single specimen, reared by Dr. Riley September 13, 1889, from the Horn-fly larva, *Hæmatobia serrata*.

The paper was briefly discussed by Messrs. Howard and Smith, the latter inquiring whether the Spalangia which has been reared in this country from cow's dung infested by the larvæ of the Horn Fly is an imported species. Mr. Ashmead replied that it is new to science, and in all probability a native form.





Ashmead, William H. 1894. "A synopsis of the Spalangiinae of North America." *Proceedings of the Entomological Society of Washington* 3, 27-37.

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