

NOTES ON SOME PARASITIC HYMENOPTERA, WITH DESCRIPTIONS OF
NEW SPECIES.

BY THE REV. T. A. MARSHALL, M.A.

PHYGADEUON SCOTICUS, *n. sp.*

Ph. niger, sub-depressus, capite coriaceo, remote punctulato; mesothoracis disco punctato, parum nitido; alarum squamulis, segmentis 2^{do} et sequentibus, trochanterum femorumque apicibus, tibiis tarsisque, castaneis; alis fusco-hyalinis, stigmatate et radio fuscis, radice pallidiore; areola pentagona, nervo externo obsoleto; terebra segmento 1^o paulo longiore.

♀ Long. 3—3½ lin. (terebra excl.)

Metathorax rugulose; *areolæ spiraculiferæ* and *pleurales* distinct, the others obsolete. Spiracles orbicular. Carinated margin of the declivity of the metathorax distinct, single, not laterally toothed. Vertex with a broad shining fovea behind the antennæ. Antennæ stout, filiform, a little longer than the head and thorax, fuscous. Palpi castaneous. Body sparingly clothed with fulvous hairs. Tubercles of the first segment of the abdomen inconspicuous; all the segments aciculated, not shining; the apical segments sometimes slightly infuscated; the anus whitish.

Allied to *P. abdominalis*, Gr., and *obscuripes*, Tasch (= *abdominator*, var. 3, Gr.), but is larger, wanting the white ring of the antennæ, and with the abdomen opaque, etc.

Two specimens from the Black Wood of Rannoch.

PHYGADEUON ERRATOR, *n. sp.*

Ph. niger, abdomine rufo, polito, apice sub-compresso; segmento 1^{mo} nigro, apice rufo; pedibus rufis, femoribus 4 posterioribus præter basin et apicem, tibiis posticis præter basin, tarsis iisdem totis, nigris; alis fusco-hyalinis, stigmatate et radio fuscis, radice et squamula rufis, areola pentagona, nervo externo obsoleto; antennis fusco-ferrugineis, annulo albo; terebra segmento 1^{mo} paulo longiore.

♀ Long. fere 4 lin. (terebra excl.)

Metathorax and vertex as in the preceding. On the inner vertical orbit of each eye, above the antennæ, is a rufous line. Antennæ moderately stout, filiform, fusco-ferruginous, joints 7—12 white, joint 7 fuscous beneath. Palpi rufous. Metathorax and abdomen on the sides with a few pale hairs. Abdomen elongate, impunctate, shining, red; 1st segment black, long, and slender (for a *Phygadeuon*), red at the middle of the apex, tubercles not prominent.

Might be an *Ichneumon*, but for its exerted ovipositor. Allied to *Phygadeuon desertor*, Gr., from which it differs in the number of white joints of the antennæ, the coloration of the legs, the sculpture of the metathorax, etc.

One specimen from the London district.

The following strange piece of synonymy among the *Ichneumonida* deserves mention, if only for the purpose of inviting criticism. Of its truth I have thoroughly convinced myself, although unwillingly.

♀ *ICHNEUMON CRASSIPES*, Gr., i, 622.

♂ *Ichn. latrator*, Gr., i, 572 (*excl.* ♀).

♀ Var. with short wings, *Brachypterus means*, Gr., i, 675; Ste. Mand. vii, pl. 40, fig. 2; *Pterocormus means*, Först., Mon. Pez., 24.

The original description of *Brachypterus means* was drawn up by Gravenhorst from a single specimen sent him by the Rev. F. W. Hope from Netley, in Shropshire. A similar form does not seem to have occurred on the Continent; but I fortunately possess four, taken long ago somewhere in the Midland Counties,—I believe at Bridgenorth. They agree *ad amussim* with *I. crassipes*, even in the sculpture of the metathorax, the most certain proof of identity. My specimens of *I. crassipes* are undoubtedly rightly named, having passed through several examinations, including one by the late Mr. Desvignes.

Genus *APTESIS*, Först., Mon. Pezom., 34.

The insect named *Pezomachus hemipterus* by Gravenhorst (ii, 874) was described from a single German specimen, now lost. Upon the strength of that description only, it is placed in Förster's genus *Aptesis*; he rightly remarking that it cannot be assigned to any other. It cannot be assigned even to *Aptesis*, unless the following character of the genus be modified, "das erste Segment punktirt, nicht langsrundlich," for the first segment of *A. hemiptera* is most distinctly wrinkled longitudinally. One of the new species here to be described exhibits the same rugosity, and it is only by claiming for them the same privilege as for *hemiptera* that I can allow myself to refer them to this genus.

APTESIS GRAVICEPS, *n. sp.*

A. nigra, capite maximo, antennis piceis, basi testaceis, albo semiannulatis; abdomine picescente, segmentis 1° apice, 2^{do} disco, plus minus

dilutioribus; *alis metathorace longioribus, fusco-hyalinis, stigmatate et radio pallide fuscis, areola irregulari, subtus aperta, vel punctiformi, obsoleta*; *pedibus testaceis*; *terebra segmenti 1^{mi} longitudine.*

♀ *Long. 1 lin. (terebra excl.)*

Head very large, twice as broad as the thorax, and with the thorax and 1st segment of the abdomen finely punctulate. Antennæ tricolorous, joints 1—3—4 testaceous, the rest blackish, 7—8 white above. Areolæ of the metathorax distinct; *areola superomedia* short, small; *posteromedia* hexagonal, narrow above, widest in the middle, and slightly decreasing in width thence to the apex; *areolæ spiraculiferæ* bisected by a transverse carina; all the areolæ distinctly punctulate. First segment of the abdomen with the tubercles inconspicuous, medial; three times wider at the apex than the width of the petiole, *punctulate*, with 2 abbreviated longitudinal carinæ, and 2 lateral longitudinal furrows; apex glabrous. Segments 2, etc., hardly punctulate, shining, black, sometimes more or less pitchy. *Terebra* fulvous, the sheaths testaceous, tipped with black. Fore-wings with a triangular stigma; the apical nervures imperfect (in one specimen the radial cell is closed on the right side, and open on the left); areolet transverse, 4 angular or irregular, the lower nervure incomplete (in one individual the areolet is obsolete, reduced to a punctiform knot; the same insect has also rather shorter wings).

I took four of this distinct and unnoticed species last month, in a wood near Milford Haven.

APTESIS STENOPTERA, n. sp.

A. nigra, antennis fuscis, basin versus testaceis; pedibus, abdominis segmento 1^{mo} apice, 2^{do} toto, testaceis; segmentis 3^{do} et sequentibus fusciscentibus; alis angustis, metathorace longioribus, fusco-hyalinis, stigmatate et radio pallide fuscis, areola irregulari, extus aperta; terebra abdominis longitudine.

♀ *Long. 1½ lin. (terebra excl.)*

Head broader than the thorax; both finely punctulate, almost coriaceous. Joints 1—5 of the antennæ testaceous, the rest dusky, darker at the apex. Areolæ of the metathorax not so distinct as in the preceding; the *superomedia* irregularly hexagonal, slightly narrowed above; *areolæ spiraculiferæ* bisected as in the preceding; all these areolæ shining, nearly impunctate. First segment of the abdomen with the tubercles medial, inconspicuous; only twice as broad at the apex as at the base of the petiole; *sub-rugulosely* punctulate; black, the apex testaceous; glabrous; 2 lateral carinæ not reaching the apex.

Second and following segments glabrous, shining, the 2nd testaceous, the 3rd and following testaceous suffused with fuscous (the dark intestines shining through). Aculeus as long as the abdomen, red, the sheaths dusky. Fore-wings narrow, not widened beyond the middle; areolet transverse, open exteriorly; beneath it is an oblong whitish spot, which also invades the areolet.

Resembles *A. brachyptera*, Gr., but may be known by the absence of a white ring on the antennæ, by the black 1st segment, the longer terebra, and the differently constructed wings and metathorax.

Two specimens taken, last year and this, near Milford Haven.

Having captured no less than 8 of *A. hemiptera* in this neighbourhood (some with developed wings), I think it worth while to note some of their characters, by way of supplement to the description of Gravenhorst, made from a single short-winged specimen.

APTESIS HEMIPTERA.

Pezomachus hemipterus, Gr., ii, 874.

Aptesis hemiptera, Först., Mon. Pezom., 39.

A. alis vel brevibus apice infuscatis, bis albido maculatis, vel completis, fuscis, fasciis 2 albidis; stigmatibus albo nigroque; nigra; antennarum basi, segmentis 2 et 3, pedibusque, rufis; geniculis posticis nigris.

♀ Long. $1\frac{1}{2}$ — $2\frac{1}{4}$ lin. (terebra excl.)

Antennæ with joints 1—7—8 fulvous; the rest blackish. Metathorax distinctly areolated, as in *A. graviceps* (supra). First segment of the abdomen longitudinally rugose. Six specimens.

Var. ♀. *Alæ abdomine longiores.*

Fore-wings fuscous; one-half the stigma, a transverse fascia beneath it, and a large indeterminate apical spot, or fascia, whitish. The neuration is that of *Hemiteles*, to which genus the insects would be referred, if not necessarily identified with the hemipterous form. Two specimens.

The species of *Ceraphrontidæ*, almost entirely neglected in this country, have found describers on the Continent in Nees von Esenbeck, Boheman, and C. G. Thomson. The following indications will show the genera and species I have hitherto ascertained to be British, including a new *Megaspilus* :—

I. Antennæ ♂ ♀ 11-jointed.

i. Mesothorax with three dorsal lines. Wings (if any) with a broad stigma.

1. Metathorax with a bifid spine beneath the scutellum.

Gen. HABROPELTE, Thoms., Öfv., 1858, p. 288.

Ceraphron, Boh.,—*Megaspilus*, Westw., Först.

Sp. 1. DUX, Curt., B.E., 249, No. 1 = *scutellaris*, Boh., Handl., 1831, p. 325, ♀ = *tibialis*, Boh., *ibid.*, p. 326, ♂.

Sp. 2. STRIOLATA, Thoms., Öfv., 1858, p. 288.

2. Metathorax with a short simple spine.

a. Radius shorter than the stigma.

Gen. TRICHOSTERESIS, Först., Hym. St., ii, p. 99.

Ceraphron, Boh., Nees; *Thliboneura*, Thoms.

Sp. 1. GLABRA, Boh., Handl., 1831, p. 328 = *C. clandestinus*, Nees, Mon., ii, p. 276.

b. Radius longer than the stigma.

† Antennæ ♂ ramose or serrated. Eyes ♀ glabrous.
Both sexes winged.

Gen. LYGOCERUS, Först., Hym. St., ii, p. 99.

Ceraphron, Thoms.

Sp. 1. HALIDAYI, Curt., B.E., 249, fig.

Sp. 2. CARPENTERI, Curt., B.E., 249, No. 10 = *basalis*, Thoms., Öfv., 1858, p. 290.

Sp. 3. RAMICORNIS, Boh., Handl., 1831, p. 329.

Sp. 4. SERRICORNIS, Boh., *ibid.*, p. 334.

Sp. 5. PUBESCENS, Thoms., Öfv., 1858, p. 292.

†† Antennæ ♂ not ramose or serrated. Eyes ♀ hairy. The ♀ often apterous.

Gen. MEGASPILUS, Westw., Phil. Mag., ser. iii, vol. i, p. 128.

Sp. 1. ABDOMINALIS, Boh., Handl., 1831, p. 330 = *tenuicornis*, Boh., *ibid.*, p. 332.

Sp. 2. SYRPHI, Bouché, Naturg., 175, pl. vii, fig. 33, 36—39, and 41 = *Eupelmus syrphii*, Nees, Mon., ii, p. 420.

Sp. 3. BOREALIS, Thoms., Öfv., 1858, p. 297.

Sp. 4. ARCTICUS, Thoms., *ibid.*, p. 295.

Sp. 5. FUSCIPES, Nees, Mon., ii, 278.

Sp. 6. CURSITANS, Nees, Mon., ii, 284.

Sp. 7. HALTERATUS, Boh., Handl., 1831, p. 336 = *brevipennis*, Nees, Mon., ii, p. 283, ♀ = *longicornis*, Boh., Handl., 1831, p. 337, ♂.

Sp. 8. MELANOCEPHALUS, Boh., *ibid.*, p. 337.

Sp. 9. THORACICUS, Nees, Mon., ii, p. 283 = *halteratus*, var. g, Boh., Handl., 1831, p. 336.

Sp. 10. ALUTACEUS, Thoms., Öfv., 1858, p. 296.

Sp. 11. CRASSICORNIS, Boh., Handl., 1831, p. 331 = *sulcatus*, Nees, Mon., ii, p. 277.

Sp. 12. RUFIPES, Nees, Mon., ii, p. 277.

Sp. 13. MEGASPILUS ATELOPTERUS, n. sp.

M. piceo-testaceus, capite et thorace nigris; antennarum articulis 2 primis piceo-testaceis, 3—7 rufo-nigris, cæteris nigris, scapo capite longiore; fronte et thorace alutaceis; alis angustis, fere halteriformibus, abdominis basin paulo excedentibus; pedibus cum coxis piceo-testaceis; abdomine thorace latiore et longiore, basi striolato. ♀ Long. $\frac{3}{4}$ lin.

Front broadly excavated above the antennæ, and with a small fovea below the foremost ocellus. Antennæ stout, sub-clavate, nearly as long as the body, the two apical joints sub-equal. Disc of the mesothorax sub-rufescent. Scutellum large, depressed, somewhat shining. Abdomen glabrous, sub-pellucid, pale pitchy, ovate, depressed at the base, at the apex sub-compressed, acuminate, and recurved. First segment occupying two-fifths of the length of the abdomen; the 2nd and following gradually shortened to the apex. Hinder femora and tibiæ incrassated. Head deflexed, vertex transverse, as broad as the thorax.

In a wood near Milford Haven; August. Distinguished from large individuals of *M. thoracicus*, Nees, by the stouter antennæ, with the 2 apical joints sub-equal; by the broader and entirely pale abdomen, etc.

There are several more species of *Megaspilus*, not yet known to me by name.

ii. Mesothorax with one dorsal line. Wings ♂ with a linear stigma; ♀ apterous.

Gen. LAGYNODES, Först., Hym. St., ii, p. 98.

Microps, Hal., Thoms.

Sp. 1. PALLIDUS, Boh., Handl., 1831, p. 338.

II. Antennæ ♀ 10-, ♂ 11-jointed. Stigma linear or none. Both sexes winged.

* Mesothorax with an impressed dorsal line; scutellum margined.

Gen. CERAPHRON, Jur.,—Först., Hym. St., ii, 98.

Calliceras, Nees, Thoms.

Sp. 1. BISPINOSUS, Nees, Mon., ii, p. 280.

Sp. 2. NANUS, Nees, *ibid.*, p. 284 = *Call. pallida*, Thoms., Öfv., 1858, p. 302.

Sp. 3. *NIGRICEPS*, Thoms., *ibid.*, p. 302.

Besides several more not yet ascertained.

** Mesothorax with an almost invisible dorsal line ; scutellum not margined.

Gen. *APHANOGMUS*, Thoms., *Öfv.*, 1858, p. 305.

Sp. 1. *HYALINIPENNIS*, Thoms., *ibid.*

Sp. 2. *TENUICORNIS*, Thoms., *ibid.*

There are more British species of this genus not yet ascertained. They are the minutest of the group, averaging less than half-a-line in length.

College, Milford Haven : *September*, 1868.

OBSERVATIONS ON THE OCCURRENCE OF *SPHINX CONVOLVULI* IN GREAT BRITAIN.

BY THE REV. JOHN HELLINS, M.A.

My friend, Mr. D'Orville, having seen and captured in his garden an unusual number of specimens of this fine moth during the past autumn, has endeavoured to make some observations which may tend to throw some light on its appearance in this country ; and he has kindly placed his notes in my hands for publication.

Between August 15th and September 28th of this year, he captured 27 males and 29 females, and 2 more were brought into his house by the cat ; but a very large proportion of the total number were entirely unfit, from their battered state, to be preserved as cabinet specimens.

But this is to be remarked, that the good and the battered specimens of both sexes occurred *together* throughout the whole period ; it was by no means the case that the first taken were the finest, and the last the worst.

The first moth was taken on August 15th, a female, with its abdomen so flat, that Mr. D'Orville concluded it had deposited all its eggs. A few days later, on capturing a battered female with abdomen equally flat, he dissected it, and found in it 220 well-formed eggs, thus proving his first conclusion to have been too hasty. On the 21st August, he dissected another female, and found its ova to be quite undeveloped, mere small green gelatinous spots. On September 8th, he tried a further experiment ; he shut up a damaged female in a large box, supplying her with diluted honey and sugar for food ; on the fourth day after he found her dead, but he found also that she had laid eight eggs in the box ; and when he proceeded to open her body, he found not one