

the male flowers of four sepals, glandular at the margins. Corolla none. Filaments of the stamens very short. Anthers 2-celled: cells separate, elongated, "verruciform." Sepals of the female flowers 3, lanceolate, distinct. Corolla 0. Stamens 0. Styles 3, long, divided at the apex into several slender laciniae. Capsule 3-celled, 3-valved; cells 4-seeded. Seeds ovate, smooth, brown.

Frequent in corn-fields in the Tanjore and Cuddalore districts. The specimen figured is from the neighbourhood of Dindegul.

PLATE V. Fig. 1, extremity of a spike; f. 2, one of the stellated appendages from the same; f. 3, scale with female flowers, magnified.

XV.—New British Insects indicated in Mr. Curtis's Guide.

By A. H. HALIDAY.

THE references are to the genera and species as numbered in the 2nd edition; and where the Appendix is referred to, the number of the column is added.

COLEOPTERA.

Calathus nubigena, C. 53. 5.

C. subapterus niger antennarum basi thoracis lateribus pedibusque rufescentibus; thoracis basi utrinque leviter impressa, angulis subrectis; elytris leviter striatis: *m. f.* Long. $3\frac{1}{2}$ lin.

Under stones on the top of Sliebh Donard, Downshire.

Omaseus tetricus, C. 37. 9.

Has been lately described under the name *Pterostichus gracilis*, Erichson KÖf. M. Brand. i. 72.

HYMENOPTERA.

Ichneumon phaleratus, C. 484. 153°.

I. ore orbita scutello et segmentorum marginibus albidis, thorace multifariam albido-lineato; femoribus tibiisque croccis, posticis apice nigris, *m. f.*; facie albida, *m.*; antennarum semiannulo albo, *f.* Long. $3\frac{1}{2}$ lin.

Ireland, on a willow, September.

The characters of this species are intermediate between *Ichneumon* and *Hoplismenus*.

Tryphon hamosternus, C. 492. 100^b.

T. arcola nulla; unguibus denticulatis; pectore pedibusque rufis, tibiis posticis basi albidis, apice et ante basin fuscis; terebra crassa deflexa, *f.* Long. 3— $3\frac{1}{2}$ lin.

On willows, Ireland, May, &c.

Subgenus CTENISCUS, C. 492. bis.

Tibiarum Calcaria 1 : 1 : 0. *Characteres reliqui* subg. *Tryphon*.

Tryphon Curtisii, C. 492. 2.

Ct. unguibus denticulatis; scutello et facie albido-maculatis, segmentis summo margine albidis; pedibus rufis, tibiis tarsisque posticis nigris, crassiusculis, *f.* Long. 4 lin.

Ireland, on a willow; June.

Distinguished from *T. gnathoxanthus* and allied species by its more robust figure, and the thickness of the hind tibiæ and tarsi, in which respect it resembles a *Scolobates*.

Tryphon aurifluus, C. 492. 3.

Ct. abdomine rufo basi apiceque nigro, segmentis posterioribus summo margine albidis; facie albido-maculata; pedibus rufis, posticorum femoribus tibiis tarsisque apice nigris, *m. f.* Long. $3\frac{1}{2}$ lin.

On willows, Ireland; May—Sept.

Tryphon phæorrhæus, C. 492. 6.

Ct. pedibus anterioribus ferrugineis, basi nigris; abdominis apice fulvo, *m.* Long. $\frac{3}{4}$ lin.

Obs. To the same subgenus are to be referred *Tryphon lucidulus*, *sexlaturatus*, *gnathoxanthus*, *sexcinctus*, *quinquecinctus*, *succinctus*, *cephalotes*, *triangulatorius*, and several undescribed British species.

Exochus antiquus, C. 493. 213^d.

E. areola quinqueangulari; linea ante alas, facie orbita, pedibusque flavis; posticis basi fulvis, coxis nigris, *m.* Long. 3 lin.

Holywood.

Exochus lictor, C. 493. 222^b.

E. areola nulla; clypeo obtusangulo; capite thorace scutelloque flavo-maculatis; pedibus flavis, posticis basi fuscis, *f.* Long. 3 lin.

Isle of Wight, Sept. ? F. Walker.

Exochus pectoralis, C. 493. 222^c.

E. areola nulla; facie orbita, pectore, pedibusque anterioribus flavis; posticis fulvis, tibiis tarsisque albidis, apice fuscis, *m.* Long. $2\frac{1}{4}$ lin.

Eyre-court, county Galway; September.

Exochus Talpa, C. 493. 226^c.

E. areola nulla; abdominis basi scabricula; scutello immarginato; tibiis anticis ferrugineis, posterioribus summa basi albidis, *m. f.*; antennis thorace non longioribus, *f.* Long. $1\frac{1}{2}$ —2 lin.

Ireland, April—May.—England, F. Walker.

Genus PERIOPE, Curtis's Guide, 1st edition. App. 538^a.

Abdomen subpetiolatum postice compressum, elongato-fusifforme. Terebra recondita. Thorax brevissimus gibbus. Antennæ breves subclavatae. Facies protuberans. Clypeus basi impressus. Pedes breves; calcaria 1:2:1; ungues denticulati. Areola minuta subtriangularis.

Periope auscultator.

P. segmentis 2^o et 3^o rufis, basi nigris; tibiis tarsisque fulvis, *f.*

Long. 4 lin.—Confer *Ichn. impugnator*, Schranck. F. B. 2125.

In a grove of larches, Eyrecourt, Sept.

Genus CRYPTUS.—Subgenus MESOCHORUS.

* Alarum posticarum nervo anali discreto.

Cryptus atricilla, C. 508. 338^a.

M. abdomine compresso petiolato; testaceus, antennis concoloribus, capite abdominisque apice nigris, *m. f.* Long. 6½ lin.

Hollywood, August, September,

** Alæ posticæ nervo anali destitutæ.

Cryptus fulgurans, C. 508. 338^c.

M. scutello convexo; abdomine petiolato; totus testaceus, *m. f.*

Long. 3—3½ lin.

Hollywood, August, September.

Cryptus olerum, C. 508. 338^b.

The description omitted for the present, as it may prove to be a variety of *C. splendidulus*.

Cryptus Sylvarum, C. 508. 338^e.

M. scutello convexo; abdomine compressiusculo petiolato; pectore rufo; ore orbita pedibusque testaceis; tibiis posticis pallidioribus, basi et apice puncto nigro; terebra brevissima latissima, *f.* Long. 2—3 lin.

Var.—Mesothoracis scuto rufo-bilineato.

England, F. Walker.—Ireland and the Hebrides, in woods, June—August.

Obs. Distinguished from the other species of the present section by its elongate figure and compressed abdomen, and in these particulars approaching *C. alarius* and *atricilla* of the first section.

Cryptus complanatus.

M. thorace deplanate-cylindrico; abdomine breviter petiolato, segmento 1^o apice ruguloso; capite, antennis basi, abdominis medio, pedibusque testaceis, coxis posticis fuscis, *f.* Long. 1¾ lin.

Var.—Femoribus posticis et apice tibiaram fuscis.

England, F. Walker.

Cryptus arenarius, C. 508. 338^b.

M. scutello convexo; abdomine subpetiolato; mesopleuris punctulatis; tibiis testaceis, posticis apice fuscis, *m. f.* Long. $1\frac{1}{2}$ —2 lin.

On *Salix argentea*, Portmarnock, county Dublin, June.

Subgenus PLECTISCUS, Gr.

There is so much dissimilarity among the species included in this group that I would propose dividing it into two, and adding a third for the reception of some small species, which I formerly arranged with *Xorides*, but which agree with the genuine *Plectisci* except in respect of the wings.

Subgenus HELICTES, C. 509^b.

Abdomen petiolatum, segmento 1^{mo} attenuato, lateribus sinuato tuberculis mediis. Terebra recondita aut subexerta. Thorax gibbulo-cylindricus. Antennæ graciles involutæ, radícula prominula, scapo bulbiformi, oblique exciso. Areola nulla. Pedes graciles, postici subelongati.

In this group I would place *Cryptus impurator* and *erythro-stoma*, Gr.; also the following:

Cryptus fulvicornis, C. 509^b. 347.

H. abdominis medio pedibusque testaceis, coxis posticis basi fuscis, antennis fusco-testaceis, *f.* Long. 2 lin.

Var.—Segmentis intermediis fusco-cingulatis, etiam coxis posticis totis fuscis.

England, F. Walker.—Ireland.

I think this is the female of *P. erythrostroma*.

Cryptus cruentatus, C. 509^b. 346.

H. scutello pectore pedibusque rufis, posticorum tibiis apice tarsisque fuscis, *f.* Long. 3— $3\frac{1}{2}$ lin.

Var.—Segmentis intermediis margine castaneis.

In shady places, Ireland.—England, F. Walker.

Very active, and is continually rolling and unrolling the spiral of its antennæ.

Cryptus varius, C. 509^b. 348.

H. abdominis cingulo pedibusque fulvis, coxis anterioribus, trochanteribus facie, et linea hamata ante alas, albidis, *m.* Long. $2\frac{1}{2}$ lin.

Portmarnock, June.

Subgenus CLEPTICUS (*Xorides* spp. C. 542.).

Abdomen petiolatum, segmenti 1ⁱ tuberculis mediis s. anticis. Thorax gibbulus. Oculi magni protuberantes. Clypeus basi impressus semicircularis. Antennæ pedesque graciles. Areola nulla; radius cum cubito medio connivens. *Terebra exerta*.

Cryptus prætor, C. 542. 15^a.

Cl. antennarum basi pedibusque stramineis, segmento 2^o margine et sequentibus ochraceis intermediis fusco-maculatis, *m. f.*; abdomine lanceolato, segmento 1^o lineari-elongato lævi, terebra abdominis longitudine, *f.* Long. 3¼ lin.

In shady places, Ireland.

Cryptus comes, C. 542. 15^c.

Cl. antennarum basi pedibusque stramineis, abdominis ovati segmento 2^o margine et 3^o ochraceis, hoc lateribus fusco-maculato, 1^o nitido substriato; terebra corporis longitudine, *f.* Long. 2½ lin.

Cryptus socius, C. 542. 15^b.

Cl. antennarum basi pedibusque stramineis, abdominis ovati segmento 2^o margine et 3^o ochraceis, hoc lateribus fusco-maculato, 1^o nitido substriato, terebra ⅔ abdominis longitudine, *f.* Long. 2½ lin.

Cryptus paganus, C. 542. 15^d.

Cl. antennis basi subtus pedibusque stramineis; abdominis ovati segmento 2^o margine ochraceo, 1^o scabriculo canaliculato; terebra ½ abdominis longitudine, *f.* Long. 2 lin.

Eyrecoort, September.

Subgenus PLECTISCUS.

Areola minuta oblique transversa. Abdomen rarius sessile, segmenti 1ⁱ tuberculis anticis. Characteres reliqui ut in subg. *Clepticus*.

Here *Cr. collares*, *albipalpus*, *zonatus*, &c. find their place.

Pimpla Senator, C. 516. 113^b.

Eph. segmentis albo-marginatis, intermediis subtransversis, orbitis oculorum internis albis, mesothorace rufo albo-maculato, pedibus rufis, terebra corporis longitudine, *f.* Long. 4 lin.

Intermediate between *P. divinator* and *mediator*, resembling the first by its shorter figure and the form of the radial areolet, the latter in the length of the oviscapt.

Pimpla phænicea, C. 512. 66^b.

Pol. mesothorace cum scutello rufo, pedibus fulvis, tibiis posticis albidis apice fuscis, ore et antennarum basi subtus albidis, *m. f.* Long. 2½ lin.

A variety, as I now believe, of *P. percontatoria*.

Subgenus ACRODACTYLA (Barypus*, C. 490^b.)

Abdomen basi attenuatum, segmentis intermediis obsoletissime impressis; *f.* ventre apice fisso, terebra exerta brevi. Areola nulla. Tarsi apice incrassati, unguibus lobo infero dilatato obtuso.

The species of this little group are closely allied to the subg. *Polysphincta* (and to *P. percontatoria* in particular), but may be distinguished by the smoother abdomen attenuate at the base, the narrower stigma, and the structure of the claws. From certain *Pimplæ* of the typical subgenus which agree in this last respect, they may be known by the want of the areolet, in addition to the former characters.

Pimpla madida, C. 490^b. 2.

A. abdomine fusco-piceo incisuris nigris, palpis pedibusque stramineis, posticorum tibiis apice tarsisque fuscis, stigmatibus fusco, *m. f.* Long. 3 lin.

England, F. Walker.—Ireland, in shady groves.

Pimpla degener, C. 490^b. 1.

A. abdomine fusco-piceo incisuris nigris; antennarum basi subtus, palpis, pedibusque stramineis; posticorum tibiis apice, tarsisque fuscis, stigmatibus stramineo-piceo, metathorace canaliculato, *m. f.* Long. 2 lin.

In the same situations with the last.

Bassus serricornis, C. 522. 36.

Enc. capitis thoracisque picturis, abdominis fasciis quatuor interruptis, coxis anticis et trochanteribus, albidis; metathoracis macula laterali pedibusque fulvis; posticis apice fuscis, tarsis alboannulatis, *m. f.*; antennis medio dilatatis serratis, *m.*; antennis filiformibus, *f.* Long. 4 lin.

Wicklow, June.

Bassus Laricis, C. 521. 30^b.

O. areola irregulari subquadrangulari, segmentis intermediis margine antennarum pedibusque testaceis, fronte flavo-bimaculata, terebra subexerta, *f.* Long. 2 lin.

On larches, Holywood.

Porizon linguarius, C. 537. 178^b.

P. proboscide caput superante; mesopleuris punctatis, sulco laterali nullo; mandibulis, femoribus anticis, tibiisque rufescentibus; terebra corporis longitudine, *f.* Long. 2 lin.

England, F. Walker.

* *Barypus*, a genus of *Carabidæ*.

Obs. The maxillæ and labium inflected in repose extend as far as the coxæ of the intermediate legs.

GENUS *ATRACTODES*, *Gr.*

* Petiolus condylo triplo longior, gracilis linearis. Abdomen elongatum, feminis apice tantum subcompressum et truncatum.

Atractodes incessor.

A. abdominis medio pedibusque anterioribus rufis, coxis et trochanteribus nigris, *m. f.* Long. $2\frac{1}{2}$ —5 lin.

Var.—Tibiis posticis (etiam femoribus basi et subtus) rufis.

Common.

Atractodes dionæus, C. 538. 184.

A. mandibulis (antennis basi subtus), segmentis 2^o et 3^o basi, pedibusque rufis, coxis posterioribus nigris, *m. f.* Long. 2— $2\frac{1}{2}$ lin.

Var.—Femoribus posticis (intermediis basi coxisque) fuscis, *m.*

Not common in Ireland.—England, J. Curtis and F. Walker.

Atractodes scrutator.

A. abdominis medio, mandibulis, pedibusque rufis, *m. f.*; antennis basi rufis, *m.*; antennis nigris, aut subtus basi rufis, *f.* Long. $2\frac{3}{4}$ lin.

Var.—Femoribus tibiisque posticis puncto apicis nigro, *f.*

Ireland, Hebrides.—England, F. Walker.

** Petiolus condylo ad summum duplo longior. Abdomen modo apice compressum, fusiforme; modo compressum s. subcompressum, dorso fere lineare, a latere lanceolatum.

Atractodes vestalis, C. 538. 182.

A. tibiis testaceis, anterioribus medio posticis apice fuscis; alis hyalinis areola subtriangulari, *m. f.*; abdomine ovato, apice subcompresso, *f.* Long. 2— $2\frac{3}{4}$ lin.

Common.

This species might perhaps with equal reason be referred to the genus *Stilpnus*; indeed any definite line drawn between these two genera must be arbitrary.

Atractodes gravidus, *Gr.*

A. mesothoracis sulcis humeralibus subproductis; abdominis medio, femoribus, tibiis, tarsisque rufis; abdominis segmento 1^o apice sensim dilatato, *m. f.*; antennis basi subtus rufis, *m.*; antennis validis pubescentibus; abdomine fusiformi apice subcompresso, *f.* Long. 3— $3\frac{3}{4}$ lin.

Rare in Ireland.

Atractodes albo-vinctus, C. 538, 183.

A. abdominis medio, palpis, pedibusque rufis, coxis posticis nigris,

m. f.; antennis albo-annulatis, abdomine fusiformi apice compresso, *f.* Long. 3—4 lin.

Ireland, not common.

Atractodes arator, C. 538. 185.

A. abdominis medio femoribus tibiisque rufis; abdominis segmento 1° lagenæformi, *m. f.*; antennis gracilibus articulis extremis ovatis; abdomine subcompresso, *f.* Long. 3½ lin.

Hollywood, not common.

Atractodes Salius, C. 538. 190.

A. antennis basi, abdominis medio, ore, pedibusque, ferrugineis; femoribus posticis fuscis; alis corpore brevioribus fumatis, areola incompleta; abdomine compresso, segmento 1° apice sensim dilatato canaliculato, *f.* Long. 2½—3 lin.

Eyrecourt, September.

Atractodes exilis, C. 538. 188.

A. antennis basi, abdominis medio, ore, pedibusque, ferrugineis; posticorum tibiis apice et femoribus fuscis; abdomine compresso, segmento 1° lineari læviusculo, *f.* Long. 3 lin.

England, F. W.—Ireland, very rare.

Atractodes croceicornis, C. 538. 191.

A. abdominis medio, antennis, ore, pedibusque, ferrugineis, coxis posticis basi fuscis; abdomine compresso, segmento 1° apice sensim dilatato, *f.* Long. 3—3½ lin.

Ireland, rare.

Atractodes bicolor, Gr. ?

A. abdominis dorso medio castaneo; mandibulis pedibusque ferrugineis, coxis posticis basi fuscis; areola irregulari subtransversa, *m. f.*; antennis basi testaceis, *m.*; antennis basi subtus ferrugineis; abdomine compresso, *f.* Long. 3—3½ lin.

Var.—Femoribus posticis (mediis basi coxisque) fuscis: *etiam* abdomine antennisque nigris, *f.* Long. 1½—3 lin.

Common.

Atractodes piceicornis, C. 538. 186.

A. abdominis medio mandibulis pedibusque testaceis, coxis posticis fuscis; abdomine fusiformi apice compresso, *f.* Long. 2½ lin.

Eyrecourt, September.

Atractodes fumatus, C. 538. 189.

A. segmento 3° basi femoribus anterioribus tibiisque rufescentibus tibiis posticis apice nigris, *m. f.*; abdomine compresso, *f.* Long. 2½ lin.

Var.—Abdomine toto nigro, *f.*

Not common.

Atractodes cultellator, C. 538. 187.

A. mandibulis pedibusque rufis, coxis posterioribus nigris; abdomine compresso longissimo, medio rufo piceo (pedibus posticis vix brevior), *f.* Long. 3 lin.

Holywood.

Atractodes citator.

A. capite thoraceque punctatis; abdomine compresso, castaneo, basi nigro; femoribus anterioribus tibiisque testaceis, posticis apice nigris, *f.* Long. 3 lin.

Ireland.

Atractodes? *properator*.

A. abdomine testaceo, petiolo nigro; pedibus testaceis, coxis posticis basi fuscis; areola nulla, *m. f.*; antennis subtus testaceis, *m.*; antennis tricoloribus, abdominis apice compresso, femoribus tibiisque posticis breviusculis, *f.* Long. $2\frac{3}{4}$ — $3\frac{1}{4}$ lin.

Var.—Coxis posticis totis pallide testaceis, *f.*

England, F. Walker.—Near Edinburgh, September.

This species differs from all the former in many respects. The spiracles are placed at the middle of the first abdominal segment:—the anterior face of the tibiæ is beset with minute spines:—the proportions of the labial palpi are different, the intermediate joints being very short and the last very long. The antennæ of the male are not crenulate in the middle. The areolet is either totally wanting, or if faintly indicated, it is triangular. Notwithstanding these and other differences I have left it in this group for the present, as it differs yet more widely from *Ichneumon*; neither do I think it can with any propriety be referred to *Mesoleptus*, and I know no other group with which it is likely to be associated.

Genus LAMPRONOTA.

Abdomen subsessile læve convexum, *f.*; ventre apice fisso, valvula ventrali obtusa, terebra exerta longa. Thorax gibbulo-cylindricus, mesothoracis scuto bisulco, metathoracis spiraculis transversis. Caput oblatum, clypeo transversim impresso. Antennæ longæ graciles, articulo 3° prælongo, 5° et 6° in mare denticulatis. Pedes postici elongati validi. Areola nulla.

I have adopted the group as restricted by Mr. Stephens in his synopsis of the genera. It has some resemblance to *Echthrus*, but is perhaps more nearly allied to *Acœnites*; I have not a specimen of the latter genus to make the comparison.

Lampronota fracticornis.

L. tibiis tarsisque anterioribus et femoribus rufis, *m. f.*; terebra abdomine sesquilongiore, *f.* Long. $4\frac{1}{2}$ lin.

Var.—Segmentis intermediis summo margine rufescentibus.

England and Scotland, common in woods in autumn, and particularly on the broom.

Lampronota crenicornis, B. E. 407.

L. pedibus rufis, tibiis tarsisque posticis nigris, *m. f.*; terebra abdomine brevior, *f.* Long. 4 lin.

Holywood, not uncommon, July—September.

Lampronota denticornis, C. 511. 14^a.

L. femoribus rufis, tibiis tarsisque anterioribus rufis posticis fuscis; abdomine subopaco, segmentis intermediis summo margine castaneis, *m. f.*; terebra abdomine brevior, *f.* Long. 4 lin.

Ireland, in pine woods, autumn.

The new species indicated in the families *Cyniphidæ*, *Proctotrupidæ*, *Diapriadæ* and *Ceraphronidæ* will be noticed in a separate memoir on the British species of those families.

[To be continued.]

XVI.—*Communication respecting Fossil and Recent Infusoria made to the British Association at Newcastle.* By Prof. EHRENBERG.

To the Editors of the Annals of Natural History.

Gentlemen,

You will much oblige me by inserting the subjoined notice, which has been occasioned by the erroneous report in the Athenæum of the statements made by me at the late Meeting of the British Association in Newcastle, in the section of botany and zoology, which statements, so far as I can recollect, were to the following import:—

For the purpose of physiological inquiries I have occupied myself with the investigation of microscopic organized beings, not only in Europe, but also upon several voyages for several years in other quarters of the globe. The results of my observations had been hitherto scattered in single memoirs, published in the Acts of the Royal Academy of Berlin. Within these few weeks, however, my large work on this subject has been com-