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CATALOGUE
OF THE
SPECIMENS
OF
NEUROPTEROUS INSECTS
IN
THE COLLECTION
OF THE
BRITISH MUSEUM.

PART I.—(PHRYGANIDES—PERLIDES).

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Insects

189438

INTRODUCTION.

THE principal object of the present Catalogue has been to give a complete list of the specimens of Neuropterous Insects contained in the collection of the British Museum, indicating at the same time the peculiarities of each, as regards variation of character, locality, and the source from whence it has been derived. With this view, the different individuals of each species contained in the collection are indicated by the letters *a*, *b*, *c*, &c., following the name of the species and its synonyms, and the description, if it appeared to have been before undescribed.

This part of the Catalogue of Neuropterous Insects has been prepared and the new species described by Mr. FRANCIS WALKER, so well known for his attention to this order of Insects.

The continuation is in hand, and will follow as soon as it can be completed.

JOHN EDWARD GRAY.

British Museum,

1st September, 1852.

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CATALOGUE
OF
NEUROPTEROUS INSECTS.

Order NEUROPTERA.

Neuroptera, *Linm. &c.*
Synistata p., et Odonata, *Fabr.*
Dictyoptera, *Clairv.*

Sub-order I. PHRYGANIDES.

Ocelli tres, primus inter antennas deorsum spectans. Partes oris inter se connatæ, labro subcoriaceo inflexo, mandibulis nullis, maxillarum mandinibus obsoletissimis, palpis maxillaribus triquadri-vel in omnibus feminis quinquarticulatis, labialibus triarticulatis. Antennæ elongatæ aut longissimæ, setacæ, multiarticulatæ, articulis cylindricis. Prothorax transversus. Abdomen compressum, segmentis novem, appendicibus caudalibus coriaceis. Coxæ exsertæ, retrorsum vergentes; tibiæ calcaratæ; tarsi quinquarticulati, spinulosi, plantula aroliisque inter ungues instructi. Alæ quatuor deflexæ, quoad nervaturam æquales, quoad consistentiam et picturam inæquales; anticæ coriaceæ, pilosæ, absque nodo, cum thyridio in tertio radii principalis ramo; posticæ diaphanæ, plicatæ. Metamorphosis semicompleta per larvas aquaticas, hexapodas, mandibulis liberis instructas, branchio-pneustas, in folliculo sibi constructo hamis analibus affixas ad nymphas immobiles, artubus solutis, imagini stigmatibus respiranti similes.

Caput transversum, longitudine latius. Oculi magni, reticulati. Antennæ corporis longitudine aut longiores, articulis plurimis minime notatis. Os capite infero insertum. Labrum inflectum, mediocre. Palpi labiales articulo 3o ovato elongato. Thorax latitudine altior. Prothorax cerviciformis. Abdomen sæpissime subcompressum, apice truncatum. Larva aquatica, sæpissime thecæ opifex et tritor. Caput corneum. Thorax coriaceus. Abdomen sacculis respiratoriis, segmentum ultimum uncis duobus munitum.

Phryganea p., *Linn.*

Phryganea, *DeGeer*; *Geoffroy*; *Fabr.*; *Olivier.*

Friganides p., *Latr. (olim)*; *Lamarck.*

Agnatha p., *Duméril.*

Plicipennia, *Latr.*

Lophiacera, *Billberg.*

Trichoptera, *Leach*; *Kirby*; *Stephens*; *Westw.*; *Kolenati.*

Phryganides, *Pictet.*

Trichoptera (Phryganides), *Rambur.*

Trichoptera (Phryganodea), *Burmeister.*

Elingula, *Retzius.*

Fam. 1. PHRYGANIDÆ.

Phryganidæ, *Stephens, Illust. Brit. Ent. Mund. vi. 203.*

Palpi maxillares mediocres, subhirsuti. Antennæ setacæ. Pedes calcarati. Alæ anticæ venis transversis; posticæ plicatæ.

Heteropalpoidea p., *Kolenati.* (Palpi maxillares quoad sexum difformes, fœminarum semper articulis quinque, marum aut tri- aut quadriarticulati. Palporum maxillarium articulus ultimus reliquis quoad latitudinem æqualis. Larvæ incolunt thecas, omnes fere herbivoræ, branchiis simplicibus et ventralibus, nunquam compositis lateralibus, hanc et appendicibus analibus simplicibus, imagines de die aut ad vespas nunquam turbatim et tumultuariter volitant).

Group I. PHRYGANEOIDEA.

Palpi maxillares tantum tenuissime pubescentes, maris articulis quatuor. Tibiæ anticæ bicalcaratæ, calcaribus acutis et immobilibus. Alarum anticarum anastomosis postica cum margine postico parallela, areolis subapicalibus longitudine æqualibus, anastomosis basali nulla, costula gemina inferius bipartita et foro cubitali modico, areolis apicalibus in sculptura a reliquis non differentibus.

Larvæ corpus depressum, utrinque angustius, capite oblongo-ovali. Prothorax solus corneus semilunaris, transversus. Abdominis segmenta soluta, distincte infibulata; appendices anales carnosæ, longiores, conicæ. Branchiæ simplices, longæ, patentés. Pedes breves, ad posticos paullo longitudine increscentes. Theca semper cylindrica, e plantarum frustulis.

Pupa magis depressa, recens semper viridis, torulis iisdem in abdominis dorso corneis, postea viridi-fusca aut fusco-nigra, abdominis segmentorum interstitiis viridibus, thorace profunde sulcato, ore protracto, absque penicillo, segmento primo abdominis in dorso processu corneo deorsum vergente, appendicibus in segmento anali brevibus.

Phryganeoides, *Kolenati, Gen. et Sp. Trich.* 77.

Genus 1. PHRYGANEÆ.

Corpus subcompressum, non depressum. Palpi maxillares tenuissime pubescentes aut subnudi, maris 4-articulati; articulo ultimo brevi, subelliptico. Tibiæ setigeræ; anticæ bicalcaratæ: intermediæ tricalcaratæ; calcares immobiles, acutæ. Alæ anticæ pilosæ, vix setigeræ, apice parabolice rotundatæ.

Phryganeæ, *Uddman, Linn., Fabr., Billbg., Schæff., Gmel., Schr., Steph., Curt., Zett., Fischer, Burm., Hummel, Westw., Wood.*

Sembris, *Fabr.*

Simbris, *Billbg.*

Holostomis* et Trichostegia, † *Kolenati.*

Olostomis, *Guér. et Perch. Gen. Ins.* 4, 9. *Neur.* pl. 3.

* Holostomis, *Mannerheim, Revue Critique*, 21. *Kolenati, Gen. et Sp. Trich.* 82.

Tibiæ vix spinulosæ, calcaribus brevibus et spinis brevissimis, parcis, adpressis; alarum anticarum interstitiæ rugulosæ, vix pilosæ, alæ anticæ cum posticis concolores, areola 5a in ala antica anastomosim non attingens, brevis.

† Trichostegia, *Kolenati, Gen. et Sp. Trich.* 84, 17, pl. 2, f. 17.

Alæ anticæ cum posticis discolores, apice parabolice rotundato, interstitiis pilis densis et adpressis tectis, radio subcostali cum sectore apicali primo solum in ala per anastomosim juncto, ramo thyriifero cum cubito in alis anticis per anastomosim ad basim juncto, palporum labialium articulo apicali elliptico et compresso; tibiæ intermediæ et posticæ quadricaratae.

1. PHRYGANEA GRANDIS.

Obscure fusca, supra cinereo-pubescentis; alæ anticæ vittatæ areolis dense pilosis, maris fusco-testaceæ maculis parvis confertissimis pallidioribus punctoque albido, fæmine fusco-cinereæ nebulis pallidioribus lineolisque duabus interruptis nigris punctoque albo; tibiæ unicolores. Long. 4—9; alar. 18—28 lin.

Phryganea grandis, Linn. *Syst. Nat.* 1, 2, 909, 7. *Faun. Suec.* ed. 2, 1485. Roesel, *Ins. Belust.* 11. *Aquat.* 11, pl. 17. Sulzer, *Hist. Ins.* pl. 29, f. 9. Réaumur, *Ins.* iii. pl. 14, f. 4. Deg. *Ins.* ii. 1, 507, pl. 13, f. 1. Billg. *En. Ins.* 94. Schæff. *Icon.* pl. 180, f. 1, 2, Mas. pl. 109, f. 3, 4, Fæm. *Fabr. Sp. Ins.* i. 389, 8. *Mant. Ins.* i. 245, 9. *Ent. Syst.* ii. 76, 9. Gmel. ed. *Syst. Nat.* i. 5, 2633, 7. *Stew. Elem. Nat. Hist.* ii. 213. Panz. *Faun. Germ.* pl. xciv. f. 18. Shaw, *Gen. Zool.* vi. 255, pl. 82, f. inf. Wood, *Ill. Lin. Gen. Ins.* ii. 25, pl. 48. Kirby and Sp. *Intr. Ent.* iii. 68, pl. 3, f. 4. *Turt. Syst. Nat.* iii. 396. Leach, *Ed. Enc.* ix. 136. *Schr. Ins. Austr.* 310, 618, 11, pl. 48. *Steph. Ill. Brit. Ent. Mand.* vi. 205, 1. *Curt. Brit. Ent.* xiii. 592, 1. *Burm. Handb. Ent.* ii. 2, 934, 3. Zett. *Ins. Lapp.* 1061, 3. *Westw. Introd. Class.* ii. pl. 48. *Syn.* 49. Ramb. *Hist. Nat. Ins. Neur.* 470, 1.

Trichostegia grandis, Kol. *Gen. et Sp. Trich.* 84, 1.

Mas.—*Phryganea Beckwithii*, Leach, *MSS.* *Steph. Ill. Brit. Ent. Mand.* vi. 206, 2.

Phryganea fulvipes, *Burm. Handb. Ent.* ii. 2, 934, 4.

a—h. England.

i—u. ———? From Mr. Children's collection.

w. Versailles.

x. ———?

2. PHRYGANEA CINEREA.

Testacea, supra cinereo vittata; alæ anticæ fuscæ, pubescentes, cinereo confertim guttatæ; alæ posticæ fusco-cinereæ.

Phryganea cinerea, Barnston, *MSS.*

Testaceous, with a broad gray dorsal stripe extending from the head to the tip of the abdomen: tips of anterior tibiæ and of the joints of the anterior tarsi black: fore-wings brown, downy, thickly covered with gray dots; the posterior or cubital anastomosis and the form of the adjoining subapical areolets vary according to the sex

as in other species: hind-wings brownish. Length of the body 7—8 lines; of the wings 22—26 lines.

a, b. St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.

3. PHRYGANEA VARIA.

Cinereo-fusca, antennæ fulvæ, fusco annulatæ; alæ anticæ vittatæ, nigro alboque variæ, puncto niveo, areolis dense pilosis; pedes fulvi, fusco annulati. Long. 5—7; alar. 11—16½ lin.

Phryganea varia, *Fabr. Ent. Syst.* ii. 77, 10. *Réaumur. Ins.* iii. pl. 14, f. 9. *Deg. Ins.* ii. pl. 13, f. 1. *Fourcroy, Ent. Par.* ii. 357, 13. *Stew. El. Nat. Hist.* ii. 2, 14. *Turt. Syst. Nat.* iii. 396. *Donov. Brit. Ins.* viii. pl. 277, f. 1. *Burm. Handb. Ent.* ii. 1, 934, 2. *Pictet, Rech. Phryg.* 160, 31, pl. 11, f. 1. *Steph. Ill. Brit. Ent. Mand.* vi. 206, 4. *Zett. Ins. Lapp.* 1061, 4. *Westw. Intr. Class.* ii. 63, f. 68, 9. *Ramb. Hist. Nat. Ins. Neur.* 471, 2.

Phryganea variegata, *DeVill. Ent. Linn.* iii. 44, 60. *Hummel, Ess. Ent.* ii. 23.

Phryganea annularis, *Oliv. Enc. Méth. Ins.* 558, 16.

Trichostegia varia, *Kol. Gen. et Sp. Trich.* 86, 2.

a—c. England.

d. Malaga. Presented by Benjamin Frend, Esq.

e—k. ———? From Mr. Children's collection.

Genus 2. TRICHOSTEGIA.

1. TRICHOSTEGIA MINOR.

Fusco-ochracea; alæ anticæ ochraceæ, fasciatæ, nigro-fusco nebulosæ, macula costali fusca fasciaque subrepanda postica albido-ochracea. Long. 3½—5; alar. 9—12 lin.

Phryganea minor, *Curt. Brit. Ent.* xiii. pl. 592. *Steph. Ill. Brit. Ent. Mand.* vi. 207, 5.

Phryganea mixta, *Burm. Handb. Ent.* ii. 2, 934, 1.

Phryganea tortricæana, *Ramb. Hist. Nat. Ins. Neur.* 471, 3.

Trichostegia minor, *Kol. Gen. et Sp. Trich.* 8, 7, 3.

a—d. England.

Genus 3. HOLOSTOMIS.

1. HOLOSTOMIS ALTAICA.

Alæ posticæ margine maculato.

Phryganea Altaica, *Fischer de Waldh. Ent. Ruth. i. 2. Neur. pl. 2, f. 2.*

Phryganea phalænoides, var., *Zett. Ins. Lapp. 1061, Nota.*

Anabolia (Holostomis) Altaica, *Kol. Gen. et Sp. Trich. 83, 5.*

North Europe.

2. HOLOSTOMIS PHALÆNOIDES.

Nigra; tibiis tarsisque posticis flavis, tibiis vix spinulosis, calcaribus brevibus; alis albidis, anticis maculis atro-violaceis majoribus et minoribus, posticis maculis similibus in margine antico et limbo externo.

Phryganea phalænoides, *Uddman, Novæ Insectorum Sp. Dissert. Acad. Aboæ, 1753, 26, 53, pl. 2, f. 16. Linn. Syst. Nat. i. 2, 908, 3. Faun. Suec. 1481. Gmel. ed. Syst. Nat. i. 5, 2631, 3. Turt. Syst. Nat. iii. 396. Steph. Ill. Brit. Ent. Mand. vi. 207, 6. Zett. Ins. Lapp. 1060, 14, 1.*

Semblis phalænoides, *Fabr. Sp. Ins. i. 386, 5. Mant. Ins. i. 244, 5. Ent. Syst. ii. 73, 6.*

Simblis phalænoides, *Billbg. Enum. Ins. 94.*

Phryganea Daurica, *Fisch. Entom. Ruth. i. 52, 1. Neur. pl. 2, f. 1. Hummel, Ess. Ent. iii. 31.*

Phryganea phalænoides, *Burm. Handb. Ent. ii. 2, 935, 8.*

Olostomis phalænoides, *Guér. et Perch. Gen. Ins. livr. 4, 9. Neur. pl. 3.*

Holostomis phalænoides, *Mannerheim, Revue Critique, 21.*

Anabolia (Holostomis) phalænoides, *Kol. Gen. et Sp. Trich. 82, 4.*

Oligotricha phalænoides, *Ramb. Hist. Nat. Ins. Neur. 472, 2.*

a. ———? From Mr. Birch's collection.

b, c. ———? From Mr. Children's collection.

d. Hungary.

Genus 4. NEURONIA.

Palpi labiales articulo apicali crassiori, ovali, lato et compresso: tibiæ anticæ bicalcaratæ, posteriores quadricarcatæ: alæ anticæ cum posticis concolores, apice rotundato, interstitiis glabris; radius subcostalis cum sectore apicali primo solum in alis posticis per

anastomosim junctus, in alis anticis cum subcosta ad basim in anastomosi.

Neuronia, *Leach, MSS. Steph. Ill. Brit. Ent. Mand. vi. 234.*

Anabolia, *Kolenati, Gen. et Sp. Trich. 79, 16.*

1. NEURONIA RETICULATA.

Nigra; caput subconvexum, in medio carinula longitudinali; tibiæ posticæ flavæ; alæ anticæ virescenti-flavæ, nitidæ, crebre fusco-reticulatim maculatæ, margine apicali dentato nigro; alæ posticæ viridi-flavæ, fascia discali, maculis duabus costalibus limboque apicali dentato nigris.

Phryganea reticulata, Linn. Syst. Nat. i. 2, 908, 4. Faun. Suec. 1482. Fabr. Sp. Ins. i. 388, 1. Mant. Ins. i. 245, 1. Ent. Syst. ii. 75, 1. Gmel. ed. Syst. Nat. i. 5, 2632, 4. Turt. Syst. Nat. iii. 395. Billbg. En. Ins. 94. Panz. Faun. Ins. Germ. lxxi. 5. Zett. Ins. Lapp. 1061, 2. Burm. Handb. Ent. ii. 2, 935, 7.

Philopotamus? reticulatus, Steph. Ill. Brit. Ent. Mand. vi. 170, 4.

Anabolia (Oligostomis) reticulata, Kol. Gen. et Sp. Trich. 81, 2.

Oligotricha reticulata, Ramb. Hist. Nat. Ins. Neur. 472, 1.

Phryganea flavilatera, Linn. Faun. Suec. 1488. Syst. Nat. ii. 909. Geoffr. Ins. Par. ii. 255, 3. Gmel. ed. Syst. Nat. i. 5, 2634, 10. Berk. Syn. i. 151. Stev. El. Nat. Hist. ii. 214.

Europe.

2. NEURONIA CLATHRATA.

Nigra; capite plano et occipite torulo utrinque transverso; palpis, apice femorum, tibiis tarsisque testaceis; alis virescenti-aurantiacis, nitidis, anticis crebre reticulatim nigro maculatis, margine apicali undulato nigro, posticis umbra basali, fascia discali lata margineque apicali dentato, nigris.

Phryganea clathrata, Hoffmasegg, MSS.

Anabolia (Oligostomis) clathrata, Kolenati, Gen. et Sp. Trich. 82, 3.

Sweden, Prussia, Russia, Carniolia.

a—g. ———? From Mr. Children's collection.

3. NEURONIA PARDALIS.

Atra; caput subtus luteum; thorac. antice luteo-hirtus; alæ anticæ luteo confertim guttatæ; alæ posticæ antice luteo guttatæ, fascia lata subapicali lutea.

Black: head with luteous hairs above, luteous beneath: thorax with luteous hairs in front: fore-femora ferruginous: fore-wings

with numerous luteous dots which are mostly confluent in the middle of the wing of the male: hind-wings with a few luteous spots along the fore border and with a broad luteous band extending obliquely from the tip along part of the hind border. Length of the body 6—7 lines; of the wings 22—24 lines.

a, b. Nova Scotia. From Lieut. Redman's collection.

4. NEURONIA CONCATENATA.

Rufa; antennæ piceæ; pedes testacei; abdomen fuscum; alæ subhyalineæ, anticæ fusco reticulatæ.

Red, shining: head and thorax clothed with whitish hairs: antennæ piceous: abdomen brownish: legs testaceous: fore-wings pale brown, with very numerous almost colourless dots which are mostly confluent and especially so towards the base: hind-wings subhyaline, their tips reticulated with brown; a brown spot on the fore border opposite one on the fore-wing; a few pale brown marks on the hind border. Length of the body 5—6 lines; of the wings 16—18 lines.

a, b. St. John's Bluff, East Florida. Presented by E. Doubleday, Esq.

c, d. Georgia. From Mr. Abbot's collection.

e. ———? From Mr. Children's collection.

5. NEURONIA OCELLIFERA.

Testacea; capite thoraceque supra nigris; antennæ nigrae, apices versus ferrugineæ; alæ anticæ nigro subreticulatæ et subfasciatæ.

Fem.—Black, with black hairs and bristles: antennæ ferruginous at the tip of each joint except towards the base, and wholly ferruginous towards the tips: breast, abdomen and legs testaceous: wings testaceous: fore-wings irregularly reticulated with black, which here and there forms short and irregular bands: hind-wings with a broad curved black band near the tips. Length of the body 5½ lines; of the wings 19 lines.

a. North America. Presented by the Entomological Club.

6. NEURONIA OCELLIGERA.

Nigra; tibiæ piceæ; alæ testaceæ, anticæ nigro reticulatæ.

Male.—Black, with pale hairs and black bristles: shanks pitchy: wings testaceous; fore-wings reticulated with black, which

forms spots along the borders: hind-wings with black spots along the borders. Length of the body $4\frac{1}{2}$ lines; of the wings 13 lines.

a. Nova Scotia. From Lieut. Redman's collection.

7. NEURONIA FUSCA.

Nigra; antennæ ferruginæ; pedes testacei; alæ anticæ ferruginæ fusco confertim reticulatæ maculisque duabus fuscis.

Phryganea fusca, Barnston's MSS.

Black, clothed with brown hairs: antennæ ferruginous: abdomen beneath and legs testaceous: fore-wings ferruginous, thickly reticulated with brown, with a brown spot on the hind border and another in the disk at the base of the intermediate subapical areolets; a few brown transverse streaks on the fore border: hind-wings slightly gray. Length of the body 6—8 lines; of the wings 18—24 lines.

Var. β . Body ferruginous.

a—e. St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.

f—i. Nova Scotia. From Lieut. Redman's collection.

j. Newfoundland. Presented by W. E. St. John, Esq.

k. ———?

8. NEURONIA ANTICA.

Ferruginea; palpi pedesque testacei; alæ anticæ subluridæ, confertim tuberculatæ, fascia brevi gracili discali; alæ posticæ subhyalinæ.

Ferruginous: palpi and legs testaceous: fore-wings slightly lurid, with numerous little brown pimples of various size in the areolets, and with a short slender band in the disk: hind-wings subhyaline. Length of the body 5—6 lines; of the wings 18—20 lines.

a, b. Georgia. From Mr. Abbot's collection.

9. NEURONIA POSTICA.

Fusca; palpi pedesque testacei; abdomen nigro trivittatum; alæ anticæ fusco reticulatæ, posticæ fascia brevi angulata fusca.

Ferruginous: palpi and legs testaceous: abdomen with three blackish stripes: fore-wings indistinctly and very minutely reticulated with brown, which colour is most prevalent at the tips: hind-

wings paler, with a short angular brown band in the disk towards the tip. Length of the body 7 lines; of the wings 20—22 lines.

a, b. Georgia. From Mr. Abbot's collection.

10. NEURONIA VESTITA.

Ferruginea; thorax fusco bivittatus; alæ anticæ fusco confertim irroratæ, posticæ cinereæ.

Ferruginous: thorax with two brown stripes: thighs and tips of the shanks of the anterior legs brown: hind-legs testaceous: fore-wings thickly reticulated with brown, which is most prevalent towards the tips: hind-wings gray, bordered with brown. Length of the body 6 lines; of the wings 18 lines.

a, b. Georgia. From Mr. Abbot's collection.

11. NEURONIA COMMIXTA.

Nigra; corpore subtus antennis pedibusque ferrugineis; alæ anticæ fuscæ, macula magna discali sublimpida, guttis apicalibus albidis; alæ posticæ subcinereæ, apice margineque postico fuscis.

Black, clothed with pale hairs, beset with black bristles, under side, antennæ and legs ferruginous: fore-wings brown; discal areolet, discal cell and areolet of the thyridium mostly almost colourless; fore border slightly mottled; apical and subapical areolets with whitish dots; veins brown: hind-wings slightly gray, brown at the tips and along the hind borders. Length of the body $4\frac{1}{2}$ lines; of the wings 12 lines.

a. Georgia. From Mr. Abbot's collection.

12. NEURONIA FUSCULA.

Ferruginea, nigro-hirta, subtus testacea; thorax maculis duabus subfuscis; tibiæ anteriores apice fuscæ; alæ cinereæ, anticæ albido irroratæ.

Phryganea fuscula, Barnston's MSS.

Ferruginous, partly clothed with black hairs, testaceous beneath: thorax with a brownish mark on each side: legs testaceous; anterior shanks black towards the tips: wings gray: fore-wings

with whitish dots which are more numerous along the border than in the disk. Length of the body $4\frac{1}{2}$ lines; of the wings 12 lines.

a. St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.

13. NEURONIA RUFICRUS.

Nigro-fusca; tibiæ posticæ ochraceæ, alæ subochraceo-fuscescentes, venis piceis. Long. 5—7.; alar. 10—15 lin.

Phryganea ruficrus, Scop. *Ent. Carn.* Schr.

Neuronium fusca, Steph. *Ill. Brit. Ent. Mand.* vi. 234, 1.

Phryganea striata, Burm. *Handb. Ent.* ii. 2, 935, 6.

Anabolia analis, Kol. *Gen. et Sp. Trich.* 80, 1.

Phryganea chloroneura, Ramb. *Hist. Nat. Ins. Neur.* 473, 3.

a. England.

14. NEURONIA? SUBFASCIATA.

Phryganea fasciata, Say.

Philadelphia.

Genus 5. AGRYPNIA.

Corpus latum depressum: palpi labiales articulo 3o vix crassiori et ovali: tibiæ anticæ bicalcaratæ, posteriores quadricarcatæ: alæ anticæ pube tenui tectæ, apice antice parabolico oblique rotundato postice subangulato, radius subcostalis cum sectore apicali in alis quatuor in anastomosi; alæ posticæ hyalinæ.

Agrypnia, Curt. *Brit. Ent.* xii. 540; Steph.; Kolenati.

Phryganea p., Roesel; Burm.

Phryganea p.? Réaun.; Zett.

1. AGRYPNIA PAGETANA.

Ochracea; tibiæ spinis testaceis; alæ immaculatæ, apice subsuscescentes. Long. 4; alar. 12 lin.

——— Roesel, ii. *Aquat.* ii. pl. 14.

Agrypnia pagetana, Curtis, *Brit. Ent.* xii. 540. Steph. *Ill. Brit.*

Ent. Mand. vi. 229, 1. Westw. *Class.* ii. *Synops. Generic.*

49. Kol. *Gen. et Sp. Trich.* 78, 1.

Pyganea ægrota, Burm. *Handb. Ent.* ii. 2, 935, 5.

Phryganea striata, Burm. *Handb. Ent.* ii. 935, 6.

Phryganea testacea? Réaum. *Ins.* iii. pl. 18, f. 11. Zett. *Ins. Lapp.* 1065, 23.

a. (Type specimen). Yarmouth. Presented by W. Fisher, Esq.

2. AGRYPNIA PICTA.

Tibiæ spinis fuscis.

Agrypnia picta, Kol. *Gen. et Sp. Trich.* 79, 2.

Silesia.

Group 2. LIMNOPHILOIDEA.

Palpi maxillares maris articulis tribus: tibiæ anticæ unicalcaratæ, calcaribus acutis ac immobilibus: alarum anticarum subcosta cum costa nunquam in anastomosi, radio subcostali sub parastigmate flexo: alæ posticæ anastomosi postica obliqua, ita ut areolæ subapicales retrorsum longitudine decrescant, et anastomosi basali distincta, costulis tendinis geminis simplicibus et foro cubitali amplo, areolis apicalibus punctulatis et subpilosis.

Larvæ corpus omnino cylindricum: caput ovale: thorax segmentis duobus corneis, quadrangularibus transversis: abdomen segmentis minus solutis et non infibulatis, appendicibus analibus carnosis cylindricis brevibus et crassis: branchiæ simplices, breves, adpressæ: pedes postici paullo longiores. Theca frequentius ex arena et lapillis, semper conico-cylindrica, subtus angustior.

Pupa cylindrica, recens semper flava, segmento abdominis dorsali duobus, segmento quinto quatuor torulis corneis, fuscis, postea evadit fusca aut ferruginea, abdominis segmentorum interstitiis tantum flavis, thorace jam sulcato, ore protracto, penicillo verticali erecto instructo, segmento anali appendicibus duobus longis, filiformibus.

Limnophiloidea, Kolenati, *Gen. et Sp. Trich.* 35.

Genus 6. HALESUS.

Corpus subcompressum, non depressum: palpi maxillares maris triarticulati, articulo ultimo elongato filiformi: antennæ articulo basali capite breviori: tibiæ setigeræ, anticæ unicalcaratæ, posteriores triarticulatæ: alæ anticæ latæ, pilosæ, vix setigeræ, apice dilatatæ, rotundatæ, margine postico rotundato, rugulis in areolis inermibus, radio thyriifero cum cubito antico in anastomosi.

Halesus, Steph. *Ill. Brit. Ent. Mand.* vi. 201. Westw. *Kol. Gen. et Sp. Trich.* 68, pl. 1, f. 10.

Phryganea p., *Schr., Vill., Oliv., Pictet, Zett.*
 Limnophilus p., *Burm.*
 Halesus, *Leach.*
 Anabolia (Drusus), *Steph.*

1. HALESUS DIGITATUS.

Ochraceo-fuscus; antennæ fuscae; alæ anticæ pallidæ, venis albis fusco marginatis, areolis granulatis, posticis linea longitudinali fusca. Long. 7—9; alar. 18—24 lin.

Phryganea digitata, *Schr. Ins. Austr.* 309, 616. *DeVill. Ent.* iii. 42, 52. *Oliv. Enc. Méth.* 556, 8. *Pictet, Rech. Phryg.* 138, 7, pl. 7, f. 2.

Phryganea interpunctata, *Zett. Ins. Lapp.* 1067, 29.

Limnophilus digitatus, *Burm. Handb. Ent.* ii. 2, 933, 14.

Halesus digitatus, *Steph. Ill. Brit. Ent. Mand.* vi. 208, 1.

Hallesus digitatus, *Kol. Gen. et Sp. Trich.* 69, 1.

a—d. England.

2. HALESUS CINGULATUS.

Fulvo-ochraceus; alis anticis pallide ochraceis immaculatis; abdomine fulvescente segmentorum marginibus nigris. Long. $8\frac{1}{2}$; alar. 18 lin.

Halesus cingulatus, *Steph. Ill. Brit. Ent. Mand.* vi. 209, 2.

England.

This and Limnophilus pilosus are perhaps the same species.

3. HALESUS VIBEX.

Ochraceus; alis anticis subangustatis pallide fusco-ochraceis, atomis numerosis pallidioribus, costa excepta, sparsis. Long. 7—9; alar. 14—22 lin.

Limnophilus Vibex, *Curt. Phil. Mag.* iv. 125.

Halesus Vibex, *Steph. Ill. Brit. Ent. Mand.* vi. 209, 3.

a. ———? From Mr. Children's collection.

4. HALEBUS LATIPENNIS.

Pallide ochraceus ; alis anticis sublatis ochraceo-fuscis, vix pallide irroratis, venis fusco submarginatis. Long. 7—8½ ; alar. 18—20 lin.

Limnephilus latipennis, *Curt. Phil. Mag.* iv. 125.

Halesus latipennis, *Steph. Ill. Brit. Ent. Mand.* vi. 209, 4.

England.

5. HALEBUS HIEROGLYPHICUS.

Ochraceo-flavus ; alis anticis, costa excepta, fuscescentibus, atomis pallidioribus confertim irroratis. Long. 8—10 ; alar. 17—25 lin.

Limnephilus hieroglyphicus, *Curt. Phil. Mag.* iv. 125.

Halesus hieroglyphicus, *Steph. Ill. Brit. Ent. Mand.* vi. 210, 5.

a—e. England.

f—h. ——— ? From Mr. Children's collection.

6. HALEBUS LATERALIS.

Fulvo-ochraceus ; thoracis lateribus fuscescentibus ; alis anticis pallide ochraceis, concinne irroratis, venis subfulvis. Long. 8 ; alar. 17—20 lin.

Halesus lateralis, *Steph. Ill. Brit. Ent. Mand.* vi. 210, 6.

England.

This and *Limnephilus striatus* are perhaps the same species.

7. HALEBUS STELLATUS.

Ochraceus ; alis anticis fuscescentibus lineis maculisque pallidis.
Long. 5½—6 ; alar. 16—18 lin.

Limnephilus stellatus, *Curt. Phil. Mag.* iv. 125.

Halesus stellatus, *Steph. Ill. Brit. Ent. Mand.* vi. 210, 7.

a—d. England.

e. ——— ?

This and *Limnephilus pantherinus* are perhaps the same species.

8. HALESUS NIGRICORNIS.

Ochraceus; capite thoraceque supra fuscis; antennæ piceo-nigræ; pedes testacei; alæ anticæ pallide ochraceæ, albido indistincte irroratæ, areolis rugulosis, areola 1a apicali ad basim rotundata. Long. 4; alar. 10—11 lin.

Phryganea nigricornis, *Pictet, Rech. Phryg.* 136, pl. 6, f. 4.

Anabolia (Drusus) nigricornis, *Steph. Ill. Brit. Ent. Mand.* vi. 232, 6.

Hallesus nigricornis, *Kol. Gen. et Sp. Trich.* 70, 2.

Europe.

9. HALESUS AURICOLLIS.

Pedes testacei. Alæ anticæ bicolores, areolis rugulosis, areola 1a apicali ad basim acuta. Long. 5; alar. 12—14 lin.

Phryganea auricollis, *Pictet, Rech. Phryg.* 141, 10, pl. 8, f. 1.

Hallesus auricollis, *Kol. Gen. et Sp. Trich.* 70, 3.

Europe.

10. HALESUS FLAVIPENNIS.

Rufescenti-ochraceus; pedes testacei; alæ anticæ subhyalinæ, unicolores, tomento subaurato ornatae, areolis rugulosis. Long. 3; alar. 9½ lin.

Phryganea flavipennis, *Pictet, Rech. Phryg.* 155, 23, pl. 11, f. 8.

Anabolia (Drusus) flavipennis, *Steph. Ill. Brit. Ent. Mand.* vi. 231, 5.

Hallesus flavipennis, *Kol. Gen. et Sp. Trich.* 71, 5.

Europe.

11. HALESUS PÆCILUS.

Pedes fusci.

Hallesus pæcilus, *Kol. Gen. et Sp. Trich.* 71, 4.

Carinthia, Austria.

12. HALESUS TESTACEUS.

Rufescenti-ochraceus; alæ pallidiores, anticæ atomis paucis pallidis; pedes ochracei. Long. 4—5; alar. 12—13 lin.

Phryganea testacea, *Mus. Lesk.* 51, 38. *Gmel. Ed. Syst. Nat.* 2637, 47. *Pictet, Rech. Phryg.* 155, 4, pl. 6, f. 3. *Zett. Ins.*

Lapp. 1065, 23.

Phryganea brunnea, *Oliv. Enc. Méth.* 559, 28. *Mus. Lesk. Pars Ent.* 51, 37.

Limnephilus luridus, *Curt. Phil. Mag.* iv. 124.

Anabolia (Drusus) testacea, *Steph. Ill. Brit. Ent. Mand.* vi. 231, 3. Europe.

13. HALESUS ANNULATUS.

Rufescenti-ochraceus; abdomen *fuscescens*, segmentorum marginibus *ochraceis*; alæ *hyalinae, flavescenti-ochraceae, immaculatæ*. Long. 3; alar. 11 lin.

Anabolia (Drusus) annulata, *Steph. Ill. Brit. Ent. Mand.* vi. 231, 4, pl. 34, f. 3.

England.

14. HALESUS DUBIUS.

Rufescenti-ochraceus; antennæ *fusco annulatæ*; alæ anticæ *pubescentes, fusco-ochraceae, punctis remotis pallidioribus*. Long. $5\frac{1}{2}$; alar. 12 lin.

Anabolia (Drusus) dubia, *Steph. Ill. Brit. Ent. Mand.* vi. 232, 7.

England.

15. HALESUS GUTTIFER.

Testaceus; alæ anticæ *macula una nonnunquam obsoleta subfusca in areolis apicalibus, alteraque in cella discali areola thyridii et cella thyridii, guttaque nigra in areola apicali 3a; alæ posticæ albidæ*.

Testaceous: antennæ ferruginous: fore-wings thickly and very minutely tuberculated, with two pale brown spots which are occasionally obsolete, one at the base of the apical areolets, the other occupying the base of the discal cell, of the areolet of the thyridium, and of the cell of the thyridium; a black dot near the base of the third apical areolet: hind-wings whitish. Length of the body 5—7 lines; of the wings 16—20 lines.

a—d. St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.

e, f. Georgia. From Mr. Abbot's collection.

16. HALESUS PUNCTATISSIMUS.

Testaceus; alæ anticæ albido indistincte et confertissime irroratæ; alæ posticæ albidæ.

Testaceous, rather broad: antennæ stout: fore-wings broad, minutely tuberculate, very thickly covered with whitish dots; fore-border mostly whitish; a large irregular whitish spot on the discal areolet, on the areolet of the thyridium, and on the cell of the thyridium: hind-wings whitish. Length of the body $3\frac{1}{2}$ lines; of the wings 12 lines.

a, b. Nova Scotia. From Lieut. Redman's collection.

Genus 5. LIMNEPHILUS.

Corpus subcompressum, non depressum. Palpi maxillares articulo ultimo elongato, filiformi. Tibiæ setigeræ; intermediæ tricalcaratæ. Alæ anticæ angustæ, pilosæ, vix setigeræ, margine postico oblique truncato.

Limnophilus, Leach; Steph. Ill. Brit. Ent. Mand. vi. 211.

Limnophilus, Burm.

Group 1. GLYPHOTÆLIUS.

Alæ anticæ apice obliquè truncatæ; margo apicalis excisus, bis sinuatus, sinu anteriore minore, inter sinus substantia excedente. Tibiæ intermediæ tricalcaratæ, posticæ quadricarcatæ.

Glyphotælius, Steph. Ill. Brit. Ent. Mand. vi. 211.

Glyphidotaulius, Kolenati, Gen. et Sp. Trich. Pars 1a (1848), 36, pl. 1, f. 1, A, B.

Phryganea p., Deg., Oliv., Pictet.

Limnophilus p., Leach, Burm.

1. LIMNEPHILUS UMBRACULUM.

Alæ unicolores.

Glyphidotaulius umbraculum, Kolenati, Gen. et Sp. Trich. Pars 1a, 37, 1.

Germany.

2. LIMNEPHILUS PELLUCIDULUS.

Ochraceus; *alæ anticæ bicolores, emarginatæ, fusco irroratæ, maculis duabus hyalinis*; *alæ posticæ hyalinæ, apice ochraceo in maribus fusco nebuloso.* Long. 6—8; alar. 15—18 lin.

Phryganea pellucida, *Oliv. Enc. Méth.* 541, 12. *Pictet, Rech. Phryg.* 146, 17, pl. 8, f. 4.

Phryganea, &c., *Deg. Ins.* ii. 526, 1, pl. 12, f. 19.

Limnophilus pellucidus, *Burm. Handb. Ent.* ii. 932, 8.

Glyphotælius pellucidus, *Steph. Westw. Synops.* 49.

Glyphidotaulius pellucidus, *Kolen. Gen. et Sp. Trich.* 37, 2.

Mas.—*Limnophilus basalis*, *Curt. Phil. Mag.* iv. 122.

Fæm.—*Limnophilus emarginatus*, *Curt. Phil. Mag.* iv. 122.

Limnophilus (Glyphotælius) pellucidulus, *Steph. Ill. Brit. Ent. Mand.* vi. 211, 1.

Var. *ornatus*, *Steph. Ill. Brit. Ent. Mand.* vi. 212.

Var. *diaphanus*, *Steph. Ill. Brit. Ent. Mand.* vi. 212.

Var. *cognatus*, *Steph. Ill. Brit. Mand.* vi. 212.

Limnephila pellucida, *Ramb. Hist. Nat. Ins. Neur.* 485, 24.

a—d. England.

e. ———? From Mr. Children's collection.

3. LIMNEPHILUS LÆVIS.

Ferrugineus; *antennis palpis pectorisque disco nigris*; *abdomen nigro varium*; *alæ anticæ luridæ, areola interclavali nigro guttata.*

Ferruginous, clothed with pale hairs: antennæ, palpi and disk of the breast black: abdomen, coxæ and thighs marked with black: fore-wings lurid, minutely tuberculated, with a row of black dots along the interclaval areolet; veins testaceous: hind-wings slightly gray. Length of the body 9 lines; of the wings 26 lines.

a. ———? From Mr. Children's collection.

Group 2. GRAMMOTAULIUS.

Alarum posticarum sector apicalis 4a in sexu utroque linea fusca, infra et supra glabra; alarum anticarum margo apicalis integer, nimis oblique truncatus, alarum omnium apex acuminatus. Tibiæ intermediæ tricalcaratæ; posticæ quadricalcaratæ.

- Grammotaulius, *Kolenati, Gen. et Sp. Trich. Pars 1a*, 38, pl. 1, f. 2.
 Phryganea p., *Fabr., Schr., DeVill., Zett.*
 Limnophilus p., *Leach, Steph., Westw.*
 Limnophilus p., *Burm.*
 Limnephila p., *Ramb.*

4. LIMNEPHILUS LINEOLA.

Pallide ochraceus ; alæ anticæ pallidæ, fusco irroratæ ; posticæ immaculatæ lineola apicis fusca. Long. 6—7 ; alar. 14—22 lin.

- Phryganea lineola, *Schr. Ins. Austr.* 307, 613, var. a. *DeVill. Lin. Ent.* iii. 41. *Zett. Ins. Lapp.* 1063, 10.
 Limnophilus strigosus, *Curt. Phil. Mag.* iv. 122.
 Limnophilus gracilis, *Burm. Handb. Ent.* ii. 2, 932, 12.
 Limnophilus lineola, *Steph. Ill. Brit. Ent. Mand.* vi. 213, 2.
 Grammotaulius lineola, *Kol. Gen. et Sp. Trich.* 39, 1.
 Limnephila lineola, *Ramb. Hist. Nat. Ins. Neur.* 474, 1.
 a—e. England.
 f, g. ———? From Mr. Children's collection.

5. LIMNEPHILUS ATOMARIUS.

Fusco-cinereus ; alæ anticæ fusco-cinerascentes, punctis nigris confertissimis sparsis ; pedes ochracei. Long. 7 ; alar. 22 lin.

- Phryganea atomaria, *Fabr. Ent. Syst.* ii. 78, 15.
 Phryganea lineola, *Schr. Ins. Austr.* 308, 613. Var. b.
 Phryganea irrorata, *Zett. Ins. Lapp.* 1063, 11.
 Limnophilus atomarius, *Steph. Ill. Brit. Ent. Mand.* vi. 206, 3.
 Limnophilus atomarius, *Burm. Handb. Ent.* ii. 932, 11.
 Grammotaulius atomarius, *Kol. Gen. et Sp. Trich. Pars 1a*, 39, 2.
 Europe.

6. LIMNEPHILUS INTERROGATIONIS.

Alæ anticæ vittatæ.

- Phryganea interrogationis, *Zett. Ins. Lapp.* 1063, 12.
 Grammotaulius interrogationis, *Kol. Gen. et Sp. Trich.* 40, 3.
 Lapland, Greenland.

Group 3. CHÆTOTAULIUS.

Alarum sector primus apicalis in mare lineola brevi fusca, quæ supra glabra, infra hirta, e pilis accumulatis suberectis rigidis est composita, in fœmina ibidem vena latiori, alarum anticarum margo suturalis late sinuatus, apice subacutus, margo apicalis integer, subcrenulatus. Tibiæ intermediæ tricalcaratæ; posticæ quadricalcaratæ.

Chætotauius, *Kolen. Gen. et Sp. Trich.* 41, 3, pl. 1, f. 3.

Phryganea p., *Linn.*

Limnephilus p., *Leach, Steph., Curt., Westw., Pictet.*

Limnophilus p., *Burm.*

7. LIMNEPHILUS VITRATUS.

Ochraceus; alæ anticæ flavescente-ochraceæ, fusco variegatæ, macula discali rhombea utrinque fusco marginata, lunulaque apicis pallidis. Long. 3½—5; alar. 13—14½ lin.

Phryganea vitrata, *Deg. Ins. ii. pl. 12, f. 19. Zett. Ins. Lapp. 1064, 13.*

Limnophilus lunaris, *Burm. Handb. Ent. ii. 931, 5.*

Phryganea lunaris, *Pictet, Rech. Phryg. 152, 21, pl. 9, f. 3.*

Chætotauius vitratus, *Kol. Gen. et Sp. Trich. 42, 1.*

Limnephila lunaris, *Ramb. Hist. Nat. Ins. Neur. 481, 18.*

Limnephilus nebulosus, *Curt. Phil. Mag. iv. 123. Steph. Ill. Brit. Ent. Mand. vi. 215, 10.*

Var. Limnephilus apicalis, *Curt. Phil. Mag. iv. 123.*

a—i. England.

j. England. Presented by J. C. Dale, Esq.

k. ———? From Mr. Children's collection.

8. LIMNEPHILUS BOREALIS.

Alæ anticæ macula apicali marginali quadrangulari.

Phryganea borealis, *Zett. Ins. Lapp. 1062, 7.*

Chætotauius borealis, *Kol. Gen. et Sp. Trich. 42, 2.*

Lapland.

9. LIMNEPHILUS NOBILIS.

Caput albo-pilosum. Alæ anticæ macula discali rhombea; venæ bicolores.

Chætotaulius nobilis, Kolen. Gen. et Sp. Trich. 43, 3.

Livorno.

10. LIMNEPHILUS ANGUSTATUS.

Caput fusco-pilosum. Alæ anticæ macula discali rhombea; venæ bicolores.

Chætotaulius angustatus, Kol. Gen. et Sp. Trich. 43, 4.

Styria.

11. LIMNEPHILUS DECIPIENS.

Alæ anticæ macula discali rhombea absque fuscedine, maculaque stigmatali; venæ unicolores.

Chætotaulius decipiens, Kol. Gen. et Sp. Trich. 44, 5.

Europe.

12. LIMNEPHILUS FLAVICORNIS.

Ochraceus; antennæ pedesque flavescens; alæ anticæ hyalinæ cinereo variegatæ, venis margineque interiore fusco punctatis, macula discali rhombea absque fuscedine, macula stigmatali nulla, venis unicoloribus. Long. 5—6; alar. 14—16 lin.

Phryganea flavicornis, Fabr. Ent. Syst. ii. 77, 12. Oliv. Enc. Méth. 541, 13. Schr. Faun. Boic. ii. 184, 1917. Latr. Hist.

Nat. Ins. xiii. 88, 8. Pictet, Rech. Phryg. 151, 20, pl. 9, f. 2.

Limnephilus flavicornis, Steph. Ill. Brit. Ent. Mand. vi. 213, 3.

Limnephilus flavicornis, Billb. En. 94. Burm. Handb. Ent. ii. 2, 932, 10.

Phryganea atomaria, Zett. Ins. Lapp. 1063, 8.

Chætotaulius flavicornis, Kol. Gen. et Sp. Trich. 44, 6.

Limnephila flavicornis, Ramb. Hist. Nat. Ins. Neur. 484, 23.

Var.? *Limnephilus discoidalis, Curt. Phil. Mag. iv. 123. Steph. Ill. Brit. Ent. Mand. vi. 214, 5. Sordide ochraceus; alæ anticæ fuscescentes basi pallidiores, macula discoidali et altera postice semihyalinæ; alæ posticæ apice fusco. Long. 7; alar. 15 lin.*

- a—f. England.
 g, h. Polish Ukraine. Presented by Dr. Dowler.
 i. Italy. From Dr. Leach's collection.
 j. South France. Presented by F. Walker, Esq.
 k—o. ———? From Mr. Children's collection.

13. LIMNEPHILUS RHOMBICUS.

Ochraceus; alæ anticæ cinereo-flavescentes, macula magna rhomboidali pallida utrinque fusco marginata. Long. 6—8; alar. 12—16 lin.

Phryganea rhombica, Linn. *Syst. Nat. ed. 12*, ii. 909, 8. *Faun. Suec.* 1486. *Réaum. Ins.* iii. pl. 11, f. 5. *Roesel, Ins. Bel.* ii. *Aquat.* 2, pl. 16. *Schæff. Icon.* pl. 90, f. 5, 6. *Elem. Ent.* pl. 100. *Geoff. Ins.* ii. 246, 2. *Schr. Ins. Austr.* 307, 612. *Faun. Boic.* ii. 180, 1905. *Gmel. ed. Syst. Nat.* i. 5, 2633, 8. *Ahrens, Faun. ed. Germar*, ix. 13. *Fourcr. Ent. Par.* ii. 354, 2. *De Vill. Ent.* iii. 29, 12. *Rossi, Faun. Etrusc.* 680. *Oliv. Enc. Méth.* 511, 14. *Fabr. Sp. Ins.* i. 389, 10. *Mant. Ins.* i. 245, 10. *Ent. Syst.* ii. 77, 13. *Wilh. Recréat.* iii. 23, 30. *Latr. Hist. Nat. Ins.* xiii. 88, 9. *Don. Brit. Ins.* vii. pl. 220. *Stew. Elem.* ii. 214. *Turt. ed. Syst. Nat.* xiii. 396. *Shaw, Gen. Zool.* vi. 255, pl. 82, f. med. *Pictet, Rech. Phryg.* 148, 19, pl. 9, f. 1. *Zett. Ins. Lapp.* 1062, 6.

Limnophilus rhombicus, Billberg, *Enum.* 94. *Burm. Handb. Ent.* ii. 2, 932, 9. *Pictet, Rech. Phryg.* 148, 19, pl. 9, f. 1.

Phryganea grandis, Sulzer, *Ins.* pl. 17, f. 104.

Phryganea rhomboidica, Berk. *Syn.* i. 151.

Chætotautilus rhombicus, Kol. *Gen. et Sp. Trich.* 45, 7.

Limnephila rhombica, Ramb. *Hist. Nat. Ins. Neur.* 481, 17.

a—d. England.

e, f. ———? From Mr. Children's collection.

g. St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.

14. LIMNEPHILUS ELEGANS.

Fusco-ochraceus; alæ anticæ pallide fuscæ, vittis aliquot albidis subradiatim dispositis. Long. 6—7; alar. 14—16 lin.

Limnophilus elegans, Curt. *Phil. Mag.* iv. 123. *Brit. Ent.* pl. 488. *Steph. Ill. Brit. Ent. Mand.* vi. 215, 9.

Chætotauius signifer, *Kol. Gen. et Sp. Trich.* 46, 8.
Phryganea signifer, *Zett. Ins. Lapp.* 1063, 9.

Europe.

15. LIMNEPHILUS STRIOLA.

Alæ anticæ unicolores.

Chætotauius striola, *Kol. Gen. et Sp. Trich.* 47, 9.

Germany.

Group 4. COLPOTAULIUS.

Antennæ corpore longiores. Alæ anticæ apice oblique truncatæ, areola basali una, margine apicali integro, fimbriis longioribus. Alæ posticæ non vittatæ, margine postico fimbriis longioribus, inter cubitum et costulam trochlearem profunde exciso, sectore apicali primo in utroque sexu absque juba. Tibiæ intermediæ tricalcaratæ; posticæ quadricalcaratæ.

Colpotaulius, Kolenati, *Gen. et Sp. Trich.* 47, 4, pl. 1, f. 4.

16. LIMNEPHILUS EXCISUS.

Corpus rufum. Alæ anticæ sectoribus apicalibus variegatis.

Colpotaulius excisus, *Kol. Gen. et Sp. Trich.* 48, 1.

Limnephilus incisus? *Steph. Ill. Brit. Ent. Mand.* vi. 228, 48.

a. England.

17. LIMNEPHILUS VULSELLA.

Corpus fuscum. Alæ anticæ sectoribus apicalibus unicoloribus.

Colpotaulius vulsella, *Kol. Gen. et Sp. Trich.* 48, 2.

a, b. England.

18. LIMNEPHILUS INDICANS.

Ferrugineus; palpi et pedes testacei; alæ anticæ testaceæ, albido marginatæ, vitta discali brevi alba apud medium contracta apice quinque-digitata.

Ferruginous: antennæ paler: palpi and legs testaceous: forewings testaceous, deeply and irregularly whitish round the border; disk with a short white stripe which is slender in the middle and

towards the tip forms five rays, the middle one longest: hind-wings whitish. Length of the body 5 lines; of the wings 18 lines.

a, b. Georgia. From Mr. Abbot's collection.

19. LIMNEPHILUS DESIGNATUS.

Testaceus; thorax fusco bivittatus; abdomen fuscum; alæ anticæ vitta sericea alba interrupta et apicem versus dilatata.

Testaceous, clothed with testaceous hairs: thorax with two brown stripes: abdomen brown: fore-wings with a silky white discal stripe which is interrupted beyond the middle, dilated and irregular towards the tip: hind-wings whitish. Length of the body 7 lines; of the wings 18 lines.

a, b. St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.

c. North America. Presented by the Entomological Club.

d, e. Arctic America. District watered by the Mackenzie and Slave Rivers. Presented by Sir John Richardson.

f. Great Bear Lake. Presented by Sir John Richardson.

g. Nova Scotia. From Lieut. Redman's collection.

Group 5. GONIOTAULIUS.

Alæ anticæ apice oblique truncatæ, margine apicali integro, oblique cum suturali in angulum connivente, areola apicali prima quintæ inæquali. Alæ posticæ margine non exciso, integro, areola apicali prima quintæ quoque inæquali: Tibiæ intermediæ tricalcaratæ; posticæ quadricalcaratæ.

Goniotaulius, Kolenati, Gen. et Sp. Trich. 48, 5.

Phryganea p., Linn., Deg., Fabr., Billbg., Oliv., Schr., Pictet, Zett.

Limnephilus p., Leach, Steph., Curt., Westw.

Limnophilus p., Burm.

20. LIMNEPHILUS VITTATUS.

Subtestaceus; alæ anticæ ochraceo-flavæ, vitta longitudinali interrupta fusca. Long. 3½; alar. 9 lin.

Phryganea vittata, Fabr. Ent. Syst. Suppl. 201, 16, 17. Pictet, Rech. Phryg. 157, 27, pl. 10, f. 4. Zett. Ins. Lapp. 1064, 16.

Limnephilus vittatus, Steph. Ill. Brit. Ent. Mand. vi. 225, 39.

Limnophilus vittatus, Burm. Handb. Ent. ii. 2, 931, 3.

Goniotaulius vittatus, *Kol. Gen. et Sp. Trich.* 49, 1.

Limnephila vittata, *Ramb. Hist. Nat. Ins. Neur.* 485, 26.

Europe.

Var. ? *Fuscus, subtus ochraceus ; alæ anticæ pallide fusco-flavide, flavo irroratæ, stigmatè obscuro.* Long. 4—4½; alar. 10½—11 lin.

Limnephilus ochraceus, *Curt. Phil. Mag.* iv. 124. *Steph. Ill. Brit. Ent. Mand.* vi. 223, 34.

a. England.

Var. ? *Fuscus, subtus ochraceus ; alæ anticæ ferrugineo-ochraceæ fusco irroratæ, angulo postico fusco ochraceo irrorato.* Long. 4—5½; alar. 10—11½ lin.

Limnephilus consobrinus, *Curt. Phil. Mag.* iv. 124. *Steph. Ill. Brit. Ent. Mand.* vi. 224, 35.

a—g. England.

21. LIMNEPHILUS NIGROVITTATUS.

Ochraceus ; antennæ pedesque pallidiores ; alæ anticæ ochraceo-flavæ, lineâ abbreviatâ longitudinali mediâ nigra, margine postico fusco irrorato, stigmatè fusco. Long. 4½; alar. 11 lin.

Var. ? *Phryganea elegans*, *Pictet, Rech. Phryg.* 157, 26, pl. 10, f. 3.

Var. ? *Limnophilus elegans*, *Burm. Handb. Ent.* ii. 931, 2.

Var. ? *Limnephila elegans*, *Ramb. Hist. Nat. Ins. Neur.* 486, 27.

Limnephilus nigrovittatus, *Steph. Ill. Brit. Ent. Mand.* vi. 225, 40.

Europe.

22. LIMNEPHILUS FLAVUS.

Ochraceus ; thoracis dorsum et abdomen fusca ; alæ anticæ flavæ, vittis duabus indistinctis longitudinalibus fuscis. Long. 5; alar. 10—11 lin.

Phryganea flava, *Linn. Syst. Nat. ed.* 12, 910, 21. *Faun. Suec.*

1502. *Gmel. ed. Syst. Nat.* i. 5, 2636, 21. *De Vill. Ent.* iii.

31, 25. *Oliv. Enc. Méth.* 548, 39. *Latr. Hist. Nat. Ins.* xiii.

92, 28. *Pictet, Rech. Phryg.* 156, 25, pl. 10, f. 2.

Limnephilus terminalis? *Curt. Phil. Mag.* iv. 124.

Limnephilus flavus, *Steph. Ill. Brit. Ent. Mand.* vi. 226, 42.

Limnophilus flavus, *Burm. Handb. Ent.* ii. 2, 931, 4.

Goniotaulius flavus, *Kol. Gen. et Sp. Trich.* 50, 2.

Europe.

23. LIMNEPHILUS FUSCINERVIS.

Alæ anticæ vittatæ ; venæ omnes rufo-fuscæ. Femora testacea.

Phryganea fuscinervis, Zett. Ins. Lapp. 1065, 19.
Goniotaulius fuscinervis, Kol. Gen. et Sp. Trich. 51, 3.
 Lapland; Germany.

24. LIMNEPHILUS FEMORATUS.

Alæ anticæ vittatæ. Femora picea.

Phryganea femorata, Zett. Ins. Lapp. 1065, 17.
Goniotaulius femoratus, Kol. Gen. et Sp. Trich. 51, 4.
 Lapland.

25. LIMNEPHILUS ANASTOMOSIS.

Alæ anticæ vittatæ ; venæ in anastomosi fuscæ. Femora testacea.

Goniotaulius anastomosis, Kol. Gen. et Sp. Trich. 52, 5.
Phryganea elegans? Pictet, Rech. Phryg. 157, 26, pl. 10, f. 3.
 Hungary.

26. LIMNEPHILUS FENESTRATUS.

Alæ anticæ albo pustulatæ, macula stigmatali.

Phryganea fenestrata, Zett. Ins. Lapp. 1064, 15.
Goniotaulius fenestratus, Kol. Gen. et Sp. Trich. 52, 6.
 Lapland.

27. LIMNEPHILUS TRIMACULATUS.

Alæ anticæ maculis tribus fuscis, maculaque stigmatali.

Phryganea trimaculata, Zett. Ins. Lapp. 1065, 18.
Goniotaulius trimaculatus, Kol. Gen. et Sp. Trich. 53, 7.
 Scandinavia.

28. LIMNEPHILUS GRISEUS.

Fusco-cinereus ; alæ anticæ fuscescentes, flavido irroratæ, macula rhombea albida, stigmatate nigro-fusco. Long. 5—6½ ; alar. 12—15½ lin.

Phryganea grisea, *Linn. Syst. Nat. ed. 12, ii. 909, 6. Faun. Suec.* 1484. *Deg. Ins.* 399, 3, pl. 13, f. 18—21; 539—543. *Fabr. Sp. Ins.* i. 389, 11. *Mant. Ins.* i. 245, 13. *Ent. Syst.* ii. 78, 14. *Gmel. ed. Syst. Nat.* i. 5, 2632, 6. *Cederhielm, Faun. Ingr. Prodr.* 139, 422. *Mus. Lesk.* 51, 35. *Rossi, Mant. Ins.* 104, 229. *Billb. Ent.* i. 94. *De Vill. Linn. Ins.* iii. 28, 10. *Oliv. Enc. Méth.* 541, 15. *Latr. Hist. Nat. Ins.* xiii. 88, 10. *Schr. Faun. Boic.* ii. 181, 1907. *Dahlb. Skand. Ins.* 239, 156. *Pictet, Rech. Phryg.* 147, 18, pl. 11, f. 7. *Zett. Ins. Lapp.* 1062, 5.

Limnephilus griseus, *Leach. Steph. Ill. Brit. Ent. Mand.* vi. 217, 13. *Curt. Brit. Ent.* 488. *Westw. Synops.* 49.

Limnophilus griseus, *Burm. Handb. Ent.* ii. 2, 932, 7.

Goniotaulius griseus (*vars. senex*, *Selene*, *tæniatus*), *Kol. Gen. et Sp. Trich.* 43.

a—i. England.

j. ———? From Mr. Children's collection.

29. LIMNEPHILUS STIGMATICUS.

Alæ anticæ fusco irroratæ, macula stigmaticali.

Goniotaulius stigmaticus, *Kol. Gen. et Sp. Trich.* 55, 6.

Europe.

Var.? *Fuscus, subtus ochraceus; alæ anticæ albido-fuscæ, pallide irroratæ, lunula media maculaque bisinuata postice hyalinis plerisque fusco marginatis, venis longitudinalibus albo punctatis, stigmatate piceo.* Long. 6—7; alar. 10—13½ lin.

Limnephilus bipunctatus, *Curt. Phil. Mag.* iv. 123. *Steph. Ill. Brit. Ent. Mand.* vi. 218, 18.

a—c. England.

Var.? *Pallide ochraceus; alæ pallidiores, immaculatæ, venis piceo irroratis, stigmatate piceo.* Long. 5½—6; alar. 13—14 lin.

Limnephilus affinis, *Curt. Phil. Mag.* iv. 123. *Steph. Ill. Brit. Ent. Mand.* vi. 217, 15.

a—d. England.

e. ———? From Mr. Children's collection.

30. LIMNEPHILUS CONCENTRICUS.

Alæ anticæ maculatæ, parastigmate nullo.

Phryganea concentrica, Zett. *Ins. Lapp.* 1067, 30.

Goniotaulius concentricus, Kol. *Gen. et Sp. Trich.* 55, 10.

North Europe.

31. LIMNEPHILUS TENEBRICUS.

Fuscus; alæ anticæ saturate fusæ plus minus ochraceo irroratæ, maculis duabus pallidis, stigmate piceo. Long. 4—5½; alar. 12—14. lin.

Limnephilus tenebricus, Curt. *Phil. Mag.* iv. 123. *Steph. Ill. Brit. Ent. Mand.* vi. 222, 29.

a—k. England.

32. LIMNEPHILUS SPARSUS.

Fuscus, subtus ochraceus; alæ anticæ fusco-ochraceæ, atomis pallidioribus, macula postica ochracea; pedes ochracei, tibiis anticis fusco annulatis. Long. 4—5½; alar. 11—13 lin.

Limnephilus flavus var. ?

Limnephilus sparsus, Curt. *Phil. Mag.* iv. 123. *Steph. Ill. Brit. Ent. Mand.* vi. 223, 31.

a—c. England.

33. LIMNEPHILUS AURICULA.

Ochraceus; alæ anticæ lucidæ, saturate ochraceæ, macula media alteraque auriculæformi postice hyalinis, stigmate obscure fusco. Long. 4—5; alar. 10—11. lin.

Limnephilus Auricula, Curt. *Phil. Mag.* iv. 124. *Steph. Ill. Brit. Ent. Mand.* vi. 220, 22.

a—h. England.

34. LIMNEPHILUS COMBINATUS.

Ferrugineus, abdomine pedibusque testaceis; alæ anticæ fusæ, costa maculaque magna subrhomboidali discali guttisque subtetaceis, apicem versus subtetaceæ fusco conspersæ, alæ posticæ hyalinæ.

Ferruginous, clothed with pale hairs: abdomen and legs testaceous: fore-wings brown, slightly testaceous along the foreborder and with a large nearly rhomboidal spot of that colour in the disk; some pale testaceous dots in the disk and more towards the tips where the brown hue least prevails: hind wings colourless. Length of the body 5 lines; of the wings 16 lines.

a. Newfoundland. Presented by W. C. St. John, Esq.

35. LIMNEPHILUS OCHRACEUS.

Ochraceus; *alæ anticæ angustæ fusco-ochraceæ, macula centrali scriisq̄ue duabus punctorum posticis hyalinis, stigmatè fusco-ochraceo.* Long. 4—5; alar. 10—12. lin.

Limnephilus obscurus, *Curt. Phil. Mag.* iv. 124. *Steph. Ill. Brit. Ent. Mand.* vi. 220, 24.

England.

36. LIMNEPHILUS FENESTRALIS.

Ochraceus, supra fuscus; *alæ anticæ albidæ, basi excepto irregulariter fusco irroratæ et maculatæ, lineola discali maculisq̄ue postice subhyalinis, stigmatè piceo.* Long. 5—6½; alar. 10—15 lin.

Limnephilus fenestralis, *Curt. Phil. Mag.* iv. 123. *Steph. Ill. Brit. Ent. Mand.* vi. 218, 17.

a—f. ———? From Mr. Children's collection.

37. LIMNEPHILUS STIPATUS.

Nigro-cinereus, subtus testaceus; *antennæ fulvæ; pedes testacci*; *alæ anticæ fuscæ, albido guttatæ et maculatæ.*

Allied to *L. variegatus*. Black, tinged with gray, clothed with pale hairs and with longer black hairs, testaceous beneath: antennæ tawny; 1st joint mostly black or brown: legs testaceous: fore-wings brown, with numerous whitish dots and spots, many of these confluent, and especially so on the disk and on the fore border: hind-wings whitish. Length of the body 4 lines; of the wings 12 lines.

a. St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.

b. Arctic America. District watered by the Mackenzie and Slave Rivers. Presented by Sir J. Richardson.

38. LIMNEPHILUS MARMORATUS.

Ochraceus ; alæ pallidiores, anticæ fusco nebulosæ, maculis duabus subhyalinis, venis transversis fuscis. Long. 6—7 ; alar. 12—15 lin.

Limnephilus marmoratus, Curt. Phil. Mag. iv. 123. Steph. Ill. Brit. Ent. Mund. vi. 214, 7.

England.

39. LIMNEPHILUS DIVERGENS.

Testaceus ; antennæ ferruginæ ; alæ anticæ confertissime tuberculatæ, apice subfuscæ ; alæ posticæ albidæ.

Testaceous, clothed with pale hairs: antennæ ferruginous: fore-wings very thickly covered with ferruginous tubercles, very pale brown at the tips, with a large tubercle at the base of the third apical areolet: hind-wings whitish. Length of the body 5 lines; of the wings 16 lines.

a, b. North America. Presented by the Entomological Club.

40. LIMNEPHILUS BIMACULATUS.

Testaceus ; antennæ ferruginæ ; thorax piceo bivittatus ; alæ anticæ obsolete irroratæ ; alæ posticæ albidæ.

Limnephilus bimaculatus, Barnston, MSS.

Testaceous, clothed with pale hairs and black bristles: antennæ ferruginous: thorax with a broad pitchy stripe on each side: fore-wings with very indistinct pale dots, which are most prevalent towards the base: hind-wings whitish. Length of the body 5 lines; of the wings 16 lines.

a. St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.

41. LIMNEPHILUS INTERCISUS.

Ferrugineus, albo-tomentosus ; caput supra, thorax vittis duabus, et abdomen fusca ; alæ anticæ fuscæ albo-tomentosæ, maculis nonnullis albis discalibus et apicalibus ornata.

Ferruginous, covered with white down: disk of the head, two stripes of the thorax and abdomen brown: legs testaceous: fore-wings brown, with white down, here and there with some darker

marks, speckled with white, with three white spots in the disk and with a smaller one on the tip of each of the apical and subapical areolets; two of the discal spots are on the cell of the thyridium and one on the 4th and 5th apical areolets; tips slightly notched: hind-wings slightly gray. Length of the body 4—4½ lines; of the wings 15—16 lines.

Var. *β*. *Niger, antennis pedibusque ferrugineis; thorax cano vittatus; alæ anticæ fuscæ, albido irroratæ, maculis fuscis obscurioribus albidisque discalibus et apicalibus; alæ posticæ subcinereæ.*

Black, clothed with pale hairs, tinged with gray: antennæ, legs, and tip of the abdomen ferruginous: thorax with a very broad hoary stripe: fore-wings brown, very minutely tuberculated, covered with white, sprinkled with whitish dots, adorned with some oblong darker brown and whitish spots in the disk, and with small white spots along the tips: hind-wings slightly gray. Length of the body 5 lines; of the wings 15 lines.

a—e. St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.

42. LIMNEPHILUS DESPECTUS.

Cinereo-ferrugineus; antennæ subfuscæ, articulis basi abdomine pedibusque testaceis; thorax albo bivittatus; alæ anticæ fuscæ albido irroratæ et bimaculatæ, costa discoque apicem versus albidis.

Dark ferruginous, tinged with gray, clothed with pale hairs and beset with longer black bristles: antennæ pale brown; joints testaceous at the base: maxillary palpi brown: labial palpi, abdomen and legs testaceous: thorax with two white stripes: fore-wings brown, with whitish dots, and a whitish spot on the cell of the thyridium and on the interlaval areolet, and another on the 1st subapical areolet; the whitish colour also prevails along the fore border and on the disk towards the tip: hind-wings whitish. Length of the body 3½ lines; of the wings 10 lines.

a—c. Nova Scotia. From Lieut. Redman's collection.

This may be *L. nebulosus*, *Kirby*, but does not well agree with the description.

43. LIMNEPHILUS MULTIFARIUS.

Nigro-cinereus; antennæ fuscæ, annulatæ; pedes testacei; alæ anticæ fuscæ, albido irroratæ et bimaculatæ.

Phryganea variegata, Barnston's MSS.

Black, tinged with gray, clothed with pale hairs and with longer black hairs: antennæ brown, testaceous at the base of each joint: legs testaceous: fore-wings brown, with numerous whitish dots, some of which are large and irregular; a whitish spot on the areolet and on the cell of the thyridium, and another on the base of the apical areolets; hind border fringed with black hairs: hind-wings grayish. Length of the body $3\frac{3}{4}$ lines; of the wings 10 lines.

a. St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.

Much resembles *L. fenestralis*.

44. LIMNEPHILUS PRÆTERITUS.

Niger; antennis tibiis tarsisque ferrugineis; alæ anticæ fuscæ, albido irroratæ et maculatæ, venis nigris; alæ posticæ subhyalinæ.

Black, clothed with pale hairs: head clothed in front with black hairs: antennæ ferruginous; the 1st joint black: legs ferruginous; thighs black: fore-wings brown, with numerous minute whitish dots and with some oblong whitish spots in the disk and along the border at the tips: hind-wings almost colourless, with a brown spot on the hind border towards the tip: veins black. Length of the body $3\frac{1}{2}$ lines; of the wings 11 lines.

a. Arctic Regions. District watered by the Mackenzie and Slave Rivers. Presented by Sir John Richardson.

45. LIMNEPHILUS PARTITUS.

Nigro-cinereus; antennis, pedibus, abdominisque apice ferrugineis; alæ hyalinæ, anticæ vitta interrupta maculisque duabus fuscis.

Black, with a gray covering, clothed with pale hairs: antennæ ferruginous; 1st joint black: legs ferruginous: wings colourless; fore-wings with an irregular brown stripe near the hind border, this stripe is obliquely interrupted before the middle, a little beyond which it contains two colourless dots; a brown spot on the parastigma, and another on the 2nd, 3rd and 4th apical areolets; veins brown. Length of the body $3\frac{1}{2}$ lines; of the wings 11 lines.

a. St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.

46. LIMNEPHILUS PERFORATUS.

Ferrugineus; *caput, thorax vittis duabus et scutellum nigra*; *alæ anticæ fuscæ, albido irroratæ et maculatæ.*

Ferruginous, clothed with black hairs: head above, sides of the thorax and scutellum black: legs testaceous: fore-wings brown, with numerous whitish dots; fore border mostly whitish; a rather large whitish spot on the areolet and on the cell of the thyridium, and another occupying the base of the apical areolets: hind-wings slightly gray. Length of the body $3\frac{1}{2}$ lines; of the wings 12 lines.

- a. St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.
 b. Arctic America. District watered by the Mackenzie and Slave Rivers. Presented by Sir John Richardson.

47. LIMNEPHILUS CONSOCIUS.

Ferrugineus; *thorax nigro vittatus*; *abdomen supra nigricans*; *pedes testacei*; *alæ anticæ testaceæ, albido confertissime irroratæ*; *alæ posticæ subhyalinæ.*

Ferruginous, clothed with pale hairs: antennæ black at the base: thorax with a broad black stripe: abdomen blackish above: legs testaceous: fore-wings testaceous, with very numerous whitish dots, many of which are confluent; veins brown: hind-wings almost colourless. Length of the body 4 lines; of the wings 12 lines.

- a. North America. Presented by the Entomological Club.

48. LIMNEPHILUS SUBMONILIFER.

Niger; *antennæ articulis basi testaceis*; *abdomen subtus ferrugineum*; *pedes testacei*; *alæ anticæ fuscæ, macula discali albida guttisque fere obsoletis hyalinis, lineisque tribus nigris albidoguttatis*; *alæ posticæ subcinereæ.*

Black, clothed with pale hairs, beset with black bristles: joints of the antennæ testaceous at the base: abdomen ferruginous beneath: legs testaceous: fore-wings brown, with a whitish spot on the disk, and with almost obsolete colourless dots towards the tips; three pitchy stripes on each wing, one near the fore border, the other two near the hind border; veins piceous: hind-wings very slightly gray. Length of the body 5 lines; of the wings 12 lines.

- a. North America. Presented by the Entomological Club.

49. LIMNEPHILUS EXTRACTUS.

Obscure testaceus ; palpis pedibusque pallidioribus ; thorax fusco bivittatus ; abdomen supra fuscum ; alæ sordide albide.

Dark testaceous, clothed with pale hairs : antennæ brown towards the tips : palpi and legs pale testaceous : thorax with a short broad brown stripe on each side : abdomen brown above : wings whitish ; fore-wings with a slight testaceous tinge along the hind border ; veins pale testaceous. Length of the body $3\frac{1}{4}$ lines ; of the wings 11 lines.

a. St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.

50. LIMNEPHILUS DIFFICILIS.

Testaceus ; antennæ fuscae, articulis 1o ad et 2o omnino sequentibusque basi testaceis ; alæ anticæ subtestaceæ, hyalino indistincte et confertissime irroratæ ; alæ posticæ hyalinæ.

Testaceous, clothed with pale hairs : antennæ brown, paler towards the base ; first and second joints and each following joint at the base testaceous : fore-wings slightly testaceous, thickly covered with indistinct colourless dots, some of which are confluent ; veins ferruginous : hind-wings colourless. Length of the body $3\frac{1}{2}$ lines ; of the wings 13 lines.

a. Nova Scotia. From Lieut. Redman's collection.

51. LIMNEPHILUS INDIVISUS.

Pallide testaceus ; alæ anticæ subtestaceæ, macula stigmatali subfusca ; alæ posticæ hyalinæ.

Pale testaceous : antennæ a little darker : fore-wings slightly testaceous, very minutely tuberculate, with a very pale brown stigma ; veins testaceous : hind-wings colourless. Length of the body 4 lines ; of the wings 13 lines.

a. Nova Scotia. From Lieut. Redman's collection.

52. LIMNEPHILUS SUBGUTTATUS.

Testaceus ; alæ anticæ albido subguttatæ, apud stigma fuscum albido plagiata.

Phryganea guttata, Barnston's MSS.

Nearly allied to *L. affinis*. Testaceous, clothed with pale hairs : fore-wings with indistinct dots towards the base, along the hind-

border and about the tips; a brown spot on the fore border, and about it a large almost colourless space: hind-wings almost colourless. Length of the body $3\frac{1}{2}$ lines; of the wings 11 lines.

a. St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.

53. LIMNEPHILUS PLAGA.

Testaceus; alæ anticæ macula magna postica media subquadrata fusca, apice fusco subreticulatæ.

Testaceous, clothed with pale hairs and with a few longer black hairs: fore-wings with pale shining testaceous down, adorned with a large dark brown subquadrated spot near the hind border, a little beyond the middle; tips indistinctly reticulated, with two patches of brown. Length of the body $3\frac{1}{2}$ lines; of the wings 10 lines.

a. Nova Scotia. From Lieut. Redman's collection.

54. LIMNEPHILUS PERPUSILLUS.

Testaceus; antennæ fulvæ; alæ anticæ subtestaceæ, posticæ albide.

Testaceous, clothed with testaceous hairs: antennæ tawny: fore-wings slightly testaceous, very indistinctly mottled with darker colour from the disk to the hind border and about the tips; veins tawny: hind-wings whitish. Length of the body $2\frac{1}{2}$ lines; of the wings 6 lines.

a. St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.

Group GONIOTAULIUS?

55. LIMNEPHILUS AREOLATUS.

Cinereo-niger; tibiæ obscure ferrugineæ; alæ anticæ albide, areolis fusco fasciatis.

Black, with a slight gray tinge, clothed with black hairs: shanks dark ferruginous: wings whitish; veins black; most of the areolets of the fore-wings with brown bands which are broadest at the tips; borders fringed. Length of the body 2 lines; of the wings 6 lines.

a. St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.

Group 6. DESMOTAULIUS.

Alæ anticæ apice oblique rotundatæ, cubito pilis erectis, rigidis, areola apicali quinta basi angustiori et oblique triangulari. Alæ posticæ cubito cum sectoribus apicalibus per anastomosim brevem juncto. Tibiæ intermediæ tricalcaratæ; posticæ quadricalcaratæ.

Desmotaulius, *Kolenati*, *Gen. et Sp. Trich.* 56, 6, pl. 1, f. 6.

Limnophilus p., *Burm.*

Phryganea p., *Pictet.*

56. LIMNEPHILUS PLANIFRONS.

Frons plana. Alæ anticæ variegatæ, thyridio reniformi.

Desmotaulius planifrons, *Kol. Gen. et Sp. Trich.* 56, 1.

Greenland, Labrador.

57. LIMNEPHILUS MEGERLEI.

Frons plana. Alæ anticæ variegatæ, thyridio cum arcu fasciolarum albido.

Desmotaulius Megerlei, *Kol. Gen. et Sp. Trich.* 57, 2.

Europe.

58. LIMNEPHILUS HIRSUTUS.

Frons convexa. Alæ anticæ variegatæ.

Phryganea hirsuta, *Pictet, Rech. Phryg.* 159, 29, pl. 11, f. 10.

Phryganea nigriceps? *Zett. Ins. Lapp.* 1065, 21.

Desmotaulius hirsutus, *Kol. Gen. et Sp. Trich.* 57, 3.

Germany.

59. LIMNEPHILUS FUMIGATUS.

Fulvus; caput supra, antennæ et metathoracis dorsum nigra; alæ anticæ fuscæ, unicolores. Long. 6; alar. 16 lin.

Phryganea fumigata, *Germ. Ahrens, Faun. Fasc.* xiii. 21.

Phryganea rubricollis, *Pictet, Rech. Phryg.* 135, 3, pl. 1, f. 2.

Limnophilus rubricollis, *Burm. Handb. Ent.* ii. 2, 933, 13.

Desmotaulius fumigatus, *Kol. Gen. et Sp. Trich.* 58, 4.

Europe.

60. LIMNEPHILUS INDISTINCTUS.

Testaceus; caput et thorax ferruginea; alæ anticæ vitta lata postica strigaque apud areolas 4am et 5am subapicales subfuscis.

Testaceous: head and thorax ferruginous: antennæ pale ferruginous: fore-wings pale testaceous, with a broad very pale brown stripe along the hind-border, with a line of the same colour on the vein between the fourth and fifth subapical areolets, and with a white spot on the thyridium. Length of the body 4 lines; of the wings 13 lines.

α. Newfoundland. Presented by W. C. St. John, Esq.

Group 7. PHACOPTERYX.

Frons inter antennas cornuta aut carinata. Alæ anticæ apice oblique rotundatæ, cubito pilis mollibus adpressis, areolis et areis alarum posticarum granulatis aut verrucosis, glabris, area costali interclavali et foro toto cubitali lævibus. Tibiæ intermediæ tricalcaratæ; posticæ quadricalcaratæ.

Phacopteryx, *Kolenati, Gen. et Sp. Trich.* 59, 7, pl. 1, f. 8.

61. LIMNEPHILUS GRANULATUS.

Phacopteryx granulata, *Kol. Gen. et Sp. Trich.* 59, 7, pl. 1, f. 8.

North Europe.

Group 8. STATHMOPHORUS.

Alæ anticæ apice oblique rotundatæ, cubito pilis mollibus adpressis, areolis et areis lævibus et pubescentibus, areola apicali prima ad fundum longiori et acutiori. Theca supra et infra surculis gravata. Tibiæ intermediæ tricalcaratæ; posticæ quadricalcaratæ.

Stathmophorus, *Kolenati, Gen. et Sp. Trich.* 60, 8, pl. 1, f. 7.

Phryganea p., *Linn. &c.*

Limnophilus p., *Leach.*

Anabolia p., *Steph.*

Limnophilus p., *Burm.*

62. LIMNEPHILUS DESTITUTUS.

Antennæ fusco-piceæ. Alæ anticæ unicolores.

Stathmophorus destitutus, *Kol. Gen. et Sp. Trich.* 60, 1.

Phryganea picicornis? *Pictet, Rech. Phryg.* 155, 24, pl. 11, f. 9.

Germany.

63. LIMNEPHILUS LAPPONICUS.

Alæ anticæ bicolores.

Phryganea fusca, var. β . *Lapponica*, *Zett. Ins. Lapp.* 1067, 31.

Stathmophorus Lapponicus, *Kol. Gen. et Sp. Trich.* 62, 3.

Lapland.

Group 9. STENOPHYLAX.

Antennæ articulo basali capite breviori. Alæ anticæ apice parabolico aut orbiculari, radio thyrifero cum cubito antico in anastomosi. Tibiæ intermediæ tricalcaratæ; posticæ quadricalcaratæ. Larva omnino cylindrica, folliculum explens, branchiis brevibus simplicibus, pedibus brevibus æqualibus.

Stenophylax, *Kolenati*, *Gen. et Sp. Trich.* 62, 3, pl. 1, f. 9.

Phryganea p., *Linn. &c.*

Limnophilus p., *Burm.*

Halesus p., *Steph.; Westw.*

64. LIMNEPHILUS PUBERULUS.

Alæ anticæ unicolores, fusco-pilosæ. Alæ anticæ et posticæ areola apicali 5a brevi.

Phryganea puberula, *Zett. Ins. Lapp.* 1066, 27.

Stenophylax puberulus, *Kol. Gen. et Sp. Trich.* 63, 1.

North and East Europe.

65. LIMNEPHILUS ARCTICUS.

Alæ anticæ unicolores, nigro-pilosæ, areolis apicalibus æqualibus.

Stenophylax arcticus, *Kol. Gen. et Sp. Trich.* 63, 2.

Sweden.

66. LIMNEPHILUS PILOSUS.

Alæ anticæ unicolores, aureo-pilosæ.

Phryganea pilosa, *Fabr. Ent. Syst.* ii. 76, 6. *Oliv. Enc. Méth.* 540, 7. *De Vill. Ent.* iii. 40, 44. *Cederhielm, Faun. Ingr. Prodr.* 138, 419. *Latr. Hist. Nat. Ins.* xiii. 87, 5. *Pictet, Rech. Phryg.* 134, 2, pl. 6, f. 2.

Limnophilus pilosus, *Billbg. Ent.* 94.

Stenophylax pilosus, *Kol. Gen. et Sp. Trich.* 64, 3.

Europe.

67. LIMNEPHILUS STRIATUS.

Alæ anticæ bicolores, in areolis conspersæ.

Phryganea striata, *Linn. Syst. Nat.* ii. 908, 5. *Faun. Succ.* 148, 2. *Aldrovand. Ins.* 763. *Acta Upsalia*, 1736, 27, 2. *Geoffr. Ins.* ii. 246, 1, pl. 13, f. 5. *Frisch. Ins.* xiii. pl. 3. *Valisnieri, Op.* i. 37. *Réaum. Ins.* iii. pl. 13, f. 8, 9, 11. *Albin, Ins.* 763. *Raii, Ins.* 274, 2. *Schæff. Icon.* pl. 168, f. 2, 3. *Fabr. Sp. Ins.* i. 388, 2. *Mant. Ins.* i. 245, 2. *DeVill. Ent.* iii. 28, 9. *Scop. Ent. Carn.* 688. *Fourcroy, Ent. Par.* ii. 353. *Mus. Lesk.* 51, 26. *Billbg. Ent. Ins.* 94. *Rossi, Faun. Etrusc.* 679. *Oliv. Enc. Méth. Ins.* 358, 3. *Wilhelm, Récréat. &c.* iii. f. 32. *Berk. Syn.* i. 151. *Stew. Elem. Nat. Hist.* ii. 213. *Turt. Syst. Nat.* iii. 396, 5. *Latr. Hist. Nat.* xiii. 87, 3. *Pictet, Rech. Phryg.* 132, 1, pl. 6, f. 1.

Limnophilus striatus, *Burm. Handb. Ent.* ii. 2, 933, 16.

Stenophylax striatus, *Kol. Gen. et Sp. Trich.* 64, 4.

Limnephila striata, *Ramb. Hist. Nat. Ins. Neur.* 479, 11.

a—f. England.

g. South France. Presented by F. Walker, Esq.

68. LIMNEPHILUS MERIDIONALIS.

Alæ anticæ bicolores, in venis conspersæ.

Stenophylax meridionalis, *Kol. Gen. et Sp. Trich.* 65, 5.

Isle of Crete.

69. LIMNEPHILUS ALPESTRIS.

Alæ anticæ bicolores, circa anastomosim guttatæ, absque parastigmate.

Stenophylax alpestris, Kol. Gen. et Sp. Trich. 66, 6.
Carniolia.

70. LIMNEPHILUS NIGRIDORSUS.

Alæ anticæ bicolores, circa anastomosim guttatæ, macula stigmatica.

Phryganea nigridora, Pictet, Rech. Phryg. 158, 28, pl. 10, f. 5.
Stenophylax nigradorsus, Kol. Gen. et Sp. Trich. 66, 7.
Europe.

71. LIMNEPHILUS PANTHERINUS.

Alæ anticæ bicolores, in areolis guttatæ.

Phryganea pantherina, Pictet, Rech. Phryg. 137, 6, pl. 6, f. 1, d, e.
Limnophilus pantherinus, Burm. Handb. Ent. ii. 2, 933, 15.
Phryganea guttifera, Zett. Ins. Lapp. 1067, 28.
Stenophylax pantherinus, Kol. Gen. et Sp. Trich. 67, 8.
Europe.

Group uncertain.

72. LIMNEPHILUS DORSALIS.

Virescenti-ochraceus; antennæ flavescens, fusco annulatæ; alæ pallidæ, anticæ hyalinæ margine inferiore fusco irroratæ.
Long. 5—6½; alar. 14—16 lin.

Limnophilus dorsalis, Steph. Ill. Brit. Ent. Mand. vi. 213, 4.
Phryganea concentrica? Zett.
England.

73. LIMNEPHILUS BINOTATUS.

Sordide ochraceus; alæ anticæ flavescens, maculis tribus pallidis, stigmatate piceo. Long. 6; alar. 14 lin.

Limnophilus binotatus, Curt. Phil. Mag. iv. 125. *Steph. Ill. Brit. Ent. Mand.* vi. 215, 8.

Phryganea borealis? Zett.

England.

74. LIMNEPHILUS LUNATUS.

Ochraceus; alæ anticæ fuscæ, costa macula centrali alteraque sublunata postice subhyalinis, stigmatè magno piceo. Long. 5 : alar. $14\frac{1}{2}$ lin.

Limnephilus lunatus, Curt. *Phil. Mag.* iv. 123. *Steph. Ill. Brit. Ent. Mand.* vi. 216, 11.

England.

75. LIMNEPHILUS STIGMA.

Ochraceus; alæ anticæ saturatiores, basi costaque pallidis, disco immaculato stigmatè rotundato piceo. Long. 5—6; alar. 14—15 lin.

Limnephilus stigma, Curt. *Phil. Mag.* iv. 123. *Steph. Ill. Brit. Ent. Mand.* vi. 216, 12.

England.

76. LIMNEPHILUS COSTALIS.

Ochraceus; alæ anticæ fuscescentes, nebulis saturatoribus, venis transversis fuscis, alteris plerisque fusco irroratis stigmatè perfusco. Long. 6; alar. 13 lin.

Limnephilus costalis, *Steph. Ill. Brit. Ent. Mand.* vi. 217, 14.

England.

77. LIMNEPHILUS MARGINALIS.

Fuscus, subtus ochraceus; alæ anticæ fuscescentes, lunula media, maculaque tripartita postice hyalinis, stigmatè piceo. Long. $5\frac{1}{2}$; alar. 12 lin.

Limnephilus marginalis, *Steph. Ill. Brit. Ent. Mand.* vi. 218, 16.

England.

78. LIMNEPHILUS SIGNATUS.

Fuscus, subtus ochraceus; alæ anticæ ochraceo-albidæ, macula media utrinque fusco marginata alba, stigmatè pallide fusco. Long. 6; alar. 12 lin.

Limnephilus signatus, *Steph. Ill. Brit. Ent. Mand.* vi. 219, 19.

England.

79. LIMNEPHILUS OBLIQUUS.

Fuscus, subtus ochraceus; alæ anticæ flavescente-ochraceæ, macula præobliqua pallida, stigmatè piceo. Long. 5; alar. 10 lin.

Limnephilus obliquus, Steph. Ill. Brit. Ent. Mand. vi. 219, 20.

England.

80. LIMNEPHILUS LUNIGER.

Ochraceo-fuscus; alæ anticæ fuscæ, lunula media maculaque postice subhyalinis, stigmatè fusco. Long. $5\frac{1}{2}$; alar. 11 lin.

Limnephilus luniger, Steph. Ill. Brit. Ent. Mand. vi. 219, 21.

England.

81. LIMNEPHILUS GEMINUS.

Fuscus; alæ anticæ lucidæ, fuscæ, macula geminata media hyalina, stigmatè ochraceo. Long. $3\frac{1}{2}$ —5; alar. 9—11 lin.

Limnephilus geminus, Steph. Ill. Brit. Ent. Mand. vi. 220, 23.

England.

82. LIMNEPHILUS FUSCUS.

Ochraceo-fuscus; alæ anticæ fuscæ, atomis maculisque quatuor pallidis, stigmatè fusco-piceo immaculato; tibie anticæ fusco annulatæ. Long. $3\frac{1}{2}$ —4; alar. 10—11 lin.

Limnephilus fuscus, Steph. Ill. Brit. Ent. Mand. vi. 221, 25.

England.

83. LIMNEPHILUS CÆNOSUS.

Ochraceo-fuscus; alæ breves, fuscæ, ochraceo pallido obsolete irroratæ, stigmatè obscuro utrinque pallide marginato. Long. 4; alar. 10—11 lin.

Limnephilus cænusus, Curt. Phil. Mag. iv. 123. Steph. Ill. Brit. Ent. Mand. vi. 221, 26.

England.

84. LIMNEPHILUS PUNCTATISSIMUS.

Ochraceo-fuscus ; antennæ fuscæ, ochraceo tenuiter annulatæ ; alæ anticæ angustæ, pallide fuscæ, perlepidide vageque albido irroratæ. Long. $4\frac{3}{4}$; alar. 12 lin.

Limnephilus punctatissimus, *Steph. Ill. Brit. Ent. Mand.* vi. 221, 27.

England.

85. LIMNEPHILUS VINCULUM.

Ochraceo-fuscus ; alæ anticæ fuscæ, maculis quatuor pallidis, stigmatate fusco pallide irrorato. Long. $3\frac{1}{2}$; alar. $9\frac{1}{2}$ —10 lin.

Limnephilus Vinculum, *Curt. Phil. Mag.* iv. 124. *Steph. Ill. Brit. Ent. Mand.* vi. 222, 28.

England.

86. LIMNEPHILUS FUSCATUS.

Ochraceo-fuscus ; alæ anticæ pallide fuscæ, marginibus interioribus et posticis saturatioribus, stigmatate fusco-piceo pallide irrorato. Long. $4\frac{1}{2}$; alar. 12 lin.

Limnephilus fuscatus, *Steph. Ill. Brit. Ent. Mand.* vi. 222, 30.

England.

87. LIMNEPHILUS IRRORATUS.

Ochraceus ; antennæ fusco annulatæ ; abdominis dorsum fuscum ; alæ anticæ pallide ochraceæ, atomis numerosissimis pallidioribus ; pedes ochracei, spinis fuscis. Long. $4\frac{1}{2}$; alar. 11 lin.

Limnephilus irroratus, *Steph. Ill. Brit. Ent. Mand.* vi. 223, 32.

England.

88. LIMNEPHILUS FLAVESCENS.

Ochraceus ; alæ anticæ pallide flavescente-ochraceæ, immaculatæ, posticæ pallidissime flavescentes. Long. 6 ; alar. 14 lin.

Limnephilus flavescens, *Steph. Ill. Brit. Ent. Mand.* vi. 223, 33.

England.

89. LIMNEPHILUS NOTATUS.

Ochraceus, dorso fusco; alæ anticæ pallide ferrugineo-flavidæ, atomis saturate fuscis longitudinaliter notatæ, angulo postico fuscescente ochraceo irrorato. Long. 5; alar. 10½ lin.

Limnephilus notatus, Steph. Ill. Brit. Ent. Mand. vi. 224, 36.
England.

90. LIMNEPHILUS SUBSTRIGOSUS.

Ochraceus; thorax et abdomen supra fuscescentia; alæ anticæ pallide ochraceæ margine interno apiceque saturatioribus, strigis duabus obscuris fuscis. Long. 5½; alar. 12 lin.

Limnephilus substrigosus, Steph. Ill. Brit. Ent. Mand. vi. 224, 37.
England.

91. LIMNEPHILUS BIPARTITUS.

Ochraceus; alæ anticæ pallidiores, margine interno et postico vage fusco irroratis, disco linea longitudinali fusca. Long. 4½—5; alar. 10—11 lin.

Limnephilus bipartitus, Curt. Phil. Mag. iv. 124. Steph. Ill. Brit. Ent. Mand. vi. 225, 38.
England.

92. LIMNEPHILUS PRÆUSTUS.

Fuscus, subtus ochraceus; alæ anticæ pallide ochraceæ, margine postico macula apicali stigmatæque ustulatis. Long. 3; alar. 6 lin.

Limnephilus præustus, Steph. Ill. Brit. Ent. Mand. vi. 226, 41.
England.

93. LIMNEPHILUS CENTRALIS.

Ochraceus; alæ anticæ fuscæ, interne ochraceo irroratæ, macula centrali alteraque postice lunulaque marginali pallidis. Long. 4—5; alar. 10—11 lin.

Limnephilus centralis, Curt. Phil. Mag. iv. 124. Steph. Ill. Brit. Ent. Mand. vi. 227, 43.
England.

94. LIMNEPHILUS PUNCTATUS.

Fusco-ochraceus; alæ anticæ pallide ochraceæ, interne fusco punctatæ. Long. 5; alar. 10 lin.

Limnephilus punctatus, Steph. Ill. Brit. Ent. Mand. vi. 227, 44.
England.

95. LIMNEPHILUS ELONGATUS.

Pallide ochraceus; alæ anticæ angustatæ et elongatæ, pallide ochraceæ, interne fusco subirroratæ. Long. 3½; alar. 11—12 lin.

Limnephilus elongatus, Steph. Ill. Brit. Ent. Mand. vi. 227, 45.
England.

96. LIMNEPHILUS FULIGINOSUS.

Fusco-ochraceus; abdomen pallidum; alæ anticæ fusco-fuliginosæ, atomis pallidioribus obscure notatæ; posticæ hyalinæ, albide, iridescentes. Long. 4; alar. 11 lin.

Limnephilus fuliginosus, Steph. Ill. Brit. Ent. Mand. vi. 227, 46.
England.

97. LIMNEPHILUS USTULATUS.

Ochraceus; abdomen pallidum; alæ anticæ ochraceæ, fusco irroratæ, costa immaculata, disco macula magna irregulari fusco-ustulata. Long. 4; alar. 9½ lin.

Limnephilus ustulatus, Steph. Ill. Brit. Ent. Mand. vi. 228, 47.
England.

98. LIMNEPHILUS INCISUS.

Ochraceus; alæ pubescentes, subbreves; anticæ margine interno venisque fusco irroratis; posticæ pallidæ ad apicem emarginatæ. Long. 3—4½; alar. 9½—10½ lin.

Limnephilus incisus, Curt. Phil. Mag. iv. 124. Steph. Ill. Brit. Ent. Mand. vi. 228, 48.

Colpotauius excisus? Kol.

England.

99. LIMNEPHILUS MIXTUS.

Niger; femora, tibiæ alæque fusca; venæ nigræ. Long. 3; alar. 8 lin.

Phryganea mixta, *Pictet, Rech. Phryg.* 142, 11, pl. 8, f. 2.

Geneva.

100. LIMNEPHILUS SERICEUS.

Niger; antennæ et alæ fuscæ; pedes fulvi, tarsis fuscis. Long. 3½; alar. 10 lin.

Phryganea sericea, *Pictet, Rech. Phryg.* 143, 12, pl. 11, f. 3.

Geneva.

101. LIMNEPHILUS GUTTULATUS.

Fuscus; antennæ et pedes fulva; alæ fuscescentes, guttulis albidis indistinctis. Long. 4½; alar. 12 lin.

Phryganea guttulata, *Pictet, Rech. Phryg.* 143, pl. 11, f. 4.

Geneva.

102. LIMNEPHILUS BIGUTTATUS.

Fulvus; alæ nitidæ, basi pubescentes, macula media alba. Long. 4; alar. 11 lin.

Phryganea biguttata, *Pictet, Rech. Phryg.* 144, 14, pl. 11, f. 5.

Phacopteryx granulata? *Kol.*

Geneva.

103. LIMNEPHILUS PUNCTICOLLIS.

Niger; palpi fusci; prothorax fulvo-rufescens, macula dorsali nigra; pedes fulvi, tarsis fuscis; alæ fulvo cinereoque variæ, basi fulvæ. Long. 3½; alar. 13 lin.

Phryganea puncticollis, *Pictet, Rech. Phryg.* 145, 15, pl. 11, f. 6.

Geneva.

104. LIMNEPHILUS RUFICOLLIS.

Fulvus; caput supra antennæ et tarsi nigra; alæ fuscæ macula discali albida. Long. 4; alar. 12 lin.

Phryganea ruficollis, *Pictet, Rech. Phryg.* 145, 16, pl. 8, f. 3.

Geneva.

105. LIMNEPHILUS SCABRIPENNIS.

Limnephila scabripennis, *Ramb. Hist. Nat. Ins. Neur.* 488, 30.
Europe?

106. LIMNEPHILUS FUSCICORNIS.

Limnephila fuscicornis, *Ramb. Hist. Nat. Ins. Neur.* 486, 28.
Desmotaulius fumigatus?
France.

107. LIMNEPHILUS GUTTATUS.

Limnephila guttata, *Ramb. Hist. Nat. Ins. Neur.* 485, 25.
Goniotaulius fenestratus?
France.

108. LIMNEPHILUS FUSCATUS.

(Nomen bis lectum ; vide Sp. 86.)
Limnephila fuscata, *Ramb. Hist. Nat. Ins. Neur.* 483, 22.
Phryganea Megerlei? *Pictet.*
France.

109. LIMNEPHILUS OBSCURUS.

(Nomen bis lectum ; vide Sp. 35.)
Limnephila obscura, *Ramb. Hist. Nat. Ins. Neur.* 483, 21.
France.

110. LIMNEPHILUS VARIEGATUS.

Limnephila variegata, *Ramb. Hist. Nat. Ins. Neur.* 482, 20.
Goniotaulius griseus?
France.

111. LIMNEPHILUS VITREUS.

Limnephila vitrea, *Ramb. Hist. Nat. Ins. Neur.* 482, 19.
France.

112. LIMNEPHILUS NIGRITUS.

Limnephila nigrita, *Ramb. Hist. Nat. Ins. Neur.* 480, 16.
Chamounix.

113. LIMNEPHILUS CHRYSOTUS.

Limnephila chrysota, *Ramb. Hist. Nat. Ins. Neur.* 480, 15.
Chamounix.

114. LIMNEPHILUS DISCOLOR.

Limnephila discolora, *Ramb. Hist. Nat. Ins. Neur.* 480, 14.
Halesus?
Chamounix.

115. LIMNEPHILUS RUFESCENS.

Limnephila rufescens, *Ramb. Hist. Nat. Ins. Neur.* 479, 13.
Halesus?
South France?

116. LIMNEPHILUS RADIATUS.

Limnephila radiata, *Ramb. Hist. Nat. Ins. Neur.* 479, 12.
Pyrenees.

117. LIMNEPHILUS TESSELLATUS.

Limnephila tessellata, *Ramb. Hist. Nat. Ins. Neur.* 478, 10.
Halesus digitatus?
France.

118. LIMNEPHILUS STRIOLATUS.

Limnephila striolata, *Ramb. Hist. Nat. Ins. Neur.* 478, 9.
Limnephilus incisus? *Steph.*
France.

119. LIMNEPHILUS NEBULOSUS.

(Nomen bis lectum ; vide Sp. 126).

Limnephila nebulosa, *Ramb. Hist. Nat. Ins. Neur.* 477, 8.
France.

120. LIMNEPHILUS OBSOLETUS.

Limnephila obsoleta, *Ramb. Hist. Nat. Ins. Neur.* 477, 7.
Sierra Nevada, Spain.

121. LIMNEPHILUS FLAVIDUS.

Limnephila flavida, *Ramb. Hist. Nat. Ins. Neur.* 476, 6.
Barcelona.

122. LIMNEPHILUS IMPURUS.

Limnephila impura, *Ramb. Hist. Nat. Ins. Neur.* 476, 5.
Goniotaulius stigmaticus? *Kol.*
France.

123. LIMNEPHILUS FULVUS.

Limnephila fulva, *Ramb. Hist. Nat. Ins. Neur.* 475, 4.
France.

124. LIMNEPHILUS ASPERSUS.

Limnephila aspersa, *Ramb. Hist. Nat. Ins. Neur.* 475, 3.
Stenophylax meridionalis? *Kol.*
South France.

125. LIMNEPHILUS SUBMACULATUS.

Limnephila submaculata, *Ramb. Hist. Nat. Ins. Neur.* 474, 2.
South France.

126. LIMNEPHILUS NEBULOSUS.

Niger; alæ anticæ testaceæ, albido maculatæ et irroratæ, arcola costali immaculata; posticæ albidæ; venæ testaceæ. Long. 7 lin.

Limnephilus nebulosus, Kirby, Fauna Boreali-Americana, 253, 1, (1837).

British North America.

127. LIMNEPHILUS FEMORALIS.

Niger; alæ anticæ dilute testaceæ; pedes testacei, femoribus nigris. Long. 6½ lin.

Limnephilus femoralis, Kirby, Fauna Boreali-Americana, 253, 2.

British North America.

128. LIMNEPHILUS PILOSULUS.

Nigro-cinereus; palpis fuscis; antennis pallide annulatis; pedibus testaceis; alis pallescentibus, obsolete fusco nebulosis, pilosis. Long. 3; alar. 8—8½ lin.

Phryganea pilosula, Zett. Ins. Lapp. 1066, 24.

Lapland.

129. LIMNEPHILUS BREVIS.

Nigro-cinereus; antennis palpis pedibusque testaceis; alis oblongo ovalibus, cinereo-flavescentibus, obsolete fusco punctatis, pubescentibus, venis dorsalibus costalis pilosis.

Phryganea brevis, Zett. Ins. Lapp. 1066, 25.

Lapland.

130. LIMNEPHILUS STIGMATELLUS.

Nigro-cinereus; tibiis tarsisque testaceis; alis cinereo-hyalinis, ciliatis, subpubescentibus, stigmatate fusco hirto, striga media transversa alba notato.

Phryganea stigmatella, Zett. Ins. Lapp. 1066, 26.

Lapland.

Genus 6. CHÆTOPTERYX.

Corpus subcompressum, non depressum. Tibiæ setigeræ, anticæ unicalcaratæ; intermediæ et posticæ tricalcaratæ. Alæ anticæ setis erectis, apex rotundus, areæ ac areolæ tuberculosæ, tuberculis pilis longis, erectis, rigidis armatis, area subcostali et suturali lævibus. Tibiæ intermediæ et posticæ tricalcaratæ.

Chætopteryx, *Steph. Ill. Brit. Ent. Mand.* vi. 232, (1837). *Kolenati, Gen. et Sp. Trich.* 71, 11, pl. 1, f. 11.

Phryganea p., *Fabr., Pictet, Zett.*

Limnephilus p., *Billbg.*

1. CHÆTOPTERYX VILLOSA.

Fulvescente-ochracea; antennæ fuscæ; alæ anticæ subgranulatæ, ochraceo-fuscæ, punctis duobus pallidis, areolarum verrucis biseriatis. Long. $4\frac{1}{2}$ — $5\frac{1}{2}$; alar. 10—12 lin.

Phryganea villosa, *Fabr. Ent. Syst. Suppl.* 200, 6, 7. *Pictet, Rech. Phryg.* 139, 8, pl. 7, f. 3.

Limnephilus villosus, *Billbg. En. Ins.* 94.

Chætopteryx villosa, *Steph. Ill. Brit. Ent. Mand.* vi. 233, 1. *Kol. Gen. et Sp. Trich.* 72, 1.

a—d. England.

2. CHÆTOPTERYX BREVIPENNIS.

Fusca, subtus ochracea; abdomen nigricans; alæ anticæ tuberculatæ, fulvescente-ochraceæ, punctis tribus minimis pallidis, areolarum verrucis biseriatis. Long. 3— $3\frac{1}{2}$; alar. 9—11 lin.

Limnephilus brevipennis, *Curt. Phil. Mag.* iv. 125.

Phryganea tuberculosa, *Pictet, Rech. Phryg.* 140, 9, pl. 7, f. 4.

Phryganea villosa, *Zett. Ins. Lapp.* 1068, 33.

Chætopteryx brevipennis, *Steph. Ill. Brit. Ent. Mand.* vi. 233, 2.

Chætopteryx tuberculosa, *Kol. Gen. et Sp. Trich.* 73, 2.

Europe.

3. CHÆTOPTERYX RUGULOSA.

Alarum anticarum areolæ verrucis uniseriatis.

Chætopteryx rugulosa, *Kol. Gen. et Sp. Trich.* 73, 3.

Dalmatia.

Genus 7. ECCLESIOPTERYX.

Corpus subcompressum, non depressum. Tibiæ setigeræ; intermediæ bicalcaratæ; posticæ tricalcaratæ. Alarum anticarum apex parabolicus, alarum posticarum forum cubitale modice dilatatum, radio subcostali paullo crassiori.

Ecclesiopteryx, Kolenati, Gen. et Sp. Trich. 74, 13, pl. 2, f. 13.

1. ECCLESIOPTERYX DALECARLICA.

Ecclesiopteryx Dalecarlica, Kol. Gen. et Sp. Trich. 75, 1.

Dalecarlia.

Genus 8. APATANIA.

Corpus subcompressum, non depressum. Tibiæ setigeræ; intermediæ bicalcaratæ; posticæ quadricalcaratæ. Alarum anticarum apex parabolice rotundatus, radio subcostali valde incrassato ad parastigma non flexo, cubito antico cum ramo clavali per anastomosim juncto, in ala non dilatato, anastomosi postica non obliqua, sed ramo subdiscoidali cum cubito in sectoribus sese cruciante.

Apatania, Kol. Gen. et Sp. Trich. 75, 14, pl. 2, f. 14.

Phryganea p., *Pictet, Zett.*

Limnophilus? p., *Burm.*

1. APATANIA VESTITA.

Phryganea vestita, Zett. Ins. Lapp. 1071, 45.

Phryganea fimbriata? *Pictet, Rech. Phryg.* 159, 30, pl. 11, f. 11.

Limnophilus pusillus? *Burm. Handb. Ent.* ii. 2, 931, 1.

Apatania vestita, Kol. Gen. et Sp. Trich. 76, 1.

Europe.

Genus 9. ANABOLIA.

Corpus subcompressum. Palpi maxillares articulo ultimo elongato filiformi. Tibiæ setigeræ. Alæ anticæ pilosæ, angustæ, margine postico rotundato.

Anabolia p., *Steph. Ill. Brit. Ent. Mand.* vi. 229.

Phryganea p., *Linn.*; *Deg.*; *Cederh.*; *Geoffr.*; *De Vill.*; *Fabr.*;
Gmel.; *Lat.*; *Pict.*; *Zett.*

Limnophilus p., *Leach*; *Billb.*

Limnophilus p., *Burm.*

Stathmophorus, *Kol.*

Limnephila p., *Ramb.*

I. ANABOLIA FUSCA.

Nigricante-fusca; tibiæ posticæ ochraceæ; alæ subochraceo-fuscescentes, venis piceis. Long. 5—7: alar. 10—15.

Phryganea fusca, *Linn. Syst. Nat.* ii. 910, 20. *Faun. Suec.* 1500.
Deg. Ins. ii. 407, 4, pl. 15, f. 11—14. *Cederhielm, Faun. Ingr. Prodr.* 137, 418. *Mus. Lesk.* 51, 33. *Geoffr. Hist. Nat. Ins.* ii. 247, 4. *De Vill. Ent.* iii. 34, 24. *Fabr. Sp. Ins.* i. 388, 4. *Mant. Ins.* i. 245, 4. *Ent. Syst.* ii. 75, 4. *Gmel. ed. Syst. Nat.* i. 5, 2635, 20. *Latr. Hist. Nat. Ins.* xiii. 90, 16. *Pictet, Rech. Phryg.* 153, 22, pl. 10, f. 1. *Zett. Ins. Lapp.* 1067, 31.

Limnophilus nervosus, *Leach, Sam. Comp.* pl. 7, f. 3. *Billbg. En. Ins.* 94.

Anabolia nervosa, *Steph. Ill. Brit. Ent. Mand.* vi. 230, 1.

Limnophilus fuscus, *Burm. Handb. Ent.* ii. 2, 931, 6.

Stathmophorus fuscus, *Kol. Gen. et Sp. Trich.* 61, 2.

Limnephila fusca, *Ramb. Hist. Nat. Ins. Neur.* 487, 29.

Var.? Anabolia lurida, *Steph. Ill. Brit. Ent. Mand.* vi. 330, 2.
Ochraceo-fusca, subtus lurido-ochracea; antennis fuscis; alis anticis lurido-ochraceis, macula obsoleta albida, posticis hyalinis, apice lurido.

a, b. England.

c, d. ———? From Mr. Children's collection.

Genus 10. ENOICYLA.

Corpus subcompressum, non depressum. Tibiæ setigeræ; intermedia et posticæ bicalcaratæ. Alæ anticæ apice rotundatæ: alæ posticæ foro cubitali angustato, areola apicali quinta in ala anastomosim non attingente, radio subcostali incrassato.

Enoicyla, *Ramb. Nat. Hist. Ins. Neur.* 488.

Phryganea p.? *Fabr.*; *Coq.*; *Pictet.*

Limnophilus p., *Burm.*

Ptyopteryx, *Kol.*

Dromophila, *V. Heyden.*

1. ENOICYLA PUSILLA.

Niger ; pedes flavi, tibiis tarsisque apice femoribusque nigricantibus ; alæ subflavescentes, venis fuscis.

Phryganea pygmæa ? *Fabr., Coq.*

Phryganea fimbriata ? *Pict.*

Limnophilus pusillus, *Burm. Handb. Ent. ii.*

Enoicyla silvatica, *Ramb. Hist. Nat. Ins. Neur. 488.*

Ptyopteryx Reichenbachii, *Kol. Gen. et Sp. Trich. 74, 1.*

Dromophila montana, *Von Heyden, Ent. Zeit. Stett.*

Europe.

Genus 11. MONOCENTRA.

Tibiæ intermediæ et posticæ unicalcaratæ. Alæ subpilosæ et subsquamosæ.

Monocentra, *Ramb. Hist. Nat. Ins. Neur. 489.*

Phryganea ?

1. MONOCENTRA LEPIDOPTERA.

Nigra, fuliginosa, hirta ; abdomen rufescens ; tibiæ posticæ subtus tarsisque flavescentia ; alæ nigro-fuscæ.

Monocentra lepidoptera, *Ramb. Hist. Nat. Ins. Neur. 489.*

Sardinia.

Genus 12. BARYPENTHUS.

Palpi maxillares hirsuti, maris 3-articulati, fœminæ 5-articulati. Tibiæ posteriores vix in apice nec in medio calcaratæ. Alæ posticæ dilatatæ, areola postica instructæ.

Barypenthus, *Burm. Handb. Ent. ii. 2, 928, 14.*

1. BARYPENTHUS CONCOLOR.

Totus niger, opacus ; corpore subtus pedibusque dilutioribus.

Barypenthus concolor, *Burm. Handb. Ent. ii. 2, 929, 2,*

Brazil.

2. BARYPENTHUS RUFIPES.

Niger, opacus; pedes obscure ochracei; alæ anticæ supra rufohirtæ, subtus dimidio auro-hirtæ.

Barypenthus rufipes, Burm. Handb. Ent. ii. 2, 929, 2.

Brazil.

Fam. 2. LEPTOCERIDÆ.

Antennæ setacææ. Palpi maxillares elongati, hirsutissimi. Pedes calcarati. Alæ anticæ venis transversis. Alæ posticæ plicatæ. Leptoceridæ, *Leach, Steph. Ill. Brit. Ent. Mand. vi. 191, (1836).* Isopalpoidea p., *Kolenati.*

Genus 1. ODONTOCERUS.

Antennæ graciles, alis longiores, maris denticulatæ. Tibiæ posteriores quadricaratae.

Odontocerus, Leach, Steph. Ill. Brit. Ent. Mand. vi. 192, (1836).

Phryganea p., Scopoli.

1. ODONTOCERUS ALBICORNIS.

Cinereo-fuscus; antennæ albido-ochraceæ; alæ cinereæ aut canescentes, vix maculatæ. Long. 4—6; alar. 15—18 lin.

Phryganea albicornis, Scop. Ent. Carn. 689. Schr. Ins. Austr. 619.

De Vill. Ent. iii. 36, 29. Oliv. Enc. Méth. 555, 2.

Odontocerus griseus, Leach, Edin. Encycl. ix. 136.

Mystacide albicornis, Pictet, Rech. Phryg. 162, 1, pl. 12, f. 1.

a—h. England.

Genus 2. MOLANNA.

Antennæ incrassatæ, alis non longiores, haud denticulatæ. Tibiæ posteriores quadricaratae.

Molanna, Curt. Phil. Mag. iv. 214. Steph. Ill. Brit. Ent. Mand. vi. 202.

1. MOLANNA NIGRIPALPIS.

Fusca; antennæ fulvæ, fusco guttatæ; thorax et pedes fulvi; alæ anticæ ochraceo-sericeæ, posticæ pallide fuscescentes. Long. 3; alar. 12 lin.

Molanna nigripalpis, *Steph. Ill. Brit. Ent. Mand.* vi. 203, 1.
England.

2. MOLANNA ANGUSTATA.

Fusca; palpi pedesque rufo-ochracei; alæ anticæ subfulvæ venis fuscis; posticæ fuscescentes. Long. 3; alar. 12 lin.

Molanna angustata, *Curt. Phil. Mag.* iv. 264. *Steph. Ill. Brit. Ent. Mand.* vi. 203, 2. *Burm. Handb. Ent.* ii. 922, 1.
England.

3. MOLANNA MACULIPENNIS.

Niger; pedes fulvi; tibiis tarsisque anticis femoribusque obscuris; alæ anticæ ochraceæ, nigricante-maculatæ. Long. —; alar. 16. lin.

Odontocerus maculipennis, *Curt. Phil. Mag.* iv. 214. *Steph. Ill. Brit. Ent. Mand.* vi. 193.
Mystacide cylindrica, *Pictet, Rech. Phryg.* 164, 2, pl. 12, f. 2.
Molanna cylindrica, *Burm. Handb. Ent.* ii. 922, 2.
England.

Genus 3. CERACLEA.

Palpi maxillares articulis 1o et 2o brevibus. Tibiæ posteriores bicalcaratæ.

Ceraclea, *Leach, Steph. Ill. Brit. Ent. Mand.* vi. 193.
Phryganea p., *Latr.*

1. CERACLEA NERVOSA.

Nigra; pedes obscure ochracei, nebulis obscurioribus; alæ anticæ cinereæ venis fuscis, posticæ hyalinæ obscuræ. Long. 4; alar. 11—13 lin.

- Phryganea nervosa, *Latr. Hist. Nat. Ins.* xiii. 91.
 Ceraclea nervosa, *Steph. Ill. Brit. Ent. Mand.* vi. 194, 1.
 a—d. England.
 e. ———? From Mr. Children's collection.

Genus 4. LEPTOCERUS.

Palpi maxillares articulo 1o tantum brevi. Tibiæ posteriores bicalcaratæ.

- Phryganea p., *Linn., Fabr.*
 Mystacide, *Latr., Pictet.*
 Leptocerus, *Leach, Steph. Ill. Brit. Ent. Mand.* vi. 194.
 Mystacides, *Burm.*
 Mystacida, *Rambur.*

Group 1.

Alarum anticarum areolæ apicales linea subcurvata venarum transversarum inclusæ.

Steph. Ill. Brit. Ent. Mand. vi. 195.

1. LEPTOCERUS OCHRACEUS.

Pallide ochraceus; thorax ferrugineus, lineis tribus obscuris; alæ posticæ hyalinæ. Long. $3\frac{1}{2}$ —4; alar. 12—13 lin.

Leptocerus ochraceus, *Curt. Brit. Ent.* ii. 57. *Steph. Ill. Brit. Ent. Mand.* vi. 195, 1.

a. England.

2. LEPTOCERUS TESTACEUS.

Rufescente-ochraceus; alæ posticæ hyalinæ, apice subfuscæ. Long. —; alar. 8 lin.

Leptocerus testaceus, *Curt. Phil. Mag.* iv. 214. *Steph. Ill. Brit. Ent. Mand.* vi. 195, 2.

a—c. England.

d, e. ———? From Mr. Children's collection.

3. LEPTOCERUS OBTUSUS.

Niger, nitidus; antennæ et pedes obscure fusci; alæ fuscæ, anticæ apice rotundato-obtusæ. Long. 3—3½; alar. 7½—8 lin.

Leptocerus obtusus, Steph. Ill. Brit. Ent. Mand. vi. 195, 3.

a, b. ———? From Mr. Children's collection.

4. LEPTOCERUS NIGRICANS.

Niger, nitidus; antennæ albo annulatæ; pedes obscure fusci, tarsis ochraceis; alæ fuscæ. Long. 3½; alar. 9 lin.

Leptocerus nigricans, Steph. Ill. Brit. Ent. Mand. vi. 196, 5, 4.

England.

5. LEPTOCERUS ATER.

Ater; antennæ nigro alboque subannulatæ; pedes nigri; alæ immaculatæ subiridescentes. Long. 3; alar. 9. lin.

Mystacide atra, Pictet, Rech. Phryg. 169, 9, pl. 12, f. 4.

Leptocerus ater, Steph. Ill. Brit. Ent. Mand. vi. 196, 5.

Mystacides ater, Burm. Handb. Ent. ii. 919, 4.

England.

6. LEPTOCERUS NIGER.

Niger, nitidus; antennæ nigro alboque annulatæ; pedes obscure fusci; alæ anticæ splendide chalybeo-nigræ. Long. 3—3½; alar. 8½—9½ lin.

Phryganea nigra, Linn. Syst. Nat. ed. 12. 909, 2. Geoffr. Ins. ii. 250, 10. Deg. Ins. ii. 580, 12, pl. 15, f. 21—23. Raii, Ins. 275. Roemer, Gen. Ins. pl. 24, f. 10, 11. De Vill. Ent. iii. 31, 15. Mus. Lesk. 51, 42. Cederh. Faun. Ingr. Prod. 139, 424. Rossi, Faun. Etrusc. 681. Oliv. Enc. Méth. 545, 21. Fabr. Sp. Ins. i. 390, 14. Mant. Ins. i. 246, 17. Ent. Syst. ii. 79, 20. Gmel. ed. Syst. Nat. i. v. 2634, 11. Schr. Faun. Boic. ii. 183, 1903. Latr. Hist. Nat. xiii. 90, 15. Berk. Syn. i. 151. Stew. Elem. Nat. Hist. ii. 214. Turt. Syst. Nat. iii. 397. Zett. Ins. Lapp. 1072, 53.

Phryganea fuliginosa, Scopoli, Ent. Carn. 696.

Mystacide nigra, Pictet, Rech. Phryg. 169, 10, pl. 12, f. 5.

Mystacides niger, Burm. Handb. Ent. ii. 919, 5.

Mystacida nigra, *Ramb. Hist. Nat. Ins. Neur.* 511, 8.
 Leptocerus niger, *Steph. Ill. Brit. Ent. Mand.* vi. 196, 6.
 a—e. England.
 f—h. ———? From Mr. Children's collection.

Group 2.

Alarum anticarum venæ 2a et 3a apud marginem posteriorem bifidæ.

Steph. Ill. Brit. Ent. Mand. vi. 196.

7. LEPTOCERUS PERFUSCUS.

Niger; antennæ albo nigroque annulatæ; pedes ochracei; alæ anticæ cupreo-fuscæ, posticæ pallidiores. Long. 3; alar. 9 lin.

Leptocerus perfuscus, *Steph. Ill. Brit. Ent. Mand.* vi. 196, 7.

England.

8. LEPTOCERUS AUREUS.

Niger, cano-pilosus; antennæ albo annulatæ; pedes pallidi, tarsi albis fusco annulatis; alæ anticæ aureo-sericeæ, posticæ cinereæ iridescentes. Long. 3; alar. 10—11 lin.

Mystacide aurea, *Pictet, Rech. Phryg.* 164, 3, pl. 13, f. 1.

Leptocerus aureus, *Steph. Ill. Brit. Ent. Mand.* vi. 197, 8.

a. England.

9. LEPTOCERUS ANNULATUS.

Niger; antennæ fuscæ, albo subannulatæ; palpi pedesque fusci; alæ fuscæ, maculis holosericeo-fulvescentibus ornata. Long. 3; alar. 10—11 lin.

Phryganea annulata, *Mus. Lesk. Pars Ent.* 52, 43. *Gmel. ed. Syst. Nat.* 2037. *Oliv. Enc. Méth.* 560, 31.

Mystacide annulata, *Pictet, Rech. Phryg.* 165, 4, pl. 13, f. 2.

Leptocerus annulatus, *Steph. Ill. Brit. Ent. Mand.* vi. 197, 9.

England.

10. LEPTOCERUS DISSIMILIS.

Fulvo-ochraceus; antennæ albidæ, fusco annulatæ; alæ antica cinereo-ochraceæ immaculatæ, posticæ hyalinæ iridescentes.
Long. 3; alar. $8\frac{1}{2}$ —9 lin.

Leptocerus dissimilis, *Steph. Ill. Brit. Ent. Mand.* vi. 197, 10.
a. England.

11. LEPTOCERUS BIMACULATUS.

Niger; alæ fuscæ, anticæ macula laterali duplici flava aut cinerea.
Long. $2\frac{1}{2}$; alar. 9 lin.

Leptocerus bimaculatus, *Steph. Ill. Brit. Ent. Mand.* vi. 197, 11.
England.

12. LEPTOCERUS INTERRUPTUS.

Niger; alæ fuscæ, anticæ strigis aliquot interruptis niveis margineque postico albo punctato. Long. $2\frac{1}{2}$ —3; alar. $8\frac{1}{2}$ — $9\frac{1}{2}$ lin.

Phryganea interrupta, *Fabr. Ent. Syst.* ii. 79. *Stew. Elem. Nat. Hist.* ii. 215. *Turt. Syst. Nat.* iii. 397. *Donov. Ins.* xvi. pl. 551.

Leptocerus interruptus, *Leach, Edinb. Enc.* ix. 136, 28. *Steph. Ill. Brit. Ent. Mand.* vi. 198, 12.

Mystacides interruptus, *Burm. Handb. Ent.* 919, 6.

a—f. England.

13. LEPTOCERUS AFFINIS.

Ater; antennæ albo annulatæ; pedes subochracei, tarsi albis; alæ anticæ punctis duobus marginalibus albis. Long. 3; alar. $8\frac{1}{2}$ lin.

Leptocerus affinis, *Leach, MSS.* *Steph. Ill. Brit. Ent. Mand.* vi. 198, 13.

England.

Group 3.

Alarum anticarum vena 2a bifida, 5a trifida apud marginem posteriorem.

Steph. Ill. Brit. Ent. Mand. vi. 198.

14. LEPTOCERUS ASSIMILIS.

Viridi-fuscus; antennæ albo fuscoque annulatæ; alæ anticæ cinereo-ochraceæ immaculatæ, posticæ hyalinæ iridescentes. Long. $2\frac{1}{2}$ —3; alar. 8—9 lin.

Leptocerus assimilis, *Steph. Ill. Brit. Ent. Mand.* vi. 198, 14.

Mystacida fulva, *Ramb. Hist. Nat. Ins. Neur.* 509, 3.

a. England.

15. LEPTOCERUS ANNULICORNIS.

Pallide fuscus; palpi pedesque ochracei; antennæ albæ, nigro annulatæ; alæ anticæ cinereo-fuscæ, posticæ subhyalinæ fuscæcentes. Long. $2\frac{1}{2}$ —3; alar. 9—10 lin.

Leptocerus annulicornis, *Steph. Ill. Brit. Ent. Mand.* vi. 199, 15.

England.

16. LEPTOCERUS SEMINIGER.

Niger; antennæ albo annulatæ; pedes pallidi; alæ anticæ cinereo-ochraceæ, posticæ atro-fuscæ immaculatæ. Long. 3; alar. 9 lin.

Leptocerus seminiger, *Steph. Ill. Brit. Ent. Mand.* vi. 199, 16.

England.

17. LEPTOCERUS CINEREUS.

Cinereo-fuscus; tibiæ tarsique albido-ochraceæ; alæ anticæ cano-pubescentes, costa nebulisque aliquot subochraceis. Long. 4— $4\frac{1}{2}$; alar. 12—13 lin.

Leptocerus cinereus, *Curt. Phil. Mag.* iv. 214. *Steph. Ill. Brit. Ent. Mand.* vi. 199, 17.

England.

18. LEPTOCERUS FILOSUS.

Niger; caput subtus fulvum; antennæ graciles, fusco alboque annulatae; pedes pallidi, fusco annulati; alæ anticae ochraceo-fuscae marginibus flavescentibus, posticae hyalinae iridescentes. Long. 3—3½; alar. 11 lin.

Phryganea filosa, Linn. *Syst. Nat. ed. 12*, ii. 910, 16. *Faun. Suec.* 1493. *Mus. Lesk.* 52, 40. *Fabr. Sp. Ins.* i. 991, 23. *Mant. Ins.* i. 246, 26. *Ent. Syst.* ii. 80, 30. *Oliv. Enc. Méth.* 547, 34. *Gmel. ed. Syst. Nat.* i. 5, 2634, 16. *Stew. Elem. Nat. Hist.* ii. 215. *Turt. Syst. Nat.* iii. 397. *Latr. Hist. Nat.* xiii. 92, 24.

Mystacide filosa, Pictet, *Rech. Phryg.* vi. 166, 5, pl. 13, f. 3.

Leptocerus filus, Steph. *Ill. Brit. Ent. Mand.* vi. 199, 18.

Mystacides filus, Burm. *Handb. Ent.* ii. 920, 8.

Mystacida obsoleta, Ramb. *Hist. Nat. Ins. Neur.* 509, 4.

a. England.

19. LEPTOCERUS CALIGINOSUS.

Niger; antennæ tenuissime albo annulatae; pedes ochraceo-fusci, tarsi pallidioribus; alæ obscure fuscae immaculatae, posticae basi subiridescentes.

Leptocerus caliginosus, Steph. *Ill. Brit. Ent. Mand.* vi. 200, 19.

England.

20. LEPTOCERUS ATERRIMUS.

Ater; antennæ albo tenuissime annulatae; pedes fusci; alæ fusco-nigræ, venis saturatioribus. Long. 3; alar. 8½—9½ lin.

Leptocerus aterrimus, Steph. *Ill. Brit. Ent. Mand.* vi. 200, 20.

England.

21. LEPTOCERUS BILINEATUS.

Niger; palpi fusci; antennæ fuscae, obscure flavo annulatae; pedes ochracei; alæ fuscae, lineis duobus abbreviatis albidis. Long. 2¾; alar. 8 lin.

Phryganea bilineata, Linn. *Syst. Nat. ed. 12*, ii. 910, 19. *Faun. Suec.* 1496. *De Vill. Ent.* iii. 34, 23. *Fabr. Sp. Ins.* i. 991, 18. *Mant. Ins.* i. 246, 21. *Ent. Syst.* ii. 79, 24. *Oliv. Enc. Méth.* 546, 27. *Schr. Faun. Boic.* ii. 183, 1914. *Gmel. ed. Syst. Nat.* i. 2635, 19. *Latr. Hist. Nat.* xiii. 91, 20. *Turt. Syst. Nat.* iii. 397.

Mystacide bilineata, *Pictet, Rech. Phryg.* 167, 7, pl. 13, f. 4.
 Leptocerus bilineatus, *Steph. Ill. Brit. Ent. Mand.* vi. 200, 21.
 England.

Group 4.

Alæ anticæ venis sat indistinctis, 2a tantum apud marginem posteriorem bifida.

Steph. Ill. Brit. Ent. Mand. vi. 200.

22. LEPTOCERUS QUADRIFASCIATUS.

Niger; alæ ochraceo-testaceæ, anticæ fasciis quatuor latis nigris, posticæ immaculatæ. Long. $2\frac{1}{2}$ —3; alar. 8—10 lin.

Phryganea quadrifasciata, Fabr. Ent. Syst. ii. 80, 28. *Turt. Syst. Nat.* iii. 937. *Zett. Ins. Lapp.* 1072, 50.

Leptocerus quadrifasciatus, Steph. Ill. Brit. Ent. Mand. vi. 200, 22.
Mystacida quadrifasciata, Ramb. Hist. Nat. Ins. Neur. 511, 9.

a. England. Presented by J. C. Dale, Esq.

b—e. England.

f—h. ———? From Mr. Children's collection.

23. LEPTOCERUS LONGICORNIS.

Fuscus; antennæ albide; pedes albi; alæ anticæ cinereo et nigricante variæ, posticæ cinereæ immaculatæ. Long. 3; alar. $9\frac{1}{2}$ lin.

Phryganea longicornis, Linn. Syst. Nat. ii. 910, 15. *Faun. Suec.* 1492. *Fabr. Sp. Ins.* i. 391, 21. *Mant. Ins.* i. 246, 24. *Geoffr. Ins. Par.* ii. 249, 1. *Gmel. ed. Syst. Nat.* i. 5, 2634, 15. *Berk. Syn.* i. 151. *Stew. El. Nat. Hist.* ii. 214. *Turt. Syst. Nat.* iii. 397.

Mystacides longicornis, Burm. Handb. Ent. ii. 918, 2.

Leptocerus longicornis, Steph. Ill. Brit. Ent. Mand. vi. 201, 23.

England.

24. LEPTOCERUS RUFGRISEUS.

Fuscus; antennæ albæ nigro maculatæ; pedes albi; alæ anticæ rufo-cinereæ atomis pallidioribus, posticæ fusce subhyalinæ. Long. $2\frac{1}{2}$; alar. $7\frac{1}{2}$ —8 lin.

Leptocerus rufogriseus, Steph. Ill. Brit. Ent. Mand. vi. 201, 24.

England.

25. LEPTOCERUS BICOLOR.

Ochraceo-ferrugineus; antennæ nigræ, albo annulatæ; pedes fulvi; abdomen nigricans; alæ posticæ nigricantes. Long. $2\frac{1}{2}$ — $3\frac{3}{4}$; alar. 6—8 lin.

Leptocerus bicolor, *Curt. Phil. Mag.* iv. 214. *Steph. Ill. Brit. Ent. Mand.* vi. 201, 25.

a—e. England.

26. LEPTOCERUS ELONGATUS.

Pallide rufo-ochraceus; antennæ pallide cinereæ, albido annulatæ; pedes pallide cinerei; alæ anticæ angustæ ochraceæ atomis paucis atris, posticæ subfusco-hyalinæ iridescentes. Long. 2; alar. 7 lin.

Leptocerus elongatus, *Steph. Ill. Brit. Ent. Mand.* vi. 201, 26.

a. England.

27. LEPTOCERUS TINEIFORMIS.

Fusco-cinereus; antennæ albæ, nigro annulatæ; pedes ochraceo-albi; alæ anticæ angustissimæ, venis fusco irroratis. Long. 2— $2\frac{1}{2}$; alar. 6— $6\frac{1}{2}$ lin.

Leptocerus tineiformis, *Curt. Phil. Mag.* iv. 214. *Steph. Ill. Brit. Ent. Mand.* vi. 202, 27.

England.

28. LEPTOCERUS ATTENUATUS.

Fuscus; antennæ pallidæ, fusco annulatæ; abdomen pallide ochraceum; pedes pallide ochracei; alæ angustissimæ, subhyalinæ immaculatæ. Long. $1\frac{3}{4}$ —2; alar. 5—6 lin.

Leptocerus attenuatus, *Steph. Ill. Brit. Ent. Mand.* vi. 202, 28.

England.

Group ?

29. LEPTOCERUS ALBIFRONS.

Niger; antennæ albo annulatæ; macula inter oculos alba; pedes cinerei; alæ anticæ fuscæ, fasciis tribus interruptis albis.

Phryganea albifrons, Linn. *Syst. Nat. ed. 12*, ii. 910, 18. *Faun. Suec.* 1495. *De Vill. Ent.* iii. 33, 22. *Oliv. Enc. Méth. Ins.* 547, 36. *Gmel. ed. Syst. Nat.* i. 4, 2635, 18. *Zett. Ins. Lapp.* 1072, 51.

Mystacide albifrons, Pictet, *Rech. Phryg.* 168, 8, pl. 13, f. 5.

Mystacida albifrons, Ramb. *Hist. Nat. Ins. Neur.* 510, 6.

L. bilineatus, var. ?

a. England.

30. LEPTOCERUS VENOSUS.

Mystacida venosa, Ramb. *Hist. Nat. Ins. Neur.* 508, 1.

Phryganea Fennica ? *Fabr. Gmel.*

Phryganea barbata ? *Zett. Ins. Lapp.* 1071, 47. *Nigra*; palpis longe hirsutis; tarsi albidis; alis cinereo-fuscis, venis longitudinalibus duabus postice infra venas transversas furcatis. Long. fere 3; alar. 8-9 lin.

France.

31. LEPTOCERUS BIFASCIATUS.

Niger; antennæ albo annulatæ; pedes albidis, fusco annulati; alæ anticæ atræ, fasciis duabus punctisque nonnullis albis. Long. $4\frac{1}{2}$ lin.

Phryganea bifasciata, Fourcr. *Ent. Par.* ii. 358, 17. *Oliv. Enc. Méth.* 558, 20.

Mystacide bifasciata, Pictet, *Rech. Phryg.* 166, 6, pl. 12, f. 3.

Mystacides bifasciatus, Burm. *Handb. Ent.* ii. 920, 10.

Europe.

32. LEPTOCERUS ALBIMACULA.

Mystacida albimacula, Ramb. *Hist. Nat. Ins. Neur.* 509, 2.

France.

33. LEPTOCERUS FILICORNIS.

Cinereus; antennæ fulvæ, longissimæ; pedes flavescens; alæ ciliatæ. Long. $3\frac{1}{2}$ lin.

Mystacide filicornis, Pictet, *Rech. Phryg.* 171, 12, pl. 12, f. 6.

Geneva.

34. LEPTOCERUS HECTICUS.

Totus flavo-cinereus ; alarum vena longitudinali unica infra venas transversas medias furcata. Long. 3 ; alar. 8—9 lin.

Phryganea hectica, Zett. Ins. Lapp. 1072, 48.

Lapland.

35. LEPTOCERUS UNIGUTTATUS.

Cinereus, subtus fulvus ; antennæ albidæ, fusco annulatæ ; pedes fulvi ; alæ fulvæ, macula communi alba. Long. 4½ lin.

Mystacide uniguttata, Pictet, Rech. Phryg. 170, 11, pl. 13, f. 6.

Geneva.

36. LEPTOCERUS GENEI.

Mystacida Genei, Ramb. Hist. Nat. Ins. Neur. 511, 7.

Sardinia.

37. LEPTOCERUS LACUSTRIS.

Fulvus ; alæ anticæ maculis nonnullis apicalibus posticisque. Long. 3 lin.

Mystacide lacustris, Pictet, Rech. Phryg. 171, 13, pl. 13, f. 7.

Geneva.

38. LEPTOCERUS RUFINUS.

Phryganea rufina, Linn. Syst. Nat. ii. 910, 16.

Mystacide rufina, Pict. Rech. Phryg. 166, 5, pl. 13, f. 3.

Mystacides rufinus, Burm. Handb. Ent. ii. 920, 8.

Mystacida rufina, Ramb. Hist. Nat. Ins. Neur. 510, 5.

Europe.

39. LEPTOCERUS VETULUS.

Mystacida vetula, Ramb. Hist. Nat. Ins. Neur. 512, 12.

France.

40. LEPTOCERUS NOTATUS.

Mystacida notata, Ramb. Hist. Nat. Ins. Neur. 514, 18.

France.

41. LEPTOCERUS RUFUS.

Mystacida rufa, *Ramb. Hist. Nat. Ins. Neur.* 514, 17.

France.

42. LEPTOCERUS CONSPERSUS.

Mystacida conspersa, *Ramb. Hist. Nat. Ins. Neur.* 514, 16.

France.

43. LEPTOCERUS FURVUS.

Mystacida furva, *Ramb. Hist. Nat. Ins. Neur.* 512, 11.

44. LEPTOCERUS LEUCOPHÆUS.

Mystacida leucophæa, *Ramb. Hist. Nat. Ins. Neur.* 512, 13.

Mystacida subtrifasciata, var., *Ramb. Hist. Nat. Ins. Neur.* 513, 14.

France.

45. LEPTOCERUS SUBFASCIATUS.

Mystacida subfasciata, *Ramb. Hist. Nat. Ins. Neur.* 513, 15.

France.

46. LEPTOCERUS FERRUGINEUS.

Mystacida ferruginea, *Ramb. Hist. Nat. Ins. Neur.* 512, 10.

France.

47. LEPTOCERUS OCHRATUS.

Nigricans, flavo-pilosus; antennis fuscis tenuiter pallido annulatis; alis ochraceis; pedibus testaceis. Long. $1\frac{1}{2}$; alar. 5 lin.

Phryganea ochrata, *Dalm. MSS. Zett. Ins. Lapp.* 1072, 49.

Scandinavia.

48. LEPTOCERUS RESPERSELLUS.

Setodes respersella, *Ramb. Hist. Nat. Ins. Neur.* 515, 1.

France.

49. LEPTOCERUS PUNCTATELLUS.

Setodes punctatella, *Ramb. Hist. Nat. Ins. Neur.* 516, 2.

50. LEPTOCERUS PUNCTATUS.

Phryganea punctata, *Fabr: Ent. Syst.* ii. 80, 29.

Mystacides punctatus, *Burm. Handb. Ent.* ii. 919, 7.

Setodes punctata, *Ramb. Hist. Nat. Ins. Neur.* 516, 4.

Setodes punctella, var.? *Ramb. Hist. Nat. Ins. Neur.* 516, 5.

Europe.

51. LEPTOCERUS ASPERSELLUS.

Setodes aspersella, *Ramb. Hist. Nat. Ins. Neur.* 516, 3.

France.

52. LEPTOCERUS SENILIS.

Fuscus; corpore supra cum alis anticis hirto; pilis dorsi cinereis, alarum testaceis; antennis pedibusque testaceis, his nigro annulatis.

Mystacides senilis, *Burm. Handb. Ent.* ii. 2, 920, 11.

Germany.

Burmeister arranges the species which he has described in the following groups:—

Group 1.—Eyes very large, each of them broader than the space between them. Three first joints of the maxillary palpi of equal length; fourth shorter; fifth longer but much more slender than the preceding.

A. Fore-tibiæ with apical spurs; middle tibiæ longer than the hind tibiæ, with two spurs near the base. *L. albicornis*.

B. Fore-tibiæ without apical spurs. Posterior tibiæ with a pair of more slender and rather longer apical spurs but without any middle spurs. *L. longicornis*, *concolor*.

Group 2.—Eyes much smaller; each of them much less than the space between them.

A. First joint of the maxillary palpi almost as long as the second, which is as long as the third. Fore-tibiæ without spurs at the tips.

a. Last joint of the maxillary palpi longer than the preceding. Posterior tibiæ with very small spurs at the tips. *L. ater*, *niger*, *interruptus*, *punctatus*, *ochraceus*.

- b. Last joint of the maxillary palpi shorter than the preceding ; first thinly pilose. Posterior tibiæ with long spurs at the tips. *L. filusus*.
- B. First joint of the maxillary palpi smaller in proportion, hardly half as long as the second, which is as long as the third or somewhat longer ; last joint longer and more slender than the preceding.
- a. Fore-tibiæ with little spurs at the tips, those of the hinder tibiæ somewhat larger. *L. 3-punctatus*, *bifasciatus*, *senilis*.
- b. Spurs at the tips of all the tibiæ equal in size, but the hind-tibiæ have a single little spur somewhat above one-fifth of their length. *L. gracilis*, *princeps*, *fennicus* (*Fabr.* = *uni-guttatus*, *Pict.*), *bimaculatus*, *bilineatus*, *4-fasciatus*, *minutus*.

53. LEPTOCERUS CONCOLOR.

Fuscus ; corpore supra cum alis anticis fulvo-hirto ; antennis palpisque nigris, articulo 1o utriusque organi pedibusque flavis.

Mystacides concolor, *Burm. Handb. Ent.* ii. 2, 919, 3.

Germany.

54. LEPTOCERUS ALBICORNIS.

Fusco-niger ; antennæ corpore cum alis triplo longiores, apice niveæ ; pedes dilutiores.

Mystacides albicornis, *Burm. Handb. Ent.* ii. 2, 918, 1.

Brazil.

55. LEPTOCERUS GRACILIS.

Testaceus ; antennis tarsisque fuscis, illis apice albis, dorso alisque pilosis, pilis testaceis cum albis intermixtis appressis nigrisque longioribus patentibus.

Mystacides gracilis, *Burm. Handb. Ent.* ii. 2, 921, 12.

Brazil.

56. LEPTOCERUS PRINCEPS.

Fulvo-fuscus ; antennis apice albo annulatis ; pedibus cinereo-testaceis ; dorso alisque pilosis, pilis alarum fuscis et flavis in maculas alternas congestis.

Mystacides princeps, *Burm. Handb. Ent.* ii. 2, 921, 13.

Brazil.

57. LEPTOCERUS SEPULCHRALIS.

Niger; antennæ albo annulatæ; abdomen apice ferrugineum; pedes testacei; alæ nigricantes.

Psychomyia sepulchralis, Barnston, MSS.

L. niger, var.?

Black, clothed with black hairs: antennæ more than twice the length of the body, with a white ring on each joint, wholly black towards the tips: abdomen ferruginous at the tip: legs testaceous: wings blackish, deeply fringed. Length of the body $2\frac{1}{2}$ lines; of the wings 6 lines.

a. St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.

58. LEPTOCERUS RESURGENS.

Fuscus, albido-hirtus; alæ anticæ fuscæ albo maculatæ, posticæ cinereæ.

Brown, with a hoary tinge, clothed with whitish hairs: palpi and legs tawny, with whitish down: palpi not hairy: fore-wings brown, with white spots at the base and about the middle and with a white spot on the tip of each apical areolet: hind-wings gray. Length of the body $3\frac{1}{2}$ lines; of the wings 14 lines.

a. St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.

59. LEPTOCERUS SUBMACULA.

Niger, tibiis tarsisque testaceis; alæ cinereæ, anticæ maculis tribus albidis, una basali, 2a subcostali, 3a postica.

Black, clothed with black hairs: palpi hairy: antennæ very slender, about thrice the length of the body; tibiæ and tarsi testaceous: wings gray; fore-wings sprinkled with whitish down, adorned with three whitish spots, one in the middle near the base, the second on the anterior or discal anastomosis, the third on the arcus; veins black. Length of the body $3\frac{1}{2}$ —4 lines; of the wings 10—12 lines.

a, b. River St. Lawrence. Presented by E. Doubleday, Esq.

60. LEPTOCERUS MENTIEUS.

Ferrugineus ; antennæ nigræ albo annulatæ ; tarsi albo cincti ; alæ anticæ cinereo-fuscæ, ferrugineo-pubescentes, posticæ cinereæ.

Ferruginous, hairy : antennæ black, with a white ring on each joint : palpi slightly hairy : tarsi with white bands : wings gray ; fore-wings with a brown tinge, clothed with ferruginous down ; veins ferruginous. Length of the body $2\frac{1}{2}$ lines ; of the wings 9 lines

a. St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.

61. LEPTOCERUS INCERTUS.

Obscure testaceus, aureo-pubescentis, corpore subtile antennis pedibusque albidis, abdominis apice ferrugineo ; alæ cinereæ, anticæ aureo-pubescentes.

Dark testaceous, clothed with gilded down and with a few black hairs, whitish beneath : palpi hairy : antennæ whitish, full thrice the length of the body : tip of the abdomen ferruginous : legs whitish : wings gray ; fore-wings covered with gilded down. Length of the body $1\frac{3}{4}$ line ; of the wings $5\frac{1}{2}$ lines.

a. St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.

62. LEPTOCERUS ALBIDUS.

Fuscus, albo-hirtus ; antennæ basi albo annulatæ ; palpi testacei ; pedes albi ; alæ albidæ, venis testaceis.

Brown, clothed with white hairs : antennæ about four times the length of the body, with white rings on the joints towards the base : palpi testaceous : legs whitish : wings whitish, with testaceous veins. Length of the body $3\frac{1}{4}$ lines ; of the wings 12 lines.

a. St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.

63. LEPTOCERUS INCONSPICUUS.

Ferrugineus ; abdomine nigricante ; palpis pedibusque testaceis ; alæ cinereæ, testaceo-pubescentes.

Ferruginous, with pale hairs : palpi testaceous, slightly hairy : antennæ about thrice the length of the body, testaceous at the base :

abdomen blackish: legs testaceous: wings slightly gray, covered with testaceous down; veins pale. Length of the body $2\frac{1}{2}$ lines; of the wings 9—11 lines.

a—c. Georgia. From Mr. Abbot's collection.

64. LEPTOCERUS IGNITUS.

Testaceus; antennæ albidae fulvo annulatæ; pedes albidii; alæ albidae, iridescentes, anticæ testaceo-pilosæ, maculis duabus posticis nigris.

Testaceous: palpi slightly hairy: antennæ whitish, more than four times the length of the body, with a tawny ring on each joint: legs whitish: wings whitish, iridescent, deeply fringed; fore-wings clothed with testaceous hairs, and having two black spots on the hind border. Length of the body $2\frac{1}{4}$ lines; of the wings 8 lines.

a, b. Georgia. From Mr. Abbot's collection.

65. LEPTOCERUS EXQUISITUS.

Testaceus, albo-hirtus; antennæ articulis basi albis; pedes albi; alæ albæ, anticæ testaceo fasciatæ maculisque quatuor apud marginem posticum nigris.

Pale testaceous, clothed with white hairs: joints of the antennæ white towards the base; those towards the tip wholly testaceous; sutures brown: legs and wings white: fore-wings with five pale testaceous bands, the outer ones irregular; nearer the tip are some streaks composed of blackish hairs, and at the tip there are some pale testaceous marks or interrupted bands; five black spots furnished with long black hairs in a row on the hind border near the tip; veins white. Length of the body $2\frac{1}{4}$ lines; of the wings $7\frac{1}{2}$ lines.

a. Georgia. From Mr. Abbot's collection.

66. LEPTOCERUS INDICUS.

Testaceus, albo-hirtus; antennæ articulis albo cinctis; alæ anticæ fusco conspersæ, posticæ albidae.

Testaceous, clothed with white hairs: head partly clothed with brownish hairs: joints of the antennæ with white bands: fore-wings with minute patches of brown hairs which are most prevalent and partly confluent towards the tips; veins pale: hind-wings whitish. Length of the body $4\frac{1}{2}$ lines; of the wings 15 lines.

a. North Bengal. From Miss Campbell's collection.

67. LEPTOCERUS CEPHALOTES.

Ferrugineus, subtus testaceus; caput latum; antennæ testaceæ, nigro annulata; pedes testacei; alæ subhyalinæ, venis testaceis.

Ferruginous, testaceous beneath: head broader than the thorax: palpi slightly hairy: antennæ testaceous, more than four times the length of the body, with a black ring on each joint: thorax with three brownish stripes: legs testaceous: wings subhyaline; veins testaceous. Length of the body $3\frac{1}{4}$ lines; of the wings 14 lines.

a. New Zealand. Presented by Dr. Sinclair.

The wings of the specimen described are much rubbed.

68. LEPTOCERUS OPPOSITUS.

Ferrugineus, subtus nigricans; antennis pedibusque testaceis; alæ cinereæ, fusco-pubescentes.

Ferruginous, blackish beneath, clothed with pale hairs: antennæ pale testaceous, almost whitish, full thrice the length of the body: legs testaceous: wings gray, slightly clothed with pale brown down; veins pale. Length of the body $2\frac{1}{2}$ —3 lines; of the wings 10—11 lines.

a. Van Dieman's Land. From Dr. Hooker's sale.

69. LEPTOCERUS MAGNUS.

Ferrugineus, cano-hirtus; antennæ nigra, longissima, articulis apice albis; palpi nigri; pedes testacei; alæ anticae cervinæ, posticae subcinereæ.

Ferruginous, clothed with hoary hairs: palpi black, rather hairy: antennæ black, more than five times the length of the body, ferruginous at the base; tips of the joints white: abdomen at the base beneath and legs testaceous: fore-wings fawn-colour, with darker veins: hind-wings slightly gray. Length of the body 4—5 lines; of the wings 15—19 lines.

a—d. Van Dieman's Land. From Dr. Hooker's collection.

e. Van Dieman's Land. Presented by R. Butler, Esq.

70. LEPTOCERUS ? MACULATUS.

Ferrugineus ; antennis nigro flavoque variis ; pectoris lateribus et abdomine nigricantibus ; pedibus flavicantibus ; alis anticis fusco et hyalino variis, maculis aliquot ad marginem anticum fulvis, alis posticis pellucidis immaculatis. Long. 5½ ; alar. 16 lin.

Phryganea maculata, Perty, Delect. Anim. Artic. 129, Pl. 25, f. 16. St. Paul, Brazil.

Genus 5. MACRONEMA.

Palpi maxillares in utroque sexu conformes 5-articulati, nudi vel breve pilosi, articulo ultimo longissimo filiformi : antennæ quam alas duplo vel triplo longiores : alæ spatulatæ, apice rotundatæ.

Macronema, Pictet, Mém. Soc. Phys. et Hist. Nat. Genève, vii. Ramb. Hist Nat. Ins. Neur. 507.

Macronemum, Burm.

1. MACRONEMA SPECIOSA.

Fulvo-testacea ; antennæ annulatæ ; alæ anticæ fusco-pilosæ, fascia media et altera ante apicem e maculis congesta nigra, areolis apicalibus apice fusco-nigris.

Macronemum speciosum, Burm. Handb. Ent. ii. 2, 916, 1. Brazil.

2. MACRONEMA LINEATA.

Fulvo-testacea ; antennæ annulatæ ; alæ fascia post medium argentata, apice aurantiaco.

Macronema lineata, Pictet, Mém. Soc. Phys. et Hist. Nat. Gen. vii. Macronemum lineatum, Burm. Handb. Ent. ii. 2, 916, 2.

Brazil.

3. MACRONEMA HYALINA.

Fusco-nigra; antennis articulo 1o femoribus tarsisque testaceis; alæ anticæ fuscæ maculis quinque hyalinis, posticæ hyalinæ margine apicali fusco.

Macronema hyalina, *Pict. Mém. Soc. Phys. et Hist. Nat. Gen.* vii.
Macronemum hyalinum, *Burm. Handb. Ent.* ii. 2, 916, 3.

Brazil.

4. MACRONEMA AURIPENNE.

Macronema auripenne, *Ramb. Hist. Nat. Ins. Neur.* 507, 2.

Brazil.

5. MACRONEMA RUBIGINOSA.

Nigricans, subtus flavescens; antennis longis fuscis; pedibus pallidis; alis anticis ferrugineo-fuscis semihyalinis apice obscurioribus, posticis pallidioribus.

Macronema rubiginosa, *Guér. Icon. Règne Anim. Texte*, 395.

Brazil.

6. MACRONEMA OCLATA.

Testacea; caput thoracisque dorsum ferruginea, nigro vittata; antennæ nigro annulatæ; alæ anticæ purpureæ, ad costam testaceæ, apice fuscæ, macula magna rotunda postica ante apicali hyalina; alæ posticæ viridi-purpureæ.

Testaceous: head and thorax above ferruginous, the former with two black stripes, the latter with a black disk: antennæ more than four times the length of the body; joints with black bands; fore-wings purple with gilded down, testaceous along the fore border; tips brown, with a large round hyaline spot on the hind border: hind-wings purple, partly green. Length of the body 4 lines; of the wings 12 lines.

a—c. Venezuela. From Mr. Dyson's collection.

7. MACRONEMA CUPREA.

Nigra; palpis pectore pedibusque fulvis; alæ nigricantes, anticæ supra cupreæ, posticæ ad costam fulvæ.

Black, covered with coppery down: antennæ about four times the length of the body: palpi, breast, legs and hind borders of the abdominal segments tawny: wings blackish; fore-wings covered above with bright coppery down; hind-wings tawny along the fore border. Length of the body $4\frac{1}{2}$ lines; of the wings 16 lines.

a. Brazil. Presented by J. P. G. Smith, Esq.

8. MACRONEMA FASTOSA.

Lutea; antennæ nigre; alæ anticæ nigro bifasciatæ apice cinereæ, posticæ apice nigre.

Mystacida fastosa, Brit. Mus. MSS.

Pale luteous: antennæ black, luteous at the base, about thrice the length of the body: fore-tibiæ and fore-tarsi black; fore-tibiæ with two very short apical spurs: posterior tibiæ with two pair of long spurs; middle tibiæ with one pair above the middle; hind-tibiæ deeply fringed, with one pair at three-fourths of the length: fore-wings with two black bands, one before the middle, the other irregular and slightly curved near the tips, which are gray: hind-wings paler with blackish tips. Length of the body 5 lines; of the wings 15 lines.

a. Hong Kong, China. Presented by J. Bowring, Esq.

9. MACRONEMA ALBOVIRENS.

Viridi-alba; antennis palpisque testaceis, illis fusco annulatis et terminatis.

Whitish, with a slight green tinge: palpi testaceous: antennæ testaceous, with a brown ring on each joint, and wholly brown towards the tips, more than thrice the length of the body: tarsi testaceous: veins of the wings greenish. Length of the body 3—4 lines; of the wings 12—16 lines.

a—e. Venezuela. From Mr. Dyson's collection.

f. ———? From Mr. Children's collection.

10. MACRONEMA SCRIPTA.

Macronema scriptum, Ramb. Hist. Nat. Ins. Neur. 507, 1.
Madagascar.

11. MACRONEMA CAPENSIS.

Testacea ; antennæ nigræ ; abdomen nigricans ; alæ subcinereæ.

Testaceous, slightly pubescent: eyes black: antennæ black, about thrice the length of the body, tawny at the base: abdomen blackish; hind borders of the segments and tip testaceous: fore-tibiæ with a pair of short apical spurs; hinder tibiæ with two pairs of long spurs: wings very slightly gray; veins testaceous. Length of the body 4 lines; of the wings 12 lines.

a. Port Natal. From M. Guenzius' collection.

12. MACRONEMA SIGNATA.

Fulva ; antennæ nigræ ; alæ anticæ testaceæ, fasciis duabus una furcata fuscis, apice cinereæ.

Tawny, almost without hairs: antennæ black, tawny at the base: legs testaceous; fore-tibiæ with a pair of very short spurs at the tips: hinder tibiæ with two pair of long spurs, one in the middle, the other at the tips: fore-wings testaceous, gray towards the tips, with two brown bands, one before the middle, oblique, the other nearer the tip, forked towards the fore border: hind-wings slightly gray. Length of the body 3 lines; of the wings 9 lines.

a, b. Sierra Leone. Presented by the Rev. D. F. Morgan.

13. MACRONEMA INSCRIPTA.

Testacea ; antennæ nigræ ; alæ hyalinæ, anticæ fasciis duabus fuscis unaquæ cinerea.

Testaceous, almost without hairs: antennæ black, testaceous at the base: wings colourless; veins testaceous; fore-wings with an oblique brown band about the middle, with a semicircular brown band beyond the middle, and with an irregular pale gray band near the tip. Length of the body $3\frac{1}{2}$ lines; of the wings 11 lines.

a, b. Sierra Leone. Presented by the Rev. D. F. Morgan.

14. MACRONEMA PULCHERRIMA.

Testacea ; antennæ nigræ ; alæ hyalinæ, anticæ testaceo vittata strigis nonnullis obliquis fuscis.

Testaceous, almost without hairs: antennæ black, testaceous at the base: wings colourless, with stripes of gilded down about the

veins, and with some oblique dark brown streaks, one of them forming a curved band across the wing. Length of the body $2\frac{1}{2}$ lines; of the wings 7 lines.

a. Sierra Leone. Presented by the Rev. D. F. Morgan.

Note.—The three preceding species are very nearly allied to each other.

15. MACRONEMA? APICALIS.

Testacea; thoracis dorsum nigrum; alæ apice nigricantes.

Testaceous: head wanting: disk of the thorax black, clothed with testaceous hairs: wings clothed with testaceous down, and towards the tips with black down; hind-wings very iridescent. Length of the body 3 lines; of the wings 10 lines.

a. Venezuela. From Mr. Dyson's collection.

Genus 6. LEPTONEMA.

Corpus elongatum. Palpi maxillares 5-articulati; articulus 1us brevis; 2us 1o duplo longior; 3us 2o paullo brevior et crassior; 4us validus, 1i ongitudine; 5us gracilior, præcedentibus conjunctis longitudine. Palpi labialis triarticulati; articuli 1us et 2us sat longi, æquales; 3us gracilior 1o et 2o conjunctim longior.

Leptonema, Guérin, Icon. Règne Anim. Texte, 396.

1. LEPTONEMA PALLIDA.

Pallide flava; antennis fusco annulatis; alis cinero-flavis semihyalinis.

Leptonema pallida, Guér. Icon. Règne Anim. Texte, 396.

Brazil.

Genus 7. POLYMORPHANISUS, m.

Palpi brevissimi: antennæ setaceæ, longissimæ, gracillimæ: tibiæ apice brevi-calcaratæ; tarsi dilatati: alæ anticæ nudæ venulis transversis nonnullis apud areolam costalem.

This genus seems to indicate an affinity between the Planipenides and the Phryganides. Head with a triangular compartment

between the eyes, very convex beneath : palpi extremely short : antennæ very long and slender ; joints cylindrical : eyes small : legs pubescent ; posterior legs comparatively short ; tips of the tibiæ armed with two very little spurs ; joints of the tarsi dilated, rather short : fore-wings quite bare, semifusiform towards the tips ; costal areolet intersected by several rather indistinct transverse veinlets ; subcostal areolet and discoidal areolet very narrow, the latter subdivided longitudinally ; apical areolets very long ; first divided near its base by a transverse vein which encloses a subquadrate areolet ; second and fifth very broad ; third narrow ; fourth moderately broad ; subapical areolets long ; areolet of the thyridium divided by a very oblique transverse vein which joins the thyriferous branch of the radius at the thyridium ; cell of the thyridium divided by a transverse veinlet.

1. POLYMORPHANISUS NIGRICORNIS.

Testaceus ; antennæ nigrae ; alæ albidae, venis viridibus.

Testaceous, clothed with pale hairs : antennæ black, about thrice the length of the body, tawny at the base ; first joint short, thick : tips of the tibiæ black above ; tips of the tarsi black, fringed with black hairs ; claws black : wings whitish ; veins pale green. Length of the body $6\frac{1}{2}$ lines ; of the wings 23 lines.

a. North India. From Mr. Stevens' collection.

Genus 8. ASCALAPHOMERUS, m.

Palpi hirsutissimi : oculi maris maximi, connexi : antennæ longæ, extrorsum crassiores, apice recurvæ.

This genus has a slight resemblance to *Ascalaphus*. Eyes of the male very large, connected above : maxillary palpi very hairy : antennæ long, slender, but slightly increasing in thickness from the base to the tips, towards which they are recurved and have transverse joints : tibiæ with two apical spurs ; fore-tibiæ rather short ; posterior tibiæ with two spurs at two-thirds of the length : fore-wings pubescent ; apical areolets very long ; cell of the thyridium triangular, rather short, very broad towards the tip, a little nearer to the fore border than to the hind border of the wing ; interclaval areolet and cubital areolet unusually broad.

1. ASCALAPHOMERUS HUMERALIS.

Niger, hirtus; antennæ corpore duplo longiores; thoracis latera antica rufo-hirta.

Black, thickly clothed with black hairs: eyes red: antennæ full twice the length of the body, hairy at the base: thorax with a tuft of bright red hairs on each shoulder: legs hairy; posterior thighs and tibiæ partly clothed with hoary hairs: wings blackish; fore-wings thinly covered with black down, slightly angular on the hind border, semifusiform towards the tips; veins black. Length of the body 6 lines; of the wings 22 lines.

a. Northern China. From Mr. Fortune's collection.

Fam. 3. PSYCHOMIDÆ.

Antennæ setaceæ. Alæ posticæ non plicatæ. Pedes calcarati.

Psychomidæ, *Curt. Steph. Ill. Brit. Ent. Mand. vi. 190.*

Psychomides, *Westw. Intr. Ent. ii. 50.*

Psychomioidæ, *Agassiz.*

Genus 1. CHIMARRA.

Palpi maxillares longissimi; articuli 2us et 3us elongati, validi; 4us gracilis.

Chimarra, *Leach; Curt. Brit. Ent. 561; Steph. Ill. Brit. Ent. Mand. vi. 190.*

Phryganea p., *Linn.*

Chimarrha, *Burm.; Ramb.*

1. CHIMARRA MARGINATA.

Fusco-nigra; alarum costa, margine postica et alarum anticarum lineis nonnullis ochraceo-flavis. Long. 4—5; alar. 6—9 lin.

Phryganea marginata, *Linn. Syst. Nat. ii. 910. Fabr. Sp. Ins. ii. 390, 16. Mant. Ins. i. 246. Ent. Syst. ii. 79, 22. Gmel. Ed. Syst. Nat. i. 5, 2634, 14.*

Chimarra marginata, *Leach. Curt. Brit. Ent. xii. 561. Steph. Ill. Brit. Ent. Mand. vi. 191, 1.*

Chimarra marginata, *Burm. Handb. Ent.* ii. 910. *Ramb. Hist. Nat. Ins. Neur.* 498.

a—d. England.

e. ———? From Mr. Children's collection.

2. CHIMARRA MORIO.

Tota atra, opaca, pilosa.

Chimarra Morio, *Burm. Handb. Ent.* ii. 2, 911, 2.

Brazil.

Genus 2. PSYCHOMIA.

Palpi maxillares 5-articulati, articulo 5o elongato filiformi. Antennæ mediocres, setacæ. Alæ anticæ angustæ, acuminatæ, venis transversis nullis; alæ posticæ auticis similes, non plicatæ.

Psychomia, *Latr.*; *Pictet, Rech. Phryg.* 222; *Ramb.*

Isopalpoidea p., *Kolenati*. (*Palpi maxillares in utroque sexu conformes, 5-articulati*).

1. PSYCHOMIA ANNULICORNIS.

Fusca; antennæ fusco fulvoque annulatæ; thorax subtus pedesque fulvi; alæ anticæ iridescentes, posticæ cinereæ. Long. $2\frac{1}{2}$ lin.

Psychomia annulicornis, *Pictet, Rech. Phryg.* 222, 1, pl. 20, f. 7. *Ramb. Hist. Nat. Ins. Neur.* 500, 1.

Geneva.

2. PSYCHOMIA ACUTA.

Fulva; antennæ subannulatæ; alæ fulvo-cinereæ, elongatæ, acuminatæ, iridescentes. Long. 3. lin.

Psychomia acuta, *Pictet, Rech. Phryg.* 223, 2, pl. 20, f. 8.

Geneva.

3. PSYCHOMIA TENUIS.

Fulva; palpi fusciscentes; antennæ basi subannulatæ, apice nigricantes; mesothorax punctis nonnullis nigris. Long. 3 lin.

Psychomia tenuis, *Pictet, Rech. Phryg.* 223, 3, pl. 20, f. 9.

Geneva.

Fam. 4. SERICOSTOMIDÆ.

Palpi maxillares maris articulis 4, fœm. 5, pilis simplicibus, densis et longis obtecti, articulo 2o elongato, 3o brevi, ovato. Calcaria tibiæ obtusa et mobilia. Alæ anticæ longe fimbriatæ, radio subcostali recto, facie inferiori etiam pilosa, venis transversis vix ullis. Alæ posticæ plicatæ, quoad colorem alis anticis magis æquales, pilosæ, foro cubitali nunquam dilatato, potius angustato.

Larvæ corpus cylindricum, infra sensim angustius aut oblongo-ovale: caput orbiculare aut transversum: prothorax solus corneus, semilunaris, transversus, antice caput amplectens; pedes fere æquales, breves: abdomen segmentis minus solutis, appendicibus analibus brevibus, hamis bidentatis: branchiæ simplices, brevissimæ, basi inter se connatæ, radiatæ, aut nullæ. Theca fere semper ex arena aut lapillis, intus neto subserta, depressa aut conica. Pupa cylindrica, recens flava, serius rufa, ore cucullato, appendicibus aut nullis, eorum loco setulis accumulatis, aut appendicibus tribus.

Sericostomidæ, *Steph. Ill. Brit. Ent. Mand.* vi. 180.

Sericostomides, *Westw. Intr. Ent.* ii. 50.

Phryganeidæ p., *Burm. Handb. Ent.* ii. 2, 922.

Sericostomoidea p., *Kol. Gen. et Sp. Trich.* 88.

Genus 1. POTAMARIA.

Tibiæ anticæ non calcaratæ.

Potamaria, *Leach, MSS. Steph. Ill. Brit. Ent. Mand.* vi. 182.

Phryganea p., *Fabr.*

Trichostoma? *Pictet.*

1. POTAMARIA ANALIS.

Nigra; alæ fuscæ, anticæ macula anali alba nebulaque basali albida. Long. $4\frac{1}{2}$ —6; alar. 13—15 lin.

Phryganea analis, *Fabr. Ent. Syst.* ii. 75.

Potamaria analis, *Steph. Ill. Brit. Ent. Mand.* vi. 183, 1, pl. 34, f. 4.

a, b. England.

2. POTAMARIA ASSIMILIS.

Nigra; tibiæ tarsique obscure ochracei; alæ fusæ immaculatæ, anticæ cupreo tinctæ. Long. 4—5; alar. 13—14 lin.

Potamaria assimilis, Steph. Ill. Brit. Ent. Mand. vi. 183, 2.
England.

3. POTAMARIA HYALINA.

Nigra; palpi, tibiæ tarsique ochracea; antennæ graciles, fusæ; alæ subhyalinæ, pallide fuscæ, immaculatæ. Long. 4½; alar. 14 lin.

Potamaria hyalina, Steph. Ill. Brit. Ent. Mand. vi. 183, 3.
England.

4. POTAMARIA NIGRA.

Nigra, nigro-pilosa; abdominis segmentis apice tarsi basi tibiisque ferrugineis; alæ nigricantes.

Phryganea nigra, Barnston, MSS.

Black, clothed with black hairs above, with some tawny hairs beneath: antennæ rather short, much longer than the body: breast tinged with gray: hind borders of abdominal segments, tarsi at the base and tibiæ ferruginous: wings blackish with black hairs. Length of the body 2¼ lines; of the wings 7½ lines.

a. St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.

Genus 2. SERICOSTOMA.

Palpi maxillares maris lati, crassi, hirsutissimi, sursum flexi et fronti adpressi, personati: tibiæ anticæ et intermediæ bicalcaratæ, posticæ quadricarcatæ: alæ anticæ radio subcostali in sectore apicali 1o in anastomosi, areola basali una; areola apicalis 1a areolæ discalis basin non attingens; alæ posticæ anastomosi antica inter sectorem apicalem 2um et 3um interrupta, exinde areola discali nulla; anastomosis postica distincta.

Sericostoma, Latr. Fam. Nat. 439; Curt.; Steph.; Westw.; Pic-tet; Schneider.

Phryganea p., *Deg.*; *De Vill.*; *Oliv.*; *Schr.*; *Zett.*
 Prosoptionia, *Leach*; *Kol. Gen. et Sp. Trich.* 88, pl. 2, f. 18.

1. SERICOSTOMA COLLARIS.

Fusco-nigrum; antennæ fuscae, basi punctoque verticis aurantico-ochraceis; alæ anticæ sericeo-testaceæ, aureo tinctæ.
 Long. 4—5; alar. 10—14 lin.

Phryganea collaris, *Schr. Ins. Austr.* 615. *Deg. Ins.* ii. pl. 15, f. 19. *De Vill. Ent. Linn.* iii. 42, 51. *Oliv. Enc. Méth.* 556, 7.

Sericostoma collaris, *Pictet, Rech. Phryg.* 176, 1, pl. 14, f. 1.

Sericostoma Spencii, *Steph. Ill. Brit. Ent. Mand.* vi. 33, f. 2.

Sericostomum collare, *Burm. Handb. Ent.* ii. 2, 928, 2. *Ramb. Hist. Nat. Ins. Neur.* 496, 4.

Phryganea personata, *Spence, Intr. Ent.* iii. 489.

Prosoptionia Spencii, *Kirby, Intr. Ent.* (4th edit.), 111, 488.

Phryganea chrysocephala, *Zett. Iter. Lapp.* 1832, 103. *Ins. Lapp.* 1070, 42.

Prosoptionia collaris, *Kol. Gen. et Sp. Trich.* 90, 3.

Sericostoma Latreillii, *Curt. Phil. Mag.* iv. 214.

Sericostoma Spencii, *Steph. Ill. Brit. Ent. Mand.* vi. 184, 1, pl. 38, f. 2.

a—d. England.

e—i. Dartmoor, England. From Dr. Leach's collection.

2. SERICOSTOMA SCHNEIDERII.

Nigrum; palpis maxillaribus cochleiformibus capiti adpressis; occipite thoraceque nigro-hirtis; antennis crassis flavis basi obscurioribus; alis anticis densissime obscure cupreo-pilosis; pedibus flavis, femoribus infuscatis. Long. cum alis 6 lin.

Sericostoma flavicorne, *Schneider, Ent. Zeit. Stett.* vi. 155, 10.

Prosoptionia Schneiderii, *Kol. Gen. et Sp. Trich.* 89, 1.

Dalmatia.

3. SERICOSTOMA MULTIGUTTATUM.

Caput unicolor; antennæ luteæ.

Sericostoma multiguttatum, *Pictet, Rech. Phryg.* 178, 2, pl. 14, f. 2.
Ramb. Hist. Nat. Ins. Neur. 496, 2.

Prosoptionia multiguttata, *Kolenati, Gen. et Sp. Trich.* 90, 2.

Germany; Geneva.

4. SERICOSTOMA GALEATUM.

Fusco-fulvum ; thorax et abdomen nigra.

Sericostoma galeatum, *Ramb. Hist. Nat. Ins. Neur.* 495, 1.
South France.

5. SERICOSTOMA LATREILLII.

S. multiguttato simillimum ; alæ fulvo-fuscæ, fasciis tribus indistinctis.

Sericostoma Latreillii, *Gené, MSS. Ramb. Hist. Nat. Ins. Neur.*
496, 3.
South France, Sardinia.

6. SERICOSTOMA VITTATUM.

Sericostoma vittatum, *Ramb. Hist. Nat. Ins. Neur.* 497, 5.
Sierra Nevada, South Spain.

7. SERICOSTOMA FESTIVUM.

Sericostoma festivum, *Ramb. Hist. Nat. Ins. Neur.* 497, 5.
Madrid.

8. SERICOSTOMA AMERICANUM.

Nigrum, hirtum ; pedes picei ; alæ nigro-fuscæ, anticæ plus tridente posticis longiores.

Black, clothed with black hairs : antennæ about twice the length of the body ; joints long, cylindrical : legs pitchy : wings dark brown, hairy ; fore-wings almost fusiform, more than one-third longer than the hind-wings. Length of the body 3 lines ; of the wings 16 lines.

a, b. Georgia. From Mr. Abbot's collection.

Genus 3. BRACHYCENTRUS.

Antennæ remotæ. Tibiæ anticæ bicalcaratæ; intermediæ et posticæ quadricalcaratæ; calcares breves.

Brachycentrus, *Curt. Phil. Mag.* iv. 215; *Steph. Ill. Brit. Ent. Mand.* vi. 181.

Trichostoma? *Pictet, Rech. Phryg.* 172. "Maris palpi maxillares triarticulati, articulo 3o clavato. Antennæ breves, robustæ, articulo 1o crasso hirtio. Alæ anticæ breves, venis transversis nullis. Alæ posticæ vix plicatæ."

Trichostomum p., *Burm.*

Pogonostoma, *Rambur.*

Hydronautia, *Kolenati.*

"Alæ posticæ absque anastomosi postica, cubito bipartito, areolis apicalibus tribus, areola discoidali nulla, alarum anticarum ramo subcostali prope parastigma flexo, radio thyriifero cum cubito antico in anastomosi, areola apicali prima reliquis non longiori: palpis maxillaribus maris hirsutissimis et fronti adpressis, minus incrassatis: tibiæ anticæ bicalcaratæ, intermediæ et posticæ tricalcaratæ."

1. BRACHYCENTRUS MACULATUS.

Cinereus; capite vertice, thorace, palpisque longius pilosis; tibiis tarsisque testaceis; alis anticis fuscis luteo-pubescentibus, maculis pallide flavescensibus, quarum duæ in margine principali, septem vel octo ad marginem apicalem et in areolis reliquis complures, alis posticis fuscis fusco-pilosis et fimbriatis.

Phrygranea maculata, *Oliv. Enc. Méth.* 543, 17. *Réaum. Ins.* iii. pl. 13, f. 13? *Geoffr. Ins.* ii. 248, 6. *Fourcroy, Ent. Par.* ii. 355, 6. *Latr. Hist. Nat. Ins.* xiii. 89, 13.

Sericostoma maculatum, *Pictet, Rech. Phryg.* 180, 5, pl. 14, f. 4.

Trichostomum maculatum, *Burm. Handb. Ent.* ii. 2, 925, 1.

Phrygranea tinctoria, *Zett. Ins. Lapp.* 1071, 44.

Hydronautia maculata, *Kol. Gen. et Sp. Trich.* 93, 1.

Pogonostoma verbum, *Ramb. Hist. Nat. Ins. Neur.* 490.

Europe.

2. BRACHYCENTRUS SUBNUBILUS.

Niger; tibiæ tarsisque ochracea; alæ fuscæ, venis piceis, antica flavescens-subnebulosa. Long. 2½—3½; alar. 8½—12 lin.

Brachycentrus maculatus var. ?

Brachycentrus subnubilus, *Curt. Phil. Mag.* iv. 215. *Steph. Ill. Brit. Ent. Mand.* vi. 182, 1.

a. England.

3. BRACHYCENTRUS CONCOLOR.

Ater; *tibiæ tarsique ochraceo-fusca*; *alæ fuscescentes, immaculatæ, venis piceis.* Long. $2\frac{1}{2}$; alar. 8 lin.

Brachycentrus concolor, *Steph. Ill. Brit. Ent. Mand.* vi. 182, 2.

England.

4. BRACHYCENTRUS COSTALIS.

Ater; *femora fusca*; *tibiæ tarsique fusco-ochracea*; *alæ fuscescentes, immaculatæ, costâ stigmatæque fuscis, venis piceis.* Long. $2\frac{1}{2}$; alar. 8 lin.

Brachycentrus costalis, *Steph. Ill. Brit. Ent. Mand.* vi. 182, 3.

England.

5. BRACHYCENTRUS ALBICANS.

Nigro-fuscus; *capite et thorace albo-hirsutis*; *antennis albidis*; *tibiis tarsisque albido-testaceis*; *alis fusco-testaceis, pube densa albido-flava depressa tectis, fimbriis albidis.*

Ptrygranea albicans, *Zett. Ins. Lapp.* 1071, 46.

Hydronautia albicans, *Kol. Gen. et Sp. Trich.* 93, 2.

North Europe.

6. BRACHYCENTRUS CREPUSCULARIS.

Niger, luteo-hirtus; *antennis, abdominis segmentis apice, pedibusque testaceis*; *alæ cinereæ, anticæ testaceo-pubescentes.*

Ptrygranea crepuscularis, *Barnston, MSS.*

Black, clothed with luteous hairs: antennæ testaceous, with an indistinct ring of a darker colour on each joint, black towards the tips: abdomen testaceous along the hind border of each segment and at the tip: legs testaceous: wings gray; fore-wings thickly covered with testaceous down; veins tawny. Length of the body $2\frac{1}{2}$ lines; of the wings 8 lines.

a. St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.

7. BRACHYCENTRUS FULIGINOSUS.

Niger, cano-hirtus; abdominis segmentis apice pedibusque testaceis; antennæ ferrugineæ; palpi testacei, apice nigricantes; alæ anticæ fusco-cinereæ, posticæ cinereæ.

Phryganea fuliginosa, *Barnston, MSS.*

Black, tinged with gray, clothed with hoary hairs: antennæ ferruginous, longer than the body: palpi testaceous, with blackish tips: hind borders of the abdominal segments and legs testaceous: fore-wings brownish gray, with pale down; veins ferruginous: hind-wings gray. Length of the body 4 lines; of the wings 12 lines.

a. St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.

Genus 4. LASIOSTOMA.

“Calcares æquales. Tibiæ et tarsi spinosa. Alæ anticæ anastomosi antica et postica valde flexa, a se non remotis, areola apicali quinta anastomosim non attingente, area interclavali ad anastomosim dilatata, spathulæformi; alæ posticæ anastomosi antica incompleta, areola discali non clausa, areola apicali quinta anastomosim non attingente, cubito et costula sequenti bipartitis, ad basim inter se anastomosi junctis.”

Lasiostoma, *Ramb. Hist. Nat. Neur.* 492.

Spathidopteryx, *Kolenati, Gen. et Sp. Trich.* 95, 21, pl. 2, f. 23.

1. LASIOSTOMA CAPILLATUM.

Fusco-cinereum; caput et alæ fulva; antennæ et pedes flava. Long. alar. 9 lin.

Trichostoma capillatum, *Pictet, Rech. Hist. Phryg.* 173, 1, pl. 13, f. 8.

Trichostomum capillatum, *Burm. Handb. Ent.* ii. 2, 926, 3.

Trichostomum auratum, *Burm. Handb. Ent.* ii. 2, 926, 4. *Fuscus; capite, dorso, alisque anticis densissime fulvo-hirtis, pilis auratis longioribus; tibiis tarsisque testaceis.*

Spathidopteryx capillata, *Kol. Gen. et Sp. Trich.* 95, 1.

Lasiostoma fulvum, *Ramb. Hist. Nat. Ins. Neur.* 492.

Europe.

Genus 5. ASPATHERIUM.

“ Tibiæ anticæ bicalcaratæ, intermediæ et posticæ quadricalcaratæ, calcaribus æqualibus; tibiæ et tarsi parce spinulosa. Alæ anticæ anastomosi antica a postica valde remota, areola interclavali ad apicem alæ triangula, non spathulæformi; alæ posticæ anastomosi antica completa, areola discali clausa, triangulari, anastomosi postica nulla, cubito et costulis duabus bipartitis, reliquis simplicibus.”

Trichostoma p., *Pictet*.

Aspatherium, *Kol. Gen. et Sp. Trich.* 96, 23, pl. 2, f. 24.

1. ASPATHERIUM FUSCICORNE.

Fuscum; capite, antennis, dorso, alisque anticis fusco-ochraceo hirtis et pilosis; antennis apice infuscatis; alis posticis fusco-pilosis; femoribus basi fuscis; tibiis tarsisque testaceis.

Trichostoma fuscicorne, *Pictet, Rech. Phryg.* 174, 3, pl. 13, f. 10.

Aspatherium fuscicorne, *Kol. Gen. et Sp. Trich.* 97, 1.

Europe.

2. ASPATHERIUM PICICORNE.

Nigro-fuscum; capite, thorace, et antennarum articulo 1o cinereo-hirtis; femoribus cinereo-fuscis; tibiis tarsisque testaceis; alis anticis fuscis, fusco-luteo pilosis, apice fusco-fimbriatis, posticis fuscis, fusco pilosis et fimbriatis.

Trichostoma picicorne, *Pictet, Rech. Phryg.* 174, 2, pl. 13, f. 9.

Ramb. Hist. Nat. Ins. Neur. 491, 1.

Aspatherium picicorne, *Kol. Gen. et Sp. Trich.* 97, 2.

Trichostoma rufescens, var.? *Ramb. Hist. Nat. Ins. Neur.* 492, 2.

Europe.

Genus 6. NOTIDOBIA.

“ Palpi maxillares maris non incrassati, nec personati. Tibiæ anteriores bicalcaratæ, posticæ quadricalcaratæ. Alæ anticæ radio subcostali cum sectore apicali 1o in anastomosi, areola basali una, areola apicalis 1a areolæ discoidalis basim attingens; alæ posticæ areola discoidali clausa, distincta, anastomosis postica adest.”

Phryganea p., *Linn.*; *Billbg.*; *Fabr.*; *Latr.*; *Zett.*

Sericostoma p., *Latr.*; *Pictet.*

Notidobia, *Steph. Ill. Brit. Ent. Mand.* vi. 185; *Kolen. Gen. et Sp. Trich.* 91.

1. NOTIDOBIA CILIARIS.

Atra, atro-pilosa; tibiis posterioribus tarsisque subtestaceis vel albicantibus; alis anticis subnitidis, longe atro-pilosis et pubescentibus, posticis atro-fuscis subopalinis fusco-pubescentibus et fimbriatis.

Phrygranea ciliaris, *Linn. Faun. Suec.* 1497, fœm. *Billbg. En. Ins.* 94. *Gmel. ed. Syst. Nat.* i. *Zett. Ins. Lapp.* 1070, 41.

Phrygranea atrata, *Fabr. Ent. Syst.* ii. 78, 17. *Coquebert, Illust. Icon. Déc.* i. 1, pl. 1, f. 6. *Latr. Hist. Nat.* xiii. 89, 12.

Sericostoma atratum, *Pictet, Rech. Phryg.* 178, 3, pl. 14, f. 5.

Sericostomum atratum, *Burm. Handb. Ent.* ii. 2, 927, 1. *Ramb. Hist. Nat. Ins. Neur.* 497, 7.

Notidobia ciliaris, *Kol. Gen. et Sp. Trich.* 91, 1.

Notidobia atrata, *Steph. Ill. Brit. Ent. Mand.* vi. 186, 1.

a, b. England.

c. Dartmoor. From Dr. Leach's collection.

2. NOTIDOBIA PYRALOIDES.

Fulvus, hirtus; antennæ testaceæ, basi fuscæ, corpore duplo longiores; pedes testacei; alæ fuscæ, anticæ latæ.

Tawny, clothed with tawny hairs: antennæ testaceous, slender, about twice the length of the body, joints long, cylindrical, brown, with testaceous tips towards the base; 1st joint stout, tawny: legs testaceous: wings deep brown, thickly clothed and fringed with hairs; fore-wings very broad; veins brown. Length of the body $3\frac{1}{2}$ —4 lines; of the wings 10—12 lines.

a, b. Georgia. From Mr. Abbot's collection.

3. NOTIDOBIA LATIFASCIA.

Testaceus, hirtus; antennæ articulis fusco cinctis; alæ anticæ fascia lata obliqua fusca, posticæ cinereæ.

Testaceous, clothed with testaceous hairs: antennæ slender, longer than the body, or perhaps twice its length; each joint brown at the base; 1st joint stout: fore-wings with a broad oblique brown band beyond the middle; hind-wings gray. Length of the body $2\frac{1}{2}$ lines; of the wings 9 lines.

a. North America. Presented by the Entomological Club.

Genus 7. DIPSEUDOPSIS, n.

Notidobiæ affinis. Antennæ approximatae; articulus 1us non elongatus: tibiæ anticæ tricalcaratæ; posteriores quadricalcaratæ.

Fem. Allied to *Notidobia*. Maxillary palpi stout; 4th joint slender; 5th very slender: antennæ stout, longer than the body; joints oblong: fore-shanks with one spur before the middle and 2 at the tips; middle shanks with 2 spurs before the middle and 2 at the tips; hind-shanks with 2 spurs beyond the middle and 2 at the tips: fore-wings long, elliptical towards the tips.

1. DIPSEUDOPSIS CAPENSIS.

Picea; antennis palpisque ferrugineis; pedibus fulvis; alæ anticæ fusca aureo-pubescentes, posticæ cinereæ.

Pitchy, slightly tinged with gray: antennæ and palpi ferruginous: legs tawny: fore-wings brown, thinly clothed with gilded down: hind-wings gray; veins testaceous. Length of the body $3\frac{1}{2}$ lines; of the wings 10 lines.

a. Port Natal. From M. Gueinzus' collection.

Genus 8. MORMONIA.

Antennæ approximatae, articulo 1o elongato hirsutissimo. Tibiæ anticæ bicalcaratæ; intermediæ quadricalcaratæ.

Mormoria, *Curt. Phil. Mag.* iv. 215; *Steph. Ill. Brit. Ent. Mand.* vi. 188.

Goëra p., *Burm.; Kol.*

Lepidostoma, *Rambur.*

Phryganea p., *Fabr.; Oliv.; De Vill.; Hummel.*

Goëra, *Hoffmansegg; Burm.; Kol. Gen. et Sp. Trich.* 98, 24, pl. 2, f. 21.

"Tibiæ anticæ bicalcaratæ; intermediæ et posticæ quadricalcaratæ, calcaribus æqualibus; tibiis absque spinis; tarsis spinulis minimis, adpressis: alarum anticarum anastomosi antica a postica valde remota, arca interclavali ad apicem triangula, subcosta cum radio subcostali in anastomosi; alarum posticarum anastomosi antica completa, areola discoidali clausa, anastomosi postica nulla, cubito bipartito, costulis simplicibus tantum duabus."

1. MORMONIA NIGROMACULATA.

Obscure fusca; antennæ ochraceæ, fusco annulatæ; pedes ochracei; alæ fuscæ, anticæ nigro irroratæ. Long. $2\frac{3}{4}$; alar. $9\frac{1}{2}$ lin.

Mormonia nigromaculata, *Steph. Ill. Brit. Ent. Mand.* vi. 189, 1, pl. 32, f. 2.

Goëra hirta, *Kol. Gen. et Sp. Trich.* 99, 3.

Lepidostoma squamulosum, *Ramb. Hist. Nat. Ins. Neur.* 493.

Europe.

2. MORMONIA HIRTA.

Obscure fusca; antennæ pallidæ, fusco annulatæ; pedes pallidi; alæ anticæ maculis duabus obscurioribus. Long. 3; alar. 9—10 lin.

Phryganea hirta, *Fabr. Ent. Syst.* ii. 80, 26. *De Vill. Ent.* iii. 40, 47. *Oliv. Enc. Méth.* 547, 31. *Hummel, Ess. Ent.* iv. 16. *Zett. Ins. Lapp.* 1069, 40.

Mormonia gracilicornis, *Curt. Phil. Mag.* iv. 215.

Mormonia hirta, *Steph. Ill. Brit. Ent. Mand.* vi. 189, 2.

a. ———? From Mr. Children's collection.

3. MORMONIA IMMACULATA.

Ochraceo-fusca; antennæ ochraceæ, fusco punctatæ; alæ anticæ pallide fusca, immaculatæ. Long. $2\frac{1}{2}$ — $3\frac{1}{4}$; alar. 9—10 lin.

Mormonia maculicornis? *Curt. Phil. Mag.* iv. 215.

Mormonia immaculata, *Steph. Ill. Brit. Ent. Mand.* vi. 189, 3.

Goëra basalis? *Kol. Gen. et Sp. Trich.* 98, 1.

Goëra hirta? *Burm. Handb. Ent.* ii. 2, 924, 1.

England.

4. MORMONIA MINOR.

Ochraceo-fusca; antennæ et pedes ochraceæ; alæ hyalinæ, iridescentes, immaculatæ. Long. 2; alar. 7 lin.

Mormonia minor, *Steph. Ill. Brit. Ent. Mand.* vi. 189, 4.

England.

5. MORMONIA VILLOSUM.

Lepidostoma villosum, *Ramb. Hist. Nat. Ins. Neur.* 494, 2.
France.

6. MORMONIA SERICEA.

Lepidostoma sericeum, *Ramb. Hist. Nat. Ins. Neur.* 494, 3.
France.

7. MORMONIA DALMATINA.

Antennæ simplices, fusæ.

Goëra Dalmatina, *Kol. Gen. et Sp. Trich.* 99, 2.
Dalmatia.

Genus 9. SILO.

“Palpi maxillares maris divaricati. Antennæ setaceæ, approximatæ, articulo 1o elongato vix hirsuto. Tibiæ non pinnatæ; anticæ bicalcaratæ, calcaribus brevibus; posteriores quadricaratae. Alæ absque areola discali, anastomosibus omnibus incompletis, subcostali nulla.”

Phryganea p., *Linn. ; Fabr. ; Zett.*

Trichostomum p., *Burm.*

Sericostomum p. ? *Pictet.*

Athripsodes p., *Billberg.*

Silo, *Curtis ; Steph. Ill. Brit. Ent. Mand.* vi. 186 ; *Kol. Gen. et Sp. Trich.* 101, 26, pl. 2, f. 26.

1. SILO MINUTUS.

Nigra ; pedes pallide ochracei ; alæ nigro-fusæ, immaculatæ.
Long. 4 ; alar. 9—11 lin.

Phryganea pallipes, *Fabr. Ent. Syst.* ii. 76.

Silo pallipes, *Steph. Ill. Brit. Ent. Mand.* vi. 186, 1.

Phryganea minuta, *Linn. Faun. Suec.* 1591. *Fabr. Ent. Syst.* ii. 81, 32. *Zett. Ins. Lapp.* 1070, 43.

Phryganea pallipes? *Fabr. Sp. Ins.* i. 388, 6 ; *Mant. Ins.* i. 245, 7 ; *Ent. Syst.* ii. 76, 7. *Gmel. Ed. Syst. Nat.* i. 5, 2636. 36.

Sericostoma minutum? *Pictet, Rech. Hist. Phryg.* 181, 6, pl. 14, f. 5, d, e.

Trichostomum pallipes, *Burm. Handb. Ent.* ii. 2, 926, 2.

Athripsodes minuta, *Billbg. Enum. Ins.* 94.

a. Dartmoor. From Dr. Leach's collection.

Genus 10. GOERA.

“Palpi maxillares maris recurvi. Antennæ approximatae, articulo 1o elongato vix hirsuto. Tibiæ non spinosæ; anticæ bicalcaratæ; intermediæ quadricalcaratæ; calcares omnes æquales. Alæ absque anastomosi postica.”

1. GOERA PILOSA.

Sericeo-ochracea; alæ anticæ subtestaceo-ochraceæ immaculatæ, posticæ subfuscentes. Long. $3\frac{1}{2}$ —5; alar. 9—11. lin.

Phryganea pilosa, *Fabr. Sp. Ins.* i. 388, 5; *Mant. Ins.* i. 245, 6; *Ent. Syst.* ii. 76. *Gmel. ed. Syst. Nat.* i. 5, 2635, 35.

Goëra pilosa, *Steph. Ill. Brit. Ent. Mand.* vi. 187, 1.

Europe.

2. GOERA FLAVIPES.

Sericeo-ochracea; thorax, abdomen, coxæ femoraque fusca. Long. $3\frac{1}{2}$ —5; alar. 10—12 lin.

Goëra flavipes, *Curt. Phil. Mag.* iv. 215. *Steph. Ill. Brit. Ent. Mand.* vi. 187, 2.

a--d. England.

e. ———? From Mr. Children's collection.

3. GOERA VULGATA.

Nigra; pedes ochraceo-flavi; alæ flavo-testaceæ immaculatæ. Long. $3\frac{1}{2}$; alar. 10 lin.

Phryganea vulgata? *Olivier; Latr. Hist. Nat.* xiii. 91.

Goëra vulgata, *Steph. Ill. Brit. Ent. Mand.* vi. 188, 3.

England.

4. GOERA IRRORATA.

Ochracea; antennæ piceæ, ochraceo subannulatæ; alæ anticæ subochraceæ, punctis plurimis indistinctis albidis. Long. —; alar. 7 lin.

Goëra irrorata, *Curt. Phil. Mag.* iv. 215. *Steph. Ill. Brit. Ent. Mand.* vi. 188, 4.

England.

5. GOERA ELEGANS.

Testacea, pilosa; antennæ nigro annulatæ, corpore triplo longiores; alæ cinereæ, anticæ testaceo-pubescentes.

Testaceous, clothed with testaceous hairs: antennæ full thrice the length of the body, with a black ring on each joint: wings gray; fore-wings thickly clothed with testaceous down. Length of the body 3 lines; of the wings 11 lines.

a. North America? Presented by the Entomological Club.

6. GOERA INDECISA.

Nigra, pilosa; antennæ corpore plus duplo longiores; pedes ferruginei; alæ nigricantes, anticæ fusco-pubescentes.

Black, clothed with black hairs: palpi clothed with hoary hairs; antennæ more than twice the length of the body: legs dull ferruginous: wings blackish; fore-wings clothed with dark brown down. Length of the body 3 lines; of the wings 10 lines.

a. St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.

Genus 11. ——— ?

“Antennæ ubique æquales, cylindricæ. Tibiæ non pinnatæ, anticæ bicalcaratæ, calcaribus brevissimis; posteriores quadricalaratæ. Alæ anticæ et posticæ areola discali clausa; anastomosis antica completa, postica nulla; areola in alis posticis 4a apicalis et 2a subapicalis anastomosim non attingens.”

Potamaria, *Kol. Gen. et Sp. Trich.* 99, 25.

1. ——— ? PICTETII.

Fusco-nigra, corpore nigro; antennis nigro-fuscis, articulo 1o capite et thorace ochraceo-pilosis; femoribus tibiisque fusco-cinereis; genubus et tarsis testaceis; alis anticis fuscis subopalinis fusco-ochraceo pilosis fusco fimbriatis, posticis fuscis subopalinis fusco-pilosis et fimbriatis.

Potamaria Pictetii, *Kol. Gen. et Sp. Trich.* 100, 1.

Trichostoma nigricorne? *Pictet, Rech. Hist. Phryg.* 175, 4, pl. 13, f. 11. *Nigrum; pedes flavi; alæ fusæ, nitidæ.* Long. 7 lin.

Germany; Switzerland?

2. ——— ? SCHMIDTII.

Fusca, pubescens; capite et prothorace aureo-hirtis; ventre albidocinereo; femoribus cinereis; tibiis testaceis, basi fuscis, anticis brevi-calcaratis; tarsis fuscis; alis anticis fuscis, pilosis, fusco-fimbriatis, macula discali magna et sutura aureo-pilosis; posticis fuscis, fusco-pilosis et fimbriatis, pulcherrime iridicoloribus.

Potamaria Schmidtii, *Kol. Gen. et Sp. Trich.* 100, 2.

Carniola.

Genus 12. DASYSSTOMA.

Dasystoma, *Ramb. Hist. Nat. Ins. Neur.* 490.

1. DASYSSTOMA PULCHELLUM.

Dasystoma pulchellum, *Ramb. Nat. Hist. Ins. Neur.* 491.

Granada, South Spain.

Genus 13. PLECTROTARSUS.

Plectrotarsus, *Kol. Gen. et Sp. Trich.* 94, 21, pl. 2, f. 22.

“Tibiæ anticæ bicalcaratæ, intermediæ et posticæ quadricalcaratæ, calcaribus tibiæ omnium æqualibus. Tibiæ et tarsi valde spinosa. Alæ anticæ anastomosi antica et postica in una fere linea; alæ posticæ anastomosi antica completa, areola discali clausa, pen-

tagona, anastomosi postica nulla, cubito bipartito, reliquis costulis simplicibus.

I. PLECTROTARSUS GRAVENHORSTII.

Plectrotarsus Gravenhorstii, *Kol. Gen. et Sp. Trich.* 94, 1.

Var. *Luteus, hirtissimus; capite supra, antennis, tarsisque nigris; alæ anticæ nigro-cyanææ, basi costaque luteæ, albo maculatæ.*

Luteous, thickly clothed with luteous hairs: head above black, thickly clothed with black hairs: antennæ black, thick, joints compact: tarsi black: fore-wings bluish black, very hairy, marked with white, more or less luteous at the base and along the fore border; hind-wings slightly luteous, blackish towards the tips. Length of the body $4\frac{1}{2}$ lines; of the wings 11 lines.

a, b. Van Dieman's Land. From Dr. Hooker's collection.

c. Van Dieman's Land. Presented by R. Butler, Esq.

d. Australia. From Mr. Argent's collection.

Fam. 6. HYDROPSYCHIDÆ.

Palpi maxillares articulo 3o elongato, filiformi. Antennæ setaceæ. Pedes calcarati. Alæ anticæ venis transversis vix ullis; posticæ plicatæ.

Hydropsychidæ, *Curt.*; *Steph. Ill. Brit. Ent. Mand.* vi. 167; *Burm.*

Hydropsychides, *Westw.*

Genus 1. CYRNUM.

Tibiæ anticæ tricalcaratæ. Alæ anticæ venis transversis diversis.

Cyrnus, *Steph. Ill. Brit. Ent. Mand.* vi. 174; *Westw.*

Hydropsyche p., *Pictet.*

1. CYRNUM UNIPUNCTATUM.

Nigricans; antennæ et pedes fulva; alæ fuscæ, venis saturatioribus, anticæ macula albo-hyalina. Long. $2\frac{1}{2}$ —3; alar. $2\frac{1}{2}$ —3 lin.

Cyrnus unipunctatus, Steph. Ill. Brit. Ent. Mand. vi. 175, 1.

a. England. Presented by F. Walker, Esq.

2. CYRNUM PULCHELLUM.

Fuscus; antennæ ochraceæ, fusco annulatæ; pedes fulvi; alæ ochraceo-fuscæ, anticæ ad apicem pallide luteo-irroratæ punctoque discali albido. Long. 3; alar. 6—7 lin.

Cyrnus pulchellus, Steph. Ill. Brit. Ent. Mand. vi. 175, 2.

England.

3. CYRNUM URBANUM.

Gracilis, ochraceus; caput et thorax supra fusca; palpi nigricantes; antennæ fusco annulatæ; alæ angustæ, immaculatæ. Long. $2\frac{1}{3}$; alar. $5\frac{1}{2}$ —6 lin.

Hydropsyche urbana, Pictet, Rech. Phryg. 215, 20, pl. 19, f. 13.

Cyrnus urbanus, Steph. Ill. Brit. Ent. Mand. vi. 175, 3.

Philopotamus urbanus? Ramb. Hist. Nat. Ins. Neur. 503, 5.

England.

4. CYRNUM UNICOLOR.

Subgracilis, ochraceus; caput et palpi fusca; alæ hyalinæ, iridescentes. Long. 2; alar. 6 lin.

Hydropsyche unicolor, Pictet, Rech. Phryg. 218, 27, pl. 20, f. 5.

Cyrnus unicolor, Steph. Ill. Brit. Ent. Mand. vi. 176, 4.

England.

Genus 2. POLYCENTROPUS.

Antennæ alis non longiores. Tibiæ anticæ tricalcaratæ. Alæ anticæ venis transversis paucis.

Polycentropus, Curt. Phil. Mag. iv. 213; Brit. Ent. xii. 544; Steph.; Westw.

1. POLYCENTROPUS SUBPUNCTATUS.

Obscure fuscus ; antennæ et pedes ochracea ; alæ ochraceo-fusca, anticæ obsolete fusco-irroratæ. Long. 1½—2 ; alar. 6—7 lin.

Polycentropus subpunctatus, Steph. Ill. Brit. Ent. Mand. vi. 176, 1 a. England.

2. POLYCENTROPUS PICEICORNIS.

Nigricans ; antennæ piceæ, nigro annulatæ ; tibicæ tarsique ochracea ; alæ fusco-fulvescentes, anticæ obsolete fusco-nebulosæ. Long. 2 ; alar. 6—7 lin.

Polycentropus piceicornis, Steph. Ill. Brit. Ent. Mand. vi. 177, 2 a. England.

3. POLYCENTROPUS PYRRHOCERAS.

Fusco-nigricans ; antennæ fulvæ, fusco annulatæ ; pedes ochraceo-fulvi ; alæ fulvescentes, anticæ ochraceo-irroratæ. Long. 2½ ; alar. 6½ lin.

Polycentropus pyrrhoceras, Steph. Ill. Brit. Ent. Mand. vi. 177, 3 a. ——— ? From Mr. Children's collection.

4. POLYCENTROPUS FULIGINOSUS.

Nigricans ; antennæ et abdomen picea ; pedes obscure ochracei ; alæ fusco-infumata, obsoletissime ochraceo-irroratæ.

Polycentropus fuliginosus, Steph. Ill. Brit. Ent. Mand. vi. 177, 4 a. England.

5. POLYCENTROPUS CONCINNUUS.

Obscure fuscus ; antennæ et pedes ochraceo-fulva, illæ obscure fusco annulatæ ; abdomen fuscum, basi pallidius ; alæ anticæ fulvescente-fusca, ochraceo-irroratæ. Long. 2¾ ; alar. 8 lin.

Polycentropus concinnus, Steph. Ill. Brit. Ent. Mand. vi. 178, 5. England.

6. POLYCENTROPUS TRIMACULATUS.

Ochraceo-fuscus ; antennæ et pedes ochracea, illæ annulis pallidioribus ; alæ anticæ ochraceo confertissime punctatæ. Long. 1½—2 ; alar. 5—6 lin.

Polycentropus trimaculatus, Curt. Phil. Mag. iv. 213. Steph. Ill. Brit. Ent. Mand. vi. 178, 6. Burm.

England.

7. POLYCENTROPUS IRRORATUS.

Obscure fuscus ; pedes subcastaneo-ochracei ; alæ anticæ maculis plurimis ochraceo-sericeis nebulisque fuscis. Long 2½—3 ; alar. 8—9 lin.

Polycentropus irroratus, Curt. Brit. Ent. xii. 544. Steph. Ill. Brit. Ent. Mand. vi. 187, 7. Burm. Handb. Ent. ii. 914, 3.

a—h. England.

8. POLYCENTROPUS MULTIGUTTATUS.

Fuscus ; alæ anticæ ochraceo confertissime punctatæ, macula alba. Long. 3 ; alar. 8½—9 lin.

Polycentropus multiguttatus, Curt. Brit. Ent. 544. Steph. Ill. Brit. Ent. Mand. vi. 178, 8.

England.

9. POLYCENTROPUS CONCOLOR.

Cinereus ; vertice dorsoque flavo-hirtis ; antennis pedibusque cinereo-flavis ; alis fusco-hirtis, pilis mediis flavis in fasciam obsoletam congestis. Long. 5¼ lin.

Polycentropus concolor, Burm. Handb. Ent. ii. 2. 914, 2.

Germany.

10. POLYCENTROPUS VALIDUS.

Nigricans, flavo-hirtus, subtus ferrugineus ; palpi testacei, basi nigri ; antennæ fulvæ, robustæ ; pedes testacei ; alæ cinereæ, flavo-pubescentes.

Blackish, clothed with pale yellow hairs, ferruginous beneath: maxillary palpi testaceous; 1st joint black: antennæ tawny, stout: legs testaceous: wings gray, clothed with yellow down. Length of the body $2\frac{1}{2}$ lines; of the wings 7 lines.

a. United States. Presented by E. Doubleday, Esq.

11. POLYCENTROPUS CRASSICORNIS.

Ferrugineus, flavo-hirtus, subtus testaceus; antennæ fulvæ, robustæ; palpi pedesque testacei; alæ subcinereæ, anticæ flavo-pubescentes et irroratæ.

Ferruginous, thickly clothed with yellow hairs, testaceous beneath: antennæ tawny, robust: palpi and legs testaceous: wings pale gray; fore-wings clothed with yellow down, adorned with numerous pale yellow dots. Length of the body $1\frac{3}{4}$ — $2\frac{1}{4}$ lines; of the wings 6—8 lines.

Var. β . Fore-wings without dots.

a—e. Georgia. From Mr. Abbot's collection.

12. POLYCENTROPUS INVARIUS.

Fulvus, aureo-hirtus; antennis vertice thoracisque disco nigris; pedes testacei; alæ anticæ subfusæ, posticæ cinereæ.

Tawny, clothed with gilded hairs: crown of the head and disk of the thorax black: antennæ black, a little longer than the body, tawny at the base: legs testaceous: fore-wings brownish; veins ferruginous: hind-wings gray. Length of the body $2\frac{1}{2}$ lines; of the wings 8 lines.

a. Nova Scotia. From Lieut. Redman's collection.

Genus 3. PLECTROCNEMIA.

Antennæ alis longiores. Tibiæ anticæ tricalcaratæ. Alæ anticæ venis transversis paucis.

Plectrocnemia, *Steph. Ill. Brit. Ent. Mand.* vi. 168; *Westw.*

Philopotamus p., *Curt.*

Hydropsyche p., *Pictet.*

1. PLECTROCNEMIA SENEX.

Obscure fusca; frons et thorax pilis argenteo-albidis vestiti; antennæ fulvæ, albo annulatæ; alæ anticæ canescentes, albido nigroque variegatæ, costa nigro punctata. Long. 5—6; alar. 12—13 lin.

Philopotamus conspersus? *Curt. Phil. Mag.* iv. 213.

Hydropsyche senex, *Pictet, Rech. Phryg.* 219, 28, pl. 19, f. 1.

Plectrocnemias senex, *Steph. Ill. Brit. Ent. Mand.* vi. 168, 1.

Polycentropus senex, *Burm. Handb. Ent.* ii. 913, 1.

a—e. England.

f. Italy. From Dr. Leach's collection.

Genus 4. PHILOPOTAMUS.

Antennæ graciles, alis longiores. Tibiæ anticæ bicalcaratæ. Alæ posticæ parvæ, vix plicatæ.

Philopotamus, *Leach, MSS.*; *Steph. Ill. Brit. Ent. Mand.* vi. 169; *Westw.*; *Ramb.*

Phryganea p., *Fabr.*; *Scop.*; *Schr.*; *Oliv.*; *Latr.*; *Donov.*

1. PHILOPOTAMUS SCOPULORUM.

Niger; antennæ et pedes fulvæ, illæ fusco annulatæ; alæ anticæ fuscæ, luteo maculatæ, posticæ fuscescentes, maculis obscurioribus. Long. 4—5¼; alar. 9—15 lin.

Philopotamus Scopulorum, *Leach, MSS.* *Steph. Ill. Brit. Ent. Mand.* vi. 169, 1.

a. England.

b. Italy. From Dr. Leach's collection.

2. PHILOPOTAMUS VARIEGATUS.

Niger; antennæ et pedes fulvescentia; alæ anticæ fuscæ, maculis plurimis rotundatis luteis, posticæ cinereæ. Long. 5; alar. 14—16 lin.

Phryganea variegata, *Scop. Ent. Carn.* 693. *Schr. Ins. Austr.* 621. *Faun. Boic.* ii. 182, 1910. *Fabr. Ent. Syst.* ii. 79, 23. *Oliv. Enc. Méth.* 546, 26. *Latr. Hist. Nat.* xiii. 90, 19.

Philopotamus variegatus, *Steph. Ill. Brit. Ent. Mand.* vi. 169, 2.
Burm. Handb. Ent. ii. 915, 1. *Ramb. Hist. Nat. Ins. Neur.*
 502, 1.

Hydropsyche montana, *Pictet, Rech. Phryg.* 210, 12, pl. 18, f. 5.

Hydropsyche variegata? *Pictet, Rech. Phryg.* 208, 11, pl. 18, f. 4.

a. ———? From Mr. Children's collection.

3. PHILOPOTAMUS MONTANUS.

*Niger; antennæ obscure fuscae; pedes fulvi; alæ fuscae; obscure
 luteo maculatæ.* Long. 3—4; alar. 9—11 lin.

Phryganea montana, *Donov. Brit. Ins.* xvi. pl. 548, f. 1.

Philopotamus montanus, *Steph. Ill. Brit. Ent. Mand.* vi. 170, 3.

England.

4. PHILOPOTAMUS LONGIPENNIS.

Philopotamus longipennis, *Ramb. Hist. Nat. Ins. Neur.* 504, 6.

France.

5. PHILOPOTAMUS DUBIUS.

Philopotamus dubius, *Ramb. Hist. Nat. Ins. Neur.* 503, 3.

France.

6. PHILOPOTAMUS TENELLUS.

Philopotamus tenellus, *Ramb. Hist. Nat. Ins. Neur.* 503, 4.

France.

7. PHILOPOTAMUS CONFUSUS.

*Niger, cano-pilosus; antennis basi testaceo annulatis; abdomine sub-
 tus, palpis, pedibusque testaceis; alæ cinereæ, anticæ obsolete
 irroratæ.*

Black, clothed with hoary hairs: palpi, abdomen beneath and
 legs dull testaceous: wings gray; fore-wings very indistinctly covered
 with pale dots; veins black. Length of the body 3 lines; of the
 wings 11 lines

a. Arctic America. District watered by the Mackenzie and Slave
 Rivers. Presented by Sir J. Richardson.

8. PHILOPOTAMUS ALTERNANS.

Niger, cano-hirtus; antennis basi, abdominis segmentis apice pedibusque fulvis; alæ anticæ fuscæ, cano confertim irroratæ, posticæ cinereæ.

Black, clothed with hoary hairs: antennæ tawny at the base: hind borders of the abdominal segments and legs tawny: fore-wings brown, mostly thickly covered with hoary dots; hind-wings gray. Length of the body $3\frac{1}{2}$ lines; of the wings 11 lines.

- a. St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.

9. PHILOPOTAMUS INDECISUS.

Nigricans, subtus testaceus; antennæ testaceæ, fusco annulatæ; pedes testacei; alæ cinereæ, anticæ confertim flavo guttatæ.

Blackish, testaceous beneath: palpi testaceous, tawny towards the base: antennæ testaceous, with a brown ring on each joint: legs testaceous: wings gray; fore-wings slightly brown, adorned with numerous pale yellow dots of various size. Length of the body 3 lines; of the wings $10\frac{1}{2}$ lines.

- a. St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.
b. Nova Scotia. From Lieut. Redman's collection.

10. PHILOPOTAMUS RECIPROCUS.

Nigricans; antennis pedibusque testaceis; palpi ferruginei, basi nigri; alæ anticæ subfuscæ, flavo confertim irroratæ, posticæ subcinereæ.

Blackish: palpi ferruginous, black towards the base: antennæ and legs testaceous: fore-wings slightly brown, with numerous pale yellow dots of various size; hind-wings pale brown. Length of the body 3 lines; of the wings 13 lines.

Closely allied to P. indecisus.

- a. North America? Presented by the Entomological Club.

11. PHILOPOTAMUS DISTINCTUS.

Niger; palpi et pedes obscure testacei; alæ anticæ fusco-cinereæ flavo confertim guttatæ, posticæ cinereæ.

Black, clothed with black and yellow hairs: antennæ very much longer than the body: palpi and legs dull testaceous: wings gray: fore-wings tinged with brown, adorned with numerous pale yellow dots of various size. Length of the body 2 lines; of the wings $5\frac{1}{2}$ lines.

a—d. Trenton Falls, New York. Presented by E. Doubleday, Esq.

Genus 5. MONOPSEUDOPSIS, n.

Capitis vertex utrinque gibbosus. Antennæ articulis longis cylindricis. Pedes antici breves, tenues, tibiis bicalcaratis; posteriores longi, tibiis quadricalcaratis.

Head a little narrower than the thorax, with a large round convex protuberance on each side between the eyes, by the base of the antennæ: maxillary palpi long; last joint very long and slender: joints of the antennæ thrice longer than broad, or more, except near the base, where they are twice longer than broad; first joint very stout: legs slender; their pairs of spurs of unequal length; fore-legs short and slender, with two little spurs at the tips: posterior legs long, with four long spurs, one pair in the middle, and one at the tips.

1. MONOPSEUDOPSIS INSCRIPTUS.

Niger; pedes flavi; alæ anticæ luridæ, maculis vittisque flavis maculaque subapicali hyalina ornata; alæ posticæ subcinereæ.

Black, with a slight hoary tinge: head clothed with short black hairs above, with ferruginous hairs beneath: antennæ longer than the body; second, third and fourth joints ferruginous: palpi and legs yellow: fore-wings lurid, with three yellow stripes, one on each border and one on the disk, and with six large irregularly-triangular yellow spots, three resting on each border; tips gray, with a large almost round hyaline spot in the disk: hind-wings pale gray, with two almost colourless marks near the tip of the fore border; veins pale. Length of the body $4\frac{1}{2}$ lines; of the wings 14 lines.

a. New Holland. Presented by the Entomological Club.

Genus 6. HYDROPSYCHE.

Antennæ graciles, alis longiores. Tibiæ anticæ bicalcaratæ. Alæ posticæ amplæ, valde plicatæ.

Phryganea p., *Donov.*

Philopotamus p., *Curt.*

Hydropsyche, *Pictet, Rech. Phryg.* 199; *Steph. Ill. Brit. Ent. Mand.* vi. 170; *Westw.*

1. HYDROPSYCHE ATOMARIA.

Fusca, cano-pilosa, subtus ochracea; pedes flavescens; alæ canescentes, anticæ ochraceo nigroque maculatæ. Long. $4\frac{1}{2}$; alar. 9—11 lin.

Phryganea atomaria, *Mus. Lesk. pars Ent.* 51, 36. *Gmel. ed. Syst. Nat.* 2637. *Oliv. Enc. Méth.* 559, 27.

Phryganea maculata, *Donov. Brit. Ins.* xvi. pl. 548, f. 2.

Hydropsyche atomaria, *Pict. Rech. Phryg.* 201, pl. 17, f. 1—5. *Steph. Ill. Brit. Ent. Mand.* vi. 171, 1. *Ramb. Hist. Nat. Ins. Neur.* 505, 1.

Philopotamus instabilis, *Curt. Phil. Mag.* iv. 213.

a. England.

2. HYDROPSYCHE TENUICORNIS.

Nigricans; antennæ graciles, ochraceæ; pedes ochraceo-fulvi; alæ anticæ canescentes ochraceo nigroque punctatæ, posticæ fuscescentes. Long. 4; alar. 10—11 lin.

Hydropsyche tenuicornis, *Pictet, Rech. Phryg.* 203, 2, pl. 17, f. 2. *Steph. Ill. Brit. Ent. Mand.* vi. 171, 2.

Europe.

3. HYDROPSYCHE GUTTATA.

Nigra, cinereo-pilosa; pedes fulvi; alæ anticæ canescentes ochraceo nigroque distincte maculatæ, posticæ albidæ. Long. $3\frac{1}{2}$; alar. 9—10 lin.

Hydropsyche guttata, *Pictet, Rech. Phryg.* 203, 3, pl. 17, f. 3. *Steph. Ill. Brit. Ent. Mand.* vi. 172, 3. *Burm. Handb. Ent.* ii. 912, 3.

Europe.

4. HYDROPSYCHE PELLUCIDULA.

Nigricans; antennæ ochraceæ, fusco punctatæ; abdomen fuscum; alæ semihyalinæ, anticæ indistincte ochraceo fuscoque irroratæ, marginibus internis et posticæ ochraceo maculatæ. Long. $6\frac{1}{2}$; alar. 13— $15\frac{1}{2}$ lin.

Philopotamus pellucidulus, *Curt. Phil. Mag.* iv. 213.

Hydropsyche læta, *Pictet, Rech. Phryg.* 204, 5, pl. 17, f. 4. *Burm. Handb. Ent.* ii. 912, 1.

Hydropsyche pellucidula, *Steph. Ill. Brit. Ent. Mand.* vi. 172, 4.

a—d. ———? From Mr. Children's collection.

5. HYDROPSYCHE HIBERNICA.

Fusca, subtus antennis pedibusque ochraceis; alæ hyalinæ, venis ochraceis, anticæ ad marginem posticum fusco obscure punctatæ. Long. 4—5; alar. $11\frac{1}{4}$ — $12\frac{1}{2}$ lin.

Hydropsyche hibernica, *Curt. Brit. Ent.* 601. *Steph. Ill. Brit. Ent. Mand.* vi. 173, 5.

Britain.

6. HYDROPSYCHE LANCEOLATA.

Nigricans; pedes fulvo-ochracei; alæ fuscæ, anticæ subfalcata obscure irroratæ margine postico fusco punctatæ. Long. $3\frac{1}{2}$ —4; alar. 12—13 lin.

Hydropsyche lanceolata, *Curt. Phil. Mag.* iv. 213. *Steph. Ill. Brit. Ent. Mand.* vi. 173, 6.

England.

7. HYDROPSYCHE ANGUSTIPENNIS.

Nigricans; antennæ subserratæ; alæ fuscæ, anticæ ochraceo tinctæ stigmatæ fusco maculisque ochraceis. Long. $3\frac{1}{2}$ — $4\frac{1}{2}$; alar. 10—13 lin.

Hydropsyche angustipennis, *Curt. Phil. Mag.* iv. 213. *Steph. Ill. Brit. Ent. Mand.* vi. 173, 7.

England.

8. HYDROPSYCHE FULVIPES.

Nigra; abdominis segmenta marginibus pallidis; tibiæ tarsique pallide fulva; alæ anticæ fuscæ, ochraceo obscure nebulosæ.
Long. 5—6; alar. 13—14 lin.

Hydropsyche fulvipes, *Curt. Brit. Ent.* xiii. 601. *Steph. Ill. Brit. Ent. Mand.* vi. 174, 8.

England.

9. HYDROPSYCHE ANGUSTATA.

Fusco-cinerea; abdomen nigricans, subtus virescens; alæ subhyalinae, anticæ ochraceæ holosericeæ iridescentes nebulis duabus subochraceis. Long. 2½; alar. 6½—7 lin.

Hydropsyche angustata, *Curt. Brit. Ent.* 601. *Steph. Ill. Brit. Ent. Mand.* vi. 174, 9.

a, b. England.

10. HYDROPSYCHE CINEREA.

Nigra, albo-pilosa; thorax utrinque et pedes fulvi; alæ anticæ cinereæ, maculis albis punctisque nigris. Long 7 lin.

Hydropsyche cinerea, *Pictet, Rech. Phryg.* 204, 4. pl. 19, f. 3.

Geneva.

11. HYDROPSYCHE VARIABILIS.

Nigricans; alæ anticæ fulvæ, maculis pallidis punctisque nigricantibus. Long 6 lin.

Hydropsyche variabilis, *Pictet, Rech. Phryg.* 205, 6, pl. 17, f. 5.
Burm. Handb. Ent. ii. 912, 2.

Geneva.

12. HYDROPSYCHE NEBULOSA.

Nigra; tibiæ tarsique fulva; alæ anticæ fuscæ, pilis flavis maculatae. Long. 6 lin.

Hydropsyche nebulosa, *Pictet, Rech. Phryg.* 206, 7, pl. 19, f. 4.

Geneva.

13. HYDROPSYCHE TINCTA.

Nigricans; caput et antennæ cinerea; pedes cinereo-fulvi; alæ anticæ fuscæ, maculis duabus posticis indistinctis argenteis.
Long. 5 lin.

Hydropsyche tinctoria, Pictet, *Rech. Phryg.* 206, 8, pl. 19, f. 5.

Geneva.

14. HYDROPSYCHE LEPIDA.

Fulva; antennæ apice nigricantes; alæ anticæ subcinereæ, maculis auratis punctisque anticis nigris. Long 3 lin.

Hydropsyche lepida, Pictet, *Rech. Phryg.* 207, 9, pl. 18, f. 1.

Geneva.

15. HYDROPSYCHE ANGUSTATA.

Nigricans; os fulvum; antennæ fulvo fuscoque annulatæ; alæ anticæ subcinereæ maculis nonnullis anticis unaque postica fuscis. Long 3 lin.

Hydropsyche angustata (bis lecta), Pictet, *Rech. Phryg.* 208, 10, pl. 19, f. 6.

Geneva.

16. HYDROPSYCHE BREVICORNIS.

Nigra; antennæ fulvæ, fusco annulatæ; caput maculis duabus thoracisque latera fulva; abdomen fuscum; alæ anticæ fuscæ, iridescentes. Long. 4 lin.

Hydropsyche brevicornis, Pictet, *Rech. Phryg.* 211, 13, pl. 19, f. 7.

Geneva.

17. HYDROPSYCHE OCCIPITALIS.

Nigra; antennæ fuscæ, annulis obscurioribus; caput et thorax maculis duabus, hujusque latera fulva; abdomen fuscum; alæ anticæ fuscæ, iridescentes. Long. 4 lin.

H. brevicornis, var.?

Hydropsyche occipitalis, Pictet, *Rech. Phryg.* 211, 14, pl. 19, f. 8.

Geneva.

18. HYDROPSYCHE COLUMBINA.

Nigra; caput fulvo-pubescentis; antennæ nigricantes; pedes fulvi; alæ anticæ fuscæ, iridescentes. Long. $3\frac{1}{2}$ lin.

Hydropsyche columbina, *Pictet, Rech. Phryg.* 212, 15, pl. 19, f. 9.
Geneva.

19. HYDROPSYCHE VITREA.

Nigra, subtus fusca; occiput et prothorax fulva; antennæ fuscæ; pedes fulvi; alæ cinereæ, hyalinæ. Long. $3\frac{1}{2}$ lin.

Hydropsyche vitrea, *Pictet, Rech. Phryg.* 212, 16, pl. 19, f. 10.
Geneva.

20. HYDROPSYCHE MICROCEPHALA.

Nigra, subtus fusca; pedes cinereo-fulvi; alæ hyalinæ, iridescentes. Long. $3\frac{1}{2}$ lin.

Hydropsyche microcephala, *Pictet, Rech. Phryg.* 213, 17, pl. 19, f. 11.
Geneva.

21. HYDROPSYCHE MACULICORNIS.

Fulva; caput nigrum; antennæ annulis apiceque fuscis; alæ anticæ subcinereæ, maculis posticis nigricantibus. Long. 3 lin.

Hydropsyche maculicornis, *Pictet, Rech. Phryg.* 213, 18, pl. 18, f. 2.
Geneva.

22. HYDROPSYCHE FRAGILIS.

Fulva; caput nigricans; antennæ fusco annulatæ; thorax dorso fusco; alæ anticæ cinereæ nebulosæ. Long. $2\frac{1}{2}$ lin.

Hydropsyche fragilis, *Pictet, Rech. Phryg.* 214, 19, pl. 19, f. 12.
Geneva.

23. HYDROPSYCHE DIVES.

Nigra ; tibiæ anticæ et intermediæ fulvæ ; alæ anticæ nigricantes, aureo-pilosæ, viridi purpureoque micantes. Long 3 lin.

Hydropsyche dives, *Pictet, Rech. Phryg.* 215, 21, pl. 19, f. 14.
Geneva.

24. HYDROPSYCHE TURTUR.

Nigra, aureo-pilosa ; antennæ fuscæ ; pedes fulvi ; alæ anticæ subcinereæ, iridescentes. Long. 3 lin.

Hydropsyche turtur, *Pictet, Rech. Phryg.* 216, 22, pl. 20, f. 1.
Geneva.

25. HYDROPSYCHE FLAVICOMA.

Nigra ; caput aureo-pilosum ; pedes cinerei ; alæ nigricantes, iridescentes. Long. 3 lin.

Hydropsyche flavicoma, *Pictet, Rech. Phryg.* 216, 23, pl. 18, f. 3.
Geneva.

26. HYDROPSYCHE NIGRIPENNIS.

Nigra ; pedes cinerei ; alæ nigricantes, iridescentes. Long. 3 lin.

Hydropsyche nigripennis, *Pictet, Rech. Phryg.* 217, 24, pl. 20, f. 2.
H. flavicoma, var. ?

Geneva.

27. HYDROPSYCHE HUMERALIS.

Nigra ; thorax fuscus ; pedes cinerei ; alæ anticæ nigricantes, iridescentes, basi fulvæ. Long. 3 lin.

Hydropsyche humeralis, *Pictet, Rech. Phryg.* 217, 25, pl. 20, f. 3.
Geneva.

28. HYDROPSYCHE PICEA.

Nigra; pedes cinerei; alæ anticæ nigricantes, subiridescentes, macula media albida. Long. 2½ lin.

Hydropsyche picea, Pictet, Rech. Phryg. 218, 26, pl. 20, f. 4.

Geneva.

29. HYDROPSYCHE BREVICOLLIS.

Nigra; antennæ fusco fulvoque annulatæ; pedes fulvi; alæ fulvæ, iridescentes. Long. 3 lin.

Hydropsyche brevicollis, Pictet, Rech. Phryg. 221, 30, pl. 20, f. 6.

Geneva.

30. HYDROPSYCHE ASPERSA.

Hydropsyche aspersa, Ramb. Hist. Nat. Ins. Neur. 506, 4.

France.

31. HYDROPSYCHE OPHTHALMICA.

Hydropsyche ophthalmica, Ramb. Hist. Nat. Ins. Neur. 505, 2.

France, Spain.

32. HYDROPSYCHE VARIA.

Hydropsyche varia, Ramb. Hist. Nat. Ins. Neur. 506, 3.

France.

33. HYDROPSYCHE DUBIA.

Nigra, subtus testacea; antennæ pallide testaceæ, fusco annulatæ; palpi ferruginei; pedes testacei; alæ anticæ subfuscae obsolete irroratæ, posticæ subcinereæ.

Black, testaceous beneath: antennæ pale testaceous, with a brown ring on each joint, and wholly brown towards the tips: palpi ferruginous: legs testaceous: fore-wings slightly brown, indistinctly covered with pale dots: hind-wings pale gray. Length of the body 3 lines; of the wings 11 lines.

a. North America? Presented by the Entomological Club.

34. HYDROPSYCHE DUBITANS.

Picea ; antennæ testaceæ apice nigre ; pectus ferrugineum ; pedes testacei ; alæ cinereæ, anticæ fusco-hirtæ, maculis nonnullis e pilis flavis congestis pallidioribus.

Pitchy, clothed with pale hairs : antennæ testaceous, black towards the tips : palpi, legs and hind borders of the abdominal segments testaceous : breast ferruginous : wings gray ; fore-wings clothed with brown hairs, having some indistinct spots composed of pale yellow hairs. Length of the body 3 lines ; of the wings 11 lines.

a. United States. Presented by E. Doubleday, Esq.

35. HYDROPSYCHE CRASSICORNIS.

Ferruginea, fulvo-hirta ; antennæ articulis basi pallidioribus ; palpi pedesque testacei ; alæ cinereæ fulvo-pilosæ, anticæ macula discali subhyalina.

Ferruginous, clothed with tawny hairs : antennæ very stout, very much longer than the body ; each joint paler towards the base : palpi and legs testaceous : wings gray, clothed with tawny hairs ; fore-wings with an almost colourless spot at the base of the apical areolets ; veins brown. Length of the body $2\frac{1}{2}$ lines ; of the wings 9 lines.

a, b. Georgia. From Mr. Abbot's collection.

36. HYDROPSYCHE MACULICORNIS.

Nigricans ; antennæ testaceæ, fusco annulatæ ; pectus ferrugineum ; pedes testacei ; alæ anticæ fusco-cinereæ obsolete irroratæ ; posticæ cinereæ.

Blackish, hairy : antennæ testaceous, with a brown ring on each joint : palpi tawny : breast ferruginous : legs testaceous : fore-wings brownish gray, with numerous indistinct pale dots : hind-wings gray. Length of the body 2 lines ; of the wings 7 lines.

a. St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.

37. HYDROPSYCHE ROBUSTA.

Ferruginea ; antennis palpis pedibusque testaceis ; thorax piceo bivittatus ; alæ cinereæ, anticæ irroratæ.

Ferruginous, hairy: palpi, antennæ and legs testaceous: thorax with a broad pitchy stripe on each side: wings gray, clothed with yellowish down; fore-wings with pale dots, which are most distinct along the border; veins brown. Length of the body 2 lines; of the wings 8 lines.

a, b. North America? Presented by the Entomological Club.

38. HYDROPSYCHE TRANSVERSA.

Testacea ; antennæ nigræ, basi testaceæ ; abdomen nigrum, marginibus posticis albidis ; pedes albi ; alæ albidæ, anticæ guttis apicibusque subcinereis ad costam flavescentes.

Testaceous: antennæ black, very slender, testaceous towards the base: abdomen black; hind borders of the segments whitish: legs white: wings whitish; fore-wings yellowish on the fore border and along some of the longitudinal veins, adorned with numerous transverse pale gray marks, some of which are confluent; tips pale gray, with some whitish marks; veins pale yellow. Length of the body $3\frac{1}{2}$ lines; of the wings 12 lines.

a, b. Georgia. From Mr. Abbot's collection.

39. HYDROPSYCHE VICARIA.

Ferruginea ; corpore subtus pedibusque testaceis ; antennæ testaceæ nigro-hirtæ ; alæ anticæ fulvæ fusco conspersæ macula parva rotunda discali flavescente.

Ferruginous, clothed with pale hairs, testaceous beneath: antennæ testaceous, partly clothed with black hairs: legs testaceous: fore-wings hairy, tawny, with numerous brown marks, which are most prevalent towards the tips, and with a small round pale yellowish spot in the disk before the middle; hind-wings gray. Length of the body $3\frac{1}{2}$ lines; of the wings 12 lines.

a. Venezuela. From Mr. Dyson's collection.

40. HYDROPSYCHE DIMINUTA.

Nigra, ferrugineo-hirta; antennæ fulvæ, annulis albidis; palpi pedesque testacei; alæ anticæ fusco-cinereæ, posticæ cinereæ.

Black, clothed with ferruginous hairs: antennæ tawny, with a whitish ring on each joint: palpi and legs testaceous: fore-wings brownish gray; hind-wings gray. Length of the body 2 lines; of the wings $6\frac{1}{2}$ lines.

a. Sierra Leone. Presented by the Rev. D. F. Morgan.

41. HYDROPSYCHE HYALINA.

Nigra; pedes fulvi, tarsi nigricantibus; alæ anticæ fuscæ maculis sex hyalinis, posticæ hyalinæ fusco marginatæ.

Hydropsyche hyalina, Pictet, *Mém. Soc. Phys. et d'Hist. Nat. de Genève*, vii. pl. f. 2.

East Indies.

42. HYDROPSYCHE MULTIFARIA.

Nigra; caput testaceum, nigro fasciatum; antennæ fulvæ, nigro testaceoque fasciatæ; pedes testacei, tibiis posticis nigris; alæ fuscæ, flavo maculatæ.

Black, shining: head luteous, testaceous beneath, with a black band between the eyes: antennæ black towards the base, which is luteous, with a broad pale testaceous band in the middle, tawny from thence to the tips: legs pale testaceous; tips of tibiæ and of tarsi black; hind-tarsi black, except at the base: fore-wings brown, with four triangular yellow spots on the fore border, and with seven others of various size and shape in the disk or on the hind border; hind-wings pale brown, pale yellow along the fore border. Length of the body 4 lines; of the wings 10 lines.

a. Ceylon. Presented by William Templeton, Esq.

Genus 7. PHILANISUS, n.

Palpi maxillares articulo 5o elongato filiformi. Antennæ subfiliformes sat validæ, alis vix breviores. Tibiæ anticæ vix calcaratæ, intermediæ bicalcaratæ, posticæ quadricalaratæ.

Maxillary palpi with the fifth joint long, filiform: antennæ nearly filiform, rather stout, almost as long as the wings: fore-tibiæ with two very short spurs at the tips; middle tibiæ with a pair of long spurs at the tips; hind tibiæ with two pairs of long spurs, one at three-fourths of the length, the other at the tips.

1. PHILANISUS PLEBEIUS.

Fulvus; antennis pedibusque testaceis; alæ anticæ subcinereæ fusco maculatæ, posticæ subhyalinæ.

Male.—Tawny, thinly clothed with tawny hairs: antennæ testaceous, rather stout, slightly setaceous, much longer than the body: legs testaceous, long; fore-tibiæ without spurs; hinder tibiæ with two pairs of long spurs, one pair near the tips, the other at the tips: abdomen with two appendages at the tip: wings narrow; fore-wings slightly gray, with pale brown marks or interrupted bands: hind-wings subhyaline. Length of the body $2\frac{1}{2}$ — $2\frac{3}{4}$ lines; of the wings 7— $8\frac{1}{2}$ lines.

a, b. New Zealand. Presented by Dr. Sinclair.

Genus 8. APHELOCHEIRA.

Antennæ alis breviores. Tibiæ anticæ bicalcaratæ.

Aphelocheira, *Steph. Ill. Brit. Ent. Mand.* vi. 179.

Hydropsyche p., *Pictet.*

Diplectrona, *Westw.*

1. APHELOCHEIRA FLAVO-MACULATA.

Obscure fusca; abdominis segmenta marginibus pallidis; alæ cinereo-fuscæ, anticæ obsolete luteo maculatæ. Long. $2\frac{1}{2}$ — $2\frac{3}{4}$; alar. 6—8 lin.

Phryganea umbrosa, *Linn. Syst. Nat. ed.* 12, ii. 910, 21. *Faun. Suec.* 1498. *De Vill. Ent. Linn.* iii. 35, 26. *Oliv. Enc. Méth.* 548, 40. *Zett. Ins. Lapp.* 1069, 36.

Hydropsyche flavo-maculata? *Pictet, Rech. Phryg.* 220, 29, pl. 19, f. 2.

Aphelocheira flavo-maculata, *Steph. Ill. Brit. Ent. Mand.* vi. 179, 1, pl. 32, f. 3.

England.

2. APHELOCHEIRA SUBAURATA.

Obscure fusca; pedes ochraceo-fulvi; alæ subfuscæ, anticæ immaculatæ aureo-pilosæ. Long. $1\frac{3}{4}$; alar. $5\frac{3}{4}$ lin.

Aphelocheira subaurata, *Steph. Ill. Brit. Ent. Mand.* vi. 180, 2.
England.

Fam. 5. RHYACOPHILIDÆ.

Palpi maxillares articulo 2o brevissimo; 3o brevi, ovato. Antennæ setacæ. Pedes calcarati. Alæ anticæ venis transversis vix ullis; posticæ plicatæ.

Rhyacophilidæ, *Steph. Ill. Brit. Ent. Mand.* vi. 154.

Rhyacophilides, *Westw.*

Rhyacophiloidea, *Agassiz.*

Genus 1. GLOSSOSOMA.

Tibiæ anticæ bicalcaratæ. Alæ quatuor areola discali.

Glossosoma, *Curt. Phil. Mag.* iv. 216; *Steph. Ill. Brit. Ent. Mand.* vi. 160; *Westw.*

1. GLOSSOSOMA BOLTONI.

Fusco-castanea; abdominis apex et pedes ochracei; alæ pallide fuscescentes, anticæ maculis apicalibus obscure ochraceis. Long. 4?; alar. 10 lin.

Glossosoma Boltoni, *Curt. Phil. Mag.* iv. 216. *Steph. Ill. Brit. Ent. Mand.* vi. 161, 1.

Rhyacophila vernalis? *Pictet, Rech. Phryg.* 189, pl. 15, f. 4.
a, b. England.

2. GLOSSOSOMA FIMBRIATA.

Piceo-fusca; caput, abdomen apice, pedesque ochracea; alæ pallide fuscescentes immaculatæ. Long. $2\frac{1}{2}$ —3; alar. $5\frac{3}{4}$ —7 lin.

Glossosoma fimbriata, *Steph. Ill. Brit. Ent. Mand.* vi. 161, 2, pl. 32, f. 1.

a—e. England.

Genus 2. TINODES.

Tibiæ anticæ bicalcaratæ. Alæ anticæ areola discali.

Tinodes, Leach, MSS.; *Steph. Ill. Brit. Ent. Mand.* vi. 162; *Westw.*

Group 1.

Pedes fœminæ tibiis tarsisque intermediis non dilatatis. Alæ anticæ venis distinctis, areola discali clausa.

1. TINODES PALLESCENS.

Pallide ochraceo-fulvus; abdomen saturatius, apice pallidum; pedes ochracei; alæ anticæ ochraceo-flavæ, venis pallidis.
Long. $2\frac{1}{2}$; alar. 6—7 lin.

Tinodes pallescens, *Steph. Ill. Brit. Ent. Mand.* vi. 162, 1.

a. England.

2. TINODES FLAVICEPS.

Ochraceus; caput et pedes ochraceo-flava; antennæ obscure fusæ; thorax et abdomen supra schistacea. Long. $2\frac{1}{2}$; alar. 7—8 lin.

Tinodes flaviceps, *Steph. Ill. Brit. Ent. Mand.* vi. 162, 2.

England.

3. TINODES XANTHOCERAS.

Fuscus; antennæ et pedes flavo-ochracea; alæ hyalinæ, ochraceo-fusæ, iridescentes, venis saturatioribus. Long. $2\frac{1}{2}$; alar. 8 lin.

Tinodes xanthoceras, *Steph. Ill. Brit. Ent. Mand.* vi. 163, 3.

England.

4. TINODES LURIDUS.

Fusco-ochraceus; caput, antennæ, thorax supra, et abdomen saturate fusca; pedes ochraceo-fulvi; alæ iridescentes, venis fuscis.
Long. $2\frac{1}{2}$ —3; alar. $8\frac{1}{2}$ — $9\frac{1}{4}$ lin.

Tinodes luridus, *Curt. Phil. Mag.* iv. 163, 4. *Steph. Ill. Brit. Ent. Mand.* vi. 163, 4.

England.

5. TINODES PALLIPES.

Ochraceo-fuscus; *palpis nigris*; *pedibus flavis*; *alis latis, anticis ochraceo-fuscis aureo-pilosis venis fuscescentibus, posticis iridescentibus.* Long. 3; alar. $8\frac{1}{2}$ lin.

Tinodes pallipes, *Steph. Ill. Brit. Ent. Mand.* vi. 163, 5.

England.

6. TINODES ANNULICORNIS.

Ochraceus; *palpi, thoracis dorsum et abdomen basi supra fuscescentia*; *antennæ fuscae, ochraceo annulatae*; *pedes ochraceo-flavi.* Long. $2\frac{1}{2}$; alar. 8 lin.

Tinodes annulicornis, *Steph. Ill. Brit. Ent. Mand.* vi. 163, 6.

England.

7. TINODES ALBIPUNCTATUS.

Pallide ochraceus; *caput, thorax et abdomen supra fusca*; *pedes pallide flavi*; *alæ subochraceo-fuscae, anticæ ad marginem posteriorem nebulis saturatioribus punctisque albidis.* Long. $2\frac{1}{2}$; alar. $7\frac{1}{2}$ lin.

Tinodes albipunctatus, *Steph. Ill. Brit. Ent. Mand.* vi. 164, 7.

England.

Group 2.

Pedes feminae tibiis tarsisque intermediis dilatatis. *Alæ anticæ venis indistinctis, areola discali postice aperta.*

8. TINODES OBSCURUS.

Ochraceo-flavus; *abdomen supra subfuscum*; *alæ subhyalinae; anticæ fulvescente-ochraceæ, immaculatæ.* Long. $2\frac{3}{4}$; alar. $8\frac{1}{2}$ lin.

Tinodes obscurus, *Steph. Ill. Brit. Ent. Mand.* vi. 164, 8.

a, b. England.

9. TINODES PUSILLUS.

Obscure fuscus; antennæ ochraceo fuscoque annulatæ; abdomen nigricans; pedes ochraceo-flavi; alæ fusco-testaceæ.

Phryganea pusilla? *Fabr. Ent. Syst.* ii. 81.

Tinodes pusillus, *Steph. Ill. Brit. Ent. Mand.* vi. 164, 9.

England.

Genus 3. BERÆA.

Antennæ articulo 1o maximo. Tibiæ anticæ bicalcaratæ. Alæ areola discali nulla.

Beræa, *Steph. Ill. Brit. Ent. Mand.* vi. 158; *Westw.*

Thya, *Curt. Phil. Mag.* iv. 216.

1. BERÆA ALBIPES.

Atra; pedes fusci; tarsis albidis; alæ nigro-fuscæ, anticæ subiridescentes atomis nonnullis albidis. Long. 2; alar. $5\frac{1}{2}$ —6 lin.

Beræa albipes, *Steph. Ill. Brit. Ent. Mand.* vi. 158, 1.

Thya pullata? *Curt. Phil. Mag.* iv. 216.

England.

2. BERÆA PYGMÆA.

Atra; pedes fusci, genubus albidis; alæ fuscæ, immaculatæ. Long. 2; alar. $4\frac{1}{2}$ —5 lin.

Beræa pygmæa, *Steph. Ill. Brit. Ent. Mand.* vi. 158, 2.

Rhyacophila melas? *Pictet, Rech. Phryg.* 196, 25, pl. 16, f. 21.

England.

3. BERÆA MARSHAMELLA.

Atra; pedes fusci, genubus tarsisque subochraceis; alæ anticæ angustæ, subochraceo-fuscæ, immaculatæ. Long. 2; alar. 5 lin.

Thya Maurus, *Curt. Phil. Mag.* iv. 216.

Rhyacophila nigrocincta? *Pictet, Rech. Phryg.* 197, 27, pl. 16, f. 23.

Beræa Marshamella, *Steph. Ill. Brit. Ent. Mand.* vi. 158, 3.

England.

4. BERÆA? OBSCURA.

Nigricans, fusco-hirta; pectus et abdomen ferruginea; pedes testacei; alæ nigro-fusca, ciliatæ.

Blackish, thickly clothed with brown hairs: antennæ black: breast and abdomen ferruginous: legs testaceous: wings blackish brown, deeply fringed. Length of the body $1\frac{1}{2}$ line; of the wings 4 lines.

a, b. St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.

Genus 4. ANTICYRA.

Antennæ articulo 1o parvo. Tibiæ anticæ bicalcaratæ. Alæ areola discali nulla, elongatæ, angustæ, obtusæ.

Anticyra, Curt. Phil. Mag. iv. 217; Westw.; Steph. Ill. Brit. Ent. Mand. vi. 159.

Rhyacophila p., Pictet.

1. ANTICYRA PHÆOPA.

Ochracea; caput et thorax supra fusca; antennæ fusca, ochraceo cinctæ; tibiæ tarsique fusciscentia; alæ anticæ cinereo-fusciscentes, posticæ iridescentes. Long. $2\frac{1}{2}$; alar. $5\frac{1}{2}$ lin.

Rhyacophila tomentosa? Pictet, Rech. Phryg. 189, 11, pl. 16, f. 9. Anticyra phæopa, Steph. Ill. Brit. Ent. Mand. vi. 159, 1.

a. England.

2. ANTICYRA GRACILIPES.

Pallide fusca; antennæ pallidæ, nigro annulatæ; pedes fusciscentes; alæ anticæ ochraceæ. Long. $2\frac{1}{3}$; alar. 5— $5\frac{1}{2}$ lin.

Anticyra gracilipes, Curt. Phil. Mag. iv. 217. Steph. Ill. Brit. Ent. Mand. vi. 159, 2.

England.

3. ANTICYRA SUBOCHRACEA.

Pallide ochraceo-fusca; antennæ fusco annulatæ; pedes fulvescentes; alæ angustæ, anticæ subochraceæ. Long. 2½; alar. 5½—6 lin.

Anticyra latipes? *Curt. Phil. Mag.* iv. 217.

Anticyra subochracea, Steph. Ill. Brit. Ent. Mand. vi. 160, 3.

a. England.

4. ANTICYRA CILIARIS.

Pallide ochracea; antennæ fusco maculatæ; thorax rufus; abdomen nigro-fuscum. Long. 1½; alar. 4¾ lin.

Anticyra ciliaris, Steph. Ill. Brit. Ent. Mand. vi. 160, 4.

a, b. England.

5. ANTICYRA? ROBUSTA.

Picea, fulvo-hirta, subtus ferruginea; antennis, palpis, pedibusque testaceis; alæ anticæ subfuscæ maculis duabus discalibus e pilis congestis flavis, posticæ subcinereæ.

Pitchy, clothed with tawny hairs, ferruginous beneath: antennæ testaceous, stout, almost as long as the body: palpi and legs testaceous: fore-wings slightly brown, with two spots on the disk composed of pale yellow hairs: hind wings pale gray. Length of the body 2 lines; of the wings 6 lines.

a. England.

This species probably belongs to a genus not yet described.

Genus 5. AGAPETUS.

Antennæ articulo 1o parvo. Tibiæ anticæ bicalcaratæ. Alæ breves, rotundatæ, areola discali nulla.

Agapetus, Curt. Phil. Mag. iv.; *Steph. Ill. Brit. Ent. Mand.* vi. 155; *Westw.*

Phryganea p., Linn.; Oliv.; Turton.

Rhyacophila p., Pictet.

1. AGAPETUS FUNEREUS.

Niger, obscurus; pedes fusci; alæ anticæ obscure fuscæ, ciliis elongatis nigricantibus. Long. $2\frac{1}{2}$; alar. $5\frac{1}{2}$ lin.

Phryganea funerea? Oliv. *Latr. Hist. Nat. Ins.* xiii. 93.

Agapetus funereus, Steph. *Ill. Brit. Ent. Mand.* vi. 156, 1.

England.

2. AGAPETUS FUSCIPES.

Niger, supra tomentosus; pedes fusci, ochraceo maculati; alæ anticæ ochraceo-fuscæ, pilis pallidioribus. Long. $2\frac{1}{3}$; alar. 5 lin.

Agapetus fuscipes, Curt. *Phil. Mag.* iv. 217. *Steph. Ill. Brit. Ent. Mand.* vi. 156, 2.

Agapetus ochripes, Curt. *Phil. Mag.* iv. 217, fœm.

Rhyacophila lanata, Pictet, *Rech. Phryg.* 194, 22, pl. 16, f. 18.

Europe.

3. AGAPETUS LANIGER.

Obscure fuscus, tomentosus, subtus ochraceus; pedes ochracei, anticæ nigricantes; alæ anticæ cinereo-ochraceæ, pilis pallidioribus. Long. $2\frac{1}{3}$; alar. 5— $5\frac{1}{2}$ lin.

Rhyacophila lanigera, Pictet, *Rech. Phryg.* 195, 23, pl. 16, f. 19.

Agapetus laniger, Steph. *Ill. Brit. Ent. Mand.* vi. 156, 3.

Europe.

4. AGAPETUS COMATUS.

Niger, tomentosus, subtus ochraceo-fulvus; pedes ochracei; alæ anticæ canescentes, pilis subochraceis. Long. $2\frac{1}{4}$; alar. $5\frac{1}{2}$ lin.

Rhyacophila comata, Pictet, *Rech. Phryg.* 194, 21, pl. 16, f. 17.

Agapetus comatus, Steph. *Ill. Brit. Ent. Mand.* vi. 157, 4.

Europe.

5. AGAPETUS SETIFERUS.

Obscure fuscus ; antennæ ochraceæ, fusco annulatæ ; pedes flavi ; alæ cinereæ, sericeæ. Long. 2 ; alar. 5 lin.

Rhyacophila setifera, Pictet, Rech. Phryg. 197, 28, pl. 16, f. 24.

Agapetus setiferus, Steph. Ill. Brit. Ent. Mand. vi. 157, 5.

Europe.

6. AGAPETUS AZUREUS.

Niger ; antennæ fuscæ ; pedes ochracei ; alæ anticæ atræ, nitidæ, posticæ atro-azureæ. Long. 2 ; alar. 5. lin.

Phryganea azurea? Linn. Syst. Nat. ed. 12, ii. 909, 12. Faun. Suec. 1491. Cederh. Faun. Ingr. Prodr. 139, 425. De Vill. Ent. iii. 32, 16. Fabr. Sp. Ins. i. 390, 15. Mant. Ins. i. 246, 18. Ent. Syst. ii. 79, 21. Oliv. Enc. Méth. 545, 24. Gmel. ed. Syst. Nat. i. 5, 2634. 12. Turt. Syst. Nat. iii. 397. Latr. Hist. Nat. xiii. 90.

Rhyacophila azurea, Pictet, Rech. Phryg. 193, 19, pl. 16, f. 16.

Agapetus azureus, Steph. Ill. Brit. Ent. Mand. vi. 157, 6.

Geneva.

Phryganea azurea, Linn., is probably a species of Leptocerus.

Genus 6. RHYACOPHILA.

Tibiæ anticæ tricalcaratæ.

Rhyacophila, Pictet, Rech. Phryg. 181 ; Steph. Ill. Brit. Ent. Mand. vi. 165 ; Westw. ; Burm. ; Ramb.

Group 1.

Corpus gracile. Fœmina tibiis tarsisque intermediis non dilatatis.

1. RHYACOPHILA VULGARIS.

Fusco-ochracea ; alæ hyalinæ, anticæ fusco subpunctatæ maculaque dorsali communi rhomboidali pallide flavescente. Long. 5—6 ; alar. 12—13 lin.

Rhyacophila vulgaris, *Pictet, Rech. Phryg.* 182, 1, pl. 15, f. 1.
Steph. Ill. Brit. Ent. Mand. vi. 165, 1. *Burm. Handb. Ent.* ii.
 909, 1.

Philopotamus dorsalis? *Curt. Phil. Mag.* iv. 213.

Nais plicata? *Ramb. Hist. Nat. Ins. Neur.* 505, 1.

England.

2. RHYACOPHILA STIGMA.

Pallide ochracea ; antennæ et pedes fulvescentia ; alæ fuscæ, atomis flavescentibus, stigmatæ elongato fusco. Long. 5—6 ; alar. 12—15 lin.

Philopotamus longipennis? *Curt. Phil. Mag.* iv. 213.

Rhyacophila stigma, *Steph. Ill. Brit. Ent. Mand.* vi. 166, 2.

England.

3. RHYACOPHILA OPACA.

Subfuscescente-ochracea ; antennæ crassæ, breves, fulvescentes ; pedes fulvescentes ; alæ fuscæ, ochraceo indistincte irroratæ, nebulis albidis. Long. 5 ; alar. 11½ lin.

Rhyacophila opaca, *Steph. Ill. Brit. Ent. Mand.* vi. 166, 3.

England.

Group 2.

Corpus latum. Fœmina tibiis tarsisque intermediis dilatatis.

4. RHYACOPHILA NEBULOSA.

Ochraceo-fusca ; abdomen ochraceo cingulatum ; pedes fulvescentes, coxis fuscis ; alæ subfusco-nebulosæ, anticæ apice subtruncatæ. Long. 6 ; alar. 13½ lin.

Rhyacophila nebulosa, *Steph. Ill. Brit. Ent. Mand.* vi. 166, 4.

England.

Group —?

5. RHYACOPHILA TORRENTIUM.

Nigro-fusca, subtus fulva; antennæ fulvo annulatæ; pedes fulvi; alæ anticæ cinereæ, guttis fulvis et fuscis maculaque postica rhomboidali alba. Long. 8 lin.

Rhyacophila torrentium, *Pictet, Rech. Phryg.* 184, 2, pl. 16, f. 1.

Geneva.

6. RHYACOPHILA TRISTIS.

Nigra; pedes subcinerei; alæ anticæ nigro-fuscæ. Long. 5 lin.

Rhyacophila tristis, *Pictet, Rech. Phryg.* 184, 3, pl. 16, f. 2.

Geneva.

7. RHYACOPHILA UMBROSA.

Nigra; pedes fulvi; alæ anticæ fuscæ, maculis auratis, renis nigris. Long. 4 lin.

Rhyacophila umbrosa, *Pictet, Rech. Phryg.* 185, 4, pl. 15, f. 2.
Burm. Handb. Ent. ii. 909, 2.

Geneva.

8. RHYACOPHILA PUBESCENS.

Nigro-fusca; antennæ fuscæ; alæ anticæ subcinereæ, aureo-pilosæ, macula postica fusca. Long. 4 lin.

Rhyacophila pubescens, *Pictet, Rech. Phryg.* 186, 5, pl. 16, f. 3.

Geneva.

9. RHYACOPHILA ANGULARIS.

Nigra, nitens; pedes fulvi; alæ anticæ fuscæ, macula postica obscuriore. Long. 4 lin.

Rhyacophila angularis, *Pictet, Rech. Phryg.* 186, 6, pl. 16, f. 4.

Geneva.

10. RHYACOPHILA LÆVIS.

Nigra; pedes cinereo-fulvi; alæ anticæ nigricantes, iridescentes.
Long. $3\frac{1}{2}$ lin.

Rhyacophila lævis, *Pictet, Rech. Phryg.* 187, 7, pl. 16, f. 5.

Geneva.

11. RHYACOPHILA FLAVIPES.

Fusca; pedes flavi; alæ fuscescentes. Long. 4 lin.

Rhyacophila flavipes, *Pictet, Rech. Phryg.* 187, 8, pl. 16, f. 6.

Geneva.

12. RHYACOPHILA BIGUTTATA.

Nigra, subtus fusca; pedes fulvi; alæ anticæ fuscæ, macula media alba. Long. 4 lin.

Rhyacophila biguttata, *Pictet, Rech. Phryg.* 188, 9, pl. 16, f. 7.

Geneva.

13. RHYACOPHILA OBFUSCATA.

Nigra; antennæ fuscæ; pedes fulvi; alæ fuscæ, iridescentes.
Long. $3\frac{1}{2}$ lin.

Rhyacophila obfuscata, *Pictet, Rech. Phryg.* 188, 10, pl. 16, f. 8.

Geneva.

14. RHYACOPHILA LATIPENNIS.

Nigra, subtus fusca; antennæ fuscæ; abdomen apice fulvum;
pedes flavi; alæ fulvæ, iridescentes. Long. 3 lin.

Rhyacophila latipennis, *Pictet, Rech. Phryg.* 189, 12, pl. 16, f. 10.

Geneva.

15. RHYACOPHILA VERNALIS.

Fusca; antennæ fulvo annulatæ; pedes fulvi; alæ anticæ subcinereæ ciliatæ, maculis posticis fulvis. Long. 4 lin.

Rhyacophila vernalis, *Pictet, Rech. Phryg.* 189, 13, pl. 15, f. 4.
Burm. Handb. Ent. ii. 909, 3.

Geneva.

16. RHYACOPHILA NEBULOSA (bis lecta).

Nigra; pedes fulvi, femoribus medio nigris; alæ anticæ cinereæ, fulvo-hirtæ. Long. 4 lin.

Rhyacophila nebulosa, *Pictet, Rech. Phryg.* 190, 14, pl. 16, f. 11.

Geneva.

17. RHYACOPHILA MICROCEPHALA.

Nigra; antennæ fuscæ; pedes fulvi; alæ cinereæ, iridescentes.
Long. 3 lin.

Rhyacophila microcephala, *Pictet, Rech. Phryg.* 191, 15, pl. 16, f. 12.

Geneva.

18. RHYACOPHILA DECOLORATA.

Fulva, supra fusca; antennæ apice nigricantes; alæ anticæ ciliatæ, immaculatæ. Long. $2\frac{1}{2}$ lin.

Rhyacophila decolorata, *Pictet, Rech. Phryg.* 191, 16, pl. 16, f. 13.

Geneva.

19. RHYACOPHILA INCOLOR.

Nigra, subtus fusca; antennæ robustæ, fuscæ; pedes fulvi; alæ anticæ fulvæ, iridescentes. Long. $2\frac{1}{4}$ lin.

Rhyacophila incolor, *Pictet, Rech. Phryg.* 192, 17, pl. 16, f. 14.

Geneva.

20. RHYACOPHILA LÆVIGATA.

Nigra; tibiæ fulvæ; alæ nigricantes, subiridescentes. Long. $2\frac{1}{2}$ lin.

Rhyacophila lævigata, *Pictet, Rech. Phryg.* 192, 18, pl. 16, f. 15.

Geneva.

21. RHYACOPHILA CILIATA.

Nigra, hirta; antennæ robustæ; pedes fulvi; alæ anticæ cinereæ, aureo-pubescentes. Long. 3 lin.

Phryganea ciliata, Mus. Lesk. Pars Ent. 52, 39. Gmel. ed. Syst. Nat. 2637. Oliv. Enc. Méth. 560, 30.

Rhyacophila ciliata, Pictet, Rech. Phryg. 193, 20, pl. 15, f. 3.

Geneva.

22. RHYACOPHILA PENICILLUS.

Nigra, obscura; palpi hirti; pedes fusci; alæ ciliatæ. Long. 2½ lin.

Rhyacophila penicillus, Pictet, Rech. Phryg. 193, 24, pl. 16, f. 20.

Geneva.

23. RHYACOPHILA BARBATA.

Nigra; palpi subpilosi; pedes fusci; alæ nigricantes, fasciculis ciliatæ. Long. 2½ lin.

Rhyacophila barbata, Pictet, Rech. Phryg. 196, 26, pl. 16, f. 22.

Geneva.

24. RHYACOPHILA GRANULATA.

Nigra; palpi breves; pedes fusci, valde pilosi; alæ anticæ subiridescentes, granulatæ. Long. 2 lin.

Rhyacophila granulata, Pictet, Rech. Phryg. 197, 29, pl. 16, f. 25.

Geneva.

25. RHYACOPHILA ARTICULARIS.

Nigra; palpi hirti; pedes fusci, articulis nigricantibus; alæ anticæ subcinereæ, iridescentes, basi fulvæ. Long. 2½ lin.

Rhyacophila articularis, Pictet, Rech. Phryg. 198, 30, pl. 16, f. 26.

Geneva.

26. RHYACOPHILA IRRORELLA.

Rhyacophila irrorella, Ramb. Hist. Nat. Ins. Neur. 501.

France.

27. RHYACOPHILA ARMENIACA.

*Nigro-fusca, subtus flavescens ; antennis, tibiis, tarsisque flavescen-
tibus fusco cinctis ; alis anticis cinereis semihyalinis maculis
fuscis et flavescen-
tibus maculaque postica mediâ obscuriore.*

Rhyacophila armeniaca, Guérin, Icon. Règne Anim. Texte, 396.

Armenia.

28. RHYACOPHILA ? WÆNERI.

*Nigricans ; antennis pedibusque testaceis ; alis anticis cinereis, ve-
narum longitudinalium duabus versus apicem furcatis, posticis
hyalinis, omnibus margine interiori mediocriter ciliatis.
Long. $1\frac{1}{2}$; alar. $4\frac{1}{2}$ lin.*

*Phryganea Wæneri, Linn. Faun. Suec. 1494. Fabr. Ent. Syst.
Suppl. 201, 28. Rossi, Faun. Etrusc. 13, 682. Zett. Ins. Lapp.
1069, 37.*

Sweden, Lapland.

29. RHYACOPHILA ? AUREOLA.

*Fusca ; antennis pedibusque testaceis ; alis anticis aureo-flavis, ve-
narum longitudinalium duabus versus apicem furcatis, posticis
cinerascentibus, omnibus margine interiori mediocriter ciliatis.
Long. $1\frac{1}{2}$; alar. 4 lin.*

Phryganea aureola, Zett. Ins. Lapp. 1069, 38.

Lapland.

30. RHYACOPHILA ? GRISEOLA.

*Fusca ; antennis pedibusque testaceis ; alis omnibus cinereis, mar-
gine interiori mediocriter ciliatis, anticis venarum longitudi-
narium duabus versus apicem elongato-furcatis. Long. $1\frac{3}{4}$;
alar. $4\frac{3}{4}$ lin.*

Phryganea griseola, Zett. Ins. Lapp. 1069, 39.

Lapland.

Fam. 7. HYDROPTILIDÆ.

Antennæ filiformes aut pectinatæ. Tibiæ calcaratæ.

Hydroptilidæ, *Steph. Ill. Brit. Ent. Mand. vi. 151*; *Burm.*

Hydroptilides, *Westw.*

Hydroptiloida, *Agassiz.*

Genus 1. HYDROPTILA.

Tibiæ anticæ non calcaratæ, intermediæ bicalcaratæ, posticæ quadricalcaratæ; calcares externa breviora: tibiæ posticæ unilaterally fimbriatæ. Alæ anticæ anastomosi nulla: alæ posticæ anastomosi antica incompleta, postica nulla; fimbriæ longissimæ, in apice fasciculatæ: alæ apice acuminatæ. Antennæ ubique æquales, ante apicem nunquam paulo crassiores, articulis modice infibulatis.

Hydroptila, *Dalman, Act. Holm. 1819, 1*; *Pictet*; *Steph. Ill. Brit. Ent. Mand. vi. 151*; *Westw.*; *Burm.*; *Zett.*; *Kolenati, Gen. et Sp. Trich. 104, 29, pl. 3, f. 29, δ.*

1. HYDROPTILA TINEOIDES.

Fusca; caput, antennæ et pedes pallida; alæ fuscæ, anticæ fasciis duabus punctoque apicali albis. Long. 1¼; alar. 2½ lin.

Hydroptila tineoides, *Dalm. Act. Holm. 1819, i. 125, pl. 1, f. 4.*

Analecta Ent. 26, pl. 3. Steph. Ill. Brit. Ent. Mand. vi. 152, 1.

Zett. Ins. Lapp. 1074, 1. Kol. Gen. et Sp. Trich. 105, 1.

Ramb. Hist. Nat. Ins. Neur. 499, 1.

Hydroptila tineodes, *Burm. Handb. Ent. ii. 2, 906, 1.*

Hydroptila flavicornis, *Pictet, Rech. Phryg. 225, 2, pl. 20, f. 11.*

Guér. Icon. Règne Anim. pl. 63, f. 12.

Hydroptila hirsutula, *Kollar.*

a, b. England.

2. HYDROPTILA BRUNNEICORNIS.

Nigra; frons albus; antennæ flavo-fuscae, annulis tribus fuscis, apice nigrae; alæ canescentes, anticæ marginibus albo nigroque punctatis. Long. 1; alar. $2\frac{3}{4}$ —3 lin.

Hydroptila brunneicornis, *Pictet, Rech. Phryg.* 226, 3, pl. 20, f. 12.
Steph. Ill. Brit. Ent. Mand. vi. 152, 2. *Kol. Gen. et Sp. Trich.* 106, 3.

H. recurva, *Dalm. Kol.*

a. England.

3. HYDROPTILA SPARSA.

Fusco-nigra; frons canescens; antennæ et pedes fulva; alæ anticæ marginibus albo niveoque punctatis. Long. $1\frac{1}{3}$; alar. 3 lin.

Hydroptila sparsa, *Curt. Phil. Mag.* iv. 217. *Steph. Ill. Brit. Ent. Mand.* vi. 152, 3.

England.

4. HYDROPTILA VECTIS.

Fusca; frons albida; abdomen subtus et pedes argenteo-micantia; alæ anticæ fascia media angulata punctisque variis ochraceis. Long. $1\frac{1}{2}$; alar. $3\frac{3}{4}$ lin.

Hydroptila vectis, *Curt. Phil. Mag.* iv. 217. *Steph. Ill. Brit. Ent. Mand.* vi. 152, 4.

England.

5. HYDROPTILA COSTALIS.

Pallide ochracea, nitida; alæ anticæ fusco variegatæ, ciliis costalibus elongatis nigris, areola centrali pallida. Long. 1— $1\frac{1}{3}$; alar. 3 lin.

Hydroptila costalis, *Curt. Phil. Mag.* iv. 217. *Steph. Ill. Brit. Ent. Mand.* vi. 153, 5.

England.

6. HYDROPTILA PULCHRICORNIS.

Antennæ annulis duobus fuscis.

Hydroptila pulchricornis, *Pictet, Rech. Phryg.* 224, 1, pl. 20, f. 10.

Kol. Gen. et Sp. Trich. 105, 2.

Hydroptila calorira, *Dalm. Kol.*

Europe.

7. HYDROPTILA FUSCICORNIS.

Antennæ fuscæ, apice obscuriores.

Hydroptila fuscicornis, *Schneider, Ent. Zeit. Stett.* 1844, ii. 346, 46.

Hydroptila obscura, *Kol. Gen. et Sp. Trich.* 106, 4.

Sicily.

8. HYDROPTILA PUMILIO.

Tota fusca; pedibus flavo-testaceis; alis omnibus cinereis subpubescentibus margine distincte ciliatis, anticis venarum longitudinalium duabus versus marginem interiorem breviter furcatis.

Long. $\frac{3}{4}$; alar. 2 lin.

Hydroptila pumilio, *Zett. Ins. Lapp.* 1074, 2.

Lapland.

9. HYDROPTILA ? AMBIGUA.

Nigra; alis anticis fusco-irroratis. Long. $1\frac{1}{4}$; alar. 3 lin.

Hydroptila ambigua, *Zett. Ins. Lapp.* 1074, 3.

Lapland.

10. HYDROPTILA LANCEOLATA.

Hydroptila lanceolata, *Zett.*

Lapland.

11. HYDROPTILA TENEBROSA.

Nigricans; antennæ fuscæ; pedes testacei; alæ nigro-cinereæ.

Blackish: antennæ brown: legs testaceous: wings blackish gray, fringed; veins black. Length of the body 1 line; of the wings 3 lines.

a—e. St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.

12. HYDROPTILA? PARVA.

Testacea; abdominis dorsum piceum; alæ albidæ.

Hydroptila parva, Barnston, MSS.

A mutilated specimen. Testaceous: abdomen pitchy above: wings whitish. Length of the body 1 line; of the wings 3 lines.

a. St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.

Genus 2. AGRAULES.

“Tibiæ anticæ non calcaratæ, intermediæ tricalcaratæ, posticæ quadricalcaratæ; calcares externa breviora: tibiæ posticæ unilaterally pinnatæ. Alæ anticæ anastomosi antica incompleta, venis omnibus repræsentatis; anastomosis in alis posticis nulla; fimbriæ longissimæ: alæ apice acuminatæ. Antennæ ubique æquales, articulis infibulatis.”

Agraylea, Curt. Phil. Mag. iv. 217; Steph. Ill. Brit. Ent. Mand. vi. 153; Westw.

Agraules, Agassiz.

Hydrorchestria, Kolenati, Gen. et Sp. Trich. 103, 28, pl. 3, f. 28, γ.

1. AGRAULES SEXMACULATA.

Ochracea; antennæ apice fuscæ; alæ anticæ fuscæ, maculis sex albidis. Long. —; alar. 4 lin.

Agraylea sexmaculata, Curt. Phil. Mag. iv. 217. Steph. Ill. Brit. Ent. Mand. vi. 153, 1.

Hydrorchestria sexmaculata, Kol. Gen. et Sp. Trich. 103, 1.

Europe.

2. AGRAULES MULTIPUNCTATA.

Fusca; vertex cinereus; facies, abdomen et pedes fulva; alæ anticæ maculis plurimis ochraceis. Long. —; alar. 4 lin.

Agraylea multipunctata, *Curt. Phil. Mag.* iv. 217. *Steph. Ill. Brit. Ent. Mand.* vi. 153, 2.

Hydroptila argyricola, *Dalman, MSS.*

Hydrorchestia argyricola, *Kol. Gen. et Sp. Trich.* 104, 2.

Europe.

Genus 3. NARYCIA.

Antennæ pectinatæ.

Narycia, *Steph. Ill. Brit. Ent. Mand.* vi. 154; *Westw.*

1. NARYCIA ELEGANS.

Fusco-nigra; alæ anticæ nigrae, fusco variae, punctis flavis, margine tenuiore maculis ochraceis. Long. $1\frac{1}{2}$; alar. 4 lin.

Narycia elegans, *Steph. Ill. Brit. Ent. Mand.* vi. 154, 1, pl. 32, f. 4. England.

Genus 4. PTILOCOLEPUS.

“Tibiæ utrinque pinnatæ, anticæ bicalcaratæ, intermediæ et posticæ quadricalcaratæ; calcares tibiæ anticarum brevia. Alæ anticæ cum areola discali clausa et anastomosi antica completa, postica incompleta: alæ posticæ anastomosi antica et postica semi-completa.”

Ptilocolepus, *Kol. Gen. et Sp. Trich.* 102, 27, pl. 3, f. 27.

1. PTILOCOLEPUS TURBIDUS.

Ptilocolepus turbidus, *Kol. Gen. et Sp. Trich.* 102, 1.

Saxony.

The following Lepidopterous insect has been described as one of the Phryganides.

Fam. ACENTROPIDÆ.

Tibiæ non calcaratæ.

Acentropidæ, *Steph. Ill. Brit. Ent. Mand.* vi. 148.

Genus 1. ACENTROPUS.

Acentropus, *Curt. Brit. Ent.* xi. 497; *Steph. Ill. Brit. Ent. Mand.* vi. 150, 1; *Westw.*

Phryganea p., *Oliv.*; *Latr.*

1. ACENTROPUS NIVEUS.

Pallide rufo-ochraceus; caput et thorax canescentia; alæ sericeo-nivæ. Long. $2\frac{1}{2}$ —3; alar. 6— $7\frac{1}{2}$ lin.

Phryganea nivea, *Oliv. Latr. Hist. Nat. Crust. &c.* xiii. 93.

Acentropus Garnonsii, *Curt. Brit. Ent.* 497. *Westw. Trans. Ent. Soc. Lond.* i. 117.

Acentropus niveus, *Steph. Ill. Brit. Ent. Mand.* vi. 150, 1.

Europe.

Sub-order 2. PERLIDES.

Caput subtrigonum, antice obtusum, thoracis latitudine aut latius. Oculi subglobosi, prominentes. Ocelli 3, triangulum fingentes. Antennæ multi-articulatæ, setacæ, remotæ, ante oculos insertæ, corpore vix breviores. Mandibulæ distinctæ. Palpi exerti, inflexi, filiformes aut setacei; palpi maxillares 5-articulati. Prothorax depressus, transverso-quadratus. Abdomen molle, elongatum, depresso-cylindricum, setis apicalibus multi-articulatis sæpe instructum. Pedes compressi; tibiis tarsisque elongato-cylindricis;

tarsis triarticulatis, articulo 1o longiore obconico. Alæ incumbentes; posticæ plerumque longiores, venosæ, abdominis duplo longitudine, margine interiore plicato.

Phryganea p., *Linn.*

Sembris p., *Fabr.*

Perla, *Geoffroy.*

Planipennes p., *Latr.*

Perlariæ p., *Latr.*

Perlidæ, *Leach*; *Steph.*

Megaloptera p., *MacLeay.*

Perlides, *Pictet.*

The five principal veins of each wing are the following: 1st, *the costal*, which forms the fore border; 2nd, *the subcostal*, which is parallel to the costal and not far from it; 3rd, *the median*, which springs immediately from the side of the subcostal, is in juxtaposition with it for a short space, then diverging divides the wing into two almost equal parts, and is bifurcate at two-thirds of its length; 4th, *the submedian*, which springs near the internal angle of the wing, and terminates in the middle of the hind border, and is bifurcate very near its beginning, its fore branch forming *the anterior submedian vein*, and its hind branch *the posterior submedian vein*; 5th, *the anal*, which is near the base, has a short course, and of which it is often difficult to distinguish between the principal and secondary branches. These veins divide the wing into four principal regions, which are thus named: 1st, *the marginal region*, comprised between the costal vein and the subcostal vein; 2nd, *the submarginal region*, between the subcostal and the median vein; 3rd, *the median region*, between the median vein and the anterior submedian vein; 4th, *the anal region*, which contains all the internal part of the wing between the lower submedian vein and the anal angle, and in which the vein of the same name ramifies. There is besides *the submedian areolet*, between the branches of the submedian vein. The principal line of transverse veins divides the 1st, 2nd and 3rd regions into two parts, the basilar part and the terminal part. The basilar part of the marginal region is divided longitudinally into two parts by the vein accessory to the costal, and thus contains three principal areolets, the external basilar areolet, the internal basilar areolet and the terminal areolet. In the hind-wings the submarginal region is divided longitudinally by a vein accessory to the median vein, not by one accessory to the subcostal.

Genus 1. KOLLARIA.

Palpi setacei. Alæ reticulatæ. Maxillæ capite longiores. Palpi maxillares longissimi.

Kollaria, *Pictet, Hist. Nat. Perl.* 114.

Maxillary palpi very long and slender: mandibles small: maxillæ formed of two processes; one internal, small, slender, terminated by three bristles; the other external, large, curved, longer than the head, dentated at the tip: labium very slender: wings large, strongly reticulated over nearly the whole surface: tail-bristles long.

1. KOLLARIA INSIGNIS.

Kollaria insignis, *Pictet, Hist. Nat. Neur. Perl.* 123, pl. 4.

Genus 2. EUSTHENIA.

Palpi setacei. Alæ reticulatæ. Maxillæ mediocres, capite breviores. Palpi maxillares mediocres, non dilatati, articulis 1o et 2o brevissimis.

Eusthenia, *Westw. ; Gray, Griff. Anim. Kingd.* xv. 348, pl. 72, f. 4.

Maxillary palpi of moderate length; their 1st and 2nd joints very short; 3rd and 4th long, not dilated; 5th ovate, straight: mandibles of moderate length: maxillæ large, not altogether extending beyond the mouth: wings large, strongly reticulated over nearly the whole surface; 8th abdominal segment furnished beneath in the female with a large median and slightly recurved prolongation: tail-bristles long.

1. EUSTHENIA SPECTABILIS.

Eusthenia spectabilis (*Westw. MSS.*), *Gray, Griff. Anim. Kingd.* x. 348, pl. 72, f. 4. *Pictet, Hist. Nat. Neur. Perl.* 139, pl. 5, f. 1—5.

- a. New Holland. Presented by the Entomological Club.
- b. Van Dieman's Land. Presented by R. Butler, Esq.
- c. Van Dieman's Land. Presented by R. T. Ewing, Esq.
- d. New Holland. From the Rev. J. Wenham's collection.
- e. Van. Dieman's Land. From Mr. Westwood's collection.
- f. Van Dieman's Land. From Lieut. Ross's collection.

2. EUSTHENIA THALIA.

Subnigra ; pedes nigri, femora basi testacea, tibiæ prope basin testaceo annulatæ.

Eusthenia Thalia, *Newm. Mij. Nat. Hist. New Series*, iii. 33, 1.

Pteronarcys Thalia, *Pictet, Hist. Nat. Neur. Perl.* 132, 3, pl. 5, f. 6—8.

Van Dieman's Land.

3. EUSTHENIA DIVERSIPES.

Eusthenia diversipes, *Westw.*

Genus 3. PTERONARCYS.

Palpi setacei. Alæ reticulatæ. Maxillæ parvæ. Palpi maxillares mediocres, dilatati, articulo 1o brevissimo.

Pteronarcys, *Newman, Entomological Magazine*, v. 175.

Maxillary palpi of moderate length ; first joint short ; second, third and fourth longer, dilated outwardly ; fifth cylindrical, slightly recurved : mandibles and maxillæ hidden, very small : wings large, strongly reticulated over nearly the whole surface : eighth abdominal segment furnished beneath in the female (at least of some species) with two projecting and recurved unguæ : tail-bristles long.

1. PTERONARCYS PROTEUS.

Fusca ; caput, prothorax, mesothorax et metathorax linea communi longitudinali interrupta flava signata ; abdominis segmenta postice flava, tum subtus inerme ; alæ hyalinæ fusco variegatæ ; pedes fusci, genubus flavis.

Pteronarcys Proteus, *Newm. Ent. Mag.* v. 177, 3. *Pictet, Hist. Nat. Neur. Perl.* 128, 1, pl. 6, f. 1—6. *Ramb. Hist. Nat. Ins. Neur.* 449.

a. New York. Presented by the Entomological Club.

b—e. Trenton Falls. Presented by E. Doubleday, Esq.

f. District watered by the Mackenzie River. Presented by Sir J. Richardson.

2. PTERONARCYS RETICULATA.

Perla reticulata, *Burm. Handb. Ent.* ii. 879.

Pteronarcys reticulata, *Pictet, Hist. Nat. Neur. Perl.* 130, 2, pl. 6, f. 7, 8.

Siberia.

3. PTERONARCYS REGALIS.

Fusca; *caput, prothorax, mesothorax et metathorax linea communi longitudinali flava signata*; *abdominis segmenta postice flava*; *alæ hyalinæ fusco tinctæ*; *pedes fusci, genubus concoloribus.*

Pteronarcys regalis, *Newm. Ent. Mag.* v. 176. *Ann. Nat. Hist.* xiii. 21. *Pictet, Hist. Nat. Neur. Perl.* 134, 4. *Ann. Sci. Nat.* i. 183. *Froriep, N. Notizen*, xxx. 179.

a, b. Canada. Presented by the Entomological Club.

c—e. District watered by the Mackenzie and Slave Rivers. Presented by Sir J. Richardson.

f, g. St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.

h. North America.

4. PTERONARCYS BILOBA.

Fusca; *caput, prothorax et mesothorax concoloria*; *metathorax linea longitudinali flava*; *abdominis segmentum 7um sub-
tus lobis duobus conicis auctum*; *alæ hyalinæ fusco variegatæ*; *pedes fusci, genubus concoloribus.*

Pteronarcys biloba, *Newm. Ent. Mag.* v. 176, 2. *Pictet, Hist. Nat. Neur. Perl.* 135, 5.

a. Trenton Falls. Presented by the Entomological Club.

b. St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.

c. North America.

5. PTERONARCYS CALIFORNICA.

Capite thoraceque saturate fuscis; *fronte, clypeo, labroque rufis*; *oculis ocellisque nigris*; *segmentis thoracis linea longitudinali interrupta flava*; *abdomine aurantiaco lateribus fuscis*; *setis caudalibus basi flavis*; *antennis pedibusque totis atris*; *alīs obscuris nigro venosis, sed absque macula stigmatali.*

Pteronarcys Californicus, *Newport, Proc. Linn. Soc.* (1848) i. 388.

a. California. From M. Hartweg's collection.

Genus 4. PERLA.

Palpi setacei. Alæ venosæ.

Perla, *Geoffroy*; *Fabr.*; *Latr.*; *Newman*; *Curt.*; *Steph.*; *Pictet*;
Burm.

Diura, *Billberg.*

Maxillary palpi of moderate length; first joint short; second, third, and fourth larger, not dilated; fifth straight; mandibles and maxillæ of moderate size, or small; wings veined, with only a few cross-veins; eighth abdominal segment without an inferior prolongation in the female: tail-bristles long.

Group 1. DICTYOPTERYX.

Caput parvum. Alæ rotundatæ. Venæ longitudinales sæpe irregulares. Regionis submarginalis pars terminalis venis transversis divisa. Alarum posticarum regio analis magna, plicata.

Dictyopteryx, *Pictet, Hist. Nat. Neur. Perl.* 143.

Anal region of the hind-wings large, folded; terminal part of the submarginal region divided by cross-veins; longitudinal veins of this same part often irregular: head small; maxillæ multidentate: wings large, rounded. Colour of the body almost always black, with a yellow stripe on the head and on part of the thorax.

1. PERLA INTRICATA.

Flava; *prothorax longitudine multo latius, vitta flava; alæ obscure fuscæ, dense reticulatæ, regione submarginali irregulariter reticulata.*

Perla intricata, *Pictet, Hist. Nat. Neur. Perl.* 152, 1, pl. 7, f. 1—8.
Ramb. Hist. Nat. Ins. Neur. 452, 5.

Chamounix.

2. PERLA MICROCEPHALA.

Flava; *prothorax longitudine multo latius, vitta flava; alæ pallide fuscæ, mediocriter reticulatæ.*

Perla bicaudata? *Linn. Syst. Nat. ed.* 12, 908, 1. *Faun. Suec.* 1489. *Gmel. ed. Syst. Nat.* i. 2631, 1. *Barbut, Gen.* 216.
Berk. Syn. i. 150. *Stew. Elem. Nat. Hist.* ii. 213. *Turt. Syst.*

Nat. iii. 395. *De Vill. Linn. Ent.* iii. 24, 1. *Cederhielm, Faun. Ingr. Prodr.* 136, 414.

Semblis bicaudata? *Fabr. Ent. Syst.* ii. 73, 8.

Semblis bicaudata, *Panz. Faun. Ins.* lxxxii. 4.

Perla bicaudata, *Geoffr. Hist. Nat.* ii. 230, 1, pl. 13, f. 2. *Fourcr. Ent. Par.* 349, 1. *Latr. Hist. Nat. Ins.* xiii. 49, 2. *Règne Anim. Cuv.* v. 158. *Steph. Ill. Brit. Ent. Mand.* vi. 136, 3. *Zett. Ins. Lapp.* 1057. *Guér. Icon. Règne Anim. Ins.* pl. 63, f. 6.

Diura bicaudata, *Billberg.*

Perla microcephala, *Pictet, Ann. Sci. Nat.* xxviii. pl. 6, f. 4, 5. *Hist. Nat. Neur. Perl.* 155, 2, pl. 7, f. 9—13. *Burm. Handb. Ent.* ii. 878, 2.

Perla Cymodoce, *Newm. Mag. Nat. Hist.* iii. 37.

Perla Parisina, *Ramb. Hist. Nat. Ins. Neur.* 450, 1.

Perla proxima, var. ? *Ramb. Hist. Nat. Ins. Neur.* 451, 2.

Perla dispar, var. ? *Ramb. Hist. Nat. Ins. Neur.* 451, 3.

Perla dubia, var. ? *Ramb. Hist. Nat. Ins. Neur.* 453, 6.

Perla angustata, var. ? *Ramb. Hist. Nat. Ins. Neur.* 453, 8.

a—d. Dartmoor. From Dr. Leach's collection.

e—h. England.

i. France.

j. South France.

3. PERLA RECTANGULA.

Flava; prothorax longitudine multo latius, vitta flava; regio submarginalis rectangulis sat regularibus reticulata.

Perla rectangula, *Pictet, Hist. Nat. Neur. Perl.* 159, 3, pl. 8, f. 1—3. Turin.

4. PERLA HISPANICA.

Perla hispanica, *Ramb. Hist. Nat. Ins. Neur.* 452, 4. Madrid.

5. PERLA MALACCENSIS.

Perla Malaccensis, *Ramb. Hist. Nat. Ins. Neur.* 453, 7. Malaga.

6. PERLA ALPINA.

Fusca; prothorax longitudine vix latius, vitta flava; alæ subfusca, apud costam fulvæ.

Perla alpina, *Pictet, Hist. Nat. Neur. Perl.* 161, 4, pl. 8, f. 4—7. Swiss Alps.

7. PERLA VENTRALIS.

Fusca ; prothorax longitudine vix latius, vitta flava ; alæ limpidae, apud costam læte flavæ.

Perla ventralis, *Pictet, Hist. Nat. Neur. Perl.* 164, 5, pl. 8, f. 8, 9.
Balkan.

8. PERLA IMHOFFII.

Læte fusca ; prothorax non vittatus.

Perla Imhoffii, *Pictet, Hist. Nat. Neur. Perl.* 166, 6, pl. 9, f. 9, 10.
Basle.

Group 2. ISOGENUS.

Nigra, vitta flava. Alæ macula apud stigma nebulosa ; vena subcostalis accessoria valde ramosa et irregularis ; regionis submarginalis pars terminalis venis transversis non divisa. Alæ posticæ regione anali magna, plicata.

Isogenus p., *Newman, Ent. Mag.* i. 415. Sexuum amborum alis pariter repandis, pariterque abdomen tegentibus ; telo setis duabus instructo.

Nephelion, *Pictet, Hist. Nat. Neur. Perl.* 144, 3.

Terminal part of the submarginal region without cross-veins ; accessory vein of the subcostal vein much ramified and very irregular. Species with a black body, which has almost always the yellow stripe, with the likeness of *Dictyopteryx* ; they are also characterized by a blackish clouded spot on the side where the principal line of the cross-veins terminates.

9. PERLA NUBECULA.

Caput macula flava occipitali ; frons omnino nigra ; prothorax longitudine paullo latius, vitta flava ; alæ anticæ sordide hyalinæ, nubecula costali ultra medium fusca.

Perla bicaudata, *St. Farg. et Serr. Enc. Méth. Ins.* x. 69, 1. *Dum. Cons. Gén. Ins.* pl. 27, f. 10. *Pictet, Ann. Sci. Nat.* xxviii. pl. 6, f. 6, 7. *Burm. Handb. Ent.* ii. 878.

Perla nubecula, *Pictet, Hist. Nat. Neur. Perl.* 170, 7, pl. 9, f. 1—6.

Isogenus nebecula, *Newm. Ent. Mag.* i. 415. *Steph. Ill. Brit. Ent. Mand.* vi. 137, 1, pl. 31, f. 4.

a. England.

b. ——— ?

10. PERLA FRONTALIS.

Fusca; *caput macula flava occipitali*; *frons macula V-flava*; *prothorax longitudine paullo latius, vitta flava*; *alæ anticae hyalinæ, fusco tinctæ, nubecula costali ante medium vix conspicua fusca.*

Isogenus frontalis, *Newm. Ent. Mag.* v. 178. *Mag. Nat. Hist.* iii. 85.

Perla bicaudata, *Kirby, Faun. Bor. Amer. Ins.* 252.

Perla frontalis, *Pictet, Hist. Nat. Neur. Perl.* 172, 8, pl. 8, f. 10, 11.

a—c. Trenton Falls. Presented by the Entomological Club.

d. St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.

11. PERLA POSTICA.

Atra, nitens; *caput thorace vix latius, maculis tribus flavis*; *prothorax flavo vittatus, antice bicornis*; *alæ subhyalinæ.*

Black, shining: head a little broader than the thorax, with a yellow triangular spot on the hind-border, and a pale yellow spot on each side in front of the antennæ: prothorax very rugulose, with a yellow stripe along the longitudinal furrow, produced into an acute angle or short horn on each side by the fore-angle, hardly broader in front; sides almost straight; angles rather sharp: wings subhyaline; veins black; external basilar areolet with five transverse veins; terminal areolet with four transverse veins; submedian areolet with six or seven? transverse veins. Length of the body 5 lines; of the wings 16 lines.

a. Mackenzie River, Arctic America. Presented by Sir John Richardson.

12. PERLA OLIVACEA.

Piceo-nigra; *caput thorace vix latius, macula triangulari margineque postico flavis*; *prothorax rugulosus, vitta flava, lateribus rectis, angulis sat acutis*; *alæ subcinereæ.*

Perla olivacea, *Barnston, MSS.*

Pitchy black: head hardly broader than the thorax, yellow beneath and at the base of the antennæ, and with a yellow triangular spot on the hind-border, which is also yellow: prothorax rugulose, with a yellow middle stripe, not broader in front; sides straight: angles rather sharp; under side yellow: wings very slightly gray; veins black; external basilar areolet with six transverse veins; terminal areolet with two transverse veins; terminal part of the submarginal areolet with no transverse veins; submedian areolet with six transverse veins. Length of the body 4 lines; of the wings 12 lines.

a. St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.

13. PERLA MEDIA.

Nigra; caput thorace paullo latius, lateribus, margine postico, maculisque duabus flavo-ferrugineis; prothorax valde rugulosus, antice multo latius, sulco dorsali, angulis anticis sat acutis, posticis rotundatis; alis subcinereis.

Perla media, Barnston, MSS.

Black: head a little broader than the thorax, ferruginous mixed with yellow on each side and behind, and with two spots of that colour diverging from each other on the vertex towards the fore-border: scutum very rugulose, with a slight middle furrow, much broader in front; hind-angles rounded; fore-angles rather sharp: wings very slightly gray; veins black; external basilar areolet with thirteen transverse veins; terminal areolet with three transverse veins; terminal part of the submarginal areolet with no transverse veins; submedian areolet with eight transverse veins. Length of the body 5 lines; of the wings 16 lines.

a. St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.

14. PERLA NUBES.

Caput macula flava occipitali; prothorax omnino niger, longitudine paullo latius.

Perla nubes, Pictet, *Hist. Nat. Neur. Perl.* 174, 9, pl. 9, f. 7, 8. America.

15. PERLA SERVILLEI.

Caput macula nulla occipitali ; prothorax longitudine multo latius.

Perla Servillei, *Pictet, Hist. Nat. Neur. Perl.* 175, 10, pl. 9, f. 11—14.

Egypt.

Div. ?

16. PERLA LIGEA.

Fusca ; facies testacea ; abdomen testaceum, lateribus saturatioribus ; alæ vix hyalinæ, croceo-fusco tinctæ.

Isogenus Ligea, *Newm. Mag. Nat. Hist. new series*, iii. 84, 1.

——— ?

17. PERLA CLIO.

Fusca ; capitis latera circa oculos flavida ; prothorax linea mediana longitudinali flavida ; abdomen testaceum.

Isogenus Clio, *Newm. Mag. Nat. Hist. new series*, iii. 86, 7.

a. b. Georgia. From Mr. Abbot's collection.

18. PERLA DRYMO.

Fusca ; caput testaceum, clypeo maculaque quadrata postica fuscis ; prothorax fuscus, maculis duabus magnis late testaceis signatus ; femora basi pallidiora.

Isogenus Drymo, *Newm. Mag. Nat. Hist. new series*, iii. 86, 6.

a, b. Georgia. From Mr. Abbot's collection.

Group 3. ACRONEURIA.

Caput magnum. Alæ elongatæ. Venæ longitudinales regulares. Regionis submarginalis pars terminalis venis transversis divisa. Alarum posticarum regio analis magna, plicata.

Acroneuria, *Pictet, Hist. Nat. Neur. Perl.* 144.

Terminal part of the submarginal region divided by cross-veins ; longitudinal veins of this same part regular : head large : maxillæ unidentate. Species with elongate wings, and with the likeness of the group *Perla*.

19. PERLA ARENOSA.

Perla arenosa, *Pictet, Hist. Nat. Neur. Perl.* 178, 11, pl. 10, f. 1, 2.
North America.

20. PERLA PENNSYLVANICA.

Perla Penusylvanica, *Ramb. Hist. Nat. Ins. Neur.* 456, 13.
Philadelphia.

21. PERLA ABNORMIS.

Fusca, fere concolor; alæ fuscescentes, superne apicibus reticulatæ.

Perla abnormis, *Newm. Ent. Mag.* v. 177. *Pictet, Hist. Nat. Neur. Perl.* 180, 12.

a. Trenton Falls. Presented by the Entomological Club.

Group 4. PERLA.

Alæ apud stigma non maculatæ. Vena subcostalis accessoria simplex, aut regulariter unifurcata vel bifurcata. Areola marginalis apicalis venis duabus aut pluribus transversis.

Perla, *Pictet, Hist. Nat. Neur. Perl.* 144, 4.

Terminal part of the submarginal region without cross veins: accessory vein of the subcostal vein without ramifications, or with one or two regular bifurcations; marginal terminal areolet with at least two transverse veins. Species of a large or middle size, of a more or less deep brown or yellowish colour.

Sub-group 1.

Species plus minusve obscure fuscæ, magnæ vel mediocres. Prothorax lateribus rectis angulisque acutis. Alæ subfuscæ vel subfulvæ, venis robustis.

Species of large or moderate size: prothorax with straight sides and sharp angles: wings with a brown or a tawny tinge, strongly veined: general colour more or less deep brown.

Div. 1.

Areola costalis vix areolis reliquis colore diversa.

Subdiv. 1.

Alæ æqualiter hyalinæ vel opacæ.

Sect. 1.

Prothorax rufescens, linea marginali nigra. Alæ flavido-fuscæ.

Subsect. 1.

Prothorax guttis maculisve duabus nigris.

22. PERLA BIPUNCTATA.

Venæ fuscæ, robustæ.

Perla bipunctata, *Pictet, Ann. Sci. Nat.* xxviii. (1833), 12, pl. 5, f. 12—14. *Hist. Nat. Neur. Perl.* 187, 13, pl. 11, 12.

Perla bicaudata, *Newm. Mag. Nat. Hist.* iii. 35.

Perla cephalotes, *Burm. Handb. Ent.* ii. 880.

a, b. England. Presented by J. C. Dale, Esq.

c. England.

23. PERLA PALLIDA.

Venæ flavescens.

Perla pallida, *Guér. Icon. Règne Anim. Ins.* pl. 63, f. 5. *Texte*, 393. *Pictet, Hist. Nat. Neur. Perl.* 192, 14, pl. 13, f. 8.

Caucasus.

Subsect. 2.

Prothorax maculis nigris nullis.

24. PERLA IMPUNCTATA.

Perla impunctata, *Pictet, Hist. Nat. Neur. Perl.* 194, 15, pl. 13, f. 9.

Rome.

Sect. 2.

Prothorax nigricans. Alæ obscure fuscae.

Subsect. 1.

Alæ semibyalinæ, venis robustis. Abdomen fusco varium.

25. PERLA CEPHALOTES.

Prothorax parvus, capite angustior.

Perla cephalotes, *Curt. Brit. Ent.* iv. pl. 100. *Steph. Ill. Brit. Ent. Mand.* vi. 136, 2. *Newm. Mag. Nat. Hist.* iii. 36. *Pictet, Hist. Nat. Neur. Perl.* 196, 16, pl. 14, 15.

Perla bipunctata, *Ræmer, Gen.* pl. 24, f. 8. *Sulzer, Abgek. Geschichte*, pl. 24, f. 8. *Burm. Handb. Ent.* ii. 881, 15.

a. ———? From Mr. Children's collection.

26. PERLA MARGINATA.

Magna; caput et prothorax fusco varia; caput obscure fuscum, macula nigra non bene determinata; prothorax magnus, capituli latitudine; venæ fuscae; abdomen fulvum, fusco-obscurum; setæ caudales alis occultæ.

Perla marginata, *Muraldt, Ephem. Nat. Cur. Dec.* 2, An. 2, 1683, 191, f. 16—19. *Fabr. Ent. Syst.* ii. 73, 7. *Hummel, Essais Ent.* 2. *Pictet, Ann. Sci. Nat.* xxviii. pl. 5, f. 1—3. *Hist. Nat. Neur. Perl.* 200, 17, pl. 16, f. 1—4; pl. 17, f. 1, 2. *Steph. Ill. Brit. Ent. Mand.* vi. 135, 1. *Newm. Mag. Nat. Hist.* iii. 35. *Zett. Ins. Lapp.* 1057, 1. *Burm. Handb. Ent.* ii. 880, 11.

Perla bicaudata, *Sulzer, Ins.* pl. 17, f. 104.

Perla maxima, *Scopoli, Ent. Carn.* 269, 705.

Perla grandis, *Ramb. Hist. Nat. Ins. Neur.* 454, 9.

Semblis marginata, *Pauz. Faun. Ins. Germ.* lxxi. 3.

Phryganea marginata, *Turt. Syst. Nat.* iii. 395.

a. Dartmoor. From Dr. Leach's collection.

b. Rheinwald. Presented by the Entomological Club.

c. ———?

27. PERLA ABDOMINALIS.

Magna ; caput et prothorax omnino nigra ; prothorax magnus, capitis latitudine ; venæ fusæ ; abdomen fulvum, fusco-obscurum ; setæ caudales alis non occultæ.

Perla abdominalis, *Burm. Handb. Ent.* ii. 881, 14. *Schæff. Icon. Ins. Ratisb.* p. 160, f. 2, 3. *Pictet, Hist. Nat. Neur. Perl.* 204, 18, pl. 16, f. 5—7. *Guér. Icon. Règne Anim. Texte*, 394.

a. ——— ?

28. PERLA BARCINONENSIS.

Perla Barcinonensis, *Ramb. Hist. Nat. Ins. Neur.* 454, 10.
Barcelona.

29. PERLA MADRITENSIS.

Perla Madritensis, *Ramb. Hist. Nat. Ins. Neur.* 455, 11.
Madrid.

30. PERLA BÆTICA.

Perla Bætica, *Ramb. Hist. Nat. Ins. Neur.* 455, 12.
Malaga.

31. PERLA CAPITATA.

Parva ; caput flavum, macula valde distincta nigra ; thorax nigricans ; prothorax magnus, capitis latitudine ; abdomen fulvum, fusco-obscurum ; venæ fusæ.

Perla capitata, *Pictet, Hist. Nat. Neur. Perl.* 214, 23, pl. 18, f. 4, 5.
United States.

32. PERLA COULONII.

Maxima ; caput macula nigra bene determinata ; prothorax magnus, capitis latitudine ; abdomen fere thoracis colore ; venæ fusæ.

Perla Coulonii? *Pictet, Hist. Nat. Neur. Perl.* 212, 22, pl. 10, f. 4.
a, b. District watered by the Mackenzie and Slave Rivers. Presented by Sir J. Richardson.

33. PERLA CAUCASICA.

Mediocris ; capitis macula non bene determinata ; prothorax magnus, capitis latitudine ; abdomen fere thoracis colore ; venæ fuscæ.

Perla Caucasica, *Guér. Icon. Règne Anim. Texte*, 394. *Pictet, Hist. Nat. Neur. Perl.* 206, 19, pl. 17, f. 4.

Caucasus.

34. PERLA TIBIALIS.

Prothorax magnus, capitis latitudine ; venæ aureo-flavæ.

Perla tibialis, *Pictet, Hist. Nat. Neur. Perl.* 217, 25, pl. 18, f. 6, 7.

Japan.

Subsect. 2.

Abdomen omnino flavum. Alæ fere opacæ, venis vix conspicuis.

35. PERLA FERRERI.

Perla Ferreri, *Pictet, Hist. Nat. Neur. Perl.* 210, 21, pl. 18, f. 1, 2.

Turin.

Subdiv. 2.

Alæ fuscæ, opacæ, areolarum discis limpidioribus.

36. PERLA BRASILIENSIS.

Perla Brasiliensis, *Kollar, MSS. Pictet, Hist. Nat. Neur. Perl.* 216, 24, pl. 18, f. 3.

Brazil.

Div. 2.

Areola costalis areolis reliquis multo magis colorata.

37. PERLA SELYSII.

Alæ concinne fuscae.

Perla Selysii, *Pictet, Hist. Nat. Neur. Perl.* 208, 20, pl. 17, f. 5.
Liège.

38. PERLA LIMBATA.

Abdomen rufescens ; pedes fuscii ; alæ obscure fuscae.

Perla limbata, *Pictet, Hist. Nat. Neur. Perl.* 219, 26, pl. 19, f.
1—5.
Japan.

39. PERLA INFUSCATA.

Fusca ; pedes nigri ; alæ nigricantes, costis omnibus flavis.

Isogenus infuscatus, *Newm. Ent. Mag.* v. 499 ; *Mag. Nat. Hist.* iii.
85 ; *Zool.* iii. 852.
Perla infuscata, *Pictet, Hist. Nat. Neur. Perl.* 221, 27, pl. 19, f.
6—11.

- a. Hong-Kong. Presented by J. C. Bowring, Esq.
- b. North China. From Mr. Fortune's collection.
- c. China. From Mr. Stevens's collection.

40. PERLA LYCORIAS.

Perla Lycorias, *Newm. Mag. Nat. Hist.* iii. 85. *Pictet, Hist. Nat. Neur. Perl.* 214.

- a. Trenton Falls. Presented by the Entomological Club.

41. PERLA INTERNATA.

Fuscescens, subtus flava ; caput thorace paullo latius, fasciis duabus undatis flavo signatis luteis ; antennæ fulvæ ; prothorax rugulosus, lateribus rectis vittaque testaceis, angulis acutis ; pedes fulvi ; alæ subhyalinæ.

Brownish, yellow beneath : head a little broader than the thorax, with two undulating yellow-marked luteous bands on the disk :

antennæ dull tawny, paler towards the base: prothorax somewhat rugulose, slightly testaceous on each side, and with a testaceous dorsal stripe, increasing in breadth from the hind angles to the fore angles; sides straight; angles sharp: legs dull tawny: caudal appendages tawny, pubescent: wings subhyaline; veins testaceous; the external basilar areolet has eighteen transverse veins, and the terminal has six; the terminal part of the submarginal region has two transverse veins; the submedian areolet has seven transverse veins. Length of the body 6 lines; of the wings 26 lines.

a. North America? Presented by the Entomological Club.

42. PERLA INTERMIXTA.

Flava; capitis et prothoracis latera fuscescentia; caput thorace non latius; prothorax subrugulosus, antice paullo latius, lateribus subconvexis, angulis subobtusis; pedes testacei; alæ subhyalinæ.

Yellow: head and thorax brownish along each side; head not broader than the thorax: prothorax slightly rugulose, a little broader in front; sides slightly convex; angles rather obtuse: legs dull testaceous: caudal appendages pale testaceous: wings subhyaline; veins testaceous; external basilar areolet with sixteen transverse veins; terminal areolet with five transverse veins; terminal part of the submarginal region with no transverse veins; submedian areolet with six transverse veins. Length of the body 6 lines; of the wings 28 lines.

a. Venezuela. From Mr. Dyson's collection.

43. PERLA TRIJUNCTA.

Lutea, fulvo varia, subtus flava; caput thorace vix latius; prothorax rugulosus, sulcatus, antice paullo latius, lateribus rectis, angulis acutis; alæ subhyalinæ.

Luteous, partly tawny, yellow beneath: head very little broader than the thorax: prothorax rugulose, with a slight middle furrow, little broader in front; sides straight; angles sharp: wings subhyaline; veins testaceous; external basilar areolet with twenty transverse veins; terminal areolet with six transverse veins; terminal part of the submarginal region with no transverse veins; submedian areolet with eight transverse veins. Length of the body 9 lines; of the wings 28 lines.

a. Georgia. From Mr. Abbot's collection.

44. PERLA SUFFUSA.

Fulva, subtus testacea; caput prothorace latius, disco fusco, maculis tribus marginisque antici lateribus testaceis; antennæ nigrae; prothorax subrugulosus, antice multo latius, margine antico fusco, lateribus rectis, angulis acutis; scutellum maculis tribus flavis; alæ subfusca.

Tawny, testaceous beneath: head broader than the thorax; disk brown, including three testaceous spots; fore border testaceous on each side: antennæ black: prothorax minutely rugulose, much broader in front, brown along the fore border; sides straight; angles sharp: scutellum with three pale yellow spots in front: wings pale brown; veins ferruginous; external basilar areolet with twelve transverse veins; terminal areolet with seven transverse veins; terminal part of the submarginal areolet with no transverse veins; submedian areolet with eight transverse veins. Length of the body 8 lines; of the wings 22 lines.

a, b. Nepaul. From the Hardwicke bequest.

45. PERLA ÆTHIOPS.

Atra; caput thorace vix latius; prothorax subrugulosus, subsulcatus, antice latius, lateribus convexis, angulis sat acutis; alæ nigro-fusca.

Deep black: head hardly broader than the thorax: prothorax minutely rugulose, with a slight longitudinal furrow, broader in front, convex or almost angular on each side; angles rather sharp: wings dark brown; veins black; external basilar areolet with fifteen transverse veins; terminal areolet with three transverse veins; terminal part of the submarginal areolet with no transverse veins; submedian areolet with seven or eight transverse veins. Length of the body 6 lines; of the wings 18 lines.

a. Mexico. From M. Hartweg's collection.

46. PERLA LUTEICOLLIS.

Atra, nitens; caput læve, thorace non latius; prothorax luteus, subrugulosus, subsulcatus, antice latius, lateribus rectis, angulis anticis acutis posticis obtusis; alæ nigro-fusca.

Deep black, shining: head smooth, not broader than the thorax: scutum luteous, minutely rugulose, with a slight longitudinal

furrow, broader in front, straight on each side; hind angles rounded: fore angles sharp: wings dark brown; veins black; external basilar areolet with ten transverse veins; terminal areolet with two transverse veins; submedian areolet with six transverse veins. Length of the body 5 lines; of the wings 10 lines.

a. Venezuela. From Mr. Dyson's collection.

Sub-group 2.

Species mediocres. Prothorax fuscus, rugosus, lateribus rectis. Alæ omnino hyalinæ et limpidæ, venis fuscis.

Species of moderate size: prothorax with straight sides, brown, rugose: wings quite transparent and colourless, with brown veins.

47. PERLA VITRIPENNIS.

Perla vitripennis, *Burm. Handb. Ent.* ii. 880, 10. *Pictet, Hist. Nat. Neur. Perl.* 224, 28, pl. 20, f. 1, 2.

Germany.

48. PERLA BICOLOR.

Perla bicolor, *Burm. Handb. Ent.* ii. 880, 9. *Pictet, Hist. Nat. Neur. Perl.* 226, 29, pl. 20, f. 3, 4.

France, Germany.

49. PERLA TERMINALIS.

Nigra, subtus lutea; caput thorace vix latius, margine antico lateribusque luteis; antennæ nigrae; prothorax subrugulosus, antice paullo latius, submarginatus, subsulcatus, lateribus rectis, angulis acutis; alæ hyalinæ.

Black, luteous beneath: head very little broader than the thorax, luteous on each side and in front: antennæ black, testaceous towards the base: prothorax minutely rugulose, a little broader in front, with a slight border and a slight middle furrow; sides straight; angles sharp: wings hyaline; veins blackish brown; external basilar areolet with seventeen transverse veins; terminal areolet with four transverse veins; terminal part of the submarginal areolet with no transverse veins; submedian areolet with seven transverse veins,

the seventh forked. Length of the body 5 lines; of the wings 18 lines.

a, b. East Indies. Presented by J. W. Evans, Esq.

Sub-group 3.

Species magnitudine variæ. Prothorax semper bicolor, angulis rotundatis.

Species above or below the middle size: prothorax with rounded angles, always of two colours.

Div. 1.

Prothorax fuscus vel niger, flavo marginatus.

50. PERLA CINCTA.

Alæ unicolores.

Perla cincta, *Pictet, Hist. Nat. Neur. Perl.* 229, 30, pl. 20, f. 5.
Vera Cruz.

51. PERLA BIFASCIATA.

Alæ fasciis duabus conspicuis.

Perla bifasciata (*Klug. MSS.*) *Pictet, Hist. Nat. Neur. Perl.* 230, 31, pl. 20, f. 6, 7.

Columbia.

Div. 2.

Prothorax flavus, nigro marginatus.

52. PERLA GENICULATA.

Perla geniculata (*De Haan, MSS.*) *Pictet, Hist. Nat. Neur. Perl.* 232, 32, pl. 21, f. 1, 2.

Japan.

53. PERLA ANGULATA.

Testacea ; caput antice rotundatum marginatum, thorace latius, disco fulvo ; prothorax valde rugulosus, antice rotundatus, lateribus subangulatis ; alæ subtestaceæ.

Testaceous: head rounded and with a rim in front, broader than the thorax; disk tawny: antennæ testaceous: prothorax very rugose, obtusely angular on each side, rounded in front: wings with an indistinct testaceous tinge; veins testaceous; external basilar areolet with ten transverse veins; terminal areolet with three transverse veins; terminal part of the submarginal areolet with no transverse veins; submedian areolet with six transverse veins. Length of the body 6 lines; of the wings 20 lines.

a. Ceylon. Presented by William Templeton, Esq.

54. PERLA SIGNATA.

Testacea, nitens ; caput thorace non latius ; antennæ nigre ; scutum antice multo latius ; pedes femoribus et tibiis apice tarsisque nigris ; alæ albide, fasciis duabus cincreis.

Testaceous, shining: head almost smooth, not broader than the thorax: eyes and antennæ black: ocelli bright red: scutum minutely rugulose, with a very slight longitudinal furrow, much broader in front; sides almost straight; angles rounded: tips of the femora, knees, tips of the tibiæ and tarsi black: wings whitish, with two gray bands which are occasionally indistinct, one in the middle, the other at the tip; veins yellow, blackish on the bands; external basilar areolet with fifteen transverse veins; terminal areolet with three transverse veins; submedian areolet with three or four transverse veins. Length of the body 4 lines; of the wings 12 lines.

a—c. Venezuela. From Mr. Dyson's collection.

Sub-group 4.

Species above or below the middle size: prothorax rugose, with straight sides which are often inflected when dry; its colour bright in the middle, black or brown on each side: wings livid or yellowish; veins of the same colour.

Div. 1.

Species magnæ. Alæ fuscæ, vix hyalinæ, ad costam flavæ.

55. PERLA GAYI.

Perla Gayi, *Pictet, Hist. Nat. Neur. Perl.* 238, 33, pl. 10, f. 3.
Chili.

Div. 2.

Species mediocres vel parvæ. Alæ fusco-hyalinæ; costa vix propriæ coloris.

Sub-div. 1.

Species mediocres. Prothoracis color discalis maculam irregularem fingens.

56. PERLA NIGRO-CINCTA.

Prothorax flavus et niger; setæ caudales longitudine mediocres.

Perla nigro-cincta, *Pictet, Hist. Nat. Neur. Perl.* 236, 34, pl. 22, f. 5—8.

Mexico.

57. PERLA LONGICAUDA.

Prothorax lividus et fuscus; setæ caudales longæ.

Perla longicauda, *Pictet, Hist. Nat. Neur. Perl.* 238, 35, pl. 23, f. 1—4.

Brazil.

Sub-div. 2.

Species parvæ. Prothoracis color discalis vittam dorsalem fingens.

58. PERLA DILATICOLLIS.

Alæ læte fuscæ.

Perla dilaticollis, *Burm. Handb. Ent.* ii. 880, 7. *Pictet, Hist. Nat. Neur. Perl.* 240, 36, pl. 23, f. 5—10.

Isogenus Clio? *Newm. Mag. Nat. Hist.* iii. 86.

Brazil, Columbia, Mexico, Canada?

59. PERLA LITURA.

Alæ nigrae.

Perla litura, *Pictet, Hist. Nat. Neur. Perl.* 242, 37, pl. 24, f. 1—3.
Mexico.

Sub-group 5.

Species mediocres vel parvæ, flavæ vel fusca, fere unicolores. Prothorax rugosus, lateribus rectis vel sinuatis. Alæ plus minusve limpida, venis corporis colore.

Species of middle or small size: prothorax rugose, with straight or sinuated sides; general colour yellow or brown, almost uniform: wings more or less colourless; veins of the ground colour.

Div. 1.

Color corporis et alarum pallide flavus.

60. PERLA XANTHENES.

Lutea; ocelli 3 nigro cincti; antennæ flavæ; prothorax quadratus, postice valde angustior.

Perla Xanthenes, *Newm. Ent. Mag.* v. 178; *Mag. Nat. Hist. new series*, iii. 35, 3. *Pictet, Hist. Nat. Neur. Perl.* 245, 38, pl. 21, f. 3, 4.

a, b. Georgia. From Mr. Abbot's collection.

61. PERLA HYALINA.

Ocelli postici nigro cincti; antennæ fusca.

Perla hyalina (*Kollar, MSS.*), *Pictet, Hist. Nat. Neur. Perl.* 247, 39, pl. 21, f. 5—8.

Brazil.

Div. 2.

Color corporis et alarum fuscus vel lividus.

Sub-div. 1.

Antennæ bicolores.

62. PERLA ÆGYPTIACA.

Antennæ basi fuscae, apice flavæ.

Perla Ægyptiaca (*Kollar, MSS.*), *Pictet, Hist. Nat. Neur. Perl.* 251, 41, pl. 25, f. 6—8.

Egypt.

63. PERLA ANNULARIS.

Antennæ flavæ, apice nigræ ; articulus 1us fuscus.

Perla annularis, *Pictet, Hist. Nat. Neur. Perl.* 252, 42, pl. 25, f. 3—5.

Brazil?

Sub-div. 2.

Antennæ fuscescentes, fere unicolores.

64. PERLA ANNULICAUDA.

Mediocris ; prothorax capite latior.

Perla annulicauda, *Pictet, Hist. Nat. Neur. Perl.* 249, 40, pl. 22, f. 1—4.

Mexico, Brazil.

65. PERLA OCCIPITALIS.

Parva ; caput rufescente-fulvum, macula occipitali nigra ; prothorax fuscus, capite angustior ; venæ valde distinctæ.

Perla occipitalis, *Pictet, Hist. Nat. Neur. Perl.* 254, 43, pl. 26, f. 1—3.

United States.

66. PERLA DEBILIS.

Parva; prothorax capite angustior; venæ pallidissimæ vix distinctæ.

Perla debilis, *Pictet, Hist. Nat. Neur. Perl.* 255, 44, pl. 26, f. 4.
Brazil.

67. PERLA LUTEOLA.

Fulca; caput et prothorax angusta, colore similia.

Perla luteola, *Burm. Handb. Ent.* ii. 881, 13. *Pictet, Hist. Nat. Neur. Perl.* 257, 45, pl. 26, f. 5—7.

Java.

68. PERLA DUVAUCELII.

Fusca; caput et prothorax lata, colore similia.

Perla Duvaucelii, *Pictet, Hist. Nat. Neur. Perl.* 258, 46, pl. 27, f. 1, 2.

East Indies.

Sub-group 6.

Species parvæ, maculis rufescentibus et nigris.

Species of small size: body with reddish and black spots.

69. PERLA PICTA.

Perla picta, *Pictet, Hist. Nat. Neur. Perl.* 261, 47, pl. 27, f. 3—8.
a—c. New York. Presented by the Entomological Club.

Sub-group 7.

Species parvæ. Caput et prothorax nigra. Alæ nigro-fuscæ.

Species of small size: head and prothorax black: wings very deep brown.

Div. 1.

Caput mediocre, prothorace infixum.

Subdiv. 1.

Vena costalis flava.

70. PERLA COSTALIS.

Perla costalis, *Pictet, Hist. Nat. Neur. Perl.* 264, 48, pl. 24, f. 4.
Vera Cruz.

Subdiv. 2.

Venæ omnino nigræ.

Sect. 1.

Mesothorax et metathorax flavi.

71. PERLA CALIGATA.

Perla caligata, *Burm. Handb. Ent.* ii. 880, 8. *Pictet, Hist. Nat. Neur. Perl.* 266, 49, pl. 24, f. 5, 6.

a. Java. From Mr. Argent's collection.

Sect. 2.

Mesothorax et metathorax nigri.

* Pedes nigri, basi læte flavi.

72. PERLA KLUGII.

Perla Klugii, *Pictet, Hist. Nat. Neur. Perl.* 267, 50, pl. 25, f. 1, 2.
Brazil.

** Pedes nigri, vel fusco varii, sed non distincte bicolores.

† Abdomen et pedes nigri, fusco varii.

73. PERLA OBSCURA.

Antennæ fuscae, unicolores, vix crenulatæ; alarum venæ copiosissimæ.

Perla obscura, *Pictet, Hist. Nat. Neur. Perl.* 269, 51, pl. 28, f. 1—4.

Brazil.

74. PERLA POLITA.

Antennæ crenulatæ, subannulatæ; alarum venæ sat copiosæ.

Perla polita, *Burm. Handb. Ent.* ii. 879, 6. *Pictet, Hist. Nat. Neur. Perl.* 271, 52, pl. 28, f. 5—9.

Brazil.

†† Color omnino niger.

75. PERLA MORIO.

Perla Morio, *Pictet, Hist. Nat. Neur. Perl.* 272, 53, pl. 30, f. 1—5.
Columbia.

Div. 2.

Caput magnum, liberum, omnino nigrum. Abdomen fulvum.

76. PERLA FLAVIVENTRIS.

Perla flaviventris (*Hoffmansegg, MSS.*) *Pictet, Hist. Nat. Neur. Perl.* 274, 53, pl. 29.

Portugal.

Sub-genus 5. CHLOROPERLA.

Alarum areola marginalis terminalis vena una aut nulla transversa. Regio submarginalis venis transversis nullis apud apicem. Venæ subcostalis venula accessoria simplex aut bifurca, singula vel duplici.

Chloroperla p., *Newman, Ent. Mag.* v. 500. *Steph. Ill. Brit. Ent. Mand.* vi. 137. *Pictet, Hist. Nat. Neur.* 145, 5.

Terminal part of the submarginal region without cross veins; accessory vein of the subcostal vein simple or bifurcate; marginal terminal areolet with at most one cross vein beyond that which terminates the accessory vein at the costal vein. Species generally small; European species more or less yellowish green; some exotic species brown or blackish.

Div. 1.

Alæ unicolores.

Subdiv. 1.

Corpus plerumque nigrum.

Sect. 1.

Caput et prothorax vitta dorsali flava.

77. PERLA GUERINII.

Perla Guerinii, Pictet, Hist. Nat. Neur. Perl. 279, 55, pl. 30, f. 6—8.

New Orleans.

Sect. 2.

Caput nigrum, flavo marginatum. Prothorax vitta media nigra.

78. PERLA MACULATA.

Perla maculata, Pictet, Hist. Nat. Neur. Perl. 280, 56, pl. 30, f. 9. Philadelphia.

Subdiv. 2.

Corpus plerumque flavum vel viridescens.

Sect. 1.

Capitis macula nebulosa.

Subsect 1.

Occipitis discus fuscus, unicolor.

79. PERLA RIVULORUM.

Perla rivulorum, *Pictet, Hist. Nat. Neur. Perl.* 284, 58, pl. 32.
Switzerland.

Subsect. 2.

Occipitis discus flavo maculatus.

Group 1.

Corpus robustum. Prothorax capitis latitudine.

80. PERLA AFFINIS.

Perla affinis, *Pictet, Hist. Nat. Neur. Perl.* 286, 59, pl. 31, f. 5—7.
Portugal.

Group 2.

Corpus gracile, tenue. Prothorax capite angustior.

81. PERLA VENOSA.

Areola costalis viridis.

Chloroperla venosa, *Steph. Ill. Brit. Ent. Mand.* vi. 139, 4. *Pictet,*
Hist. Nat. Neur. Perl. 297, 62, pl. 35, f. 1—3.

Perla virescens, var. ?

82. PERLA GRISEIPENNIS.

Areola costalis hyalina, cinerea.

Perla griseipennis, *Pictet, Hist. Nat. Neur. Perl.* 299, 63, pl. 35, f. 4—7.

Switzerland.

Subsect. 2.

Capitis macula isolata, ferri-equini figura.

Group 1.

Color plerumquè fulvus aut viridis. Setæ caudales non aut vix annulatæ.

83. PERLA VIRESCENS.

Perla virescens, *Pict. Ann. Sci. Nat.* xxxiii. 60, pl. 6, f. 8—10 ; *Hist. Nat. Neur. Perl.* 288, 60, pl. 33, 34, f. 1. *Burm. Handb. Ent.* ii. 878, 2.

Phrygranea grammatica? *Scopoli, Ent. Carn.* 269, 703. *Poda, Musæum Græcum*, 99. *De Vill. Linn. Ent.* iii. 26, 4. *Schrank, Faun. Boic.* 1897 ; *Ins. Austr.* 608.

Perla virens? *Zett. Ins. Lapp.* 1059.

Chloroperla grammatica, *Newm. Mag. Nat. Hist. new series*, iii. 87, 2.

Chloroperla fuscipennis, var., *Curt. Steph. Ill. Brit. Ent. Mand.* vi. 138, 1.

Chloroperla lateralis, var., *Steph. Ill. Brit. Ent. Mand.* vi. 138, 2.

Chloroperla media, var., *Curt. Steph. Ill. Brit. Ent. Mand.* vi. 138, 3.

a—e. England.

f—l. Dartmoor. From Dr. Leach's collection.

m—p. ———? From Mr. Children's collection.

Group 2.

Color plerumquè rufescens. Setæ caudales distincte annulatæ.

84. PERLA RUFESCENS.

Chloroperla rufescens, *Steph. Ill. Brit. Ent. Mand.* vi. 139, 5.

Pictet, Hist. Nat. Neur. Perl. 295, 61, pl. 34, f. 7.

Perla virescens, var. ?

a. England.

Div. 2.

Alæ tricolores.

85. PERLA FENESTRATA.

Perla fenestrata, *Pictet, Hist. Nat. Neur. Perl.* 281, 57, pl. 31, f. 1—4.

Columbia.

86. PERLA SPIO.

Testacea fere unicolor ; ocelli duo fusco-nigri ; oculi magni, nigri ; caput prothorace latius ; pedes incrassati ; alæ subobscuræ iridescentes.

Chloroperla Spio, *Newm. Mag. Nat. Hist. new series*, iii. 186, 1.

Perla Spio, *Pictet, Hist. Nat. Neur. Perl.* 282.

a. Sierra Leone. Presented by the Rev. D. F. Morgan.

87. PERLA CLYMENE.

Caput flavum ; oculis ocellisque nigris ; alæ fusco leviter tinctæ, venis omnibus fuscis.

Chloroperla Clymene, *Newm. Mag. Nat. Hist. new series*, iii. 87, 4.

Pictet, Hist. Nat. Neur. Perl. 283.

a. Georgia. From Mr. Abbot's collection.

88. PERLA CYDIPPE.

Pallide lutea ; antennæ fuscæ, basi imo tantum luteæ ; alæ venuste virescentes, venis concoloribus.

Chloroperla Cydippe, *Newm. Mag. Nat. Hist. new series*, iii. 88, 8.
Perla Cydippe, *Pictet, Hist. Nat. Neur. Perl.* 317.

a, b. Georgia. From Mr. Abbot's collection.

89. PERLA TRANSMARINA.

Pallide fusca ; prothorax fuscus, linea mediana longitudinali flavida ; caput flavidum ; oculis maculisque duobus fuscis ; alæ anticæ hyalinæ, basi flavidæ venis fuscis ; alarum posticarum venæ apice tantum fuscæ.

Chloroperla transmarina, *Newm. Mag. Nat. Hist. new series*, iii. 87, 3 ; *Ent. Mag.* v. 499.

Perla transmarina, *Pictet, Hist. Nat. Neur. Perl.* 283.

a. United States.

90. PERLA ? CYRENE.

Atra ; caput vix depressum ; antennæ 40-articulatæ, validæ, submoniliformes, corpore vix breviores, articulis subovatis ; prothorax subtransversus, acutangulus, fere quadratus, capite paullo latius ; setæ caudales brevissimæ, incurvæ, 14-articulatæ ; tibiæ flavo cinctæ ; alæ nigricantes, semiopacæ. Long. alar. 12 lin.

Chloroperla Cyrene, *Newm. Zool.* iii. 853, 3.

New Zealand.

91. PERLA EPHYRE.

Caput flavum, macula verticali fusca ; oculi nigri ; setæ caudales virescentes fusco annulatæ.

Chloroperla Ephyre, *Newm. Mag. Nat. Hist. new series*, iii. 87, 5.

Perla Ephyre, *Pictet, Hist. Nat. Neur. Perl.* 283.

a. Georgia. From Mr. Abbot's collection.

92. PERLA OPIS.

Nigra, nitida, concolor; prothoracis latera convexa; alæ obscure fusco tinctæ, venis saturatioribus.

Chloroperla Opis, *Newm. Mag. Nat. Hist. new series*, iii. 89, 11.

93. PERLA VIRIDELLA.

Perla viridella, *Ramb. Hist. Nat. Ins. Neur.* 456, 14.

Chamounix.

94. PERLA CHLORELLA.

Perla chlorella, *Ramb. Hist. Nat. Ins. Neur.* 457, 15.

Europe as far as South Spain.

95. PERLA TENELLA.

Perla tenella, *Ramb. Hist. Nat. Ins. Neur.* 457, 16.

France.

Div. 3.

Antennæ setæque caudales elongatæ. Pedes elongati. Alarum anticarum venæ apicales parallelæ 6, venulis transversis numerosis intersectæ.

Leptoperla, *Newm. Mag. Nat. Hist. new series*, iii. 89.

96. PERLA BEROE.

Fusca; pedes anteriores fusci, tibiis medio testaceis; femora postica testacea, apice fusca; alæ opacæ fuscæ, versus apicem maculis albidis notatæ.

Leptoperla Beroe, *Newm. Mag. Nat. Hist. new series*, iii. 89, 1.

Van Dieman's Land.

97. PERLA CITRINELLA.

Lutea; caput thorace non latius; antennæ fuscæ, basi pallidæ; scutum antice et apud sulcum nigricans; alæ limpidæ.

Perla citrinella, Barnston, MSS. *Newport, Proc. Linn. Soc. Lond.* (1848), i. 388, 6.

Pale luteous, shining: head not broader than the thorax: eyes and ocelli black: antennæ brown, pale towards the base: scutum minutely rugulose, blackish on the fore border and along the longitudinal furrow, rounded on each side, not angular nor broader in front: wings quite colourless; veins pale yellow; external basilar areolet with four transverse veins; terminal areolet with one or two transverse veins; submedian areolet with four transverse veins. Length of the body 3 lines; of the wings 10 lines.

- a, b.* St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.
c. Nova Scotia. From Lieut. Redman's collection.

98. PERLA DECOLORATA.

Pallide testacea; caput thorace paullo latius, macula angulari nigricante; scutum fusco binaculatum; alæ hyalinæ.

Pale testaceous: head a little broader than the thorax, with a blackish irregular mark extending forwards from the ocelli, truncate in front: eyes and ocelli black: antennæ very minutely pubescent: scutum minutely rugulose, with a longitudinal furrow, not broader in front, a large oblong brown spot on each side; sides almost straight; angles rather sharp: wings hyaline; veins black, testaceous towards the base. Length of the body 4 lines; of the wings 12 lines.

- a, b.* Great Bear Lake, N. America. Presented by Sir John Richardson.

99. PERLA DECISA.

Ferruginea, nitens, subtus testacea; antennæ fusæ; scutum subquadratum, angulis sat acutis; alæ anticæ subcinereæ.

Ferruginous, shining, testaceous beneath: head testaceous in front, a little broader than the thorax: antennæ brown, minutely pubescent: scutum minutely rugulose, subquadrate; angles rather sharp: wings slightly gray; veins black; external basilar areolet with four transverse veins; terminal areolet with three transverse veins; submedian areolet with five transverse veins. Length of the body $3\frac{1}{2}$ lines; of the wings 11 lines.

- a.* St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.

100. PERLA OPPOSITA.

Nigra, nitens, ferrugineo varia; caput antice testaceum, thoracix latius; prothorax antice non latius, disco ruguloso, lateribus marginatis rectis, angulis sat acutis; scutellum flavo maculatum; alæ subcinereæ, ad venas transversas obscuriores.

Black, shining, partly ferruginous: head testaceous in front, hardly broader than the thorax: antennæ very minutely pubescent: prothorax minutely punctured, rugulose on the disk, not broader in front, with a rim on each side and along the fore border; sides straight; angles rather sharp: scutellum with a yellow spot in front: wings very slightly gray, darker about the transverse veins: veins black. Length of the body $4\frac{1}{2}$ lines; of the wings 13 lines.

a, b. Van Dieman's Land. From Dr. Hooker's collection.

c. Van Dieman's Land. From Mr. Smith's collection.

d. New Zealand. Presented by Capt. J. C. Ross.

Sub-genus 6. ISOPTERYX.

Alarum posticarum regio analis vix ulla.

Anal region of the hind-wings almost wanting.

Isopteryx, *Pictet, Hist. Nat. Neur. Perl.* 146, 6.

Species yellow, of small size.

Div. 1.

Antennæ serratæ. Prothorax maculis duabus magnis fuscis.

101. PERLA SERRICORNIS.

Perla serricornis, Pictet, Hist. Nat. Neur. Perl. 303, 64, pl. 36, f. 1—3.

Germany.

Div. 2.

Antennæ setaceæ. Prothorax unicolor, aut striis nigris notatus.

Sect. 1.

Antennæ plerumquè flavæ.

102. PERLA MONTANA.

Perla montana, *Pictet, Hist. Nat. Neur. Perl.* 305, 65, pl. 36, f. 4—6.

Bex. Alps of Piedmont.

Sect. 2.

Antennæ nigræ, triente basali flavæ.

Subsect. 1.

Setæ caudales apice nigræ.

Group 1.

Corpus viridescence-flavum. Macula nulla nigra inter ocellos. Prothorax vitta nulla dorsali nigra.

103. PERLA TORRENTIUM.

Perla torrentium, *Pictet, Hist. Nat. Neur. Perl.* 307, 66, pl. 37, f. 1—4.

Jena. Bohemia.

Group 2.

Corpus plerumquè læte fulvum. Macula parva nigra inter ocellos. Prothorax vitta gracili nigra.

104. PERLA TAURICA.

Areola costalis viridis; venæ fusæ.

Perla taurica, *Pictet, Hist. Nat. Neur. Perl.* 309, 67. pl. 37, f. 5, 6.
Taurus.

105. PERLA BURMEISTERI.

Areola costalis limpida; venæ pallidæ.

Perla Burmeisteri, *Pictet, Hist. Nat. Neur. Perl.* 311, 68, pl. 37, f.
7, 8.

North Germany.

Subsect. 2.

Setæ caudales omnino flavæ.

Group 1.

Prothorax mediocris, nigro marginatus.

106. PERLA FLAVA.

Perla flava, *Geoffr. Ins.* ii. 232, 4. *Fourcr. Ent. Par.* 349, 4.
Pictet, Hist. Nat. Neur. Perl. 313, 69, pl. 38, f. 1, 2.

Perla viridis, *Fabr. Ent. Syst.* ii. 74, 11. *Zett. Ins. Lapp.* 1059, 6.

Perla tripunctata, *Scop. Ent. Cern.* 267, 704. *De Vill. Linn. Ent.*
iii. 26, 5.

Semblis tripunctata, *Schrank, Ins. Austr.* 607. *Faun. Boic.* 1898.

Phryganea viridis, *Turt. Syst. Nat.* iii. 395.

Perla lutea, *Latr. Hist. Nat. Ins.* xiii. 491. *Oliv. Enc. Méth.* x.
69, 3.

Chloroperla flava, *Newm. Mag. Nat. Hist. new series,* iii. 88, 6.
Steph. Ill. Brit. Ent. Mand. vi. 139, 6.

Dodecatoma flava, *Léon Dufour.*

a—c. England.

d—f. Dartmoor. From Dr. Leach's collection.

g—i. ———? From Mr. Children's collection.

Group 2.

Prothorax minimus, omnino flavus.

Chloroperla, *Newm. Ent. Mag.* v. 500. Sexuum amborum alæ pariter repandæ, pariterque abdomen tegentes. Telum setis duabus instructum. Proalæ venæ subcostali cum costali parallelo.

107. PERLA APICALIS.

Luteo-viridis; oculis antennarum apicibusque nigerrimis.

Chloroperla apicalis, *Newm. Ent. Mag.* i. 286. *Mag. Nat. Hist. new series*, iii. 88, 7.

Perla pallida, *Steph. Ill. Brit. Ent. Mand.* vi. 139, 7.

Perla apicalis, *Pictet, Hist. Nat. Neur. Perl.* 316, 70, pl. 38, f. 3—9.

a, b. England.

Genus 5. CAPNIA.

Palpi filiformes. Abdomen setis longis.

Capnia, *Pictet, Hist. Nat. Neur. Perl.* 318.

Perla p., *Zett.*; *Pictet* (olim).

Chloroperla p., *Newman.*

Semblis p., *Burm.*

Leptomeres ? *Rambur.*

Palpi filiform : abdomen with long bristles.

Sub-genus 1. CAPNIA.

Alarum apices venis transversis nullis.

Capnia, *Pictet, Hist. Nat. Neur. Perl.* 319.

Tips of the wings without transverse veins.

1. CAPNIA NIGRA.

Abdomen disco flavum; maris alæ longæ; venæ rectæ, regulares.

- Capnia nigra, *Pictet, Hist. Nat. Neur. Perl.* 321, 1, pl. 39.
 Perla nigra, *Pictet, Ann. Sci. Nat.* xxviii. 61, pl. 6, f. 11—13.
 Chloroperla nigra, *Neum. Mag. Nat. Hist. new series*, iii. 88, 10.

2. CAPNIA PYGMÆA.

Abdomen omnino nigrum ; maris alæ breves ; venæ rectæ, regulares.

Sembris pygmæa, *Burm. Handb. Ent.* ii. 874, 1.

Capnia pygmæa, *Pictet, Hist. Nat. Neur. Perl.* 324, 2, pl. 40, f. 1—3.

Pennsylvania, Newfoundland.

3. CAPNIA NECYDALOIDES.

Venæ ad partem indirectæ, irregulares.

Capnia necydaloïdes (*Kollar, MSS.*) *Pictet, Hist. Nat. Neur. Perl.* 326, 3, pl. 40, f. 4, 5.

North America.

Sub-genus 2. GRIPOPTERYX.

Alarum apices venis plurimis transversis reticulatæ.

Gripopteryx, *Pictet, Hist. Nat. Neur. Perl.* 319, 327.

Tips of the wings reticulated with numerous transverse veins :
 abdomen of the female terminated by claviform appendages.

4. CAPNIA CANCELLATA.

Nigro-fusca ; alæ posticæ reticulatæ.

Capnia cancellata, *Pictet, Hist. Nat. Neur. Perl.* 328, 4, pl. 41.

Brazil.

5. CAPNIA GRACILIS.

Cinerea ; alæ posticæ non reticulatæ.

Sembris gracilis, *Burm. Handb. Ent.* ii. 876, 8.

Capnia gracilis, *Pictet, Hist. Nat. Neur. Perl.* 330, 5, pl. 42, f. 1—3.

Brazil.

6. CAPNIA ? BIFRONS.

Fusco-nigra, nitida; alæ fusco tinctæ.

Chloroperla bifrons, *Newm. Ent. Mag.* v. 401. *Mag. Nat. Hist. new series*, iii. 89, 9.

Scotland.

7. CAPNIA PYGMÆA (Nomen bis lectum).

Nigra, subnitida, immaculata; alæ cinereæ, venis apicalibus omnibus simplicibus, plaga discali solita venis tribus tantum ornata.

Perla pygmæa, *Zett. Ins. Lapp.* 1059, 4.

Lapland.

8. CAPNIA VERNALIS.

Perla vernalis, *Barnston, MSS.*

Capnia vernalis, *Newport, Proc. Linn. Soc.* (1838), 388, 3.

9. CAPNIA ? RUFEOLA.

Leptomeres rufeola, *Ramb. Nat. Hist. Ins. Neur.* 457, 1.

France.

10. CAPNIA ? FLAVEOLA.

Leptomeres flaveola, *Ramb. Hist. Nat. Ins. Neur.* 458, 2.

France.

11. CAPNIA ? PALLIDELLA.

Leptomeres pallidella, *Ramb. Hist. Nat. Ins. Neur.* 458, 3.

France.

12. CAPNIA ? ALBELLA.

Leptomeres albella, *Ramb. Hist. Nat. Ins. Neur.* 458, 4.

France.

Genus 6. NEMOURA.

Palpi filiformes. Abdomen setis nullis.

Nemoura, *Latr.*

Phryganea p., *Linn.*

Perla p., *Geoffr.*

Semblis p., *Burm.*

Nemoura et Leuctra, *Steph.*

Sub-genus 1. TÆNIOPTERYX.

Palpi labiales mediocres, remoti. Abdomen setis tribus triarticulatis brevissimis terminatum. Tarsorum articuli longi, subæquales. Alæ plerumque involutæ, cinereo et albido sæpe fasciatæ. Parastigmatis venæ X non fingentes.

Tæniopteryx, *Pictet, Hist. Nat. Neur. Perl.* 343, pl. 42, f. 4.

Veins of the parastigma not forming an X: labial palpi middle-sized, far apart: abdomen terminated by very short rudimentary three-jointed tail-bristles: joints of the tarsi long, almost equal: wings generally involved into a half cylinder, often with gray and whitish bands.

Div. 1.

Alæ fasciis cinereis plus minusve distinctis.

Subdiv. 1.

Alæ fasciis tribus valde distinctis, maris rudimentales.

1. NEMOURA TRIFASCIATA.

————— fig., *Schaff. Icon.* pl. 37, f. 2, 3. *Abhandl. Ins. Mem.* 7.

Nemoura trifasciata, *Pictet, Ann. Sci. Nat.* xxvi. 379, 3, pl. 15, f. 4—10; *Mém. Soc. Phys. Genève*, vii. 178; *Hist. Nat. Neur.*

Perl. 351, 2, pl. 44, 45, f. 1—5. *Zett. Ins. Lapp.* 1057.

Brachyptera trifasciata, *Newport.*

a, b. England.

c. Dartmoor. From Dr. Leach's collection.

Subdiv. 2.

Alæ fasciis indistinctis vel minusquam tribus, maris nonnunquam brevissimæ at non rudimentales.

Sect. 1.

Femora fusca. Alæ subopacæ, maris breves; venæ mediocres.

2. NEMOURA NEBULOSA.

Phryganea nebulosa, *Linn. Syst. Nat. ed.* 12, 908, 2; *Faun. Suec.* 1499. *Gmel. ed. Syst. Nat.* i. 2631, 2. *De Vill. Linn. Ent.* iii. 25, 2. *Deg. Ins.* ii. 2, 730, pl. 23, f. 16, 17; vii. pl. 44, f. 17, 18. *Berk. Syn.* i. 150. *Stew. El. Nat. Hist.* ii. 213. *Turt. Syst. Nat.* iii. 395.

Perla X-fusca, &c.? *Geoffr. Ins.* ii. 232, 3.

Perla nebulosa, *Fourc. Ent. Par.* 349, 3.

Semblis nebulosa, *Fabr. Ent. Syst.* ii. 74, 9. *Walck. Faun. Par.* ii. 11, 2. *Cederh. Faun. Ingr. Prod.* 136, 415. *Schrank, Ins. Austr.* 610; *Faun. Boic.* 1896. *Mus. Lesk.* i. 51, 22. *Müll. Prodr.* 144, 1655. *Burm. Handb. Ent.* ii. 875, 4.

Nemoura nebulosa, *Latr. Hist. Nat. Ins.* xiii. 50; *Gen. Crust. et Ins.* iii. 210, 1. *Oliv. Enc. Méth. Ins.* viii. 186, 1. *Zett. Ins. Lapp.* 1056, 1. *Pictet, Ann. Sci. Nat.* xxvi. 379, 3, pl. 15, f. 7, 8; *Mém. Soc. Phys. Genève*, vii. 178, 1; *Hist. Nat. Neur. Perl.* 347, 1, pl. 43. *Burm. Handb. Ent.* ii. 875, 4.

Nemoura variegata, *Steph. Ill. Brit. Ent. Mand.* vi. 144, 15, pl. 31, f. 2.

Nemura nebulosa, *Ramb. Hist. Nat. Ins. Neur.* 459, 1.

a. England.

b, c. ———? From Mr. Children's collection.

d. ———?

3. NEMOURA FUSCATA.

Semblis fuscata, *Fabr. Ent. Syst. Suppl.* 200, 10, 11.

Europe.

Sect. 2.

Femora flava, fusco vittata aut maculata. Alæ hyalinæ, maris longæ; venæ robustæ.

4. NEMOURA PRÆTEXTATA.

Femora basi ad apicem fusco vittata.

Sembris prætextata, *Burm. Handb. Ent.* ii. 875, 5.

Nemoura prætextata, *Pictet, Hist. Nat. Neur. Perl.* 355, 3, pl. 45, f. 7—9.

Europe.

5. NEMOURA FASCIATA.

Femora flava, apice fusca.

Sembris fasciata, *Burm. Handb. Ent.* ii. 875, 6.

Nemoura fasciata, *Pictet, Hist. Nat. Neur. Perl.* 359, 5, pl. 46, f. 4, 5.

Pennsylvania.

Div. 2.

Alæ fasciis nullis cinereis.

6. NEMOURA MONILICORNIS.

Fusca; antennæ annulis distinctis.

Nemoura monilicornis, *Pictet, Hist. Nat. Neur. Perl.* 357, 4, pl. 46, f. 1—3.

Switzerland, Banks of the Arve.

7. NEMOURA MAURA.

Nigra; antennæ annulis indistinctis.

Nemoura maura, *Pictet, Hist. Nat. Neur. Perl.* 361, 6, pl. 46, f. 6.

Var.? *a—c.* St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.

Sub-genus 2. LEUCTRA.

Palpi labiales brevissimi. Setæ caudales nullæ. Tarsorum articuli 1us et 3us longi; 2us brevissimus, subtus parum dilatatus. Alæ angustæ, plerumquè semicylindro involutæ. Parastigmatis venæ X non fingentes.

Leuctra, *Steph. Ill. Brit. Ent. Mand.* vi. 144; *Pictet, Hist. Nat. Neur. Perl.* 343, pl. 42, f. 5.

Veins of the parastigma not forming an X: labial palpi very short: no rudiments of tail-bristles: first and third joints of the tarsi long; second very short, a little dilated beneath: wings narrow, long, generally rolled up into a half cylinder.

Div. 1.

Prothorax longus, antice et postice contractus. Abdomen supra pallide flavum.

8. NEMOURA CYLINDRICA.

——— cylindrica, *Deg. Ins.* vii. 599, pl. 44, f. 17, 19.

Nemoura cylindrica, *Oliv. Enc. Méth. Ins.* viii. 186, 4. *Pictet, Hist. Nat. Neur. Perl.* 366, 7, pl. 47, f. 1—5.

Europe.

9. NEMOURA GENICULATA.

Nemoura geniculata, *Steph. Ill. Brit. Ent. Mand.* vi. 145, 1, pl. 31, f. 4. *Pictet, Hist. Nat. Neur. Perl.* 369.

a—d. England.

Div. 2.

Prothorax fere quadratus. Abdomen fuscum aut nigrum.

Subdiv. 1.

Prothorax lineis tribus longitudinalibus elevatis.

Sect. 1.

Antennæ omnino aut ad partem nigricantes.

Subsect. 1.

Antennæ omnino nigricantes.

Group 1.

Pedes fusci aut fulvi; femora apice nigra.

10. NEMOURA FUSCIVENTRIS.

Pedibus alisque fuscis.

Nemoura cylindrica, *Pictet, Ann. Sci. Nat.* xxvi. 385, pl. 15, f. 1—3. *Mém. Soc. Phys. Genève*, vii. 188. *Zett. Ins. Lapp.* 105, 5.

Leuctra fusciventris, *Steph. Ill. Brit. Ent. Mand.* vi. 145, 2.

Nemoura fusciventris, *Pictet, Hist. Nat. Neur. Perl.* 370, 8, pl. 48. a—e. England.

11. NEMOURA ABDOMINALIS.

Leuctra abdominalis, *Steph. Ill. Brit. Ent. Mand.* vi. 145, 3.

Nemoura fusciventris, var. ?

a, b. England.

c. Dartmoor. From Dr. Leach's collection.

12. NEMOURA NIGRA.

Minima ; pedes nigricantes ; alæ cinereæ.

Nemoura nigra, *Oliv. Enc. Méth.* viii. 186, 5. *Pictet, Ann. Sci. Nat.* xxvi. 384, 4 ; *Mém. Soc. Phys. Genève*, vii. 188 ; *Hist. Nat. Neur. Perl.* 373, 9, pl. 47. f. 6, 7. *Zett. Ins. Lapp.* 1055, 6.

Europe.

Group 2.

Pedes omnino fulvi.

13. NEMOURA TENUIS.

Nemoura tenuis, *Pictet, Hist. Nat. Neur. Perl.* 375, 10, pl. 49, f. 1—3.

Nemoura nivalis, *Fitch.*

a—d. New York. Presented by Dr. Asa Fitch.

e—h. St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.

i, j. York Factory. Presented by Dr. Rae.

Sub-sect. 2.

Antennæ basi fulvæ. Alæ valde iridescentes.

14. NEMOURA ANGUSTA.

Nemoura angusta, *Pictet, Hist. Nat. Neur. Perl.* 376, 11, pl. 49, f. 4—6.

Switzerland.

Section 2.

Antennæ omnino fulvæ.

15. NEMOURA FLAVICORNIS.

Nemoura flavicornis, *Pictet, Mém. Soc. Phys. Genève*, vii. 187, 16 ; *Hist. Nat. Neur. Perl.* 378, 12, pl. 49, f. 1—9.

Switzerland.

Sub-div. 2.

Prothorax punctis elevatis lineas distinctas non fingentibus.

16. NEMOURA BRUNNEA.

Nemoura brunnea, *Pictet, Hist. Nat. Neur. Perl.* 380, 13, pl. 49, f. 10—12.

Germany.

Div. ?

17. NEMOURA FUSCA.

Leuctra fusca, *Curt.*

a, b. England.

c, d. Dartmoor. From Dr. Leach's collection.

18. NEMOURA FERRUGINEA.

Fusco-ferruginea, nitens; *caput thorace paullo latius*; *scutum antice latius*; *alæ subhyalinæ.*

Brownish ferruginous, shining: head a little broader than the thorax: antennæ pale ferruginous, minutely pubescent: scutum minutely rugulose, with a slight longitudinal furrow, broader in front; sides slightly convex; angles somewhat rounded: wings subhyaline; veins brownish; external basilar areolet and terminal areolet with no transverse veins; submedian areolet with about eight transverse veins. Length of the body $1\frac{3}{4}$ line; of the wings 6 lines.

a—d. Nova Scotia. From Lieut. Redman's collection.

19. NEMOURA MINIMA.

Nigra, nitens; *caput thorace latius.*

Perla minima, *Barnston, MSS. Newport, Proc. Linn. Soc. Lond.* (1848), i. 388, 2.

Black, smooth, shining, slender: head broader than the thorax: antennæ very minutely pubescent, shorter than the body: prothorax subquadrate, not broader in front; sides straight; angles sharp: wings hyaline; veins black; external basilar areolet with one transverse vein; terminal areolet with no transverse veins; internal basilar areolet and terminal areolet with no transverse veins; submarginal region divided by a single upright transverse vein;

submedian areolet with one transverse vein. Length of the body $1\frac{1}{2}$ — $2\frac{1}{2}$ lines ; of the wings 2 — $3\frac{1}{2}$ lines.

a—e. St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.

Sub-genus 3. NEMOURA.

Palpi labiales breves, approximati. Abdomen setis nullis apicalibus, maris nonnunquam unguatum. Tarsi articulis 1o et 3o longis, 2o brevissimo. Alæ plerumquæ expansæ. Parastigmatis venæ X fingentes.

Nemoura, Pictet, Hist. Nat. Neur. Perl. 343, pl. 42, f. 6.

Veins of the parastigma forming a very distinct X : labial palpi short, approximate : abdomen with no rudiments of tail-bristles ; that of the male in some cases furnished with two unguæ : first and third joints of the tarsi long ; second very short : wings generally outspread.

Div. 1.

Prothorax obscurus, granulatus, tuberculatus, lateribus rotundatis.

Sub-div. 1.

Antennæ articulo 1o flavo. Alæ læte fusæ, fere unicolores.

20. NEMOURA VARIEGATA.

Nemoura variegata, Oliv. Enc. Méth. vii. 186, 3. Pictet, Ann. Sci. Nat. xxvi. pl. 14 ; Mém. Soc. Phys. Genève, vii. 179 ; Hist. Nat. Neur. Perl. 386, 14, pl. 50. Zett. Ins. Lapp. 1055, 3.

Nemoura macrophthalma, Pictet, Mém. Soc. Phys. Genève, vii. (mas). Semblis pallipes, Burm. Handb. Ent. ii. 875, 3.

Nemura lunata ? Ramb. Hist. Nat. Ins. Neur. 461, 4.

Nemoura nebulosa ? Steph. Ill. Brit. Ent. Mand. vi. 140, 1. Fusco-nigra ; prothoracis lateribus rufo-piceis ; pedibus pallide rufescentibus, femoribus posticis annulo obscuro ; alis cinereis venis fuscis.

Europe.

21. NEMOURA FULIGINOSA.

Fusco-nigra; capite postice, prothoracis lateribus, pedibusque fusco-rufescentibus; alis fuscis venis fuscis.

Nemoura fuliginosa, Steph. Ill. Brit. Ent. Mand. vi. 141, 2.

Nemoura nebulosa, var. ?

a. England.

b. Germany.

Sub-div. 2.

Antennæ omnino nigricantes. Alæ albidæ, cinereo-nebulosæ.

22. NEMOURA MEYERI.

Nemoura Meyeri, Pictet, Hist. Nat. Neur. Perl. 390, 15, pl. 51, f. 1—3.

Burgdorf.

Div. 2.

Prothorax lævis, nitens, punctis magnis projicientibus, lateribus subrectis.

Sub-div. 1.

Prothorax longitudine et latitudine æqualis.

Sect. 1.

Caput et antennæ nigra. Alarum venæ obscure fusæ.

Sub-sect. 1.

Alæ hyalinæ, cineræ vel læte fusæ.

Group 1.

Femora postica macula lata nigra signata. Alæ cineræ.

Sub-group 1.

Prothorax omnino niger. Alarum venæ cinereo obscuriore marginatæ.

23. NEMOURA NITIDA.

Nemoura nitida, *Pictet, Mém. Soc. Phys. Genève*, vii. 179, 5. *Hist. Nat. Neur. Perl.* 392, 16, pl. 51, f. 4—8.

Europe.

Sub-group 2.

Prothorax flavo marginatus. Alarum venæ cinereo non nebulosæ.

24. NEMOURA LATERALIS.

Nemoura lateralis, *Pictet, Mém. Soc. Phys. Genève*, vii. 180, 6; *Hist. Nat. Neur. Perl.* 395, 17, pl. 52, f. 1—3.

Swiss Alps.

Group 2.

Femora postica omnino fulva, aut striga gracili nigra tantum signata. Alæ læte fuscæ.

25. NEMOURA MARGINATA.

Nemoura marginata, *Pictet, Mém. Soc. Phys. Genève*, vii. 181, 7; *Hist. Nat. Neur. Perl.* 397, 18, pl. 52, f. 4—6.

Switzerland.

Sub-sect. 2.

Alæ opacæ, nigro-fuscæ, basi flavæ.

26. NEMOURA HUMERALIS.

Nemoura humeralis, *Pictet, Mém. Soc. Phys. Genève*, vii. 184, 11; *Hist. Nat. Neur. Perl.* 399, 19, pl. 52, f. 7—2.

Switzerland.

Section 2.

Statura minima. Caput et antennæ læte fusca. Alarum venæ fulvæ.

27. NEMOURA INCONSPICUA.

Nemoura inconspicua, *Pictet, Mém. Soc. Phys. Genève*, vii. 185, 12 ;
Hist. Nat. Neur. Perl. 404, 21, pl. 53, f. 10—13.

Geneva.

Sub-div. 2.

Prothorax longitudine distincte latior.

28. NEMOURA CINEREA.

Nemoura cinerea, *Oliv. Enc. Méth.* viii. 186, 2. *Pictet, Ann. Sci. Nat.* xxvi. 372, 1 ; *Hist. Nat. Neur. Perl.* 401, 20, pl. 53, f. 1—10. *Zett. Ins. Lapp.* 1057, 4. -

Sembris cinerea, *Burm. Handb. Ent.* ii. 876, 7.

a, b. Hammerfest, Finmark. Presented by F. Walker, Esq.

Div. ?

29. NEMOURA PALLIDA.

Pallide fusco-rufescens ; oculis, meso- et meta-thoracis dorso, geniculis intermediis, abdomineque fusco-nigris ; alis hyalinis, pallidis, venis fuscescentibus.

Nemoura pallida, *Steph. Ill. Brit. Ent. Mand.* vi. 141, 3.

England.

30. NEMOURA CRUCIATA.

Eusco-nigra ; prothoracis lateribus piceo-rufescentibus ; tibiis tarsisque intermediis piceo-nigris ; alis fuscescentibus, cruce venisque saturatoribus.

Nemoura cruciata, *Steph. Ill. Brit. Ent. Mand.* vi. 141, 4.

a, b. England.

c, d. England, Dartmoor. From Dr. Leach's collection.

31. NEMOURA AFFINIS.

Fusco-nigra; *prothoracis marginibus rufescentibus*; *pedibus anticis piceo-nigris, posterioribus pallide rufis*; *alis cinerascensibus cruce fusca, venis subfuscentibus.*

Nemoura affinis, *Steph. Ill. Brit. Ent. Mand.* vi. 141, 5.

a. England.

b. ———? From Mr. Children's collection.

32. NEMOURA PUSILLA.

Fusco-nigra; *prothoracis lateribus pedibusque pallide rufescentibus*; *capite lato*; *antennis gracilibus*; *alis hyalinis pallidis, venis subfuscescentibus.*

Nemoura pusilla, *Steph. Ill. Brit. Ent. Mand.* vi. 142, 6.

a. ———? From Mr. Children's collection.

33. NEMOURA ANNULATA.

Rufo-fusca, nigro variegata; *pedibus pallide rufescentibus, femoribus posticis annulo obscuro fusco*; *alis fusco-cinereis, venis fuscis.*

Nemoura annulata, *Steph. Ill. Brit. Ent. Mand.* vi. 142, 7.

a. ———? From Mr. Children's collection.

b—d. England.

34. NEMOURA PALLIPES.

Piceo-fusca, nitida; *antennis subpilosiss*; *pedibus pallidis*; *alis hyalinis subcinereis, venis pallidis.*

Nemoura pallipes, *Steph. Ill. Brit. Ent. Mand.* vi. 142, 8.

England.

35. NEMOURA LUTEICORNIS.

Nigro-picea, nitida; *labro, capite postice, prothoracis lateribus, pedibusque rufescentibus*; *alis pallide cinereis, venis pallidis*; *antennis gracilibus pallide luteis.*

Nemoura luteicornis, *Steph. Ill. Brit. Ent. Mand.* vi. 142, 9.

a. England.

36. NEMOURA PALLICORNIS.

Nigro-picea, nitida; antennis elongatis pedibusque pallidis; alis subfusco-cinereis, venis fuscis.

Nemoura pallicornis, *Steph. Ill. Brit. Ent. Mand.* vi. 143, 10.
England.

37. NEMOURA NITIDA (Nomen bis lectum).

Piceo-fusca, nitida; antennis gracilibus elongatis nigris; pedibus pallido-rufis; alis angustis hyalinis, venis pallidis.

Nemoura nitida, *Steph. Ill. Brit. Ent. Mand.* vi. 143, 11.
a—c. England.
d. ———? From Mr. Children's collection.

38. NEMOURA CAMBRICA.

Piceo-nigra; prothorace rugoso; mesothoracis lateribus pedibusque rufescentibus; alis fuscescentibus, venis fuscis.

Nemoura Cambrica, *Steph. Ill. Brit. Ent. Mand.* vi. 143, 12.
England.

39. NEMOURA SULCICOLLIS.

Nigra, nitida; prothorace rugoso, sulco dorsali; pedibus piceis; alis fuscescentibus, venis saturatioribus.

Nemoura sulcicollis, *Steph. Ill. Brit. Ent. Mand.* vi. 143, 13.
England.

40. NEMOURA FUMOSA.

Atra, nitidissima; abdomine tibiisque rufo-piceis; alis fuscentibus, venis saturatioribus.

Nemoura fumosa, *Steph. Ill. Brit. Ent. Mand.* vi. 143, 14.
England.

41. NEMOURA GENEI.

Nemura Genei, *Ramb. Hist. Nat. Ins. Neur.* 461, 5.
Sardinia.

42. NEMOURA MINUTA.

Nemura minuta, *Ramb. Hist. Nat. Ins. Neur.* 460, 2.
France.

43. NEMOURA SOCIA.

Nemura socia, *Ramb. Hist. Nat. Ins. Neur.* 460, 3.
France.

44. NEMOURA PYGMÆA.

Nemura pygmæa, *Ramb. Hist. Nat. Ins. Neur.* 462, 6.

45. NEMOURA FONSCOLOMBII.

Nemura Fonscolombii, *Ramb. Hist. Nat. Ins. Neur.* 462, 7.
South France.

46. NEMOURA NIGRIPES.

Nemoura nigripes, *Zett. Ins. Lapp.* 1056, 2.
Group *Tæniopteryx* ?
Lapland.

47. NEMOURA NIVICOLA.

Perla nivicola, *Fitch, Wint. Ins. E. N. York, May, 1847*, 5, 3.
New York.

48. NEMOURA NIVALIS.

Nemoura nivalis, *Fitch, Wint. Ins. E. N. York, May, 1847*, 6, 4.
New York.

49. NEMOURA PUTATA.

Fusca, nitida; antennæ moniliformes, alis fere longiores, et cum pedibus concolores; alæ fusco tinctæ, brevissimæ, tibias posticas sedentis haud dimidio exporrigentes.

Nemoura putata, *Newm. Ent. Mag.* v. 401.

Scotland.

50. NEMOURA ALBIDIPENNIS.

Ferruginea, nitens; caput thorace multo latius; scutum antice vix latius, angulis sat acutis; alæ albidae.

Ferruginous, shining: head much broader than the thorax: antennæ pubescent: scutum minutely rugulose, with an indistinct longitudinal furrow, hardly broader in front; sides almost straight; angles rather sharp: wings whitish; veins very pale testaceous; external basilar areolet with no transverse veins; terminal areolet with one transverse vein; submedian areolet with six or seven transverse veins. Length of the body 2 lines; of the wings 6 lines.

a. Nova Scotia. From Lieut. Redman's collection.

51. NEMOURA PERFECTA.

Nigra, nitens; caput thorace multo latius; scutum ferrugineum, rugulosum; pedes testacei, femoribus basi nigris; alæ hyalinae, anticæ fusco-nebulosæ.

Black, shining: head smooth, much broader than the thorax: antennæ blackish, minutely pubescent: prothorax mostly ferruginous, minutely rugulose, much broader in front; sides almost straight; angles rather sharp: legs testaceous; femora, especially the hind pair, black towards the base and at the tips; tibiæ and tarsi blackish at the tips: wings hyaline; fore-wings clouded with brown near the tips and about the transverse veins in the disk: veins black. Length of the body $2\frac{1}{2}$ lines; of the wings 5 lines.

a. Nova Scotia. From Lieut. Redman's collection

52. NEMOURA COMPLETA.

Nigra, gracilis, nitens; caput thorace multo latius, macula testaceu; prothorax rugulosus; pedes ferruginei; alæ hyalina, anticæ fusco bifasciatæ.

Black, slender, shining: head much broader than the thorax, with a large testaceous spot between the eyes: antennæ minutely pubescent: prothorax minutely rugulose, with a slight longitudinal furrow, not broader in front; sides almost straight; angles rather sharp: legs ferruginous: wings hyaline; fore-wings with a distinct

brown band beyond the middle, and another at the tip; veins black. Length of the body 2 lines; of the wings $5\frac{1}{2}$ lines.

a. Nova Scotia. From Lieut. Redman's collection,

53. NEMOURA GLACIALIS.

Piceo-nigra; antennæ crassæ, corpore multo longiores; pedes fuscî, validi; alæ subhyalinæ.

Nemoura (Brachyptera) glacialis, Newport, Proc. Linn. Soc. Lond. (1838), i. 389, 4.

Nemoura glacialis, Barnston, MSS.

Pitchy black: antennæ very stout, minutely pubescent, much longer than the body: legs brown, very thick: wings subhyaline; veins black, testaceous towards the base. Length of the body 3 lines; of the wings 8 lines.

a—c. St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.

54. NEMOURA SPEUSTICA.

Nemoura speustica, Newm. Zool. Append. cxxxii.

55. NEMOURA? REGELATIONIS.

Phryganea regelationis, Scop. Ent. Carn. 269, 702. "Tota nigra, alis (planiusculis) fusciscentibus, incumbentibus, hyalinis. Inter caput et thoracem plica transversa pallida. Abdomen muticum, supra plicæ prædictæ concolor. Long. 4 lin."

56. NEMOURA? MARTIA.

Phryganea Martia, Scop. Ent. Carn. 268, 701. "Alæ incumbentes (planiusculæ), hyalinæ, immaculatæ, venulis fuscis. Corpus fuscum. Pedes testacei. Antennæ nigræ, alarum longitudine. Frons tuberculis tribus. Thorax linea depressa antica sub qua foveolæ nonnullæ. Palpi colore pedum. Abdomen muticum, subtus fusco testaceum. Long. 5 lin."

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