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“We ought to attach more importance to observed facts than to theories, and to believe in theories then only when they agree with the facts.”—*Aristotle*.

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SOME NEW SPECIES OF *TRICHOPTERA* BELONGING TO THE
EUROPEAN FAUNA, WITH NOTES ON OTHERS.

BY ROBERT MCLACHLAN, F.R.S., &c.

The following descriptions, &c., and the figures that accompany them, were mostly written and drawn some years ago, and formed part of materials accumulated for a "Second Additional Supplement" to my "Revision and Synopsis;" but having been compelled to relinquish *camera lucida* drawing, the proposed second supplement had to be abandoned. It is, however, advisable, for several reasons, that the descriptions of the new species should appear, not the least of which is that the types were returned to their owners with MS. names attached: moreover, I recently saw one of the species here described figuring in a trade catalogue under the name originally bestowed, but not, until now, published.

Reference is several times made to Albarda's collection. It is well known that my esteemed correspondent, Mr. H. Albarda, was compelled, owing to failing eyesight, to give up the study of entomology, and that he generously presented his collections to the Leyden Museum, where they now are.

LIMNOPHILUS PONTICUS (*n. sp.*).

Head and thorax above dull ochreous; hairs yellow; orbits of ocelli blackish; posterior warts very large, oval, transverse; a fine median impressed longitudinal line, which is sometimes blackish. Antennæ brownish-testaceous, with paler annulations. Palpi and legs yellowish, the latter with black spines; coxæ, femora, and sides of thorax occasionally fuscous. Abdomen fuscous (greenish in life?); the margins of the segments (especially beneath), the lateral lines, and the terminal segment, paler. Anterior-wings long and rather narrow, gradually dilated to the apex, which is not very sharply truncate; pale greyish, clothed (but not densely) with pale golden pubescence mixed (microscopically) with blackish, without markings of any kind, but there are sometimes indications (hardly visible) of paler irrorations; thyridium and arculus whitish transparent; neuration fine, pale testaceous, with sparse, short, blackish hairs, which become stronger and testaceous on the postcosta and its basal branches; no "beard" on the 1st apical sector in the ♂; discoidal cell longer than its footstalk, all the apical cellules broad at the base. Posterior-wings hyaline, iridescent, pterostigmatic region slightly tinged with yellowish; neuration pale testaceous; discoidal cell shorter and broader than in the anterior, much shorter than its footstalk; upper branch of cubitus furcating on a level with the commencement of the discoidal cell, or slightly after.

In the ♂ the last dorsal segment is rather thickly covered with small tubercles, whence arise long pale hairs; its margin is deeply excised if viewed in front, and on either side is a large swollen projection densely covered with short black setæ, leaving the excision between them pale. Superior appendages concealed in the cavity of the apex, broadly ear-shaped. Intermediate appendages likewise concealed, broad

at the base, triangular, the produced apices black. Side-pieces of the 9th ventral segment moderate. Inferior appendages large, directed upward, the base broad, yellow, and furnished with very long black hairs, the outer apical edge produced upwardly into a somewhat long, black, nearly uncinatè spine. Penis sheaths (unexserted) short and broad, and between them in the slender penis which about equals them in length, all being testaceous. No ventral teeth.

In the ♀ the 9th dorsal segment is rather broad, its outer margin triangularly produced at the apex, on either side of which are placed the broad, rounded, hairy appendages. Tubular piece projecting slightly beyond the appendages, broad, concave above, its outer edge slightly truncate and finely black. Side-pieces of 9th ventral segment excised. Vulvar-scale with broad side lobes, which are rounded externally, straight internally, and arcuate at the apex; the middle lobe scarcely longer, elongately triangular. No ventral teeth.

Length of body, ♂, 8½—to 9 mm., ♀, 7—9 mm. Expanse, ♂, 23—24 mm., ♀, 20—23 mm.

Asia Minor (Amasia, *Staudinger*, 2 ♀ in my collection); Mesopotamia (Malatia, 3 ♂, 1 ♀, in Albarda's collection; 1 ♂ generously presented to me).

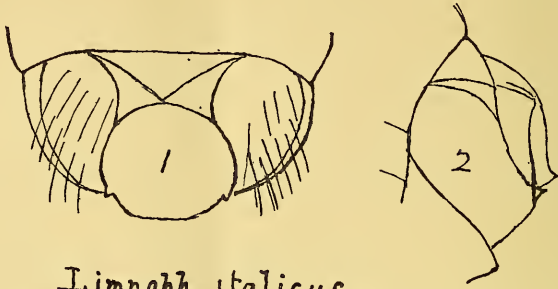
The examples from Amasia are those alluded to in "Revision and Synopsis," Supplement, Pt. ii, p. xx (at bottom of page). Having now seen the ♂, it appears to me that the affinities of the species are with *L. extricatus* (especially the anal structure of the ♂), notwithstanding that the pale colours show more resemblance to *L. luridus*. I think it should follow or precede *extricatus*, especially as the strong resemblance of *hirsutus* to *extricatus* is more a case of analogy than of affinity.

Fig. 1, apex of abdomen of ♂ from side; 2, same beneath; 3, same of ♀ from above; 4, same from side; 5, vulvar scale.

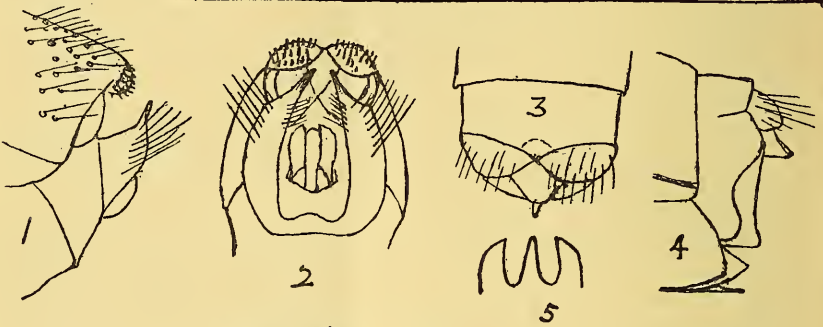
LIMNOPHILUS CENTRALIS, Curt., *var. ITALICUS*, McLach., First Add. Suppl., p. 6.—I have seen a further ♀ of this form, from Vallombrosa, Central Italy (*A. Costa*). It is of large size (expanse, 26½ mm.), much larger than any example I possess of the type-form, and the anterior-wings are strongly marked with fuscous, including a well-defined pterostigmatic spot, which is unusual in the type-form.

Upon comparing this ♀ with that previously noticed, and also with the same sex of the type-form, I find differences in the anal parts equivalent to those that exist in the ♂, so that it is probable this Central Italian form represents a good species (*italicus*) rather than a variety, but it is desirable to see more materials, especially from Southern Italy.

In the ♀ the tubular piece, viewed from above, is nearly obsolete, leaving a nearly circular concave disc, the side plates of which are swollen and hairy, and



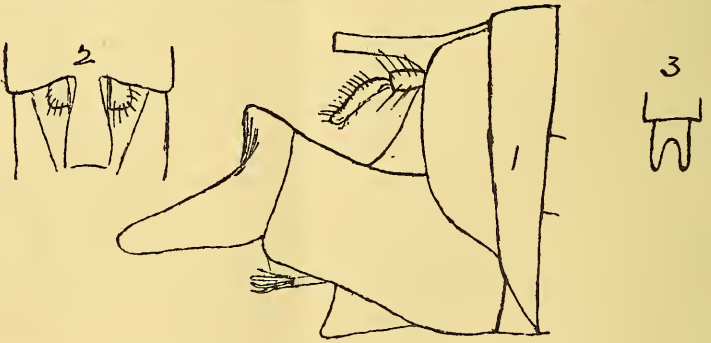
Limnoph. italicus.



Limnoph. ponticus.



Seric. flavicorne. *Seric. mesopotamicum.* *Ser. Selysi.*



Rhyacoph. appennina.

R.M.^c Lachlan del.

having their angles (viewed laterally) only very slightly produced into a small tooth, the structure being analogous to that existing in the type-form, but the open disc is much larger, and the production of its side-pieces very much less.

Fig. 1, apex of abdomen of ♀ from above; 2, same from side.

SERICOSTOMA FLAVICORNE, Rev. and Synops., p. 230, Suppl., p. xlviii, and First Add. Suppl., p. 20.—I am of opinion that examples in Albarda's collection (whereof he presented me with one ♂) from Beirut, Syria, certainly pertain here. The penis-sheaths (see figure) show an approach towards a condition sometimes present in *S. personatum*, and it is probable that the species should more immediately follow it. The antennæ are slightly annulate. I have a note that in the ♀ the anterior wings are wholly *cinereous* with blackish fringes, in which is a whitish spot at the termination of the 7th apical sector. There now seems no reason to doubt its distinctness from *S. Schneideri*.

SERICOSTOMA SELYSII, Rev. and Synop., p. 231; First Add. Suppl., p. 20.—I have seen in Albarda's collection 4 ♂ and 1 ♀ of this from San Ildefonso, Spain (E. Pictet's locality). The species (or "form") is near *S. Schneideri*, and differs chiefly therefrom in the antennæ, which are darker and much more distinctly annulate. I give a figure of a penis-sheath.

SERICOSTOMA MESOPOTAMICUM (*n. sp.*).

Of the group of *turbatum*. Antennæ blackish-fuscous, not very distinctly annulate with greyish-yellow. Hairs of head and prothorax almost wholly black (there are indications of a slight admixture of reddish-golden). Maxillary palpi of ♂ very prominent (the internal "fluff" nearly white). Labial palpi blackish, but the terminal joint dingy yellowish. Legs bright yellow, the femora tinged with fuscous-cent. Wings (♂) clothed with black pubescence.

In the ♂ the anal parts are yellow (the inferior appendages clothed with black hairs). Penis sheaths (see figure) remarkable for the disproportion in the length of the branches, *the lower being only one-third the length of the upper*; both branches are stout, the upper slightly upturned at the apex.

Expanse, ♂, 22—25 mm.

Mesopotamia (Malatia, 4 ♂, Albarda's and my collection).

A very distinct form, in consequence of the great disproportion of the two branches of the penis-sheaths. A very black species, allied to *Selysii* and *Schneideri* by the annulate antennæ.

SERICOSTOMA SUBÆQUALE (*n. sp.*).

It seems to me that the examples from North Italy and South Tyrol alluded to at p. 21 of the First Add. Suppl. under *S. pedemontanum*, and of which three figures (20 to 22) were given on Pl. ii in

connection with that species, should be considered to have claim to specific rank and a name. The designation above given has reference to the sub-equal condition of the branches of the penis-sheaths, which is the most salient character.

SCHIZOPELEX FESTIVA, Rev. and Synop., p. 235, and S. GRANJÆ, p. 236, and First Add. Suppl., p. 23.—I am now quite confirmed in an opinion I have long held to the effect that *granjæ* is only a colour-condition of *festiva*, in which the anterior-wings are wholly yellow. In Albarda's collection there exist from San Ildefonso (E. Pictet's locality) several examples of typical *festiva* and two of the yellow form. There is apparently no structural difference whatever in these two forms. It is singular that nearly all the numerous examples from Portugal examined by me (*cf.* First Add. Suppl., p. 23) pertain to the unicolorous yellow condition, and that, as I now see, not one of them is a typical *festiva*, although some few are intermediate. *S. granjæ* must sink as a species, though it may be retained as a varietal name for the unicolorous yellow condition.

SILO GRAELLSI, Rev. and Synop., p. 249, and Suppl., p. lii.—A ♂ from San Ildefonso, Spain, in Albarda's collection, quite agrees with those previously seen, but there is a small triangular apical ventral lobe, which in all probability is retracted in the other examples.

TREMMA GALLICUM, Rev. and Synop., Suppl., p. lviii.—From San Ildefonso, Spain (Albarda's collection), I have seen two ♂ that I incline to refer here, but the penis is not strongly exerted as is the case in the Pyrenean types. There is no ventral tooth, the presence of which is insisted upon by Brauer in the type of *Th. anomalum* (*l. c.*), so they cannot pertain to that species.

CYRUS INSOLUTUS.

Philopotamus urbanus, Ramb., Névrope, p. 503, *nec Pict.* *C. insolutus*, McLach., Rev. and Synopsis, 406, pl. xliii, fig. 1, neuration (1878). *C. fenestratus*, Ris, Mitth. schw. ent. Gesell., ix, p. 53 (1893).

Fuscous. Head and pronotum clothed with golden-grey hairs, which become almost whitish between the antennæ, and fuscous on the sides of the pronotum. Antennæ strong, distinctly crenate within after the basal third, the joints strong, separated (almost moniliform); fuscous, but nearly the basal half of each joint is whitish-yellow, so that they are sharply annulate. Palpi fuscous, clothed with grey hairs. Legs dingy testaceous; tibiæ and tarsi fuscous externally (the latter slightly annulate), and clothed with grey hairs. Anterior-wings elongate, with pale grey membrane, very strongly and uniformly clothed with golden-grey pubescence,

strongly intermingled with fuscous (but not irrorated with spots); the usual whitish spots on the transverse nervules are large and distinct, and there are other large pale spots in the membrane, especially towards the middle of the inner margin and at the base of the apical cellules; fringes dark greyish-fuscous; neuration as detailed at p. 406. Posterior-wings dark smoky-grey, with concolorous fringes and fuscous neuration.

In the ♂ the anal parts resemble those of *C. flavidus* rather than those of *C. trimaculatus*. The dorsal plate is subquadrate, with its apical margin deeply excised, leaving the outer angles rounded, and there are (apparently) none of the intermediate appendages and sheaths so prominent in *C. trimaculatus*. Also the superior appendages are quite as large as the inferior, therefore much as in *C. flavidus*.

In the ♀ the anal parts appear to be much as in *C. trimaculatus*.

Expanse, ♂, 12 mm.; ♀, 12—15 mm. (Rambur's type, ♀, expands only 12 mm.).

France (Paris, *Rambur*, 1 ♀ type in De Sely's collection; 1 ♂, 1 ♀, *P. Mabilles*, the ♂ is from Meudon, near Paris, 22nd June). Switzerland (*Katzensee, Ris*, 31st July).

Having been able to compare Rambur's type ♀ with the ♂ collected by Mabilles, I feel sure they are specifically identical, and that a larger ♀ taken by Mabilles also belongs here. I also feel sure that *insolutus* is a good species. At first sight it might be passed over as a variety of *trimaculatus*, in which the irrorations of the wings were absent, but the numerous transparent spots in the membrane (which show through the pubescence if the wings be held against the light), the neuration, and the anal parts (especially) differ; in the anal parts there is some amount of resemblance to *flavidus*, but all other characters differ; finally, in the presence of the numerous pale spots in the membrane there is resemblance to *crenaticornis*, but in no other point, for *crenaticornis* is a very delicate pale species, with the antennæ strongly crenate for nearly their whole length.

It will have been seen (Rev. and Synopsis, p. 407) that I was formerly not inclined to place much stress upon Rambur's words, "paraissant avoir de petites marques plus pâles vers le milieu et sur l'extrémité" of the wings, but viewed in the light of further materials these words had greater significance. Dr. Ris's description is very full, and is accompanied by figures of the wings and appendages of the ♂; he generously presented me with a series of types, which are darker than the Parisian examples.

RHYACOPHILA APPENNINA (*n. sp.*).

Of Division A, and may provisionally be placed in the Group of *Hageni*.

In general form similar to the Group of *intermedia*, and also to that of *torren-*

tium, &c. Head, prothorax, and antennæ pale, the latter only slightly darker at the sutures of the joints. The vague markings of the anterior-wings approach those of *rupta* and others; the pale dorsal blotch tolerably distinct. Anal parts pale yellow.

In the ♂ the dorsal process is elongate-oblong in form, slightly narrowed towards the base, the apex broadly truncate, nearly straight. The lateral lobes small, hairy. Immediately beneath the dorsal process is a deeply furcate process. Inferior appendages very large, the basal joint broad (viewed laterally); second joint almost two-branched, the upper short and broad, obtuse at the apex, the lower broad, but much produced, and also obtuse, the upper edge of this joint forming a deep excision between the two branches. Lower penis-cover deeply concave. Penis small (uncertain without dissecting the example), not produced. Sheaths in the form of two short straight spines, each of which has nearly straight bristles at its apex. Tooth of the 7th ventral segment nearly obsolete.

♀ unknown.

Length of body, 10 mm. Expanse, 32 mm.

Central Italy (Vallombrosa, *Costa*, 1 ♂ in the Naples Museum).

Once again it may be said that the species of *Rhyacophila* are endless! And in the present instance we have to deal with a species that has apparently no very close allies, and of large size. In the form of the dorsal process there is some analogy with *rectispina*. The second joint of the inferior appendages has some resemblance to that of *evoluta*, also to that of *Hageni* and *obliterata*. The short penis-sheaths with bristles at the tips are suggestive of the Group of *Hageni*, but the other inner anal parts do not accord therewith (so far as can be made out without dissection). The discovery of the ♀ might serve to define the position.

Fig. 1, apex of abdomen of ♂ from side; 2, the same above; 3, apex of furcate process beneath the dorsal process, above.

Lewisham, London:

September, 1897.

SOME REMARKS ON THE *BAGOUS LUTOSUS*, GYLL.,
AND *B. GLABRIROSTRIS*, HERBST (*LUTULENTUS*, GYLL.), OF
BRITISH COLLECTIONS.

BY G. C. CHAMPION, F.Z.S.

There is a good deal of confusion regarding these two species, the only representatives of the genus on our list with dilated and bilobed 3rd tarsal joint (apart from *B. alismatis*, Marsh.), in British collections. All the specimens I have seen as yet (including those of Stephens and Power) doing duty for *B. lutosus* are either *B. glabrirostris*, of which a large well-marked form occurs in the south of England, or *B. binodulus*, Herbst. It is, therefore, highly probable that all the