REMARKS ON SOME BRITISH *HEMIPTERA-HETEROPTERA*.

BY DR. O. M. REUTER.

(*Continued from Vol.* xiv, *page* 245).

GLOBICEPS FULVIPES (Saund., Synops., ii, p. 279, 2). Concerning *G. fulvipes*, Scop., Mr. Saunders says, *l. c.*, "A very doubtful species," and he describes it only by the following lines: "Extremely like the preceding (*flavomaculatus*), but smaller, and with the basal spot of the elytra truncate posteriorly, and not produced along the lateral margin." I, however, think that *G. fulvipes* is a very good species, and perfectly different from *G. flavomaculatus*. The latter lives not uncommonly among grass, and especially on nettles, &c.; but *fulvipes* is a scarcer species, exclusively occurring on small *Salices*, especially on *S. repens* and *rosmarinifolia*, and also on *Betula nana*. Moreover, the larva and nymph of the two species have a different colour, and are more dissimilar than the imagines (*vide* Revisio crit. Capsin., pp. 118, 119). The following characters are sufficient to separate *fulvipes* from *flavomaculatus*:

MALE.

G. FULVIPES.	G. FLAVOMACULATUS.
Vertex *not convex*, its margin *in the whole width* carinate, the carina *straight*; on each eye a distinct foveola. Pronotum *wider*, with the calli less distinct and *scarcely convex*. Corium with a small basal spot.	Vertex *convex*, its margin only *in the middle* with a transverse, short, *curved* carina. Pronotum *narrower*, with the calli distinct and *convex*. Corium with a larger spot below the base.

FEMALE.

G. FULVIPES.	G. FLAVOMACULATUS.
Head from the side with the vertex *scarcely raised* above the eyes. Pronotum with *low* calli. Corium with the spot below the base truncate posteriorly.	Head *very globose*; from the side with the vertex very convex and *highly raised* above the eyes. Pronotum with *convex* calli. Corium with the basal spot produced along the lateral margin.

MACROCOLEUS SORDIDUS (Cat., 38, 4), and ONCOTYLUS PUNCTIPES (Cat., 38, 2). Mr. Douglas has kindly communicated a specimen of his *M. sordidus* (Ent. Mo. Mag., iv, 49), and also of his *Oncotylus tanaceti*, in Brit. Hem., i, 394, 2, which latter in the Catalogue is further erroneously named *O. punctipes*. Examining these specimens I have found that both are only the ♀ of *Tinicephalus hortulanus*, Mey., a species not cited in the Catalogue of Messrs. Douglas and Scott, but described by Mr. Saunders as *Macrocoleus hortulanus* (Synops., p. 296). I can therefore confirm the synonymy given by

this last author (*l. c.*). The true *Capsus sordidus*, Kirschb., is = *Macrocoleus tanaceti*, Fall., Reut., Saund., *nec* Fieb., *nec* Doug. and Scott. *Oncotylus punctipes*, Reut. (= *O. tanaceti*, H.-Sch., Fieb., *nec* Fall., *nec* Doug. and Sc.) is very different from the species with the same name in the Catalogue of Douglas and Scott; the former is a true *Oncotylus*, and not found in Britain.

Psallus. To my mind, and also according to Mr. Saunders, *P. alni* and *P. sanguineus* (Cat., 41, 2 and 3) are only varieties of *one* species (*vide* Rev. crit. Capsin., p. 176). *P. distinctus* (Cat., 41, 9) is likewise a variety of *P. varians* (Cat., 41, 8). I have seen perfectly different coloured varieties of *P. diminutus*, representing a different species, as well as *P. distinctus*.

Neocoris Scotti (Cat., 42, 2) is only a variety of *N. nigritulus*, Zett., as cited by Mr. Saunders (Synops., 301, 6). I have found it in Finland *in copula* with the typically coloured form.

Capsus capillaris (Cat., 43, 1). This is the sole Scandinavian species which can be regarded as *Cimex laniarius* of the Systema Naturæ, 726, 75 (described from Sweden). The diagnosis of Linné accords very well with the var. *danicus*, Fabr.

Camptobrochis punctulatus (Cat., 44, 1). The British species of *Camptobrochis* is not *punctulatus* of Fallén, but *lutescens*, Schill. (= *punctulatus*, Fieb., *nec* Fall.), a species not yet found in Sweden. I have examined several specimens communicated by Mr. Saunders. The *C. punctulatus*, Fall., H.-Sch., Reut., Saund., is = *C. Falleni*, Fieb., erroneously cited by Messrs. Douglas and Scott as synonymical with their species.

(To be continued).

Psylla rhamnicola bred: description of the nymph.—Towards the end of last month I paid a visit to Purley Downs for the purpose, if possible, of learning something about the earlier stages of the above-named species. The large tree of *Rhamnus catharticus* which grows in the valley, well known, I daresay, to many entomologists, and where I took the original specimens of *P. rhamnicola*, was the first to which I directed my steps, and after examining the leaves for some little time, I observed first one and then another small creature running about upon them. I at once took out my pocket-lens, and discovered they were the nymphs of some species of *Psylla*. I then set to work to beat the branches into my sweeping net, and in a short time had the satisfaction of collecting into a tin box a goodly number of these individuals. On reaching home I turned them out into a wide-mouthed stoppered bottle, into

trunks of *apple* trees, the ordinary form of *Hartmanniana* occurring *only* on willows in the same neighbourhood. This is strongly suggestive of the influence of the food upon colour.

This also has been submitted to Prof. Zeller, with a very singular result; he says—

"My North American *albeolana* ♂ is similar on the anterior wings, but has *whitish* posterior wings; *both* may be only *scriptana*, var."

It would be strange if a North American insect should be proved to be identical with a well-known European species, by the discovery of a striking aberration of the latter.

Pembroke: 11*th March*, 1878.

REMARKS ON SOME BRITISH *HEMIPTERA-HETEROPTERA*.

BY O. M. REUTER.

(*Continued from page* 131).

PILOPHORUS CINNAMOPTERUS (Cat., 34, 1). It is said (in vol. xii, p. 102), that *Camaronotus cinnamopterus*, Fieb., Dougl. and Scott, Brit. Hem., i, 359, 1, is not, as stated by Reuter in his "Revisio critica Capsinarum," part ii, 85, 1, the *Cimex bifasciatus*, Fab., Mantissa, ii, 305, 264. Stål confirms Fieber's view, and refers the latter insect to the genus *Closterotomus* of this author.

But in the Syst. Rhyng., p. 242, Fabricius says, concerning his *Capsus bifasciatus*:—

> "7. C. ater, elytris testaceis, strigis duabus albis.
> *Lygæus bifasciatus*, Ent. Syst., iv, 177, 152.
> *Cimex clavatus*, Linn., Syst. Nat., ii, 729, 97?
> Habitat Lipsiæ."

This diagnosis agrees much better with *Pilophorus* (=*Camaronotus*) *cinnamopterus* than with the *Closterotomus*. The former has the elytra fulvous or cinnamon-brown (=*testacea*), with two snow-white, very narrow, bands (*strigæ*) across them; the latter has the elytra fuscous (scarcely paler than the head and pronotum), with three pale, testaceous, rather broad bands (*fasciæ*), or in the ♂ only one whitish band across the cuneus.

All the authors previous to Hahn have also regarded *C. bifasciatus*, Fabr., as not belonging to *Closterotomus*. Schrank, in his Fauna Boica, ii, p. 86, 1139, had described *Piloph. cinnamopterus* under the name of "*Capsus bifasciatus*, Fab., Syst. entom., 725, n. 142." This is clear from Schrank's descriptions: "Länglich; nussbraun; zwo schmale Binden über die Halbdecken weiss * * *

Die Fühlhörner muschelbraun: das zweigte Glied am Ende schwarz, die folgenden sehr dünn, das *vierte* am Grunde weiss. Die vordere Binde der Halbdecken erreicht kaum den Innenrand." Fallén (Hem. Sv., 118, 6) has confounded *Piloph. clavatus* and *cinnamopterus* under the name of *Capsus bifasciatus**), but Zetterstedt has described both species under the names of *clavatus* (Ins. Lap., 278, 3) and *bifasciatus* (*l. c.*, 277, 2), the *latter* being = *cinnamopterus* of Kirschbaum. I have seen the typical specimens of Fallén and Zetterstedt in the Museum at Lund. Also Hahn, in his "Icones" (i, tab. 23), regards the *Capsus bifasciatus*, Fabr., as synonymous with the true *clavatus*, giving the species the name of *Pilophorus bifasciatus*. Herrich-Schäffer, in Nomencl. entom., has cited *bifasciatus* under *clavatus*,† and the same author has described *Closterotomus bifasciatus*, Hahn, et auct. recent., as a *new* species, under the name of *Capsus biclavatus* (p. 48); under this name, the species is also preserved in the Museum of the University at Berlin.

In the Wanz. Ins., Band iii, fig. 232, Hahn, has, however, figured this last species (♀) as *Phytocoris bifasciatus*, and has cited (p. 7) as synonymous, *Capsus bifasciatus*, of Fabricius (!), of Fallén (!) and of Herrich-Schäffer (!), and also *Lygæus bifasciatus*, Fabr., and *Cimex sphegiformis*, Rossi (!). But in the same volume, fig. 265, *Globiceps sphegiformis* is figured as *mas* of "*Capsus bifasciatus*, Fabr.," and, as synonyms, are noted: "*Capsus id.*, Zett., Fabr., and Fallén (Hemipt. No. 6.—Cim. No. 5 cum *C. clavato* confusus)."‡ Thus Hahn has figured and described as *bifasciatus*, of Fabricius, three generically distinct species, viz.: *Pilophorus clavatus* (Icon., i, t. 23), *Closterotomus bifasciatus*, Fieber (= *Calocoris biclavatus*, H.-Sch., mihi), and *Globiceps sphegiformis*, Rossi (W. I., figs. 232 and 265); but he knew not the true Fabrician species with the diagnosis: "*ater*, elytris *testaceis*, *strigis* duabus albis."

The more recent authors are also very doubtful concerning the application of the name *bifasciatus* (*vide* Kirschbaum, Rh. Wiesb., p. 109, 35). Flor has not cited Fabricius under "*Capsus bifasciatus*, Hahn" (p. 488, 11), but under *C. clavatus*; and Fieber has cited *Capsus bifasciatus*, Fabr., both under *Closterotomus* and under *Camaronotus clavatus!* Stål has not mentioned *Closterotomus bifasciatus* in

* The *Closterotomus* is not yet found in Sweden.

† The *Capsus bifasciatus* of Herrich-Schäffer (Nomencl., p. 48), however, = *Globiceps sphegiformis*, Rossi.

‡ "L. niger, antennarum articulo primo pedibusque ferrugineis, coxis et trochanteribus albidis; fasciis elytrorum duabus argenteis; thoracis angulis anticis in forma dentium adscendentibus.

his "Hemiptera Fabriciana" otherwise than in the index, ii, p. 122, but he had not seen all the species which are there enumerated, and he has told me that he can *not* give any sure indication of the typical *Capsus bifasciatus* of Fabricius.

The application of this name by Zetterstedt, is not only earlier, but much more in accordance with the diagnosis of Fabricius than that made by Hahn, in Wanz. Ins., vol. iii. This circumstance, and the fact that the *Phytocoris* (or *Capsus*) *bifasciatus* of Hahn includes two very distinct species, are, to my mind, sufficient reasons for adopting the nomenclature of Zetterstedt. Thus I regard *Capsus cinnamopterus*, Kirschb., and *Capsus bifasciatus*, Fabr., as identical.

The following is, therefore, the proper synonymy of the above-named species:—

I. Calocoris biclavatus.

Capsus biclavatus, H.-Sch., Nomencl., 48.
Phytocoris bifasciatus, Hahn, W. I., iii, 7, fig. 232 (♀).
Capsus id., J. Sahlb., Mon. Geoc., 121, 68; Kirschb., Rh. Wiesb., 48, 35; Flor, Rh. Livl., i, 488, 11.
Closterotomus id., Fieb., E. H., 261, 1.
Calocoris variegatus, Reut., Rev. crit. Caps., ii, 32, 3 (*nec* Costa).

II. Globiceps sphegiformis (Rossi).

Capsus bifasciatus, H.-Sch., Nomencl., p. 48. *Id. mas*, Hahn, W. I., iii, p. 48, fig. 265.

III. Pilophorus clavatus (Linn.).

Capsus bifasciatus, Fall., H. Sv., 118, 6 (descriptio, excl. diagn.).
Pilophorus bifasciatus, Hahn, Icon. i, t. 23.

IV. Pilophorus bifasciatus.

Lygæus bifasciatus, Fabr., Ent. Syst., iv, 177, 152.
Cimex id., Schrank, Faun. Boic., 86, 1139.
Capsus id., Fabr., Syst. Rh., 242, 7; Fall., H. Sv., 118, 6 (diagnosis, excl. descr.); Zett., Ins. Lapp., 277, 2.
Capsus cinnamopterus, Kirschb., Rh. Wiesb., 135, 10, etc.

Pilophorus perplexus (Cat., 34, 2). This species is regarded by Mr. Saunders (Synops., ii, p. 287) as only a variety of *P. bifasciatus*, Fabr. Mr. Scott has kindly sent me a specimen of *perplexus*, which I have submitted to a careful examination, and the result thereof with both the other British species, is that *P. perplexus* is very distinct from *bifasciatus*, and much more nearly allied to *clavatus*. The European species could be arranged according to the following tabulation:—

1 (2). Body rather broad. The elytra cinnamon-brown; the *whole width* of the space between the posterior band and the apex brown, shining; the posterior band of the corium quite straight (the band across the clavus *in a line* there-

with). The fourth joint of the antennæ white, brown only at the apex. Head cinnamon-brown. On *Pinus*.

1. P. BIFASCIATUS, Fabr., Zett.

2 (1). Body narrower, posteriorly more widening. The space on the corium between the posterior band and the apex, *only between the cubital nerve and the exterior margin*, piceous, shining. The fourth joint of antennæ only at the base whitish, but the third joint on the basal half whitish or testaceous.

3 (8). Upper-side without long, straight hairs.

4 (5). Head dark cinnamon-brown, very little narrower than the base of the pronotum. The colour of the elytra cinnamon-brown; the posterior band of the corium quite straight (the band across the clavus in a line therewith). The second joint of the antennæ only about one-fifth longer than the basal width of the pronotum. Food-plant unknown. From Greece ... 2. P. PUSILLUS, n. sp.

5 (4). Head and thorax fuscous, more or less with a bronzy tint. Head considerably narrower than the base of pronotum. The colour of the elytra dark brown or olive-brown, with a dull velvety appearance in certain lights.

6 (7). The transverse band of the clavus a very little *above* the posterior band of corium, and *united* thereto; the latter a little oblique and curved. The second joint of the antennæ very little or scarcely longer than the posterior width of the pronotum. On *Quercus* ..... 3. P. PERPLEXUS, D. & S.

7 (6). The transverse band of the clavus distinctly above the posterior band of the corium, and *not united* thereto; the latter straight; the second joint of the antennæ at least one-third longer than the basal width of the pronotum. On *Salix*, *Populus*, *Betula*, *Alnus* .....4. P. CLAVATUS, Linn.

8 (3). Upper-side, with long straight hairs. On *Salix* and *Alnus incana*.

5. P. CONFUSUS, Kirschb.

Obs.—Mr. Saunders (Synops., p. 287) has described *P. bifasciatus* as *narrower* than *clavatus*, but this is not correct. Kirschbaum has already said (Rh. Wiesb., p. 137) that his *cinnamopterus* differs from *clavatus* by the *broader* pronotum. Is it possible that the British Hemipterists have confounded two species? *P. bifasciatus* in Sweden and Finland is found only on *Pinus* (Prof. Kirschbaum has also taken this species on *firs*), but Mr. Saunders and Dr. Fieber indicate that it lives also on oaks. This, if referring to one species, would be a very peculiar feature, for scarcely any other of the *Capsidæ* lives on *Coniferæ* and also on foliage-trees.

PILOPHORUS CLAVATUS (Cat., 35, 3). *Capsus bifasciatus*, Sahlb., Mon. Geoc., 91, 1, cited by the authors as identical with this species, belongs to *Calocoris biclavatus*. I have examined the types of Sahlberg.

(To be continued).