



## TWO BEES NEW TO BRITAIN (HYM., APOIDEA)

BY MAJOR D. B. BAKER, F.R.E.S.

*PSEUDOCILISSA DIMIDIATA* (MOR., 1876) (MELITTIDAE: MELITTINAE)

### 1.—OCCURRENCE IN BRITAIN.

A female of this species, taken by Mr. P. W. E. Currie near Tilshead, Wiltshire, on July 9th, 1949, was found recently in material submitted for determination by Mr. F. D. Lawton.

*Pseudocilissa dimidiata* was described from the Caucasus, but has since been recorded from Turkey and from a number of localities in south-eastern and central Europe, the nearest of these to Britain being those in southern Germany. The bee is apparently everywhere an oligolege of *Onobrychis*. However, Mr. Currie, answering a request for further information, wrote (March 2nd, 1964): 'I do not recall seeing Sainfoin growing in the vicinity; my recollection is that I collected this insect from the flowers of Restharrow'. The Tilshead locality was visited on June 27th and 28th, 1964, when *Onobrychis viciifolia* Scop. was found in abundance, in full flower. No *Ononis* was noted; no *Pseudocilissa* were found. On July 9th the locality was again visited, when, in unfavourable weather, 1 female and 5 males of the bee were taken, all on *Onobrychis*, then largely over. The female, taken late in the afternoon, was quite fresh, as were three of the males, indicating that the species had probably not been long on the wing. The bees taken, and a few other males seen, occurred singly over a wide area of open chalk down. It was noted that during particularly dull and cold intervals males would thrust their way into the centre of *Onobrychis* racemes for shelter (a strong, cold wind that blew throughout the day did not ordinarily seem to reduce the activity of the *Pseudocilissa*, although a few species of *Bombus* were the only other bees—and almost the only other insects—seen to be active).

In Britain *Onobrychis viciifolia* Scop. is often only a relic of cultivation, but it is accepted as being native in chalk and limestone grassland in the south-east (J. E. Dandy, *in litt.*). As a native, it is a member of the continental southern element of the British flora (which consists predominantly of plants of dry sandy or calcareous soils), and a probable postglacial migrant (Matthews, 1955: 133–135, 157). Its distribution is given by Clapham, Tutin and Warburg (1962: 354) as: 'From Somerset and Kent to Shropshire and Norfolk; Glamorgan, Carmarthen and Flint'. A map is given by Perring and Walters (1962: 113). *Ononis spinosa* L., at which the first Tilshead *Pseudocilissa* was possibly taken, is a plant of dry wastes throughout England, Wales and southern Scotland.

From its continental distribution and its biology, *Pseudocilissa dimidiata* is most unlikely to have been introduced accidentally, and presumably reached Britain in Boreal or Sub-boreal times in the wake of *Onobrychis*. The Tilshead population, on this assumption, is a relict population stranded in a favourable locality during a period of general range contraction (cf. Mayr, 1963: 563). Isolated northern peripheral populations of pontic and mediterranean species are probably generally to be interpreted not as '... Vorposten eines vorrückenden, sondern verlorene Posten eines in Rückzug begriffenen Heeres' (Gradmann,

1924: 242). Whether the Tilshead population has yet attained subspecific level can only be decided in the light of more extensive material, but it may be noted that the material now available (2 females, 5 males) differs consistently in certain characters from available central and south-east European material. Subspecific differentiation of such an isolate would not be unexpected (cf. Mayr, 1963: 534-535).

Whether this conspicuous and readily recognizable bee survives undetected elsewhere in England is problematical. In peripherally isolated populations, physical and biotic conditions are usually minimal, and that in some years the bee may not appear until its food-plant is nearly over may be a major limiting factor (cf. Haldane, 1956). It should, however, be looked for in the south and south-east, wherever *Onobrychis* occurs plentifully in a wild or naturalized state.

## 2.—GENERAL DATA.

### Synonymy

*Pseudocilissa dimidiata* (Mor., 1876), **comb. nov.**

*Melitta dimidiata* Mor., 1876, *Horae Soc. ent. ross.*, **12**: 54; ♂; Mastara [Armenian SSR, 60 km NW of Yerevan].<sup>1</sup>

*Cilissa robusta* Rad. 1876, *Horae Soc. ent. ross.*, **12**: 87; [♀]; Caucase. **Syn. nov.**

*Cilissa dimidiata* var. *hungarica* Mocs. 1883, *Érték. Term-Tud. Köreből.*, **13** (11): 58-60; ♀♂; Hungary, Budapest; Transylvania, Torda [Romania, Cluj, Turda].

*Pseudocilissa robusta* Rad. 1891, *Horae Soc. ent. ross.*, **25**: 241, pl. 2, fig. 5; ♂; Lagodekhi [Georgian SSR]; Kourouche (Daghestan) [Kurush, Dagestan ASSR, 90 km SSW of Derbent].

### Distribution

Map (fig. 1, page 281).

### Records

USSR, Georgian SSR: Lagodekhi, leg. Mlokoszewicz (Rad., 1891, *l.c.*). Armenian SSR: Mastara, c. 1160 m., 30.vi. or l.vii.1875, leg. Morawitz (Morawitz, 1876, *l.c.*: 8-9, 54: TYPE LOCALITY). RSFSR, Dagestan ASSR: Kurush (Rad., 1891, *l.c.*); [Stalingrad Obl.] Sarepta [=Krasnoarmeysk], ♂, leg. Becker (Friese, 1901, *Die Bienen Europa's*, **6**: 158). Kazakh SSR, W. Kazakhstan Obl.: Yanvartsevo (Popov, 1954, *Trud. zool. Inst. Akad. Nauk SSSR*, **16**: 356). Ukrainian SSR [former Polish territory (Podola)]: Mielnica and Zaleszczyki a. Dn. [=Mel'nitsa and Zaleschchiki on Dnestr], Czortków a. Seret [=Chortkov], Kasowa Góra b. Bursztyn [=Burshtyn] (Kinel and Noskiewicz, 1930, *Polsh. Pismo ent.*, **9**: 281), at *Onobrychis sativa* (Stöckert, F.K., 1933, *Dtsch. ent. Z.*, Jahrg. 1932, Beiheft, Die Bienen Frankens (Hym. Apid): 192).

TURKEY, Amanos, Bagdje (also given as Bagtsche) [Seyhan: Bahçe?], 630 m., 27.vi.1914, ♂, leg. Tölg (Friese, in Fahringer and Friese, 1921, *Arch. Naturgesch.*, **87**, Abt.A, Heft 3: 164). Ankara: Ankara, 7 and 16. vi.1934, ♂♂, leg. Seitz (Alfken, 1935, *Ent. Rdsch.*, **52**: 150).

ROMANIA, Cluj: Turda, leg. Mocsáry (Mocs., 1883, *l.c.*; Móczár, M., 1957, *Rovart. Közlem.* (ser. nov.) **10** (25): 463).

JUGOSLAVIA, Serbia (Voyvodina): Deliblát, leg. Pável (Móczár, M., 1957, *l.c.*). Croatia: Fiume [=Rijeka], leg. Korlevic (Mocs., 1897, *A Magyar Birodalom Állatvilága*, **3**, Arthropoda. (Insecta. Hymenoptera.) Ed. sep.: 91; Móczár, M., 1957, *l.c.*).

HUNGARY, Borsod-Abaúj-Zemplén: Tokaj, leg. Chyzer (Mocs., 1897, *l.c.*; Móczár, M., 1957, *l.c.*). Pest: Budapest, late vi., at *Onobrychis arenaria* (Mocs., 1883, *l.c.*); Rákospalota (Mocs., 1897, *l.c.*); Fácános, Zugliget, leg. Mocsáry; Budaörs, leg. Bartók; Peszer, leg. Schmidt (all Móczár, M., 1957, *l.c.*). Győr-Sopron: Sopron, leg. Györfi (Móczár, M., 1957, *l.c.*).

<sup>1</sup> Localities are given as originally stated, additional information or modern equivalents being given where these appear desirable.

CZECHOSLOVAKIA, Slovenia: Silice (Szilice), leg. Méhely; Devín [= Theben], leg. Balthasar (Móczár, M., 1957, *l.c.*).

ITALY, Friuli - Venezia Giulia: Trieste, Monte Spaccato, 20.vi.1896, ♀, at *Onobrychis sativa*, leg. Duce (Friese, 1901, *l.c.*); Trieste, viii, resting in *Campanula* flowers (Graeffe, 1902, *Verh. zool.-bot. Ges. Wien*, 52: 127).

AUSTRIA, Niederösterreich: Korneuburg, Retzbach, Marchfeld, all leg., det., coll. Mader<sup>2</sup>; Oberweiden, 4.vii.1937, 5 ♂♂ 12 ♀♀, leg., det., coll. Pittioni<sup>3</sup>; Oberweiden, 12.viii.1937, 1 ♂, leg., coll. Schmidt,<sup>4</sup> det. Alfken; Piesting, leg. Tschek, det. Kohl<sup>5</sup>; Wien, Bisamberg, 7.vii.1889, leg. Kolazy.<sup>6</sup> Burgenland: Weiden, 18.viii.1940, 1 ♀, leg., det., coll. Bischoff.<sup>7</sup> (Pittioni and Schmidt, 1943, *Niederdonau, Natur und Kultur*, 24 (Die Bienen des südöstlichen Niederdonau, 2, Andrenidae und isoliert stehende Gattungen): 4.)

GERMANY, Bayern (Unterfranken): Karlstadt a. M., 26.vi.1921, 2 ♂♂ 1 ♀, leg. Enslin (Enslin, 1922, *Arch. Naturgesch.*, 88, Abt. A, Heft 6: 239); Thüngersheim, 15.vi.1913, 3 ♂♂, leg. Lehmann (Friese, 1920, *Z. wiss. InsektBiol.*, 16: 161). Thüringen: Pappenheim, mid-vi.1931, at *Onobrychis viciaefolia* [sic], leg. E. Stöckert (Stöckert, F.K., 1933, *l.c.*).

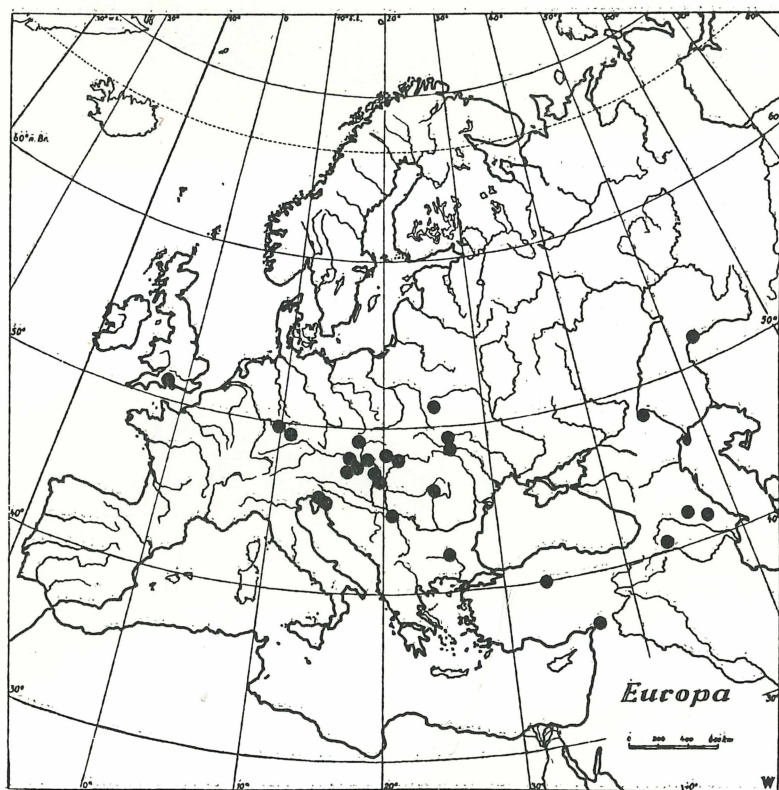


Fig. 1.—The distribution of *Pseudocilissa dimidiata* (Mor.)

<sup>2</sup> Niederösterreichisches Landesmuseum, Wien.

<sup>3</sup> British Museum (Natural History) and author's collection.

<sup>4</sup> Collection destroyed.

<sup>5</sup>, <sup>6</sup> Naturhistorisches Museum, Wien.

<sup>7</sup> Zoologisches Museum der Humboldt Universität, Berlin.

## Additional material.

BULGARIA, Stara Zagora: Stara Zagora, vi.1963, ♂♂, leg. Balthasar, det., coll. Baker.

CZECHOSLOVAKIA, Moravia: Kobyli env., 26.vii.1943, 1 ♂ 1 ♀, leg., det. Balthasar, coll. Baker.

ENGLAND, Wiltshire: Tilshead, 9.vii.1949, ? at *Ononis spinosa* L., leg. Currie, det. Baker, coll. Lawton; Tilshead, 9.vii.1964, 5 ♂♂ 1 ♀, at *Onobrychis viciifolia* Scop., leg., det., coll. Baker.

*Biotores; ecological requirements*

Eremophile species of dry calcareous and sandy soils, but whether restricted to these by nesting requirements as well as by the local distribution of *Onobrychis* is uncertain. (European *Melitta* are predominantly eremophile, the early-flying *M. haemorrhoidalis* (F., 1775) being a prominent exception.) In England occurs on the Upper Chalk downland of Salisbury Plain; in Germany in xerothermic localities on the limestone and dolomite (White Jura/Malm) of the Franconian Jura and the Wellenkalk (lowest division of the shelly limestone [Muschelkalk]) of the Maintal (Stöckhert, F.K., 1933: 35–38, 44–46, 192). In some central and south-east european localities (e.g., Deliblát) it occurs on sand (Móczár, L., verbal communication) and Morawitz's original material may have been taken on salt steppe (Morawitz, 1876: 8–9, 54).

*Plant relationships*

Apparently an oligolege of *Onobrychis* (*Leguminosae*). *O. viciifolia* Scop. (of which *O. sativa* Lam. is an absolute synonym) is recorded from Italy (Friese, 1901: 158, as *O. sativa*), the Ukrainian SSR (then Poland, Podola: Stöckhert, F.K., 1933: 192, as *O. sativa*), Germany (Stöckhert, F.K., 1933: 192, as *O. viciaefolia*) and, in the present paper, England. *O. arenaria* (Kit.) DC., recorded from Hungary (Mocsary, 1883: 58), is a very close ally of *viciifolia* and is treated by Hegi (1927: 1490) as a subspecies [*arenaria* (Kit. em. Koch) Thellung]. Various forms of *viciifolia* have been introduced as pasture plants and are now naturalized in countries well outside their original ranges, making the natural distribution of individual forms difficult to determine. The aggregate species *viciifolia-arenaria* is found throughout Europe (northwards to the Estonian SSR), eastwards through the West Siberian Plain and Kazakh Uplands to the Altai and the Baikal region, south to Turkey and Iran. Its range thus wholly includes that of *Pseudocilissa dimidiata*.

The single record of *Ononis spinosa* L. (England, Wiltshire), as already indicated, requires confirmation.

Graeffe (1902: 127) records *P. dimidiata* (sex not stated) as resting in the flowers of *Campanula* (Trieste, August). This (if correct: *Campanula* spp., particularly *trachelium* L. and *rotundifolia* L., are constant hosts of *Melitta haemorrhoidalis*) does not necessarily imply that the species also uses *Campanula* as a source of pollen or nectar.

*Flight period*

Single-brooded. On present data not markedly protandric.

♂♂: 7.vi (Anatolia)—12.viii (Marchfeld).

♀♀: mid-vi (Franconia)—18.viii (Burgenland).

*Parasites*

None known. Will possibly be found to be parasitized by a *Nomada* of the *flavopicta*-group, species of which appear to be restricted to *Melitta*, to which *Pseudocilissa* is closely allied.

## 3.—DISTINCTION FROM OTHER BRITISH MELITTIDAE.

*Pseudocilissa* could be confused with *Melitta* only, and *P. dimidiata* will be found under *Melitta* in recent literature (e.g., Schmiedeknecht, 1930: 774–5). [It is possible that *Pseudocilissa* may prove to be not more than subgenerically distinct from *Melitta*. *Melitta*, as at present generally interpreted, is a small, primarily holarctic genus comprising several rather discordant elements, for some of which names have been proposed. *Pseudocilissa* is one of the more distinct, and it is convenient for the present to maintain its distinction. European *Melitta*, excluding *dimidiata*, form a fairly homogeneous group, though interspecific differences are generally extensive and well marked. Morphological differences are accompanied, even among more closely related species, by oligolecty on distinct plant families, a characteristic tending to confirm archaic origin of the group.] *Pseudocilissa dimidiata* may readily be distinguished from all British *Melitta* by the following characters:

♀♀.—Mandibles unusually broad subapically; marginal fringe and lateral pubescent tufts of clypeus unusually well developed. Mesonotum centrally and scutellum anteriorly without evident microsculpture, glossy, the macrosculpture sparse; dense peripheral sculpture of mesonotum narrowly but distinctly interrupted medially before the scuto-scutellar suture; mesonotum discally and scutellum anteriorly with conspicuous black pubescence; metatarsus II very broad, parallel-sided; scopa unicolorous on tibia and metatarsus, tawny, thin, the individual hairs simple, stiff, little curved. Microsculpture of metasomal terga weak, macrosculpture not dense; terga 1–3<sup>\*</sup> with erect brown pubescence, 4 with black, 5 with dense decumbent pubescence, black in median third, brown laterally, completely concealing the surface; terga 2–4 with narrow but conspicuous apical fasciae of decumbent pale yellowish-brown pubescence, progressively more attenuated laterad. 13–15 mm.

♂♂.—Flagellum simple, segments neither arcuate nor angulate; face with long, dense, erect, white pubescence, becoming subdecumbent apically and projecting well beyond clypeal margin. Metatarsus III unusually broad. Terga effasciate; sternum 6 clothed with outwardly directed decumbent pubescence, forming a long apical fringe with denser and longer lateral and median tufts, the median tuft particularly well developed; sternum 7 with broad basal lobes, its apical margin deflexed, except narrowly medially, and bearing well developed sublateral horizontal lobes, inwardly of these small vertical lobes, and inwardly again (on either side of the narrow unmodified zone) well developed hair-tufts; sternum 8 unusually elongate and clothed with moderately dense long black pubescence; gonocoxites flanged extero-ventrally, incurved apically, subacuminate; volsellae with well-developed clavate processes; penis valves strongly dentate mid-laterally. 12–14 mm. (Resembles superficially a large *Melitta haemorrhoidalis* (F.), but the mesosomal pubescence is brighter and the apex of the metasoma lacks pale pubescence; the pale facial pubescence and tawny mesosomal pubescence are conspicuous even in the field.)

EUCERA TUBERCULATA TUBERCULATA : AUCTION. (?F., 1793) (APIDAE:  
ANTHOPHORINAE)

## 1.—OCCURRENCE IN BRITAIN; GENERAL DISTRIBUTION; BIOLOGY.

Three males of a *Eucera* immediately distinguishable from *E.*

\* 1st to 3rd metasomal terga, i.e., 2nd to 4th abdominal.

*longicornis* (L., 1758) were taken near Hassocks, Sussex, on June 22nd, 1941. Subsequent examination confirmed that they belonged to the species generally known as *E. tuberculata* (F., 1793).

Publication was not contemplated at the time, as it was understood that Mr. G. M. Spooner, to whom, among others, the discovery was made known, would shortly complete the part on bees for the Royal Entomological Society of London's '*Handbooks for the Identification of British Insects*'. No part of this series dealing with the aculeate Hymenoptera has yet appeared, and the present record is published at the prompting of Dr. J. F. Perkins. The occurrence of the bee in this country is now generally known, but no formal introduction has hitherto been made.

It is remarkable that the species had not been detected previously. *E. tuberculata* and *E. longicornis* are very distinct and can normally be separated in both sexes with the naked eye; both were well known to such experienced workers as E. S. Saunders and F. D. Morice. Subsequent collecting and a survey of material in the British Museum (Nat. Hist.) have shewn that *tuberculata* is widely distributed in the southern counties, though less common than *longicornis*. Abroad, distributions overlap very widely. *E. tuberculata* is a polytypic species generally distributed in the western palaearctic region. *E. tuberculata tuberculata* is northern, but ranges less far north than *longicornis*; other subspecies occur in N. Africa and the eastern Mediterranean. No material from further east than the Caucasus (Yerevan) has been encountered. [*E. longicornis* is monotypic and eurasian. It appears not to be represented in N. Africa. Very dark forms of the female, with the normally pale pubescence (but not the scopal hairs) more or less completely replaced by dark brown or black, occur in some southern and southeast european localities (e.g., Corsica, Romania). The species extends eastwards through palaearctic Asia at least as far as Sikang (China, Sikang, Batang: Hedicke, 1940: 347).]

*Eucera tuberculata* is eury-eremophile—less tolerant than *E. longicornis*—and typically a species of open grasslands. It is polylectic, visiting a number of Leguminosae, Boraginaceae, Labiatae and Scrophulariaceae. (The Hassocks population was associated with *Vicia cracca* L.) It flies in May and June, normally appearing about two weeks earlier than *longicornis*, and is strongly protandric, ♂♂ appearing three to four weeks before the ♀♀.

Both *Eucera tuberculata* and *E. longicornis* are parasitized by *Nomada sexfasciata* Panz. 1799, a member of a group of *Nomada* unusual in being attached to the more highly evolved Eucerini rather than to normal nomadine hosts (Halictidae, Melittidae, Andrenidae). It has not been possible to determine, in the absence of adequate positively-associated material (the two host species often occur together), whether specific host-strains of the parasite exist.

## 2.—SEPARATION OF *tuberculata* AND *longicornis*.

The following key is extracted from a MS. revision of the British Apoidea.

♂♂.—Head produced anteriorly, clypeus strongly protuberant, malar area as long as or little shorter than basal diameter of third flagellar segment; flagellum little

if at all compressed, apical segments less arcuate, second segment (on shortest side) not or but little longer than basal diameter in same aspect. Mesonotum matt, microsculpture stronger, macrosculpture weaker and much less dense, the punctures on the disc being separated by from one to several times their diameter, towards the periphery becoming denser and weaker and tending to become lost in the microsculpture; discal punctures simple and shallow, smaller than in *longicornis*; metatarsus III simple, slender, parallel-sided, squarely truncate apically, the dorsal apical angle but slightly rounded off, the ventral apical angle without any appearance of a spinose prolongation. Basal rami of discal carinae of sternum 6 divergent basad, forming an angle of about  $140^\circ$  with the inner apical rami, the area between the carinae more strongly sculptured and less glossy; apices of gonostyli directed obliquely inwards, spatulate-truncate..... *tuberculata*

♂♂.—Head not produced anteriorly, clypeus not unusually protuberant, malar area at most as long as basal diameter of second flagellar segment; flagellum compressed, especially basally, consequently appearing unusually thick in certain aspects, the apical segments more strongly arcuate, the second segment usually distinctly longer than its basal diameter. Mesonotum discally slightly glossy, microsculpture weaker, macrosculpture stronger and denser, the punctures on the disc being separated by at most their own diameter, towards the periphery becoming denser and forming an imperfect reticulation; discal punctures oblique and strong, larger than in *tuberculata*; metatarsus III modified, down-curved in apical fifth, more or less obliquely truncate, the ventral ridge turning slightly inwards at apex and terminating with a strong seta, or pencil of two or more setae, giving the appearance of a spinose prolongation. Basal rami of discal carinae of sternum 6 subparallel or convergent basad, forming an angle of about  $110^\circ$  with the inner apical rami, the area between the carinae less strongly sculptured and glossier, especially apically; apices of gonostyli abruptly bent inwards and slightly expanded, liguliform..... *longicornis*

♀♀.—Clypeus strongly protuberant; malar area at least twice as long as least width of second flagellar segment, usually as long as median diameter of scape; second flagellar segment as long as third and fourth combined, third distinctly shorter than fourth; supraclypeal area with well-developed microsculpture throughout but moderately glossy, with comparatively few larger punctures. Mesonotal sculpture similar to that of ♂ but normally denser. Pale marginal fasciae of apical metasomal terga normally more extensive, those of tergum 3 well developed and of tergum 4 broadly coalescent..... *tuberculata*

♀♀.—Clypeus not unusually protuberant; malar area about as long as least width of second flagellar segment; second flagellar segment subequal to third and fourth combined, third and fourth subequal; supraclypeal area with stronger macrosculpture, matt. Mesonotal sculpture similar to that of ♂ but normally denser and stronger. Pale marginal fasciae of apical terga normally much less well developed, those of tergum 3 frequently vestigial, of tergum 4 attenuated or interrupted medially..... *longicornis*

#### ACKNOWLEDGEMENTS

The author is indebted to Dr. C. E. Hubbard, Royal Botanic Gardens, Kew, and Mr. J. E. Dandy, British Museum (Natural History), for information on the status of *Onobrychis arenaria* (Kit.) DC. and on the distribution of *O. arenaria* and *O. viciifolia* Scop.; to Mr. P. W. E. Currie for information on his Wiltshire capture of *Pseudocilissa dimidiata* (Mor.); and to Dr. L. Móczár, Természettudományi Múzeum, Budapest, for assistance in tracing certain localities recorded by his father, Dr. M. Móczár.

#### SUMMARY

*Pseudocilissa dimidiata* (Mor., 1876) (Apoidea: Melittidae) and *Eucera tuberculata* :auctt. (? F., 1793) (Apoidea: Apidae) are recorded from Britain, and notes on their distribution, biology, and separation from related forms in the British fauna given.

#### REFERENCES

Bailey, L. H., 1949, *Manual of cultivated plants*, 2nd ed., New York. Clapham, A. R., Tutin, T. G., & Warburg, E. F., 1962, *Flora of the British Isles*, 2nd ed., Cam-

bridge. Friese, H., 1901, *Die Bienen Europa's (Apidae Europaeae) nach ihren Gattungen, Arten und Variationen auf vergleichend morphologisch-biologischer Grundlage bearbeitet* . . . , Theil VI. Solitäre Apiden: Subfam. Panurginae, Melittinae, Xylocopinae, Jena. Gradmann, R., 1924, Die postglazialen Klimaschwankungen Mitteleuropas, *Geogr. Zeitschr.*, 30: 241-263. Graeffe, E., 1902, Die Apiden-Fauna des österreichischen Küstenlandes, *Verh. zool.-bot. Ges. Wien*, 52: 113-135. Haldane, J. B. S., 1956, The relation between density regulation and natural selection, *Proc. roy. Soc. (B)*, 145: 306-308. Hedicke, H., 1940, Ueber paläarktische Apiden. (Hym.) II. 2. Einige Apiden aus Ost-Tibet, *Sitzb. Ges. naturf. Fr. Berl.*, Jahrg. 1939: 347-349. Hegl, G., 1927, *Illustrierte Flora von Mittel-Europa*, IV/3, Dicotyledones, II. Teil. Munich. Matthews, J. R., 1955, *Origin and distribution of the British flora*, London. Mayr, E., 1963, *Animal species and evolution*, Cambridge, Mass., & London. Mocsáry, S., 1883, *Hymenoptera nova europaea et exotica. Európai és másföldi új hártaró-pók, Érték. Term.-tud. Közéből.*, 13 (11): 1-72. Morawitz, F. F., 1876, Zur Bienenfauna der Caucasusländer, *Horae Soc. ent. ross.*, 12: 3-69. Perring, F. H. & Walters, S. M., 1962, *Atlas of the British flora*, London. Schmiedeknecht, O., 1930, *Die Hymenopteren Nord- und Mitteleuropas*. Zweite Auflage, Jena. Stöckhert, F. K., 1933, Die Bienen Frankens (Hym. Apid.). Eine ökologisch-tiergeographische Untersuchung, *Dtsch. ent. Z.*, Jahrg. 1932, Beiheft.

c/o 67 Cheam Road, Ewell, Surrey.

January 16th, 1965.

*Gabrius exiguus* Nord. and other Staphylinidae in Cumberland.—During the morning of 28th March, 1965, I spent an hour or so collecting Staphylinid beetles from flood debris on the lake shore at the Wasdale Head end of West Water, Cumberland. The morning was cold and misty and the material yielded a disappointingly small number of specimens. Among the beetles taken, however, was one male specimen of *Gabrius exiguus* Nord., which was kindly determined for me by Mr. C. Johnson of Manchester Museum, to whom also I am indebted for determining some of the other beetles taken. *Gabrius exiguus* was added to the British list of Coleoptera by D. K. Kevan only two years ago (1963, *Ent. mon. Mag.*, 99: 80) from nine specimens in the R. H. May/H. Heasler collection which were recorded as having been taken with ants at Mitcham in 1891.

The male *exiguus* is a very handsome insect, well characterised by the emarginate lateral lobes of the bifurcate paramere and the acuminate apex of the aedeagus, the thick fringe of long pubescence on the inner margin of the hind tibia, the relatively long first segment of the hind tarsus, and the shape of the pronotum which is distinctly narrower in front than behind. The metallic lustre on the elytra mentioned by Hansen (1952, *Danmarks Fauna*, 58: Biller 16, p. 88) and by Freude, Harde, and Lohse (1964, *Die Käfer Mitteleuropas*, 4, Staphylinidae I, p. 188) was found on my specimen to be very weak and only visible in strong light.

The other Staphylinid species collected in the flood debris were: *Gabrius trossulus* Nord. (1 ♂, 2 ♀), *Philonthus varius* Gyll. (1 ♀), *Xantholinus linearis* Ol. (2 ♀), *Lathrobium fulvipenne* Gr. (1 ♀), *Lathrobium brunnipes* F. (1 ♀), *Oxyptoda longiuscula* Er. (1 ♂, 3 ♀), *Atheta fungi* Gr. (2 ♂, 5 ♀), *Stenus rogeri* Kr. (1 ♀), *Stenus brunnipes* Steph. (1 ♀).—C. F. GRIFFITH, 23 The Rooley, Huyton, Liverpool: April 20th, 1965.

*Dryops ernesti* Des G. (Col., Dryopidae) associated with rotting vegetables.—On two occasions I have taken this species in rotting vegetables on soggy ground. The first was in November, 1960, when I took one boring into a turnip in a marshy field near Cran Loch, Nairnshire, and the second was in August, 1964, when I took one boring into a Puff Ball in a marshy dune slack on Drigg Sands, Cumberland. *D. luridus* Er. was common in pools on Drigg Sands, but I never took *D. ernesti* Des G. in these, nor have I ever taken *D. luridus* except in shallow pools. *D. ernesti* is a well known inhabitant of shallow pools, but its presence in rotting vegetables on marshy ground is perhaps an extension to its known habitat.—R. B. ANGUS, 12 Fraser Road, Calverley, Pudsey, Yorkshire: January 15th, 1965.



1944

1944

1944

1944

1944

1944

1944

1944

1944

1944

1944

1944

1944

1944

1944

1944

1944

1944

1944

1944

1944

1944

1944

1944

1944

1944

1944

1944

1944

1944

1944

1944

1944

1944

1944

1944

1944

1944

1944

1944

1944

1944

1944

1944

1944

1944

1944

1944

1944

# ZOBODAT - [www.zobodat.at](http://www.zobodat.at)

Zoologisch-Botanische Datenbank/Zoological-Botanical Database

Digitale Literatur/Digital Literature

Zeitschrift/Journal: [Monografien Entomologie Hymenoptera](#)

Jahr/Year: 1965

Band/Volume: [0163](#)

Autor(en)/Author(s): Baker Donald B.

Artikel/Article: [Two bees new to Britain \(Hym., Apoidea\). – Entomologist's mon. Mag. 100 279-286](#)