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Myrmecophilous Notes for 1913.

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Myrmecophilous Notes for 1913.

By H. St. J. K. DONISTHORPE, F.Z.S., F.E.S.

In consequence of the fact that I am now engaged in writing a book on the British Ants, which takes up all my spare time, and which I propose to follow with a second volume on the British Myrmecophilous Fauna, my notes for 1913 must be considerably curtailed, and in fact be confined to the bare records of captures, new localities, etc., without drawing any conclusions from the results obtained, or referring to similar observations by others, or myself, in the past. I have already published my observation on the myrmecophilous fauna of Lundy, and the important captures of *Claviger longicornis*, Müll., and *Aenigmatias blattoides*, Mein., which somewhat simplifies matters.

I take this opportunity to ask all entomologists who have unpublished records of ants, or myrmecophiles, from any part of

Britain, to kindly communicate with me. I shall also be pleased to name ants for anyone who may possess a British Collection, or unnamed specimens.

FORMICIDÆ.

Subfamily MYRMICINÆ.

Myrmecina graminicola, Latr.—2 dealated ♀♀, and 3 ♂♂ were taken in company with *Lasius flavus* at Bletchington, Oxon., on May 17th; 6 ♂♂ carrying their larvæ, in a nest of *L. mixtus* at Box Hill on May 25th; and a dealated ♀, in a nest of *L. mixtus* at Box Hill on September 25th.

Solenopsis fugax, Latr.—A few ♂♂ were taken by Crawley and myself in company with *Formica fusca* var. *fusco-rufibarbis* at Sandown, I. of W., on August 10th.

I discovered a large colony at Blackgang Chine, on August 26th, situated in a large block of green-sand, two feet long by a foot broad. Vast quantities of ♂♂, great numbers of ♂♂ and a few winged ♀♀ occurred. Eggs, larvæ, ♂ and ♀ pupæ and one ♀ pupa (subsequently reared) were present. No other ants, or ants' nests were near, and no *Aphidae*, nor myrmecophiles were found.

Myrmica laevinodis, Nyl.—Colonies were found at Tenby, and abundant under stones on the marshy ground in front of Manorbier Castle, in Pembrokeshire, in April. Four partly winged ♀♀ occurred in a nest at Bletchington, May 12th.

Myrmica ruginodis, Nyl.—Tenby and Manorbier in April.

Myrmica scabrinodis, Nyl.—Colonies at Tenby in April, one under the same stone as *L. flavus*, April 25th. An isolated dealated ♀, under a stone on April 27th. Three colonies under the same stones as *L. flavus* at Bletchington, on May 17th.

In July I found a form of *scabrinodis* at Rannoeh, in two nests of *F. rufa* var. *alpina*, inhabiting part of the latter's hillocks, only ♂♂ and larvæ being found. The shape of the antennæ exhibits a slight transverse ridge (more developed in some specimens), reaching across from the lateral tooth and forming a small point, or angle, opposite to the same. These specimens may represent the var. *scabrinodo-lobicornis*, Forel.

Myrmica scabrinodis, Nyl., var. *sabuleti*, Meinert.—Tenby, Pembrokeshire, and the Landslip, I. of W. One of the latter in the same mound as *L. flavus*.

Myrmica lobicornis, Nyl.—Two dealated ♀♀, July 29th and September 22nd, crawling on paths at Weybridge.

Stenammina westwoodi, West.—A ♂ occurred in a nest of *Lasius mixtus* at Box Hill, on May 28th.

Leptothorax acervorum, F.—A dealated ♀, ♂♂, larvæ and pupæ,

in a nest of *Formica sanguinea* at Weybridge, on July 12th. A ♂ in a nest of *F. exsecta* at Parkhurst Forest, I. of W., on August 23rd.

Leptothorax nylanderii, Först.—A dealated ♀ in a nest of *L. mixtus* at Box Hill on September 7th.

Tetramorium caespitum, L.—Colonies not uncommon at Tenby, one under the same stone as *L. flavus*, on April 23rd. A small colony at roots of *Arenaria maritima* at Blackgang Chine, I. of W., August 26th, all the ♂ ♂ being very small.

Subfamily DOLICHODERINÆ.

Tapinoma erraticum, Latr.—a fine colony was found in the New Forest, on June 23rd, situated in a small, low, round mound made of bits of cut grass, burnt heather, etc. The nest was traced by carefully watching the ♂ ♂ in the neighbourhood, only a few being out as the day was cold and cloudy. It contained a few ♂ ♂, very many winged ♀ ♀, two dealated ♀ ♀, a large number of ♂ ♂, ♂, ♀, and ♀ pupæ, and some larvæ.

Another large colony was observed at Weybridge, on July 29th, in a sandbank. Two dealated ♀ ♀ were present, and the ♂ ♂ were the largest specimens I have ever seen.

Subfamily CAMPONOTINÆ.

Lasius fuliginosus, Latr.—On August 16th at Apse Heath, I. of W., ♂ ♂ were traced from a copse to an oak tree on a hill at a considerable distance from the copse. A number of ♂ ♂ were out on the tree trunk, and the nest was situated just below the turf at the roots. A dealated ♀ with the gaster enormously distended with eggs, and surrounded by a mass of ♂ ♂, was found in the carton cells at the top of the nest.

Lasius niger, L.—Common at Tenby, a ♂ was found under a tin on the sand-hills, on April 26th. A very distended dealated ♀ was found in a nest at Box Hill, on July 30th. Naked pupæ were abundant in a mound-nest at Sandown on August 7th.

Lasius niger, L., var. *alieno-niger*, Forel.—A colony was found at Bletchington in May.

Lasius alienus, Först.—Colonies were noticed at Tenby and Bletchington.

Lasius flavus, F.—Common at Tenby and Manorbier. Two dealated ♀ ♀ were observed in one nest at Bletchington, on May 14th, and in another in which no ♀ could be found, some very large dark ♂ ♂, many times larger than ordinary ♂ ♂, occurred.

Isolated dealated ♀ ♀, some with egg-packets, were seen at Blackgang Chine, on August 26th, under stones and lumps of soft green-sand.

Lasius umbratus, Nyl.—A marriage flight had evidently taken place at Weybridge on July 29th, since many dealated ♀ ♀ were running

about on paths on the heath on each side of the railway, several had been captured by *F. rufa* and *F. sanguinea* ♂ ♀, and were being dragged as prey to the nests of the latter. A dead winged ♀ was also found in a *sanguinea* nest.

A marriage flight occurred at Sandown, I. of W., on August 27th, ♂ ♂ being observed in the garden of our house and on the pavements near by, and a ♀ was captured, which had already removed some of her wings. A dealated ♀ was found fighting with some *L. niger* ♂ ♀ near a nest of the latter, a fact of considerable interest.

A large form was found in some numbers on the sand-hills at Tenby (near to the continental *L. affinis*, Schenck, which might almost be called *affino-umbratus*, though most nearly related to *umbratus*), much digging in the sand unfortunately only produced ♂ ♀. Specimens taken there alive and introduced into my *L. mixto-umbratus* observation nest, were all killed, whereas *umbratus* ♂ ♀, from Wellington College this year (and from Weybridge and other places last year), were accepted by the inhabitants of my nest. The Wellington College nest (kindly pointed out by Dr. Joy) was situated in the ground, at a spot where formerly a tree root or stump had been present, this being nearly entirely decayed. Cells of a hard earthy carton were found attached to the roots of plants. These, through the kindness of Prof. Poulton, were submitted for me to Prof. Newstead for analysis, and he reported as follows:—

“The nodular concretions attached to the roots of the plant are composed of:—

1. Numerous hyphæ of a fungus, with spores, apparently.
2. A few fine root-fibres (?) of the plant supporting the nodules.
3. The bark of the root (rhizome) (?) of the plant supporting the nodules. These are much more numerous in the dark coloured nodules than in the paler ones.
4. Quartzite grains. These predominate.

My impression is that the presence of the fungus is due to the ‘cement’ used by the ants for fastening the quartz grains, etc., together.”

Some of the root fibres and bark were, no doubt, taken from the remains of the tree root or stump before mentioned. This seems to prove that *umbratus* can, and does, make “carton.” Similar cells of a darker nature found at the roots of heather in an *umbratus* nest at Weybridge also contain fungus.

Formica rufa, L.—Many nests were very late this year; at Weybridge only small larvæ were present on May 4th.

Formica rufa, L. var. *alpina*, Santschi.—Some seven colonies of this variety were observed at Rannoch in July, dealated ♀ ♀ were present (three in one nest and two in others), but no winged forms could be found. Some pseudogynes occurred in one colony.

Formica rufa, L. var. *rufo-pratensis*, Forel.—Several nests, superficially like *F. exsecta* nests, were found at Parkhurst Forest in clumps of grass (*Aira caespitosa*) on June 29th, one dealated ♀ was taken, but only ♂ cocoons were present.

Formica pratensis, De G.—A number of colonies were found at

Rannoch, when in company with my friend Mr. Morice, in July; ♂ ♂ and winged ♀ ♀ were abundant in one nest on July 17th, and four deälated ♀ ♀ were taken in this nest. A few Pseudogynes were present.

Formica sanguinea, Latr.—In 1912 it appeared almost impossible to find a deälated ♀ in the nests, at Woking; in 1913, on the other hand they were plentiful. On May 21st, deälated ♀ ♀ were found in every nest, in one no less than 37 specimens being counted. For the first time, at Woking, I found pseudogynes of this ant, they being present in several nests and in one quite 10% of the ♂ ♂ in the nest were pseudogynes.

Formica fusca, L.—Common at Tenby, in April, under stones on the cliffs and in fields, and on banks on the east of the town. Deälated ♀ ♀ were abundant in most nests, many of them being microgynes.

At Rannoch, in July, two colonies were found inhabiting deserted nests of *F. rufa* and *exsecta* respectively.

Naked pupæ were found in some numbers in a nest at Box Hill, on July 30th, and in Parkhurst Forest on August 23rd.

Formica fusca, L., var. *rubescens*, Forel.—A colony situated in the side of the cliff at the Landslip, I. of W., was found on August 21st, it contained many ♂ ♂, one winged ♀, many large ♀ ♀, and ♀ cocoons.

Formica fusca, L., var. *fusco-rufibarbis*, Forel.—Naked pupæ were found in a nest of this variety at Sandown, I. of W., on August 13th.

Formica rufibarbis, F.—Some seven colonies were again found at Weybridge, five deälated ♀ ♀ occurred in one nest but no winged forms could be found, although the nests were visited in May, June, July, and September.

COLEOPTERA.

Homoeusa acuminata, Märk.—In a nest of *L. mixtus*, Box Hill, May 23rd.

Thiasophila angulata, Er.—With *F. rufa*, L., var. *rufo-pratensis*, in Parkhurst Forest, August 23rd.

Thiasophila inquilina, Märk.—With *L. fuliginosus*, Oxshott, May 25th and June 2nd; Apse Heath, I. of W., July 16th.

Dinarda märkeli, Kies.—Larvæ in nest of *F. rufa*, Weybridge, July 12th.

Dinarda hagensi, Wasm.—In some numbers with *F. exsecta*, Parkhurst Forest, August 22nd.

Atemeles emarginatus, Pk.—In two nests of *F. fusca*, at Tenby, April 25th.

Myrmedonia limbata, Pk.—With *L. niger*, Tenby, April 25th, with *L. flavus*, Bletchington, May 14th.

Drusilla canaliculata, F.—In nest of *F. fusca*, Tenby, April 25th; with *L. niger* and with a half dead *M. scabrinodis* ♀ in its jaws, Bletchington, May 18th; with *Ponera coarctata*, Box Hill, May 16th; larva in nest of *M. ruginodis* at Nethy Bridge, July 20th; and with *F. fusca*, L., var. *fusco-rufibarbis* at Sandown, August 10th.

Notothecta flavipes, Gr.—In nest of *F. rufa*, L., var. *alpina*, Rannoch, July 16th; and *F. rufa*, L., var. *rufo-pratensis*, Parkhurst Forest, August 23rd.

Claviger testaceus, Preys.—With *L. flavus* at Tenby, common in one nest in a field, April 23rd; a pair in *côp.* in a nest on April 25th. With *L. niger*, Bletchington, May 14th.

Coccinella distincta, Fald.—On *F. rufa* nest at Woking, May 21st, June 4th.

Clythra 4-punctata, L.—Larva in nest of *F. rufa*, L., var. *rufo-pratensis* at Parkhurst Forest, August 11th.

Opatrum sabulosum, L.—A pupa taken in a nest of *F. fusca*, L., var. *fusco-rufibarbis*, at Blackgang Chine on August 26th, taken home and subsequently hatched about September 3rd, in my *mixto-umbratus* nest (the ants never attacked either the pupa or the perfect insect) where it lived for some time.

BRACONIDÆ.

Euphorus bistigmaticus, Morley.—Hovering over ♂ ♀ on *F. rufa* nest at Weybridge, July 12th. This species is not uncommon at Weybridge.

Pachylomma buccata, Bréb.—Very large specimens (of this species according to Morley) were taken hovering over ♂ ♀ on a nest of *F. rufa*, L., var. *rufo-pratensis* in Parkhurst Forest, on June 29th.

Typical specimens were observed at Weybridge, hovering over ♂ ♀ of *F. rufibarbis*, *F. sanguinea*, *L. flavus* and *Tapinoma erraticum*, on July 29th.

CHALCIDIDÆ.

Spalangia erythromera, Först.—In nest of *L. fuliginosus*, Oxshott, September 9th.

DIPTERA.

Phora fornicarum, Verrall.—Hovering over ♂ ♀ of *F. sanguinea* at Woking, May 21st; *F. sanguinea*, *L. flavus* and *Tapinoma erraticum* at Weybridge, July 29th; and *L. niger* at Shanklin, August 21st; and *L. niger* at Blackgang Chine, August 26th.

Phyllomyza lasiae, Collin.—With *L. fuliginosus*, Wellington College, September 30th.

Ceratopogon myrmecophilus, Egger.—♂ hovering over *F. rufa* nest at Weybridge, September 22nd.

COCCIDÆ.

Rippersia subterranea, Newst.—In nest of *L. alienus*, April 23rd; *L. niger*, April 29th at Tenby; *F. fusca*, L., var. *fusco-rufibarbis* at Sandown, August 22nd.

Rippersia tomlini, Newst.—In nest of *L. niger* at Bletchington, May 14th.

Newsteadia floccosa, De G.—In *F. rufa* nest, Weybridge, July 12th.

Ortheziola vej dovskyi, Sulc.—In nest of *L. niger* at Tenby, April 25th; *L. flavus* at Manorbier, April 28th.

COLLEMBOLA.

Cyphodeirus (Beckia) albinus, Nic.—With *Tetramorium caespitum* at Tenby, April 23rd; *Tapinoma erraticum* at Weybridge, June 29th; *Lasius niger*, Bletchington, May 14th; Sandown, August 10th; *L. alienus*, Box Hill, May 16th; *L. flavus*, Bletchington, May 14th; *L. mixtus*, Box Hill, May 16th; *F. exsecta*, Parkhurst Forest, August 11th and 23rd; *F. rufa*, Weybridge, May 4th; *F. fusca*, Tenby, April 23rd; *F. fusca* var. *fusco-rufibarbis*, Sandown, August 10th, and Blackgang, August 26th; *F. fusca* var. *rubescens*, Landslip, I. of W., August 21st; and *F. rufibarbis*, Weybridge, July 29th.

MYRIAPODA.

Blanjulus guttulatus, Gerv.—With *L. fuliginosus*, Wellington College, September 30th.

Polyxenus lagurus, L.—In nest of *F. fusca*, Box Hill, September 7th; and abundant in two nests of *F. rufa*, pointed out to me by W. E. Sharp at Wellington College, on September 30th.

ARANEINA.

Thyreosthenius biovata, Camb.—In nest of *F. pratensis* at Rannoch, July 17th.

Evansia merens, Camb.—In nest of *F. fusca* at Aviemore, July 18th.

Tetrilus recisus, Camb.—Young with *L. fuliginosus* at Oxshott, June 2nd, and a number of egg-sacs (of this species according to Randell Jackson) situated on the carton cells of this nest on September 9th.

Cicurina cinerea, Panz.—In *L. mixtus* nest at Box Hill, on July 30th.

Micaria pulicaria, Sund.—With *L. niger*, August 7th, and *F. fusca* var. *fusco-rufibarbis*, August 10th, at Sandown.

Harpactes hombergi, Scp.—With *F. fusca* var. *fusco-rufibarbis*, Blackgang, August 26th, and the Landslip, August 28th.

ACARINA.

Cilicant comata, Leon.—On larvæ in a nest of *L. niger*, at Tenby, April 24th.

Trachyropoda bostocki, Mich.—In some numbers in a nest of *L. fuliginosus*, at Apse Heath, I. of W., on August 16th.

Laelaps cuneifer, Mich.—In nest of *L. miatus* at Box Hill, May 22nd; and *L. fuliginosus*, at Apse Heath, August 16th.

Antennophorus pubescens, Wasm.—On ♂ ♀ in a nest of *L. flavus*, Box Hill, July 30th.

Antennophorus grandis, Berl.—On ♂ ♀ in a nest of *L. fuliginosus* at Apse Heath, August 16th.

CRUSTACEA.

Platyarthus hoffmanseggi, Brandt.—In nests of *Myrmica ruginodis* and *M. scabrinodis*, at Tenby, in April; *L. niger*, Tenby and Manorbier, in April, Bletchington, in May; *L. alienus*, Tenby, in April, Box Hill, in May; *L. flavus*, Tenby and Manorbier, in April, Bletchington, in May; *L. miatus*, Box Hill, in May; *L. fuliginosus*, Apse Heath in August; *F. exsecta*, Parkhurst Forest, in August; *F. fusca*, Tenby in April; *F. fusca* var. *rubescens*, and var. *fusco-rufibarbis*, Landslip, in August.

Father Schmitz and others, having asked me to publish a further list of my publications, since my last list, which appeared in the *Entomologist's Record*, vol. xxiii., p. 238 (1911), and brought the total up to 50. I therefore here append the following list which brings it up to date:—

No. 51.—“*Lasius miatus*, Nyl., in Britain,” *Ent. Record*, xxiii., 236-238 (1911).

No. 52.—“Ants at Kew,” *Royal Botanic Gardens, Kew Bull.*, No. xii., li., 367-369 (1911).

No. 53.—“A Messmate of Ants” (*Lomechusa strumosa*, F.), *Marvels of the Universe*, V., 220-222 (1911) (with photographs).

No. 54.—“A Revised List of the British Ants,” *Entomologist*, xlv., 389-391 (1911).

No. 55.—“Experiments on the Formation of Colonies by *Lasius fuliginosus* ♀ ♀;,” *Trans. Ent. Soc. Lond.*, 1912, 664-672. (Joint paper with C. Crawley).

No. 56.—“Myrmecophilous Notes for 1911,” *Ent. Record*, xxiv., 4-10, 34-40 (1912).

No. 57.—“A Fly that is Born in Ants' Nests” (*Microdon mutabilis*, L.), *Marvels of the Universe*, xix., 764-767 (1912) (with photographs).

No. 58.—“Mites that live in Ants' Nests,” *Marvels of the Universe*, xix., 778-780 (1912) (with photographs).

No. 59.—“*Dairying Ants*” (Ants and *Aphidae*), *Marvels of the Universe*, xx., 804-806 (1912) (with photographs).

No. 60.—“The Founding of Colonies by Queen Ants,” *Int. Ent. Cong. Oxford*, 1912, II., 11-77 (1913). (Joint paper with C. Crawley.)

No. 61.—“Ants as Honey Pots” (*Myrmecocystus horti-deorum*, McCook), *Marvels of the Universe*, xxiii., 940-943 (1912) (with photographs).

No. 62.—“The Wood Ant” (*Formica rufa*, L.), *Marvels of the Universe*, xxvii., 1099-1103 (1912) (with photographs).

No. 63.—“The Agricultural Ant of Texas” (*Pogonomyrmex mole-faciens*, Buck.), *Marvels of the Universe*, xxviii., 1159-1162 (1912) (with photographs).

No. 64.—“On Some Remarkable Associations between Ants of Different Species,” *Report Lancs. Chesh. Ent. Soc.*, xxxvi., 38-56., 1912 (1913).

No. 65.—“Some Races of Ants New to Britain,” *Ent. Record*, xxiv., 306 (1912).

No. 66.—“Some Notes on the Genus *Myrmica*, Latr.,” *Ent. Record*, xxv., 1-8., 42-48 (1913) (with plate and wood-cuts).

No. 67.—“Myrmecophilous Notes 1912.” *Ent. Record*, xxv., 61-68., 89-97 (1913) (with wood-cuts).

No. 68.—“Ants and Myrmecophiles on Lundy,” *Ent. Record*, xxv., 267-269 (1913) (with plates).

No. 69.—“*Aenigmatias blattoides*, Meinert, captured in Scotland,” *Ent. Record*, xxv., 277-278 (1913).

No. 70.—“Notes on the capture of *Claviger longicornis*, Müll., and a Description of the supposed Larva,” *Ent. Record*, xxv., 290-294 (1913) (with plate).

