Myrmecophilous Notes for 1909.

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

(Continued from p. 259.)

Coleoptera.—Atemeles paradoxus, Gr.—Some six specimens were dug up out of nests of F. rufifarbises var. fusco-rufifarbises at Whitsand Bay, Rame Head, and Tregantle, in April, by my friend, Mr. Keys, and myself. The beetle was very scarce, and all the specimens were found deep in the nests, very many nests being dug up to obtain these few specimens.

Dinarda pygmaea, Wasm.—This species occurred as usual in these nests, and we had a most striking illustration of how this beetle is confined to nests of F. rufifarbises var. fusco-rufifarbises. All the nests at Whitsand Bay belong to this species, on the other side of Rame Head more nests are true F. fusca, and in the Meavy Valley all the nests but one were found to be those of F. fusca. In this one nest of F. rufifarbises var. fusco-rufifarbises, we found Dinarda pygmaea, but never in the F. fusca nests.

Atemeles emarginatus was found with F. fusca in the latter locality. F. fusca is a cowardly and shy ant; when a nest is disturbed they all vanish, this is not the case with F. var. fusco-rufifarbises. Mr. Hamm sent me a F. fusca nest from Shotover, near Oxford, on July 12th, containing some eggs, 8's and pupae. In it I found two larvae of Atemeles emarginatus. These were carried about by the ants, as they did their own pupae, and fed. On July 15th, one of them was placed on the bunch of eggs. I eventually put them into spirit, as I was using the nest for experiments with F. sanguinea, 8's.

Lomechusa strumosa, F.—On May 10th, I noticed a Lomechusa in a small nest of F. sanguinea, from Woking, laying eggs on the ants’ eggs in the nest.

Dinarda dentata, Gr.—Occured as usual with F. sanguinea at Woking, and, in plenty, in company with many of its larve, with the same ant at Bewdley. I introduced a specimen into a F. rufifarbises var. fusco-rufifarbises observation nest on July 23rd, it lived in this nest till September 14th, when I removed it and put it into my F. exsecta nest, where it is still alive, October 20th.

Dinarda hagensi, Wasm.—On April 26th, I found specimens of
this beetle in a nest of *F. cesecta* at Parkhurst Forest, Isle of Wight. This is a new locality for it, as the species has only been found at Bournemouth up to now, where I first discovered it in Britain.

**Oxyopoda recondita**, Kr.—Several specimens of this rare species were taken with *F. rufa* at Buddon Wood in May.

**Oxyopoda vittata**, Myrmedonia funesta, M. cognata, and M. laticollis were found with *L. fuliginosus* at Darent Wood in June and September; a new locality for all.

**Myrmedonia limbata**, Pk.—A specimen was observed at Bradgate Park, in Leicestershire, on May 3rd, to seize a larva of *Lasius flarus* and drag it out of the nest.

**Xantholinus atratus**, Gr.—Several specimens occurred with *F. rufa* at Buddon Wood, in May, and one was swept at Tubney, near Oxford, in June.

**Claviger testaceus**, Preys.—On June 1st, Mr. Forsyth sent me a nest of *Lasius flarus* from Portland, which contained some 50 specimens of *Claviger*. I put two ♀s, and a number of ♂s, egg-masses, and young larvae into a small plaster nest, with many Clavigers, and frequently saw the Clavigers fed and licked. They ate all the young larvae and eggs, and also pupae of other ants I introduced. As many as five or more specimens sat on and crawled about the ♀s, especially on their abdomina, and I believe they ate the eggs as they were laid. Many of the ♀s died, and the Clavigers ate those too I kept introducing more ♂s and larvae from the main nest. No Clavigers died, and the ♀s lived till August 30th. I took them to the Isle of Wight, but, unfortunately, on the journey home, all were killed.

**Myrmetes piceus**, Pk.—This species occurred in great numbers in nests of *Formica rufa* at Buddon Wood, in May; I brought a lot home, and introduced them into my different observation-nests. In a nest of *F. rufibarbis* var. *fusc-o-rufibarbis*, I introduced 12 specimens on May 6th. I had given these ants pupae of *F. rufa* to eat. The *Myrmetes* bored into the pupae and devoured the whole contents. On May 10th, I noticed a pair in cop. The ♀ sits far back on the dorsum of the ♂. A ♀ was observed to lick one of the *Myrmetes*.

**Cetonia floridola**, Hbs.—In May I found a number of the larvae of this beetle in a nest of *Formica rufa*, at Nethy Bridge. I brought home some 16 specimens in a tin full of the nest materials, on which the larvae feed. I introduced six specimens into my *F. rufa* observation-nest (these immediately bored into the nest and disappeared), some I preserved in spirit, and the rest I left in the tin. The larvae does not use the legs for walking. When placed on a table, or on the floor, it turns over on its back, and moves rapidly along by means of the bristles on the back, the legs being held up in the air. The larva in the tin made their pupa-cases from the nest materials and pupated at the end of July, and hatched out in August. I have them alive now. Those in my nest hatched out and came up in August.

**Diptera.—Phyllomyza formicæ**, Collin.—I bred this species this year from larvae which I found in some numbers in a nest of *Formica rufa-pratensis*, at Nethy Bridge, in May. The larvae occurred in the chambers of the ants at the bottom of the nest. This proves that the species is not parasitic on the ants, but lives free in the nests. I put
a number of the larvae in a tin, with mould from the bottom of the nest, and they changed to pupae and hatched out in June.

Phyllomyza sp.?—I took a number of a species with Lasius fuliginosus, at Darent Wood, in July and September. Mr. Collin tells me this is the same species I took with L. fuliginosus on the Birkdale sand-hills, and is distinct from P. lasia, Collin, which I have taken with the same ant at Oxshott, and have bred out of my observation-nest of that ant from Wellington College.

Milicia ludens, Wahl.—This fly, which is new to Britain, I took in a nest of Lasius fuliginosus, at Darent Wood, on June 6th. Collin has kindly supplied me with the following information about it. It was described by Wahlberg in 1817, as Lobioptera ludens (Ofrersigt Kongl. Vetensk. Akad., iv., p. 261, pl. vii., fig. 1). In 1873, Raddatz (Archiv Vereins der Naturgesch. in Mecklenburg, xxvii., p. 102) records that it lives with Lasius fuliginosus, and that he had taken it with that ant in May and June.

Ceratopogon myrmecophilus, Egger.—Collin and I caught several f s flying over a nest of Formica rufa, at Weybridge, on July 5th, and I netted others over a nest of the same ant at Darent Wood, on September 24th.

Limosina curtiventris, Stnh.—This species was again found with Lasius fuliginosus, this time at Darent Wood, in September.

Limosina sp.?—A f and f taken with L. fuliginosus, at Darent Wood, September 26th. Collin writes of them, "A most interesting little Limosina, new to me; unfortunately the male is headless, but the abdomen is so remarkable I think it might safely be described." I unfortunately broke the f when pinning it.

Phora formicarum, Verrall.—I have at last succeeded in taking this little species. I found it rather commonly at Bewley Forest, in July, with Lasius niger, L. flavus and Formica sanguinea. The little fly hovers over the ants, flying very steadily, and getting nearer and nearer to an ant, which it strikes at. I found they would strike at ants on my hands, when I kept quite still. It was amusing to watch an ant which had become aware of the presence of the fly, make a dash for safety pursued by the fly. I subsequently took it over a L. niger nest, at St. Helens, in the Isle of Wight, in August. I have also seen it hovering over L. fuliginosus at Wellington College and Darent Wood.

Phora æqualis, Wood.—Taken in some numbers in a nest of Lasius fuliginosus at Darent Wood, on September 24th.

Phora sp.?—I twice captured a very small Phora, with long posterior legs, in the same nest as the last species. Collin writes, "Dr. Wood does not recognise it, he says it is remarkable in having a very long costa and long costal fringe."

Trineura aterrima, F.—f and f taken with L. fuliginosus, Darent Wood, June 6th.

Microdon devius, L.—I netted a specimen of this beautiful fly at Cotthill, near Oxford, on June 30th. The larvae should be searched for in nests of Formica fusca, etc.

Araneina.—Thyreosthenius iovata, Camb.—This species was found in F. rufa nests at Parkhurst Forest, Isle of Wight, in April, Buddon Wood, Leicestershire, and Nethy Bridge, Inverness-shire, and in plenty, f s and f s, and very young, with F. rufa-pratensis, at
Nethy Bridge, in May. A young ♀ was taken with *F. fusca* at Aviemore, on May 17th. This is the first time I have found it with this ant.

**Evansia merens**, Camb.—I took ♀'s and ♂'s with *F. fusca*, and ♀'s with *F. sanguinea*, at Aviemore, on May 17th.

**Salticus formicarius**, De Geer.—I took this rare species again this year in the Isle of Wight, this time at Luccombe Chine, a young ♀ being captured in company with *Myrmica seadrivinis*, on August 29th.

**Cicurina cineara**, Panz.—I found a number of ♀'s, young and adult, in a nest of *Lasius fuliginosus*, in October. My friend, Mr. Cambridge, writes, "I have only met with this here in old disused drains . . . . The shelter and accommodation afforded by ants' nests would probably be very congenial to this species."

**Dysderia cambrioghi**, Thor.—I took specimens of this spider with *F. rufipes* var. fusca-rufipes at Whitsand Bay, in April, and with *F. sanguinea* at Woking, in May. Van Hasselt recorded it with *Lasius brunneus*.

**Cryptocera recisa**, Camb.—Two ♀'s were taken in nests of *F. fusca* at Bradgate Park, in Leicestershire, in May. Mr. Cambridge writes, "This is only the second record of the species, the former having occurred in Sherwood Forest several years ago, swept, I believe, from heather. The ♀ is unknown."

**Micarisoma festiva**, C.K.—This species was taken in April, with *L. niger*, at Whitsand Bay and Rame Head, and with *L. flavescent* at Virtuous Lady Mine.

**Micaria fuligurria**, Sund.—This spider occurred with *L. niger* at Virtuous Lady Mine, and with *Tetramorium caespitum* at Whitsand Bay, in April, and in May with *Formica esserate*, at Aviemore.

**Proctotrupidae.**—*Tropidopria fuliginosa*, Wasm., was found in nests of *F. rufa* at Buddon Wood, in Leicestershire, in May, and a var., with the same ant, at Nethy Bridge, on May 18th.

**Comostigmus testacipes**, Kief.—This species, which is new to Britain, was taken in a nest of *Formica rufa* at Nethy Bridge, on May 18th.

**Lagynodes pallidus**, F.—Two specimens occurred in a nest of *F. fusca*, in Parkhurst Forest, Isle of Wight, in April. When this species meets an ant it tucks in its antenne and feigns death.

**Tetraporia donistorpei**, Kief., and *T. femoralis*, Kief.—Both these species, which are new to science, were discovered by me in nests of *Tetramorium caespitum* at Whitsand Bay, in April. In this genus, which was erected by Wasmann, the hairs on the neck, which are usually white in other *Proctotrupidae*, are golden, and are licked by the hosts. They are on good terms with their hosts, and, I observed, when they met that they tapped antennæ with the ants. They are parasitic on the larve of the ants.

**Planoporia pedestrina**, Kieffer.—A genus and species new to science. I took several of this little creature running about in company with *Lasius niger* at Luccombe Chine, in August. They areapterous, and were rather ant-like in appearance when alive.

**Loxotropa n. sp.**—Taken with *Lasius fuliginosus* at Darenth Wood, on September 29th. Dr. Kieffer writes that he will send on name

*Gonotopus distinctus*, Kieff.—I swept a specimen in company with *Myrmica raccinoides*, in the New Forest, on June 18th.

*(To be concluded.)*

**NOTES ON LIFE-HISTORIES, LARVAE, &c.**

Notes on the larval habits of *Dryas paphia* var. *valesina.*—In July, 1908, I obtained ova from a New Forest 2 (♂ unknown) deposited on moss; the 2 s never deposit on their food-plant. These hatched in fourteen days, and, after eating their egg-shells, went at once into hybernation on moss, no food being supplied to them. On March 21st, 1909, I sprayed the moss with lukewarm water and placed same in the sunshine; within a couple of hours the larvae started to move, and within three days some 80 made their appearance. These were removed to young leaves of *Viola canina*; after retiring to the underside of the leaves, and remaining dormant for six days, they started feeding vigorously, early morning and late afternoon being their favourite hours; they are also fond of the early morning sunshine. The dates for the moulted were April 10th, 19th, 28th, and May 8th, pupating from May 23rd, onwards. The 77 imagines produced were:—41 typical males, 23 typical females, 13 var. *valesina.*—E. C. Joy, 2, St. Kilda's Road, Stoke Newington, N. October 18th, 1909.

Note on the larval habits of *Brenthis euphrosyne.*—Ova obtained from a Lincoln 2 captured in June, 1908; these hatched in twelve days, and were placed on growing plants of *Viola canina*; after moulted twice, they settled down for hybernation, in early August. On March 21st, 1909, only 15 out of 80 larve had survived the winter, these appeared weak and sickly, and here the great difficulty with the larvae arose; they refused their food; they would only wander round, basking in the sunshine; apparently they lacked strength to accomplish their moult. On April 3rd only four safely survived the moult, and these started feeding ravenously, their movements being exceedingly rapid. Except whilst feeding, they never rest on their food, retiring amongst the moss, but always in the sunshine. These moulted again on April 11th; the first, pupating on April 19th, produced an imago on May 21st.—Ib.

Description of eggs of *Lepidoptera.*—*Metrocampa margaritaria.*—Eggs laid by a ♀ captured near Meran at the entrance of the Passier-Thal, August 10th, 1909. The eggs are laid in regular rows in clusters of 50-150. They are of typical Geometrid shape, but turned up on end, so that the rounded micropylar end is at the top of the egg. The eggs are pale green in colour when first laid, quite uniform and homogeneous, but turn to a pinky colour, speckled all over irregularly with various-sized blood-red dots. The micropylar area is freest from these dots, except that one or two quite large dots are usually conspicuous in the position of the micropyle. The eggshell appears to be quite smooth under a hand lens. The peculiarity of these eggs is in their being laid as upright eggs (Described August 17th, 1909, under a hand lens).

*Thalera jimbrialis.*—♀ captured August 7th, 1909, in the Sarnthal; 6 eggs laid in a box, 2 close together almost