

assistance, and for affording us every facility for pursuing our researches, thereby adding considerably to the pleasure and interest of our visit.

A list is appended of the 39 additional species taken by us, thus bringing up the total number of species, so far recorded from Lundy, to 501.

<i>Harpalus ruficola</i> , Stm.	<i>Micalymma breripenne</i> , Gyll.
<i>Bembidium lampros</i> , Hbst. (black var.)	<i>Anisotoma calcarata</i> , Er.
<i>Hydroporus pubescens</i> , Gyll.	<i>Cholera chrysomeloides</i> , Pz.
<i>Hydroporus lituratus</i> , F.	<i>Neuraphes sparshalli</i> , Den.
<i>Oethebius lejolisii</i> , Muls.	<i>Scydmaenus pusillus</i> , Müll.
<i>Homalota nigricornis</i> , Th.	<i>Gnathoneus punctulatus</i> , Th.
<i>Homalota clancula</i> , Er.	<i>Saprinus nitidulus</i> , Pk.
<i>Conosoma lividum</i> , Er.	<i>Corymbites aeneus</i> , L.
<i>Megacronus cingulatus</i> , Man.	<i>Telephorus bicolor</i> , F.
<i>Mycetoporus angularis</i> , Rey.	<i>Irhagonycha limbata</i> , Th.
<i>Quedius nigriceps</i> , Kr.	<i>Malthinus fasciatus</i> , Ol.
<i>Philonthus marginatus</i> , F.	<i>Longitarsus pellucidus</i> , Foud.
<i>Philonthus varians</i> , Pk.	<i>Mantura chrysanthemii</i> , Koch., var. <i>crotchii</i> , Al.
<i>Othius laeviusculus</i> , Steph.	<i>Crepidodera transversa</i> , Marsh.
<i>Lathrobium geminum</i> , Kr.	<i>Rhynchites minutus</i> , Hbst.
<i>Lathrobium multipunctum</i> , Gr.	<i>Strophosomus coryli</i> , F.
<i>Stenus diversus</i> , Aub.	<i>Hypera ramicis</i> , L.
<i>Stenus erichsoni</i> , Rye.	<i>Sibinia sodalis</i> , Germ.
<i>Bledius opacus</i> , Block.	<i>Rhinoneus castor</i> , F.
<i>Oxytelus sculptus</i> , Gr.	

Ants and Myrmecophiles on Lundy (with plate).

By HORACE DONISTHORPE, F.Z.S., F.E.S.

The only records of ants from the Isle of Lundy, that I can find, are by the late F. Smith, who visited the Island twice in August, 1869, chiefly in search of Hymenoptera, and found the following species:—*Myrmica ruginodis*, *Lasius niger*, *L. flavus*, and *Formica fusca* (*Ent. Ann.*, 1870, p. 24), and again in 1874, when he adds *Lasius alienus* and *Formica cunicularia* [*Ent. Mo. Mag.*, xi., 111. (1874)]. Having spent some nine days, as stated above by my friend Mr. Mitford, on Lundy, and having paid particular attention to ants' nests and their inhabitants, I am able to add a few species to the above lists, and also to record a certain number of Myrmecophilous creatures noticed.

Myrmica ruginodis, Nyl.—Not uncommon under stones.

M. laevinodis, Nyl.—Scarce.

M. ruginodis var. *laevino-ruginodis*, Forel.—One colony found.

M. scabrinodis, Nyl.—Not uncommon. The *Aphis Forda formicaria* was taken in one nest.

M. scabrinodis var. *sabuleti*, Mein.—Several colonies observed.

Tetramorium caespitum, L.—A number of colonies occurred, some being very large ones, under stones in different parts of the Island. They contained larvæ of various sizes and ♂ pupæ, and in one nest sex pupæ also, and a deilated ♀ was present in another. In one colony all the ♂ ♀ were very large and dark in colour, and no ♀ or brood was observed. The ground was very difficult to dig up, and nothing

else was found, though the nest might well have contained an *Anergates-Tetramorium* colony. Two small spiders taken with this ant on June 11th and 12th are considered by Dr. A. Randell Jackson to be *Acartanhenius scurrilis*, Cbr. This little species, which is new to Britain, is recorded by Wasmann with the same ant from the Rhineland and Bohemia. The *Aphidae*, *Pentaplis marginalis* and *Forda formicaria* were found, and in several nests a large number of *Paracletus cimiciformis*. The *Acarus*, *Laelaps equitans* was observed riding on the ants. *Platyarthrus hoffmanseggi*, *Beckia albina*, and a Proctotrupid not yet named completes the list of myrmecophiles found with *Tetramorium*. In three different nests a number of seeds were found, which Prof. Weise tells me are a *Cerastium* sp.?

Lasius niger, L.—Common. *Drusilla canaliculata* occurred in one nest.

Lasius alienus, Först.—Not uncommon. The *Aphidae*, *Geocica carnosa* and *Trama troglodytes*, and the Coccid *Ripersia subterranea*, occurred in these nests. *Peyerimhoffia brachyptera*, Kieffer, an aberrant *Sciara*, with short wings, was found in the galleries of one nest in June. This is its first record for Britain, and only two specimens taken by Mons. Peyerimhoff in Algeria have hitherto been recorded. *Trachyropoda excavata*, Wasm.? A number of a small *Acarus*, which appear to me to be this species, occurred in one nest.

Lasius flavus, F.—Common. Eggs, larvæ, and ♂, ♀, and ♀ pupæ were present in most of the nests. In one very large colony three deälated ♀ ♀ were found; this is very unusual; indeed, in our paper on the founding of colonies by queen ants, read at the International Entomological Congress for 1912, Crawley and I state that, "Certainly, we know of no case where more than two females have been found in one nest." This does not apply to virgin females, or deälated ♀ ♀ gathered together after the marriage flight, but in a well-established colony such as the above. A Proctotrupid not yet determined, *Beckia albina*, and the *Aphidae*, *Tycheoides hirsutum*, N. S., *Tetraneura ulmi* and *Macrosiphum*, N. S. (Theobald, MS.), were found at large in nests of this ant, and the *Acarus Cillibano comata*, fastened on the larvæ.

Lasius mistus, Nyl.—Two colonies of this addition to the island were observed which contained specimens of the *Acar*i, *Sphaerolaelaps holothyroides* and *Trachyropoda bostocki*. *Beckia albina* also occurred with this ant.

Formica fusca, L.—Plentiful. Large colonies occurred under stones which contained many deälated ♀ ♀. A number of microgynes were present, some of them being deälated, whilst four or five possessed some wings, and wing-stumps, evidently from last year. Eggs were found in all the nests, and larvæ, and ♂ and sex cocoons in some. *Drusilla canaliculata*, a Chalcid, a spider which Dr. Jackson is unable to name at present, and a number of a *Laelaps* sp.? (near to *L. myrmophilus*, Mich.) were found in these nests. The most interesting discovery, however, was a large number of the larvæ, all sizes, of *Atemeles emarginatus*, which were always situated on the ants' brood. As soon as the stone over a nest was lifted up, the first thing the ants did was to seize these interesting beetle larvæ and endeavour to carry them down the galleries into safety, and considerable celerity was required to secure any. The perfect insect is recorded by Joy and

Tomlin [*Ent. Mo. Mag.*, xliii., 28 (1907)], though they do not mention its host, and judging from the number of its larvæ observed in many parts of the island, it would seem to be abundant.

Formica fusca var. *fusco-rufibarbis*, Forel.—This variety was observed on the west coast only, it is probably the *F. cunicularia* referred to by F. Smith.

It is evident from the above notes that both the ants of this island and also the other inhabitants of their nests would well repay further study.

"A Swiss Eldorado" in 1913.

By ROSA E. PAGE, B.A.

Mr. Muschamp has, in the preceding number, given one aspect of his Eldorado; I am now going, in response to his request, to show the reverse side of the picture. I must, however, apologise to the reader for a second doleful article in one year, my excuse being that our late esteemed and revered Editor always considered that the lean years should be chronicled as well as the fat ones.

On July 27th, five nets were at work on the Stäfa marshes; *Coenonympha tiphon* was nearly over, but enough good specimens were obtainable if worked; their habits recalled to us the Spanish *C. iphioides*, *C. tiphon*, however, being much more conspicuous and easy to capture. *Aphantopus hyperantus* type, with many ab. *cavca* (these being especially numerous this year) was still plentiful and fresh, one remarkable specimen having the ground colour of the left hindwing underside creamy in lieu of the usual coloration, whilst the left forewing is devoid of all spotting, and has some of the membrane of the apical portion missing, an accident having evidently occurred during the pupal period. A few nice ♀s of *Melitaea dictynna* and *Lycaenaalcon* completed our short list of insects taken, the year being an exceptionally bad one here as everywhere else in Switzerland. In the afternoon a thunderstorm broke and rain continued during the rest of the day. The following morning looking much too unpromising for collecting, we visited Zürich; but, provokingly, out came the sun, of course too late for any alteration of our plans.

The 29th being fine, we walked, with Mr. Muschamp as our guide, from Glarus through shady woods up to the Children's Summer School, where a spring invites one to an *alfresco* lunch, with which, however, one must provide one's self, the school not possessing a superfluity, even of bread. Continuing through wood, we at last came out some hundred feet above a little gem of a lake, surrounded by a succession of grand and rugged slopes, every tint and line of which it reflected in its placid surface. This we skirted, taking the right hand side, the road running between the precipitous slopes and the flowery banks of the Klönthalensee to the Klönthal Hotel. The remarkable dearth of insects the whole way up was, I fear, a bad omen, nothing at all appearing but a few *Erebia stygine* in very fair condition, flying on the herbage at the base of the rocks beside the lake.

The next day we continued our ascent through the Rossmatterthal to the Club Hut, by the beautiful path described by Mr. Muschamp. Just above the chalets of Werben a few *Parnassius apollo* and *P. delius* were taken, the latter flying wildly in a gully beside the stream,