

on September 1st, records all species seen in flower on those dates. Most of the above investigations are in their preliminary stages and cannot be satisfactorily summarized, but copies of all of these may be seen in the Hon. Secretary's office.

A count of over 2,500 plants by the Harvey family and Miss J. Throver in August 1948 at North End showed that 0.5 per cent of plants of *Calluna vulgaris* were albino.

Further colonies of *Brassicella wrightii* have been noted by Mr. Wiggins and Mr. Morgan on the slopes of Quarry Bay and Halfway Wall Bay, while the recent cliff falls between Lametry and the main island are being rapidly re-colonized. These observations confirm that the Lundy Cabbage occurs on granite as well as on slate soils, and dispose of any fears that it might be in danger of extinction.

Ophioglossum vulgatum, with its variety *polyphyllous*, is much more widely spread on the Island than is suggested by Elliston Wright's records. It extends from near North End as far south as the Rocket Pond, though most of it is in Middle Park, especially near the Round Tower. *Botrychium lunaria* was not rediscovered in Wright's rather vaguely defined locality, but a large patch was found in the field north-west of the Old Light (OS 26), the position of the colony having been charted.

Lastly, in view of the need for soil analyses in the interpretation of ecological relationships, soil samples have been taken by Mr. Morgan from some of the more important areas. They have been analysed by Mr. J. Langmead, and full details are lodged with the Secretary. They may be summarized as follows :

The soil is acid, the pH varying from 4.9. to 6.0. The highest acidity is developed on the virgin moorland, the pasture land being less strongly acid, while the soils derived from the Devonian slates are more nearly neutral. The potash level, varying from 20 to 60 ppm of water-soluble K, expressed as K_2O , is higher than that of comparable soils on the Devon mainland. The phosphate status is less satisfactory, being below 1.0 ppm water-soluble P, expressed as P_2O_5 . The only exceptions were a sample taken on an arable field which has presumably been manured, and two samples from the East Sidings, in *Brassicella* habitats, where the higher phosphate content may be due to manuring by birds.

This has only been a preliminary survey, and it is hoped to follow up various special problems. The question of bird manuring and the chemical features of *Brassicella* habitats deserve attention, and it may be of interest to investigate the effect on the flora of experimental dressings of lime and phosphate.

Additions to the Lundy Flora.

1. Additions and amendments to the list in "Ilfracombe Flora and Fauna," both from reliable literature and recent investigations.

Ranunculus bulbosus L. Recorded Chanter and FD. Confirmed HGM and EDW, in face of FREW's statement to the contrary. Common over all southern half of the island.

R. ficaria L. Recorded Chanter, confirmed HGM East Sidings.

Caltha palustris L. Recorded FREW.

Cheiranthus cheiri L. Recorded FD possibly an escape.

Sinapis arvensis L. Recorded Chanter and FREW, confirmed HGM and EDW Millcombe.

Lepidium draba L. Found, EDW, 1947.

Cerastium tetrandrum Curt. Recorded FREW and FD.

Hypericum humifusum Vahl. Found HGM (Ident. checked EDW), later by MG. Tillage Field 1948.

Sarothamnus scoparius L. "L" omitted IFF.

Potentilla anserina L. Recorded FREW, found HGM, EDW, MG, Abundant.

Epilobium obscurum Schreb. Recorded FREW.

Rubia peregrina L. Found EDW, South End.

Matricaria inodora L. "L" omitted IFF.

Hieracium pilosella L. Recorded FREW, found HGM.

Erica cinerea L. Recorded FREW.

Armeria maritima Willd. "L" omitted IFF. The most obvious plant on the island.

Anagallis tenella L. Recorded FREW, found HGM, EDW.

Euphrasia occidentalis Wall. Recorded FREW. One species, presumably this, seen abundantly HGM, EDW, MG.

Atriplex hastata L. and var. *deltoides*, recorded FREW.

A. glabriuscula Edm. and var. *babingtonii*, recorded FREW.

Spiranthes spiralis (L). Koch. Recorded WBA, September 11th, 1948.

Narthecium ossifragum L. Recorded FREW, since seen EDW, CCH, LAH.

Lemna minor L. Found abundantly HGM, EDW.

Eleocharis palustris L. Recorded FREW.

Carex, *Agrostis*, *Festuca*. Several additional species of these genera have been recorded FREW.

2. Records awaiting further verification and/or fuller description, and on which information is desired.

Ranunculus acris L. Probably occurs.

R. hederaceus L. Recorded FREW and MG. Is this in fact *hederaceus* s.s. or *tenormandi*? The latter is recorded and is common on the island.

Helianthemum nummularium L. Recorded Loyd, but seems unlikely in view of the pH conditions.

Malva moschata L. Recorded Chanter. An unmistakable species, but requires modern confirmation.

Poterium officinale Gray. Recorded Loyd. Again, pH conditions make it unlikely.

Rosa canina L. Recorded MG with a query. Possibly *spinosissima*?

Filago sp. Seen HGM on tillage field, but not identified, 1947.

Erigeron acer L. Recorded Loyd, with query.

Limonium sp. Seen near Jenny's Cove, CCH, LAH, August 6th, 1948, but not identified.

Centaureum pulchellum (SW) Druce. Recorded FD.

Equisetum sp. Seen HGM at sea level in Quarry Bay, 1948, but not identified.

Mosses and Hepatics. Few have been identified. They would repay investigation, and constitute an important feature of the plant communities.

3. Additional list by MG and RJ, with no localities noted. Some of the species require confirmation:

<i>Arenaria serpyllifolia</i> L.	<i>Valeriana officinalis</i> L.
<i>Linum catharticum</i> L.	<i>Cirsium acaule</i> (L) Weber.
<i>Trifolium scabrum</i> L.	<i>Leontodon hispidus</i> L.
<i>Vicia hirsuta</i> (L.) S.F. Gray	<i>Stachys arvensis</i> L.
<i>Agrimonia eupatoria</i> L.	<i>Plantago maritima</i> L.
<i>Epilobium parviflorum</i> Schreb.	<i>Euphorbia pepus</i> L.

4. List of Lichenes, identified WAG, August 1948. No specific Lundy records are listed IFF.

Ramalina siliquosa A.L.Sm.

Usnea florida Web. On wall south of Old Light.

Lichina confinis Ag. Above *Ferrucaria* zone.

Cyphelium unguinans Trev. (?) Quarry Beach.

Xanthoria paristina Th. Fr.

X. polycarpa Oliv.

Physcia ciliaris DC. In moist crevice, Quarry Beach.

Peltigera (Peltidea) aphthosa Willd.

Peltigera (Eupeltigera) polydactyla Hoffm.

P. (Eupeltigera) canina Willd. (?) Quarry Beach. Almost like a Jew's Ear fungus.

- Verrucaria maura* Wahlenb.
Cladonia pyxidata Hoffm.
C.coccifera Willd.
Leciographa parasitica Mudd. Parasitic on encrusting lichen
at North End.
Thermutis velutina Th.Fr. (?) Quarry Beach.
Nomenclature from A. Lorrain Smith, "British Lichens" 1921.

KEY TO ABBREVIATIONS :

CCH	Mrs. Clare Harvey.	LAH	L. A. Harvey.
EWD	E. D. Wiggins.	MG	Mary Goddard.
FD	Flora of Devon.	RJ	Ruth Jelley.
FREW	F. R. Elliston Wright.	WAG	W. A. Gliddon.
HGM	H. G. Morgan.	WBA	W. B. Alexander.
IFF	Ilfracombe Flora and Fauna.		

**MISCELLANEOUS NOTES ON TERRESTRIAL
INVERTEBRATES**

To the present, little systematic ecological work has been attempted on the land and freshwater habitats of Lundy. Several general surveys have, however, been made, and a considerable amount of collecting has gone on, some of it in systematic fashion, much of it desultory.

As a result of general observations on the Insecta in 1947, H. G. Morgan reported, not as a survey, but as a guide for future work :

- Apterygota, Thysanura.** Two or three species present.
Collembola. Fairly numerous, both on land and on the shore.
Dermaptera. Present.
Hemiptera, Heteroptera. Aquatic forms fairly numerous: surveyed in 1947 by H.G.M., land-living forms not numerous.
Homoptera. Aphides numerous: several species noted, and further work proposed by H.G.M. Hoppers numerous, and several species worth investigation.
Plecoptera. None noted.
Ephemeroptera. None noted in July and August; probably present.
Odonata. Several species noted, both adults and nymphs. This would be a compact and interesting group for ecological study.
Neuroptera. None noted; almost certainly present.
Mecoptera. None noted.