

## Lichens of Lambay Island

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### INTRODUCTION

Prior to our visit in May 1987, information on the lichen flora of Lambay was sketchy, being based on a few records made by Isaac Carroll (1828-1880), mentioned by Knowles (1929), and a short list made by David McArdle (1849-1934) which appeared in the previously published survey of the island (McArdle, 1907). Few details survive of the visit made by Carroll, a very competent lichenologist, but herbarium packets in the Natural History Museum, London are dated June 1863 and several of his records appear in Leighton (1879) and Smith (1918, 1926). McArdle's list contains 17 taxa (14 species and 3 varieties) recorded by him during a brief visit made in November 1906, but several of these lichens are doubtful or difficult to interpret in the absence of supporting herbarium material. In the light of the above, a baseline survey for comparative studies is not feasible: had Matilda Knowles (1864-1933) been able to visit the island, no doubt she would have provided a detailed study of its lichen flora for this purpose, similar to that which she undertook on the nearby peninsula of Howth (Knowles, 1913).

The tides dictated the times of arrival and departure of our sailing-boat to Lambay and in consequence we were only able to spend a bare three hours there. We were accompanied by Peter James and Howard Fox who remained in the harbour area; the authors ranged more extensively over the island, paying particular attention to maritime zones, exposed rocks, man-made structures (especially those of the harbour, castle and chapel), and trees and shrubs. We had little opportunity to study terricolous habitats, substrata of which according to McArdle (1907) supported several *Cladonia* species as yet unconfirmed. In all, the group recorded 129 species, which although not a definitive list very considerably extends the knowledge of its lichen flora.

Lambay Island lies 4 km from the coast of Co. Dublin and is formed mainly of volcanic rocks; it covers an area of c. 250 hectares and its highest point is 127 m above sea-level. Lichenologically the island has much to offer in terms of the biodiversity of saxicolous habitats; there is also a reasonable number of mature trees, particularly around the Castle, and other habitats supporting corticolous and lichenicolous species. However, terricolous species were poorly represented; this contrasts significantly with the description of the island portrayed in Hart (1883) and Praeger (1907b) who draw attention to the fact that much of its surface was occupied by *Calluna* and *Erica cinerea*, and supported by McArdle (1907) in terms of the lichens he recorded. Praeger (1934) draws attention to the influence of large colonies of breeding herring gulls; from our observations it is apparent that this influence continues, and no doubt has greatly increased, particularly in respect of eutrophication, and consequently a representative heathland lichen flora may be close to extinction.

*Teloschistes flavicans*, which Carroll recorded on Lambay, has not been seen here since the 19<sup>th</sup> century and is no doubt extinct as it is in many other localities in the British Isles: this eye-catching bright orange species, formerly widespread on a variety of substrata, is now very localized, occurring in south-west Ireland, west Wales and south-

west England (Gilbert, 1998).

For accounts of the geology and former natural history of Lambay see the papers contained in Praeger (1907a) and for a more detailed review of the topography, vegetation and bryophyte flora of Lambay see Synnott (1990).

### THE LICHENS

The following list of 142 lichens and 1 lichenicolous fungus includes those taxa recorded by earlier workers, indicated by square brackets [ ], not observed during the 1987 visit. Additional records provided by P. W. James (*in litt.*) are indicated by **PWJ**, and new vice-county (Dublin, H21) records (cf. Seaward 1984), subsequently included in Seaward (1994) are indicated by **VCR**. Substrata for the more recently recorded species are as follows: **S** = saxicolous (on rocks, walls and other artificial stone surfaces); **C** = corticolous (on trees and shrubs); **T** = terricolous (on soil). The nomenclature is according to Purvis *et al.* (1994) and voucher specimens for some taxa are to be found in the Natural History Museum, London (BM) and Herb. Seaward.

<i>Anaptychia runciniata</i> (With.) J.R.Laundon	S
<i>Anisomeridium biforme</i> (Borrer) R.C.Harris	C
<i>Arthonia impolita</i> (Hoffm.) Borrer ( <b>VCR</b> )	C
<i>Arthonia radiata</i> (Pers.) Ach.	C
[ <i>Arthonia varians</i> (Davies) Nyl. on <i>Lecanora rupicola</i> – Carroll, in Leighton (1879: 426) and Knowles (1929: 383)]	
<i>Aspicilia caesiocinerea</i> (Nyl. ex. Zahlbr.) Arnold	S
<i>Aspicilia calcarea</i> (L.) Mudd	S
[ <i>Aspicilia cinerea</i> (L.) Körber – in Knowles (1929: 286) and Smith (1918: 316)]	
<i>Aspicilia contorta</i> (Hoffm.) Krempelh.	S
<i>Aspicilia leproscens</i> (Sandst.) Havaas	S
<i>Bacidia phacodes</i> Körber ( <b>PWJ</b> )	C
<i>Bacidia rubella</i> (Hoffm.) A.Massal. ( <b>PWJ</b> )	C
<i>Buellia aethalea</i> (Ach.) Th.Fr.	S
<i>Buellia punctata</i> (Hoffm.) A.Massal.	C
<i>Buellia stellulata</i> (Taylor) Mudd	S
<i>Buellia subdisciformis</i> (Leighton) Jatta ( <b>PWJ</b> )	S
<i>Caloplaca citrina</i> (Hoffm.) Th.Fr.	S
<i>Caloplaca crenularia</i> (With.) J.R.Laundon	S
<i>Caloplaca flavescens</i> (Huds.) J.R.Laundon	S
<i>Caloplaca flavovirescens</i> (Wulfen) Dalla Torre & Sarnth.	S
<i>Caloplaca holocarpa</i> (Hoffm.) Wade	S
<i>Caloplaca marina</i> (Wedd.) Zahlbr. ex Du Rietz	S
<i>Caloplaca microthallina</i> (Wedd.) Zahlbr.	S
<i>Caloplaca saxicola</i> (Hoffm.) Nordin	S
<i>Caloplaca thallincola</i> (Wedd.) Du Rietz	S
<i>Caloplaca verruculifera</i> (Vainio) Zahlbr.	S
<i>Candelariella aurella</i> (Hoffm.) Zahlbr.	S
<i>Candelariella coralliza</i> (Nyl.) H.Magn.	S
<i>Candelariella medians</i> (Nyl.) A.L.Sm.	S
<i>Candelariella vitellina</i> (Hoffm.) Müll.Arg.	S

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<i>Catillaria chalybeia</i> (Borrer) A.Massal.	S
<i>Catillaria lenticularis</i> (Ach.) Th.Fr.	S
<i>Chrysothrix candelaris</i> (L.) J.R.Laundon	C
[ <i>Cladonia arbuscula</i> (Wallr.) Flotow – as <i>C. rangiferina</i> var. <i>sylvatica</i> in McArdle (1907: 111)]	
[ <i>Cladonia gracilis</i> (L.) Willd. – in McArdle (1907: 110) – possible, but probably <i>C. furcata</i> (Huds.) Schrader]	
[ <i>Cladonia pyxidata</i> (L.) Hoffm. – in McArdle (1907: 110) – possible, but probably another species]	
[ <i>Cladonia rangiferina</i> (L.) Weber ex Wigg. – in McArdle (107: 111) – unlikely; possibly <i>C. arbuscula</i> , <i>C. ciliata</i> var. <i>tenuis</i> or <i>C. rangiformis</i> ]	
<i>Cladonia rangiformis</i> Hoffm.	T
[ <i>Cladonia stellaris</i> (Opiz.) Pouzar & Vezda – as <i>C. rangiferina</i> var. <i>alpestris</i> in McArdle (1907: 111) and as <i>C. alpestris</i> in Knowles (1929: 309) – unlikely; possibly <i>C. portentosa</i> or another species - see under <i>C. rangiferina</i> above].	
<i>Collema auriforme</i> (With.) Coppins & J.R.Laundon	S
<i>Collema tenax</i> var. <i>ceranoides</i> (Borrer) Degel.	T
<i>Diploicia canescens</i> (Dickson) A.Massal.	C, S
<i>Diplotomma alboatrum</i> (Hoffm.) Flotow	S
<i>Diplotomma chlorophaeum</i> (Hepp ex Leighton) Szat.	S
<i>Dirina massiliensis</i> forma <i>sorediata</i> (Müll.Arg.) Tehler (VCR)	S
<i>Enterographa crassa</i> (DC.) Fée	C
<i>Evernia prunastri</i> (L.) Ach.	C
<i>Fuscidea cyathoides</i> (Ach.) V. Wirth & Vezda	S
[ <i>Graphis scripta</i> (L.) Ach. – in McArdle (1907: 111)]	
<i>Hyperphyscia adglutinata</i> (Flörke) H.Mayrhofer & Poelt	C
[ <i>Hyrogymnia physodes</i> (L.) Nyl. – in McArdle (1907: 111)]	
<i>Lecanactis premnea</i> (Ach.) Arnold	C
<i>Lecania cyrtella</i> (Ach.) Th.Fr. (PWJ)	C
<i>Lecania erysibe</i> (Ach.) Mudd	S
<i>Lecanora actophila</i> Wedd.	S
<i>Lecanora albescens</i> (Hoffm.) Branth & Rostrup	S
<i>Lecanora campestris</i> (Schaerer) Hue	S
<i>Lecanora chlarotera</i> Nyl.	C
<i>Lecanora crenulata</i> Hook.	S
<i>Lecanora dispersa</i> (L.) Sommerf.	S
<i>Lecanora expallens</i> Ach.	C
<i>Lecanora fugiens</i> Nyl.	S
<i>Lecanora gangaleoides</i> Nyl.	S
<i>Lecanora helicopsis</i> (Wahlenb.) Ach.	S
<i>Lecanora intricata</i> (Ach.) Ach.	S
<i>Lecanora muralis</i> (Schreber) Rabenh.	S
<i>Lecanora polytropa</i> (Hoffm.) Rabenh.	S
<i>Lecanora rupicola</i> (L.) Zahlbr.	S

<i>Lecanora sulphurea</i> (Hoffm.) Ach.	S
<i>Lecidea lithophila</i> (Ach.) Ach.	S
<i>Lecidella asema</i> (Nyl.) Knoph & Hertel	S
<i>Lecidella elaeochroma</i> (Ach.) M.Choisy	C
<i>Lecidella scabra</i> (Taylor) Hertel & Leuckert	S
<i>Lecidella stigmatea</i> (Ach.) Hertel & Leuckert	S
<i>Lepraria incana</i> (L.) Ach.	C, S
<i>Lepraria lobificans</i> Nyl. (VCR) (PWJ)	S
<i>Micarea prasina</i> Fr.	C
<i>Ochrolechia androgyna</i> (Hoffm.) Arnold	C, S
<i>Ochrolechia parella</i> (L.) A.Massal.	S
<i>Opegrapha atra</i> Pers.	C
<i>Opegrapha rufescens</i> Pers. (VCR)	C
<i>Opegrapha vulgata</i> (Ach.) Ach.	C
<i>Parmelia caperata</i> (L.) Ach.	C
<i>Parmelia glabratula</i> (Lamy) Nyl.	C
<i>Parmelia perlata</i> (Huds.) Ach.	C
<i>Parmelia revoluta</i> Flörke	C
[ <i>Parmelia saxatilis</i> (L.) Ach. – in McArdle (1907: 111)]	
<i>Parmelia subaurifera</i> Nyl.	C
<i>Parmelia subrudecta</i> Nyl.	C
<i>Parmelia sulcata</i> Taylor	C
<i>Parmelia verruculifera</i> Nyl. (VCR)	S
[ <i>Peltigera canina</i> (L.) Willd. – in McArdle (1907: 111) – probably <i>P. membranacea</i> ]	
<i>Peltigera lactucifolia</i> (With.) J.R.Laundon (VCR)	T
<i>Peltigera membranacea</i> (Ach.) Nyl. (VCR)	T
<i>Pertusaria amara</i> (Ach.) Nyl.	C
<i>Pertusaria corallina</i> (L.) Arnold	S
<i>Pertusaria pertusa</i> (Weigel) Tuck.	C
<i>Pertusaria pseudocorallina</i> (Lilj.) Arnold	S
<i>Phaeophyscia nigricans</i> (Flörke) Moberg (VCR)	S
<i>Phaeophyscia orbicularis</i> (Necker) Moberg	S
<i>Phlyctis argena</i> (Sprengel) Flotow	C
<i>Physcia adscendens</i> (Fr.) H.Olivier	C, S
<i>Physcia caesia</i> (Hoffm.) Fürnr.	S
<i>Physcia tenella</i> (Ach.) Müll.Arg.	C
<i>Placynthiella icmalea</i> (Ach.) Coppins & P.James	C
<i>Placynthium nigrum</i> (Huds.) Gray	S
<i>Porina chlorotica</i> (Ach.) Müll.Arg.	S
<i>Porpidia tuberculosa</i> (Sm.) Hertel & Knopf	S
<i>Pyrenocollema halodytes</i> (Nyl.) R.C.Harris	S
<i>Pyrenula macrospora</i> (Degel.) Coppins & P.James (VCR)	C
<i>Pyrrhospora querneae</i> (Dickson) Körber	C
[ <i>Ramalina calicaris</i> (L.) Fr. – in McArdle (1907: 111) – probably another species]	
<i>Ramalina canariensis</i> Steiner	C, S
<i>Ramalina farinacea</i> (L.) Ach.	C

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<i>Ramalina fastigiata</i> (Pers.) Ach.	C
<i>Ramalina fraxinea</i> (L.) Ach.	C
<i>Ramalina lacera</i> (With.) J.R.Laundon (VCR)	C
<i>Ramalina siliquosa</i> (L.) Ach.	S
<i>Ramalina subfarinacea</i> (L.) Ach.	S
<i>Rhizocarpon concentricum</i> (Davies) Beltr.	S
<i>Rhizocarpon geographicum</i> (L.) D.C.	S
<i>Rhizocarpon obscuratum</i> (Ach.) A.Massal.	S
<i>Rhizocarpon richardii</i> (Nyl.) Zahlbr.	S
<i>Rinodina gennarii</i> Bagl.	S
<i>Scoliciosporum umbrinum</i> (Ach.) Arnold	S
[ <i>Sphaerophorus globosus</i> (Huds.) Vainio – in McArdle (1907: 111)]	
[ <i>Teloschistes flavicans</i> (Swartz) Norman – Carroll, in Leighton (1879: 131), Smith (1918: 191) and Knowles (1929: 252)]	
<i>Tephromela atra</i> (Huds.) Hafellner ex Kalb	S
<i>Toninia aromatica</i> (Sm.) A.Massal.	S
<i>Trapelia involuta</i> (Taylor) Hertel	S
<i>Trapelia placodioides</i> Coppins & P.James (VCR) (PWJ)	S
<i>Trapeliopsis granulosa</i> (Hoffm.) Lumbsch	C
<i>Verrucaria fusconigrescens</i> Nyl. (VCR)	S
<i>Verrucaria glaucina</i> auct.	S
<i>Verrucaria maura</i> Wahlenb.	S
<i>Verrucaria mucosa</i> Wahlenb.	S
<i>Verrucaria muralis</i> Ach.	S
<i>Verrucaria nigrescens</i> Pers.	S
<i>Verrucaria striatula</i> Wahlenb.	S
<i>Xanthoria calcicola</i> Oxner	S
<i>Xanthoria candelaria</i> (L.) Th.Fr.	C
<i>Xanthoria elegans</i> (Link) Th.Fr.	S
<i>Xanthoria parietina</i> (L.) Th.Fr.	C, S

As a consequence of the above work, the lichen flora of Lambay can be summarized as follows: 143 taxa (142 lichens and 1 lichenicolous fungus) have so far been reported from the island, of which 9, although not seen for almost a century, probably still exist there, and 5 are doubtful in the absence of herbarium material to support them.

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