

## THE FLORA OF INISHBOFIN AND INISHSHARK

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### INTRODUCTION

Inishbofin and Inishshark are two adjacent islands off the north-western coast of Co. Galway, Ireland, separated from each other by a strait  $\frac{3}{4}$  of a mile wide, and from the mainland by  $3\frac{1}{2}$  miles of open sea. Inishbofin has an area of just over  $3\frac{1}{2}$  square miles; Inishshark of rather less than a square mile. There are a few other islets in the group, all less than 100 acres in area, but only one of them (Inishgort, to the S.E. of Inishshark) was visited for the purposes of this survey. The islands are composed almost entirely of Silurian slates and shales, and rise to a height of 292 feet (Bofin) and 326 feet (Shark). Some patches of glacial drift are, or have been farmed, but the greater part of the islands has the rock covered only by a thin layer of peaty soil, which is continually being cut for fuel. There are a very few small bogs, where the peat is deeper, and these, too, have been extensively cut. Most of the coast is rocky, rising in places to form impressive cliffs, but there is a good beach on the E. coast of Bofin. Bofin retains a population of small farmers and lobster-fishers, augmented in summer by day-trippers and visitors to the small hotel. Shark was evacuated in 1961.

The first attempt at a systematic survey of the flora of these islands was made by More and Barrington in mid-August, 1875; they spent four days on Bofin and one on Shark and noted 303 species (More, 1876). No species was seen on Shark which was not also seen on Bofin, but their list does not indicate which species were found on Shark. In 1911 Praeger, rightly suspecting that More's list was incomplete, spent three days on Bofin in late July. He added 82 species (Praeger, 1911*b*) and failed to find only 12 from More's list.

In 1965 D.A.W., feeling that records more than 50 years old were not adequate for the projected *Flora of Connemara and the Burren*, spent 3 days on Bofin in early June, with a party of students. Independently, and without knowledge of this visit, J.H., as a member of an expedition from University College, Bangor, spent a month on Inishshark in July-August of the same year and also paid hasty visits to Bofin and Inishgort. Collation of our lists during 1966 revealed some discrepancies, and in order to resolve these and to look for some species for which his 1965 visit had been too early, D.A.W. returned to Bofin for 3 days in late July, 1967. Miss M. Scannell and Miss A. Folan visited Bofin in May, 1967, primarily to collect algae and bryophytes, but noted also some vascular plants; a few of their records are incorporated in the lists below.

The result of our visits has been to establish a list of some 370 species for the archipelago. We have confirmed all but 33 of the species on Praeger's list (excluding *Rubi*) and one of the species noted by More but not seen by Praeger, and we have added a further 36 species not seen by our predecessors. Of these 22 are entirely new, and 14 are due to the recognition today of segregates which were not recognised as species in 1911.

#### CHARACTER OF THE VEGETATION

The most striking feature of the vegetation is the complete absence of native trees and shrubs more than about a foot in height; even planted shrubs are few and stunted. There is, in consequence, an almost complete absence of shade and shelter. The farmed land is almost entirely under grass; cultivation is restricted to potato-patches and a very few small fields of cereals. Much of the surface is covered by heath, with semi-prostrate *Calluna* or *Nardus* dominant; there are also some patches of bog and marsh. On the cliff-tops, especially towards the west, there is a very fine development of *Plantago*-sward (Tansley, 1939, p. 900), which is stabilized not only by extreme exposure to wind but also by a considerable population of rabbits. The other sub-maritime communities are fragmentary, there being no real salt-marsh and only a very small development of sand-dunes. There are six small lakes on Bofin, of which one is brackish. For a more detailed description see Praeger (1911*b*); it should be noted, however, that he, following More, has transposed the names of Loughnagrooan and Lough Gowlanagower. We found *Eriocaulon* abundant in the latter and *Isoetes* in the former; it seems unlikely that these have changed places since 1911.

#### LIST OF SPECIES

In the following lists the order and nomenclature follows that of Dandy (1958), except in a few cases where nomenclature follows that used in *Flora Europaea* (Tutin *et al.* 1964 and 1968) or is in accordance with editorial policy. In these cases the name used by Dandy is given in parentheses. Hybrids have not been included unless they are fertile or have powers of vegetative reproduction sufficient to establish themselves as permanent members of the flora. Planted shrubs are included only if they are found far from houses.

The letters after each name indicate the authors who have seen it on the islands, M, P, W and H indicating respectively More, Praeger, Webb and Hodgson; (!) stands for (MPWH) and indicates that it was seen by all four. Species found on Shark and/or Gort as well as Bofin are marked with an asterisk (\*); those seen on Shark alone with a dagger (†). Species without any distinguishing mark have been seen only on Bofin. Notes on abundance and rarity are to be interpreted by the standards of western Ireland.

##### (1). OLD RECORDS CONFIRMED

- \* 2/1. SELAGINELLA SELAGINOIDES (L.) Link. (PH). Locally frequent on Shark; not rediscovered on Bofin where, if still present, it must be very rare.
- 3/2. ISOETES SETACEA Lam. (*I. echinospora* Durieu). (MPW).
- 4/5. EQUISETUM FLUVIATILE L. (!).
- 4/9. E. ARVENSE L. (!).

- 5/1. *OSMUNDA REGALIS* L. (!).
- 7/2. *HYMENOPHYLLUM WILSONII* Hook. (PW). Rare; but as well as on bluffs near Church Lough, it grows near the west end of Bofin (Miss A. Folan).
- \* 8/1. *PTERIDIUM AQUILINUM* (L.) Kuhn. (!).
- \* 13/1. *BLECHNUM SPICANT* (L.) Roth. (!).
- \* 15/1. *ASPLENIUM ADIANTUM-NIGRUM* L. (!). Unusually abundant.
- \* 15/4. *A. MARINUM* L. (!). On Shark this species grows on walls and rocks at some distance from the sea.
- 15/7. *A. RUTA-MURARIA* L. (MPW). Rare.
- \* 18/1. *ATHYRIUM FILIX-FEMINA* (L.) Roth. (!).
- \* 21/1. *DRYOPTERIS FILIX-MAS* (L.) Schott. (!).
- \* 21/7. *D. DILATATA* (Hoffm.) A. Gray. (!).
- 21/8. *D. AEMULA* (Ait.) Kuntze. (MPW). Rare.
- 25/1. *POLYPODIUM VULGARE* L. (!). Most of the plants were very dwarf, with few fertile fronds, and were difficult to assess. Subsp. *vulgare* (tetraploid) seems to predominate, but at least one plant from a wall north-east of Bofin harbour was, by its annulus-count, referable to subsp. *prionodes* Rothm. (hexaploid). Miss Scannell collected an apparent hybrid between the two subspecies.
- 34/1. *JUNIPERUS COMMUNIS* L. subsp. *NANA* Syme. (MPW). Rare.
- 36/1. *CALTHA PALUSTRIS* L. (PW).
- \* 46/1. *RANUNCULUS ACRI* L. (!).
- \* 46/2. *R. REPENS* L. (!).
- 46/3. *R. BULBOSUS* L. (MPW). Only on blown sand.
- \* 46/12. *R. FLAMMULA* L. (!).
- \* 46/16. *R. HEDERACEUS* L. (!).
- 46/21. *R. TRICHOPHYLLUS* Chaix. (MPW).
- 46/23. *R. BAUDOTII* Godr. (MPW).
- \* 46/24. *R. FICARIA* L. (PWH). W's 1965 visit was early enough to show that it is widespread and abundant on Bofin in open grassland.
- 56/1. *NUPHAR LUTEA* (L.) Sm. (!).
- 66/4. *FUMARIA BASTARDII* Bor. (MPW).
- 67/3. *BRASSICA RAPA* L. (!).
- 67/4. *B. NIGRA* (L.) Koch. (MPW).
- \* 70/1. *SINAPIS ARVENSIS* L. (!).
- 70/2. *S. ALBA* L. (MPW). Rare.
- 77/1. *CAKILE MARITIMA* Scop. (MPW). Rare.
- \* 80/1. *CORONOPUS SQUAMATUS* (Forsk.) Aschers. (!). Plentiful, not only as a ruderal, but also as a garden weed.
- 80/2. *C. DIDYMUS* (L.) Sm. (!). Abundant, and, like the preceding, common as a weed.
- \* 86/1. *CAPESELLA BURSA-PASTORIS* (L.) Medic. (!).
- \* 88/1. *COCHLEARIA OFFICINALIS* L. (!). In addition to normal specimens some dwarf plants rather suggestive of *C. scotica* Druce were seen on Bofin and Shark; it is difficult to name such plants from extremely exposed conditions in W. Ireland without cultivation. Some of Praeger's records of *C. groenlandica* for Western Ireland probably refer to dwarf forms of *C. officinalis*.

- 88/5. *C. DANICA* L. (MPW). Rare; seen only on the ruined church on Bofin.
- \* 97/1. *CARDAMINE PRATENSIS* L. (!).
- 97/4. *C. FLEXUOSA* With. (PW). Rare.
- 100/5. *ARABIS BROWNII* Jord. (PW). Rare.
- 102/1. *NASTURTIUM OFFICINALE* R.Br. (*Rorippa nasturtium-aquaticum* (L.) Hayek). (!). Normal plants occur by streams leading into the inner harbour on Bofin; in drains E. of the ruined church the species occurs mostly as var. *stifolium*, with stems up to 1.5 m high and 20 mm in diameter, and with leaves 25 cm long.
- \* 113/4. *VIOLA RIVINIANA* Reichb. (!).
- 113/6. *V. CANINA* L. (MP). Overlooked by W and H, but collected by Miss Scannell on stony ground near the centre of Bofin.
- 113/9. *V. PALUSTRIS* L. (!).
- \* 114/2. *POLYGALA SERPYLLIFOLIA* Hose. (!). Less common than one would expect from the terrain.
- 115/1. *HYPERICUM ANDROSAEMUM* L. (MPW). In several places, but only as isolated, small plants.
- \* 115/8. *H. TETRAPTERUM* Fr. (!).
- \* 115/9. *H. HUMIFUSUM* L. (!). Locally abundant on banks.
- \* 115/11. *H. PULCHRUM* L. (!).
- \* 115/14. *H. ELODES* L. (!).
- \* 117/1. *TUBERARIA GUTTATA* (L.) FOURT. subsp. *BREWERI* (Planch.) E. F. Warb. (!). Widespread on the higher parts of both islands, on thin peat with rock-outcrops, but rather thinly scattered and not as abundant as Praeger's references would imply.
- 122/1. *ELATINE HEXANDRA* (Lapierre) DC. (MPW).
- \* 123/2. *SILENE VULGARIS* (Moench) Garcke subsp. *MARITIMA* With. A. & D. Löve (*S. maritima* With.). (!).
- 124/3. *LYCHNIS FLOS-CUCULI* L. (MPW).
- \* 131/7. *CERASTIUM FONTANUM* Baumg. subsp. *TRIVIALE* (Link) Jalas (*C. holosteoides* Fr.). (!).
- \* 131/8. *C. GLOMERATUM* Thuill. (!). Abundant on Shark, on cliff-tops as well as on disturbed ground.
- 131/10. *C. DIFFUSUM* Pers. (*C. atrovirens* Bab.). (MPW).
- \* 133/2. *STELLARIA MEDIA* (L.) Vill. (!).
- \* 133/8. *S. ALSINE* Grimm. (PWH).
- \* 136/3. *SAGINA MARITIMA* Don. (PWH). Especially abundant on Shark.
- \* 136/4. *S. PROCUMBENS* L. (!).
- \* 136/9. *S. SUBULATA* (Sw.) C. Presl. (!). Rare.
- \* 139/1. *HONKENYA PEPLOIDES* (L.) Ehrh. (!). On Bofin and Gort, but not seen on Shark.
- 141/1. *ARENARIA SERPYLLIFOLIA* L. (MPW).
- 142/1. *SPERGULA ARVENSIS* L. (MPW).
- \* 143/3. *SPERGULARIA RUPICOLA* Lebel ex Le Jolis. (!).
- \* 149/1. *MONTIA FONTANA* L. (!). Abundant. A plant collected by Miss Scannell appears to be referable to subsp. *chondrosperma* (Fenzl) Walters.

- \* 154/4. *CHENOPodium ALBum* L. (!). Now very rare on both islands; in many parts of Ireland this species seems to be giving place to *Atriplex patula*.
- \* 155/1. *BETA VULGARIS* L., subsp. *MARITIMA* (L.) Arcangeli. (PWH). Noted by Praeger on sandy and gravelly shores on the S. & E. sides of Bofin, but frequent also on cliffs at the W. end of both islands.
- \* 156/2. *ATRIPLEX PATULA* L. (!).
- \* 156/3. *A. HASTATA* L. (PWH).
- \* 156/4. *A. GLABRIUSCULA* Edmondst. (!).
- 159/1. *SALSOLA KALI* L. (MPW).
- \* 166/4. *LINUM CATHARTICUM* L. (!).
- \* 167/1. *RADIOLA LINOIDES* Roth. (!). Remarkably abundant on the N. & W. parts of Bofin, where it often attains to subdominance on eroded, west-facing, peaty slopes.
- 168/11. *GERANIUM DISSECTUM* L. (!).
- 168/13. *G. MOLLE* L. (MPW).
- 168/16. *G. ROBERTIANUM* L. (MPW). The typical plant and not, as indicated by More, var. *purpureum* (Vill.) Forst. (*G. purpureum* Vill.).
- 169/3. *ERODIUM CICUTARIUM* (L.) L'Hérit. (!).
- 170/1. *OXALIS ACETOSELLA* L. (MPW).
- 187/1. *ULEX EUROPAEUS* L. (PW). Only a few planted hedges; not naturalized.
- \* 192/2. *TRIFOLIUM PRATENSE* L. (!).
- \* 192/18. *T. REPENS* L. (!).
- 192/21. *T. CAMPESTRE* Schreb. (PH). Rare.
- 192/23. *T. DUBIUM* Sibth. (!).
- \* 193/1. *ANTHYLLIS VULNERARIA* L. (!).
- \* 195/1. *LOTUS CORNICULATUS* L. (!).
- \* 206/1. *VICIA HIRSUTA* (L.) Gray. (!). Rather rare, but probably varying in abundance from year to year.
- \* 206/4. *V. CRACCA* L. (!).
- \* 206/11. *V. SEPIUM* L. (!).
- \* 206/14. *V. SATIVA* L. (!).
- \* 207/4. *LATHYRUS PRATENSIS* L. (!). Apparently increasing; now abundant around Church Lough.
- 207/11. *L. MONTANUS* Bernh. (PW).
- 210/2. *FILIPENDULA ULMARIA* (L.) Maxim. (!).
- 211/11(104). *RUBUS VILICAULIS* Koehlex Weihe & Nees. (MPW). Only 2 specimens of the genus were collected, and both seem to agree best with this species, although one has white flowers and the other pink.
- \* 212/2. *POTENTILLA PALUSTRIS* (L.) Scop. (!).
- \* 212/5. *P. ANSERINA* L. (!).
- \* 212/13. *P. ERECTA* (L.) Räusch. (!).
- \* 212/14. *P. ANGLICA* Laichard. (!).
- 218/1. *AGRIMONIA EUPATORIA* L. (MPW). Rare; but seen just behind the beach on the E. coast of Bofin, as well as in More's station.

- 225/4. *ROSA PIMPINELLIFOLIA* L. (MPW). Seen only on the S.E. part of Bofin; very dwarf and not flowering.
- 225/8. *R. CANINA* L. (MPW). Rare.
- 226/1. *PRUNUS SPINOSA* L. (MPW). Rare, and very dwarfed.
- \* 235/1. *RHODIOLA ROSEA* L. (*Sedum rosea* (L.) Scop.). (PWH). Local on both islands on steep but not vertical sea-cliffs; abundant where it occurs.
- \* 235/5. *SEDUM ANGLICUM* Huds. (!). Very abundant on both islands, and on a wide variety of habitats, from bare maritime rocks to bogs and marshes among *Sphagnum* or *Callitriche*.
- 235/8. *S. ACRE* L. (!). On calcareous sands.
- 239/5. *SAXIFRAGA SPATHULARIS* Brot. (!). Only on one inland cliff.
- \* 247/1. *DROSERA ROTUNDIFOLIA* L. (!). Abundant, and often very large.
- \* 249/1. *LYTHRUM SALICARIA* L. (!).
- \* 250/1. *L. PORTULA* (L.) D. A. Webb (*Peplis portula* L.). (!). Very frequent on Bofin, but rare on Shark.
- 254/2. *EPILOBIUM PARVIFLORUM* Schreb. (MPW).
- 254/3. *E. MONTANUM* L. (MPH). Recorded without comment by M and P; noted as a weed in hotel garden on Bofin by H in 1965, but searched for here (and elsewhere) by W in 1967 and not found.
- \* 254/9. *E. OBSCURUM* Schreb. (!). Abundant.
- \* 254/10. *E. PALUSTRE* L. (MPH). Reported by M and P as frequent, and recorded by H for both islands; searched for by W in 1967 but not found.
- 259/4. *MYRIOPHYLLUM ALTERNIFLORUM* DC. (!).
- \* 262/1. *CALLITRICHE STAGNALIS* Scop. (!).
- \* 262/2. *C. PLATYCARPA* Kütz. (MH). On account of nomenclatural confusion it is not clear whether Praeger also saw this species.
- 262/4. *C. INTERMEDIA* Hoffm. (MPW). The only specimen seen was referable to subsp. *pedunculata* (DC.) Clapham.
- \* 268/1. *HEDERA HELIX* L. (!).
- \* 269/1. *HYDROCOTYLE VULGARIS* L. (!).
- 272/1. *ERYNGIUM MARITIMUM* L. (PW). Rare.
- 282/1. *CONIUM MACULATUM* L. (!).
- \* 285/2. *APIUM NODIFLORUM* (L.) Lag. (!).
- \* 285/4. *A. INUNDATUM* (L.) Reichb. f. (!).
- 293/1. *CONOPODIUM MAJUS* (Gouan) Loret. (PW). Rare.
- \* 298/1. *CRITHMUM MARITIMUM* L. (!).
- 300/5. *OENANTHE CROCATI* L. (PW).
- \* 307/1. *ANGELICA SYLVESTRIS* L. (!). Widespread, but much less common, even on cliffs, than might be expected.
- \* 311/1. *HERACLEUM SPHONDYLIIUM* L. (!). Seen by More only on one lawn; noted by Praeger as common, which it is still.
- \* 314/1. *DAUCUS CAROTA* L. (!).
- 319/9. *EUPHORBIA HELIOSCOPIA* L. (MPW). Noted by M as rare and by P as common, it must now be considered rare again.
- 319/10. *E. PEPLUS* L. (PWH). Not seen by M; noted as local by P; now fairly common.

- 320/1. *Polygonum aviculare* L. (MPW).
- 320/2. *P. oxyspermum* C. A. Meyer & Bunge ex Ledeb. subsp. *raii* (Bab.) D. A. Webb & A. O. Chater (*P. raii* Bab.). (PW). Described by Pas 'luxuriant'; W found none in 1965 and 2 small plants in 1967. The species is decreasing in many parts of Ireland.
- \* 320/8. *P. amphibium* L. (!).
- 320/9. *P. persicaria* L. (!).
- 320/12. *P. hydropiper* L. (!).
- 320/15. *Polygonum convolvulus* L. (MPW). Now rare; seen in one field at Cloonamore (Bofin).
- \* 325/1. *Rumex acetosella* L. (!).
- \* 325/2. *R. acetosa* L. (!).
- \* 325/11. *R. crispus* L. (!).
- \* 325/12. *R. obtusifolius* L. (!).
- \* 325/15. *R. conglomeratus* Muir. (PWH). P saw only one plant; it is now established on Bofin, though still rather rare; only one plant was seen on Shark.
- 328/1. *Urtica urens* L. (!). Rather rare.
- \* 328/2. *U. dioica* L. (!).
- 333/1. *Myrica gale* L. (MPW).
- 342/3. *Populus tremula* L. (MPW). Rare, and probably diminishing.
- 343/9. *Salix viminalis* L. (!). A few lines of planted bushes; not naturalized.
- 343/12b. *S. atrocinerea* Brot. (*S. cinerea* L.). (MPW).
- 343/9 × 12. *S. × smithiana* Willd. (MPW). Nearly gone; in 1967 only one small bush was seen; it was almost buried in the reedswamp by Church Lough.
- \* 343/16. *S. repens* L. (!).
- \* 346/1. *Calluna vulgaris* (L.) Hull. (!). Very stunted, but dominant over most of the isands.
- \* 357/1. *Erica tetralix* L. (!).
- \* 357/4. *E. cinerea* L. (!).
- 358/2. *Vaccinium myrtillus* L. (MPW). Only on one line of rocky bluffs.
- \* 364/1. *Empetrum nigrum* L. (MPH). In several places on Shark; not refound on Bofin and certainly rare, but perhaps overlooked.
- \* 366/1. *Armeria maritima* (Mill.) Willd. (!).
- \* 367/5. *Primula vulgaris* Huds. (!).
- 370/1. *Lysimachia nemorum* L. (PW).
- \* 372/1. *Anagallis tenella* (L.) L. (!). Very abundant in a wide range of communities.
- \* 372/2. *A. arvensis* L. (!).
- \* 372/4. *A. minima* (L.) E. H. L. Krause. (!). Frequent in suitable places.
- \* 373/1. *Glaux maritima* L. (!).
- \* 374/1. *Samolus valerandi* L. (!).
- \* 382/4. *Centaureum erythraea* Rafn. (!).
- \* 385/1. *Gentianella campestris* (L.) Börner. (!). Noted as frequent by M, but only one small colony was seen on each island.

- 386/1. *MENYANTHES TRIFOLIATA* L. (!).
- \* 400/2. *MYOSOTIS SECUNDA* A. Murr. (PWH). Common on Bofin; rare on Shark.
- \* 400/4. *M. CAESPITOSA* K. F. Schultz. (!). Widespread, but rarer than the preceding.
- 400/8. *M. ARVENSIS* (L.) Hill. (MPW).
- 405/1. *CONVOLVULUS ARVENSIS* L. (PW).
- 406/1-3. *CALYSTEGIA SEPIUM* L. *s.l.* (!). M noted that the flowers were pink; W confirmed this in 1967 and noticed also that they are larger than in typical *C. sepium*, and that the plant has inflated, overlapping bracteoles, a hairy leaf-sinus, and other features associated with subsp. *pulchra* (Brummitt & Heywood) Tutin. Dr Brummitt has determined very similar plants from elsewhere in Western Ireland as *C. sepium* subsp. *roseata* Brummitt, but we are reluctant to accept a taxonomy which places them closer to typical *C. sepium* than to the pink garden escape. We prefer, therefore, to adopt the taxonomy of Tutin in Clapham, Tutin & Warburg (1962); under this the Inishbofin plant must be named subsp. *pulchra*, though with slight tendencies to diverge in the direction of subsp. *sepium*. It is almost certainly native, as although it grows in the hotel garden it is most abundant in marshes and reedswamps far from houses.
- 424/2. *SCROPHULARIA AURICULATA* L. (*S. aquatica* auct.) (!). Appears to be increasing.
- 430/1. *VERONICA BECCABUNGA* L. (!).
- 430/4. *V. SCUTELLATA* L. (PW).
- 430/7. *V. CHAMAEDRYIS* L. (!).
- \* 430/13. *V. SERPYLLIFOLIA* L. (PWH). Rather rare.
- 430/15. *V. ARVENSIS* L. (!). Rather rare.
- 430/21. *V. PERSICA* Poir. (PWH). Now common on Bofin, but not seen on Shark.
- 430/22. *V. POLITA* Fr. (MPW). Very rare; only one plant seen by W in a was in 1967. Here, as almost everywhere in Ireland, ousted by *V. persica* over the last 60 years.
- 430/23. *V. AGRESTIS* L. (MPW). Fairly plentiful (1967) in the hotel garden on Bofin, and in a field at Cloonamore. Occurs as a robust, pink-flowered form.
- \* 432/1. *PEDICULARIS PALUSTRIS* L. (!).
- \* 432/2. *P. SYLVATICA* L. (!). Widespread, but less abundant, at least on Bofin, than might have been expected. All plants examined were subsp. *hibernica* D. A. Webb, with hairy calyx.
- \* 433/2. *RHINANTHUS MINOR* L. (!). All plants examined were referable to subsp. *stenophyllus* (Schur.) O. Schwarz.
- \* 435/1(12). *EUPHRASIA TETRAQUETRA* (Brébisson) Arrondeau (*E. occidentalis* Wettst.). (MWH). Occurs in a very dwarf form on exposed cliff-tops at the western end of both islands; the dwarf habit is retained in cultivation (P. F. Yeo). This species was seen by M, to judge from his description, though he does not give it a name.
- \* 436/1. *ODONTITES VERNA* (Bellardi) Dumort. (!). As noted by M, the plants are referable to subsp. *serotina* Corbière.
- 437/1. *PARENTUCELLIA VISCOSA* (L.) Caruel. (PWH). Seen not only in P's station, but also in a marsh near the harbour. Probably spreading slowly, as in other places in W. Ireland.
- \* 441/1. *PINGUICULA LUSITANICA* L. (!). Rather rare.
- \* 441/3. *P. VULGARIS* L. (!).



- 442/4. *UTRICULARIA MINOR* L. (MPW). Rare; seen not in M's station, but in the bog at the head of Bennamullen Bay, and also N.E. of Bofin Lough (Miss Scannell).
- \* 445/4. *MENTHA AQUATICA* L. (!).
- \* 448/3. *THYMUS DRUCEI* Ronn. (!). Abundant.
- \* 457/1. *PRUNELLA VULGARIS* L. (!). White-flowered plants are frequent, especially on Shark.
- \* 459/6. *STACHYS PALUSTRIS* L. (!).
- 459/7. *S. SYLVATICA* L. (PW). Rare.
- 462/3. *LAMIUM HYBRIDUM* Vill. (PW). Now frequent. This species seems to have expanded at the expense of *L. moluccellifolium* in many parts of Ireland over the past 60 years.
- \* 462/4. *L. PURPUREUM* L. (!). Frequent on Bofin; only one plant seen on Shark.
- 469/2. *SCUTELLARIA MINOR* Huds. (MPW). Rare.
- 470/4. *TEUCRIUM SCORODONIA* L. (!).
- \* 472/1. *PLANTAGO MAJOR* L. (!).
- \* 472/3. *P. LANCEOLATA* L. (!).
- \* 472/4. *P. MARITIMA* L. (!). Abundant and dominant in *Plantago*-sward over considerable areas at the W. end of both islands.
- \* 472/5. *P. CORONOPUS* L. (!).
- \* 473/1. *LITTORELLA UNIFLORA* (L.) Aschers. (!). Not only in the lakes on Bofin, but in small and shallow pools on cliff-tops near the west end, where submergence must be very intermittent. One small patch in a slow stream on Shark.
- 475/7. *CAMPANULA ROTUNDIFOLIA* L. (!).
- \* 479/1. *JASIONE MONTANA* L. (!). Abundant, giving with *Thymus drucei* an unusual and brilliant colour-effect. Pink- and white-flowered plants were seen on Shark.
- 480/2. *LOBELIA DORTMANNA* L. (!).
- 485/4. *GALIUM VERUM* L. (!).
- 485/5. *G. SAXATILE* L. (MPW).
- \* 485/8. *G. PALUSTRE* L. (!).
- \* 485/12. *G. APARINE* L. (!). Only one plant seen on Shark (on a wall).
- 487/2. *SAMBUCUS NIGRA* L. (MPW). In several places on Bofin, by ruined cottages or on banks, but always planted, and severely wind-shorn and stunted.
- \* 491/3. *LONICERA PERICLYMENUM* L. (!).
- \* 500/1. *SUCCISA PRATENSIS* Moench. (!).
- 502/2. *BIDENS TRIPARTITA* L. (PW). Rare.
- \* 506/1. *SENECIO JACOBAEA* L. (!).
- \* 506/2. *S. AQUATICUS* Hill. (!).
- \* 506/8. *S. VULGARIS* L. (!).
- \* 508/1. *TUSSILAGO FARFARA* L. (!).
- 512/1. *INULA HELENIUM* L. (PW). Still in the station noted by P; protected from the west wind by a wall, and easily overlooked.
- 513/1. *PULICARIA DYSENTERICA* (L.) Bernh. (MPW).
- \* 515/4. *GNAPHALIUM ULIGINOSUM* L. (!).

- 517/1. *ANTENNARIA DIOICA* (L.) Gaertn. (PW). Rather rare, but seen on heaths in the centre of Bofin as well as on sand-dunes.
- 518/1. *SOLIDAGO VIRGAUREA* L. (!).
- \* 519/1. *ASTER TRIPOLIUM* L. (!). Frequent on cliff-ledges in Shark and on the S.E. coast of Bofin.
- \* 524/1. *BELLIS PERENNIS* L. (!).
- \* 528/1. *ACHILLEA MILLEFOLIUM* L. (!).
- \* 528/3. *A. PTARMICA* L. (!).
- \* 531/1. *TRIPLEUROSPERMUM MARITIMUM* (L.) Koch. (!). Mainly on cliff-ledges. Only subsp. *maritimum* was seen.
- \* 532/2. *MATRICARIA MATRICARIOIDES* (Less.) Porter. (PWH).
- 533/1. *CHRYSANTHEMUM SEGETUM* L. (MW). On the rotting thatch of a ruined cottage above the W. end of Bofin harbour (1967). Not seen by Praeger; apparently on the verge of extinction.
- \* 533/2. *C. LEUCANTHEMUM* L. (!).
- \* 538/4. *ARCTIUM MINUS* Bernh. s. l. (!). Flowering plants were not seen. Praeger named his plant *A. newbouldii* A. Benn., but it is not clear what exactly he meant by this name.
- \* 540/2. *CIRSIUM VULGARE* (Savi) Ten. (!).
- 540/3. *C. PALUSTRE* (L.) Scop. (MPW). Remarkably rare; only 3 or 4 plants were seen, in a field E. of Bofin harbour. This species, however, though frequent in Connemara as a whole, becomes scarcer near the W. coast.
- \* 540/4. *C. ARVENSE* (L.) Scop. (!). Noted by M as rare; now locally abundant.
- \* 540/8. *C. DISSECTUM* (L.) Hill. (PWH).
- 544/1. *CENTAUREA SCABIOSA* L. (!). Rare.
- \* 544/6. *C. NIGRA* L. (!).
- 547/1. *LAPSANA COMMUNIS* L. (MPW). Rare; seen only as a weed in the hotel garden.
- \* 549/1. *HYPOCHOERIS RADICATA* L. (!).
- \* 550/1. *LEONTODON AUTUMNALIS* L. (!).
- \* 550/3. *L. TARAXACOIDES* (Vill.) Mérat. (!).
- \* 556/3. *SONCHUS OLERACEUS* L. (!).
- 556/4. *S. ASPER* (L.) Hill. (!).
- \* 588/2(1). *PILOSELLA OFFICINARUM* C. H. & F. W. Schultz subsp. *OFFICINARUM* (*Hieracium pilosella* L.). (!).
- 559/6. *CREPIS CAPILLARIS* (L.) Wallr. (PW). 'Chiefly in sandy ground', according to P; it is now more frequent on sodded walls and banks.
- \* 560/1. *TARAXACUM OFFICINALE* Weber. (!).
- \* 574/1. *TRIGLOCHIN PALUSTRIS* L. (!).
- 574/2. *T. MARITIMA* L. (PW). Rather rare.
- [\* 576/1. *ZOSTERA MARINA* L. (MPH). Recorded by M for Bofin harbour and, by implication, confirmed by P. Not to be seen there now, and there is no sign of it in jetsam. Leaves were, however, seen by H washed up on Shark and Gort. Their provenance is unknown, but it seems more likely that they came from the archipelago than from the mainland.]
- 577/1. *POTAMOGETON NATANS* L. (MPW).

- 577/2. *P. POLYGONIFOLIUS* Pourr. (!).
- 577/21. *P. PECTINATUS* L. (!). Abundant in Lough Bofin.
- 579/2. *RUPPIA MARITIMA* L. (PWH). Abundant in Lough Bofin.
- 582/1. *ERIOCAULON AQUATICUM* (Hill) Druce (*E. septangulare* With). (MPW).
- \* 584/1. *NARTHECIUM OSSIFRAGUM* (L.) Huds. (!).
- \* 605/1. *JUNCUS SQUARROSUS* L. (!). Rather rare on both islands, which is surprising in view of the terrain.
- \* 605/5. *J. GERARDII* Lois. (!).
- \* 605/7. *J. BUFONIUS* L. (!).
- \* 605/9. *J. EFFUSUS* L. (!).
- \* 605/10. *J. SUBULIFLORUS* Drej. (*J. conglomeratus* auct.). (!).
- 605/14. *J. MARITIMUS* Lam. (PWH). Confined to one small patch on the S. Side of Bofin harbour.
- \* 605/18. *J. ACUTIFLORUS* Ehrh. ex Hoffm. (!).
- \* 605/19. *J. ARTICULATUS* L. (!).
- \* 605/22. *J. BULBOSUS* L. (!).
- 606/3. *LUZULA SYLVATICA* (Huds.) Gaudin. (!). Rare.
- \* 606/8. *L. CAMPESTRIS* (L.) DC. (!).
- \* 606/9. *L. MULTIFLORA* (Retz.) Lejeune. (!).
- 607/2. *ALLIUM BABINGTONII* Borrer. (MPW). A few plants on a field-margin near the north side of Bofin harbour; not now accompanying the *Inula helenium*, as was noted by P.
- 616/4. *IRIS PSEUDACORUS* L. (!).
- 640/1. *OPHRYS APIFERA* Huds. (PW). One plant seen in 1965 W. of Cloonamore Bay.
- \* 643/2. *DACTYLORHIZA MACULATA* (L.) Soo (*Dactylorchis maculata* (L.) Vermeul.). (!). Commoner than is implied by M and P.
- \* 643/6. *D. MAJALIS* (Reichb.) P. F. Hunt & Summerh. s. l. (PWH). P's record of *D. incarnata* is interpreted as referring to this species. It is widespread on Shark, and very abundant in marshy meadows in the centre of Bofin. The plants come nearest to *D. kerryensis* (*Dactylorchis majalis* subsp. *occidentalis*) but, as so often in Co. Galway, are in variable degree transitional to *D. purpurella*. The flowers are mostly deep purple, but one population was seen in which they were pale pink.
- 650/3. *LEMNA MINOR* L. (!).
- 652/1. *SPARGANIUM ERECTUM* L. (PW).
- 652/3. *S. ANGUSTIFOLIUM* Michx. (!). Unusually plentiful.
- \* 654/1. *ERIOPHORUM ANGUSTIFOLIUM* Honck. (!).
- \* 654/4. *E. VAGINATUM* L. (PH). Searched for by W in Praeger's station, but not found. Seen by H in a few places on the S. side of Shark.
- 655/3. *SCIRPUS MARITIMUS* L. (PWH).
- 655/8. *S. LACUSTRIS* L. (PW).
- \* 655/11. *S. CERNUUS* Vahl. (!).
- \* 655/12. *S. FLUITANS* L. (!).
- \* 656/4. *ELEOCHARIS MULTICAULIS* (Sm.) Sm. (!). Very abundant.
- \* 656/5. *E. PALUSTRIS* (L.) Roem. & Schult. (!).

- \* 659/1. *SCHOENUS NIGRICANS* L. (!). Local; not widespread on bogs as in most of Connemara.
- 663/2. *CAREX DISTANS* L. (MPW).
- \* 663/5. *C. BINERVIS* Sm. (!). Abundant.
- \* 663/8. *C. DEMISSA* Hornem. (!). Abundant; M's *C. flava* var. *lepidocarpa*, is presumably to be interpreted as this; *C. lepidocarpa* s. s. does not occur. Plants on wet, stony ground near the sea on Bofin and Shark come close to *C. serotina* in a number of characters, but A. O. Chater and A. C. Jermy agree that they are best referred to *C. demissa*.
- \* 663/11. *C. EXTENSA* Gooden. (!).
- 663/16. *C. ROSTRATA* Stokes. (MPW).
- \* 663/26. *C. PANICEA* L. (!).
- 663/28. *C. LIMOSA* L. (PW). Rare.
- \* 663/31. *C. FLACCA* Schreb. (!).
- 663/36. *C. CARYOPHYLLEA* Latourr. (MPW).
- \* 663/50. *C. NIGRA* (L.) Reichard. (!).
- \* 663/57. *C. OTRUBAE* Podp. (!).
- 663/61. *C. ARENARIA* L. (MPW).
- \* 663/70. *C. ECHINATA* Murr. (!).
- \* 663/74. *C. OVALIS* Gooden. (!).
- \* 663/80. *C. PULICARIS* L. (!).
- 663/81. *C. DIOICA* L. (PW). Rare.
- \* 665/1. *PHRAGMITES AUSTRALIS* (Cav.) Steud. (*P. communis* Trin.). (!). On sea-cliffs and bogs, as well as in lakes.
- \* 667/1. *MOLINIA CAERULEA* (L.) Moench. (!).
- \* 668/1. *SIEGLINGIA DECUMBENS* (L.) Bernh. (!).
- \* 669/1. *GLYCERIA FLUITANS* (L.) R. Br. (!).
- 669/2. *G. PLICATA* Fr. (MPW).
- \* 670/6. *FESTUCA RUBRA* L. (!). Abundant on sea-cliffs.
- 670/8. *F. OVINA* L. (MPW).
- \* 671/1. *LOLIUM PERENNE* L. (!).
- \* 672/2. *VULPIA BROMOIDES* (L.) Gray. (!).
- \* 673/1. *PUCCINELLIA MARITIMA* (Huds.) Parl. (!).
- 674/2. *CATAPODIUM MARINUM* (L.) C. E. Hubbard. (MPW).
- \* 676/1. *POA ANNUA* L. (!).
- \* 676/10. *P. PRATENSIS* L., s. l. (!).
- \* 676/13. *P. TRIVIALIS* L. (!).
- \* 678/1. *DACTYLIS GLOMERATA* L. (!). Only one plant was seen on Shark.
- \* 679/1. *CYNOSURUS CRISTATUS* L. (!).
- \* 683/10. *BROMUS HORDEACEUS* L. (*B. mollis* L.). (!).
- 684/1. *BRACHYPODIUM SYLVATICUM* (Huds.) Beauv. (MPW).
- \* 685/3. *AGROPYRON REPENS* (L.) Beauv. (MPH). Not seen on Bofin, but perhaps overlooked; in rough grassland at one place on Shark.
- \* 689/1. *KOELERIA CRISTATA* (L.) Pers. (!).

- 692/1. *AVENA FATUA* L. (MPH).
- \* 694/1. *ARRHENATHERUM ELATIUS* (L.) Beauv. ex J. & C. Presl. (!).
- \* 695/1. *HOLCUS LANATUS* L. (!).
- 696/3. *DESCHAMPSIA FLEXUOSA* (L.) Trin. (MPW). Rather rare, in spite of much suitable terrain, but this is also true over much of Connemara, and indeed Ireland.
- \* 697/1. *AIRA PRAECOX* L. (!).
- \* 697/2. *A. CARYOPHYLLEA* L. (!).
- 699/1. *AMMOPHILA ARENARIA* (L.) Link. (!). Mainly on rocky cliff-ledges on the S.W. shore of Bofin.
- 700/1. *CALAMAGROSTIS EPIGEJOS* (L.) Roth. (MPW). Observed by W in both stations recorded by P. The plant at Bofin harbour was exactly as he described it, with a single inflorescence. The plant at Cloonamore has, however, suffered invasion by *Arrhenatherum*; now 2 smallish plants may be seen, of which one bore a single inflorescence.
- \* 701/2. *AGROSTIS CANINA* L. (!).
- \* 701/3. *A. TENUIS* Sibth. (!).
- \* 701/5. *A. STOLONIFERA* L. (!).
- \* 712/1. *ANTHOXANTHUM ODORATUM* L. (!).
- \* 715/1. *NARDUS STRICTA* L. (!). Abundant.

## (2). NEW RECORDS, 1965-7

- 1/1. *HUPERZIA SELAGO* (L.) Bernh. ex Schrank & Mart. (*Lycopodium selago* L.). (W). 1 or 2 stunted plants on heathland in the E. centre of Bofin were seen on each visit.
- †4/10. *EQUISETUM TELMATEIA* Ehrh. (H). At the base of a cliff, E. of the school on Shark. An unexpected find, as this species is very rare in W. Galway; apart from two 19th-century records by Praeger it is known only from a well-wooded district near Moyard. It occurs, however, on Clare Island, Co. Mayo.
- 14/1. *PHYLLITIS SCOLOPENDRIUM* (L.) Newm. (W). Several plants in walls N.E. of Bofin harbour. Perhaps a recent immigrant.
- 21/2. *DRYOPTERIS PSEUDO-MAS* (Wollaston) Holub & Pouzar (*D. b orreri* Newm.). (W). One large plant in a deep ditch along the principal N.-S. road N.E. of Bofin harbour. *D. filix-mas* is plentiful.
- 66/8. *FUMARIA OFFICINALIS* L. (H). 2 small plants on shingle near the harbour.
- \* 102/2. *NASTURTIUM MICROPHYLLUM* (Boenn.) Reichb. (*Rorippa microphylla* (Boenn.) Hyland). (H). Fairly common on Shark. Noted by H for Bofin, but not seen by W.
- 102/1 × 2. *N. MICROPHYLLUM* × *OFFICINALE* (*Rorippa* × *sterilis* Airy-Shaw) (W). In small quantity, with *N. officinale*, E. of the ruined church on Bofin. Like *N. officinale*, here mostly very large.
- \* 141/1. *POLYGALA VULGARIS* L. (WH). On cliff-top on Shark, and on sand-dunes on Bofin; sparingly in both places.
- †143/4. *SPERGULARIA MEDIA* (L.) C. Presl. (H). Under a wall on a cliff-top on Shark.
- 195/3. *LOTUS ULIGINOSUS* Schkuhr. (WH). In a damp meadow near Bofin harbour, and in a roadside ditch near Lough Bofin.
- 221/2. *APHANES MICROCARPA* (Boiss. & Reut.) Rothm. (W). Roadside on Bofin in 3 places.

- 257/1. *FUCHSIA MAGELLANICA* Lam. (WH). Nowhere naturalized, but now much the commonest hedge-plant on Bofin, and sometimes far from houses; it has apparently replaced some of the shrubs listed by Praeger. It may be a recent introduction, but it seems more likely that Praeger (and perhaps More) ignored it as not being a 'respectable' alien.
- 310/1. *PASTINACA SATIVA* L. (W). A few plants on a field-margin E. of the ruined church on Bofin.
- \* 320/1(4). *POLYGONUM ARENASTRUM* Bor. (*P. aequale* Lindm.). (WH). Near the harbour on Bofin, and abundant on a link-road leading north above the harbour. The plants collected by W have fruits 2.8-3 mm long, but in other respects seem typical.
- 336/1. *ALNUS GLUTINOSA* (L.) Gaertn. (W). One hedge, and an isolated bush near by, near the centre of Bofin; obviously planted, but thriving better than most of the shrubs.
- 343/4. *SALIX FRAGILIS* L. (W). Three small bushes by the stream flowing out of Church Lough on Bofin; probably planted, but perhaps naturalized from a now defunct hedge.
- 378/2. *LIGUSTRUM OVALIFOLIUM* Hassk. (W). In a field-hedge in one place near the centre of Bofin; taller than any other shrub seen in an equally exposed position.
- 400/9. *MYOSOTIS DISCOLOR* Pers. (W). Locally abundant on Bofin in wet meadows and marshes; up to 65 cm high. Apparently a distinct ecotype, known also from Connemara and W. Scotland.
- 430/3. *VERONICA CATENATA* Pennell. (W). Frequent by the stream running out of Church Lough.
- \* 435/1 (2). *EUPHRASIA SCOTTICA* Wettst. (W). Abundant and widespread on heathy ground, where perhaps *E. micrantha* would rather have been expected. (Det. P. F. Yeo.)
- †435/1 (4). *E. FRIGIDA* Pugsl. (H). Only on Shark; unusual at such a low elevation. (Det. E. F. Warburg.)
- 435/1 (15). *E. CONFUSA* Pugsl. (W). Fairly frequent on heathy ground on Bofin; not altogether typical, and perhaps hybridizing with *E. brevipila*.
- \* 435/1 (18). *E. BREVIPILA* Burnat & Gremli. (WH). Frequent in meadows, on roadsides, etc.
- 481/1. *SHERARDIA ARVENSIS* L. (W). On the ruined church, and on banks N.E. of the harbour.
- 560/4. *TARAXACUM LAEVIGATUM* (Willd.) DC. (W). On sandy ground on Bofin in two places.
- 600/1. *ENDYMION NON-SCRIPTUS* (L.) Garcke. (W). Fairly plentiful on the rocky scarp S. of Church Lough, Bofin. W's visit in 1965 was the only one early enough to see this species.
- 605/18 × 19. *J. ACUTIFLORUS* × *ARTICULATUS*. (W). A few large stands of this were seen in a marshy field N.W. of Church Lough; it was too early to verify with confidence the sterility of the capsules, but the plants stood out from the parents by their clonal growth.
- \* 620/1. *CROCOSMIA* × *CROCOSMIFLORA* (Lemoine) N.E. Br. (WH). Widespread on Bofin, often far from houses; it has clearly increased greatly since 1911. Only a few clumps on Shark, and perhaps surviving rather than truly naturalized.
- \* 655/10. *SCIRPUS SETACEUS* L. (WH). A few plants near Lough Gowlanagower on Bofin; also in boggy places on Shark.

- 656/6. *ELEOCHARIS UNIGLUMIS* (Link) Schult. (W). In two places S. of Bofin harbour, and also by Lough Bofin.
- \* 663/34. *CAREX PILULIFERA* L. (WH). Dry heaths on both islands, rather sparingly.
- \* 670/10. *FESTUCA VIVIPARA* (L.) Sm. (WH). Common on exposed heaths on both islands. It is curious that neither M nor P should have mentioned this plant, even though it was not generally given specific status in their day.
- \* 683/12. *BROMUS HORDEACEUS* L. subsp. *THOMINII* (Hardouin) Hyland. (*B. thominii* Hardouin). (WH). Sparingly on both islands, growing with *B. hordeaceus* subsp. *hordeaceus*.
- 683/13. *B. LEPIDUS* Holmberg. (W). At the edge of a meadow near Bofin harbour.
- 691/1. *TRisetum FLAVESCENS* (L.) Beauv. (WH). E. of Bofin harbour. A rather unexpected find, as this species is seldom seen off the limestone. There is, however, one record for the mainland not far away.
- \* 708/3. *ALOPECURUS GENICULATUS* L. (WH). Rather frequent on both islands, not only in marshes and ditches but even (on Bofin) on a sodded wall.

Though it scarcely deserves a place in the list, it is of interest to note that *Zantedeschia aethiopica* (arum lily) still survives on Shark.

### (3). OLD RECORDS NOT CONFIRMED

- 1/2. *LYCOPODIELLA INUNDATA* (L.) Holub (*Lycopodium inundatum* L.). (P). Possibly extinct; there has been a lot of peat-cutting near the station indicated by Praeger. Praeger's precise station was not, however, located with confidence.
- 16/1. *CETERACH OFFICINARUM* DC. (P). Searched for by W on both visits in the limited station indicated. Probably a casual.
- 66/2. *FUMARIA CAPREOLATA* L. (MP). Much rarer everywhere in Ireland than it was 60 years ago; probably extinct.
- 74/2. *RAPHANUS MARITIMUS* Sm. (MP). Like many biennials, this varies greatly in abundance from year to year, but the fact that such a conspicuous plant was not seen by W on either visit suggests that it may be extinct.
- 108/1. *SISYMBRIUM OFFICINALE* (L.) Scop. (MP).
- 133/7. *STELLARIA GRAMINEA* L. (P). Searched for by W on both visits; if it survives it must be in very small quantity.
- 136/10. *SAGINA NODOSA* (L.) Fenzl. (MP). Easily overlooked in June or July.
- 143/5. *SPERGULARIA MARINA* (L.) Griseb. (MP). Evidently rare, but not searched for systematically.
- 163/2. *MALVA SYLVESTRIS* L. (MP). Apparently extinct.
- 163/4. *M. NEGLECTA* Wallr. (P). Apparently extinct.
- 164/1. *LAVATERA ARBOREA* L. (P). A few plants were seen beside houses on Bofin, and in one place there were 2 seedlings on the road, but their chances of coming to maturity seemed slight. The present status of this species does not entitle it to a place in the flora.
- 192/4. *TRIFOLIUM MEDIUM* L. (P). Probably a short-lived relic of cultivation.
211. *RUBUS* spp.: We find it impossible to be certain what plants were intended by More's and Praeger's records; subsequent authorities do not agree on synonymy. The names used were *R. carpinifolius*, *dumnoniensis*, *mollissimus*, *dunensis*, *thyrsoides* and *discolor*. The last-named indicates *R. ulmifolius* Schott; the application of all the others seems open to some ambiguity or uncertainty.

- 212/15. *POTENTILLA REPTANS* L. (M). Perhaps a robust form of *P. anglica*. Specimens collected by More of *P. erecta* and *P. anglica* are in TCD herbarium, but there is no specimen of *P. reptans*.
- 215/1. *FRAGARIA VESCA* L. (P). Searched for by W on both visits.
- 232/1. *SORBUS AUCUPARIA* L. (P). Searched for carefully; apparently extinct.
- 247/2. *DROSERA ANGLICA* Huds. (P). For comment, see under *Lycopodiella inundata*.
- 301/1. *AETHUSA CYNAPIUM* L. (P).
- 343/1. *SALIX PENTANDRA* L. (P). Apparently replaced by *Fuchsia* or other shrubs
- 392/1. *SYMPHYTUM OFFICINALE* L. (P.) Apparently extinct.
- 430/2. *VERONICA ANAGALLIS-AQUATICA* L. (MP). The records refer to *V. catenata*.
- 442/3. *UTRICULARIA INTERMEDIA* Hayne. (P). Not searched for sufficiently thoroughly to pronounce on its present status.
- 448/1. *THYMUS PULEGIOIDES* L. (P, as *T. chamaedrys* Fr.). An error; the characters of the species were imperfectly understood in Praeger's day.
- 459/3. *STACHYS ARVENSIS* (L.) L. (MP). Perhaps extinct.
- 462/2. *LAMIAM MOLUCCCELLIFOLIUM* Fr. (P). Probably extinct; much rarer everywhere than in Praeger's day.
- 465/4. *GALEOPSIS TETRAHIT* L. (MP). Probably extinct.
- 506/6. *SENECIO SYLVATICUS* L. (M). Apparently extinct.
- 533/5. *CHRYSANTHEMUM VULGARE* (L.) Bernh. (P). This can hardly have been overlooked; almost certainly extinct.
- 535/1. *ARTEMISIA VULGARIS* L. (MP). Apparently extinct.
- 556/2. *SONCHUS ARVENSIS* L. (MP). Noted by M as 'a colonist among the crops'. In Connemara it is seldom seen now as a cornfield weed; it is more usual in walls and hedges. It seems to have failed to make this adjustment in Bofin.
- 577/15. *POTAMOGETON BERCHTOLDII* Fieb. Recorded by M from Church Lough and by P for another station (as *P. pusillus*, but this species is probably intended). Unfortunately these records were overlooked, and the plant was not searched for.
- 635/1. *COELOGLOSSUM VIRIDE* (L.) Hartm. (P).
- 638/1. *PLATANThERA CHLORANTHA* (Custer) Reichb. (P).
- 656/3. *ELEOCHARIS QUINQUEFLORA* (F. X. Hartmann) Schwarz. (MP). Doubtless still there; easily overlooked.
- 660/1. *RHYNCHOSPORA ALBA* (L.) Vahl. (P). Searched for carefully in 1967, at a time when it was in flower. Probably extinct from drainage or cutting.
- 670/1. *FESTUCA PRATENSIS* Huds. (M). See next species.
- 670/2. *F. ARUNDINACEA* Schreb. (M). This and the preceding seem to have been short-lived introductions for meadows. The islands do not provide the sort of terrain in which one would expect either to become naturalized.
- 670/11. *F. LONGIFOLIA* Thuill. (M, as *F. duriuscula*). Probably an error.
- 671/3. *LOLIUM TEMULENTUM* L. (M). Perhaps only a casual, even in More's day; now virtually extinct in Ireland.
- 677/1. *CATABROSA AQUATICA* (L.) Beauv. (P). Searched for in the limited station indicated; nothing but *Glyceria fluitans* was seen. The grazing is, however, heavy here and it is possible that a few non-flowering plants were overlooked.



## COMMENT ON THE LISTS

In spite of the considerable number of new records, and of old records not confirmed, the main impression given by the lists is the stability of the flora. A few species have probably appeared, and a few have disappeared; some have become commoner and others rarer, but the great majority show no obvious change over nearly a century, and the persistence both of natives like *Calamagrostis epigejos* and of aliens like *Inula helenium* is impressive.

The list of new records comprises 14 segregates not recognized by earlier authors and 22 which they would have listed if they had seen them. Of the 22 4 are planted shrubs, of which only one can claim to be naturalized, and one is a garden escape (*Crocsmia*); these are clearly new elements brought in by man. The remaining 17 species are rather difficult to assign to their two possible categories—plants overlooked by Praeger, or immigrants since his day by natural means or by unintentional human agency. *Endymion* and *Carex pilulifera* probably belong to the first category; *Bromus lepidus* and *Fumaria officinalis* more probably to the second. The most baffling case is that of *Alopecurus geniculatus*. This is now rather common on Bofin, and it seems very difficult to believe that it was overlooked by Praeger; yet it is an unlikely plant to have spread widely from a chance introduction. Making the best guess we can, we estimate that about 12 species have arrived in the islands and established themselves there since 1911.

Turning now to the losses, we find that of the 40 species previously recorded which we failed to find, 5 were probably recorded in error. Of the remaining 35 species over half are weeds, ruderals or cultivated plants, and it seems probable that the great majority of these are truly extinct, though the case of *Chrysanthemum segetum* is a warning against dogmatizing on such a matter. Of the 17 species which grow in natural habitats two or three may have been eliminated by turf-cutting and one or two by wind, but the majority are probably still there.

If it be asked why the decline in the number of the weeds and ruderals has been so pronounced, it is clear that decline in the population and change of farming habits give part of the answer. The population of the islands at the time of More's visit was about 1,300; at the 1961 census it was 268. The area under tillage must have declined *pro rata*, and this is confirmed by the figures for the decline in western Ireland generally. Furthermore, there is less genuine subsistence farming, and the variety of crops is therefore less. Differential weedkillers have not yet made their influence felt here, but imported seed of all kinds is, of course, much cleaner than in 1911. Furthermore, it would seem that successful, recently established aliens such as *Veronica persica* and *Matricaria matricarioides* have achieved their success at the expense of older-established species. The decline in ruderals is not so easy to explain as that of weeds, but it seems to be a general phenomenon in Ireland. One has only to look at maps in the *Atlas of the British Flora* (Perring and Walters, 1962) of such species as *Chenopodium rubrum*, *Artemisia absinthium* or *Cichorium intybus*, where pre-1930 records are differentiated from recent ones, to realize this; and although the ecologically-minded botanist of today may spend less of his time poking around rubbish-heaps than did his predecessors, this is not in itself a sufficient explanation. In some places the tarring of roads and the replacement of horses by cars has helped to change the roadside flora, but on Inishbofin

asphalt is unknown and motor-vehicles number two. One is forced to the conclusion that although the Irish village is not a model of tidiness now, it must have been messier around 1900.

The results of the depopulation of Inishshark are not yet very obvious in its flora, but it is clear that a considerable number of annuals, of which only a single plant was seen in 1965, are heading towards extinction, and the number of plants introduced during the period of human habitation which have permanently established themselves is fairly small.

#### EXPECTED SPECIES NEVER RECORDED

We may appropriately conclude with a list of species which one might reasonably expect to find on these islands, but which have never been recorded there. The criterion for inclusion in this list is that the species should be widespread in Connemara, should grow in a type of habitat which is represented on these islands, and be tolerant of extreme exposure. This last consideration excludes most woody plants (even *Crataegus monogyna*!) and those dependent on shade or shelter.

<i>Isoetes lacustris</i>	<i>Digitalis purpurea</i>
<i>Asplenium trichomanes</i>	<i>Veronica officinalis</i>
<i>Nymphaea alba</i>	<i>Valeriana officinalis</i>
<i>Ulex gallii</i>	<i>Baldellia ranunculoides</i>
<i>Umbilicus rupestris</i>	<i>Scirpus caespitosus</i>
<i>Drosera intermedia</i>	<i>Cladium mariscus</i>
<i>Daboecia cantabrica</i>	<i>Carex hostiana</i>
<i>Scrophularia nodosa</i>	<i>C. lasiocarpa</i> .

The islands most closely comparable with Inishbofin and Inishshark are Inishturk and Clare Island (Co. Mayo). Only 5 of the species listed above (*Asplenium trichomanes*, *Ulex gallii*, *Daboecia cantabrica*, *Cladium mariscus* and *Carex lasiocarpa*) are absent from both Inishturk and Clare Island (Praeger, 1907, 1911a). It looks, therefore, at first sight, as though the remaining 11 have been excluded from the flora of Inishbofin mainly by chance. But it is significant that with one exception (*Digitalis*, which is frequent on Clare Island, though it does not occur on Inishturk) all of them occur very sparingly on Inishturk or Clare Island (in 3 cases on both). It would seem, therefore, that some ecological factor, too subtle for our apprehension at present, is working against their presence on all these islands.

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