
Report on the Botany of South Clare and the Shannon

Author(s): S. A. Stewart

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XXXI.

REPORT ON THE BOTANY OF SOUTH CLARE AND THE SHANNON. BY S. A. STEWART, Fellow of the Botanical Society of Edinburgh, Curator of the Collections in the Museum of the Belfast Natural History and Philosophical Society.

[Read MAY 27, 1889.]

THE district with which this Report is concerned is very irregularly limited, and its bounds cannot be defined with much exactness. It ranges in latitude from $52^{\circ} 25' N.$, at the southern side of the Shannon's mouth, to $52^{\circ} 51'$ at Ennis. Its longitudinal extremes are, Limerick, $8^{\circ} 38' W.$, and Kerry Head, $9^{\circ} 50'$. Portions of three counties—Clare, Limerick, and Kerry—are embraced in this area, which is mainly interesting by reason of its including the wide and deep estuary of the greatest of British rivers. Ennis in the east, and Kilrush in the west, were the principal centres of observation in South Clare. Most attention was paid to Clare, and a wider area was examined in this county than in either Limerick or Kerry. From Ennis the lower Fergus flows, with a slow, deep current, through low-lying flats formed of alluvial deposits. This river opens into the Shannon through a wide estuary of its own, some fifteen miles below Limerick, and about twelve miles south of Ennis, and is tidal almost as far up as the latter place. The surface of the country, in this part of the county, is flat and uninteresting, with numerous small bogs and lakes lying amongst low hills. The lakelets are in many cases surrounded by planting, and they form the one attractive feature in the landscape. The margins of the Fergus are so marshy as to be almost inaccessible to the pedestrian naturalist; its vicinity will probably yield some interesting fenland plants when more fully examined. Kilrush is seated on the northern bank of the Shannon a considerable distance above its mouth. The north side of the estuary is here separated from the Atlantic by a long, narrow peninsula, which terminates at Loop Head about twenty miles below Kilrush. Inland the scene rises gradually from both sides, and much of the median portion of the peninsula consists of extensive, elevated peat

bogs. Rocky shores, interspersed with frequent sand dunes, characterize the exterior coast, while on the side of the estuary shingly and muddy beaches prevail. The country on the south of the estuary is made of interest by the many, and sometimes extensive, woods that diversify the scenery. At Ringmoylan Point, some ten miles below Limerick, there are remains of what seems to have been a rather extensive natural forest, but the trees now standing are mostly dead. Curragh Chace is an extensive wood which, if it were to be well searched, would occupy a botanist for many days. The wood-covered rocks at Foynes are also most interesting to the naturalist. On the Kerry coast, further west, the shores are rocky, with occasional sandy beaches, which gave good results as regards maritime plants. Ballybunion, a seaside resort with considerable natural attractions, has a wide stretch of sandhills that extend some two miles to the south, and yield a good number of scarce plants. It is not to be supposed that the six days spent by me at this place in the summers of 1885 and 1886, by any means exhausted its botanical interest.

The leading feature, as respects the geology of the neighbourhood of the Shannon Estuary, is the prevalence of rocks of one great geological epoch, namely, the Carboniferous; rocks which though brought comparatively near together, as regards age, are yet very unlike in structural and in chemical characters, producing, therefore, very different effects on the aspect of the country, and on its vegetable productions. The shales of the Coal Measures form the dominant rocks of the greater part of the district. Commercially they yield, in places, flag-stones of marketable value, and thin seams of coal occur. In the district west of Foynes the coals lie at but slight depths below the surface, and from time to time have been worked in a primitive and inexpensive manner. Frequently the older rocks are obscured by alluvial deposits, the courses of the more important rivers being marked, more or less, by these alluvial flats. By the Shannon, the alluvium is found below high water, and is often capped by drift accumulations forming low islands. On the south side of the mouth of the Shannon there are grits, and yellow sandstones that have been classed as Upper Old Red. Silurian rocks (Llandovery) occur at Ballycar and elsewhere, but so slightly developed as to be comparatively insignificant.

In the lists which follow there are enumerated—of Phanerogamia, 459 species; Vascular Cryptogamia, 18; Characeæ, 4; Musci, 84; Hepaticæ, 14: in all, 579 species. Though this number reaches nearly to one-half of the Irish flora, it cannot be said to represent the

total of the plants of the district. The names of several comparatively common species do not appear in these lists, but it is not to be assumed that all such are really absent from the flora. In the case of even the most common it has not been deemed wise to assume their occurrence unless actually noted in the field; and to pass by such without note is easier than to overlook a rarity. Amongst the Musci one species, *Cinclidotus riparius* is an addition to the British flora; to give a full account of the mosses would, however, entail another winter's work, and the following list is an incomplete one. The Hepaticæ have been still less perfectly catalogued, though it must be said that a rich flora of these plants cannot be hoped for, as Nature has not afforded them the most suitable habitats. It is singular that this district, lying midway between two remarkable floras, is scarcely enriched by any outliers or vestiges of either. Killarney is but half of a degree further south, but then the physical conditions are totally unlike. Instead of lofty mountains, with thickly-wooded and deep sheltering glens, we have on the Shannon low boggy hills, and the woods are elevated but slightly above sea-level. About an equal distance to the north we meet with, in the Burren flora, a vegetation very different from that of Killarney, and scarcely less interesting. The prominent plants of the Burren are absent from South Clare and the Shannon estuary, and this absence must be accounted for on geological considerations. The warm limestone rocks of the Burren, intersected as they are everywhere by their humid fissures, offer unique conditions which do not obtain, to any extent, elsewhere in Ireland. The speciality of the conditions in north-west Clare is expressed in its special flora; but this flora, due to geological influences, is confined to the area in which those influences operate.

The geographical relations of the flora here recorded do not call for much comment. We notice an absence of any plants special to the locality, and the usual preponderance of the common species grouped in Watson's "British Type." An analysis of the following lists shows that 75 per cent. of the plants enumerated must be classed under the British type, 15 per cent. under the English type, 2½ per cent. are of the Atlantic type, and 1 per cent. only are placed in the Scottish type. But one plant, *Orchis pyramidalis*, can be credited to the Germanic type, and the Highland type is without any representation. There remain 6½ per cent. uncertain and unclassified. *Cinclidotus riparius* is new to the British flora, and *Rubus althæifolius* is a bramble not previously recorded as Irish. The variety *intermedius* of *R. cæsius* is also an addition to the Irish flora, and likewise the var.

densa of *Sagina maritima*. *Potamogeton Friesii* (*mucronatus*) has been erroneously recorded for the North of Ireland; it is now published with certainty as an Irish plant.

ADDITIONS TO DISTRICT I. OF THE CYBELE HIBERNICA.

Raphanus maritimus.
Sagina maritima, var. *densa*.
Rubus cæsius, var. *intermedius*.
Arenaria leptocladus (also new to 6).

ADDITIONS TO DISTRICT VI.

<i>Ranunculus penicillatus</i> .	<i>Scrophularia aquatica</i> .
<i>Viola odorata</i> .	<i>Veronica montana</i> .
<i>Stellaria holostea</i> .	<i>Mentha sativa</i> .
<i>Cerastium tetrandrum</i> .	<i>Atriplex hastata</i> .
<i>Vicia sylvatica</i> .	<i>Empetrum nigrum</i> .
<i>Rubus rusticanus</i> .	<i>Callitriche hamulata</i> .
<i>R. macrophyllus</i> .	<i>Salix alba</i> .
<i>R. koehleri</i> .	<i>S. aurita</i> .
<i>R. corylifolius</i> ,	<i>Juncus obtusiflorus</i> .
var. <i>conjungens</i> .	<i>Typha latifolia</i> .
<i>R. althæifolius</i> .	<i>Potamogeton pusillus</i> .
<i>Ægopodium podagraria</i> .	<i>P. zizii</i> .
<i>Ænanthe lachenalii</i> .	<i>Zannichellia palustris</i> .
<i>Æ. crocata</i> .	<i>Scirpus fluitans</i> .
<i>Scabiosa arvensis</i> .	<i>Carex ovalis</i> .
<i>Bidens cernua</i> .	<i>C. extensa</i> .
<i>Artemisia maritima</i> .	<i>Holeus mollis</i> .
<i>Solanum dulcamara</i> ,	<i>Bromus racemosus</i> .
var. <i>marinum</i> .	<i>Equisetum maximum</i> .
<i>Linaria vulgaris</i> .	<i>E. palustre</i> .

My best thanks are due to those friends whose kind assistance and advice on critical points have rendered the statements in this Report more reliable. For the pains taken with a number of the plants here enumerated, I feel especially grateful to Professor Charles C. Babington, F.R.S., Mr. G. A. Holt, of Manchester, and Mr. A. Bennett, F.L.S., of Croydon.

LIST OF SPECIES.

RANUNCULACEÆ.

- [*Ranunculus trichophyllus*, Chaix. A plant which seemed to be this grows sparingly on Scattery Island; but as the specimen was lost before being critically examined, it is not certain.]
R. Baudottii, Godr. Marshes by the Fergus at Ennis; also at Beal Point, Ballybunion, and north side of Tralee Bay.
R. penicillatus (Dum.). In the Fergus at Ennis, and in the Feale, near Listowel.
R. peltatus, Fries. Beal Point; not common.
R. hederaceus, Linn. Doonbeg, Beal Point.
R. sceleratus, Linn. Clare Castle, Lough Senan, Ferry Bridge, Foynes.
R. flammula, Linn. Marshes, frequent.
R. lingua, Linn. Rare; but abundant in a marsh near Doonbeg.
R. acris, Linn. Common in many places.
R. repens, Linn. Common.
R. bulbosus, Linn. Not common.
Caltha palustris, Linn. Abundant at Ennis.

NYMPHACEÆ.

- Castalia alba*, Salisb. Ballycar Lake, and in several places between Askeaton and Foynes, but not common.
Nymphaea lutea, Linn. (*Nuphar*, Sm.). Ditches in Monmor bog; also near Foynes and Askeaton.

PAPAVERACEÆ.

- Papaver dubium*, Linn. Ballycar, Foynes, &c., but not common.
[*P. somniferum*, Linn. Is not infrequent in cultivated fields.]
Glaucium flavum, Crantz. Shore at Kilrush, and abundant on Scattery Island.

FUMARIACEÆ.

- Fumaria officinalis*, Linn. Borders of fields, Ringmoylan, &c.; not common.

CRUCIFERÆ.

- Nasturtium officinale*, R. Br. Springs and shallow streams.
N. amphibium, R. Br. Abundant by the Fergus at Ennis.
Barbarea vulgaris, R. Br. Listowel, Ardfert.
Arabis hirsuta (Linn.). Limestone quarry at Ringmoylan, and limestone rocks at Askeaton; not common.
Cardamine hirsuta, Linn. Walls at Clare Castle.
C. pratensis, Linn. Wet pastures.
Sisymbrium officinale, Linn. Roadsides and wastes; common.
Brassica campestris, Linn. Clare Castle, Doonbeg; not common.
Sinapis nigra, Linn. In crops; rare, and a casual.
S. arvensis, Linn. Common.
Cochlearia officinalis, Linn. Kilrush, Foynes, &c.; common on the coast.
Thlaspi arvense, Linn. On limestone at Askeaton.
Capsella bursa-pastoris (Linn.). Roadsides; frequent.
Senebiera coronopus (Gaert.). On the quay at Clare Castle.
S. didyma, Pers. Abundant at Ennis, and on roadsides from Foynes to Listowel.
Raphanus maritimus, Sm. Sandy shore at Ballybunion.

RESEDACEÆ.

- Reseda luteola*, Linn. Clare Castle, Sixmilebridge, Lough Senan, Kilrush, Askeaton, Foynes.

VIOLACEÆ.

- Viola palustris*, Linn. Sixmilebridge, Lough Senan, Tullagher.
V. odorata, Linn. Plentiful on gravelly ground by roadside between Sixmilebridge and Newmarket.
V. hirta, Linn. Plentiful on limestone rocks at Askeaton, and in quarries south-east of Foynes.
V. sylvatica, Fries. Common on banks and pastures.
V. lutea var. *curtisii*, Forst. Doonbeg, Beal Point, Ballybunion; abundant on the sands.
V. tricolor, Linn. Sandy waste ground.
 ,, var. *arvensis*, Murr. Sixmilebridge, Kilrush, &c.

DROSERACEÆ.

- Drosera rotundifolia*, Linn. Peat bogs; common.
D. intermedia, Hayne. Bogs between Kilrush and Kilkee; abundant in places.
D. anglica, Huds. Rare, but abundant in bogs north of Carrigaholt.
,, var. *obovata*, M. and K. Sparingly in a bog, north of Carrigaholt. Apparently this, but less decidedly marked than the North of Ireland plant.

POLYGALACEÆ.

- Polygala vulgaris*, Linn. Kilrush, Carrigaholt, Askeaton; not very common.

CARYOPHYLLACEÆ.

- Silene inflata*, Sm. Clare Castle; not common.
S. maritima, With. By the Shannon occasionally, but not abundant.
Lychnis dioica, Sibth. Coast south of Ballybunion; rare.
Sagina procumbens, Linn. Common.
S. apetala, Linn. Bridge at Clare Castle, walls about Kilrush, and Foynes.
S. maritima, Don. Kilrush, north side of Tralee Bay.
,, var. *S. densa*, J. Plentiful in large patches on dry sandy banks by the church at Ballybunion.
S. nodosa, E. Meyer. Bogs at Ballyear; also at Askeaton, and in damp grassy places in sandhills at Beal Point.
Arenaria peploides, Linn. Sandy shores; common.
A. serpyllifolia, Linn. Limestone rocks, and sandy shores.
A. leptoclados, Guss. Walls of Ferrybridge, and limestone quarry south-east of Foynes.
Stellaria media (Linn.) Vill. Fields and waste ground.
S. holostea, Linn. Hedge banks; frequent.
S. graminea, Linn. Hedges; frequent.
S. uliginosa, Murr. Marshy places; frequent.
Cerastium glomeratum, Thuil. Dry places at Kilrush, Foynes, &c.; not common.
C. triviale, Link. Common.
C. tetrandrum, Curt. By the shore at Kilrush, and abundant at north side of Tralee Bay.
Spergularia rupestris, Lcbel. Kilrush, Ringmoylan, and abundant on sea cliffs at Ballybunion.
S. neglecta, Kindb. Clare Castle, and salt marsh at Foynes.
Spergula arvensis, Linn. Cultivated fields; frequent.

MALVACEÆ.

- Malva sylvestris*, Linn. Askeaton, Beal Point, Ballybunion ; frequent on waste ground.
Althæa officinalis, Linn. Sparingly by roadside south of Ballybunion, and abundant by damp ditches close to Beal Castle. The information received from a cottager at the spot was to the effect that the plant was not cultivated, and "always grew there."

HYPERICACEÆ.

- Hypericum androsæmum*, Linn. Sparingly in woods at Rinekirk, Kilrush, and Foynes.
H. tetrapterum, Fries. Rinekirk, Kilrush, and Foynes.
H. perforatum, Linn. Ennis, Ballycar, Rinekirk, Askeaton, Ballybunion.
H. dubium, Leers. Limestone rocks by shore at Askeaton.
H. humifusum, Linn. Kilrush ; not common.
H. pulchrum, Linn. Dry banks ; Kilrush, &c.
H. elodes, Linn. Tullagher Lake, north of Kilrush, and abundant on Monmor bog.

GERANIACEÆ.

- Geranium molle*, Linn. Common.
G. pusillum, Linn. Waste ground by the old Charter School near Ringmoylan, north of Pallaskenry ; rare.
G. dissectum, Linn. Common through the district.
G. columbinum, Linn. Plentiful on limestone at Askeaton ; also in quarry, and on rocky limestone pastures at Foynes.
G. lucidum, Linn. Abundant about Patrick's Well and Foynes.
G. robertianum, Linn. Rocks and banks ; frequent.
Erodium cicutarium, Smith. Common on roadsides at north side of Tralee Bay.

OXALIDACEÆ.

- Oxalis acetosella*, Linn. Frequent.

LINACEÆ.

- Linum catharticum*, Linn. Dry pastures ; in profusion on sandhills at Ballybunion.
Radiola linoides (Linn.). By Lough Senan, and abundant in places between Kilrush and Carrigaholt, also between Ballybunion and Kerry Head.

CELASTRACEÆ.

Euonymus europæus, Linn. Askeaton rare, but frequent in woods between Foynes and Glin.

LEGUMINOSÆ.

Ulex europæus, Linn. Frequent.

Medicago lupulina, Linn. Roadsides Sixmilebridge, Askeaton, and Foynes to Glin.

Trifolium pratense, Linn. Pastures and wastes; common.

T. repens, Linn. Damp pastures; common.

T. fragiferum, Linn. Muddy salt flats at Beal Point and Ballybunion, also abundant on north side of Tralee Bay.

T. procumbens, Linn. Limestone rocks, and roadsides, Ennis, Sixmile-bridge, and Askeaton; frequent.

T. minus, Sm. Pastures, banks, and wastes; common.

Lotus major, Scop. Abundant at Ennis, Lough Senan, and by the Shannon above and below Kilrush.

Anthyllus vulneraria, Linn. Sixmilebridge, Carrigaholt, Foynes; frequent on limestone.

Vicia hirsuta, Koch. Limestone rocks at Askeaton, and occasionally to Foynes.

V. sylvatica, Linn. Plentiful in Ringmoylan Wood.

V. cracca, Linn. Frequent on hedge banks.

V. sepium, Linn. Roadsides and banks; common.

Lathyrus pratensis, Linn. Kilrush and Carrigaholt; frequent.

L. macrorrhizus, Wimm. Rinekirk, Foynes.

ROSACEÆ.

Prunus communis, Linn. Hedges and thickets.

Spiræa ulmaria, Linn. Pastures and waysides; common.

Agrimonia eupatoria, Linn. Sixmilebridge, Kilrush, Askeaton, Foynes, Tarbert, Listowel.

Alchemilla vulgaris, Linn. Apparently not common.

Potentilla anserina, Linn. Roadsides and waste ground; common.

P. reptans, Linn. Ennis, Kilrush, Patrick's Well, Foynes; frequent.

P. tormentilla, Nesl. Common.

P. fragariastrum, Ehr. Dry banks; frequent.

[*Rubus rhamnifolius*, W. and N. Prof. Babington remarks on the specimen sent under this name "probably."]

- Rubus rusticanus*, Merc. (*R. discolor* Auct. Brit.). Ballycar, Sixmile-bridge, Kilrush, Patrick's Well, Askeaton, Foynes.
- R. leucostachys*, Sm. Hedge bank between Kilrush and Moyne Point.
"The form found at Malvern, and named by Lees as *R. vestitus* var. *argenteus*" (C. C. B.).
- R. villicaulis*, W. and N. Heathy hillside near Sixmilebridge; plentiful.
- R. macrophyllus*, Weihe. Doonbeg; probably common.
- R. rosaceus*, Weihe. By the Shannon, near Rineekirk.
- R. koehleri*, Weihe. Ballycar, and in woods at Foynes; a very prickly form.
- R. lejeunii*, Weihe. With the preceding species at Foynes.
- R. corylifolius*, Sm. Patrick's Well, and frequent from Askeaton to Foynes.
Var. β *conjungens*, Bab. On limestone rocks by the shore at Askeaton.
- R. althæifolius*, Host. Plentiful in a small ravine (Moyarta River) by the shore at the north end of Carrigaholt, Co. Clare. More sparingly on limestone rock, near the shore at Askeaton, Co. Limerick.
- R. scabrosus*, Müll. (*R. tuberculatus*, Bab. ?). Woods at Foynes.
- R. cæsius*, Linn., var. δ *intermedius*, Bab. In profusion on the sand-hills at Ballybunion, and more sparingly on the rocks a little to the north.
- Geum urbanum*, Linn. Roadsides and banks, Ballycar, Foynes, &c.; not plentiful.
- Rosa spinosissima*, Linn. Askeaton, and thence to Foynes, occasionally.
- R. tomentosa*, Sm. Doonbeg; not common.
- R. canina*, Linn. Hedge banks and thickets; frequent, but not abundant.
- R. arvensis*, Huds. Clare Castle, Newmarket, Sixmilebridge, Askeaton, Foynes; frequent.
- Cratægus oxyacantha*, Linn. Hedges and copses.
- Pyrus aucuparia*, Gaert. Woods at Foynes; not common.

LYTHRACEÆ.

- Lythrum salicaria*, Linn. Ennis, Kilrush, Patrick's Well, Foynes, Glin; frequent.
- Peplis portula*, Linn. Marshes at Tullagher, and on Scattery Island; not common.

ONAGRACEÆ.

- Epilobium hirsutum*, Linn. Ennis, Doonbeg, Patrick's Well, Foynes, Ballybunion; frequent.
E. parviflorum, Schreb. Ennis, Doonbeg, Ballybunion; common.
E. montanum, Linn. Sixmilebridge, Doonbeg, Foynes; common.
E. obscurum, Schreb. Doonbeg, Kilrush, Ballybunion; common.
E. palustre, Linn. Ballycar, Lough Senan; local.
Circæa lutetiana, Linn. Woods and thickets; common.

HALORAGACEÆ.

- Myriophyllum alterniflorum*, D. C. Lough Senan; not common.
Hippuris vulgaris, Linn. Doonbeg, Lough Senan, Tullagher, Askeaton to Foynes; frequent.

CRASSULACEÆ.

- Sedum acre*, Linn. Ennis, Kilrush, Foynes, Ballybunion; abundant.
S. reflexum, Linn. Walls and roofs at Newmarket; rare.
Cotyledon umbilicus, Linn. Kilrush; abundant at Foynes.

SAXIFRAGACEÆ.

- Saxifraga tridactylites*, Linn. Walls of old church on Scattery Island, common on the limestone at Askeaton and Foynes, walls at Listowel.
Chrysosplenium oppositifolium, Linn. By rocky streams.
Parnassia palustris, Linn. Bogs at Ballycar.

UMBELLIFERÆ.

- Hydrocotyle vulgaris*, Linn. Marshes and bogs; common.
Sanicula europæa, Linn. Woods, Foynes, &c.
Eryngium maritimum, Linn. Sands at Doonbeg, and on north side of Tralce Bay.
Apium graveolans, Linn. In profusion about Ballybunion; common by the Shannon estuary, reaching to four miles inland at Patrick's Well.
A. nodiflorum, Linn. Frequent; common from Askeaton to Foynes.
A. inundatum, Reich. Monmor bog, Tullagher; common.
Ægopodium podagraria, Linn. Plentiful at Ennis.
Bunium flexuosum, With. Kilrush, Foynes; not common.

- Pimpinella magna*, Linn. Roadsides and ditch-banks near Rinekirk, and about Foynes.
- P. saxifraga*, Linn. Abundant at Askeaton and Foynes.
- Sium erectum*, Huds. (*S. angustifolium*, Linn.). By the Fergus at Ennis, and abundant in a ditch at Doonbeg.
- Ænanthe lachenalii*, Gmel. Abundant in salt marshes at Foynes and Ballybunion.
- Æ. crocata*, Linn. Ennis, Kilrush, Foynes, Ballybunion.
- Æ. phellandrium*, Lamk. Abundant by the Fergus at Ennis, Foynes to Glin, occasionally.
- Feniculum officinale*, Linn. Railway bank in slob-land near Foynes.
- Crithmum maritimum*, Linn. Sparingly on rocks by the Shannon above Kilrush.
- Angelica sylvestris*, Linn. Common at Ennis, and frequent on rocks at Ballybunion.
- Pastinaca sativa*, Linn. Sparingly amongst potatoes at Foynes; a casual.
- Heracleum sphondylium*, Linn. Frequent in waste places.
- Daucus carota*, Linn. Fields and banks, in profusion.
- Torilis anthriscus*, Huds. Roadsides and banks; common.
- T. nodosa*, Huds. Sixmilebridge, Ballingrane, Ardfert.
- Scandix pecten-veneris*, Linn. Borders of cultivated fields at Kilrush and Askeaton, but not common.
- Cherophyllum sylvestre*, Linn. Ennis, and Foynes to Glin, but not abundant.
- Conium maculatum*, Linn. Clare Castle, Monmor bog, Ballybunion; abundant in places.
- Smyrniolum olusatrum*, Linn. Quay at Clare Castle, abundant on Scatterry Island, and about Foynes, occasionally.

HEDERACEÆ.

- Hedera helix*, Linn. Common.

CAPRIFOLIACEÆ.

- Sambucus ebulus*, Linn. In plenty on roadside a little west of Ard-sollus Station, also near Rinekirk and Patrick's Well, and abundant on waste ground at Askeaton.
- S. nigra*, Linn. Frequent throughout the district.
- Lonicera periclymenum*, Linn. Hedges; common.

RUBIACEÆ.

- Sherardia arvensis*, Linn. Borders of sandy fields, Sixmilebridge, Patrick's Well, Foynes, Ardfert.
Asperula cynanchica, Linn. Sandy shores at Doonbeg and Foynes, and abundant on Sandhills at Beal Point, Ballybunion, and Tralee Bay.
A. odorata, Linn. Sixmilebridge, &c. ; not common.
Rubia peregrina, Linn. Wood at Ringmoylan, rocks at Askeaton, limestone quarry at Foynes.
Galium verum, Linn. Common throughout the district.
G. saxatile, Linn. Kilrush, &c. ; frequent.
G. aparine, Linn. Frequent.

DIPSACACEÆ.

- Dipsacus sylvestris*, Huds. Doonbeg, sparingly, plentiful by the Shannon above and below Kilrush, in several places on the coast near Foynes.
Scabiosa succisa, Linn. Foynes, Ballybunion, &c. ; frequent.
S. (Knaulia) arvensis, Linn. Railway banks in several places near Adare and Askeaton.

COMPOSITÆ.

- Eupatorium cannabinum*, Linn. Abundant at Ballycar, occasionally about Foynes, Beal Point, and Ballybunion.
Petasites vulgaris, Linn. By streams ; common.
P. fragrans, Presl. Naturalized in wood at Foynes.
Tussilago farfara, Linn. Damp soil ; common.
Aster tripoleum, Linn. Muddy shores and maritime rocks ; frequent.
Bellis perennis, Linn. Common.
Solidago virgaurea, Linn. Doonbeg, and plentiful on limestone rocks at Foynes.
Inula helenium, Linn. Plentiful in two places by the shore at Beal Point.
Pulicaria dysenterica, Linn. Kilrush, Foynes, Glin, Ballybunion ; frequent.
Gnaphalium uliginosum, Linn. Lough Senan ; seems not common.
Antennaria dioica, Linn. Dry pastures at Foynes.
Achillea ptarmica, Linn. Kilrush, Ballybunion ; frequent.
A. millefolium, Linn. Roadsides and waste ground ; common.

- Matricaria inodora*, Linn. Waste ground; common.
M. chamomilla, Linn. Plentiful at Ballybunion and Beal Castle.
Chrysanthemum leucanthemum, Linn. Common.
C. segetum, Linn. Cultivated fields; frequent.
Artemisia vulgaris, Linn. Dry banks; frequent.
A. maritima, Linn. Abundant on muddy flats by the shore above Foynes.
Senecio vulgaris, Linn. Common.
S. sylvaticus, Linn. Waste ground at Askeaton, and from Foynes to Glin; not common.
S. jacobæa, Linn. Common.
S. aquaticus, Huds. Wet places; common.
Bidens tripartita, Linn. Ballycar, Lough Senan, also near Doonbeg, and Beal point; frequent in bog drains.
B. cernua, Linn. Lough Senan; less common.
Carlina vulgaris, Linn. Sixmilebridge; not common.
Arctium minus, Schk. Clare Castle, Ballycar, Beal Castle; general, sometimes abundant.
Centaurea nigra, Linn. Common.
C. scabiosa, Linn. Railway banks Adare to Ballygrane, and near Askeaton; rare.
Carduus lanceolatus, Linn. Common.
C. arvensis, Linn. Common.
C. palustris, Linn. Common.
C. pratensis, Huds. Bogs at Tullagher, and between Askeaton and Foynes.
Silybum marianum (Linn). Waste ground at Askeaton, and on the shore at Beal Point.
Lapsana communis, Linn. Clare Castle, &c.
Hypochæris radicata, Linn. Waste ground and banks; common.
Leontodon hirtus, Linn. (*Thrineia*, D. C.). Dry pastures at Foynes, and abundant on the sandhills at Ballybunion.
L. autumnalis, Linn. Damp pastures; common,
L. taraxacum, Linn. Common.
Sonchus oleraceus, Linn. Kilrush, &c.; common.
S. asper, Hoffm. Frequent; abundant at Ennis.
S. arvensis, Linn. Cultivated fields; common.
Crepis virens, Linn. Ballybunion, &c.; common.
Hieracium pilosella, Linn. Dry banks; frequent.

CAMPANULACÆ.

- Jasione montana*, Linn. Abundant on rocks at Ballybunion.
Campanula rotundifolia, Linn. Hills near Sixmilebridge; apparently not common.

ERICACEÆ.

- Calluna vulgaris* (Linn.). Heaths, Ballycar, &c.; frequent.
Erica tetralix, Linn. Ballycar; frequent on bogs.
E. cinerea, Linn. Kilrush, &c.; frequent.
Vaccinium myrtillus, Linn. Sixmilebridge and Foynes; not abundant.
V. oxycoccos, Linn. Plentiful on parts of Monmor bog.

AQUIFOLIACEÆ.

- Ilex aquifolium*, Linn. Sixmilebridge; not common.

OLEACEÆ.

- Ligustrum vulgare*, Linn. By the Fergus at Ennis, Askeaton to Foynes, and often seen in hedges.

GENTIANACEÆ.

- Chlora perfoliata*, Linn. Near Askeaton in plenty, also near Ballybunion.
Erythraea pulchella (Swartz). Abundant on the sandhills at Ballybunion, occurs also at Beal Point, and north side of Tralce Bay.
E. centaureum (Curtis). Ballycar, Sixmilebridge, Foynes, Glin; frequent.
Gentiana campestris, Linn. Rocks at Ballybunion, and near Ballin-garry, north-west of Kerry Head.

CONVOLVULACEÆ.

- Convolvulus sepium*, Linn. Ennis, Kilrush, Foynes, Askeaton, Ballybunion.
C. soldanella, Linn. In great abundance on sandhills at north side of Tralce Bay.

BORAGINACEÆ.

- Symphytum officinale*, Linn. By the Fergus at Ennis, Foynes to Glin, and abundant at Beal Point.
Myosotis palustris, With. Ennis, Ballycar, Curragh Chace.
M. caspitosa, Schultz. Lough Senan; less common than the preceding.
M. arvensis, Hoffm. Ballycar, Listowel; frequent.
M. versicolor, Reich. Sixmilebridge; not very common.

SOLANACEÆ.

- Solanum dulcamara*, Linn. (var. *marinum*, Bab.). Sparingly on gravelly shore at upper side of Kilrush.

OROBANCHACEÆ.

- Orobanche hederæ*, Duby. Sparingly, on ivy, a little south-east of Foynes, and again near Askeaton.

SCROPHULARIACEÆ.

- Verbascum thapsus*, Linn. Sparingly at Pallaskenry, Askeaton, and quarry at Foynes.
Linaria vulgaris, Mill. By the railway line at Adare.
Scrophularia nodosa, Linn. Ballycar, Kilrush, Askeaton, Foynes; frequent.
S. aquatica, Linn. Abundant by the Fergus at Ennis, and several places between Kilrush and Carrigaholt; also Foynes, Beal Castle, and Ballybunion; more common than the preceding.
Melampyrum pratense, Linn. Monmor bog; also near Kilrush, and abundant in wood at Ringmoylan.
Mimulus luteus, Linn. This introduced plant is abundant by the Fergus at Ennis.
Pedicularis palustris, Linn. Marsh at Ballycar.
Rhinanthus crista-galli, Linn. Common.
Bartsia odontites, Huds. Damp waste ground; common.
Euphrasia officinalis, Linn. Kilrush, and abundant on the sandhills at Ballybunion and Beal Point.
Veronica scutellata, Linn. Monmor bog, Tullagher Lake.
V. anagallis, Linn. Abundant at Ennis.
V. beccabunga, Linn. Kilrush, &c.
V. chamædrys, Linn. Common.

- V. montana*, Linn. Ballycar; not common.
V. officinalis, Linn. Quarry at Kilrush; not abundant.
V. serpyllifolia, Linn. Frequent.
V. arvensis, Linn. Fields about Foynes.
V. agrestis, Linn. Ballybunion, &c.
V. polita, Fries. Fields at Foynes.
V. buzbaumii, Ten. Clare Castle, Kilrush, Foynes to Glin, Ballybunion; frequent.

LABIATÆ.

- Mentha aquatica*, Linn. Ennis, Ballycar, Ballybunion.
M. sativa, Linn. Ballybunion.
Lycopus europæus, Linn. Wet places; common in the district.
Origanum vulgare, Linn. Abundant on a roadside near Patrick's Well.
Thymus serpyllum, Linn. Ballycar, Kilrush, &c.
Scutellaria galericulata, Linn. Wood at Ballycar; rare.
Brunella vulgaris, Linn. Common, but not abundant.
Nepeta glechoma, Linn. Sixmilebridge, Askeaton, Foynes.
Lamium purpureum, Linn. Cultivated fields; common.
Galeopsis tetrahit, Linn. Sixmilebridge; frequent.
Stachys sylvatica, Linn. Sixmilebridge and Scatterry Island.
S. palustris, Linn. Sixmilebridge; frequent.
S. arvensis, Linn. Roadside from Newmarket to Sixmilebridge; rare.
Teucrium scorodonia, Linn. Quarry at Foynes; not abundant.

VERBENACEÆ.

- Verbena officinalis*, Linn. Plentiful on waste ground at Askeaton, roadside at Ardferf; rare.

LENTIBULARIACEÆ.

- Utricularia minor*, Linn. Ballycar, Tullagher Lake, abundant on Monmor bog.

PRIMULACEÆ.

- Primula vulgaris*, Linn. Common.
Glaux maritima, Linn. Abundant in many places.
Anagallis arvensis, Linn. Common on light soil.
A. tenella, Linn. Common in boggy places.
Samolus valerandi, Linn. Occasionally by Shannon, at the upper end of the estuary; bogs at Ballycar and Carrigaholt; frequent at Foynes.

PLUMBAGINACEÆ.

Statice bahusiensis, Fries. Ringmoylan, and mud-flats above Foynes; rare.

Armeria maritima, Willd. Kilrush, Ballybunion; frequent.

PLANTAGINACEÆ.

Plantago coronopus, Linn. Rocky shores, Foynes, Ballybunion.

P. maritima, Linn. Common by the Shannon.

P. lanceolata, Linn. Common.

P. major, Linn. Common.

Littorella lacustris, Linn. Shores of Lough Fin, east of Newmarket.

CHENOPODIACEÆ.

Suaeda maritima, Linn. Doonbeg, Scattery Island.

Salsola kali, Linn. Shore at Beal Point; rare.

Chenopodium album, Linn. Common.

Beta maritima, Linn. Foynes; not common.

Salicornia herbacea, Linn. Foynes; not abundant.

Atriplex littoralis, Linn. Scattery Island; rare.

A. angustifolia, Wahl. Kilrush, &c.

A. hastata, Linn. Common on shores of the Shannon.

A. babingtonii, Woods. Clare Castle.

POLYGONACEÆ.

Rumex conglomeratus, Murr. Ennis, Foynes, Kilrush; frequent.

R. sanguineus, Linn. (var. *viridis*, Sibth.). Ennis.

R. obtusifolius, Linn. Common.

R. crispus, Linn. Waste ground.

R. acetosa, Linn. Frequent.

R. acetosella, Linn. Stony pastures.

Polygonum amphibium, Linn. Doonbeg, Foynes; frequent.

P. persicaria, Linn. Common.

P. hydropiper, Linn. Common in wet places.

P. aviculare, Linn. Waste ground and roadsides; common.

P. convolvulus, Linn. Foynes, Glin.

EMPETRACEÆ.

Empetrum nigrum, Linn. Ballycar, and heaths south-west of Ballybunion; rare.

EUPHORBIACEÆ.

- Euphorbia helioscopia*, Linn. Cultivated fields; common.
E. paralias, Linn. Abundant on sandhills at north side of Tralee Bay.
E. portlandica, Linn. Sparingly on sandhills at Ballybunion.
E. peplus, Linn. Common in fields.

CALLITRICHACEÆ.

- Callitriche verna*, Linn. Lough Senan, Beal Castle; common.
C. hamulata, Kutz. Ditch at Rinekirk; perhaps frequent.

URTICACEÆ.

- Parietaria officinalis*, Linn. Old walls; frequent.
Urtica urens, Linn. Common at Ennis, abundant from Askeaton to Foynes.
U. dioica, Linn. Common.
Humulus lupulus, Linn. Hedge bank close to Ballycar railway station; an escape.

AMENTIFERÆ.

- Salix alba*, Linn. Sixmilebridge, and frequent.
S. viminalis, Linn. Ballycar, Sixmilebridge.
S. cinerea, Linn. Common.
S. aurita, Linn. Common.
S. caprea, Linn. Less common.
S. repens, Linn. Boggy heaths, and in sandhills; common.
Myrica gale, Linn. Doonbeg and Tullagher; not common.
Alnus glutinosa, Gaert. Damp thickets.
Quercus robur, Linn. Dwarf and stunted in old natural wood on the shore at Ringmoylan.
Corylus avellana, Linn. Thickets.

HYDROCHARIDACEÆ.

- Hydrocharis morsus-ranæ*, Linn. Abundant, and flowering in drains by the Fergat at Ennis.

ORCHIDACEÆ.

- Orchis mascula*, Linn. Frequent.
O. maculata, Linn. Abundant.

- O. pyramidalis*, Linn. Sixmilebridge, roadside west of Limerick, Patrick's Well, Ringmoylan, Askeaton, Foynes; plentiful.
Gymnadenia conopsea, R. Br. Heaths at Ballyear, Patrick's Well, frequent from Askeaton to Foynes.
Habenaria viridis, R. Br. Foynes; not common
H. bifolia, R. Br. Plentiful on Monmor bog.
Listera ovata, R. Br. Curragh Chace, east of Askeaton; also in wood at Foynes.
Epipactis latifolia, All. Woods at Foynes; not common.

IRIDACEÆ.

- Iris pseud-acorus*, Linn. Common.
I. fetidissima, Linn. Margin of Ballyear Lake, near Ennis; possibly introduced, but has the aspect of a native.

ALISMACEÆ.

- Alisma plantago*, Linn. Ennis; common.
A. ranunculoides, Linn. Marshes, and in shallow water; common.
Triglochin maritimum, Linn. Abundant at Ballybunion.
T. palustre, Linn. Frequent.

LILIACEÆ.

- Endymion nutans*, Dum. Woods.

MELANTHACEÆ.

- Narthecium ossifragum*, Huds. Peat bogs; abundant from Kilrush to Kilkee.

JUNCACEÆ.

- Juncus maritimus*, Sm. Frequent by the Shannon.
J. effusus, Linn. Common.
J. conglomeratus, Linn. Common.
J. glaucus, Sibth. Lough Senan, and abundant at Beal Castle.
J. obtusiflorus, Ehr. Marsh by the railway line above Foynes.
J. acutiflorus, Ehr. Common.
J. lamprocarpus, Ehr. Abundant at upper end of the estuary.
J. supinus, Moench. Lough Senan; not common.
J. squarrosus, Linn. Heath at Ballyear.
J. gerardi, Lois. Muddy flats at north side of Tralee Bay.
J. bufonius, Linn. Lough Senan.
Luzula multiflora, Lej. Moors and bogs.

TYPHACEÆ.

Typha latifolia, Linn. Ennis, Lough Senan, Tullagher, Doonbeg ; frequent in Clare.

Sparganium ramosum, Huds. Common.

S. minimum, Fries. Frequent in bogs about Ennis, abundant in Lough Senan and Tullagher Lake ; also Blue Lough and Curragh Chace.

ARACEÆ.

Arum maculatum, Linn. Sixmilebridge ; common.

LEMNACEÆ.

Lemna trisulca, Linn. Abundant about Ennis.

L. minor, Linn. Common.

POTAMOGETONACEÆ.

Potamogeton natans, Linn. Ponds and lakes ; frequent.

P. polygonifolius, Pourr. Kilrush, Tullagher Lake, Carrigaholt ; frequent.

P. rufescens, Schrad. St. Senan's Lough ; not common.

P. zizii, Roth. Lough Senan.

P. perfoliatus, Linn. Abundant in the Fergus at Ennis, and in Lough Senan.

P. friesii, Rupr. (*P. mucronatus*, Schrad.) Pond near Foynes.

P. pusillus, Linn. Ponds and lakes ; frequent.

P. pectinatus, Linn. River Fergus at Ennis, also at Ballybunion.

P. densus, Linn. In great abundance in the alluvial flat by the Mague from Ferry Bridge to Rinekirk.

Ruppia rostellata, Koch. Brackish ditches, Kilrush, Foynes, Ballybunion.

Zannichellia palustris, Linn. Rinekirk.

NAIDACEÆ.

Zostera marina, Linn. Scattery Island, and frequent.

CYPERACEÆ.

Schænus nigricans, Linn. Ballycar, and abundant from Askeaton to Foynes.

Cladium mariscus, R. Br. Marshes at Blue Lough, south of Pallaskenry.

- Rhynchospora alba*, Vahl. Abundant on bogs from Kilrush to Kilkee.
- Eleocharis palustris*, R. Br. Common.
- E. multicaulis*, Sm. Monmor bog.
- Scirpus maritimus*, Linn. Frequent, and often very luxuriant by the Shannon.
- S. lacustris*, Linn. Abundant in the lakes of Co. Clare.
- S. tabernamontani*, Gm. Rinekirk, Blue Lough, Askeaton; plentiful in one spot at Ballybunion, and abundant in a ditch at Beal Castle.
- S. cæspitosus*, Linn. Moors.
- S. fluitans*, Linn. Pond by the Shannon above Kilrush.
- S. savii*, S. and M. Doonbeg, and by the shore at Foynes; not common.
- Eriophorum polystachion*, Linn. Common on bogs.
- Carex pulicaris*, Linn. Askeaton; not common.
- C. disticha*, Huds. Ennis, Foynes.
- C. arenaria*, Linn. Abundant on sandy shores at Doonbeg, Beal Point, Ballybunion, and Tralee Bay.
- C. vulpina*, Linn. Ennis, Doonbeg, Rinekirk, Beal Point, Ballybunion.
- C. paniculata*, Linn. Curragh Chace; not common.
- C. remota*, Linn. Wood at Beal Castle.
- C. echinata*, Good. Ballycar; frequent.
- C. leporina*, Linn. Kilrush; apparently not common.
- C. stricta*, Good. Woods of Curragh Chace; rare.
- C. goodenovii*, Gay. Common.
- C. limosa*, Linn. Bog drains at Ballycar; rare.
- C. præcox*, Jacq. Ballycar; not common.
- C. glauca*, Linn. Common.
- C. flava*, Linn. Common.
- C. extensa*, Good. Salt marsh at Foynes, and abundant in mud flats at Ballybunion.
- C. hornschuchiana*, Hoppe. Heaths; not common.
- C. distans*, Linn. Carrigaholt, Foynes, Ballybunion; plentiful on muddy shores.
- C. binervis*, Sm. Heaths; not common.
- C. sylvatica*, Huds. Woods; common in the district.
- C. pseudo-cyperus*, Linn. Abundant in bog drains at Ballycar.
- C. hirta*, Linn. Ballycar, Kilrush; not common.
- C. rostrata*, Stokes. Common.
- C. vesicaria*, Linn. Rinekirk; not very common.
- C. riparia*, Curt. Ennis, Ballycar, Rinekirk; frequent.

GRAMINEÆ.

- Phalaris arundinacea*, Linn. Ennis; not very common.
Anthoxanthum odoratum, Linn. Pastures; common.
Phleum arenarium, Linn. Sandhills at north side of Tralee Bay.
P. pratense, Linn. Common.
Phragmites communis, Trin. Frequent throughout the district.
Psamma arenaria, R. and S. Askeaton to Foynes; abundant at Tralee Bay.
Agrostis vulgaris, With. Common.
A. alba, Linn. Lough Senan, Kilrush, Foynes, Listowel.
Holcus lanatus, Linn. Roadsides and wastes; common.
H. mollis, Linn. Boggy ground, Kilrush.
Aira cæspitosa, Linn. Ballycar, Foynes; frequent.
A. caryophyllea, Linn. Kilrush.
Arrhenatherum elatius, M. and K. Roadsides and banks; common.
Trioda decumbens, Beauv. Bogs below Kilrush, limestone pastures at Foynes, rocks at Ballybunion.
Melica uniflora, Retz. Woods at Foynes; not common.
Molinia cærulea, Moench. Abundant at Ballycar, moors at Tullagher, rocks at Askeaton; frequent.
Poa annua, Linn. Common.
P. trivialis, Linn. Common.
Glyceria fluitans, R. Br. Ditches about Ennis.
Sclerochloa maritima, Lindl. Kilrush, Beal Point, Ballybunion.
S. rigida, Link. Wall at Kilrush, abundant at Askeaton, frequent at Foynes.
Briza media, Linn. Common in bogs and wet pastures.
Cynosurus cristatus, Linn. Common.
Dactylus glomeratus, Linn. Frequent.
Festuca ovina, Linn. Beal Point and Ballybunion.
F. rubra, Linn. Common through the district.
F. pratensis, Huds. Rinekirk to Foynes, occasionally in damp fields.
F. gigantea, Vill. In woods, Curragh Chace, Foynes, &c.
Bromus asper, Murr. Wood at Foynes.
B. racemosus, Linn. Damp pastures, Kilrush, Foynes.
B. mollis, Linn. Roadsides and waste ground; frequent.
Brachypodium sylvaticum (Huds.). Common and abundant.
Triticum caninum, Linn. Stony and gravelly shores on both sides of the Shannon; frequent.
T. repens, Linn. Waste ground and borders of fields; frequent.

- T. junceum*, Linn. Sandy shores, Doonbeg, Beal Point, abundant at Tralee Bay.
- Hordeum pratense*, Huds. Abundant in a salt marsh at Ringmoylan.
- Lepturus filiformis*, Trin. Abundant in wet, sandy flats at Ballybunion, and north side of Tralee Bay.
- Lolium perenne*, Linn. Common.
- L. italicum*, Braun. Kilrush, and Foynes to Askeaton.

EQUISETACEÆ.

- Equisetum arvenis*, Linn. Common.
- E. maximum*, Lamk. Common.
- E. limosum*, Linn. Common.
- E. palustre*, Linn. Common.

FILICES.

- Polypodium vulgare*, Linn. Banks and walls; not abundant.
- Lastrea filix-mas*, Presl. Ballycar, &c.
- L. dilatata*, Willd. Foynes.
- Polystichum aculeatum*, Roth. Roadsides, Foynes; not common.
- Athyrium filix-femina*, Roth. Kilrush.
- Asplenium adiantum nigrum*, Linn. Kilrush, Askeaton, Foynes; frequent, sometimes abundant.
- A. trichomanes*, Linn. By the Fergus at Ennis, also Sixmilebridge, Kilrush, Askeaton, Foynes; frequent.
- A. marinum*, Linn. Rocks above Kilrush; rare and stunted.
- A. ruta-muraria*, Linn. Abundant at Ennis, Kilrush, Askeaton, Foynes, Beal Castle.
- Scolopendrium vulgare*, Sym. Ballycar, &c.; not abundant.
- Ceterach officinarum*, Willd. Common on walls; very abundant, and luxuriant at Foynes.
- Blechnum spicant*, Roth. Kilrush; not abundant.
- Pteris aquilina*, Linn. Common.
- Osmunda regalis*, Linn. Bogs at Ballycar, and plentiful in bogs from Kilrush to Kilkee.

CHARACEÆ.

- Chara fragilis*, Desv. Ponds and bog drains near Ennis; plentiful.
- C. hispida*, Linn. Bog drains near Newmarket, Curragh Chace, Askeaton, Foynes; frequent.
- C. vulgaris*, Linn. By the Shannon, at Rinckirk.
- Nitella opaca*, Ag. Blue Lough, south of Pallaskenry.

MUSCI.

- Catharina undulata*, Linn. Damp, shady banks.
Politrichum commune, Linn. Bogs; common.
Fissidens bryoides, Linn. Damp banks.
F. adiantoides, Linn. Wood at Foynes.
Campylopus brevipilus, Br. et Schimp. Foynes; very fine, but barren.
Dicranum scoparium, Linn. Woods and shady places; common.
Ceratodon purpureus, Linn. Common.
Pottia truncatula, Linn. Fields and damp banks.
Tortula muralis, Linn. Common.
 " " var. *β rupestre*, Schultz. Walls and limestone rocks;
 frequent.
T. papillosa, Wilson. On trees near Ennis; rare and barren.
T. laevipila, Brid. Limestone rocks; frequent.
T. ruralis, Linn. Roofs and dry banks.
Mollia viridula, Linn. Common.
M. crispula, Lindb. (var. *elata*, Schimp.). Abundant on limestone rocks
 near Foynes.
M. littoralis, Mitten. Limestone rocks near Foynes.
M. brachydontia, Lindb. (*Trichostomum mutabile*, Bruch.). Limestone
 rocks; not rare.
M. tortuosa, Linn. Frequent, but barren on limestone rocks and walls.
Barbula rubella (Hoff.). Quarries and waste ground; frequent.
B. brevifolia, Dicks. (*Trichostomum tophaceum*, Brid.). Limestone
 rocks, Ennis, Foynes; frequent.
B. rigidula, Hedw. Limestone rocks at Foynes.
B. cylindrica, Tayl. (*Tortula insulana*, De Not.). Limestone at Foynes.
B. revoluta, Schrad. Walls; frequent.
B. convoluta, Huds. Limestone, by the Shannon at Foynes.
B. unguiculata, Huds. Damp banks; frequent.
Cinclidotus riparius. On stones, by margin of the River Fergus at Ennis.
Leersia contorta, Wulf. (*E. streptocarpa*, Hedw.). Walls near Foynes.
Grimmia maritima, Turner. Maritime rocks.
G. pulvinata, Linn. Ballycar, and elsewhere; frequent.
Glyphomitrium polyphyllum, Dicks. Common.
Anæctangium mougeottii (*Zygodon*, B. & S.). Limestone rocks, Foynes;
 not rare.
Zygodon viridissimus, Dicks. On trees, Ennis, Pallaskenry, Foynes;
 frequent and fertile.
Orthotrichum affine, Schrad. Trees, Ennis, &c.

- O. diaphanum*, Schrad. On trees by the Fergus at Ennis.
- O. cupulatum*, Hoff. (var. *nudum*, Dicks.). On stones in streams at Ennis and Foynes.
- O. tenellum*, Bruch. Wood at Curragh Chace.
- O. pulchellum*, Smith. On trees, and more rarely on stones; not common.
- Weissia bruchii*, Lindb. (*Ulota*, Brid.). Trees at Rinekirk; and frequent.
- W. phyllantha*, Brid. Trees and stones; common, but barren.
- Funaria hygrometrica*, Linn. Common.
- Pohlia nutans*, Schreb. (*Webera*, Hedw.). Bogs; not rare.
- P. carnea*, Linn. Sides of streamlets; not uncommon.
- Bryum inclinatum*, Swartz. Damp banks; rare.
- B. cœspiticium*, Linn. Walls and banks; common.
- B. argenteum*, Linn. Common.
- B. bicolor*, Dicks. (*B. atropurpureum*, W. and M.). Waste heaps; frequent.
- B. torquescens*, Br. et Sch. Plentiful on walls near Foynes.
- B. murale*, Wilson. Walls near Foynes.
- B. capillare*, Linn. Common.
- Breutelia chrysocoma*, Dicks. (*B. arcuata*, Hedw.). Heaths.
- Mnium punctatum*, Schreb. Wet, rocky places; frequent.
- Thuidium tamariscinum*, Neck. Woods and damp banks; frequent.
- Anomodon viticulosus*, Linn. Walls and limestone rocks, Ballycar, Pallaskenry, &c.
- Hypnum filicinum*, Linn. Wet places; frequent.
- H. serpens*, Linn. Damp, shady ground, and tree trunks; common.
- H. stellatum*, Schreb. Frequent; fine, but barren at Foynes.
- H. glaucum*, Lamk. (*H. commutatum*, Hedw.). Wet rocks, Foynes.
- H. scorpioides*, Linn. Foynes; barren.
- H. purum*, Linn. Foynes; frequent.
- H. striatum*, Schreb. Woods, Kilrush, Foynes.
- H. swartzii*, Turner. Wood at Foynes.
- H. rusciforme*, Necker. In streams.
- H. tenellum*, Dicks. Limestone rocks at Askeaton.
- H. velutinum*, Linn. Rocks and stones; frequent.
- H. pseudo-plumosum*, Brid. (*H. plumosum*, auct. Brit.). Frequent.
- H. viride* Lamk. (*H. populeum*, Hedw.). Foynes.
- H. lutescens*, Huds. Limestone rocks at Askeaton.
- H. sericeum*, Linn. (*Leskea*, Hedw.). Askeaton.
- H. viviparum*, Neck. (*Iso. myurum*, Poll.). Foynes.

- H. brevirostrum*, Ehr. Woods at Foynes.
H. triquetrum, Linn. Woods at Foynes.
H. squarrosum, Linn. Foynes; common.
H. molluscum, Hedw. Limestone rocks; frequent.
 „ „ var. *β gracile*, Boulay. Limestone rocks by the Shannon.
H. cypressiforme, Linn. Common.
H. resupinatum, Wils. Stones and rocks; frequent.
H. undulatum, Linn. Woods at Foynes.
H. cuspidatum, Linn. Common.
Parotrichum alopecurum, Linn. Foynes; frequent.
Homalia trichomanoides, Schreb. Rocks and banks; frequent.
Neckera complanata, Linn. On trees at Foynes.
Fontinalis antipyretica, Linn. In the Fergus, at Ennis.
Cryphæa arborea, Huds. On trees by the river at Ennis; also Six-milebridge, Rinekirk, and Foynes.
Sphagnum medium, Limpr. Hills near Sixmilebridge.
S. acutifolium, Ehr. Kilrush, Foynes; common.
 „ „ var. *rubellum*, Wilson, Sixmilebridge.
S. cuspidatum, Ehr. Sixmilebridge, Foynes.

HEPATICÆ.

- Frullania dilatata*, Linn. Trees and rocks; frequent.
Lejeunea hamatifolia, Hook. Rocks near Ballybunion.
L. serpyllifolia, Dicks. Common.
Radula complanata, Linn. Common on trees.
Porella platyphylla, Linn. Common.
Lepidozia reptans, Linn. Shady banks.
Diplophyllum albicans, Linn. Common.
Lophocolea bidentata, Linn. Foynes; frequent.
Plagiochila asplenoides, Linn. Shady banks.
P. spinulosa, Dicks. Frequent.
Nardia scalaris, Schrad. Moist banks; common.
Pellia epiphylla, Linn. Very common.
Metzgeria furcata, Linn. Trees and rocks; common.
Marchantia polymorpha, Linn. Common.