

THE HEY-DAY OF IRISH BOTANY, 1866-1916

D. A. Webb, M.R.I.A., School of Botany, Trinity College, Dublin.
The Scottish Naturalist, 1986: 123-134 (1986)

Introduction

Historians keep telling us that history cannot be divided up into neat centuries or half-centuries, but the dates which I have chosen as the boundaries of my discourse, 1866 to 1916, were not arbitrarily selected. The year 1866 saw the publication of the first edition of *Cybele Hibernica*, by David Moore and A.G. More, which consolidated the results of what can be regarded as the preliminary phase of the botanical exploration of Ireland. Then 1916 saw the publication of Scully's *Flora of Kerry*, the last major contribution to Irish floristics until the publication of *The Botanist in Ireland* eighteen years later (Praeger 1934). A partial explanation for this hiatus lies in the fact that 1916 was also the year of the Easter Rising, and the beginning of an era of political change and uncertainty which cast a heavy shadow over Irish natural history.

The fifty years between 1866 and 1916, however, saw a botanical exploration of Ireland which was much more systematic than any which had preceded it, and which laid the foundations for an understanding of the Irish flora which could be called reasonably complete. The seventy years which have elapsed since 1916 have certainly seen the discovery of a number of new species, the effective revision of some critical groups, and a few important revisions of accepted distribution-patterns. These, however, may fairly be compared to adding the finishing touches to a portrait of which the main lines had already been clearly drawn. In 1866, by contrast, the portrait was not much more than a tentative sketch.

Not only did the half-century with which I deal see the accumulation of a lot of new data; it also saw its very efficient codification. The fact that the second edition of *Cybele Hibernica* appeared in 1898 (Colgan and Scully 1898), to be followed only three years later by Praeger's *Irish Topographical Botany*, suggests at first sight a needless duplication of effort, but in reality the two volumes are complementary. Even as late as 1929, when the second supplement to *Irish Topographical Botany* was published, the Irish botanist could, by the consultation of only four texts, form a reasonable picture of the distribution of every Irish vascular plant and of the history of its discovery.

The picture in 1865 had been very different. Mackay's *Flora Hibernica* (1836) was sound enough, but by then it was nearly thirty years old and made no mention of a number of interesting plants, such as *Erica ciliaris*, *Simethis planifolia* and *Epipactis atrorubens*, which had been discovered in the 1840s and 1850s. Moreover, it gave only a few stations for most species and made no attempt to indicate general distribution. To back this up there were old and imperfect county Floras for Cork (Power 1845) and Dublin (Wade 1794), and Dickie's *Flora of Ulster* (1864). The latter was a useful work, but inevitably, in view of the wide area it covered, without much topographical detail except for rare species.

The succeeding half-century saw the publication, in addition to the works already mentioned, of a supplement to *Irish Topographical Botany* (Praeger 1906), a reasonably good county *Flora of Donegal* (Hart 1898), an excellent county *Flora of Dublin* (Colgan 1904) and a regional *Flora* (covering three counties) of the north-east of Ireland (Stewart and Corry 1888). To this list can be added a systematic survey of many of the major mountain ranges of Ireland, with altitudinal data for numerous species.

New Discoveries

It might have been anticipated that the field-work which lay behind all these publications would lead to the discovery of many plants not hitherto recorded for Ireland. So it did, but the number was rather less than might have been expected. The botanists of the early nineteenth century, although they left large tracts of Ireland completely unexplored, had a good nose for the localities where rare plants were to be found. So it was, then, that the plants of extremely limited distribution which had already been recorded for Ireland before 1866 included *Saxifraga nivalis* and *Arenaria ciliata* from the north-west, *Tuberaria guttata* and *Sibthorpia europaea* from the south-west, *Helianthemum canum* and *Astragalus danicus* from Aran, *Erica mackaiana* from Connemara, *Otanthus maritimus* from the south-east, *Elatine hydropiper* from the north-east and *Inula salicina* and *Carex appropinquata* from the midlands.

Nevertheless, there was still some gleaning to be done. If we exclude certain or probable aliens, taxa not now regarded as entitled to specific rank, and segregates from critical genera in which uncertainties of nomenclature often make it difficult to decide who was, in fact, the true discoverer of a given species), we are left with twenty-two 'normal', copper-bottomed species which were added to the Irish list in the half-century under review. These were well distributed over the country: six were from Ulster, six from Munster, and seven from Leinster – only Connaught makes a poor showing with three. I shall discuss these species and their finders later, but first I must give a general account of the organized field-work of the half-century.

David Moore, A.G. More, and *Cybele Hibernica*

The publication in 1866 of the first edition of *Cybele hibernica* was an important landmark in Irish floristic botany, not least because it indicated the gaps in our knowledge of the distribution of so many species. Its authors were David Moore and A.G. More, both of Scottish extraction. David Moore had come to Ireland as a gardener in 1829, served as botanist on the grandiose but short-lived Ordnance Survey in Antrim and Derry, and returned to Dublin to direct the Botanic Gardens at Glasnevin, which he rapidly built up to international standard. In spite of his duties at the Gardens, he remained an active field botanist all his life, although his later years were devoted mainly to bryophytes. His collaborator, A.G. More, was twenty-three years younger. He lived much of his early life in the Isle of Wight, but from schooldays onwards spent frequent holidays in Ireland and became fascinated by its natural history. In his earlier years, at least, he devoted as much time to birds and to butterflies as he did to plants.

In 1864 More proposed to David Moore that they should compile a *Cybele Hibernica* to supplement the recently completed *Cybele Britannica* by H.C. Watson (Watson 1847-59). Moore installed him at Glasnevin and supplied most of the literature, specimens and personal reminiscence needed for the task; on More, who had no other occupation to distract him, fell the donkey-work of compilation. The resulting volume inevitably suffers by comparison with its second edition of 1898, which is fuller, more handsome, and in some respects clearer, but it was of great value in its day. No sooner had it appeared than More was making plans for supplements, one of which appeared in 1872. After this it would seem that More's thoughts veered towards a new edition rather than to further supplements. Although he did not live to see it, the second edition owes much to the elaborately annotated copy of the first edition, on which More worked until near his death in 1895.

A.G. More

It is not easy from his *Life and Letters* (Moffat 1898), nor from his portrait, to form a very vivid impression of More's personality. His health was never good; in later years he suffered from chronic bronchitis and in his undergraduate days from a complaint over which his *Life* draws so discreet a veil that its nature can only be guessed. Twice it interrupted his studies at Cambridge, but from the fact that a few weeks later he was enjoying an energetic holiday in Switzerland one suspects that it may have been acute depression. In middle life he was an active field naturalist and his appointment to the staff of the Natural History Museum in Dublin, although it tied him down to some extent, gave him an ideal post from which to advise and encourage aspiring young naturalists.

There can be little doubt that More deserves to be remembered as much for this indirect service to Irish floristics as for his direct service through field-work and publications. Most of the men I shall have occasion to mention in this essay were essentially loners; More alone had disciples. Among those whose interests he directed to field-work in botany or zoology, there are two or three for whom the word 'disciple' is not quite apposite - Hart, for one, was not of the stuff of which disciples are made - but for Barrington, Vowell, Colgan, Scully and Barrett-Hamilton the designation is apt enough. Not only did More turn the interests of these men to natural history, but in several cases he provided them with a programme. He induced the Royal Irish Academy to give small but useful grants towards the exploration of those regions which could be seen from *Cybele Hibernica* to require further investigation. As a result, the late 1870s and the early and middle 1880s saw a systematic exploration of all the main mountain-ranges of Ireland (except, curiously enough, the Wicklow mountains), of a number of off-shore islands (Tory, Inishbofin, Rathlin, the Blaskets, and Lambay), of the shores and islands of three major lakes (Erne, Allen, and Ree), and of the north shore of the Shannon estuary. Although this activity produced only two additions to the Irish flora, it succeeded in its primary purpose, since a large proportion of the new localities which appeared in the second edition of *Cybele Hibernica* derive from these explorations.

H.C.Hart

Of the men who carried out this extensive field-work, H.C. Hart stands pre-eminent. He ranged over the mountains of Galway, Mayo, Donegal and Tipperary, accumulating new localities for alpine and a mass of altitudinal data for plants of all kinds. Hart was by any standard a remarkable man. Handsome, with a keen intelligence and a magnificent physique, he was, unfortunately, a little too conscious of these advantages, as also of his position as a member of the landed gentry. This led to a certain arrogance of manner, and a tendency to show off his physical powers. Only with Barrington, his social equal and contemporary, were his relations uniformly cordial, and he is the only man known to have quarrelled seriously with Praeger, whom he seems to have regarded as a young interloper. This said, however, his achievements compel admiration. He strode along the mountain-ridges in all weathers at five or six miles an hour, making frequent forays to explore the cliffs below and stuffing plants into his pockets as he went. It would seem that his memory was good enough to justify this technique, since although his herbarium specimens are deplorable he missed very few interesting plants, and only on the Galtees did he make serious mistakes in his topography. He did all this alone, since nobody could keep up with him and he would not dally for a slowcoach. Meanwhile he was accumulating data for his *Flora of the County Donegal*, the county in which his family home was situated. This eventually appeared in 1898. It has its defects, not least in the entirely disproportionate space devoted to meteorological statistics, but it was the first county *Flora* in Ireland to

measure up to modern standards, and it must be remembered that even today, with a motor-car, Donegal is a troublesome county to work.

Hart also wrote two very useful miniature Floras; one of Howth (1887), a promontory near Dublin, and one of the Aran Islands (1873). The chief difficulty a botanist experiences in Aran is the multiplicity of high stone walls; Hart solved this in characteristic style by knocking them down and getting small boys to build them up again after him. He also did a survey of the island of Lambay, and of the main rivers of south-eastern Ireland from source to mouth. These activities would have constituted a lifetime's achievement for most men, but Hart also added a good deal of bird-watching, a stint as botanist on an arctic expedition, a report on the botany of Sinai and southern Palestine, a book on the animals of the Bible, and finally, in his last few years, editions of several plays of Shakespeare and some writings on other Elizabethan dramatists. All this in a life of 61 years.

Richard Barrington

After Hart, the man who achieved most in More's programme was Richard Barrington, who lived on his small family estate at the foot of the Wicklow mountains. Although, as eighth son, he had to earn his keep by managing the farm, he had ample time for travel. He was primarily an ornithologist, and his later years were devoted mainly to the organization of bird-records from lighthouses. As a young man, however, he made a botanical survey of Tory Island on his own initiative and then, under the stimulus of A.G. More, surveys of the Blasket Islands, of the Ben Bulbin range, and of Lough Ree and Lough Erne. In two of these surveys he was accompanied by R.P. Vowell, who acted more perhaps as companion than as expert helper. Barrington delighted in companionship, and although a very skilled mountaineer he did not force his companions beyond their natural inclinations. He continued More's tradition of inspiring his younger contemporaries with enthusiasm, although most of them turned to birds and mammals rather than to plants.

The Second Edition of *Cybele Hibernica*

The programme of exploration which I have summarized above succeeded well in its primary aim of filling the more obvious gaps in the distributional data in *Cybele Hibernica*, and by 1885 it must have been clear to More (who was by now the only surviving author of the *Cybele*) that a second edition would be justified. However, it was just at this time that his health began to fail seriously, forcing his retirement from the Museum in 1887, and even with the increased leisure this brought he did not feel up to the task. He continued, however, to annotate his interleaved copy, and shortly before his death he expressed the hope that Colgan and Scully, two of his 'disciples', should prepare the second edition. They lost no time in getting to work, and within three years of More's death had produced an admirable volume (Colgan and Scully 1898) which it is still a pleasure to handle. In one important respect this volume was a pioneer, although I have never seen the fact alluded to in print. It showed the beginning of an ecological, as distinct from a purely chorological, analysis of plant distribution by distinguishing in the text a considerable number of species as calcicole or calcifuge, and by qualifying the words with the letters A, B and C to indicate whether the species was constantly, strongly or only moderately restricted to lime-rich or lime-free soils. I cannot discover which of the two editors thought of this plan, since they were both to follow it later in their county Floras.

N. Colgan and R.W. Scully

Colgan and Scully were both modest and retiring men. with plenty of ability but no conventional ambition. Colgan was content to spend his working life as clerk to the Dublin

Metropolitan police court; Scully qualified in medicine at the College of Surgeons, but never practised. When the editing of the *Cybele* had been completed, both returned to the tasks which they had, at More's suggestion, already started; the preparation of county Floras of Dublin and Kerry respectively. Colgan's Flora of County Dublin was published in 1904, and Scully's Flora of County Kerry in 1916. They are similar in general pattern, and both are of first-rate quality.

If Scully's makes for better arm-chair reading today it is partly because his material is much more interesting, for Colgan was probably the abler man of the two. Colgan was a man of literary taste, a fair linguist, and an enterprising traveller (who went as far afield as Morocco and made some acute observations on the Hiberno-Cantabrian plants he saw in Spain), but he hid his lights under a bushel, partly, it would seem, from shyness. He also did useful work in Connemara, filling in one or two of Hart's gaps in the mountain flora, and describing for the first time the viviparous variant of *Saxifraga stellaris* in Gleninagh. Soon after his Flora had been published Colgan turned from plants to marine invertebrates and published some valuable papers on nudibranchs and tunicates. Scully, on the other hand, published little beyond his Flora; he deserves credit, however, for stimulating Bruncker to start work on his Flora of the County Wicklow, which finally appeared in 1950.

The Belfast Influence

All the men I have so far mentioned lived in or near Dublin for at least a large part of their working lives. It is time to turn to Belfast. In comparison with Dublin, Belfast suffered in the latter part of the nineteenth century from the lack of an educated leisured class interested in natural history; but it had two compensating advantages. One of these was the existence, since 1863, of a vigorous Naturalists' Field Club, twenty-three years senior to its sister club in Dublin and on the whole more serious and scientific in its activities. It formed an admirable nursery for young naturalists, where they could get advice, gain confidence and make friends. The other advantage was the tradition, which Belfast shared with Scotland and northern England, of dogged and determined self-education among its artisans.

S.A. Stewart

No better example of this can be found than S.A. Stewart. Photographs of him are enough to tell the tale: the wideawake hat and heavy frieze coat, the rugged, granite face, but with a hint of gentleness in the smile - these indicate, surely, a man who has pulled himself up by his bootstraps and is willing to help others to do the same. Starting as an errand-boy, he later became a trunk-maker, and ended up as museum curator and Associate of the Linnean Society.

At first Stewart was interested mainly in geology, but later, partly under the influence of More, he turned almost entirely to botany. As part of More's programme, he carried out surveys of Rathlin Island, of Lough Allen, and of part of the Shannon estuary. He is chiefly remembered, however, for his Flora of the North-East of Ireland (1888), which covers the counties of Down, Antrim and Londonderry. The title-page bears the name of T.H. Corry as joint author, but unfortunately this brilliant young botanist was drowned before the book had progressed very far and most of the work is Stewart's. It makes rather dry reading, but the author declares in his preface that he regards "accuracy of immensely more value than copiousness", and there is no doubt that all records have been very carefully sifted.

Robert Lloyd Praeger

Stewart has one more claim to fame: he was Praeger's mentor, in so far as Praeger had a mentor. I have left myself too little space to do justice to this greatest of Irish field botanists, but his achievements have been well chronicled. I would refer those who wish to know more about Praeger to the excellent biographical sketch recently published by Timothy Collins (1985); this includes an exhaustive bibliography covering 789 publications.

Praeger began systematic botanical work in 1891, exactly in the middle of my half-century; by its close, twenty-five years later, he had written or edited three works of major importance - Irish Topographical Botany (1901), A Tourist's Flora of the West of Ireland (1909), and the Clare Island Survey (1911-15). The last-named is valuable mainly for its zoological results, but its production is a tribute to Praeger's unsurpassed talent for organization. Few other men could have brought such a distinguished team of specialists to a remote island, found them tolerable conditions in which to live and work, and induced them to publish their reports within four years of the completion of the survey. His career in the National Library also testifies to his administrative skill; he was not a great librarian, but he was a very efficient one. He organized innumerable and complex Field Club outings and was Secretary or President of a large number of societies and clubs, but he never allowed himself to get bogged down in administration or to pursue it for its own sake.

In his botanical field-work Praeger was essentially a loner; he often accompanied geologists, zoologists and archaeologists on their trips and sometimes noted a few plants en passant, but he very rarely sought out another botanist as a companion and very few of his publications have joint authorship. He was by no means a misanthrope; he enjoyed companionship on holiday outings or after the day's work was done, but he seems to have realized that in compiling botanical records most companions would turn out to be a drag on his speed and efficiency. This makes his achievement of Irish Topographical Botany all the more impressive. The planning, compilation and presentation of the data is masterly, but behind this lay two hundred days of field-work, days on which the distance travelled on foot was seldom less than twenty miles. Well over half the records are Praeger's own, and they are backed by 5,000 vouchers, pressed and labelled at the end of the long day's tramp. The book is in every way a model of clarity, and the forty vice-counties which he used for recording (based, but with considerable modifications, on the scheme suggested by Babington some years earlier) have stood the test of time; they are the vice-counties still used today.

Lastly, a word on A Tourist's Flora of the West of Ireland (1909). This is largely forgotten today, since virtually all of its material was incorporated into The Botanist in Ireland - Praeger's final summary of his knowledge of Irish plants, published in 1934. The Tourist's Flora, however, when it appeared in 1909, was strikingly original; not only did it give localities for plants, but it also listed plants for localities, and thus told the tourist both where to go and what to look for when he got there. It seems odd that this technique has been used so little for Britain or for any part of it.

By 1916 Praeger was 51, and although still in the prime of life was less inclined towards strenuous field-work, for his build was stocky rather than wiry, and this tends, despite great strength, towards stiffness in middle age. He turned to the taxonomy of *Sedum*, then to *Sempervivum* and its associates, and later to editing and to the writing of the semi-popular books on which his fame largely rests. In his early work, however, he carried on the great tradition of his predecessors, and in many respects improved on it.

Praeger and Druce

Praeger inevitably invites comparison with Druce, for, although Druce was fifteen years older, their careers overlapped for half a lifetime, and each was undoubtedly for a long time the uncrowned king of floristic botany in his respective domain. Druce had, perhaps, the more penetrating mind, but Praeger the more efficient one; Praeger did rather less, but he made far fewer mistakes. And although Praeger was never adored as Druce was, neither was he hated as was Druce. Praeger could be a bit gruff and unapproachable, but he was quite devoid of vanity. His reviews could be sharply critical, but they were fair and objective, and when he was criticized his replies were patient, even-tempered, and for that reason convincing.

New Irish Species, 1866-1916

I mentioned earlier that twenty-two native species new to Ireland were recorded in the half-century under consideration, and I must conclude with a brief account of these.

The remarkable thing is that only two were discovered in the course of the systematic explorations which I have chronicled and which brought in such an enormous mass of new county records. These were *Carex aquatilis*, found by Stewart near Lough Allen, and *Epilobium alsinifolium*, found by Barrington and Vowell on the Ben Bulbin range, both in the year 1884. Praeger's work for his Irish Topographical Botany, although it covered so much unexplored country, failed, rather astonishingly, to bring in a single new species. The only new native species to Praeger's credit before 1916 was *Arctium lappa*, which he found in County Armagh in 1892, before he came south. After 1916 he diagnosed some interesting new hybrids and found *Sorbus anglica* and *Gymnocarpium robertianum*.

Six of the new species were discovered by Moore or More within a few years of the publication of *Cybele Hibernica*; in Dublin in 1866, *Trifolium subterraneum* in Wicklow in 1867, *Eleocharis parvula*, also in Wicklow, in 1868, *Trifolium glomeratum* in Wicklow and *Deschampsia setacea* in Connemara, both in 1869, and *Pyrola rotundifolia* in Westmeath in 1870. Colgan found *Scrophularia umbrosa* in County Dublin, and Hart found *Helianthemum nummularium* in Donegal, while accumulating data for their respective county Floras, and Colgan also diagnosed *Carex magelaniica* from a few stems sent to him along with other matter from County Antrim.

The remaining ten species, however, were found by people whom I have not so far had occasion to mention. Four of them, *Ranunculus tripartitus*, *Oenanthe pimpinelloides*, *Brachypodium pinnatum* and *Viola lactea*, were discovered between 1896 and 1900 by R.A. Phillips, a keen-eyed commercial traveller whose business took him through much of Munster from his base in Cork. *Leucojum aestivum* was found in County Wexford by the Rev. E.S. Marshall, a visitor from England, *Carex pauciflora* and *Hypochaeris glabra* in Ulster by the Rev. H.W. Lett, who was primarily a bryologist, *Teesdalia nudicaulis* beside Lough Neagh by Mrs Leebody, and *Limosella aquatica* in County Clare by P.B. O'Kelly. Last and most surprising of all, *Scirpus triquetus* had to wait for admission to the Irish list until 1900, when it was recorded by R.D. O'Brien. This species grows in Ireland only on the Shannon estuary, but grows there in great abundance up to the city limits of Limerick.

Conclusion

My time is up and my tale is told. Has it any moral? I was struck, when reading through the history of the Botanical Exchange Club and the B.S.B.I. over much the same period Allen (1986), to learn how much more colourful was the botanical scene in England, and how much more quarrelsome. In Ireland we had occasional jealousies and short-lived disagreements (Praeger broke off his correspondence with Hart after a particularly rude

letter from him), but we had no dictators, no prima donnas, nobody as venomous as James Britten or as volcanic as Wilmott.

This was at least in part because we were not trying to run a club or society. The Dublin and Belfast Field Clubs were active, but they served the useful function of getting naturalists to know each other and enabling the younger ones to find their feet. They did not try to direct or accomplish research, or to publish results. Our botanists for the most part worked in solitude. Praeger was a man of many interests and many activities, but for five years he dropped them nearly all and worked solidly at the field-work for Irish Topographical Botany and for another year at writing it up. That, I think, is the way to get things done.

References

ALLEN, D.E. (1986). *The Botanists*. Winchester.

BRUNKER, S.P. (1950). *Flora of the County Wicklow*. Dundalk.

COLGAN, N. (1904). *Flora of the County Dublin*. Dublin.

COLGAN, N. and SCULLY, R.N. (1898). *Contributions towards a Cybele Hibernica*. Second edition. Dublin.

COLLINS, T. (1985). *Floreat Hibernia, a 310-bibliography of Robert Lloyd Praeger*. Dublin.

DICKIE, G. (1864). *Flora of Ulster and Botanist's Guide to the North of Ireland*. Belfast.

HART, H.C. (1873). *A List of Plants found in the Islands of Aran, Galway Bay*. Dublin.

HART, N.C. (1887). *The Flora of Howth*. Dublin.

HART, H.C. (1898). *Flora of the County Donegal*. Dublin. **MACKAY, S.T.** (1836). *Flora Hibernica*. Dublin.

MOFFAT, C.B. (1898). *Life and Letters of Alexander Goodman More*. Dublin.

MOORE, D. and MORE, A.G. (1866). *Contributions towards a Cybele Hibernica*. Dublin.

POWER, T. (1533). *The Botanist's Guide for the County of Cork*. Cork.

PRAEGER, R.L. (1901). *Irish Topographical Botany*. Dublin. (Published as a separate volume, but constituting Vol. 7 of the third series of Proc. Roy. Irish Acad.).

PRAEGER, R.L. (1906). *Irish Topographical Botany: Supplement 1901-05*. Proc. Roy. Irish Acad., 268:13-45.

PRAEGER, R.L. (1909). *A Tourist's Flora of the West of Ireland*. Dublin.

PRAEGER, R.L. (1911-15). (Ed.) *A biological survey of Clare Island, Co. Mayo*. Proc. Roy. Irish Acad., 31B. A total of 68 papers, independently paged, usually bound into three volumes.

PRAEGER, R.L. (1929). *Supplement to 'Irish Topographical Botany', 1906-28*. Proc. Roy. Irish Acad., 39B: 57-92.

PRAEGER, R.L. (1934). *The Botanist in Ireland*. Dublin.

SCULLY, R.W. (1916). *Flora of Kerry*. Dublin.

STEWART, S.A. and CORRY, T.H. (1888). *A Flora of the North-East of Ireland*. Belfast.

WADE, W. (1794). *Catalogus Systematicus Plantarum Indigenarum in Comitatu Dublinensi Inventarum*. Dublin.

WATSON, B.C. (1847-1859). *Cybele Britannica*. London.