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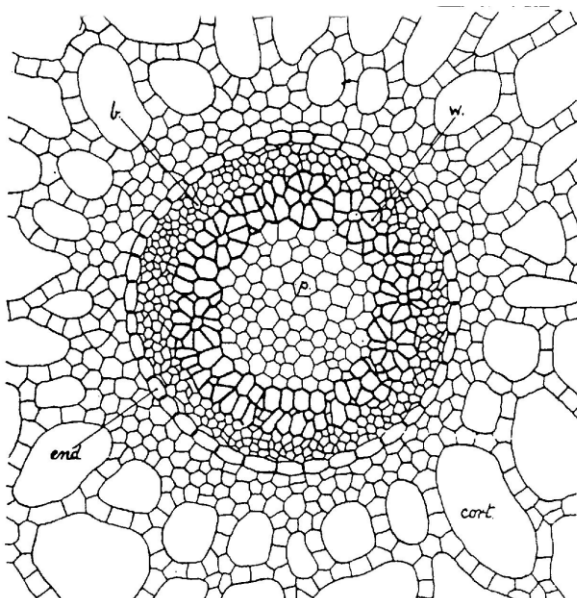


FIG. 33.—STELE OF HIPPURIS, TRANSVERSE SECTION. (High power.)
cort, cortical tissue; *end*, endodermis; *b*, bast; *w*, wood; *p*, pith.

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COMMITTEE FOR IRELAND, 1998-1999
BOTANICAL SOCIETY OF THE BRITISH ISLES

In line with the Rules, three new committee members were elected at the Annual General Meeting held in the National Botanic Gardens, Dublin on 26 September 1998 (Office Bearers were subsequently elected at the first Committee Meeting). The Committee is now:

Dr E.C. Mhic Daeid, Chair (retiring October 1999)
Dr S.L. Parr, Hon. Secretary (retiring October 1999)
Mr S. Wolfe-Murphy (retiring October 2000)
Miss A.M. McKee (retiring October 2000)
Miss A.B. Carter (retiring October 2001)
Dr G. O'Donovan (retiring October 2001)
Miss K. Duff (retiring October 2001)

The following are also members of the Committee:

Dr D.W. Nash, Representative on BSBI Council
Mr A.G. Hill, Field Meetings Secretary, co-opted October 1995
Dr B.S. Rushton, Editor *Irish Botanical News*, co-opted October 1995
Dr D.A. Doogue, Atlas 2000 Co-ordinator, co-opted October 1995
Mr P. Corbett, Observer, Environment & Heritage Service (NI)
Representative
Dr C. O'Criodain, Observer, National Parks & Wildlife Service, Republic of Ireland

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The cover illustration shows the stele of *Hippuris vulgaris* (Mare's-tail) taken from Laurie, C.L. (1903). *Flowering plants: their structure and habitat*. Allman & Son Ltd, London.

All species names and common names in *Irish Botanical News* follow those in Stace, C.A. (1991). *New Flora of the British Isles*. Cambridge University Press, Cambridge.

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EDITORIAL

The weather patterns of the last few years have been very topsy-turvy. I remember February, last year, when the weather was so warm we were actually sitting out in the garden during the weekends. Contrast that to the appalling wet weather that certainly affected us on the north coast for most of last summer. Very localised flooding has occurred and in at least one area a new 'pond' has been created which is about 1 ha in size and which has been in situ for nearly a year now with no obvious sign of it diminishing.

The predictions are that increasing temperatures will change the nature of our vegetation too. In woodlands, it has been shown that some species, such as our 'logo-ed' *Hyacinthoides non-scripta* (Bluebell), have a very narrow optimal range and that optimum roughly corresponds to 'present-day' temperatures. Many of the grass species characteristic of woodlands however have a much wider optimal range. The consequences of increased summer temperatures will be therefore that the herbaceous species will be at a competitive disadvantage compared with the grass species as the former would then be growing at temperatures greater than their optimum whilst the latter would still be growing within their optimal range. It is predicted that the nett result will be a loss of many of our woodland herb species and their subsequent replacement by grass species. The 'bluebell woods' would become a thing of the past.

As we move into an era of what may be rapid change for our flora it is so important that schemes such as the *Atlas 2000* project are there to chart this change so that the BSBI can advise on appropriate remedial action where possible.

Lastly, I have had a request from a vice-county recorder. Could authors of articles in *Irish Botanical News* please ensure that they check with appropriate vice-county recorders before submitting manuscripts for publication to ensure that the information is correct and as up-to-date as possible?

Have a good field season,

Brian S. Rushton, Editor, *Irish Botanical News*

DUBLIN AND BELFAST: TWO URBAN FLORAS

E.C. Nelson

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When I was asked recently to review (*Botanical journal of the Linnean Society* in press) the excellent *Urban flora of Belfast* by Stan Beesley & John Wilde, I was struck by the fact that Beesley & Wilde do not mention of *The flora of inner Dublin* by Peter Wyse Jackson & Micheline Sheehy-Skeffington (1984), and so make no comments comparing the floras of Dublin and Belfast. They do provide some interesting tables analyzing the Belfast urban flora and also point out additions to the flora of Ireland and new vice-comital records for Antrim and Down. In a letter to me (14 September 1998) they have explained that they did not think that a Dublin/Belfast comparison was appropriate in the *Urban flora of Belfast* and, moreover, it would have increased the size of their book and resulted in a longer publication delay. So I offer some subjective (and explicitly non-scientific) comparisons between the flora of urban Belfast and that of inner Dublin, because I think these will be entertaining if not informative.

I have done some basic manipulation of the floristic lists in these two works, and come up with some intriguing results. I simply compared the two Floras species-by-species. Those species that occur in both cities were *ignored*; my comments and comparisons only relate to those species that are absent from one or other city. Synonymy was checked to try to ensure that plants were not included or excluded because of name changes.

Of course, I am *not* comparing like-with-like. The Belfast urban flora was recorded on a grid basis using a 1-km square as the basic area; the Inner Dublin flora was based on districts defined by landmarks (streets and waterways). The Belfast *Flora* covers an area of approx 76 km²; the Dublin one covered an area of less than 25 km². Be that as it may, I feel the comparison is of value, not least in pointing out how different the floras of the sister cities are.

Dublin and Belfast are less than 150 km apart, a little more than one degree of latitude. Both are situated on the eastern seaboard so the prevailing climatic conditions are not likely to be major factors in

determining the respective floras. The inner (i.e. urban) Dublin *Flora* recorded 358 taxa, approximately *twice* the number of species per square kilometre in Belfast. Is this merely an artefact of area/total species numbers, and my unscientific analysis? Or, are there some undiscovered ecological/historical factors that make the flora of inner Dublin richer than that of urban Belfast?

DUBLIN BUT NOT BELFAST

Sixty-seven taxa including 23 native species recorded in Dublin between 1979 and 1981 were not found in Belfast in the mid-1990s. These species are listed in Table 1. (Note that I have retained the names used in the two Floras and some of these may vary from those in Stace (1991)).

Three relatively abundant species can be singled out, *Urtica urens* (Small Nettle), *Mercurialis annua* (Annual Mercury) and *Crepis vesicaria* (Beaked Hawk's-beard), each of which is rare in north-eastern Ireland anyway. Although Wyse Jackson & Sheehy-Skeffington (1984) list the nettle as a native plant, Webb *et al.* (1996) consider it is probably or possibly introduced, and there is similar disagreement about *Crepis vesicaria*, Webb *et al.* (1996) considering it native. *Mercurialis annua* is frequent near Dublin and local elsewhere in the southern half of Ireland. *Crepis vesicaria* is a difficult species to verify; Rich (1998) suggests it is over-recorded for *C. capillaris* (Smooth Hawk's-beard) (found in 68 Belfast grid squares).

Of the others, it is interesting to speculate why such garden plants as *Parthenocissus quinquefolia* (Virginia-creeper) and *P. inserta* (False Virginia-creeper), *Ficus carica* (Fig), *Foeniculum vulgare* (Fennel) and *Daphne laureola* (Spurge-laurel) have escaped into at least one sector of Dublin, but are not at large in Belfast.

TABLE 1. Taxa recorded in Dublin (1978-1981) but not in Belfast (1990s); numerals indicate the number of Dublin districts in which a plant was recorded; names highlighted in **bold** indicate plants occurring in at least 25% of the Dublin districts. Names used in the following list are those from the original Flora.

Native species

<i>Salix atrocinerea</i> , 3	<i>Sagittaria sagittifolia</i> , 1
<i>Urtica urens</i> , 7	<i>Potamogeton obtusifolius</i> , 1
<i>Brassica nigra</i> , 3	<i>Potamogeton filiformis</i> , 1
<i>Saxifraga tridactylites</i> , 1	<i>Groenlandia densa</i> , 1
<i>Rubus ulmifolius</i> , 4	<i>Zannichellia palustris</i> , 1
<i>Rubus caesius</i> , 1	<i>Allium vineale</i> , 3
<i>Hippuris vulgaris</i> , 1	<i>Festuca pratensis</i> , 1
<i>Blackstonia perfoliata</i> , 1	<i>Avenula</i> <i>pubescens</i> , 1
<i>Origanum vulgare</i> , 1	<i>Sparganium emersum</i> , 3
<i>Orobanche minor</i> , 1	<i>Gymnadenia conopsea</i> , 1
<i>Carlina vulgaris</i> , 1	<i>Anacamptis pyramidalis</i> , 1
<i>Carduus tenuiflorus</i> , 1	

Introduced species

<i>Pteris cretica</i> , 1	<i>Mercurialis annua</i> , 14
<i>Populus nigra</i> , 1	<i>Acer macrophyllum</i> , 1
<i>Quercus cerris</i> , 1	<i>Impatiens parviflora</i> , 1
<i>Ulmus procera</i> , 6	<i>Parthenocissus quinquefolia</i> , 4
<i>Ficus carica</i> , 1	<i>Parthenocissus inserta</i> , 5
<i>Polygonum amplexicaule</i> , 1	<i>Malva neglecta</i> , 1
<i>Beta vulgaris</i> , 1	<i>Daphne laureola</i> , 1
<i>Saponaria officinalis</i> , 1	<i>Oenothera biennis</i> , 2
<i>Ceratophyllum demersum</i> , 1	<i>Foeniculum vulgare</i> , 1
<i>Clematis vitalba</i> , 2	<i>Ballota nigra</i> , 1
<i>Papaver lecoqii</i> , 1	<i>Campanula rapunculoides</i> , 1
<i>Matthiola incana</i> , 1	<i>Aster novi-belgii</i> , 2
<i>Lepidium latifolium</i> , 1	<i>Galinsoga ciliata</i> , 1
<i>Coronopus squamatus</i> , 5	<i>Matricaria perforata</i> , 4
<i>Diploxys muralis</i> , 3	<i>Artemisia absinthium</i> , 3
<i>Rapistrum rugosum</i> , 4	<i>Crepis vesicaria</i> , 14
<i>Platanus x hybrida</i> , 1	<i>Hieracium gougetianum</i> , 2

Cicer arietinum, 1
Vicia faba, 1
Lens culinaris, 1
Oxalis corymbosa, 4
Erodium moschatum, 1

Narcissus spp., 2
Lolium perenne x *multiflorum*, 1
Avena fatua, 3
Lagurus ovatus, 1

Some of the difference must be due to recording, identification and editorial differences. Beesley & Wilde include all brambles under *Rubus fruticosus* (Bramble); Wyse Jackson & Sheehy Skeffington did likewise but made a point of separating *R. ulmifolius*. The pink Wood-sorrels (*Oxalis*) and the Evening-primroses (*Oenothera*) are not easy to name and the disparity between the cities might be resolved by cross-checking these plants. Again all Elms (*Ulmus*) are lumped together by Beesley & Wilde, as are both *Tripleurospermum* species (Mayweeds). Beesley (in litt.) tells me that *Matricaria perforata* (= *T. inodorum*) (Scentless Mayweed), recorded from Dublin is present in Belfast, but as some recorders did not differentiate these species he aggregated the records.

BELFAST BUT NOT DUBLIN

One hundred and sixty eight native plants are recorded from Belfast but not from Dublin. One hundred and forty one introduced and escaped species are also in Belfast but not Dublin (Table 2). Of course, the large difference in the size of the areas covered by the two Floras affects this result. The Belfast urban *Flora* covers at least three times the area of the Inner Dublin one, and includes 1200 ha of municipal parks. However, there is another *Flora* of the greater Dublin area, namely Paddy Reilly's account of The Phoenix Park (area = 707 ha) (Reilly 1993), and there is also a list by Sylvia Reynolds of aliens observed at Dublin port (Reynolds 1996). Taking Reilly's Phoenix Park *Flora* into the account adds an area equivalent to about 11 1-km squares, bringing the total Dublin area to the equivalent of about 36 squares, not quite half the area covered by the Belfast *Flora*. Having drafted Table 2 using only the two urban Floras, I then eliminated all plants noted by Reilly (65 native spp., 15 introduced spp.) and Reynolds (only eight alien spp.), and that left 103 native plants and 124 introduced species unique to urban Belfast (Table 2).

Undoubtedly if the Inner Dublin *Flora* was expanded to a Greater Dublin Flora the disparity between the cities would be further reduced, but some notable differences would persist. And increasing the Dublin area would also probably mean that new habitats such as the sea cliffs of Howth Peninsula would contribute a clutch of remarkable new taxa (e.g. *Echium pininana* (Giant Viper's-burgloss) and *Carpobrotus edulis* (Hottentot-fig)) which would merely add to the diverging floras.

Considering the native species found in Belfast but not in Dublin, some may perhaps be accounted for by the greater diversity of habitats in the larger area. Woodland and shaded waterways with banks suitable for ferns and other woodlanders are not as abundant within Dublin city; thus perhaps may be explained, for example, *Polystichum setiferum* (Soft Shield-fern), *Athyrium filix-femina* (Lady-fern) and *Anemone nemorosa* (Wood Anemone), although *A. filix-femina* grows not just in shaded places but also on the walls of buildings in Belfast. Damp meadows and marshy places are likewise not an abundant feature of inner Dublin, even of The Phoenix Park, so the more numerous *Carex* (Sedges) flora, *Lotus pedunculatus* (Hairy Bird's-foot-trefoil), *Montia fontana* (Blinks) and *Rorippa palustris* (Marsh Yellow-cress) are not unexpected. On the other hand, Beesley & Wilde note (p. 52) that *Montia fontana* is frequently found in urban flower-beds, and has apparently been introduced in peat and bark used as mulches by the Parks Department!

As for the aliens, Belfast's is a rich flora. Among these, *Barbarea intermedia* (Medium-flowered Winter-cress) is frequent only in counties Down and Antrim. *Lunaria annua* (Honesty) might be expected in Dublin, but for some reason has not escaped, while *Cotoneaster horizontalis* (Wall Cotoneaster) has the potential to escape anywhere yet is more frequent outside gardens in the south-west and north-east of Ireland. The abundance of Broom (*Cytisus scoparius*) as an escape in urban Belfast yet not in Dublin is puzzling. A similar comment applies to *Berberis darwinii* (Darwin's Barberry), *Sedum forsterianum* (Rock Stonecrop), *Hebe salicifolia* (Koromiko) and *Solidago canadensis* (Canadian Goldenrod). And, as suggested above, the different pink-flowered Wood-sorrel may be a matter of identification. Perhaps the long-awaited *Flora of County Dublin* will eliminate some of these disparities?

Table 2. Taxa recorded in Belfast (1990s) but not in Dublin (1978-1981); numerals indicate the number of 1-km grid squares in which each plant was recorded; names highlighted in **bold** indicate plants occurring in at least 25% of the grid squares. Names used in the following list are those from the original Flora.

Native species

<i>Equisetum fluviatile</i> , 7	<i>Erodium cicutarium</i> , 1
<i>Equisetum sylvaticum</i> , 5	<i>Oenanthe crocata</i> , 11
<i>Equisetum telmateia</i> , 48	<i>Torilis japonica</i> , 2
<i>Athyrium filix-femina</i> , 51	<i>Centaurium erythraea</i> , 12
<i>Polystichum x bicknellii</i> , 7	<i>Myosotis laxa</i> , 4
<i>Polystichum aculeatum</i> , 31	<i>Lamium album</i> , 4
<i>Blechnum spicant</i> , 1	<i>Teucrium scorodonia</i> , 1
<i>Caltha palustris</i> , 5	<i>Mentha arvensis</i> , 4
<i>Anemone nemorosa</i> , 14	<i>Callitriche platycarpa</i> , 1
<i>Ranunculus flammula</i> , 7	<i>Plantago maritima</i> , 4
<i>Ranunculus hederaceus</i> , 1	<i>Scrophularia auriculata</i> , 1
<i>Funaria capreolata</i> , 1	<i>Rhinanthus minor</i> , 4
<i>Funaria bastardii</i> , 1	<i>Pedicularis sylvatica</i> , 2
<i>Quercus spp.</i> , 41	<i>Lathraea squammaria</i> , 5
<i>Atriplex prostrata</i> , 4	<i>Galium saxatile</i> , 4
<i>Atriplex littoralis</i> , 5	<i>Viburnum opulus</i> , 3
<i>Suaeda maritima</i> , 1	<i>Valerianella locusta</i> , 1
<i>Montia fontana</i> , 26	<i>Crepis paludosa</i> , 1
<i>Stellaria uliginosa</i> , 14	<i>Hieracium vulgatum</i> , 1
<i>Cerastium diffusum</i> , 3	<i>Filago vulgaris</i> , 1
<i>Spergularia media</i> , 3	<i>Gnaphalium uliginosum</i> , 30
<i>Spergularia marina</i> , 8	<i>Achillea ptarmica</i> , 8
<i>Spergularia rubra</i> , 1	<i>Senecio x ostenfeldii</i> , 1
<i>Silene latifolia</i> , 8	<i>Senecio x baxteri</i> , 4
<i>Silene dioica</i> , 10	<i>Petasites hybridus</i> , 20
<i>Persicaria bistorta</i> , 1	<i>Bidens tripartita</i> , 1
<i>Persicaria hydropiper</i> , 10	<i>Triglochin palustre</i> , 1
<i>Hypericum maculatum</i> , 7	<i>Triglochin maritimum</i> , 1
<i>Hypericum tetrapterum</i> , 9	<i>Lemna gibba</i> , 1
<i>Hypericum humifusum</i> , 6	<i>Luzula sylvatica</i> , 8
<i>Viola arvensis</i> , 14	<i>Luzula multiflora</i> , 7
<i>Rorippa palustris</i> , 21	<i>Luzula multiflora</i> subsp. <i>congesta</i> , 1

Rorippa sylvestris, 5
Cardamine amara, 1
Cochlearia officinalis, 14
Lepidium campestre, 1
Lepidium heterophyllum, 2
Raphanus raphanistrum
 subsp. *maritimus*, 2
Lysimachia vulgaris, 5
Glaux maritima, 1
Sedum anglicum, 2
Chrysosplenium
 oppositifolium, 16
Alchemilla xanthochlora, 10
Alchemilla glabra, 16
Lotus pedunculatus, 32
Vicia hirsuta, 39
Lathyrus linifolius, 2
Trifolium medium, 1
Trifolium striatum, 1
Lythrum salicaria, 4
Geranium lucidum, 14

Bolboschoenus maritimus, 5
Schoenoplectus lacustris, 2
Isolepis setacea, 28
Carex paniculata, 3
Carex disticha, 9
Carex echinata, 2
Carex panicea, 5
Carex viridula, 2
Nardus stricta, 2
Puccinellia distans, 2
Poa nemoralis, 12
Deschampsia cespitosa, 31
Aira caryophyllea, 5
Aira praecox, 8
Agrostis gigantea, 1
Agrostis canina, 19
Epipactis helleborine, 16
Dactylorhiza x venusta, 1
Dactylorhiza maculata, 4
Dactylorhiza purpurella, 1
Dactylorhiza majalis, 1

Introduced (i) and escaped (e) species

Pinus sylvestris, e, 2
Aquilegia vulgaris, e, 6
Thalictrum minus, e, 5
Berberis darwinii, e, 14
Mahonia aquifolium, e, 1
Chelidonium majus, e, 6
Dicentra formosa, e, 1
Pseudofumaria lutea, e, 1
Castanea sativa, e, 1
Chenopodium
 bonus-henricus, i, 2
Chenopodium rubrum, i, 3
Claytonia perfoliata, i, 3
Claytonia sibirica, i, 2
Cerastium tomentosum, i, 4

Lupinus x regalis, e, 3
Cytisus scoparius, e, 60
Teline linifolia, i, 1
Oenothera glazioviana, i, 2
Euphorbia hyberna, e, 1
Euphorbia lathyris, e, 1
Euphorbia amygdaloides, e, 1
Acer platanoides, e, 12
Acer campestre, e, 3
Oxalis corniculata, i, 7
Oxalis exilis, i, 2
Oxalis articulata, e, 28
Oxalis incarnata, e, 1
Geranium endressii, e, 3
Geranium pratense, e, 2

Dianthus barbatus, e, 1
Persicaria wallichii, i, 1
Fallopia sachalinensis, e, 1
Malva moschata, e, 1
Lavatera arborea, e, 2
Viola tricolor, e, 9
Bryonia dioica, i, 1
Erysimum cheiranthoides, i, 3
Barbarea intermedia, i, 42
Arabis caucasica, e, 1
Aubrieta deltoidea, e, 2
Lunaria annua, e, 31
Iberis umbellata, e, 1
Lepidium ruderales, i, 7
Lepidium draba, i, 3
Diploaxis tenuifolia, i, 1
Brassica napus, e, 3
Sinapis alba, i, 1
Rhododendron ponticum, e, 6
Gaultheria mucronata, e, 3
Ribes nigrum, e, 6
Umbilicus rupestris, i, 1
Sedum telephium, e, 2
Sedum rupestre, e, 4
Sedum forsterianum, e, 16
Rodgersia podophylla, e, 1
Saxifraga x urbium, e, 4
Tellima grandiflora, e, 1
Spiraea salicifolia, e, 6
Rubus tricolor, e, 1
Rubus spectabilis, e, 1
Potentilla fruticosa, e, 1
Fragaria x ananassa, e, 5
Sanguisorba minor, i, 1
Rosa rugosa, e, 17
Prunus avium, e, 2
Sorbus
 aucuparia agg., e/n, 48
Sorbus aria agg., e, 14
Cotoneaster integrifolius, e, 3
Tropaeolum speciosum, e, 1
Vinca minor, e, 2
Vinca major, e, 2
Solanum nigrum, i, 2
Menyanthes trifoliata, i, 1
Nymphoides peltata, i, 2
Polemonium caeruleum, e, 1
Pulmonaria officinalis, e, 1
Symphytum x uplandicum, e, 16
Symphytum tuberosum, e, 4
Borago officinalis, e, 1
Trachystemon orientalis, e, 1
Lamiastrum galeobdolon, e, 3
Lamiastrum galeobdolon
 subsp. *argentatum*, e, 8
Lamium maculatum, e, 1
Mentha spicata, e, 7
Mentha x villosa, e, 1
Verbascum virgatum, i, 1
Mimulus moschatus, e, 1
Mimulus guttatus, i, 3
Chaenorhinum minus, i, 1
Hebe salicifolia, e, 17
Hebe x franciscana, e, 1
Campanula latifolia, i, 1
Lobelia erinus, i, 1
Lonicera nitida, e, 8
Dipsacus fullonum, i, 9
Chichorium intybus, i, 1
Cicerbita macrophylla, e, 1
Pilosella aurantiaca, e, 4
Inula helenium, i, 1
Solidago canadensis, e, 18
Leucanthemum x superbum, e, 5
Sinacalia tangutica, e, 1
Helianthus annuus, e, 1
Juncus tenuis, i, 3
Briza maxima, i, 1
Bromus secalinus, i, 1
Cortaderia selloana, e, 1

Cotoneaster

horizontalis, e, 28

Cotoneaster simonsii, e, 3

Robinia pseudoacacia, e, 1

Vicia sativa subsp. *nigra*, i, 13

Trifolium micranthum, i, 1

Setaria pumila, i, 1

Convallaria majalis, e, 1

Polygonatum multiflorum, e, 7

Polygonatum odoratum, e, 2

Muscari armeniacum, e, 1

Allium schoenoprasum, e, 1

CONCLUSION

I think it fair to conclude that in some botanical ways Dublin and Belfast are worlds apart: “... so near and yet so far”. Some of the differences cannot easily be explained except by invoking human influence. Are the street-cleaners of Dublin more efficient than those of Belfast? Do the parks departments use different herbicides differently? Are figs not eaten by the citizens of Belfast? There is clearly considerable scope for further investigation.

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HAS *SELAGINELLA SELAGINOIDES* (LESSER CLUBMOSS) ALWAYS BEEN IN KERRY, AFTER ALL?

T. Hodd

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INTRODUCTION

Selaginella selaginoides (Lesser Clubmoss) was one of Praeger's bogey plants and he lists it as a most striking absentee from Kerry (Praeger 1934). But Willmot (1983) records that there is a specimen of *Selaginella selaginoides* in the British Museum dated 1930 which is recorded as being collected in Killarney (H2). However Willmot dismisses this record as doubtful on two grounds:

- a. that it was the only known record for Kerry; and
- b. the record was not included in the *Atlas of the British flora* (see Perring & Walters 1976).

Even in Cork it has always been rare and the only record that could be traced was given in the 2nd ed. of *Cybele Hibernica* (More 1898). R.A. Phillips found it in 1898 on Knocknaveigh, a 250 m high hill just a few km south of Bantry in West Cork (H3).

RECENT RECORDS OF THE LESSER CLUBMOSS IN KERRY

On Sunday, 20 September 1998 I was exploring the base of the over 300 m high waterfall which towers above Loch An Mhonain on eastern facing slopes of Brandon Peak at 300 m altitude, when I spotted a few 'dwarf' clubmosses with their yellow spore cases, just near some *Huperzia selago* (Fir Clubmoss). Thinking they were just stunted *H. selago* I grabbed a couple of stems and put them in my glasses' case for future study and promptly forgot about them until four days later when one fell on to my desk! Examination with a hand lens revealed long, serrated teeth on each leaf and a buffish-pink colour to the leaves, both diagnostic characteristics of *Selaginella selaginoides*.

When I reported this record to one of the vice-county recorders for Kerry, Michael Wyse Jackson, I was interested to learn that he already had two fairly recent records for South Kerry (H1) (Wyse Jackson,

pers. comm., 1998). One record was by Tom Curtis on the cliffs above Loch An Mhonain on 7 July 1988 and was, I believe, within the area where I have located it. The other was an even lower altitude record (only 80 m above sea level) found by Melanie Flexen on 6 November 1995, at a site just 2 km north-east of Loch An Mhonain. It was found on a flushed area of bog on sloping ground between Loch Cruite and the Pilgrim's Route Road (Fig. 1).

DISCUSSION OF THE SIGNIFICANCE OF THIS DISCOVERY

Since *Selaginella selaginoides* is very rare south of Co. Clare (Webb *et al.* 1996), my notes, on its habitat and the plants associated with it, may be of interest. The plants were all growing on crumbly, old red sandstone rocks facing north to north-east. The rocks were kept wet by dripping or running water and some 50% of the rocks' surfaces were bare. 50% of the plants were mosses and the remainder were as follows: *Thymus polytrichum* (Wild Thyme), *Huperzia selago* (Fir Clubmoss), *Blechnum spicant* (Hard-fern), *Saxifraga spathularis* (St Patrick's-cabbage), *Saxifraga hirsuta* (Kidney Saxifrage), *Festuca vivipara* (Viviparous Sheep's-fescue), *Carex viridula* subsp. *viridula* (Yellow Sedge), *Calluna vulgaris* (Heather), *Molinia caerulea* (Purple Moorgrass) and *Pinguicula grandiflora* (Large-flowered Butterwort).

So is this a new colonisation by *Selaginella selaginoides* of the Brandon Mountains or has it been overlooked until now? To check on this I went back to the two Brandon sites in early October 1998 and searched to find out if the plant was widespread in other similar habitats in the same areas. If it was, then it seemed reasonable to conclude that it has actually been in the area for a long time. Despite two hours' searching, I could not relocate Melanie Flexen's 1995 low altitude Brandon Mountain record but my searches of the Brandon Peak site located hundreds more plants of *Selaginella selaginoides* spread out over a broad band of at least 150 m from east to west along the base of the cliff above Loch An Mhonain. This time I did not hide any samples in my glasses' case but I did collect enough material to send a voucher specimen to the Botanic Gardens in Dublin.

Selaginella selaginoides is abundant in Scotland but becomes progressively rarer further south. This is because, as Page (1988) explains, *S. selaginoides* is like *Polystichum lonchitis* (Holly-fern) and

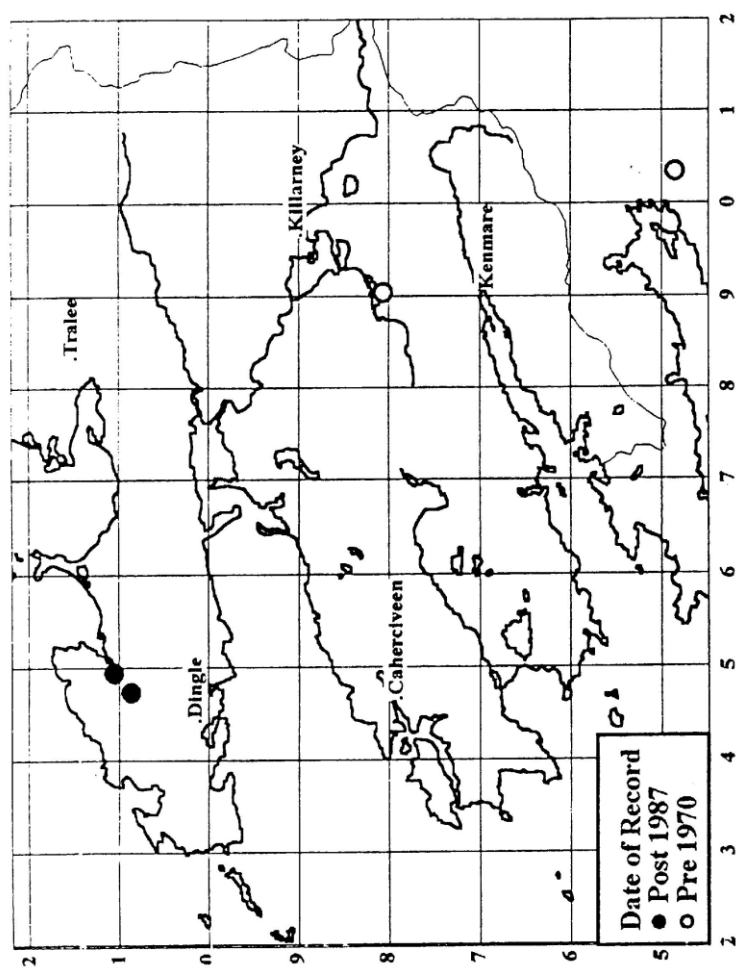


FIGURE 1. *Selaginella selaginoides* (Lesser Clubmoss) in Cos Kerry and Cork.

Diphasiastrum alpinum (Alpine Clubmoss) an Arctic-Alpine species with its main population centre in Scandinavia and the Alps. Jermy & Camus (1991) state that *Selaginella selaginoides* is usually found in damp flushes and seepage areas which contain a significant amount of base-rich salts. Such a habitat is found near snow patches on mountains or on sand-dune slacks. But in the case of the Brandon Peak site where I found hundreds of plants over a wide area, the altitude was only 250 to 300 m and there was no obvious source of base rich salts. But the site is less than 4 km from the sea and drenching salt storms must occasionally reach this far inland, particularly in the winter.

But it is really quite extraordinary that not one of the Victorian botanists who contributed to Scully (1916), or even the later botanists like Stelfox (1950) ever found it on the Brandon Mountain range. Judging by the large area in which I found it, at least a 150 m wide band, it has always been in the area. Could *Selaginella selaginoides* have been overlooked by earlier botanists? Certainly it is very inconspicuous except in the late summer when the erect fruiting stems and leaves stand out as buffish-pink all over. Or could perhaps heavy grazing by sheep have made more bare areas available for plants such as *Selaginella selaginoides* to colonise so leading to it increasing in numbers this century? There is a fascinating ecological study here for someone to carry out!

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TRACKING DOWN *EQUISETUM* X *TRACHYODON* (MACKAY'S HORSETAIL) ON ROSS ISLAND, KILLARNEY, NORTH KERRY (v.c. H2)

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INTRODUCTION

Equisetum spp. (Horsetails) are an interesting and satisfying group to study, partly because they are living fossils, apparently unchanged after 300 million years and partly because most of the species are easy to distinguish, even when they are not in fruit. They do hybridise quite freely but even here, most of the hybrids are quite distinctive. *Equisetum variegatum* (Variegated Horsetail) and *Equisetum hyemale* (Rough Horsetail) are a particularly good pair to study ... they are evergreen and their hybrid, *E. x trachyodon*, is a spectacular 1 m in height and has conspicuous black internodes. These three evergreen horsetails are all regarded as rarities both in Britain and Ireland and so it is always a pleasure to find them in new situations. Scannell & Synnott (1987) have listed *Equisetum x trachyodon* as being not seen in North Kerry (H2) since 1950 so it was a thrill for me when in 1995, Tony O'Mahony, the vice-county recorder for Cork, showed me his new discovery of a very extensive North Kerry colony of *E. x trachyodon* growing along the banks of the Owneyskeagh River, a tributary of the River Flesk, 15 km due east of Ross Island.

This reminded me of Allison M. Paul's comments (the keeper of the Fern section of the Herbarium of the British Museum) to me in 1994 that she thought *E. x trachyodon* had been found on Ross Island, Killarney (H2). Willmott (1983) has treated its present status in the Killarney Valley as doubtful although he does state that there are several specimens of the hybrid from the Killarney Valley stored in the British Museum. But the breakthrough for my hunt for the location of *E. x*

trachyodon on Ross Island, Kerry came in October, 1998 when I was reading though back issues of the *Irish Naturalists' Journal* looking for references to locations of plants in Kerry. I came across two references to *E. x trachyodon* by Praeger (1934, 1935). In the 1934 reference Praeger described finding *E. x trachyodon* (specimen now lodged in the British Museum) on the islet known as O'Donohoe's Pigeon-House off Ross Island in Lough Leane, Killarney. Then, in the 1935 account, he stated that the islet is locally known as Crocodile Rock, not O'Donohoe's Pigeon-House ... the latter islet he states, lies further out. But as I found, Crocodile Rock is not marked on any of the maps while the Pigeon-House is marked as being in exactly the same spot as the Crocodile Rock is. No wonder I hadn't been able to find the Crocodile Rock on any of the maps!

In November 1998 I asked local boatman and caretaker of Ross Castle, Henry Clifton to show me Crocodile Rock. From Ross Castle, Henry pointed it out to me. Even from half a kilometre's distance, the tiny grey limestone rock, with a large *Arbutus unedo* (Strawberry-tree) on it, was clearly visible. The Rock looked about 30 m in circumference and about 15 m offshore from Ross Island. Henry said the water level of Lough Leane was so high that I would not be able to reach it until after a long dry spell when the water level would drop so much that it would be possible to walk out from Ross Island on to Crocodile Rock.

THE POSSIBLE REFINING OF *EQUISETUM X TRACHYODON*

So, on 16 November 1998, I cycled from the Knockreer House down on to Ross Island and then nearly as far as the Library Point until I came across over 30 cm of water where I had to abandon the bike and wade along the pathway to Library Point. Just before Library Point, I could clearly see the Crocodile Rock just a few metres offshore on the Ross Bay side but because of the depth of the water I could not get closer than 50 m. So I had to postpone my assault on Crocodile Rock until the water levels had dropped and I had borrowed some waders.

By 4 December 1998 the water levels had dropped and it was a glorious day with no wind at all and dry and sunny conditions although the temperature was only 5°C after a slight frost early in the morning. I again cycled down from Knockreer House, past the Half Moon Bay (where I saw a fine male Goldeneye duck and three Dabchicks diving in

the Bay) and across Ross Island to visit the Crocodile Rock. I found the water level around the Crocodile Rock had dropped enough to enable me to get to within 15 m of the Rock. From where I stood, on a rocky headland, I could see 1 m tall, blue-grey unbranched stems of what could have been *E. x trachyodon*, and so I focused my binoculars on them and could then clearly see the pale edged, black internodes of the Horsetail. So I felt very pleased that I had probably refound *Equisetum x trachyodon* (Mackay's Horsetail) after an interval of 65 years. I was also quite relieved that the plants looked so intact and were flourishing to the extent that they covered an area of perhaps 5 square metres. I put my waders on and tried to reach the island to get a sample, but the water was very deep. I got half way across through a small reed bed of *Phragmites australis* (Common Reed) when I felt freezing cold water welling up from below ... the waders were leaking! But, anyway, I could see the water was too deep over the last 5 m, at least 1.3 m to the clear, rocky bottom and I had to turn back. But I was delighted that Crocodile Island's very isolation had helped save the *Equisetum* from being grazed short by the deer which are common on Ross Island.

As the fishing season does not start until mid-January and as there has been so much high water, it was not until 11 January 1999 that I found a boatman able to take me out to Crocodile Rock. It was a calm, frosty afternoon and we reached Crocodile Rock within five minutes of leaving Ross Castle. But the water levels were much higher than the previous month and I had to scramble on to the rock through the branches of a *Salix cinerea* (Grey Willow) tree. The predominant trees on the tiny island were *Arbutus unedo*, about six in all. Interesting understorey plants were *Rubia peregrina* (Wild Madder), *Teucrium scorodonia* (Wood Sage) and *Rosa pimpinellifolia* (Burnet Rose). But the *Equisetum* was almost completely under water after the heavy rains of the previous month and only four small stems could be reached. I gathered some small pieces of the plant and am dispatching them to the Herbaria in Glasnevin and the British Museum (London) for further determination. But frankly the specimens are puzzling and do not seem to be as obviously *E. x trachyodon* as they looked through the binoculars in December 1998! I think I can understand now why Willmot (1983) said more work is needed in determining the status of these evergreen hybrid horsetails in the Killarney Valley. In the summer of 1999 I intend to gather some fruiting bodies from the *Equisetum* specimens on Crocodile Rock and by microscopical analysis of the

spores the mystery of the R.L. Praeger's *Equisetum* on Ross Island may finally be solved.

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CEPHALANTHERA LONGIFOLIA (NARROW-LEAVED HELLEBORINE) STILL FLOURISHING IN SOUTH KERRY (v.c. H1)

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INTRODUCTION

Cephalanthera longifolia (Narrow-leaved Helleborine) is an attractive white flowered orchid found in damp swampy hollows in acid woodlands where oak/holly meets alder. An Foras Forbartha (1981) mention it as occurring near the Caragh Lake in South Kerry (H1) but this was based on Scully's old record dating back to 1911 (R.W. Goodwillie, pers. comm., 1998) and neither Peter and Michael Wyse Jackson, the vice-county recorders for North Kerry (H2) nor Caroline Mhic Daeid, the recorder for South Kerry (H1) have any records for *Cephalanthera longifolia* since 1911 (M. Wyse Jackson, pers. comms, 1998).

The old records from Scully's *Flora of Co. Kerry* (1916) can be summarised as follows:

1. In a wet wood near Lickeen at the head of Caragh Lake, still there but sparingly in 1911.
2. In the Derrycunihy Wood, near the Killarney/Kenmare Road by Derrycunihy Cascade still there up to 1902.
3. Found sparingly in a shady swamp east of Brikeen Bridge on the Muckross Peninsula, Killarney in 1889.

In the *Irish red data book*, Curtis & McGough (1988) record that *C. longifolia* has only been found in seven localities in Ireland since 1970 but they state that under-recording is clearly a factor and that many old sites merely await re-investigation. Since 1988, *C. longifolia* has been confirmed as occurring in seven counties, with one record each in Cos Clare (H9), West Donegal (H35), East Galway (H15), West Mayo (H27), Roscommon (H25), North Tipperary (H10) and Wexford (H12) and three records in West Meath (H23) (T.G.F. Curtis, pers. comm., 1999).

THE REDISCOVERY OF *CEPHALANTHERA LONGIFOLIA* IN KERRY

In June 1998 I was exploring the woods due south of Caragh Lake having recently read Scully's (1908) account of how he found *Pyrola minor* (Common Wintergreen). Apparently an angler, a Dr Wood, was making his way through a tense tangle of vegetation near the Caragh River when his eye was caught by a solitary flowering spike which he took to be Lily-of-the-valley (*Convallaria majalis*). Fortunately for the botanists of today, he collected it and took it to Scully who happened to be staying in the Glencar Hotel near Caragh Lake! Full of excitement, Scully searched the woodland beside the Caragh River for more and found a further four plants and these five plants still constitute the only documented records for *Pyrola minor* in Kerry!

So, when I was exploring deciduous woods just south of the Caragh Lake I was intrigued when I spotted a couple of faded white flowers on top of a bare spike just below a track (now part of the Kerry Way). Because I was not sure what they were I picked just one flower and a leaf and took them home. After much puzzling over plant keys and

pictures I had narrowed it down to a hybrid of *Polygonatum* (Solomon's Seal). The site was very swampy due to a stream running through it and it was in deep shade but there was some rubbish dumped so I was not too surprised that an alien like *Polygonatum* might turn up there. But still the flower did not look right. Then I noticed that the pedicel/peduncle of the flower was twisted and strongly ridged ... like an orchid's flower and I remembered Scully had found *Cephalanthera longifolia* in this vicinity. Sure enough it keyed out as *C. longifolia*, the long, narrow leaves confirming its identity.

Next week I returned to the site accompanied by my son and junior BSBI member, Rory Hodd and ecologist Dr Kathryn Freeman, from Dublin. A search quickly relocated the by now completely died back specimen of the orchid and a further eight leafy specimens of the plant all below the track. We decided to cross the track and follow the stream uphill to see if there were any more specimens. We soon found a fine, flowering specimen of *Platanthera chlorantha* (Greater Butterfly-orchid) among alders and willows near the stream. The stream, which is not marked on any O.S. map, extended nearly half a kilometre through the mixed deciduous wood and all along it, we found *C. longifolia* in quantity; in fact we gave up counting when we reached a hundred plants! Many had ripe seed pods and we found one bearing four fresh white flowers with the conspicuous orange-yellow patch on the labellum. All these features were duly photographed and I have reported the exact location to Dúchas (Fig. 1).

DISCUSSION

In 1994 Ro FitzGerald carried out the rare plant survey in Kerry for Dúchas but she did not find *C. longifolia* in any of its old locations. I have searched the woodlands of Derrycunihy and Muckross Peninsula in Killarney and have found suitable habitat for the orchid. However the Derrycunihy area has often been heavily grazed by sheep while the Muckross Peninsula was, until about 20 years ago, also heavily grazed by sheep. It may be that repeated close cropping by sheep of the leafy shoots of the *C. longifolia* has rendered it extinct in these two Killarney sites. Or it may be that, at the turn of the century, the orchids were picked each year to extinction by visiting tourists. Both the Killarney localities, that is Dinis Island, Derrycunihy Cascade and Lady's View are very close to major sites for tourists. On the other hand the collecting

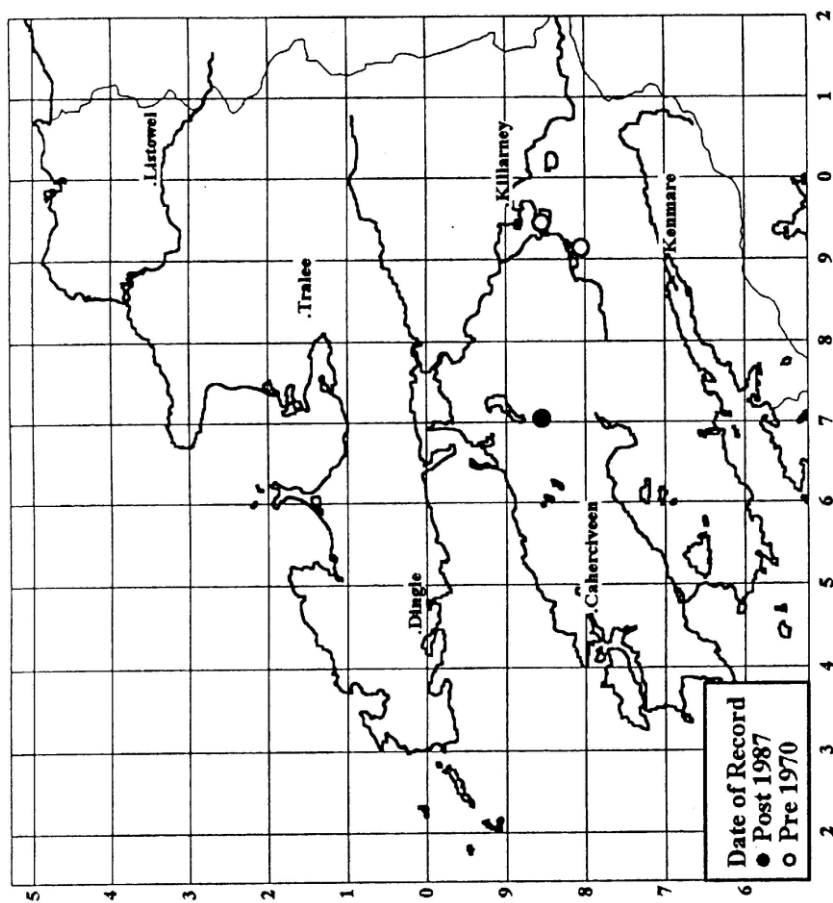


FIGURE 1. *Cephalanthera longifolia* (Narrow-leaved Helleborine) in Co. Kerry.

problem would be less likely at the Caragh Lake station which is very remote and not close to any tarred road.

Scully (1916) reported that he saw not more than two or three plants in the same spot at any of the three Kerry stations and yet we counted more than 100 plants at the Caragh Lake station. It is pleasing to record that this colony comes within the proposed Reeks and Killarney Valley Special Area of Conservation. Nonetheless steps may need to be taken to approach the landowners and ask them not to 'improve' the woodland. (Note: more than half of the woods around Caragh Lake have been replanted with conifers. Very fortunately the conifer plantations stop within 30 m of the lower part of the *Cephalanthera longifolia* colony.)

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FRANGULA ALNUS AND *RHAMNUS CATHARTICUS* - HOW WELL ARE THEY DOING 'OVER THERE'?

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Over the past few years, a colleague (Dr Pierre Binggeli) has been building up a database on invasive species throughout the world, focussing particularly on woody and shrub species. In order to verify much of the information, original papers from journals and books have been scoured for information and the most amazing books and papers have crossed my desk from many parts of the world.

One such volume was *Invasive plants: weeds of the global garden* edited by J.M. Randall and J. Marinelli and published by the Brooklyn Botanic Garden in 1996 (Randall & Marinelli 1996). It is, as you might guess, a compendium of plant invaders that have colonised and “degraded” natural areas in the United States. From the shrub section, two species caught my attention, *Rhamnus cathartica* (Buckthorn) and *Rhamnus frangula* - what we would know as *Frangula alnus* (Alder Buckthorn).

Frangula alnus is listed in Curtis & McGough (1988) as a rare species and in Northern Ireland it is given the highest conservation status possible - it is listed in Schedule 8 (Part I) of the Wildlife (Northern Ireland) Order, 1985. Webb *et al.* (1996) describe it as “very rare”. It is a tree or a shrub which inhabits rocky and boggy areas.

In recent surveys it has not been recorded as frequently as in the past, but whether this is as a result of under-recording or a genuine decline is perhaps in doubt. Certainly, Curtis & McGough (1988) note that in the Republic of Ireland it has been found in only six 10-km squares since 1970 whilst in all it has been recorded from 23 such squares over the years, whilst in Northern Ireland it has been found in only four squares since 1970 whilst previously recorded from seven. As a species of boggy areas, it has suffered from the loss of this particular habitat. Around Lough Neagh, where the species occurs on peaty-banks and in scrub, there is evidence of its decline during this century (Harron & Rushton 1986). In *The BSBI Monitoring Scheme 1987-1988* (Rich & Woodruff 1990) there is also evidence of decline.

But, how’s it doing over there? The plant was introduced to the United States during the 1800s. Its ability to invade both very wet areas and comparatively drier zones (e.g. rocky places) has led to it invading a host of wetland sites including “bogs, marshes, river banks, fens and pond margins” and drier sites such as “sand forests, roadsides and prairies” (McClain 1996). This invasion has been highly aggressive and it out-competes easily the native herbaceous and shrubby flora. Spread appears to be by birds who disperse the fruit; seed production is described as “prolific”.

So invasive is the species that control has been difficult and the fact that it grows in close association with native species exacerbates the

situation. Cutting is of little use as the plants resprout. Fire control has been tried but this generally only kills the seedlings and young stages and whilst the tops of the older bushes are killed, they quickly re-sprout. In these latter cases glyphosate is used to kill the resprouted material. Where burning cannot be carried out, because of the surrounding flora, then spring application of glyphosate has been recommended though the vigorous nature of the growth means that the application may need to be repeated over several years before a complete kill is achieved.

Rhamnus cathartica is a somewhat more commoner species (Perring & Walters 1982) than *F. alnus* but even so Webb *et al.* (1996) described it as only “occasional” in the west and centre of Ireland and “very rare” elsewhere. There is also evidence of recent decline (e.g. Perring & Walters 1982).

Rhamnus cathartica was originally introduced to the United States as a shelter-belt species also in the 1800s and now it is spread throughout much of the north-eastern and north-central parts of the US. Whilst preferring a limy soil it has nevertheless spread into a wide variety of habitats including woodlands, savannas, prairies, abandoned agricultural fields and roadsides. Control of this species is just as difficult and whilst seedlings can be easily removed by pulling, adults have to be cut and treated with herbicide (Samuels 1996).

In our own flora, we know the devastating effects of invasive alien species (for example, the effects of *Acer pseudoplatanus* (Sycamore) on semi-natural woodland and *Hippophae rhamnoides* (Sea-buckthorn) on sand dunes which, in many respects, is very like the two species discussed here) but perhaps we forget the negative effects ‘our’ species have when moved out of their natural range. Although *Frangula alnus* and *Rhamnus cathartica* apparently continue to decline in Ireland, it would appear that, at least in the U.S., they are doing rather well - if to the detriment of the native U.S. flora.

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LOCALLY RARE BUT NOW EXTINCT SPECIES IN NORTH KERRY (v.c. H2)

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The following species which were rare locally and recorded just a few times in the 1980s are now extinct. They all grew within a 5 km radius of each other in an area between Milltown and Killorglin.

Aethusa cynapium (Fool's Parsley) - waste ground on roadside
Carduus nutans (Musk Thistle) - grassland
Hypericum elodes (Marsh St John's-wort) - bog
Leycesteria formosa (Himalayan Honeysuckle) - waste ground
Silene latifolia subsp. *alba* (White Campion) - cornfield
Sisyrinchium bermudiana (Blue-eyed-grass) - river bank

The disappearance of these plants could be in some cases attributed to a change in land use but also perhaps more importantly because of their sparse numbers. Of course it is worth pointing out that *C. nutans* and *S. bermudiana* are both listed (Curtis & McGough 1988) as nationally rare.

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A REPORT ON THE FLORA OF CO. CORK (v.cc. H3-5), 1998

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The winter months of January and February were spent updating Cork distribution maps of certain species and hybrids and assimilating information on a range of critical genera in order to facilitate fieldwork later in the year. Moreover, a brief respite from work with back trouble was used to tackle hectad plant lists and thus partly redress my hitherto woeful performance in this direction!

March was spent working on the distribution of *Polypodium* (Polypody) spp. and hybrids, together with microscopic work on various *Carex* (Sedge) taxa and on *Asplenium onopteris* (Irish Spleenwort), *A. adiantum-nigrum* (Black Spleenwort) and their interspecific hybrid, *A. x ticinense*. Additionally, *Hymenophyllum tunbrigense* (Tunbridge Filmy-fern) was rechecked in its Bunaglanna River-glen site (H5, W/70.89) near Glenville, where I originally found it in 1987.

On 10 April, the Macroom Gearagh (H3, W/30.69) was visited with Michael Troy and Jim O'Malley, where *Equisetum hyemale* (Rough Horsetail), *Ranunculus auricomus* (Goldilocks Buttercup) and *Scirpus sylvaticus* (Wood Club-rush) were seen, the latter in its only known West Cork site, where it was found in the mid-1980s. In nearby Toon Bridge Woodland (H3, W/29.70) M. Troy photographed flowering *Ceratocarpus claviculata* (Climbing Corydalis) in its sole Cork site, while the very local *Hymenophyllum tunbrigense* was added to both the woodland flora and this hectad. On 24 April, *Briza maxima* (Greater Quaking-grass) was found in some abundance on both banks of the River Lee's South Channel (i.e. Morrison's Quay and Union Quay) (H4, W/67.71), near Cork's City Hall. J. O'Malley subsequently informed me that he had recorded two plants of *B. maxima* here in June

1983. In the interim fifteen-year period, this beautiful grass has firmly established itself on the old wharf timbers. It is new to Mid Cork. (*B. maxima* was added to the West Cork flora in June 1996, when it was discovered in small quantity on a sandstone outcrop near Inchageela village (H3, W/22.65) during a BSBI (Irish Branch) field outing to the area.)

On 12 May, a single plant of *Geranium purpureum* (Little-Robin) was seen in its East Cork site at Glanmire (H5, W/7.7) where herbicide spraying by Cork County Council had doubtless eliminated further plants of this nationally-rare species. Against all expectations however, a further hedgebank population of twelve plants was found in the subadjacent 1-km square within hectad W/7.7 - my first new East Cork site in 19 years (since 1979), and only the second-known extant H5 site for *G. purpureum*. On 22 May, a single flowering tussock of the sedge hybrid *Carex paniculata* (Greater Tussock-sedge) x *C. remota* (Remote Sedge) (= *C. boenninghausiana*) was found in a swampy scrub wood opposite the new Garrycloyne graveyard (H4, W/59.79), near Blarney. Also in May, a putative population of *Poa angustifolia* (Narrow-leaved Meadow-grass) was on a limestone wall in the Glasheen area of Cork City (H4, W/65.70). Farragher (1975) has reported *P. angustifolia* from a wall-top at Enniskerry, Co. Wicklow (H20), yet virtually nothing is known about the distribution or status of this rare grass in Ireland. Living material was brought into cultivation as part of my on-going study of the *P. pratensis* (Smooth Meadow-grass) group in Ireland.

On 7 June, a return visit was made to Commoge Marsh (H4, W/63.49), Kinsale, where *Carex punctata* (Dotted Sedge) was re-instated to the Cork flora in 1997. Eight small *C. punctata* populations were seen here, in a species-rich micro-habitat which boasts an abundance of *Parentucellia viscosa* (Yellow Bartsia), a species now of very local occurrence in H4. On this visit *Juncus ambiguus* (Frog Rush) was added to the Mid Cork flora, while *Anagallis minima* (Chaffweed) was re-instated to it. On 18 June, 18 flowering plants of *Geranium purpureum* were seen on its two limestone wall sites at Ballyphehane (H4, W/66.70), Cork City, where it was first recorded in 1974. On 28 June, a single clump of *Carex* x *boenninghausiana* was refound in my July 1981 site, on the western shore of Kilkern Lake (H3, W/33.34) near Ross Carbery.

On 18 July, Ballyvergan Marsh (H5, X/0.7), Youghal, was searched unsuccessfully for *Carex acuta* (Slender Tufted-sedge), found here by R.A. Phillips and R.W. Scully in 1896. This is its only Cork site to date. However, *Carex acutiformis* (Lesser Pond-sedge) and *C. riparia* (Greater Pond-sedge) were re-found, the former in some abundance. What appears to be a white-flowered form of *Calystegia sepium* subsp. *roseata* (Hedge Bindweed) (with pubescent stems/leaves/pedicels) occurred in local abundance at Ballyvergan East (H5, X/08.76), where a freshwater stream bisects the defunct Youghal-Cork Railway Line. On 26 July, *Calystegia pulchra* (Hairy Bindweed) was re-found in its two 1974 sites on the Killumney-Crookstown road (H4, W/5.6).

On 31 July, a visit to the Gearagh Causeway (H3, W/32.70), near Macroom, to recheck my 1996 find of the hybrid *Myosotis laxa* (Tufted Forget-me-not) x *M. scorpioides* (Water Forget-me-not) (= *M. x suzae*) strongly suggested that segregating F₂ hybrids are widespread here. *Elatine hexandra* (Six-stamened Waterwort) is locally abundant in this area, while two long-established bushes of *Cornus alba* (White Dogwood) are present on the Causeway. *Limosella aquatica* (Mudwort) still occurs in small quantity at nearby Lee Bridge (H3, W/34.71).

On 1 August, a two-hour visit to Bear Island, Castletownbear with Ger Morgan produced *Calystegia sepium* subsp. *roseata* in small quantity on a roadside bank near Ardagh Martello Tower (H3, V/72.43), while *Carex hostiana* (Tawny Sedge) occurred on adjacent heaths. (Toby Hodd subsequently visited Bear Island and found *Cicendia filiformis* (Yellow Centaury) at one site, though its actual distribution and frequency on the island has yet to be ascertained. He also mentioned finding *Oreopteris limbosperma* (Lemon-scented Fern) at Gougane Barra Forestry Park (H3, W/08.65), where I originally recorded it in July 1981.) August finds of *Verbascum virgatum* (Twiggy Mullein) were as follows:

1. Seeding itself freely on a shaley bank outside a garden at Castletownbear Harbour (H3, V/68.46);
2. A few plants in a field at Adrigole (H3, V/80.50);
3. Two plants on the stream bank at Pairc ui Chaoimh (H4, W/69.71), Cork City; and
4. A few plants bordering the Kinsale Road, near Cork Airport (H4, W/66.68).

On 23 August, while accompanied by Ger Morgan, a single small clump of sporing *Asplenium onopteris* was found on a rock outcrop in the Roury River-valley, near Connonagh (H3, W/24.39), Ross Carbery. Subsequent measurement of spore size and stomatal guard-cell length confirmed the identification. This find part makes up for the loss of a magnificent clump of *A. onopteris* near Roury Bridge (H3, W/25.36), found by M. Troy and I in 1992, yet *gone* (site destroyed) by March 1998! The Rev. Thomas Allin first recorded *A. onopteris* from the Roury River-valley in the 1870s.

On 9 September, *Clinopodium ascendens* (Common Calamint) was found in two sites about Leap Village (H3, W/2.3) where *Leycesteria formosa* (Himalayan Honeysuckle) is naturalised near Poulgorm Bridge. On the same trip, *Chamaemelum nobile* (Chamomile) and *Juncus tenuis* (Slender Rush) were found at Lough Ine (H3, W/09.29). On 15 September, 25 flowering plants of *Mentha pulegium* (Pennyroyal) were seen in its only known extant Cork site at Blackrock, Cork City (H4, W/6.7), where it was discovered in 1995. Puzzlingly, the population seems to have an annual life-cycle here, and not perennial, as one would expect! On 18 September, the sole Mid Cork site for *Stachys officinalis* (Betony) at White Castle Creek (H4, W/61.50), Kinsale was visited. Only three plants were recorded on this occasion (seven were seen in May 1994), and nutlet development appeared to be very erratic even within individual calyces. This site was discovered in September 1993. On 19 September, the sole Irish site for *Carex depauperata* (Starved Wood-sedge) on the River Blackwater near Killavullen (H5, W/6.9) was visited. Only five small tussocks now survive, of which just three bore fruiting culms. Lastly, on 20 September, the remnant brackish marshland complex adjacent to Youghal rubbish-tip (H5, X/10.79) was surveyed. The rare maritime grass hybrid *Elytrigia atherica* (Sea Couch) x *E. repens* (Couch Grass) (= *E. x oliveri*) proved to be abundant at this site which, most regrettably, is likely to be incorporated into the landfill area within the next two years, though it is the most easterly saltmarsh habitat in the county. (*Elytrigia x oliveri* is surely under-recorded in Ireland, as is attested to by my addition of this hybrid to the flora of Cos Waterford (H6) and Kilkenny (H11) this year.)

REFERENCE

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SOME BOTANICAL OBSERVATIONS IN CO. LIMERICK (v.c. H8) FOR THE *ATLAS* 2000 PROJECT

J. Wann

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I was recording in Co. Limerick for the *Atlas 2000* project for much of 1998, taking responsibility for the 10-km square R/5.3 which stretches from Bruree in the south to just south of Croom in the north. Additional work was done in surrounding 10-km squares especially R/4.3 (Ballingarry square) and R/4.4 (Adare square).

The proposed Natural Heritage Area at Tory Hill (112 m) (R/53.42) north-east of Croom was visited in late May just in time to see a fine display of over 100 individuals of *Orchis mascula* (Early-purple Orchid) scattered throughout the ash and hazel scrub. An inland roadside site for *Smyrnium olusatrum* (Alexanders) was found opposite the Cistercian Abbey of Monasteranenagh, near Monaster (R/55.40). This Abbey, founded by the King of Thomond in 1148, was a daughterhouse of Mellifont Abbey, Co. Louth reaching a position of great influence. This species was also found along the road between Rathkeale and Ballinlyny in R/3.4.

Tullovin Hill (76 m) (R/53.39) south-east of Croom was visited in early May. This hill was covered with *Ulex europaeus* (Gorse), *Crataegus monogyna* (Hawthorn) scrub and *Pteridium aquilinum* (Bracken) interspersed with rocky grassland with the following species: *Rumex acetosa* (Common Sorrel), *R. acetosella* (Sheep's Sorrel) and *Alchemilla filicaulis* subsp. *vestita* (Lady's-mantle). *Oxalis acetosella* (Wood-sorrel) was found at the shaded scrub edge, the only site for this species found in this 10-km square. A revisit to this site towards the end of summer could turn up some interesting species.

An interesting marsh (R/534.398) was found on the floodplain of the Camoge river south-east of Croom. The vegetation was quite rank in places suggesting that the site was not subject to grazing pressure. The flora included: *Carex hirta* (Hairy Sedge), *C. disticha* (Brown Sedge), *C. viridula* subsp. *brachyrrhyncha* (Yellow-sedge), *Eleocharis palustris* (Common Spike-rush), *Hypericum tetrapterum* (Square-stalked St John's-wort), *Samolus valerandi* (Brookweed), *Myosotis discolor* (Changing Forget-me-not), *Anagallis tenella* (Bog Pimpernel), *Pedicularis palustris* (Marsh Lousewort) and *Parnassia palustris* (Grass-of-Parnassus).

It was a delight to come across a small stand of planted mature beech trees (R/525.387) - the remnant of a demesne woodland - along the River Maigue south of Croom. The herb layer included *Carex sylvatica* (Wood-sedge), *Galium odoratum* (Woodruff) and the only site in R/5.3 for *Anemone nemorosa* (Wood Anemone).

An interesting complex of habitats was found on the site of an abandoned railway line (R/540.373) south-west of Glenbevan. It included:

- a. Marsh with *Lythrum salicaria* (Purple-loosestrife), *Galium palustre* subsp. *palustre* (Common Marsh-bedstraw), *Epilobium palustre* (Marsh Willowherb), *Ranunculus flammula* subsp. *flammula* (Lesser Spearwort), *Eleocharis palustris* (Common Spike-rush);
- b. Damp grassland with *Carex otrubae* (False Fox-sedge), *Hypericum tetrapterum* (Square-stalked St John's-wort); and
- c. Dry grassland with *Cynosurus cristatus* (Crested Dog's-tail), *Briza media* (Quaking-grass), *Euphrasia officinalis* agg. (Eyebright), *Centaurea nigra* (Common Knapweed) and *Daucus carota* subsp. *carota* (Wild Carrot)

The open water of the marsh was dominated by a magnificent stand of *Equisetum fluviatile* (Water Horsetail).

The limestone outcrop of Knocktwo with its hillfort (105 m) (R/58.34) looked in close-up like a miniature sized version of the Burren's Mullaghmore with its stepped limestone bedding planes. The outcrop itself was a mosaic of scrub with *Prunus spinosa* (Blackthorn),

Crataegus monogyna (Hawthorn) and *Rubus fruticosus* agg. (Bramble) and dry grassland in an otherwise sea of improved grassland. On the thin soil of the rocky ledges were found *Pilosella officinarum* (Mouse-ear-hawkweed), *Erophila verna* agg. (Common Whitlowgrass), *Sedum acre* (Biting Stonecrop), *Hedera helix* (Ivy), *Polypodium interjectum* (Intermediate Polypody) and scattered plants of *Arabis hirsuta* (Hairy Rock-cress). In the short turf on its western flanks, the grassland community included *Polygala vulgaris* (Common Milkwort), *Geranium molle* (Dove's-foot Crane's-bill), *Dactylorhiza fuchsii* (Common Spotted-orchid), *Galium verum* (Lady's Bedstraw), *Centaureum erythraea* (Common Centaury), *Anthyllis vulneraria* (Kidney Vetch) and *Aphanes arvensis* (Parsley-piert).

The shallow water at the edge of the small lake (R/581.343) to the north-west of Knocktwo contained *Zannichellia palustris* (Horned Pondweed) and *Potamogeton obtusifolius* (Blunt-leaved Pondweed). Further back from the water's edge the fringing vegetation included *Mentha aquatica* (Water Mint), *Myosotis scorpioides* (Water Forget-me-not), *Carex disticha* (Brown Sedge), *Alisma plantago-aquatica* (Water-plantain) and *Veronica catenata* (Pink Water-Speedwell). The lakeside vegetation was fenced off from grazing pressure.

At R/581.356 north-east of Athlacca was a fine line of *Populus x canadensis* (Hybrid Black-poplar). On the opposite side of the road to these trees was a wide, recently cleaned out muddy ditch which yielded *Equisetum palustre* (Marsh Horsetail), *Ranunculus sceleratus* (Celery-leaved Buttercup) and the charophyte (Stonewort) *Chara vulgaris*. In a more overgrown section of the ditch was a large clump of *Carex riparia* (Greater Pond-sedge).

An extensive stand of *Heracleum mantegazzianum* (Giant Hogweed) was noted at Bruree. A solitary plant of this species was also found downstream of Bruree at R/534.375. Near Bruree, eight plants of *Thlaspi arvense* (Field Penny-cress) were found on a bare stretch of a clay roadside bank.

In a red sandstone quarry (R/494.363) east of Liskennett Hill, *Reseda luteola* (Weld) was abundant on the spoil tips with *Raphanus raphanistrum* subsp. *raphanistrum* (Wild Radish) on which were Small

White butterflies including a mating pair.

An extensive fen was found south of Croagh (R/402.407) in mid-August. It was a mosaic of scrub with *Salix cinerea* subsp. *oleifolia* (Grey Willow), *Ulex europaeus* (Gorse), *Betula pubescens* (Downy Birch), *Molinea caerulea* (Purple Moor-grass) tussocks and *Juncus subnodulosus* (Blunt-flowered Rush). Ditches, which formed a barrier between the fen and the improved grazed grassland beyond, surrounded the site. According to a local farmer the fen is commonage. *Cladium mariscus* (Great Fen-sedge), *Anagallis tenella* (Bog Pimpernel), *Schoenus nigricans* (Black Bog-rush) and luxuriant growth of *Samolus valerandi* (Brookweed) were found on the sides and tops of the ditches. In the ditches were *Potamogeton coloratus* (Fen Pondweed), *Equisetum palustre* (Marsh Horsetail), *Berula erecta* (Lesser Water-parsnip) and the charophyte (Stonewort) *Chara vulgaris* var. *papillata*. *Parnassia palustris* (Grass-of-Parnassus) formed white carpets on the shorter sward areas.

Finally an extensive stand of the rare and possibly decreasing straggling perennial *Clinopodium ascendens* (Common Calamint) was discovered within the perimeter of the ruined roofless church at Croagh. Additional plants of this species were observed along the pathways through the graveyard outside the church.

I would like to thank the following people for their assistance: Sylvia Reynolds for assistance and many useful comments in the field, Howard Fox for identifying the charophytes and Dr Chris Preston for confirming the *Potamogeton* spp. Finally I would like to thank the many landowners who allowed me access to their land.

BSBI FIELD MEETINGS IN IRELAND, 1998

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The first field meeting of the season was held at Glengariff, Co. Cork (H3) on the 30 and 31 May where a number of sites were visited and recording took place for *Atlas 2000*. Among the plants found were *Hymenophyllum tunbrigense* (Tunbridge Filmy Fern), *Erica tetralix*

(Cross-leaved Heath), *Carex punctata* (Dotted Sedge), *Pinguicula grandiflora* (Large-flowered Butterwort) and *Sisyrinchium bermudiana* (Blue-eyed-grass). A fuller account of this meeting has been provided by M.J.P. Scannell (this issue of *Irish Botanical News*).

The next meeting on 6 and 7 June spanned the border with visits to Caledon in Co. Tyrone (H36) and Emyvale in Co. Monaghan (H32). In Caledon village the garden escapes *Geranium lucidum* (Shining Crane's-bill), *Clematis vitalba* (Traveller's-joy), *Allium schoenoprasum* (Chives) and *Aubrieta deltoidea* (Aubretia) were recorded. At Lough Enagh there was a healthy colony of *Thelypteris palustris* (Marsh Fern) at its only Tyrone station. Also recorded was *Berula erecta* (Lesser Water-parsnip). An early 1980s record of *Carex pulicaris* (Flea Sedge) was refound at Knockaginny. Other plants recorded on the day were *Saxifraga x urbium* (Londonpride) at a fairly 'wild site'; *Galium mollugo* (Hedge Bedstraw), which had tendencies towards a hybrid, and *Erophila verna* (Common Whitlowgrass). In Co. Monaghan we visited Lough Emy and discovered *Polygonatum x hybridum* (Garden Solomon's-seal). At a nearby quarry there was *Salix x sericans* (Broad-leaved Osier) and we ended the day with a very pleasant walk through Rossmore Forest Park just outside Monaghan town.

On 27 and 28 June we were back in Co. Cork at Charleville (H4) where plants recorded included *Trisetum flavescens* (Yellow Oat-grass), *Cochlearia danica* (Danish Scurvy grass) - a rare visitor inland, and *Pinguicula grandiflora* (Large-flowered Butterwort). A fuller account of this meeting has also been provided by M.J.P. Scannell (this issue of *Irish Botanical News*).

Co. Offaly (H18) was the venue for the field meeting on 11 and 12 July and after meeting at Birr we proceeded to Coffey's Cross and recorded various fen species including *Parnassia palustris* (Grass-of-Parnassus) and *Solidago virgaurea* (Goldenrod) and in a grassy area *Sesleria caerulea* (Blue Moor-grass). After lunch we drove to Knockbarron Wood near Kinnity where as well as the usual woodland trees (Oak, Beech, Poplar, Larch and Sitka Spruce) we found *Viburnum opulus* (Guelder-rose) and *Ulmus non-glabra* (Elm). In a damper area at the edge of the wood were *Carex disticha* (Brown Sedge), *C. vesicaria* (Bladder-sedge) and *Scutellaria galericulata* (Skullcap). On Sunday we visited a number of lakes in the Derryad area where *Nymphaea alba*

(White Water-lily) and a number of *Carex* spp. including *C. rostrata* (Bottle Sedge), *C. lasiocarpa* (Slender Sedge), *C. binervis* (Green-ribbed Sedge), *C. viridula* subsp. *brachyrrhyncha* (Yellow-sedge) and *C. viridula* subsp. *oedocarpa*. *Cladium mariscus* (Great Fen-sedge) was in abundance and *Rubia peregrina* (Wild Madder), *Pinguicula vulgaris* (Common Butterwort) and *P. lusitanica* (Pale Butterwort) were also recorded.

In late July a weekend at Ardara and Glenties in West Donegal (H35) was extended into a week when Trevor Dines and Graham Kay, visiting botanists from Wales and England, joined the 'local' band and serious recording for *Atlas 2000* took place with about 15 10-km squares visited. The square bashing was relieved by finding a good stand of *Pilularia globulifera* (Pillwort), this being only the fifth record for the vice-county. As the party split up to cover as much ground as possible I have only notes on species found by the group I was with and these included *Elymus atherica* (Sea Couch), *Eryngium maritimum* (Sea Holly), *Silene vulgaris* subsp. *maritima* (Bladder Campion), *Anacamptis pyramidalis* (Pyramidal Orchid), *Euphrasia scotica* and *E. tetraquetra* (Eyebrights).

In early August the venue was West Mayo (H27), based at Castlebar and again we were recording for the *Atlas 2000* scheme mainly by the shores of Lough Conn and Lough Cullin with a brief visit to the shore at Newport. The main find was a number of fine specimens of *Spiranthes romanzoffiana* (Irish Lady's-tresses) at Lough Conn together with *Sanguisorba officinalis* (Great Burnet) at one of its few stations in western Ireland and good plants of *Parnassia palustris* (Grass-of-Parnassus). At Lough Cullin some remarkably large flowering specimens of *Utricularia intermedia* (Intermediate Bladderwort) were noted.

Mid-August saw us in Co. Westmeath (H23) where we met at Ballymore, a village described as having a beginning and an end but no middle, as green fields separate the two ends. From here we visited the shores of Lough Ree and found *Teucrium scordium* (Water Germander) and *Stachys officinalis* (Betony). *T. scordium* is known from the shores of Lough Ree and Lough Derg but is very rare elsewhere and *S. officinalis* is also a very rare plant in Ireland.

On 22 and 23 August we had a back-to-back meeting in Cos Roscommon (H25) and Leitrim (H29) and had the benefit of the expertise of Chris Preston so naturally aquatic plants were the centre of attention. During the few days we were in field 17 species of *Potamogeton* were identified, *P. obtusifolius* (Blunt-leaved Pondweed), *P. alpinus* (Red Pondweed), *P. natans* (Broad-leaved Pondweed), *P. crispus* (Curled Pondweed), *P. polygonifolius* (Bog Pondweed), *P. x nitens* (Bright-leaved Pondweed), *P. x zizii* (Long-leaved Pondweed), *P. gramineus* (Various-leaved Pondweed), *P. perfoliatus* (Perfoliate Pondweed), *P. coloratus* (Fen Pondweed), *P. lucens* (Shining Pondweed), *P. filiformis* (Slender-leaved Pondweed), *P. pectinatus* (Fennel Pondweed), *P. friesii* (Flat-stalked Pondweed), *P. berchtoldii* (Small Pondweed), *P. pusillus* (Lesser Pondweed) and *P. x suecicus* (Swedish Pondweed) (a hybrid between *P. filiformis* and *P. pectinatus* and very rare in Ireland with only four or five other records). We had the advantage of collecting some specimens by canoe, possibly a first on a BSBI field meeting in Ireland! Other plants identified on the meeting included *Sorbus hibernica* (Irish Whitebeam), *Carex lasiocarpa* (Slender Sedge), *C. strigosa* (Thin-spiked Wood-sedge), *Myriophyllum alterniflorum* (Alternate Water-milfoil) and *Lobelia dortmanna* (Water Lobelia) at a previously unknown location in the shallows on the shores of the Shannon Waterway at Derrycarn. Several new sites for *Sagittaria sagittifolia* (Arrowhead), *Rumex hydrolapathum* (Water Dock) and *Hydrocharis morsus-ranae* (Frogbit) were found. The *Rorippa* hybrid *x anceps* (Hybrid Yellow-cress) (*R. sylvestris* x *R. amphibia*) was found in Roscommon and also at least two trees of *Sorbus hibernica* (Irish Whitebeam). Among a large number of *Epipactis helleborine* (Broadleaved Helleborine) plants at least two plants of *Epipactis phyllanthes* (Green-flowered Helleborine) were noted and were later confirmed by a chromosome count.

At Lough Meelagh in Co. Leitrim (H29) Don Cotton showed us *Typha* plants which are thought to be a hybrid between *T. latifolia* (Bulrush) and *T. angustifolia* (Lesser Bulrush) called *T. x glauca*. Samples have been taken for positive identification but as yet no result is available.

On the way back to the airport for Chris Preston to catch his flight we called at a site on Upper Lough Erne to obtain some *Butomus umbellatus* (Flowering-rush) samples for genetic work being carried out in England and saw some good stands of the rather rare *Sium latifolium*

(Great Water-parsnip) and also more specimens of the hybrid *Rorippa x anceps*.

I would like to thank all the vice-county recorders who led field meetings, Trevor Dines and Graham Kay and especially Chris Preston for all their input into the meetings which has provided not only enjoyment for all who took part but also a larger number of Irish records for *Atlas 2000*. A copy of all field meeting arrangements for 1999 is enclosed with this copy of *Irish Botanical News*.

BSBI FIELD MEETINGS HELD IN CO. CORK, 1998

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GLENGARRIFF (v.c. H3), 30-31 MAY

On the days preceding the meeting torrential rain fell in SW Ireland. The ground was saturated and bogs were sodden; on upland tracks seeping water dripped silently to form roadside rivulets. The Beara peninsula, the terrain and the wet, brought to mind a line from poet Patrick Kavanagh (*Lough Derg*, 1978) “... where hills are perished noses running peaty water”.

The Glengarriff meeting was attended by ten persons with leader M.J.P. Scannell. The coordinator for Ireland for *Atlas 2000* attended on Saturday. The rain, somewhat abated, continued during the work. On Saturday the party listed the urban flora of the village and then proceeded to mixed oak woodland to the west (V/9.5). On the unsurfaced road we botanized mainly from the cars. *Saxifraga spathularis* (St Patrick's-cabbage) was noted on dripping rock outcrop. We entered the adjacent grid, V/8.5, to the limit of the woodland and to open ground, with blanket bog, rushing streams, bare ground by a bridge and a small lake at Coomerkane. Although it was early in the season it was late for *Pinguicula grandiflora* (Large-flowered Butterwort) and we saw but a few specimens. *Fuchsia magellanica* (Fuchsia) and *Ilex aquifolium* (Holly) were frequent on the wall bordering the road. Other species noted were *Myrica gale* (Bog-myrtle),

Melampyrum pratense (Common Cow-wheat) and *Carex viridula* subsp. *oedocarpa* (Yellow-sedge). A student-botanist brought forward a plant of *Erica tetralix* (Cross-leaved Heath) with leaves broader than usual and not inrolled. It was too early for flowers. The party returned to the coast road and travelled towards the south-west. The banks and west shore on the west side of Lough Avaul were briefly botanized. The next stop was at Coolieragh (= Seal Harbour) - a known site for *Carex punctata* (Dotted Sedge) and *Euphorbia hyberna* (Irish Spurge); *Anthyllis vulneraria* (subsp. not determined) (Kidney Vetch), *Chamaemelum nobile* (Chamomile), *Rumex crispus* subsp. *littoreus*? (Curled Dock), on the stony foreshore, together with other maritime flora were noted. With rain and darkening skies the group returned to Glengariff.

On the 31 May the assembly point was Adrigole (V/8.5). We worked the immediate area and listed the flora of roadside banks and walls. A tree *Tilia platyphyllos* (Large-leaved Lime) was found growing along the road around the boundary fence of the National School. A small roadside lough was visited. Here Toby Hodd indicated a small colony of *Sisyrinchium bermudiana* (Blue-eyed-grass); *Juncus tenuis* (Slender Rush) grew on a trackway near the lake, as did *Crocasmia x crocosmiiflora* (Montbretia). We then drove northwards on a lesser road following the River Adrigole and parked and worked the roadside and bog slopes on the south-east of the river to Glen Lough. The area held *Saxifraga spathularis* (St Patrick's-cabbage), *S. hirsuta* (Kidney Saxifrage) and their hybrid, a roadside specimen of *Hypericum humifusum* (Trailing St John's-wort) (confirmed by A.N. Codling), and we also noted *Fuchsia magellanica* (Fuchsia), *Myrica gale* (Bog-myrtle), *Vaccinium myrtillus* (Bilberry), *Lonicera periclymenum* (Honeysuckle), *Cytisus scoparius* (Broom), *Carex binervis* (Green-ribbed Sedge), *C. flacca* (Glaucous Sedge), *C. ovalis* (Oval Sedge), *C. panicea* (Carnation Sedge), *Pilularia globulifera* (Pillwort), *Dryopteris aemula* (Hay-scented Buckler-fern), *Chamaemelum nobile* (Chamomile), *Epilobium brunnescens* (New Zealand Willowherb) and *Equisetum fluviatile* (Water Horsetail). We saw a specimen of *Pinguicula* possibly *grandiflora* (Large-flowered Butterwort) and *P. lusitanica* (Pale Butterwort). On the marshy shore of the lake we noted *Caltha palustris* (Marsh-marigold) and *Carex* spp. (Sedges)

Toby and Rory Hodd penetrated deeper into the marsh to record *Carex vesicaria* (Bladder-sedge) (to be confirmed) and a large white-flowered

Cardamine sp. (Bitter-cress) (to be forwarded for critical determination). This area proved of plant interest. At road-end there were some houses and one plant of *Alchemilla filicaulis* subsp. *vestita* (Lady's-mantle) (no flowers) grew on the steps of a habitation. The Caha Mountain Range is to the north and west. *Minuartia recurva* (Recurved Sandwort) was found on Knockowen in the 1960s but the site was not visited during this meeting.

One expected to see *Juncus foliosus* (Leafy Rush) and *Cicendia filiformis* (Yellow Centaury) but they were not found. The weather cleared later in the day and the party had a fine view of Bantry Bay.

CHARLEVILLE AND BALLYHOURA (v.c. H4), 27-28 JUNE

The meeting was centred on Charleville town with twelve persons attending and the leader, M.J.P. Scannell. The southern parts of R/4.2 and R/5.2 were worked (the area to the north of Limerick) and R/5.1. Preliminary work on the previous day indicated areas of interest. In spite of broken weather it was possible to work between the showers. The region is of prime grazing land and contributes to Charleville Creamery one of the largest in western Europe.

On Saturday the party botanized at Ballysallagh - limestone walls and hedges en route to the railway station. Here, on a siding, Philip Grant noted *Senecio viscosus* (Sticky Groundsel) (new to H4) and *Cochlearia danica* (Danish Scurvygrass); on the remains of a damaged eiscir there was *Trisetum flavescens* (Yellow Oat-grass), *Helictotrichon pubescens* (Downy Oat-grass), *Pimpinella major* (Greater Burnet-saxifrage) and other species. Sylvia Reynolds collected a specimen of *Hieracium* (Hawkweed) from the parapet of a bridge for further study. After lunch at Rathgoggan we drove southwards seeking streams and marshes of the River Awbeg (a tributary of the River Blackwater). On the narrow roads we could sample the flora while driving slowly; the roads were free of traffic as the farming population was supporting the local Agricultural Show in the town. A pond-marsh in a wet pasture yielded *Oenanthe crocata* (Hemlock Water-dropwort), immature *Potamogeton crispus* (Curled Pondweed) (det. M.J.P. Scannell), *Carex riparia* (Greater Pond-sedge) and other species. We then crossed into R/5.1

After listing the common species of pastures and road verges we

proceeded to the north-western flanks of the Ballyhoura Mountains. Ciaran Griffin then led the party to the Ballynaboola area where he had seen *Pinguicula grandiflora* (Large-flowered Butterwort) on a previous day. We proceeded through forestry plantations on un-surfaced roads, and at c. 100 m we saw some 20 specimens of the Large-flowered Butterwort. Under *P. vulgaris* the plant is listed in a Vilmoren Catalogue (1906) with the statement: “La forme d’Irlande, est à fleurs beaucoup plus grandes que celles du type indigène chez nous et réellement très belles ... ” and recommending it as a garden-worthy plant. Other flora noted at this location included *Carex binervis* (Green-ribbed Sedge), *Equisetum fluviatile* (Water Horsetail), *E. telmateia* (Great Horsetail) and *Trichophorum cespitosum* (Deergrass). From high ground we observed open water to the south-west of Chapel Cross Roads - a feature shown also on Discovery Map, Sheet 73. We found a recently set-up gravel-sorting quarry, with overburden removed revealing the water-table. The flora of the spoil heaps and water-body was noted - *Brassica rapa* (Turnip), *Cirsium* (Thistle) four species, *Linum catharticum* (Fairy Flax), *Odontites vernus* (Red Bartsia), *Gnaphalium uliginosum* (Marsh Cudweed), *Leucanthemum vulgare* (Oxeye Daisy), *Scrophularia auriculata* (Water Figwort), *Zannichellia palustris* (Horned Pondweed), *Carex otrubae* (False Fox-sedge), *C. rostrata* (Bottle Sedge), *C. diandra* (Lesser Tussock-sedge), *Eleocharis palustris* (Common Spike-rush) and *Dactylorhiza fuchsii* (Common Spotted-orchid). Philip Grant and John Wann worked a more distant body of water and increased the species list from this location.

On the following day working west of the town we were now in the catchment of the River Maigue (which drains northwards to the River Shannon). Specimens were listed in a graveyard near Shandrum, and from verges and linear roadside woodland. Seeking fresh ground we travelled the lesser roads and sampled the flora. We enquired from a local man if there was open water or marshland in the area. He replied that further on there was “wet ground, they call it the mountawneys, all muck”. We found the ground about Coolasmuttane and Cloonmore. Here the soil was of an impervious nature and liable to flooding; the species noted included *Carex divulsa* (Grey Sedge), *C. ovalis* (Oval Sedge), *C. remota* (Remote Sedge), *Alopecurus geniculatus* (Marsh Foxtail), *Equisetum palustre* (Marsh Horsetail), *E. telmateia* (Great Horsetail), *Odontites vernus* (Red Bartsia), *Poa trivialis* (Rough Meadow-grass) and *Ranunculus sceleratus* (Celery-leaved Buttercup).

Corylus avellana (Hazel) was frequent in hedges. Philip Grant found one specimen of *Euonymus europaeus* (Spindle). This species is getting scarce in Ireland and severe roadside trimming and the removal of field boundaries contribute. In times past Spindle was used in small carved objects as the Viking (Dublin) Excavations show. Toby and Rory Hodd penetrated further through the mucky fields and found open water with *Iris pseudacorus* (Yellow Iris), *Potamogeton natans* (Broad-leaved Pondweed) and *Carex rostrata* (Bottle Sedge).

The BSBI lists from the Glengarriff and Charleville meetings have been forwarded to the co-ordinator in Ireland for *Atlas 2000*.

IRISH BOTANISTS' MEETING, 1999

The annual Irish Botanists' Meeting will be held this year at the Newforge Lane site, Queen's University of Belfast, 29-31 March.

This year the organising committee is keen to involve members of the BSBI and others who are not necessarily attached to universities or who may be amateur botanists. (A session on the study of the Irish flora is one option for the organisers if sufficient contributions are forthcoming.)

Offers of papers (standard length 20 minutes, or short talks of c. 10 minutes) and posters can be sent to any of the following:

Dr Jim McAdam	Telephone Belfast 255275 e-mail jim.mcadam@dani.gov.uk
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Professor Jon Pilcher	Telephone Belfast 273977 e-mail j.pilcher@qub.ac.uk
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Dr Valerie Hall	Telephone Belfast 273226 e-mail v.hall@qub.ac.uk
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A Web page with full details is at www.qub.ac.uk/afs/aps