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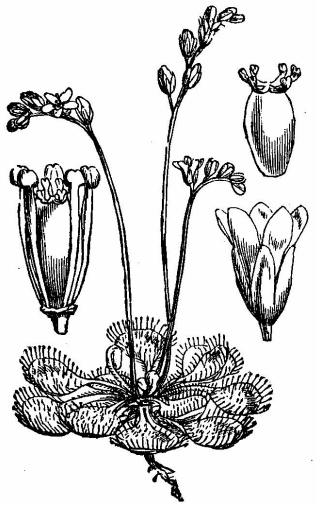

Drosera rotundifolia

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COMMITTEE FOR IRELAND, 2007-2008
BOTANICAL SOCIETY OF THE BRITISH ISLES

In line with the Rules, two new committee members were elected at the Annual General Meeting held in Glasnevin Botanic Gardens, on 13 October 2007. Office Bearers were subsequently elected at the first Committee Meeting. The Committee is now:

Dr E. Caroline Mhic Daeid, Chair and Republic of Ireland Representative on Records Committee (retiring AGM 2010)
Dr D.A. Doogue (retiring Irish AGM 2008)
Dr J.S. Faulkner, Field Meetings Secretary (retiring Irish AGM 2008)
Mr A.G. Hill, Northern Ireland Representative on Records Committee (retiring Irish AGM 2009)
Mr W.I. McNeill (retiring Irish AGM 2009)
Dr B.S. Rushton, Honorary Editor *Irish Botanical News* and Representative on BSBI Council (retiring AGM 2009)
Mr G. Sharkey (retiring AGM 2010)

The following are co-opted members of the Committee:

Mr M. Archer, Honorary Secretary
Mr P. Hackney
Mr P. Green, incoming Honorary Editor *Irish Botanical News*
Mr M. Wright, Environment and Heritage Service (N.I.) Representative
Dr M.B. Wyse Jackson, National Parks and Wildlife Service, Republic of Ireland Representative

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The cover illustration shows *Drosera rotundifolia* (Round-leaved Sundew) (taken from Fitch, W.H. and Smith, W.G. (1908). *Illustrations of the British flora*, p. 93. Lovell Reeve and Co., Ltd, London.).

All species and common names in *Irish Botanical News* follow those in the database on the BSBI web site http://rbg-web2.rbge.org.uk/BSBI/ and Stace, C.A. (1997). *New Flora of the British Isles*, 2nd ed. Cambridge University Press, Cambridge, except where otherwise stated.

CONTENTS

EDITORIAL

In this Editorial, I have to say goodbye and hello.

Goodbye because, after 18 issues (and thus 18 years) of *Irish Botanical News*, I am giving up and passing on the Editor's software and stapler. The last 18 years have flown by and it is difficult to believe that 833 pages have been published on Irish botany. These have ranged from long, scientific articles on particular species, the results of survey work, reports from vice-counties and shorter articles to book reviews and so on as well as more whimsical pieces. These have brought me very close to the work 'on the ground'. One lesson I have learnt from interacting with the Irish membership is that botanists are 'good guys'. Everyone has been supportive and cooperative as I have put this newsletter together. Thank you all.

If there is a disappointment it is that the effort is very patchy. There are a significant number of vice-counties where there have been no reports in the last 18 years. One must assume that progress has been made in investigating the flora but *Irish Botanical News* has not benefited from reports of the work. Having said that, this year's issue is the biggest ever and I've had to reduce the font size to get it all in; I hope it doesn't cause too much eye-strain.

And so … we must say hello to Paul Green. Paul is based in Co. Wexford and is Vice-county Recorder for H6 (Waterford) and H12 (Wexford). This particular issue of *Irish Botanical News* has been put together with Paul's help and I'm sure when he has full control next year he will come to enjoy the experience just as I have. I wish him luck; please support him.

Have a good field season,

Brian S. Rushton, *Irish Botanical News*

THE DIAGNOSTIC CHARACTERS OF *ROSA STYLOSA* DESV. (SHORT-STYLED FIELD-ROSE) (ROSACEAE): A BRIEF ACCOUNT OF ITS HISTORY, DISTRIBUTION AND HABITAT PREFERENCES IN THE IRISH FLORA, AND ITS CURRENT-KNOWN DISTRIBUTION IN CO. CORK (V.CC. H3-H5)

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ABSTRACT

Rosa stylosa Desv. (Short-styled Field-rose) is of *local* occurrence throughout its European range, and in Britain and Ireland has a predominantly *southern* distribution. The present paper details the diagnostic characters of this attractive, yet still under-recorded Irish rose species; provides a concise account of the history of its recording, of its distribution, and of its habitat preferences in the Irish flora; and outlines its current-known distribution in County Cork (H3-H5). Some comments are also made on the quality and accuracy of the very few *Rosa stylosa* illustrations and photographs that are readily available to Irish and British botanists.

INTRODUCTION

Within the genus *Rosa* L. (Wild roses) as represented in the European flora, Section *Caninae* DC. consists of a range of genetically unbalanced polyploid taxa which are all of hybrid origin and which exhibit a high level of pollen sterility (most anthers with at least 50% of abortive pollen grains). Section *Caninae* DC. is represented in Britain and Ireland by four subsections, namely: Subsection *Stylosae* Crepin; Subsection *Caninae* Crepin (Dog-roses); Subsection *Rubiginosae* Crepin (Sweet-briars); and Subsection *Villosae* (DC.) Crepin (Downy-roses). In these islands, Subsection *Stylosae*, in contrast to the other three subsections, contains only a single species – *Rosa stylosa* Desv. (Short-styled Field-rose), which bears a very distinctive, glabrous column of *fused* styles (*not* free styles as in the other taxa) that project beyond the conical disc of the false-fruit (hip) and terminate in *a tiered, narrowly elongate-ovoid*, head of stigmas. Indeed, with its combination of a fused stylar-column, small hips and moderately long, finely stipitate-glandular pedicels, *Rosa stylosa* mimics *Rosa arvensis* (Field-rose), yet its genetic constitution, growth-habit and vegetative features place it emphatically in *Rosa* Section *Caninae* and show its affinity with the Subsection *Caninae* (Dog-roses).

THE DIAGNOSTIC CHARACTERS OF *ROSA STYLOSA*

Rosa stylosa displays tall (to 4 m high), robust, arching, primary stems, which bear very distinctive *deltoid* prickles, the faces of which are usually *convex and stout*, rather than flat and thin, as in the prickles of most associated dog-rose species, save *Rosa obtusifolia* Desv. (Round-leaved Dog-rose) and some of its hybrid derivatives. The following composite description is based on Co. Cork and Co. Waterford material:

Leaflets *characteristically elliptic-oblong* and *acuminate* (or with slight variations on this shape), *commonly 2-2.5 times as long as broad*, those of the inflorescence-leaves and first-year (sterile) vegetative shoots 30-60 (-65) × 18-25 mm, *uniserrate* (the teeth 3-3.5 mm long), *glabrous and dark glossy-green* on the suprafoliar face, *pubescent* on the mid-vein and lateral veins of the subfoliar face and *often ciliate* on the margins of the teeth; leaf-rachides glandular-setose (at least on the rims of the rachis-channel) and varying from sparsely, to moderately densely, crispate-pubescent; pedicels (15-) 23-30 (-35) mm*, 1.5-2.5 times as long* as the hips and *finely* stipitate-glandular, the stipitate-glands *0.3-0.7 mm*, often *sparse and irregularly distributed* on the pedicels, frequently *deciduous* late in the season, but stumps usually remaining (use × 10 or × 20 lens to confirm); sepals 22-26 × 4.5-6 mm, the outer with 3-4 pairs of large, conspicuous, linear-elliptic pinnae, the pinnae 6-12 mm, usually entire and eglandular, occasionally with a linear basal lobe [note: sepals of at least the Cork material *characteristically bearing a few minute glandular-setae on the dorsal face*, these only *0.25-0.35 mm* and *scentless*]; styles *glabrous*, *long* (7-9 mm), *weakly fused* into a column which projects 1-2 mm above the variably conical disc, unequal in length and terminating in a *tiered*, *narrowly elongate-ovoid*, head of stigmas which *may equal* the stylar-column in length (in total contrast, the combined styles/stigmas in most caninoid roses are generally aggregated into a *moderately broad*, *subcapitate* head); stylar-orifice *deep and very narrowly cylindrical* (c. 3-3.5 mm deep × 0.30-0.45 mm diameter); hips red, unarmed, *small,* 12-16 (-20) × 8-12 (-15) mm, usually *short-ellipsoid* (thus oval in outline), occasionally subspherical; petals pink, or pink-flushed, c. 23-32 × 20-26 mm.

ILLUSTRATIONS AND PHOTOGRAPHS OF *ROSA STYLOSA*

The best illustrations known to me of *Rosa stylosa* are those of Margaret Gold in the major work, *Roses of Great Britain and Ireland* (Graham and Primavesi, 1993) and of Wendy Walsh in the excellent *Flora of County Dublin* (Doogue *et al*., 1998). Whilst the drawing of each artist is competently and skilfully executed and captures the general facies of *Rosa stylosa*, such drawings reveal contrasting strengths and weaknesses with regard to the depiction of the *diagnostic* morphological characters of this species. For example, Wendy Walsh very accurately depicts the *often sparse and irregular* distribution of stipitate-glands on the pedicels, whereas Margaret Gold's illustration of this feature (showing a very dense, even spread of stipitate-glands on the pedicels) is very untypical and flatly contradicts the accompanying text (1993: 86) which states: "pedicels … usually with some stalked glands ...". However, when it comes to the depiction of the leaves, I feel that Margaret Gold's drawing more clearly and convincingly evokes the graceful beauty of the *elongate* leaflets of *Rosa stylosa*, whilst her illustration of the deltoid stem-prickles is very true-to-life also. With regard to *sepal* characters, the Wendy Walsh drawing accurately depicts the robust, characteristically long, linear-elliptic, more or less entire-margined sepal-pinnae of *Rosa stylosa*. Surprisingly, the corresponding drawing by Margaret Gold depicts

spindly, very short, *coarsely gland-fringed* sepal-pinnae, features which are *wholly at odds* with the sepal-pinna morphology of *Rosa stylosa*!

The few other illustrations of *Rosa stylosa* that are readily available to botanists are those of the Rev. Keble Martin (1969) in his book, *The concise British flora in colour*; of Stella Ross-Craig (1954-1956) in her magnum opus, *Drawings of British plants* and of Ian Garrard (Garrard and Streeter, 1983) in the work, *The wild flowers of the British Isles*. While all three artists provided a reasonable representation of the inflorescences and infructescences of *Rosa stylosa*, they manifestly *failed* to capture the very distinctive leaflet-shape (and thus the 'jizz') of this species. The more detailed Ross-Craig illustrations of *Rosa stylosa* are drawn to scale, and thus provide the following biometric data:

1. Fruit-pedicels 17-25 mm; hips 13-15 × 9-10 mm; pedicel:hip ratio c. 1.3-2.
2. Leaflets of inflorescence leaves c. 30-39 × 18-23 mm; length:breadth ratio 1.6-1.8.
3. Head of stigmas *tiered*, *elongate-ovoid*; length:breadth ratio c. 1.5.
4. Petals c. 23-26 × 23-26 mm.

[Notes: 1. Though the leaflets of *Rosa stylosa* are depicted as glabrous, the text counters this erroneous impression by clearly stating that: "… the lower surface is finely hairy on the midrib and veins." 2. Of the remaining Stella Ross-Craig *Rosa* drawings, the facies and morphology of our two most distinctive native species (i.e. *R. pimpinellifolia* (Burnet Rose) and *R. arvensis* (Field-rose)) are faithfully depicted. However, her illustrations of Section *Caninae* (as, likewise, those of Ian Garrard) manifestly *fail to capture* the diagnostic features of the individual species and consequently do not fulfil their stated purpose as identification aids. Rather, such drawings are nondescript, very disappointing and occasionally misleading.]

Finally, comparative photographs of *Rosa stylosa* and *R. arvensis* can be seen in the magnificent book, *The Hamlyn guide to the wild flowers of Britain and Northern Europe* (Gibbons and Brough, 1992) – to my mind the most beautifully crafted photographic guide to British and Irish wildflowers ever produced. The photograph of *Rosa stylosa* in this work consists of a close-up of an inflorescence (displaying attractive pink flowers) that results, unfortunately, in some fore-shortening (and thus distortion) of the clearly visible stylar-column and of the apically-directed inflorescence leaves. At the bottom, right-hand corner of this photograph, a fertilized flower has shed its petals, revealing a single outer sepal that clearly displays its characteristically long, robust, pinnae.

THE EUROPEAN DISTRIBUTION OF *ROSA STYLOSA*

Rosa stylosa is a possibly endemic European species and Warburg (1962), in his account of the genus *Rosa* L. for *Flora of the British Isles*, summed up its European distribution and frequency thus: "France, W. Germany (Rhineland), W. Switzerland,

NW. Italy (very rare) and NW. Spain (very rare)." Six years later, Klášterský (1968), in his account of the genus *Rosa* for *Flora Europaea* **2**, stated that *Rosa stylosa* is of *local* occurrence in Europe and he recorded it from eleven countries, viz.: Austria, Britain, Bulgaria, France (including the Channel Islands), Germany, Ireland, Switzerland, Spain, Hungary, Italy and Romania. However, the very recently published *Atlas Florae Europaea* **13** (Kurtto, Lampinen and Junnika, 2004) has *removed* Bulgaria and Romania from Klášterský's (1968) list and substituted Belgium [very rare] and Portugal [very rare], while commenting that *Rosa stylosa* is doubtfully present in Hungary. Moreover, the map of *Rosa stylosa* in this major work, graphically illustrates how localised this species is in Europe, where its *main* populations extend in an arc from Ireland and southern Britain, through France (possibly its European headquarters), to northeast Spain.

In Britain and Ireland, *Rosa stylosa* has a markedly *southern* distribution, Warburg (1962) summing this up as follows: "From Denbeigh, Worcester, Leicester and Suffolk (?Norfolk) southwards, and Limerick, Offaly and Wicklow southwards. Local." However, since the publication of the two major works, *Roses of Great Britain and Ireland* (Graham and Primavesi, 1993) and the *New atlas of the British and Irish flora* (Preston *et al*., 2002), there has been a notable resurgence of interest in the genus *Rosa* in Britain, which has resulted in a far more rigorous and systematic recording of *Rosa stylosa* (and all other rose species and hybrids) on a 10-km square (i.e. hectad) basis. Indeed, a perusal of the 2007 update *Atlas* map for *Rosa stylosa* on the BSBI website (www.bsbi.org.uk) reveals ongoing 'infill' and expansion of *Rosa stylosa*'s recorded hectad distribution within its core areas in southern England and south Wales. In Ireland, however, progress in the recording of all native *Rosa* taxa has been much slower – this situation doubtless being partly attributable to the dearth of resident rhodologists in this island, coupled, perhaps, with an overall disinterest in the taxonomically difficult genus *Rosa* among Irish botanists in general.

THE EARLY RECORDING OF *ROSA STYLOSA* IN THE IRISH FLORA

Rosa stylosa had an inauspicious and controversial introduction to the Irish flora. In the work, *Flora Hibernica*, Mackay (1836) provided the first reference to this species as follows: "Hedges near Cork: Mr J. Drummond." Just nine years later, Power (1845) apparently precisely localised Drummond's Cork city site for *Rosa stylosa* in the statement: "Hedges near Evergreen [H4, W67.71]", and added that this species occurred in "Many places about Cork – common." Yet *Rosa stylosa* is *absent* from Drummond's own published plant-list (Drummond, 1819: 217), while Power's distributional statement was uncharacteristically vague for him and in actuality provided *no* new County Cork sites for this species! Moreover, *Cybele Hibernica* (Moore and More, 1866) compounded the confusion, with the following comment on *R. stylosa* by Isaac Carroll: "On rocks at Myrtle-hill near Cork! – perhaps planted." Carroll (1875) subsequently re-evaluated his above record and the status of *Rosa stylosa* in the Cork flora and declared: "Although stated by Dr. Power to be frequent

near Cork, I never saw but *one* specimen, and that was gathered near a garden." This statement effectively sounded the death-knell for *Rosa stylosa* as a native Irish species and in *Cybele Hibernica* **2** (Colgan and Scully, 1898) it was relegated to the Appendix, with the statement: "… perhaps semi-naturalized about Cork." On the basis of this pointer, Praeger (1901) *omitted Rosa stylosa* from his major work, *Irish topographical botany*.

THE REINSTATEMENT OF *ROSA STYLOSA* TO THE IRISH FLORA

In the period 1905-1906, *Rosa stylosa* was independently and almost simultaneously, discovered in a few indubitably 'wild' sites in Co. Limerick (H8), by R.A. Phillips, and by M.C. Knowles and C.G. O'Brien, respectively (Knowles and O'Brien, 1907). All of the sites overlooked the tidal River Shannon, between Tarbert and Foynes. Phillips recorded *Rosa stylosa* from two places on the hills behind Ardaneer, near Foynes (in either hectad R2.5 or R2.4), while Knowles and O'Brien found this species on lower ground in two hectads, viz.: "[R0.4] Shore at Clareview [between Tarbert and Ballydonohoe Point, in 1-km square R08.47]; shore below Ardanoir [i.e. Ardaneer R2.5]; edge of wood near Foynes [R2.5]." Subsequently, Phillips added *Rosa stylosa* to the flora of Kilkenny (H11), Laois (H14), Offaly (H18) and Wicklow (H20) (Praeger 1934a, 1934b). In a paper titled: 'The standing of certain plants in Ireland', Praeger (1934c) reinstated *Rosa stylosa* to the Irish flora on the basis of the above finds, allied to the comments of the finders. For example, Knowles and O'Brien (1907: 191) stated: "In all of these [sites] it [*R. stylosa*] looks as native as the plants amongst which it is growing." When Praeger (1934b) asked Phillips for his opinion on the status of *Rosa stylosa* in Ireland, the latter replied: "I am not well acquainted with that plant, and have seen it only in a few places, including Foynes, Co. Limerick, and between Bray and Enniskerry [Co. Wicklow] – *never in Cork* [my emphasis], but I feel certain that it was not planted in any of those places. It seems always to occur in small quantity, under circumstances and in habitats similar to those in which native species such as *R. sepium* [i.e. *Rosa agrestis* (Small-leaved Sweet-briar)] and *R. rubiginosa* [Sweet-briar] occur in their outlying stations. I am not aware that it [*R. stylosa*] is ever cultivated, even for budding or grafting purposes like some of the other species."

THE ONGOING RECORDING OF *ROSA STYLOSA* IN IRELAND

To reiterate: during the period 1905 to 1933, *Rosa stylosa* was recorded in Ireland from just *eight* vice-counties, namely: Mid Cork (H4), East Cork (H5), South Tipperary (H7), Limerick (H8), Kilkenny (H11), Laois (H14), Offaly (H18) and Wicklow (H20) (Praeger 1934a, 1934b). Moreover, this situation remained virtually unchanged at the time of publication of the *Census catalogue of the flora of Ireland* (Scannell and Synnott, 1972), apart from the recording of *Rosa stylosa* from the southern shore of Lough Currane, South Kerry (H1) (Stelfox, 1936). However, this record is *not* listed in either edition of the *Census catalogue* (Scannell and Synnott 1972, 1987), nor is a pre-1970 record for Louth (H31), as displayed in the *New atlas of*

the British and Irish flora (Preston *et al*., 2002). Subsequent progress in the recording of *Rosa stylosa* in Ireland continued at a snail's-pace, the second edition of the *Census catalogue of the flora of Ireland* (Scannell and Synnott, 1987) adding just *one* new vice-county record – that for Waterford (H6), where this species was found at Clashmore Village (X12.84) near the coast, in 1978 (Ferguson and Ferguson, 1981). However, there was some accelerated progress during the period 1987-2007, when *Rosa stylosa* was added to a further six vice-counties, namely:

1. Dublin (H21). O1.6 and O2.6. Occasional bushes in a few hedgebank sites close to Dermotstown and Balbrigan, in the Balrothery region of north Dublin, 1987-1988: D. Doogue (Doogue *et al*., 1998).
2. Kildare (H19). N7.2. Hedges about Lullymore (on the R414), mid-1980s, D. Doogue (D. Doogue, pers. comm., 1987-1988). *R. agrestis* is present in hedges here also – just as both species cohabit in hedgebanks in Dungarvan Bay, Co. Waterford (H6) (see 'The habitat preferences of *Rosa stylosa*' below).
3. N. Tipperary (H10). R7.7. North of Killaloe, near Lough Derg, August 1987, D. Doogue.
4. SE. Galway (H15). M42.03. Garryland Wood National Nature Reserve, July 1994, C.D. Preston. [Note: no vouchers exist and the record needs confirmation.]
5. W. Cork (H3). W04.57. Boreen hedgebank near Carriganass House, Kealkill: July 1988: T.C.G. Rich and N. Taylor. [Note: there is an element of doubt about this record – see 'The Cork hectad records' account below, for further details.]
6. Clare (H9). R3.7 and R3.8. Apparently locally frequent in the Clarecastle-Ennis region where I recorded this species in two hectads (five 1-km squares) between July and October 1998, T. O'Mahony. These Clare records are as follows:

    a. R3.7 [R36.75]. Occasional bushes in the Skehanagh-Killow area, to the northeast of Clarecastle, July 1998, T. O'Mahony.
    b. R36.77 or R37.77. A few bushes in a small scrub thicket overlooking marshy ground in the Knockaskibbole district, to the east of Ennis, August 1998, T. O'Mahony.
    c. R36.78. On limestone outcrops at Knockanean, to the northeast of Ennis, August 1998, T. O'Mahony. Associated with a small quantity of *Rosa arvensis*.
    d. R32.74. Occasional in hedgebanks of a long farm-boreen at Cahircalla Beg, to the west of Clarecastle, August 1998, T. O'Mahony.
    e. R3.8 [R36.81]. Frequent along a narrow farm-boreen (leading to Cappagh Lough) adjoining the Ennis-Gort road (the N18), south of Barefield, October 1998, T. O'Mahony.

Given that all of the above Clare records were made within a four-month period in a single year, I would suggest that *Rosa stylosa* is certainly *under-recorded* in this county where, I suspect, its core populations occur in the Clarecastle-Ennis region.

Within the 1987-2007 period also, I reinstated *Rosa stylosa* to the Limerick flora (and a new hectad) with the discovery of a single hedgebank bush on the minor Loghill-Ballyhahill road (H8, R4.1) overlooking the left bank of the White River, in October 2004. Lastly, my own researches in Co. Waterford during the period, 1983-2006 and those of the Vice-county Recorder, Paul Green, in recent years, show that Dungarvan Bay is a *major* Irish site for populations of *Rosa stylosa*. This species also occurs in hedgebanks about Moord Crossroads (H6, X13.78 and X13.79) to the west of Ardmore, where I first recorded it in 1995 and again in 2006. Nevertheless, overall recording of this species in Ireland remains piecemeal and unsatisfactory. For example, a perusal of the 2007 map of *Rosa stylosa* on the BSBI Website, reveals that all previous Limerick records for this species are pre-1930, while the S. Kerry, Louth and Wexford records date from the period 1930-1968, as do some or many of the S. Tipperary, Kilkenny, Laois and Offaly records. On present evidence, therefore, the *core* Irish populations of *Rosa stylosa* appear to be those that occur in some 22 contiguous, subcoastal hectads in the adjoining vice-counties of Mid Cork, East Cork and Waterford, with important satellite populations also being present in Clare, S. Tipperary, Kilkenny, Kildare and Dublin.

ROSA STYLOSA: ITS CURRENT-KNOWN CO. CORK DISTRIBUTION

Rosa stylosa is reported in this paper from 15 hectads (= 10-km squares) in Co. Cork (H3-H5), although an element of doubt exists regarding the correct identification of the solitary (and highly disjunct) West Cork record, which was made by T.C.G. Rich and N. Taylor during the course of the 1987-1988 BSBI Monitoring Scheme Survey. Within Co. Cork, *Rosa stylosa* is of very localised occurrence and has a predominantly *southern* distribution, the *major* populations being found in the following areas:

1. Present in seven hectads and distributed over a distance of approximately 54 km, on the South Cork Limestone Syncline from Ballincollig Regional Park (H4, W57.71) eastwards to near the East Cork/Waterford county boundary at Youghal (H5, X09.78).
2. Of locally frequent occurrence on embankments along a c. 7 km length of the Blackrock-Passagewest (Cork Harbour) Amenity Walkway (the former Cork-Crosshaven Railway Line).
3. Scattered hedgebank populations within an 8 km radius of Cork City.
4. Locally frequent hedgebank populations along the Araglin road, overlooking the left bank of the River Araglin, north of Araglin bridge – the only major, outlier, north Cork site for *Rosa stylosa* recorded to date.

THE CORK HECTAD RECORDS

1. H3, W0.5

W042.570. In the hedgebank of a laneway near Carriganass House, Kealkill, 4 July 1988, T.C.G. Rich and N. Taylor. The only known West Cork site to date. [Note: no vouchers exist for this extremely disjunct Co. Cork record, therefore an element of doubt regarding its correct identification seems in order, even though this record was accepted for publication in the *New atlas of the British and Irish flora* (Preston *et al*., 2002).]

2. H4, W5.7

W57.71 and W58.71. Scattered bushes within the grounds of Ballincollig Regional Park, on the right (southern) bank of the River Lee, below Inniscarra Bridge, 1978-2005, T. O'Mahony (O'Mahony, 2006).

W59.73. A few bushes on the wooded left bank of the River Shournach, west of Healy's Bridge, and a few more plants close to the road-bend on the opposite (right) bank of the river, 1978-2000, T. O'Mahony.

3. H4, W6.4

W60.49. In hedgebanks bordering the coastal cul-de-sac to Ballywilliam House, on the left bank of the tidal River Bandon above Kinsale, 1994, 2006, T. O'Mahony (O'Mahony, 2007). [Note: frequent here in 1994 and associated with *seven* other rose species, viz: *Rosa arvensis* (Field-rose), *R. micrantha* (Small-flowered Sweet-briar), *R. tomentosa* (Harsh Downy-rose), *R. sherardii* (Sherard's Downy-rose), *R. canina* s. st. (Dog-rose), *R. corymbifera* (Hairy Dog-rose) and *R. pimpinellifolia* (Burnet Rose). However, in the interim twelve-year period, the combination of further housing input, hedgebank removal and severe trimming of the remaining fragments of hedgebank have adversely affected the rose-flora here.]

4. H4, W6.5

W65.71. Common and luxuriant in the boundary-hedgebanks of a few fields which are close to, and border, the northern bank of the Brownsmills sea-inlet at Eastern Bridge (adjoining the R600) near Kinsale, 1978, 2007, T. O'Mahony (O'Mahony, 2008).

5. H4 and H5, W6.7

Rosa stylosa is of widespread occurrence about Cork City (H4 and H5), but most of the disjunct populations consist of scattered bushes only, as is the case in hectad W6.7.

H4, W63.71. On the southern hedgebank of the Lee Road, Cork City, bordering the River Lee inundation-meadows, shortly west of Hollymount junction, 1975-2007, T. O'Mahony. Associated here with *Rosa arvensis* (Field-rose), *R. corymbifera* (Hairy Dog-rose) and *R. canina* s. st. (Dog-rose).

H4, W61.74. A single bush on the roadside hedgebank just south of Gothic Bridge, Blarney, July 2006, T. O'Mahony (O'Mahony, 2007).

H4, W60.73. One plant on the wooded pathway at Healy's Bridge and another on a hedgebank at nearby Kerry Pike T-junction, 1976-2002, T. O'Mahony.

H5, W68.75. Two hedgebank bushes on the Ballingcollie Road, at the T-junction close to Dublin-Pike and scattered bushes along the eastern hedgebank of the nearby Ballyhooly Road, south of White's Cross. Both Cork City sites, 1987-2007, T. O'Mahony.

6. H5, W6.8

W68.80. A single bush in a hedgebank of the riverfield on the right bank of the Glashaboy River, immediately above Dunbulloge Bridge, near Cork City, 1976, 2007, T. O'Mahony (O'Mahony, 2008). The only recorded site to date.

7. H4, W7.5

W77.57 and W78.57. Present in two roadside hedgebanks at a T-junction to the north of Fountainstown Beach, Cork Harbour; common over a c. 200 m length of one such hedgebank and a c. 150 m length of the other, 1999, 2001, T. O'Mahony (O'Mahony, 2000, 2002).

8. H4, W7.6

W72.69. Scattered plants on and about a low limestone wall that borders Lakeland Strand, Blackrock, Cork Harbour, opposite Harty's Quay, Rochestown, 1977-2007, T. O'Mahony (O'Mahony, 2008).

W75.69. Scattered bushes at the Passagewest end of the Rochestown-Passagewest Amenity Walkway (formerly the Cork-Crosshaven Railway Line), Cork Harbour, 2007, T. O'Mahony (O'Mahony, 2008).

9. H4 and H5, W7.7

A *major* Cork City hectad for *Rosa stylosa*, the core populations being located on a section of the long defunct Cork-Crosshaven Railway Line near Blackrock Village, which is now an Amenity Walkway, and a valuable wildlife habitat.

H4, W70.71, W71.71 and W71.70. Proving a beautiful adornment over some 3 km of Walkway embankment, from the Atlantic Pond to the pedestrian bridge spanning the Southern Ring Road (the N25), 1977-2005+. *Rosa stylosa* is associated here with: *R. canina* s. st. (Dog-rose), *R. corymbifera* (Hairy Dog-rose), *R. tomentosa* (Harsh Downy-rose), *R. micrantha* (Small-flowered Sweet-briar), *R.* × *andegavensis* (= *R. stylosa* × *R. canina*), *R. tomentosa* × *R. corymbifera* and *R.* × *bigeneris* (= *R. micrantha* × *R. rubiginosa*), while the two naturalized species, *R. multiflora* (Many-flowered Rose) and *R. rubiginosa* (Sweet-briar) were first recorded here by the author in 1990. T. O'Mahony (O'Mahony, 2006).

H5, W72.73 and W 72.72. A few hedgebank bushes on the left (eastern) bank of the tidal Glashaboy River, shortly north of Dunkettle Bridge, Glanmire, 1975- 2003.

H5, W71.74. A few plants on the eastern hedgebank of Fany's Road, at the T-junction south of Rathcooney Cemetery, 1987-2007, T. O'Mahony.

10. H5, W7.8

W758.800. Two, small, hedgebank bushes close to the road-bend immediately NE of Coolguerisk Bridge, near Knockraha, 1987, 2007, T. O'Mahony (O'Mahony, 2008).

11. H5, W8.7

W81.74. A few bushes on the eastern hedgebank of the hilly road to Tibbotstown Reservoir, shortly north of Terry's-land Crossroads, near Carrigtohill, 1975 and 2007, T. O'Mahony.

W84.72. A single bush on the boundary embankment of an active quarry-site to the South of the N25 near Burgesland, Carrigtohill, July 2006, T. O'Mahony.

12. H5, W9.7

W90.74. A few bushes on the apex of the scrubby, southern slope of Rocksborough limestone outcrop, which outcrop overlooks the Dungourney River, to the east of Midleton, 1986, 1993, 2007, T. O'Mahony.

13. H5, X0.7

X09.79. Cohabiting with *Rosa arvensis* (Field-rose) in hedgebanks close to the Youghal-Ringcrew Bridge road, shortly north of Copperalley Roundabout (also known as Quarry Crossroads), 2001, T. O'Mahony (O'Mahony, 2002).

X05.79, X06.79, X07.79, X08.79 and X08.78. Locally frequent in the hedgebanks of the minor road from Copperalley Roundabout, Youghal (X09.78) westwards to near Clasheel Bridge, on the River Tourig, a distance of approximately 5 km, July 2001, T. O'Mahony (O'Mahony, 2002). Cohabiting with *R. arvensis*.

14. H5, X0.8

X05.80. Hedgebanks of the short stretch of the Clasheel-Youghal road that intrudes into hectad X0.8, July 2007, T. O'Mahony (O'Mahony, 2008). Associated here with *Rosa arvensis*, the attendant ditch habitat with populations of the base-demanding *Equisetum telmateia* (Great Horsetail), together with occasional clumps of fruiting *Carex otrubae* (False Fox-sedge).

15. H5, R8.0

R83.00 and R84.00. In hedges of the R666, bordering an inundation-meadow by the River Blackwater, shortly east of its confluence with the River Funshion, at Bally-Fean Bridge, near Fermoy, 1975, 2005 (O'Mahony, 2006).

R88.04. In roadside hedgebanks overlooking the left bank of the River Araglin, SW of Baker's Bridge, 1975, 2007, T. O'Mahony (O'Mahony, 2008). Locally frequent (and luxuriant) along stretches of this road, cohabiting with *Rosa arvensis*

(Field-Rose) and occasionally with *Rosa tomentosa* (Harsh Downy-rose) or *Rosa sherardii* (Sherard's Downy-rose). An unexpected, circum-neutral, somewhat upland habitat for *Rosa stylosa*, although limestone outcrops occur not far away at Araglin Bridge and support a calcicole flora which includes such species as *Orobanche hederae* (Ivy Broomrape), *Alliaria petiolata* (Garlic Mustard), *Ranunculus auricomus* (Goldilocks Buttercup) and *Melica uniflora* (Wood Melick).

THE HABITAT PREFERENCES OF *ROSA STYLOSA*

Maskew (2002), in his account of *Rosa stylosa* in the *New atlas of the British and Irish flora* (Preston *et al*., 2002) stated that (in Britain) this species is found almost exclusively on well-drained calcareous soils overlying chalk, limestone, clay and sand, where it occurs in open woodland, hedgerows, disused quarries and scrub. In Ireland, *Rosa stylosa* is specially characteristic of, but not confined to, calcareous habitats, being of most frequent occurrence *in hedgebanks* (though it also occurs in scrub and limestone quarries) on carboniferous limestone soils. In Co. Waterford this pattern is well exemplified by *Rosa stylosa*'s virtual restriction to, and abundance in, the fertile limestone environs of the exquisitely beautiful Dungarvan Bay. Here, in species-rich hedgebanks, it cohabits with another Dungarvan speciality, *Rosa agrestis* (Small-leaved Sweet-briar), in addition to *R. arvensis* (Field-rose), *R. tomentosa* (Harsh Downy-rose), *R. sherardii* (Sherard's Downy-rose), *R.* × *scabriuscula* (= *R. canina* × *R. tomentosa*) and *R.* × *andegavensis* (= *R. stylosa* × *R. canina*) (T. O'Mahony, pers. obs., 1983-2006). Similarly, in Co. Cork the most extensive populations of *Rosa stylosa* occur in hedgebanks (and occasionally on limestone outcrops) along an approximately 64 km section of the west-east aligned South Cork Limestone Syncline, between Ballincollig and Youghal, where it cohabits with a range of calcicole species and especially with *Rosa arvensis*. On limestone pavement at Killow, Clarecastle, Co. Clare, *Rosa stylosa* is associated with a 'watered-down' Burren-type flora which, while apparently lacking the Burren rarities, nevertheless supports a rich calcicole flora that includes: *Rosa pimpinellifolia* (Burnet Rose), *Cornus sanguinea* (Dogwood), *Juniperus communis* subsp. *communis* (Common Juniper), *Geranium sanguineum* (Bloody Crane's-bill), *Rubia peregrina* (Wild Madder), *Gymnadenia conopsea* s. l. (Fragrant Orchid), *Antennaria dioica* (Mountain Everlasting) and *Sesleria caerulea* (Blue Moor-grass), etc. On less species-rich limestone outcrops at Knockanean, northeast of Ennis, *Rosa stylosa* occurs with *Rosa arvensis*, while, in a base-rich hedgebank at Ballyhahill, near Foynes, Co. Limerick, both of these species also cohabit and are accompanied by *Rosa tomentosa*, *Rosa corymbifera, R. canina* s. st. and *Euonymus europaeus* (Spindle).

This pattern is repeated elsewhere on the limestones of the central plain, where the main *Rosa stylosa* populations are condensed into a narrow 'waistband' that spans the full width of Ireland, stretching from Limerick and Clare northeastwards through Laois, Offaly and Kildare, to Dublin and Louth on the east coast. [Note: yet within this very area, current recording strongly indicates that *Rosa stylosa* is *far rarer* than its

interspecific hybrid cross, *R. stylosa* × *R. canina* (*R.* × *andegavensis*)! Indeed, my own recent researches in Co. Limerick, and in the adjoining northern fringes of Mid Cork and East Cork, show that *Rosa* × *andegavensis* is *locally dominant* within this fertile limestone region, where it virtually, or totally, replaces *Rosa stylosa*.]

In Ireland, as the above notes highlight, *Rosa stylosa* is predominantly a species of calcareous soils and would seem to be of very rare occurrence in areas where acidic soils prevail. Indeed, under the latter conditions, this rose may only occur as a few bushes, which are generally confined to a more favourable microhabitat, such as basic or circum-neutral hedgebanks. For example, this is the situation at Dunbullogue (W6.8) and Knockraha (W7.8) in East Cork (see Cork hectad list for details). Nevertheless, Knowles and O'Brien (1907: 192), in a paper titled: 'The flora of the barony of Shanid' (dealing with the Foynes-Tarbert area of Co. Limerick bordering the tidal River Shannon) state: "It is worth noting that, while *Rosa arvensis* is most abundant on the limestone, all of the localities for *Rosa stylosa* are on the shales and grits." Yet the base-rich (and species-rich) Ballyhahill site that I discovered in 2004, does not accord with the above-quoted observations of these two excellent botanists. In any case, *Rosa stylosa* seems very rare in the Tarbert-Foynes area also, where all of the 1905-1906 records need updating. The presence of *Rosa stylosa* and other calcicole species in the environs of Enniskerry, Co. Wicklow (a county with a predominance of calcifuge soils) is not the anomaly that it seems, but is doubtless directly attributable to the localised occurrence in this area of ice-age limestone detritus, which supports calcareous soils (cf. Praeger, 1934a: 268).

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THE FLORA OF THE DERRY CITY WALLS (V.C. H40)

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INTRODUCTION

The Walls of Derry (Londonderry) were built between 1613 and 1618 for the Irish Society as defences for English and Scottish settlers; despite undergoing several sieges (in 1641, 1648, 1649 and 1688-9), the Walls remained intact and today Derry retains the most complete circuit of historic town walls in Britain and Ireland (Derry City Walls Conservation Plan, 2007). The Walls are between 6 and 7.7 m high and vary in width between 4.3 m and 9.1 m (though they are mainly about 5.5 m). The complete circuit around the Walls is about 1.4 km and has recently been both restored and made fully accessible to pedestrians. Construction was carried out by building an earth rampart and then facing it with the locally and readily available Precambrian fissile schist. Various sandstones constitute both the parapet cappings and much of the gates. The walkway surface is of exposed-aggregate concrete laid c. 1985. There was a broad external ditch but this was filled in sometime ago. There were four entrances to the City originally (Bishop's Gate, Shipquay Gate, Ferryquay Gate and Butcher Gate); New Gate was added towards the end of the 18th century and Castle Gate and Magazine Gate added in the 19th century (EHS, 2007). Additionally there are a number of the original artillery bastions still surviving and intact.

Walls support an important component of the flora of our built environment. Surveys suggest that their flora is often very diverse; for example, in West Norfolk, Payne (1998) identified 418 species growing on 985 walls examined and these were 30% of the available flora of the county. The mortar in the walls often erodes faster than the surrounding stonework and thus crevices are created where organic matter can build

up and seeds and other propagules can nestle (Wheater, 1999). Therefore, the mortar between the stones provides an ideal habitat for plant species to colonise and the walls have, in consequence, a diverse flora away from extensive competition.

The lime-sand mortar-mix currently used in the maintenance of the Derry City Walls is three parts red sand, two parts grit and one part non-hydraulic, hydrated lime 'St Astier NHL 3.5' (Brian Williams, Environment and Heritage Service, pers. comm., 2007). During re-pointing any vegetation is mechanically removed from the Walls. The occasional past use of a cement-sand mortar and of algaecides has been abandoned.

This small survey of the Walls of Derry was carried out in conjunction with a wider scale survey of the flora of Derry and was designed to provide a 'snap-shot' of what was currently growing on the Walls. It was carried out in a systematic fashion such that the data form a base-line against which future surveys can be compared.

METHOD

For the purposes of this survey, the Walls were divided into eight sections (Figure 1), each of about 175 m in length extending from one Bastion (or Gate) to the next. Along each section, all flowering plant and fern species were recorded using an ordinal scale from 1 to 5 (with 1 = an isolated plant, 3 = at least one plant every 50 m or so, to 5 = a consistent occurrence along the whole length of the section, with approximately one or more plants every 20 m or so). Where plants were too far away for accurate identification, binoculars were used. Whilst no attempt was made to map the location of all the plants present, notes were made of the preferred habitat of each species. The categories used for these are shown in Figure 2 and consisted of:

1. The bases of the walls (exterior) and along the walkway;
2. The main wall structure, both exterior and interior;
3. The main ledges and the tops of the exterior wall surfaces;
4. The inner wall tops; and
5. Exceptionally protected and/or untreated wall sections (see Figure 1).

The total wall area available for colonisation is approximately 2.25 ha (including the walkway).

As well as flowering plants and ferns, a general collection of bryophytes was made from each of the eight sections but no attempt was made to quantify the abundance of individual species. These were later identified by P. Hackney of the Ulster Museum.

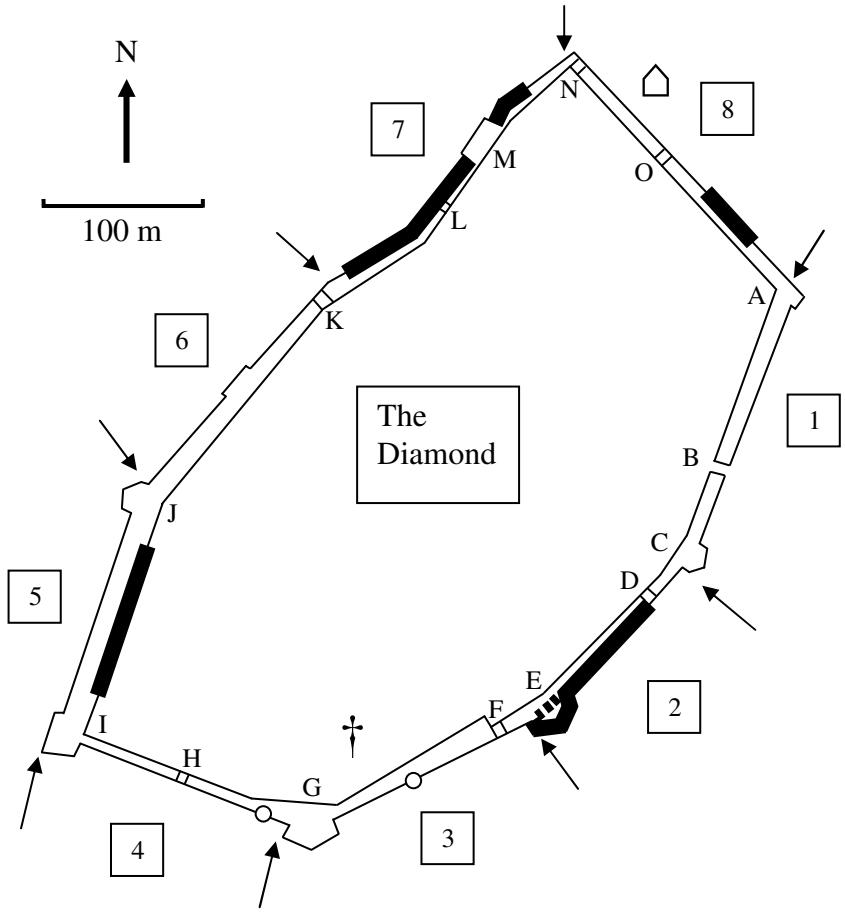

FIGURE 1. The Walls of Derry City showing the eight sections (1 to 8) used for the systematic sampling. A, Water Bastion; B, Newmarket St; C, New Gate Bastion; D, Ferryquay Gate; E, Artillery Bastion; F, New Gate; G, Church Bastion; H, Bishop's Gate; I, Double Bastion; J, Royal Bastion; K, Butcher Gate; L, Castle Gate; M, Hangman's Bastion; N, Magazine Gate; O, Shipquay Gate. St Columb's Cathedral (†) and the Guildhall (⌂) are also indicated. Walls shown with a thicker line are those that are particularly protected from exposure or untreated. There is a fall of c. 80 m between H (Bishop's gate) and O (Shipquay Gate).

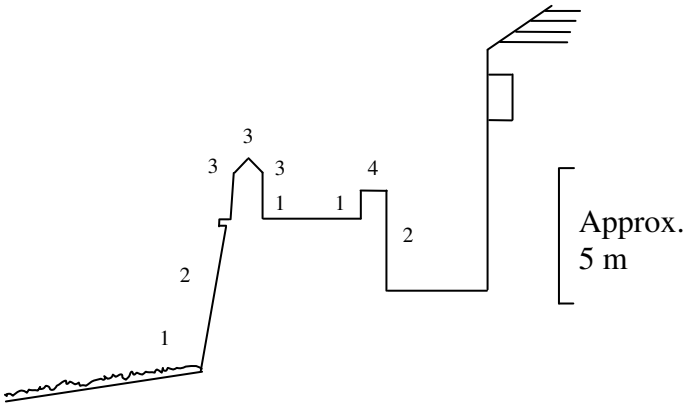

FIGURE 2. Diagrammatic general profile of the Walls of Derry City indicating the five areas for plant growth: 1. The bases of the walls (exterior) and along the current walkway; 2. The main wall structure, both exterior and interior; 3. The main ledges and the tops of the exterior wall surfaces; 4. The inner wall tops; and 5. (not shown) Exceptionally protected and/or untreated wall sections. The buildings on the inner part of the wall are largely civic or domestic.

RESULTS AND DISCUSSION

In all, a total of 58 taxa were recorded for the Walls and these are detailed in Table 1a which lists the abundance of each taxon on a scale of 1 to 5 for each section of the wall (Figure 1) and the preferred area of the wall where the taxon was found (Figure 2). The different sections of the Walls produced between 16 and 33 taxa though six of the eight sections were between 25 and 28. There was one particularly rich section, Section 5 (between the Royal Bastion and the Double Bastion), with 33 species. A major factor here was a long stretch of the inner wall classified as a 'protected wall'. A particularly poor stretch of wall with only 16 taxa was Section 6, between Royal Bastion and Butcher Gate. Here there were no protected wall areas.

None of the species were particularly uncommon, all having been recorded previously for v.c. H40 (Derry). This survey was carried out directly after a 'Streets and Spaces' survey within urban Derry and this did allow a comparison to be made. Some notes on this comparison and other interesting observations follow.

Taxa	1	2	3	4	5	6	7	8	Most favoured part of wall
Acer pseudoplatanus					2	1			1
Agrostis sp.	1		2		1				3
Asplenium adiantum-nigrum					1				2
Asplenium ruta-muraria	4	3	5	4	5	5	4	4	2
Asplenium trichomanes	2	3	1		1	1	2	2	2
Betula sp. (seedling)			1	1					3
Buddleja davidii	4	3		2	1	2	3	3	2
Capsella bursa-pastoris	1	1	1	1					1
Cardamine hirsuta/flexuosa	2	1		1		2	1	3	1
Cerastium fontanum								1	4
Cerastium glomeratum	1								4
Ceterach officinarum				2					2
Chamerion angustifolium	2	1	2	1	2		2	1	3
Cotoneaster sp. (seedling)					1				3
Cymbalaria muralis	5	5	4	3	4	4	4	4	2
Cirsium vulgare					1				4
Dactylis glomerata			1	1	2				3
Dryopteris affinis							2		5
Dryopteris filix-mas	1	1	1		1	1	2	1	3
Epilobium brunnescens	3	3	3	2			2	1	4
Epilobium ciliatum	2	1	2	1	1	2	2		1
Epilobium montanum	2	2			1		2	2	1
Epilobium parviflorum							1		1
Epilobium roseum				1			1		1
Epilobium tetragonum/obscurum	1	1	2	3	2	2	2	3	1
Fallopia japonica		1							1
Festuca rubra				1	1				3
Fragaria vesca		1							2
Geranium robertianum								1	5
Hedera helix			1	1		1			5
Holcus lanatus			2	2	2		2	2	3
Hydrangea petiolaris	1				1				5

Hypochaeris radicata	1	1	1		2				3
Parietaria judaica	5	4	3	3	2	4	4	4	2
Phyllitis scolopendrium		1	1	1	2		1	2	2
Plantago major			1		1			2	1
Poa annua	3	3	3	2	1	2	3	2	4
Poa pratensis s. l.	1		1	1	3	2		1	3
Polypodium agg.		1			2			1	3
Prunella vulgaris			1						3
Sagina apetala		1	3	1	1		2		2
Sagina procumbens	3	3	3	2	2	1	3	3	2
Salix cinerea			1						3
Sambucus nigra								1	3
Senecio jacobaea	2	1	3	2	2	1	2	2	3
Senecio squalidus								1	5
Senecio viscosus		1							5
Senecio vulgaris	2	1	1	2	2		2	2	3
Sisymbrium orientale								1	5
Sonchus oleraceus	2	2	2	2	3		1		3
Sorbus aucuparia					1				3
Sorbus intermedia					1				3
Stellaria media	1							1	1
Tanacetum parthenium				1			2		3
Taraxacum agg.	2	1	3	2	2	2	2	2	3
Tussilago farfara								1	1
Urtica dioica				1				1	1
Veronica arvensis	1	2							4
No. of taxa	26	27	28	28	33	16	25	28	

TABLE 1a. Fern and flowering plant taxa, together with their levels of abundance (from 1 = an isolated plant to 5 = a consistent occurrence along the whole length of the section, with approximately one or more plants every 20 m or so), found on eight sections (1 to 8) of the Walls of Derry City, 2007 and including, for each taxa, the most favoured part of the wall (see Figure 2).

Species	1	2	3	4	5	6	7	8
Barbula convoluta		X		X		X		X
Barbula cylindrica	X		X				X	
Barbula unguiculata		X		X		X		X
Brachythecium rutabulum	X	X	X	X	X	X	X	X
Brachythecium velutinum	X		X				X	
Bryum capillare	X	X	X	X	X	X	X	X
Cratoneuron filicinum						X		
Grimmia pulvinata	X	X	X	X		X	X	X
Hypnum cupressiforme		X	X	X	X	X		X
Lunularia cruciata		X					X	
Schistidium apocarpum	X	X	X	X	X	X	X	X
Tortula muralis	X		X				X	

TABLE 1b. Bryophytes found on the eight sections (1 to 8) of the Derry City Walls, 2007.

On the basis of aggregate abundance, the ten most common species on the Walls were (in descending order): 1. *Asplenium ruta-muraria* (Wall-rue); 2. *Cymbalaria muralis* (Ivy-leaved Toadflax); 3. *Parietaria judaica* (Pellitory-of-the-wall); 4. *Sagina procumbens* (Procumbent Pearlwort); 5. *Poa annua* (Annual Meadow-grass); 6. *Buddleja davidii* (Butterfly-bush); 7=. *Epilobium tetragonum/obscurum* (Square-stalked Willowherb/Short-fruited Willowherb); 7=. *Taraxacum* agg. (Dandelion); 9. *Senecio jacobaea* (Common Ragwort); and 10. *Epilobium brunnescens* (New Zealand Willowherb). These were found on all eight sections of the wall except *Buddleja davidii* (seven sections) and *Epilobium brunnescens* (six sections).

Arabidopsis thaliana (Thale Cress) was surprisingly absent from the Walls given its occurrence in the open spaces; similarly, *Capsella bursa-pastoris* (Shepherd's-purse) was surprisingly scarce on the Walls. *Centranthus ruber* (Red Valerian) is found on old garden walls in the city but was not on the city Walls – it is likely to spread there in the future. Other species 'missing' were *Euphorbia peplus* (Petty Spurge), *Myosotis arvensis* (Field Forget-me-not), *Sisymbrium officinale* (Hedge Mustard), *Sonchus asper* (Prickly Sow-thistle), *Arenaria serpyllifolia* subsp. *leptoclados* (Slender sandwort) and *Mycelis muralis* (Wall Lettuce). Those present, but somewhat rarer than expected were: *Plantago major* (Greater Plantain), *Stellaria media* (Common Chickweed) and *Veronica arvensis* (Wall Speedwell).

The Walls themselves provide different niches. As Wheater (1999) has observed, the tops of walls are exposed but may be suitable for colonisation by species spread via bird-droppings; the vertical sides are the most highly stressed because of lack of water and exposure; and the bottom parts of the wall may be more productive because of

rising damp and soil splashes adding to the nutrient status. In this survey, some species favoured different parts of the wall. Along the base of the wall (Figure 2, Habitat 1), particularly the outer wall, *Epilobium* spp. (Willowherbs) were well represented as they are throughout the inner city area. The range of species on the main and nearly vertical walls (Figure 2, Habitat 2) was small but besides bryophytes were the three commonest species of the survey, *Asplenium ruta-muraria* (Wall-rue), *Cymbalaria muralis* (Ivy-leaved Toadflax) and *Parietaria judaica* (Pellitory-of-the-wall). Significantly, Payne (1998) pointed out that in West Norfolk these same three plants are almost exclusively confined to walls.

Epilobium brunnescens (New Zealand Willowherb), in contrast, while common enough on the Derry Walls (and throughout the City) is neither recorded by Payne (1998) nor by Chater *et al*., (2002) in their exhaustive surveys and literature review of the street habitat across the British Isles and including Belfast.

It is difficult to compare the diversity and abundance of the flora with previous surveys as many of these are much more extensive. For example, Payne (1998) compared walls from a number of English counties (including both rural and urban walls, and walls covering the entire stone/brick and age range) and these are shown in Table 2 (see also Payne, 1978).

	Number of walls	Number of species growing on the walls	Ratio of number of species on walls to total available number of species in the area
West Norfolk	985	418	30%
S.E. Essex	650	286	>21%
Middlesex	500	204	>21%
N. Somerset	305	291	41%

TABLE 2. A comparison of wall floras taken (with modifications) from Payne (1998).

The total for Derry City Walls, 58 taxa, looks small by comparison. However, data from CEDaR suggests there have only been 417 species recorded in the 10-km square (C4.1) where the walled area is almost central. Comparing the number of taxa found on the Walls with that figure would give about 13.9% – if one excludes those taxa not seen since 1986, 37 species in total, then 58 taxa would represent 15.3% of the 10-km square total. (It should be noted, however, that this comparison is not exact as a small number of species recorded from the Walls are not recorded for C4.1.) As the Derry City Walls are just one lithologically uniform landscape feature compared with the extensive surveys reported by Payne (1998), this would seem a respectable total particularly as 'cleaning' of the Walls has occurred in the past. Gilbert (1991) observes that the colonisation of walls by plant species is favoured by a number of factors

including the age of the wall, the presence of lime mortar, a non-southerly aspect, exposure to rain and the angle of the wall – 'true' wall species being found only on vertical walls whilst more common species are found on sloping walls.

The mosses found on the Walls are summarised in Table 1b. There were no great surprises except for *Cratoneuron filicinum* that is normally found on wet fens (P. Hackney, pers. comm., 2007).

The survey was conducted in late July by which time many of the smaller spring flowers might have disappeared or have been under-estimated. The inaccessibility of some specimens was also a problem. Nevertheless, this 'snap-shot' of the flora should be a useful base-line against which further change can be monitored.

ACKNOWLEDGEMENTS

We would like to thank Paul Hackney for kindly identifying the bryophyte specimens; Alan Hill, Siobhan Campbell and Dr George Hutchinson (National Museum of Wales) for their encouragement; and the City of Derry, Biodiversity Section for initiating the survey. Peter Crowther (Ulster Museum), Brian Williams (EHS (NI)) and Mark Lusby (Derry City Council) provided valuable information and advice.

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DROSERA (SUNDEW) HYBRID FOUND IN CO. SOUTH KERRY (V.C. H1)

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On the 2 June 2007 I was delighted to join Caroline Mhic Daeid on the BSBI meeting that she was leading in Co. Kerry (v.c. H1). The first day was extremely wet but this did not deter us die-hard botanists who persisted in following Caroline to see some interesting plants.

The following day gave us the gift of more clement weather. Caroline took us to an area near Kealboy Bridge (V693.813), which is a most wonderful bog – I was pleased to see here all three *Drosera* species native to Ireland, *D. rotundifolia* (Round-leaved Sundew), *D. anglica* (Great Sundew) and *D. intermedia* (Oblong-leaved Sundew), growing together. After some time in the area Paul Green found what he reckoned was the hybrid *Drosera* × *obovata* (*D. rotundifolia* × *D. anglica*). Paul showed this to the group and explained how he determined it to be the hybrid. I could see what Paul was getting at in that it was clearly intermediate between the two parents. I decided to return to take some measurements to see if Paul's 'jizz' determination could also be determined from actual measurements. This was not to test Paul, I might add, but to test the statistics.

The following week I returned with a digital ruler, determined to make as many measurements as I could. I located the supposed hybrids first and made measurements of leaf length and leaf width, as these were the principal characters cited by Paul. In all cases the leaf length included the length of the petiole, and width was that at the widest part of the leaf blade. I then proceeded to do the same for all other species. The results are shown in Figure 1.

These leaf dimensions are within the ranges given in Stace (1997).

A Linear Discriminant Analysis was then performed using Minitab® statistical software and a summary of the results is given in Table 1.

The analysis of the data shows that 88.3% of the data are correctly classified based on the width to length ratio of the leaves. The worst result obtained was for *D. anglica* where only 60% of the data was correctly classified. This, I must admit, may be attributable to my own misclassification or the fact that some leaves of *D.* × *obovata* may resemble those of *D. anglica*.

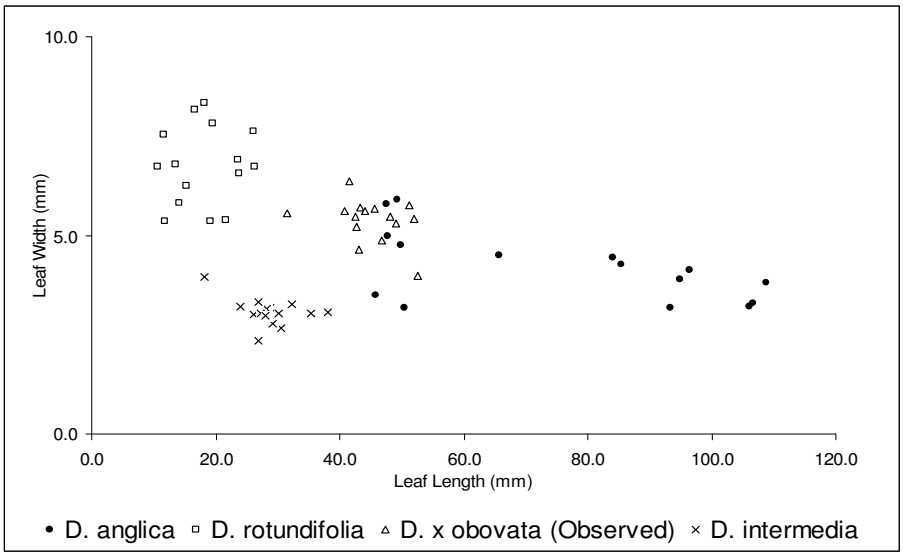

FIGURE 1. Measurements of leaf length and leaf width of *Drosera* taxa from Kealboy Bridge, Co. Kerry.

	True group			
Put into group	*D. anglica*	*D. intermedia*	*D. rotundifolia*	*D.* × *obovata*
D. anglica	9	0	0	0
D. intermedia	2	15	0	0
D. rotundifolia	0	0	14	0
D. × *obovata*	4	0	1	15
Total N	15	15	15	15
N correct	9	15	14	15
% correct	60.0	100.0	93.3	100.0

TABLE 1. Results of the Linear Discriminant Analysis of 60 plants of various *Drosera* taxa. (Total number of plants: 60; number of plants correctly identified: 53; overall % correct: 88.3%.)

In summary, with good knowledge of the parents, hybrids between *Drosera* species may be determined with reasonable accuracy based on leaf length and width. If in doubt about the identification, measurements of leaf width and length can aid the process of identification. A word of caution, however, based on the poor placement result for *D. anglica* it is advised that at least ten samples should be measured in order to be more confident of accurate identification.

ACKNOWLEDGEMENTS
Many thanks to Caroline Mhic Daeid for a splendid weekend botanising in Co. Kerry and to Paul Green for his ever useful tricks of identification and for allowing me to criticise him.

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TEMPLETON BOTANICAL MANUSCRIPT IN THE NATIONAL BOTANIC GARDENS, GLASNEVIN, DUBLIN

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While studying and transcribing manuscript notes from an annotated copy of J.T. Mackay's *Catalogue of the indigenous plants of Ireland* (1825) which had belonged briefly to John Templeton (1766–1825) of Cranmore, Malone, Belfast, I noticed that some of the annotations were dated 1826; this copy is in the National Botanic Gardens, Glasnevin, Dublin. The bulk of the information in the annotations can confidently be linked to John Templeton, yet those dated after his death on 15 December 1825 must be attributed to another person.

As well as the dated, post-1825 annotations, there is one significant annotation that clearly indicates the involvement of one of John Templeton's children. Regarding *Thalictrum*, following an entry for *T. majus* – "Portmore Park, and near Lough beg C. Antrim" – there is this comment:

"Concinnum among stones, and heath, on the western side of Slieve Binian one of the Mourne Mountains Augt. 1808 and on Rams Island in Lough Neagh. June 1812 My Father sent specimens of this plant to Dr Hooker who in a letter dated Oct 1821 says that [it] agrees both with his Swiss specimens, and with De Candolle's discriptions of Concinnum".

Given that the handwriting on this inserted slip of pale-blue paper is the same as that elsewhere in the catalogue, this conclusion is inescapable: the annotations were inserted either at John Templeton's behest during the latter months of his life by one of his children acting as amanuensis, or after his death. There is one indication that the annotations were completed after John Templeton had died: the annotation in ink for *Habenaria bifolia* reads "oak tree field Cranmore", and this appears to overwrite the pencil written "June 14 1826".

The 1826 annotations are almost all in extremely faint pencil, sometimes so faint that only the indentations made in the paper are discernable. They are not numerous and may be noted briefly:

Name used	**Locality and date**	**Page**
Anagallis tenella	at Bangor Aug 1826	23
Campanula rotundifolia	Cave hill common Aug 4 1826	23
Centaurea cyanus	In Flax fields near Castlereigh July 17 1826	75
Chara translucens	ditch on the left side of the road going to Hollywood Lake near Slieve Croob L. near Slieve Croob June 20 1826	7
Comarum palustre	bog . . . [? June] 12 1826	50
Epilobium hirsutum	edge Lagan July 2 1826	36
Habenaria bifolia	oak tree field Cranmore June 14 1826	76
Lathyrus pratensis	Holywood glen June 8 26	66
Linum catharticum	edge Lagan near water course July 20 1826	31
Listera ovata	Belfast . . . June 14 1826 …	77
Ranunculus sceleratus	. . . June 12 1826	53
Scrophularia aquatica	Purdy's burn July 30 1826	58
Sparganium ramosum	in bog meadows June 26	78
Vicia cracca	Hollywood Mount June 8 1826	66

One possibility is that the annotations were written by John Templeton's son Robert (1802-1892) who is best known within natural history circles as an entomologist (Nash and Ross, 1980; Nash *et al.,* 1980; Chesney and Nash, 1997).

Hackney (1980) noted the presence of herbarium specimens collected by Robert Templeton within a *hortus siccus* composed of twelve volumes (now in the Ulster Museum, Belfast (**BEL**)) that Hackney deduced formerly was in the possession of the Belfast Natural History and Philosophical Society. Kent and Allen (1984) noted specimens collected by Robert Templeton in the Royal Botanic Gardens, Kew (**K**), but not in **BEL**.

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OENANTHE PIMPINELLOIDES (CORKY-FRUITED WATER-DROPWORT) FOUND AT DUNCANNON, NEW FOR CO. WEXFORD (V.C. H12)

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On 10 August 2006 I was so wrapped up in looking for hybrids between *Rumex pulcher* (Fiddle Dock) and other species of dock that I had not taken much notice of the white umbellifers I kept seeing. Suddenly it clicked: I was looking at *Oenanthe pimpinelloides* (Corky-fruited Water-dropwort)! I gave up looking for the dock hybrids and walked around looking at the exciting find I had just made. For a moment I had transferred back to Somerset where I had so often seen the water-dropwort and dock growing together in fields just like this one. It was a small field grazed by two ponies, next to Duncannon Fort, adjoined by a graveyard.

I knew it was a rare species in Ireland, but was surprised to find that the nearest site was c. 100 km away at Trabolgan, Co. Cork (v.c H5) where it was found by R.A. Phillips in 1896 and has since become extinct. The *New Atlas* (Preston *et al*., 2002) gives a further five 10-km squares on the west coast, four from Co. Kerry (v.c. H1) and one from Co. Clare (v.c. H9), listing all as alien to Ireland.

Having not visited the other sites I can give no opinion on the status of these. If I were in Somerset I would not have even thought twice that it was not native. Now here at

Duncannon were two rare species in Ireland both looking so natural that it is difficult to think they are not native at this site.

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A STROLL AROUND NEW ROSS, CO. WEXFORD (V.C. H12) LOOKING AT THE PLANTS GROWING WILD

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Often, for my daily exercise, I will have a walk around some of the many roads of New Ross to see what I can find, normally looking for some unusual alien species. Over the last two years to go out for a walk was a great escape from the computer and a break from writing the *Flora of Co. Waterford*.

Polypodium cambricum (Southern Polypody) is a very common fern of the walls and the only species of *Polypodium* I have been able to find in the town. Two other very common species are *Conyza bilbaoana* (Bilbao Fleabane) an alien, the commonest weed in the town growing in almost all types of habitats from waste ground to roofs and *Geranium rotundifolium* (Round-leaved Crane's-bill) found along road and hedge banks, at the base of walls and as a weed of gardens, etc. *Cordyline australis* (Cabbage-palm) is another common alien with self-sown trees found in nearly every road and a beech tree even has one growing as an epiphyte.

Walking from my house in Bewley Street I enter Mary Street where a single plant of *Sutera cordata* appeared outside the Chinese restaurant in 2007. Continuing down to the River Barrow, *Cotoneaster* × *suecicus* (Swedish Cotoneaster) is self-sown on the wall above the river and *Bidens ferulifolia* (Fern-leaved Beggarticks) has self-sown from the flower tubs, surviving over winter to flower in 2007. *Aster tripolium* (Sea Aster) and *Angelica sylvestris* (Wild Angelica) grow on the wall above the river and *Rumex crispus* subsp. *uliginosus* (Curled Dock) grows on the muddy river bank. Crossing over Quay Street takes me to the car parks along the river front. A single plant of *Leucanthemum paludosum* had self-sown from the flower tubs in 2007. Passing the Dunbrody Ship there are the remains of a building; *Orobanche hederae* (Ivy Broomrape) is common here as it is in many parts of the town. A clump of *Anemone* × *hybrida* (Japanese Anemone) and a patch of *Aster novi-belgii* (Confused Michaelmas-daisy) grow by the ruin. Not much further on I come to the Garda Station

on the opposite side of the road. In 2006 the flower borders around the station were covered in *Ranunculus parviflorus* (Small-flowered Buttercup); then spraying killed the whole population and none have appeared since. Steps take me from the station up to Henry Street, where purple flowering *Lunaria annua* (Honesty) can be found in the hedge bank along with more Ivy Broomrape.

Sugarhouse Lane is a very narrow lane with high walls and the only place so far I have seen *Senecio squalidus* (Oxford Ragwort). This leads into South Street. An *Impatiens sultanii* (Busy-Lizzie) plant with red flowers with white stripes on the petals is self-sown below the railing of the theatre where it has now survived for two years. Usually a few plants of *Lobelia erinus* (Garden Lobelia) can be found self-sown along the base of the walls in South and North Street and, in the car park by SuperValu, one dark purple flowered *Petunia* × *hybrida* (Petunia) had self-sown in a pavement crack in 2007.

On top of a high wall along John Street can be found *Poa compressa* (Flattened Meadow-grass) and in 2006 a single plant of *Verbascum virgatum* (Twiggy Mullein) grew on waste ground, now built on.

These are just some of the interesting finds I have come across since I moved to New Ross. It just goes to show you don't have to walk far from home to find a good number of species and habitats.

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A SNAPSHOT OF THE FLORA OF AN ANCIENT ROADSIDE HEDGEROW, NORTH KERRY (V.C. H2)

Michael O'Sullivan, Knockavota, Milltown, Co. Kerry

This is one of the oldest roads in the county. It was once the main road leading from the village of Milltown west to Killorglin and is still very busy as a link road. Local history has it that this was the route used by Spanish merchants based at Valentia some time after 1216 on their way to other parts of the county.

The hedgerow sits in fertile farmland and its height is between 1.5 and 1.85 m excluding the top layer of trees and shrubs. It is predominantly earthen in composition though there are sections with layers of stone. A length of the hedgerow approximately 1.5 km was surveyed over a four-year period. The aspect is southerly. In all six species of trees, eight species of shrubs, eight species of grasses, five species of ferns and 70 species of other flowering plants were recorded.

Trees consisted of short lines of *Betula pendula* (Silver Birch) and *Acer pseudoplatanus* (Sycamore) with isolated specimens of *Fraxinus excelsior* (Ash), *Fagus sylvatica* (Beech) and *Quercus petraea* (Sessile Oak).

Shrubs recorded included *Ulex europaeus* (Gorse), *Prunus spinosa* (Blackthorn), *Buxus sempervirens* (Box), *Crataegus monogyna* (Hawthorn), *Rhododendron ponticum* (Rhododendron), *Prunus cerasus* (Dwarf Cherry), *Sambucus nigra* (Elder) and *Prunus domestica* (Wild Plum).

A wide variety of grasses can be found such as *Dactylis glomerata* (Cock's-foot), *Arrhenatherun elatius* (False Oat-grass), *Anthoxanthum odoratum* (Sweet Vernal-grass) and *Phleum pratense* (Timothy).

In the more damp shaded zones of the hedgerow ferns like *Athyrium filix-femina* (Lady-fern), *Dryopteris filix-mas* (Male-fern), *Phyllitis scolopendrium* (Hart's-tongue), *Polypodium vulgare* (Polypody) and *Asplenium adiantum-nigrum* (Black Spleenwort) find a suitable niche.

The flowering season is heralded by *Ranunculus ficaria* (Lesser Celandine) in eye-catching yellow carpets. Following on is *Viola riviniana* (Common Dog-violet), the ubiquitous *Primula vulgaris* (Primrose) and *Stellaria holostea* (Greater Stitchwort). The summer mixture is both diverse and colourful with the tall and the small blooming in close proximity. *Digitalis purpurea* (Foxglove), *Sonchus arvensis* (Perennial Sow-thistle), *Sonchus oleraceus* (Smooth Sow-thistle) as well as *Scrophularia nodosa* (Common Figwort) and *Centaurea nigra* (Common Knapweed) are robust and conspicuous and can reach surprising heights if bracketed by the likes of *Rubus fruticosus* (Bramble) and *Galium aparine* (Cleavers). *Heracleum sphondylium* (Hogweed) is very prevalent and to a lesser extent *Aegopodium podagraria* (Ground-elder). *Torilis japonica* (Upright Hedge-parsley) is at home in this environment. Another true hedgerow plant is *Umbilicus rupestris* (Navelwort) as is *Stachys sylvatica* (Hedge Woundwort).

The small species thrive too in this seemingly overcrowded mini-ecosystem. Species such as *Glechoma hederacea* (Ground-ivy), *Hypericum androsaemum* (Tutsan), *Potentilla anserina* (Silverweed), *Geranium robertianum* (Herb-Robert), *Geum urbanum* (Wood Avens) and *Geranium dissectum* (Cut-leaved Crane's-bill) flourish. Colonizers of the damper sections of the hedgerow base included *Veronica beccabunga* (Brooklime), *Cirsium palustre* (Marsh Thistle), *Epilobium palustre* (Marsh Willowherb) and *Ranunculus sceleratus* (Celery-leaved Buttercup). Stonewall sections provide an ideal habitat for the likes of *Potentilla sterilis* (Barren Strawberry) and *Geranium lucidum* (Shining Crane's-bill).

In mid-summer the sweet scent of *Lonicera periclymenum* (Honeysuckle) and *Rosa canina* (Dog-rose) is accentuated in the aftermath of a rain shower. *Vicia sepium* (Bush Vetch) and *Vicia cracca* (Tufted Vetch) are delicate scrambling plants as is *Lathyrus aphaca* (Yellow Vetchling). As the flowering season advances parts of the roadside erupt in a splash of dazzling colour caused by the emergence of one of our most well-known escapees – *Crocosmia pottsii* × *aurea* (Montbretia). As the summer flowers wither away, plants like *Circaea lutetiana* (Enchanter's-nightshade), *Calystegia sepium* (Hedge Bindweed), *Teucrium scorodonia* (Wood Sage) and the odd specimen of *Solidago virgaurea* (Goldenrod) signal the end of another natural cycle. However, pride of place must go to the rare blue-purple flowered colony of *Allium vineale* (Wild Onion) that has enriched the flora over this roadside hedge for more than 20 years.

Nothing illustrates better than this diversity the importance of hedgerows as an indispensable component of a much broader ecosystem. That is why they should be respected and protected as far as possible.

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A REPORT ON THE FLORA OF CORK (V.CC. H3-H5), 2007

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2007 has been a very busy, productive, and satisfying year botanically, though much of the effort has been channelled into projects which are ongoing and thus not referred to in this present report of the year's events. As always, *Rosa* work continues to preoccupy a good deal of my spare time, but even the considerable effort expended on this fascinating and exhilarating task in most years, is still far from adequate, given the sheer *scale* of recording that is required in such a large county as Cork. Moreover, each year new projects suggest themselves as, for instance, the need to update hectad records for all of Co. Cork's rarer fern taxa! Once again, however, lack of time and finances are the main limiting factors with regard to undertaking such worthwhile endeavours.

On 29 January, a rechecking of long-established populations of *Veronica crista-galli* (Crested Field-speedwell) on the 'back' Cork Airport road, confirmed that this species is now distributed over c. 4 km length of roadway from Fivemilebridge (H4, W66.62) northwards to a T-junction at W655.667 (H4).

On 30 January, lunch-time botany in the Mayfield area of Cork City turned up two, small, vegetative populations of *Allium vineale* (Wild Onion) on the margins of housing greens: one at the junction of Springfield Estate/Kerry Lane (H5, W70.73),

the other (same 1-km square) slightly further south, at the convergence of the Kerry Lane and Lower Mayfield Road. Small *Allium vineale* populations, such as these, are of very localized occurrence about Cork City and are likely to be remnants of once-extensive colonies, which existed prior to major housing developments in these areas over the past 50 years or so.

On 27 February, emerging shoots of a naturalized, perennial *Euphorbia* taxon (Spurge) were seen on waste ground bordering the roadway adjacent to Briarhill Bridge (H4, W634.645) that spans the N71 (the Cork-Bandon Road) some 2.5 km north of Ballinhassig Village. Material of this taxon has yet to be collected for determination.

On 15 March, a single, perennial plant of the interspecific hybrid, *Senecio jacobaea* (Common Ragwort) × *S. cineraria* (Silver Ragwort) (= *S.* × *albescens*) was seen sprouting from a limestone boundary-wall of a terrace house on the Old Blackrock Road, near its junction with the Rockboro Road (H4, W68.71). This visually attractive hybrid is of sporadic and essentially transient occurrence about Cork City on walls, roadsides and in neglected gardens, where most plants are short-lived, or succumb to Cork City Council's herbicide spraying regime. On 29 March, some ten clumps of that distinctive annual, *Medicago arabica* (Spotted Medick) were found naturalized beside the southern boundary hedge of a playing field, close to Douglas Swimming Pool, Cork City (H4, W69.70). This is a very rare (yet long established) alien in Co. Cork and all of its recorded sites require updating.

On 2 April, a visit to the eastern end of the Glen Amenity Park (H5, W68.73) near Dillon's Cross, Cork City, allowed a rechecking of the small populations of *Euphorbia hyberna* (Irish Spurge), *Geranium rotundifolium* (Round-leaved Crane's-bill) – this latter on a mortared sandstone wall bordering a playing field – *Equisetum telmateia* (Great Horsetail) and *Equisetum sylvaticum* (Wood Horsetail) present here. This is the *only* Co. Cork site I know, where both of these horsetails occur in reasonably close proximity – a fact that should not be too surprising, given that their respective habitats rarely conjoin, *E. telmateia* being specially characteristic of base-rich seepage areas, whereas *E. sylvaticum* prefers acidic (often montane) paludal habitats. However, the Glen Park is most notable for its populations of the nationally rare *Filago minima* (Small Cudweed), a species protected in the Irish Republic under the Flora (Protection) Order, 1999 and which currently has no other known extant sites in Co. Cork! Moreover, this calcifuge Old Red Sandstone valley also holds the only Cork City populations of *Senecio sylvaticus* (Heath Groundsel), which is sporadic in its appearances here, being most frequent following on localized burning of the *Ulex europaeus* (Gorse) populations. The western extremity of the Park holds populations of naturalized *Artemisia vulgaris* (Mugwort), *Chamerion angustifolium* (Rosebay Willowherb) and *Crepis biennis* (Rough Hawk's-beard), this latter species bearing large, pure-yellow, characteristically tasselled flower-heads, which are much more eye-catching than those of the related *Crepis vesicaria* (Beaked Hawk's-beard).

A Sunday spin on 8 April, revealed that *Veronica crista-galli* (Crested Field-speedwell) now occurs as staggered populations over some 32 km (20 miles) of grassy roadside verges, between Blarney Village (H4, W60.75) and Macroom Town (H3, W33.73) – a vast, linear, metapopulation! *Veronica crista-galli* is unique in its growth-habit among our annual Speedwells, as its small, isolated populations gradually enlarge and merge, to finally form expansive, carpet-like swards, that cover large tracts of roadside, and that are most conspicuous between the months of March and June. Indeed, it even 'competes' with, and scrambles through, adjacent, robust, perennial swards of *Petasites fragrans* (Winter Heliotrope), this latter, alien, pernicious super-weed, a veritable 'ecological cancer' in my view, as it has destroyed and continues to destroy or degrade, numerous ecological habitats throughout Ireland and Britain.

While driving to Youghal Town on 15 April, the minor road between Churchtown and Mogeely produced roadside populations of *Veronica crista-galli*, while limestone walls in Mogeely Village displayed flowering clumps of *Geranium rotundifolium* (Round-leaved Crane's-bill), a Co. Cork speciality of calcareous rocky habitats, which here follow a west-east aligned linear strip of limestone (officially termed the South Cork Limestone Syncline), from Cork City to Youghal – a distance of roughly 52 km (32 miles). On 16 April, a further (small) adventive Cork City population of *Erodium moschatum* (Musk Stork's-bill) was found in a housing estate green at Churchfield Gardens (H4, W66.72). This is a tenacious annual that flowers throughout most of the year, its prolific output of seeds ensuring its continuity in situ, even if such populations are sprayed with herbicide. This very effective survival strategy is also employed by the adventive annual, *Geranium pusillum* (Small-flowered Crane's-bill), which in recent years has established a foothold in Cork City on the margins of public greens and seems set to become a permanent member of our flora.

On 17 April, lunch-time botany on a work-day, resulted in the discovery of the nationally rare annual weed, *Ranunculus parviflorus* (Small-flowered Buttercup) in a garden-plot at Vicars Crossroads, Togher, Cork City (H4, W66.69). This is possibly the first Mid Cork record in over one hundred years and the only Co. Cork record for the species in recent times! On 24 April, an evening spin was utilized to monitor both the frequency and distribution of *Euphorbia hyberna* (Irish Spurge) populations in the Blarney area. Here, as elsewhere in Ireland, its hedgebank and roadside-margin habitats are falling victim to the onslaught of one-off housing developments where, more often than not, such beautiful hedgebanks are replaced with bare stone walls, or with vigorous hedges of that imported, fast-growing abomination, *Griselinia littoralis* (New Zealand Broadleaf). At present there is no government legislation for the protection of these hedgebanks – a national treasure – and consequently a very important part of our environmental heritage (and its associated biodiversity) is now being ruthlessly and thoughtlessly destroyed on a large scale, annually.

On 5 June, the Y-fork (H4, W59.79) near Garrycloyne cemetery, close to Blarney, produced a naturalized stand of *Melissa officinalis* (Balm), while the nearby Knocknalyre minor road (in the same 1-km square) was searched, without success, for the interspecific rose cross, *Rosa micrantha* (Small-flowered Sweet-briar) × *R. rubiginosa* (Sweet-briar) (*R.* × *bigeneris*), which I originally found here in 1993. However, small populations of *Rosa sherardii* (Sherard's Downy-rose), *R. micrantha*, *R. corymbifera* (Hairy Dog-rose), *R. canina* s. st. (Dog-rose) and the hybrid cross, *R. sherardii* × *R. rubiginosa*, were present and in flower. Here, as virtually everywhere else in the Irish Republic these days, the once vast stretches of linear boundary-hedgebanks are being reduced to scattered fragments – a consequence of the voracious, and seemingly unstoppable, spread of one-off housing developments that I have already referred to.

On 12 June, the section of the Amenity Walkway (H4, W70.71) immediately east of the Atlantic Pond, Blackrock, Cork City, yielded two 'budding' populations of *Orobanche hederae* (Ivy Broomrape), a few flowering plants of *Geranium purpureum* (Little-Robin), some leaf-rosettes of *Verbascum thapsus* (Great Mullein) and four spontaneous seedlings of naturalized *Rosa multiflora* (Many-flowered Rose), whose provenance is unknown, but whose progress here will be monitored in future years.

On 1 July, early-morning botany was undertaken in the Banteer Village area (H4, W38.97), where a remnant stone-and-earth hedgebank still held a few bushes of the *Rosa* cross *R. sherardii* × *R. rubiginosa*, first found here in July 1977. The eastern end of this hedgebank produced three fruiting clumps of naturalized *Iris foetidissima* (Stinking Iris) known from here since 1999, while the western end (near the level crossing of the Banteer-Killarney Railway Line) held some six fruiting clumps of *Carex muricata* (Prickly-sedge) on this present visit. Work about the nearby T-junction (H4, W37.97) refound three bushes of *Rosa rubiginosa* (Sweet-briar), on both hedgebanks of the minor road (a rare Cork rose which I first recorded here in 1999), while the main road yielded a small clump of *Mentha arvensis* (Corn Mint) and scattered clumps of *Carex muricata*, associated with naturalized stands of *Prunus cerasus* (Dwarf Cherry), *Fragaria ananassa* (Garden Strawberry) and *Geranium pyrenaicum* (Hedgerow Crane's-bill), this latter, beautifully-flowered species first recorded in this area in July 1977, where it has consolidated its hold, yet spread very little to date. The western hedgebank of the farm-pathway to nearby Lough Lea house (same 1-km square) held flowering populations of *Rosa arvensis* (Field Rose), *R. canina* s. st. (Dog-rose), *R. corymbifera* (Hairy Dog-rose) and scattered bushes of the interspecific hybrid cross, *R. canina* × *R. tomentosa* (Harsh Downy-rose) (= *Rosa* × *scabriuscula*), which latter spans at least a c. 43 km section of the west-east aligned River Blackwater valley, from Finnow Bridge, Millstreet (H4, W26.92) to Ballyhooly Bridge (H5, W72.98) near Fermoy.

A subsequent stop at Fortgrady T-junction (H4, W35.95) further southwest on this main Banteer-Rathcool road, produced two flowering bushes of *Rosa rubiginosa* (Sweet-briar) in the roadside hedgebank at the T-junction. Moreover, *Rosa rubiginosa* proved to be *locally common* in the hedgebanks of the adjoining minor road (W35.94) – its most extensive Co. Cork site to date, where it cohabited with an equal abundance of the interspecific hybrid cross, *R. sherardii* × *R. rubiginosa*, etc. Naturalized stands of both *Prunus cerasus* (Dwarf Cherry) and *Fallopia* × *bohemica* (Hybrid Japanese Knotweed) were also present here.

On 11 July, a walk along the 3 km stretch of the Rochestown-Passagewest Amenity Walkway (H4, W73.69, W74.69 and W75.69) Cork Harbour, produced scattered fruiting bushes of *Rosa stylosa* (Short-styled Field-rose) in a new site, though this attractive rose species also occurs on the opposite (i.e. Lakeland, Blackrock) side of the Harbour, where I first recorded it in 1977. Associated species included: *Linaria vulgaris* (Common Toadflax) and long naturalized bushes of *Laurus nobilis* (Bay) and *Leycesteria formosa* (Himalayan Honeysuckle), etc.

On 15 July, morning botany was undertaken in the Youghal area, the target location being Foxhole, adjacent to both the site of the old Youghal Bridge and the current Youghal refuse-tip, which takes in parts of two adjoining hectads, viz: H5, X09.80 and X10.80. As on previous visits here, the low, mortared sandstone seawall (X09.80), which is disintegrating in places, yielded populations of *Polypodium cambricum* (Southern Polypody), *Geranium rotundifolium* (Round-leaved Crane's-bill), *Erodium moschatum* (Musk Stork's-bill), *Linum bienne* (Pale Flax) and naturalized *Orobanche minor* (Common Broomrape), the latter two species occurring on both the seawall and pathway, and being most frequent near the bridge. *Epilobium tetragonum* (Square-stalked Willowherb) was established on the paludal pathway. The north-south aligned coastal pathway and embankments flanking the River Blackwater estuary at the bridge (X10.80) held a few cohabiting, naturalized bushes of *Ligustrum ovalifolium* (Garden Privet), and flowering *Hebe* × *franciscana* (Hedge Veronica), while *Linum bienne* (Pale Flax) proved frequent along the pathway and was now mostly in fruit. Small populations of *Verbascum thapsus* (Great Mullein), *Dipsacus fullonum* (Wild Teasel) and *Equisetum telmateia* (Great Horsetail) were also present here. The wire-fence enclosing the eastern end of Youghal refuse-tip, held intertwining populations of *Calystegia sepium* subsp. *sepium* (Hedge Bindweed) and *C. silvatica* (Large Bindweed). A subsequent, very brief stop at Clasheel Bridge (H5, X04.80) on the River Tourig, added *Rosa stylosa* to hectad X0.8, from a c. 450 m section of the Clasheel-Youghal road, which intrudes into this hectad, the rest of the roadway (and its many *Rosa stylosa* populations) being in hectad X0.7.

On 1 August, I confirmed the ongoing presence of two, small, long established, railway-bridge populations of *Foeniculum vulgare* (Fennel) in the Carrigtohill Village area (H5, W8.7): the first at Terrysland railway bridge (H5, W81.73) northwest of the village, the second at Ballyadam railway bridge (H5, W83.73) to the northeast of the village and about 2.7 km east of Terrysland bridge. In the *New atlas of the British and Irish flora* (Preston *et al*., 2002) it is stated that, in Britain, this species "… is much more frequent now than when mapped in the 1962 *Atlas*, especially inland." However, the situation in Ireland (where *F. vulgaris* is mainly confined to coastal habitats) is far from clear and, in Co. Cork at least, I would suggest that the species is in gradual decline as a consequence of loss of habitats – mainly due to building developments. Moreover, many of the large Cork populations which existed in the 1970s are no longer extant, or have been reduced to just a few plants. In the past, such excellent Cork botanists as Rev. Thomas Allin and R.A. Phillips (and their contemporaries elsewhere in Britain and Ireland) were certain that *F. vulgare* was an indigenous Irish plant. Yet modern-day research has shown that our plant (*F. vulgare* subsp. *vulgare*) is native *nowhere* in the world, but rather arose in cultivation as a derivative of *F. vulgare* subsp. *piperitum* (Bitter Fennel), which latter is native in the Mediterranean region. There is a salutary lesson to be learnt here and it ties in with the fact that, until the recent publication of the *New atlas of the British and Irish flora* (Preston *et al*., 2002) – which provided a refreshingly critical and enlightening reassessment of the true status of many of our plant taxa, numerous medicinal and culinary species of ancient establishment in Britain and Ireland – it had erroneously been treated as a native species.

On 12 August, the cul-de-sac to the old Inniscarra cemetery (H4, W56.70) was visited. This cemetery borders the left bank of the conjoined rivers Lee and South Bride and held flowering populations of *Eupatorium cannabinum* (Hemp-agrimony) and naturalized *Chamerion angustifolium* (Rosebay Willowherb). I then rechecked my 1984 hedgebank population of *Rosa rubiginosa* (Sweet-briar) further along the road (H4, W56.71), where it occurs as a few bushes, associated with *Rosa micrantha* (Small-flowered Sweet-briar) and *Rosa tomentosa* (Harsh Downy-rose). Shortly east of the cemetery, I was delighted to find two, small, adjacent flowering stands of *Mentha* × *piperita* (Peppermint) – a hybrid I had last recorded from the River Lee in 1970, on the opposite (right) bank, just above Inniscarra Bridge, but had not rechecked to date.

On 19 August, a remnant stone-and-earth hedgebank in Ballineen Village (H3, W35.54) was rechecked and still held small populations of *Rosa sherardii* (Sherard's Downy-rose), *Rosa micrantha* (Small-flowered Sweet-briar), *Carex divulsa* (Grey Sedge) and *C. muricata* (Prickly Sedge). On 21 August, the Dunbulloge Bridge area (H5, W68.80) to the north of Cork City was visited and a single bush of *Rosa stylosa* (Short-styled Field-rose) was refound in my 1975 site on the right bank of the Glashaboy River shortly above the bridge. This is its only known site in hectad W6.8.

Other refinds here included: small stands of the *Rosa* cross, *R. sherardii* × *R. rubiginosa* on roadside hedgebanks shortly south of the bridge; at least two separate populations of *Stachys* × *ambigua* (Hybrid Woundwort) bordering both roadsides adjacent to the bridge; and a few clumps of fruiting *Carex muricata* (Prickly Sedge) in hedgebanks about the road-bend just north of Dunbullogue Bridge.

On 28 August, I visited Labbacallee Ford (H5, R777.029) on the right bank of the River Funshion below Glanworth Village. My objective was to refind the *Mentha* × *piperita* (Peppermint) populations, which I had originally recorded here in 1993. While the riverside pasture field was now very neglected and weed-filled, a careful search turned up two, sub-adjacent, clonal colonies of Peppermint in beautiful flower. The largest population bordered a riverside stand of Alder (*Alnus glutinosa*). Given its long history of cultivation in Ireland as a medicinal and culinary herb, Peppermint is of surprisingly local occurrence in the wild in County Cork, where it is mainly confined to riverbank and streamside habitats. Over the next few years, I hope to recheck all of its recorded sites within the county, some of which were originally found in the period c. 1810-1900.

On 3 September, a special trip was made to the Coomhola River-valley (H3, W0.5 and W0.6) between Bantry and Glengarriff, to hopefully re-collect fruiting specimens of *Rosa caesia* subsp. *vosagiaca* (Glaucous Dog-rose), which I had reinstated to the Cork flora from here in 2004. After a careful search of the roadside hedgebanks, two, copiously fruiting bushes of this taxon were refound in 1-km square W03.59, but I left the collection of vouchers until the botanical outing was virtually completed, so as to keep the material (more especially the leaves) in prime condition for photographing later at home. *R. caesia* subsp. *vosagiaca* was added to the Cork flora in August 1905, by R.A. Phillips, who found it at nearby Glengarriff. However, this taxon was lost sight of until July 1988, when it was refound in hedgebanks of the Coomhola valley river-road in 1-km square W03.58 (immediately south of my site) by D.A. Webb and F.H. Perring, during work for the BSBI 1987-1988 Monitoring Scheme Survey. Intensive work in this general area might well turn up new populations of this rose, which is of extremely rare occurrence in southern Ireland. Yet, my impression is that it needs to be sought in *lowland* sites within this region (rather than the more usual upland locations it favours in Britain), as in my experience to date, *Rosa* taxa are virtually absent from, or at least very rare in, truly upland sites in southern Ireland.

On entering hectad W0.6, a single established stand of *Gunnera tinctoria* (Giant-rhubarb) was seen on the left bank of the Coomhola River, beside Curramore Bridge (H3, W03.60), while the right bank above this bridge held a colony of beautiful, flowering *Persicaria campanulata* (Lesser Knotweed) cohabiting with an abundance of *Crocosmia* × *crocosmiiflora* (Montbretia). Small populations of *Oreopteris limbosperma* (Lemon-scented Fern) occurred by the dampish rock outcrops bordering

the riverside path and was later found to occur sporadically along the main road on the left bank of the river, in both hectad W0.5 and W0.6. *O. limbosperma* was first found in the Coomhola River-valley by R.A. Phillips in 1900 and also occurs on the banks of the woodland stream in Gougane Barra Forest Park (H3, W08.65). It may yet prove to be of locally frequent occurrence in this general area, where it is definitely under-recorded.

On 9 September, a visit was made to the Knockraha (H5, W7.8) area of East Cork, to hopefully refind my 1975 hedgebank site for *Rosa stylosa* (Short-styled Field-rose) near Coolguerisk Bridge. The chances were that this would prove a needle-in-a-haystack operation, given that I had kept no detailed written record of the original find and that my memory of the site location was non-existent! Nevertheless, perseverance won out and, in this hectad with predominantly acidic soils, two bushes of this local rose species were eventually found in a hedgebank close to the road-bend (H5, W758.800) north-east of Coolguerisk Bridge – a reinstatement to hectad W7.8. A subsequent examination of local hedgebanks for *Rosa* taxa, resulted in the refinding of robust fruiting bushes of *Rosa sherardii* (Sherard's Downy-rose) on the minor road running northwest from Aghalig Bridge, in the two 1-km squares W76.79 and W76.80, which also yielded populations of *Euphorbia hyberna* (Irish Spurge) and naturalized *Prunus cerasus* (Dwarf Cherry). At nearby Coolnacaha Crossroads (H5, W74.78), fruiting populations of *Rosa tomentosa* (Harsh Downy-rose) proved frequent on both the northern and eastern branches of this crossroads, cohabiting with *R. sherardii* (Sherard's Downy-rose), *R. corymbifera* (Hairy Dog-rose) and *Rosa canina* s. st. (Dog-rose). On the southern branch of Coolnacaha Crossroads, a damp roadside margin produced a small stand of *Mentha arvensis* (Corn Mint), while a large, flowering stand of naturalized *Persicaria wallichii* (Himalayan Knotweed) abutted the old cemetery wall. This invasive rhizomatous species continues to spread throughout Co. Cork, many of its populations being of large extent and providing a mass of bloom in late-Autumn for nectar-seeking insects, at a time when most native flowers are on the wane.

On 10 September, I visited my 1985 site for *Kickxia elatine* (Sharp-leaved Fluellen) on the left bank of the River Lee Reservoir at Lower Dripsey (H4, W51.73), some 4 km above Inniscarra hydroelectric dam. As the water-level here had only dropped in recent weeks, most plants of *K. elatine* were still at the seedling stage, the only flowering plant encountered, being photographed. Despite its twenty-two year persistence on this very exposed gravel-and-boulder shore of the Reservoir, this attractive little annual still seems to be restricted to just a 300-400 m stretch of ground, though a more thorough search might yet reveal its presence elsewhere here. In 2001, I also recorded two naturalized clumps of *Cyperus eragrostis* (Pale Galingale) here and, in the interim period, this quite attractive species has increased considerably in numbers and also spread downriver. With its capacity for establishing colonies in the most hostile of paludal habitats and given the robust nature of its tussocks, combined

with a prolific seed-output, *Cyperus eragrostis* is certainly here to stay. Doubtless in future years it will spread considerably throughout the River Lee Reservoir from its main bases here and especially at Hartnett's Cross, Macroom (H4, W35.71), where I discovered a large population in October 2001 (see O'Mahony, 2002). (Note: these two, new Cork hectad records for *C. eragrostis* are *not* shown on the distribution map of this species in the 3rd edition of the major work, *Sedges of the British Isles* (Jermy *et al*., 2007).)

On 17 September, work in the area to the north of Coachford Village (H4, W4.7) enabled a rechecking of my only known Co. Cork locality for *Wahlenbergia hederacea* (Ivy-leaved Bellflower) – a site I discovered in September 1975, but which I had not been to since! To my intense relief and joy, the habitat was still in pristine condition (a valley-stream bearing a paludal heathland flora) and *W. hederacea* was photographed in beautiful flower, it cohabiting here with *Scutellaria minor* (Lesser Skullcap), *Anagallis tenella* (Bog Pimpernel), *Hypericum elodes* (Marsh St John's-wort), etc. This charming and gracefully delicate species has *greatly contracted* in range in Ireland since at least 1950, many of its habitats having been destroyed by commercial forestry plantations. Co. Kerry is now its Irish headquarters. In Co. Cork it was still locally common on sections of the River Lee and River Bandon up to 1900 at least, but has suffered a catastrophic decline in the interim period. Its apparent absence from the River Lee is doubtless partly attributable to a major loss of habitat, following on construction of two hydroelectric dams there (at Inniscarra and Carrigadrohid) in the early 1950s. Intensive searches for this easily overlooked species during its main flowering period, may yet reveal new Co. Cork sites for it.

On 23 September, the very rare *Carex* interspecific hybrid, *C. divulsa* (Grey Sedge) × *C. muricata* (Prickly Sedge), was added to hectad H4, W5.7, with its discovery in two contiguous 1-km squares, namely: 1. H4, W56.73. A single, large stand on a stone-and-earth embankment of the minor road linking Sheep Bridge (Cloghroe) to a T-junction at H4, W559.727. 2. H4, W56.72. A single clump on a roadside earth-and-stone hedgebank, shortly east of the T-junction at W559.727. This hectad record is *additional* to those shown on the map of this hybrid in the recent third edition of the work, *Sedges of the British Isles* (Jermy *et al*., 2007).

During the month of October, initial work was undertaken on updating Co. Cork records for the nationally rare fern taxa, *Asplenium onopteris* (Irish Spleenwort) and its hybrid with *A. adiantum-nigrum* (Black Spleenwort), namely, *A.* × *ticinense*. This involved four outings, two of which yielded positive results. However no details on these finds are presented here, given that such work forms but a small part of this ongoing project, which will be written up at a later date.

On 4 October, I rechecked my 1978 site for *Rosa stylosa* (Short-styled Field-rose) at Eastern Bridge (H4, W65.51) bordering the R600, shortly northeast of Kinsale Town.

This site is at the mouth of Brownsmills coastal sea-inlet, and the hedgebank bordering the pathway entrance from the main road (on the northern bank of the inlet) immediately yielded a few bushes of the sought-for *Rosa stylosa* – a rediscovery which effectively concertinaed the 29 year time-span since my original find of this species here in 1978! Associated taxa included naturalized bushes of *Buddleja davidii* (Butterfly-bush) and *Leycesteria formosa* (Himalayan Honeysuckle), together with *Carex divulsa* (Grey Sedge), *Dipsacus fullonum* (Wild Teasel) and *Eupatorium cannabinum* (Hemp-agrimony). A thorough search of this small area produced plenty of *R. stylosa*, of which many bushes were very robust and luxuriant looking, some laden down with copious hips. It occurred both in the hedgebanks and on the scrubby margin of the sea-inlet, accompanied here by *Rosa arvensis* (Field-rose), *R. tomentosa* (Harsh Downy-rose), *R. canina* s. st. (Dog-rose), *R. corymbifera* (Hairy Dog-rose) and *Euonymus europaeus* (Spindle). At present, this is the only known site for *R. stylosa* in hectad W6.5, although it is present in the adjoining hectad W6.4 (Ballywilliam coastal cul-de-sac), where I originally found it in 1994, updating this record in 2006.

The cut cornfields here produced an abundance of some annual weeds, most notably *Sherardia arvensis* (Field Madder) and *Veronica polita* (Grey Field-speedwell), the tiny, azure-blue flowers and greyish leaves of this latter species contrasting with those of the equally abundant *Veronica arvensis* (Wall Speedwell) and *V. persica* (Common Field-speedwell). The abundance of *V. polita* and *S. arvensis* in cut cornfields here, proved a novelty for me, this being a rare sight in Co. Cork these days, yet evoking memories of the 1960-1970 period, when cornfields were such a common feature of the Irish landscape, their margins then a riot of colour from annual weed species – species now more associated with disturbed ground and building sites, their former arable habitats having been largely replaced by monotonous monocultures of *Lolium perenne* (Perennial Rye-grass) cultivar strains.

On 28 October, an early-morning outing was undertaken to the River Araglin valley (H5, R8.0) to the northeast of Fermoy, the objective being the refinding of at least some of my c. 1975 populations of *Rosa stylosa* (Short-styled Field-rose), in its only major north Cork site. Gratifyingly, some luxuriant fruiting bushes of this species were quickly located in the roadside hedgebanks of the main Araglin Village road, immediately southwest of Baker's Bridge junction (H5, R88.04). However, the actual extent of these *R. stylosa* hedgebank populations along the stretch of roadway from Baker's Bridge junction southwest to Araglin Bridge (H5, R84.01), needs to be assessed on another occasion, as I failed to keep precise details during the initial recording process in the 1970s. Subsequent examination of roadside hedgebanks in 1-km square R89.04, produced a few scattered populations of *Carex muricata* (Prickly Sedge), this species being new to hectad R8.0, and associated here with *Carex flacca* (Glaucous Sedge), *Carex sylvatica* (Wood-sedge), *Euphorbia hyberna* (Irish Spurge) and *Solidago virgaurea* (Goldenrod), etc.

During the months of November and December, four Co. Cork (H3-H5) hectad locations for *Hymenophyllum tunbrigense* (Tunbridge Filmy-fern) were visited and the records updated, viz.: 1. H3, W3.5. Killaneer stream-glen, near Murragh, Bandon; 2. H5, W7.8 or W7.9. Bunnaglanna stream-glen near Glenville; 3. H5, W9.7. Glenbower Forestry Park, near Youghal; 4. H4, W4.7. Glashagarriff River, near Coachford.

All of the habitats were 'upland', calcifuge stream-glens where the *H. tunbrigense* colonies were confined to the damp, vertical faces of Old Red Sandstone outcrops – *none* being found as an epiphyte on trees, as is frequently the case in parts of Co. Kerry, for example. While the individual fronds of this species are very transient and possibly survive no longer than 3-4 years, it is a truly astonishing fact that such ostensibly fragile colonies are often very long-lived and may even persist indefinitely where optimum growth-conditions prevail! Indeed, throughout these islands, such venerable populations of *H. tunbrigense* (as of *H. wilsonii* (Wilson's Filmy-fern) and *Trichomanes speciosum* (Killarney Fern)) have greeted generations of visiting botanists – and *still* survive in luxuriant splendour, long after their human admirers have departed this earth!

The details for the above, four, Cork *Hymenophyllum tunbrigense* sites are as follows:

1. H3, W3.5. Killaneer Glen, north of Murragh, on the R586 (Bandon-Enniskean Road). Originally found here (in the 1870s or earlier?) by R.L. Allman, as reported by the Rev. Thomas Allin (Allin, 1883). Killaneer Glen is a linear, north-south aligned, wooded stream-valley, roughly 2.5 km in length, which occupies portions of five 1-km squares. During my visit on 22 November 2007, *H. tunbrigense* was found in four, separate locations on the eastern side of the glen, in the 1-km squares, W37.57 and W38.56. It may well be present further south in this glen, but time precluded such a search. Most regrettably, this beautiful stream-valley is marred by long-term refuse tipping from the roadway on its western rim – such an ugly, frustrating and yet all-too-commonplace phenomenon in modern-day Ireland!

2. H5, W7.8/W7.9. Apparently confined to (but frequent on) *one* sandstone outcrop at the southern end of the Bunnaglanna stream-valley, close to its confluence with the North Bride River near Glenville Village, 1987 to 25 November 2007, T. O'Mahony. (Note: this site straddles the boundary between hectads W7.8 and W7.9, and consequently the precise grid location needs to be ascertained.)

3. H5, W9.7 (W99.78). In Glenbower Wood, on the Dissour River, at Killeagh, near Youghal, 1840s, Dr Thomas Power (Power, 1845). Throughout the intervening years, this species was recorded here intermittently, apparently last being seen by James O'Malley in April 1994, who subsequently provided me with the precise location of its site here (J. O'Malley, in litt., June and August 1994). There appear to be very few suitable habitats for *H. tunbrigense* in Glenbower Forest Park, though my visit on 2

December 2007 produced a *second* site for this fern within 1-km square W99.78, the colonies here looking very healthy indeed. Consequently, this find gives hope that it may yet be found further north in this valley.

4. H4, W42.75. Small populations on sandstone rock-outcrops flanking both banks of the Glashagarriff River, about (and mainly above) the waterfall, 1979 to 16 December 2007, T. O'Mahony. (Note: James Drummond recorded *Trichomanes speciosum* (Killarney Fern) at this waterfall in the period 1810-1820, yet he made no mention of the occurrence of *Hymenophyllum tunbrigense* here, though it was almost certainly present.)

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CO. LAOIS (V.C. H14) – BOTANIZING IN DECEMBER 2007

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I am always hearing it said that botanists hibernate during the winter months. This short article is to show what can be found in December. Co. Laois is a county I have probably only ever driven through before and I know very little about its flora. When Megan Morris asked if I would like to have a few days with her house sitting, I jumped at the idea of exploring new ground. We were based at Cullahill.

Listed below are some of the finds we made. The *New Atlas* (Preston *et al*., 2002) and *A catalogue of alien plants in Ireland* (Reynolds, 2002) have been used to see how good our records were. [* = new county record, ** = new 10-km square record.]

11 December we visited a bog at Ballyboodin (S365.777) so Megan could show me two large ****Sorbus hibernica*** (Irish Whitebeam) trees she had found earlier in the year. On our way home we stopped to do some shopping in Rathdowney. In the car park (S280.781) was a patch of ***Barbarea verna*** (American Winter-cress).

13 December we visited Dunmore Demesne so I could see the large stand of *****Equisetum hyemale*** (Rough Horsetail) Megan had found on the bank of the River Nore (S414.789), earlier in the year. On the wall around the car park (S41.79) and along one path in the woodland was *****Poa nemoralis*** (Wood Meadow-grass) and *****Daphne laureola*** (Spurge-laurel). There was a large patch of ****Mahonia aquifolium*** (Oregon-grape) (S415.790) along the side of one of the woodland rides, found by Megan earlier in the year.

In the afternoon we had a walk around Abbeyleix Demesne. Under the laurels in the garden (S419.832) were three dead spikes of ****Monotropa hypopitys*** (Yellow Bird's-nest) and as a weed in the garden was ****Veronica peregrina*** (American Speedwell) and in a small pond ****Lemna minuta*** (Least Duckweed).

14 December we visited the Haywood Demense. In the large lake (S468.808) was an abundance of *****Apium inundatum*** (Lesser Marshwort). On the walls of the gardens (S471.816) were many clumps of *****Poa compressa*** (Flattened Meadow-grass) and as a weed were a large number of rosettes of ****Draba muralis*** (Wall Whitlowgrass). The latter was also seen elsewhere in the grounds of the Demense.

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INTERESTING PLANTS IN TYRONE (V.C. H36), 2006-2007

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There have been a surprising number of interesting discoveries in Tyrone in 2006-2007. However, few involved native plants. Most were aliens. Indeed, so many of them were found when trawling through dumps and waste ground that I thought of re-titling the article as 'Down in the Dumps in Tyrone'!

Ambrosia artemisiifolia (Ragweed)
Several plants of this turned up in September 2007 on the edge of waste ground about 2 km E of Gortin among what was presumably a group of birdseed aliens. Other plants in the group included: *Phalaris canariensis* (Canary-grass), *Echinochloa crus-galli* (Cockspur) (see below), *Helianthus annuus* (Sunflower), etc. Identified by Dr Mason (BSBI referee). This is the infamous Ragweed that is a nightmare for hay-fever sufferers in America. Let's hope it doesn't like it over here! 1st Tyrone record.

Avena sterilis (Winter Wild-oat)
Widespread weed in a cereal crop near Eglish (S of Dungannon), July 2007. Identification agreed by P. Hackney. Presumably a contaminant of the barley-seed. 1st Tyrone record.

Brassica nigra (Black Mustard)
In abundance on recently dumped soil in a disused gravel-pit at Teebane (W of Cookstown), September 2007. Identification agreed by P. Hackney and T. Rich. The origin of such a plant is quite mysterious, but a clue may lie in the fact that I found *B. nigra* as a constituent weed in a 'wild-flower' sowing at a site near Coleraine (Co. Londonderry) a month or two earlier. Could someone have sown a 'wild-flower' mix to temporarily beautify an area and then later cleared it off to be dumped in the gravel-pit? Other plants alien to the site were: *Sisymbrium officinale* (Hedge Mustard), *Solanum dulcamara* (Bittersweet), *Euphorbia helioscopia* (Sun Spurge), *Daucus carota* (Wild Carrot), etc. Incidentally, *B. nigra* is a massive plant, up to 2 m in height and spreading outwards 1.5 m in diameter. 1st Tyrone record.

Carex riparia (Greater Pond-sedge)
This turned up in lake-shore marshland at Lough Fea (NW of Cookstown). The record is of interest as Lough Fea is an upland lake with fairly acidic water. This is a rare sedge in Tyrone. It occurs infrequently along the Lough Neagh shore and the only other record is by Lough Fanny, one of the Baronscourt lakes (NW of Omagh). The Lough Fea record belongs to 2005.

Cichorium intybus (Chicory)
A single plant turned up in the Derryloran Industrial Estate in Cookstown in 2006. It was growing in an area that had been grassed over four or five years earlier. 1st Tyrone record since about 1940.

Dactylorhiza incarnata (Early Marsh-orchid)
Found by A. McNeill in June 2007 at Skea Bog (near Donaghmore). Andrew took photographs of several plants and it seemed to agree well with the expected colour of subspecies *pulchella*. We were rather surprised at this as my other son David had found *D. incarnata* at the same site in the mid-1980s and was sure it was subspecies *incarnata*. (We have a reluctance to pick orchids for identification purposes!) There is

one previous county record for subspecies *pulchella*, from Magheralough (Castlederg area) in the late 1980s.

Echinochloa crus-galli (Cockspur)
This was another of the bird-seed aliens from the site E of Gortin. Identification agreed by P. Hackney. 1st Tyrone record.

Eriophorum latifolium (Broad-leaved Cottongrass)
Found by David McNeill on the S slopes of Dunnaree Hill (SE of Drumquin) in July 2007. Previously known in Tyrone only from riverside marsh sites on the Ballinderry River around Wellbrook (W of Cookstown) (J. Harron 1970s and 1980s and McNeill into 1990s, but not seen since). Dunnaree Hill is capped by thick peat and heather, probably resting on sandstone, but lower down the hill limestone outcrops, with extensive lime quarries. David found the *E. latifolium* in an area of limy seepage. So much nicer to find a new site for a true native rarity than all those nasty aliens!

Euphorbia dulcis (Sweet Spurge)
Growing as a weed at Lissan House, near Cookstown, 2007. I have seen this plant as a weed in a garden centre near Belfast, and presumably it arrived at Lissan 'on the back' of an introduced garden plant. 1st Tyrone record.

× *Festulolium holmbergii*
The hybrid of *Festuca arundinacea* and *Lolium perenne*. Found in September 2007 on the field-border of a maize crop near Castlederg. Identified by Dr Cope (Kew) as certainly a *Festuca/Lolium* hybrid, and almost certainly the specific hybrid × *holmbergii*. There is no previous record in the county of × *Festulolium holmbergii*.

Hieracium sp. (Hawkweed)
A very strong-growing and floriferous hawkweed was found in September 2007 at Castlederg, growing on the walls of the bridge over the River Derg and also on nearby waste ground. It was just past flowering, which puts it at a rather late flowering date. I sent material to P. Hackney, including pappus heads. He thought it appeared to be of the Tridentata group. It seems to be new at this site. Perhaps we can get it next year in flower.

Juncus × *diffusus*
This is the hybrid *Juncus effusus* (Soft-rush) × *J. inflexus* (Hard Rush). Collected at Grange, near Cookstown, in 2007, and agreed by P. Hackney. 1st Tyrone record.

Lathraea squamaria (Toothwort)
This is quite common in SE Tyrone, but there had been just one record in the W of the county (at Strabane Glen). It was therefore very pleasing to find a good site in 2007 at Drumscra, SW of Drumquin.

Lathyrus grandiflorus (Two-flowered Everlasting Pea)
Found, in 2007, on waste ground in Cookstown. 1st Tyrone record.

Mercurialis annua (Annual Mercury)
This turned up in a dump at Gortaclady, about 11 km W of Cookstown. Identified by Mr T. Walker (BSBI referee). 1st Tyrone record. Dump records are not very satisfactory, but one has to presume it grows as a weed in some local garden, possibly brought in along with plants purchased in a Dublin garden centre, but this has to be pure surmise.

Pastinaca sativa (Wild Parsnip)
Growing on roadside at Derrymeen, E of Coalisland, in July 2007. Possibly of garden origin. There were two old Tyrone records from around the 1930s.

Pimpinella major (Greater Burnet-saxifrage)
Found in 2006 at Ballyetra, W of Killeter, in the far W of the county. No previous record. Unlikely to be native, but how it arrived there has no easy explanation. Growing on roadside bank just opposite end of lane to a cottage about 100 m back from the road.

Rapistrum rugosum (Bastard Cabbage)
Found in June 2007 on waste ground at Carland Quarry, N of Dungannon. Identification agreed by P. Hackney. 1st Tyrone record.

Rubus chamaemorus (Cloudberry)
In June 2007, we visited the summit of Mullaghdoo in the Sperrins to check out the only Irish site for Cloudberry. This was my third visit to the site, and my first successful visit. There were three patches within a radius of 8 m or so and a more distant patch about 80 m eastwards. The sites are just N of the summit. Mullaghdoo itself is an outlier of Mullaghclogha. We recorded 10-figure grid references for the patches. Each patch extends to a metre or two in diameter, and consists of scattered leaves, with no sign of flowers, more or less as it has been reported now for over a century. The site may be undergoing change, as there is quite a lot of *Eriophorum vaginatum* in the surrounding vegetation. David McNeill thinks that when he saw the plant in the 1990s, *E. vaginatum* was not present.

Sorbus spp.
Tim Rich has been taking considerable interest in *Sorbus* in recent years. He visited Tyrone in 2006, and I have sent him several specimens since that visit. *Sorbus hibernica* (Irish Whitebeam) occurs naturally as several scattered trees in the area NW of Cookstown approaching Lough Fea. *Sorbus devoniensis* is naturalising at Moghan Moss, W of Castlecaulfield, but almost certainly it derives from planted material, probably going back to the 19th century. In the townland of Garvagh, ENE of Gortin, there is an immense amount of *Sorbus aria* (Common Whitebeam) derived from trees planted along field-boundaries, possibly as long ago as 1850, going by the gnarled nature of some of the old trees. Such planting was unusual at that date.

Symphytum tuberosum (Tuberous Comfrey)
Naturalized and spreading in the grounds of Loughry Agricultural College near Cookstown, 2007. This plant is very frequent in SW Scotland, and there seems to be no physical reason why it should not like Co. Tyrone as well, but there have been no records outside managed grounds, as at Loughry and Baronscourt.

Trichomanes speciosum (Killarney Fern)
In 1891 Delap recorded Killarney Fern from a glen "within 5 miles [8 km] of Strabane". He presumably kept the site vague to deter collectors. Subsequent botanists, however, took Strabane Glen to be the site, and visited it in the hope of recovering the record, including a BSBI outing in the early 1980s. Strabane Glen is a rock-bound glen just on the E outskirts of Strabane town, and is an unusually rugged feature for a site really in the midst of lowland farmland, and not up in the mountains.

In 2005, R. Northridge visited the glen in the hope of finding the gametophyte, if not the sporophyte, of the fern. He was almost immediately successful, finding the gametophyte at two sites in the glen. This is a most pleasing re-establishment of a long-desired Tyrone plant.

Viburnum lantana (Wayfaring-tree)
In a roadside hedge at Donaghendry, near Stewartstown, 2007. 2nd recent Tyrone record. Probably a garden escape.

I would like to thank various referees, and especially P. Hackney, for their assistance in identifying many of the above plants.

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MINUTES OF THE ANNUAL GENERAL MEETING OF THE BSBI IRISH REGIONAL BRANCH 2007 HELD IN THE NATIONAL BOTANIC GARDENS, GLASNEVIN, DUBLIN, ON 13 OCTOBER 2007 (unapproved)

ATTENDANCE
Twenty three members attended the Meeting.

APOLOGIES
Apologies were received from Alan Hill, Paul Hackney, Cliona O'Brien, Robert Northridge, Mike Wright, Cilian Roden and Declan Doogue.

MINUTES OF AGM 2006
Held at Cultra Manor, Co. Down on 14 October 2006 were read and approved.

MATTERS ARISING
Reports by Vice-county Recorders. Correction: the discovery of *Draba incana* in Co. Kerry was made by Rory Hodd.

Caroline Mhic Daeid advised the meeting that she had been in an 'Acting Chair' role for the past year as there was some doubt about the correct application of the rules concerning election of officers.

The Committee has undertaken to review, to clarify and, if necessary, propose a revision of the rules for the next AGM, in order to clear up any anomalies.

CHAIR'S REPORT
It was noted with regret that two prominent members passed away during the year, namely Wesley Semple and Raymond Piper and the condolences of the Committee and the membership were duly expressed and recorded.

The Committee had had an active year, met five times and had held 13 field meetings. The Chair expressed her thanks to the members of the Committee and Vice-county Recorders for their work and support during the year.

The major matters discussed and business transacted during the year is summarised in the Honorary Secretary's Report which is attached below.

SECRETARY'S REPORT
See below.

REPORTS FROM VICE-COUNTY RECORDERS
Reports were read to the meeting from:
Caroline Mhic Daeid South Kerry (H1)

Paul Green	Waterford (H6) and Wexford (H12)
Sylvia Reynolds	Limerick (H8)
Ian McNeill	Tyrone (H36)
John Faulkner	Armagh (H37)

REPORTS FROM FIELD MEETINGS

The Field Meetings Secretary, John Faulkner reported generally on the number of successful meetings throughout the year and in particular the Co. Donegal meeting. He thanked all of those Vice-county Recorders who had organised meetings throughout the year and asked for confirmation of dates for 2008.

Ian McNeill suggested that Field Meeting Leaders should submit a brief report after each field meeting and that these should be published in *Irish Botanical News*.

ELECTION OF TWO MEMBERS TO THE 2007-2008 COMMITTEE

Two nominations were proposed, namely Caroline Mhic Daeid and Gerry Sharkey and as there were no additional proposals these two were deemed to be elected.

SCARCE PLANT REGISTER

Paul Green advised that he had compiled the data for a Scarce Plant Register for Co. Waterford and would welcome sponsorship towards the cost of printing same. Caroline Mhic Daeid said that she would try to progress this matter with David Pearman.

COMPUTER RECORDS

There was a discussion about the preference and/or priority of the use of different programmes to record mapping data. Different programmes including 'Mapmate', 'Recorder' and 'Excel' were being used by different people and different organisations.

It was agreed that there should be better consistency and that the Committee should arrange a meeting for discussion and tuition by the appropriate experts so as to further assist Vice-county Recorders with data exchange.

WORLD BOTANIC CONFERENCE

Dr Peter Wyse Jackson advised the meeting that the National Botanic Gardens would host the above important international event and looked forward to the BSBI contributing to the success of same. Further details will be advised during the coming year.

Peter also advised that the creation of native habitats at the Botanic Gardens was well advanced and hoped that BSBI members would get involved in assisting with this project.

AFTER LUNCH

A presentation by Dr Una Fitzpatrick of the National Biodiversity Data Centre was arranged for 2.00 p.m., after a break for lunch and Dr Jackson had arranged for the Herbarium to be opened after that, in particular to view a display of *Hieracium*.

Michael Archer, Honorary Secretary, BSBI Committee for Ireland

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HONORARY SECRETARY'S REPORT FOR 2006-2007

The Committee met on the 14 October 2006, 18 November 2006, 20 January 2007, 29 March 2007 and 29 September 2007.

A. CO-OPERATION WITH R OF I HERITAGE OFFICERS

As reported at the last AGM, Declan Doogue had initiated contact with the Heritage Officers and a very well attended meeting was held with BSBI Vice-county Recorders on 27 January 2007. An outcome from this has been co-operative events organised in counties Monaghan, Meath, Kerry and Roscommon. Further meetings and events will be held during the coming year.

B. ORCHIDIRELAND PROJECT

Your committee has had a number of meetings and correspondence with the promoters of this project, the aim of which is the publication of a high quality illustrated book that will include details of the status and distribution of orchid species throughout Ireland.

It is anticipated that the project will take four years to complete and that during that time the BSBI will take an active role in the collecting, collation and dissemination of sites and species-based records.

There has been on-going discussion regarding the precise role and commitment required by the BSBI and it is hoped to formally launch the project in April 2008.

C. FIELD MEETINGS

John Faulkner had arranged a programme of 13 field meetings during the season and most of these were well attended, including some to quite remote areas. The programme for next season is being prepared and John is still looking for proposals from Vice-county Recorders.

D. *IRISH BOTANICAL NEWS*

After 17 years of successful editorship, Brian Rushton has advised the Committee that he wishes to relinquish the post of honorary editor. Committee member Paul Green

has agreed to take over the position and it is planned that he will edit the 2009 edition. We wish both Brian and Paul well in their new roles.

E. NATIONAL BIODIVERSITY DATA CENTRE

The recent establishment of the new centre at Waterford is an important addition to the proper documenting of plant records within the country. Such a repository has been the subject of discussion by the Committee, over many years.

We look forward to establishing a co-operative and mutually beneficial relationship with the Centre, into the future.

Michael Archer, Honorary Secretary, BSBI Committee for Ireland

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GREAT IRISH WALKS

For those of you who enjoy a good walk whilst botanizing, may I draw your attention to two publications forwarded to me by Maura Scannell? They are:

The Irish Examiner guide to great Irish walks, *parts 1 and 2*, €2.95 each including postage and packing, obtainable from: Great Irish Walks, Front Counter, Irish Examiner, Lapps Quay, Cork or by calling 021 4802393 or 021 4802209 or by e-mail counter@examiner.ie. Each outlines over 30 walks with a very clear map, a note of relevant published maps, a general description of the walk, refreshments in the area, and other areas of interest as well as sources of further information. Excellent value.

B.S. Rushton

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AN FORAS FORBARTHA COUNTY REPORTS ON AREAS OF SCIENTIFIC INTEREST

Lynne Farrell, a BSBI member who did professional botanical surveys in Ireland in the early 1970s for An Foras Forbartha has copies of the reports on areas of scientific interest for the following counties: Carlow, Cavan, Clare, Cork, Donegal, Dublin, Galway (thin, not the final version), Kerry, Kildare, Kilkenny, Laois, Leitrim, Longford, Louth, Meath, Monaghan, Offaly, Roscommon, Sligo, N Tipperary, S Tipperary, Waterford, Westmeath and Wicklow.

The reports, which include species lists, form the basis for the entries in An Foras Forbartha's (1981) *Areas of scientific interest in Ireland.* If you are interested in obtaining the report for your vice-county, it is suggested that you send Lynne a £5 sterling note (disguised in a letter!) to cover a padded envelope and postage which is £3+.