

Irish Botanical News

No. 28 March 2018



Editor: Paul R. Green



Figure 1 - Distribution map of *Cyperus eragrostis* in Taiscumar Reservoir. Population density is indicated by the colour of the square. Red>200, Orange <200, Green<100. See page 30.



Committee for Ireland 2017-2018

The following is the Committee as elected at the Annual General Meeting at Oxford Island Discovery Centre, Craigavon, Co. Armagh on the 23rd September 2017. Office bearers were subsequently elected at the first committee meeting. The Committee is now:

Mr R. Northridge (Chairman, Irish Representative on Council, Atlas Planning Group, Irish Officer Steering Group and NI Representative on Records and Research Committee)
Ms P. O'Meara (Hon. Secretary)
Dr J. Conaghan (Irish Field Meetings Secretary)
Dr R. Hodd (Hon. Treasurer)
Mr C. Breen
Dr E. Cole (Irish Representative on Publications Committee)
Dr J. Denyer
Mr. A. FitzGerald
Dr M. McCorry
Mr G. Sharkey (ROI Representative on Records and Research Committee)
Mr R. Sheppard
Dr J. Faulkner is co-opted to the committee from November, once his term as BSBI President has ended.

Mr M. Wright (Northern Ireland Environment Agency) Dr M. Wyse Jackson (National Parks & Wildlife Service)

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All species and common names in *Irish Botanical News* follow those in the database on the BSBI website http://rbg-web2.rbge.org.uk/BSBI/ and Stace, C. (2010). *New Flora of the British Isles*, 3rd ed. Cambridge University, Cambridge.



Front cover photo: Epipactis phyllanthes (Green-flowered Helleborine). Some plants have their flowers arranged evenly around the stem. Photo Jackie O'Connell © 2017. (p. 48).

Left: Killarney fern sporophyte at a new location on the Dingle peninsula. Recorded during the Dingle recording event June 2017. Photo J. Conaghan © 2017: (p. 71).

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Botanical conundrum photo



You may have noticed that I have rather been focusing on family history lately. But this photo has conjured up a botanical query: it was taken in the early 20th century and is known in the family as 'Phil Blake's picnic'. Pictured are left to right Richard Sheehy, Francis Skeffington, Dick McCoy and Eugene Sheehy. These are my two great-uncles and a McCoy cousin of theirs with my grandfather (who has just hurt his finger). The question is, where was it taken and what are they wearing in their lapels? I thought it was shamrock and therefore a St Patrick's Day outing. But closer inspection reveals to me, that it is not shamrock and that each has a different species: Richard Sheehy has what looks very like selfheal *Prunella vulgaris*, Frank may have a sprig of heather, and I can't quite make out the others. Was there some natural history element to the picnic (at least Frank had an interest in it)? The vegetation (and stones in the wall) behind them suggest it is probably in the Dublin hills (possibly even Howth Head) and that it is not March, but summertime. Of less botanical importance is the date -1901 (before Frank was married in 1903) or 1910? Any comments or suggestions can be sent to me michelinesheehy@gmail.com.

Micheline Sheehy Skeffington

Introduction from newly appointed Vice-county Recorders

West Cork (H3)

Clare Heardman, *Glengarriff Woods Nature Reserve, Glengarriff, Co. Cork* E-mail: clare.heardman@chg.gov.ie



Clare is a Conservation Ranger with the National Parks & Wildlife Service. She originally became interested in wildflowers as a young child when her granny, who lived in the Peak District National Park, named plants as they walked on the moors. After studying Zoology at the University of Edinburgh, Clare worked as a Ranger on the Sefton Coast where she became interested in botany and nature conservation management. Clare began work with NPWS in 1999 and later completed a distance learning MSc in Protected Landscape Management. Most of Clare's work with NPWS is based on the Beara Peninsula and is focused on EU Annex I habitats and Annex II species within Special Areas of Conservation (SACs) such as old sessile oak woods, blanket bogs and oligotrophic waters. Now, as Vice-county Recorder, she is enjoying the new challenge of getting to grips with plants of non-Annex I habitats, such as stubble fields, waste ground and roadside margins, in some of less acidic parts of West Cork! The above photo of Clare was taken by Phoebe O'Brien (© 2016) during a BSBI Rough Crew outing in the Caha Mountains **H3**.

East Cork (H5)

Edwina Cole, An Teachín, Church Road, Ballinacurra, Midleton, Co. Cork, P25 EW71 E-mail: edwinacole@eircom.net

Edwina is a native of Kildare but has spent the last 14 years living in East Cork (**H5**), which she now calls home. She is a graduate of Trinity College Dublin (School of Botany) where she focussed her PhD research on Irish palaeoecology. Although trained as a palynologist she has been working as a self-employed ecologist since 2003. She has worked on varied contracts for an environmental consultancy company and National Parks & Wildlife Service (NPWS). One of her most recent contracts was assisting with the production of an All-Ireland Vascular Plant Red List with NPWS. Edwina sits on the BSBI Committee for Ireland and also is the contact point for the local Cork group of recorders that meet for recording events over the summer months. Her favourite habitat is native woodland but unfortunately it is not so abundant in **H5**! She looks forward to improving her identification skills as joint VCR for **H5** with Finbarr Wallace.

Finbarr Wallace, *5a Henry Street, Cork City. T12 A318* E-mail: finbarrwallace@gmail.com

Finbarr is, perhaps unsurprisingly given the name, from Cork city. He studied Ecology at London Metropolitan University and Ecological Assessment at UCC. Finbarr loves nothing more than tromping through the undergrowth recording plants, so was delighted to be invited to be co-VCR for East Cork **H5** with Edwina Cole and has greatly enjoyed that role for the last year and hopes to continue in it for some time to come.

Leitrim (H29)

Eamon Gaughan, 5 Buenos Aires Drive, Strandhill, Sligo E-mail: egaughan2016@gmail.com

I grew up in the south side of Dublin where I did a degree in Science in UCD. I embarked on a teaching career starting in Dublin, then one year in Wexford and moved to Sligo in 1974 where I taught science and maths subjects until I retired in 2009. My interest in botany began in the 1980s when during my summer holidays I explored the coasts of Dublin and Wicklow identifying as many species as I could. Based in Sligo I explored parts of the neighbouring counties Mayo, Galway, Donegal, Leitrim and Fermanagh as well as Sligo. Occasionally I would explore

further afield e.g. Wexford and Kerry. My other outdoor interest is hill walking and this provided me with the opportunity to see many of the rare upland species. I joined the BSBI in 2010 and by this time I was taking a serious interest in field botany. I participated in BSBI field outings and found them very interesting and helpful. I went out around Co Sligo with Don Cotton (VCR for Sligo and formerly VCR for Sligo and Leitrim) several times and under his guidance greatly improved my skills in identifying species like grasses and sedges. My systematic recording of VC Leitrim started quite late in the scheme of things actually last August 2017. I am looking forward to doing a lot more of the same over the coming two seasons in this very much under recorded county. Over the last 10 years or so I cannot walk through a town, along a beach or bog or even around a car park without looking at anything that is growing there. I will usually have a GPS device, camera and a plastic bag in case I see anything out of the ordinary. On some occasions a wellmeaning passer-by will ask me "did you lose something". I could answer "only the patience of my wife or other companions as I take a few minutes to give that "rare weed" its place in the annals of botanical history! Last but not least I enjoy the company of other field botanists on outings. We are a rare species in this part of the world and maybe should be added to the local "red data list"! I do make an effort to encourage a few of my friends who are casual botanists (like looking at wild plants) to go further and maybe in time become "naturalized field botanists"!

Botanising with D. A. Webb

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For many years, 'Webb', to me, was this: a small, modest-looking book with which you could identify any wild plant. Not much by way of pictures; but a quietly inviting book, all the same. A book with descriptions that were, in the author's lapidary words, "as brief as is consistent with clarity, and as untechnical as is consistent with brevity." (Webb 1959).

The first gathering of botanists that I ever attended was a Junior Meeting of the Botanical Society of the British Isles [*Footnote:* now Botanical Society of Britain & Ireland] held in Connemara back in 1964, just a year after the founding of the Irish Branch. The novelty of the event meant that we were honoured by the appearance of some senior members of the Society. One day, a priest in clerical attire roared up on a motorbike: this was J. J. Moore, a Jesuit, and a lecturer in Botany at University College Dublin (UCD). A day or two later, another striking figure appeared, a tall man with a loud laugh and a commanding presence. This, then, was Webb: the man who wrote the book. He was soon the centre of the group,

examining our specimens with keen attention. I remember proffering my find of *Carex lasiocarpa*, and the Professor's "Ah! That's more like it!" – a pat of approval. I also remember my surprise at some question being met with "Well... Let's see what Webb says", as he reached out for the book: the man referring to the printed word. The first of so many lessons: always check your text!

I continued to attend meetings of the Irish Branch. One enjoyed the interaction of Professor Webb and Father Moore, each deferring to the other. (These were still the days of "The Ban" – when Roman Catholics were debarred by their bishops from studying at Trinity College Dublin, except by special dispensation – and the ripples of the ecumenical movement were only beginning to reach these shores. One had a sense of being at the dawning of a new era.)



David as page (lower left) at his aunt's wedding, November 1916

This is not the place for a biographical sketch, but a few words about David's background would be in order. He was born in Dublin in 1912, into a prosperous family - what he himself described as the 'professional class' (doctors,

lawyers, clergy). The family was of Anglican (Church of Ireland) heritage – his maternal grandfather was Dean of St Patrick's Cathedral. You can see both grandfather and grandson in this family photograph: David as page at his aunt's wedding, in Dublin, in November 1916. A poignant picture: the bridegroom was killed at the Battle of Ypres, the following June.

The family background was also Unionist; though David records that, unlike most of his relations, his mother - a very remarkable woman - was a supporter of the Nationalists (John Redmond's party). David could remember seeing 'Vote Unionist' signs in south Dublin, in the general election of 1918. In due course he was sent to Charterhouse, an English public school (as, indeed, one might guess from his accent). He studied as an undergraduate at TCD, graduating in 1935, and went on to study for a doctorate at Cambridge – a place with which he retained a special bond. He came back to TCD as a junior lecturer in the late 1930s - and there he took root.



Junior lecturer at Trinity College Dublin (P.C. Photos.)

My real acquaintance with David Webb dates from my time as a student at Trinity College. He was a superb lecturer. One particularly remarkable contribution was his series of lectures on the History of Science, in which his erudition was given free rein – a real *tour* de force - I simply cannot imagine it being given by anyone else.

He also took a personal interest in students as individuals - not just en *masse*. This could include an invitation to join him in his cottage near Oughterard, by the shores of Lough Corrib. This was his base for exploring and recording for the Flora of Connemara and the Burren. I remember some demanding trekking in the

Twelve Bens. I think the blue denims were already a diagnostic feature. David tended to be lightly shod, and never seemed to mind getting his feet wet. (He quoted with approval the quip- I think it came down from Praeger – that an Irishman's boots needed to have a hole or two to let the water out!) At the end of a day in the field came one's host's amazing cooking. I would just set the table – and then wait in trepidation in case I had put the knives and forks the wrong way round. This was a serious matter – and my being left-handed was not accepted as an excuse...

David's hospitality was famous, and I met many people through him. These included a succession of high-calibre botanists from the Other Island: Franklyn Perring, Roy Perry, Arthur Chater, Max Walters. Perring & Walters were Editors of the first *Atlas of the British Flora* (1962, 1976). Walters, Chater and, later, John Akeroyd were all involved with David in work on *Flora Europaea* undoubtedly his greatest contribution to science.

The *Flora of Connemara and the Burren* and the *Atlas* provided the impetus for a lot of Webb's Irish fieldwork. He criss-crossed the island endlessly, 10km-square after 10km-square, often where no botanical recorder had gone before. I remember him at the wheel, calling out plant names, and me in the front passenger seat, ticking them off. He had a special *ad hoc* classification: '50 mph plants', 30 mph plants' and so on. This may be alright for passengers but, really, it is not a good idea for drivers. (Concerns about David's impetuous driving date back to long before the final, fatal crash. I can still remember a close shave or two... but who was going to stop him? Who was going to bell the cat?)

Flora of Connemara and the Burren was ultimately published in 1983. (In 2017 we celebrated a reissue; congratulations to Gerry Sharkey, to Cambridge University Press, and to all involved in this venture.)

My only joint publication with Webb was a note in the *Irish Naturalists' Journal*, recording two findings of the hybrid *Holcus lanatus* (Yorkshire Fog) *x H. mollis* (Creeping Soft-grass). (One specimen, collected near Corofin by Tom Curtis and myself, gets a glancing mention in *Flora of Connemara and the Burren*). It was fascinating to mount the pollen-grains under the microscope and find them all shrunken – a classic feature of hybrids, indicating sterility. We reported these as the first Irish records for the hybrid. (However, my pride was soon deflated by a stinging letter from M.A. Farragher, of UCD's School of Agriculture - it *would* be UCD! - pointing out that he had already published a record of this taxon from Ireland. I wrote the letter of apology. Tony Farragher - a grass expert - was subsequently very kind and helpful to me, in my struggles with *Agrostis* and the like.)

In the 1950s and 1960s, David took students on field trips to many parts of the Continent. His focus on the genus *Saxifraga* ensured visits to many spectacular mountain ranges. The physical energy and the persona of the man in his prime were summed up for me by an elderly Clarewoman: "Professor Webb! Tall and straight

and wild and red-headed, climbing away up on them mountains like a wild goat; sure the girls couldn't keep up with him." (That was Mrs O'Callaghan of Ballinalacken - doesn't it sound like something out of a Synge play?)

On top of the physical energy, David had a prodigious mental energy. He combined a keen intellect and a broad culture. He was a connoisseur of the arts as well as a scientist. I remember he once stated that the two themes of his life's endeavours were the promotion of scholarship and of elegance. He was a lively conversationalist, able to illuminate almost any topic, and a great raconteur.

This irrepressible liveliness carried over into his writing – yes, even scientific writing. (Scientific writing has to be disciplined; it does not have to feel as though it were composed by a machine). David told me once that he seldom altered a sentence once he had written it. 'Wow!', I thought; such lucid thinking, such skill in expressing it... Working with him was truly an enriching experience.

He enriched the life of the Botany Department in so many ways. Odd little jumble sales to raise funds for the herbarium. One year, a week in January brightened by a marmalade-making competition, with David as judge. (One colleague cheated and slipped in a jar she had bought in a shop!) An August day stuck in the office was turned into an occasion, simply by everyone being told to come in wearing pink (I've no idea why).



In the herbarium of Trinity College Dublin (photograph by Andrew Campbell)

David was generous, in unobtrusive ways. I know that he paid, out of his own pocket, the cost of an overseas field trip for at least one impoverished student. (That student was Bill Watts, who eventually succeeded him in the headship of the Botany Department.) David had a remarkable range of friends, and he never ceased to make new friends

And yet, he was not always a comfortable presence. There were people he related to, and people he did not. He had his good days and PAGE 11



bad days. He was often abrupt, and he had a sharp tongue. He had a sardonic wit that was more often appreciated by the bystander than by the victim. [Picture him in the Senior Common Room in Trinity College, deep in his newspaper. The election of a new Provost is approaching. A candidate an interrupts him with anxious question: "Oh David, do you think I'm too old to run for Provost?" The retort was swift and crushing: "Hm. It's not your main disadvantage."]

> Brendan Kennelly reading his tribute, on 12 August 2012 (the centenary of D.A.W.'s birth)

At a deeper level, Webb was a loner. The poet Brendan Kennelly, who

became a friend, summed up some of the tensions and contradictions in David's personality in a short poem, published a few years after his death:

'TWO. In memory of David Webb.

You're a man in two places, David: under a cherry tree one April morning flowering something fierce after a bad Winter and a nothingtowritehomeabout Spring.

Head down at first, suddenly you look up into a blaze of light and blossom, stand there several minutes outside the trap of time, pondering. Slowly you move on

into a January evening, north end of the Rubrics; "Coldest corner of Ireland, days like this, cold cutting into marrow and heart";

killed in Oxford, buried back o' the Chapel. cherryblossom warming the threat of ice as if art lit science, science pleasured art.' David's curiosity and his appetite for knowledge remained undimmed, even in his eighties. Our last conversation opened in his characteristic style: "Ah, Daniel; I want to talk to you about elms." That was nine days before his death. Sadly, we never had that talk. (The fact is that, concerning the genus *Ulmus, An Irish Flora* has misled whole generations. I believe that the only sound overview to date of the status and distribution of elms in Ireland is that given in Sylvia Reynolds's *A Catalogue of alien plants in Ireland* (2002)).

Both of my parents had known David since the days when they were all undergraduates at TCD in the early 1930s. However, they had had little contact with him subsequently, and it was completely out of the blue that a letter arrived, just when I was about to leave secondary school, with sage words of advice on the education of a would-be botanist. Two salient suggestions I now pass on: "The first is that a good knowledge of German is still of immense value in Science and if he could spend part of a year in a German-speaking country, it would be a useful weapon in his armoury. The second is the idea that he might work in a nursery or in some other place where he will get a practical knowledge of how to handle plants. Many botanists are handicapped by a complete incompatibility to make plants grow". The second piece of advice I acted on directly, and I pay tribute to the National Botanic Gardens at Glasnevin for squeezing me in, at the last minute, as a voluntary student-labourer. For the first piece of advice: I still have a way to go, but I can at least say *'Geehrte Herr Professor: ich danke Ihnen sehr herzlich'*.

To conclude: David Webb's contributions to Botany were immense, diverse, and lasting. He was, intellectually, an astonishing all-rounder: a true 'Renaissance man'. His was a fascinating, larger-than-life personality, and I cannot remotely do him justice in a short article – or even in a long one!

Acknowledgements:

I am grateful to Dr Peter Wyse Jackson, Mr Arthur Chater and Professor Seán Barrett for information and comments; to Professor Brendan Kennelly for permission to reproduce his poem; and to all whose photographs are here reproduced.

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Note: This is an edited version of a talk given to the Irish BSBI Conference held at the National Botanic Gardens, Glasnevin, Dublin on 25th March 2017).

David Howe Scott's "missing" 1833 flora of Cobh, County Cork, refound

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In the preface to his account of the flora of County Cork presented in 1843 to the meeting of the British Association for the Advancement of Science which was being held in Cork, Thomas Power (1845) commented that apart from a few records published in works by Charles Smith (1750), Walter Wade (1804) and James Townsend Mackay (1806), "there was no attempt at a systematic catalogue of our [sic] Flora till 1819-20, when Mr. James Drummond... published a list of our Flowering Plants in the Munster Farmer's Magazine", adding that "Doctor Scott of Cove gave a comprehensive catalogue of the native plants of the Great Island in 1833 ...". However, no subsequent botanist treating the flora of the county, nor indeed of Ireland as a whole, has made any direct reference to Scott's "comprehensive catalogue", and no such catalogue is recorded in cadastres of works about the wild plants of Ireland. Botanical bibliographies, including those by Moore & More (1866), and Colgan & Scully (1898), as well as Praeger's for Irish topographical botany (1901), usually do not include any work by Scott nor any list of the flora of Great Island. The most recent, comprehensive account of the Cork flora by O'Mahony (2009) continued the silence. An exception was N. D. Simpson's A bibliographic index of the British [sic] flora (1960: 407), in which two publications by Scott were noted although Simpson indicated that no copies had been inspected, evidently indicating that none could be traced.

When preparing an account of the anonymously issued *The Irish flora* ([Baily] 1833) (Nelson forthcoming), I carried out an internet search for notices and reviews of that work in contemporary Irish and British newspapers (URL www.britishnewspaperarchive.co.uk), and discovered a series of newspaper columns treating the flora of Cobh. The first one was headed "Botany—Cove of Cork" whereas the others were titled "Cove, Catalogue of plants". Although signed only with the initial S, the four parts combined certainly match the description of a "comprehensive catalogue", and that initial does provide a link to "Dr Scott of Cove". This catalogue (S[cott] 1833) was published in four separate issues of the twenty-fifth volume of *The Southern reporter, and Cork commercial courier* published on 5 September (p. 1, column 4), 17 September (p. 1, columns 3 and 4), 26 September (p. 1, column 1), and 1 October 1833 (p. 1, columns 2 and 3), corresponding exactly to Power's (1845) observations.

The listing of plants follows the sequence and nomenclature of *The Irish* flora ([Baily] 1833), which was referred to obliquely (S[cott] 1833: 5 September): "A work, purposing to be a Flora of this Country, has lately appeared; but the field from which it drew materials was not very extensive; it cannot, accordingly, be any thing like complete. It does great credit to the author in the anxiety evinced to infuse a taste for such pursuits, and reflects the highest praise for the distinguished and generous feelings which actuated its publication." Looking forward "to that period when every mile of Ireland's ground shall have been explored, and not a single blade of grass born on her rich bosom left unknown", Scott noted that the "botany of the South has been only partially attended to ...". He described the geography and geology of Great Island, and then listed the plants that he had recorded. The third part concluded with ferns and two species of *Equisetum* (horsetails), while the fourth part comprised lists of more than 70 mosses, 16 liverworts, 29 lichens, and more than 40 algae, with a brief digression about shells. Concluding, Scott noted that "In all, on this Island, 586 plants (including shrubs, &c.) have been gathered; of which 400 are Chanerogamic [sic, Phanerogamic] or flowering, and 186 Cryptogamic ..." (S[cott] 1833: 1 October, p. 1, column 2).

Who was Dr Scott? There is no one with that surname and associated with Cork listed in standard sources. Undoubtedly the person who compiled and published this list was David Howe Scott who, on 20 January 1822 when he was probably about 16 years old, "received a Certificate of his proper qualification to become an Apprentice to learn the business of an Apothecary" in the Apothecaries' Hall, Dublin (Anonymous 1829); as an apprentice apothecary he would have been taught about the medicinal use of plants and would have needed to be able to identify native species. He received his licence in 1830. On 16 May 1831 at Surgeons Hall, Edinburgh, Scott was admitted as "fully qualified to practise the arts of *Anatomy, Surgery, and Pharmacy*", and received his diploma (Scott 1831). Subsequently, David H. Scott, "Hibernus", was listed as a graduate of the

University of Edinburgh, having defended the thesis "De Ophthalmia" (Anonymous 1867: 94). Unfortunately there is a gap in the records of medical students attending the University for the early 1830s and consequently details of Scott's studies cannot be retrieved (Denise Anderson, *pers. comm.*, 29 June 2017). According to *The medical* register, Scott was also a Licentiate of Apothecaries Hall, Dublin. There is evidence in other places that David Howe Scott was a respected botanist. He was elected a life member (non-resident) of the Botanical Society of Edinburgh on 13 May 1841, and also was appointed its local secretary at Cobh (Anonymous 1841) — he continued in that role, as far as can be determined, until at least 1850. Dr Scott died on 12 April 1885 at his home, "Alta Villa", Queenstown, and the register of deaths records his age as 79, meaning his birth date was about 1806.

Scott was a prominent medical practitioner in Cobh (or, as he spelled it, Cove: known between 1849 and 1920 also as Queenstown). For example, he was one of five medical men who in 1832 signed a letter to the local newspapers decrying the "unauthentic and greatly exaggerated account of the Cholera and its effects in this town" being published by local newspapers (Millet et al. 1832). In 1849, he was Honorary Physician to the Cork Fever Hospital, and consulting physician to the Dispensary in Oueenstown. He was particularly interested in the climate of Cobh in relation to that of other cities and towns, publishing comparative tables (Scott 1838b, 1840b) as well as "a very minute, comprehensive, and able report of [the] medical topography" of Spike Island, situated in Cork Harbour (Anonymous 1839). "The medical topography of Cove" (Scott 1838a) was issued in the Dublin journal of medical science in March 1838 and was subsequently extracted in other periodicals. The work also formed part of Scott's (1840a) A guide of Cove: and the harbour of Cork; ... and the medical topography of Cove, published in 1840 by Messrs Bolster in Cork: this is an extremely rare work (see de Búrca 2013: 95, item 363). In November 1849, Bradford and Co., 44 Patrick Street, Cork, republished it as *The medical topography of Queenstown* ... with some notice of the natural history of the locality (Scott 1849; Anonymous 1849), and, as noted by Mitchell (2000), eight pages in this edition were devoted to a "List of indigenous plants" (Scott 1849: 95-102).

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Ajuga × *pseudopyramidalis* Schur: spontaneous hybrid in an Irish garden

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Records and opinions of the rare and seldom seen hybrid of the Pyramidal and Common Bugles, $Ajuga \times pseudopyramidalis$ Schur (Stace *et al.* 2015), have a chequered history in Ireland. The hybrid was first collected by Patrick B. O'Kelly in the Burren, Co. Clare, who sent a specimen to G.C. Druce at Oxford. Scannell & Synnott (1987), under the name $Ajuga \times hampeana$ Braun & Vatke, listed it as a doubtful record. Webb & Scannell (1983) gave a reason for the doubt in that the collection location of the hybrid as "Ballyvaughan" was 15km from the nearest station for *A. pyramidalis*. In Nelson & Walsh (1991), Nelson stated the collection location to be "Ballyreen Mountain". Later, Nelson (2000a), stated "The status of this plant is most uncertain" and "Extinct or very rare, if not a phantom" (see Nelson 2000b: 57).

Scannell (1988) published an account of the history and presence of a specimen collected by O'Kelly in the Burren from the herbarium of the Reverend William Bentley which clarifies the record and identifies the correct location of the specimen as Ballyryan. The incorrect transcription of Ballyryan to Ballyvaughan was what caused the initial doubt as to the authenticity of the specimen. The specimen is now in DBN but was previously in LIMFC (Kent 1984, Reynolds & Scannell 1992).

Scannell (1988) reported that, although living material was not present, examination of the dried Bentley specimens showed morphological intermediacy in a number of characters. Observations included presence of stolons, hair presence and placement on stem, hair presence and crenulation of leaf and various characters associated with the flowers and bracts. Observations of the hybrid also come from a small population in Easter Ross, Scotland where Ballinger & Ballinger (2007) reported similar morphological intermediacies. The hybrid is considered sterile, possibly based on the "shrunken and abortive" pollen observed by Scannell (1988). However, Dines (*pers. comm.* in Stace *et al.* 2015: 54) reported 57%, and Ballinger & Ballinger (2007) reported 25% pollen stainability in the Scottish population of

Torr Achilty, Easter Ross. Also noted in the account in Stace *et al.* (2015) is the similarity of hybrid populations to one or other of the parents.

The hybrid has occurred spontaneously in Ireland in a County Meath garden. The *Ajuga reptans* parent is the deep purple-leafed cultivar, *A. reptans* 'Atropurpurea'. The plant of *Ajuga pyramidalis* is from its Connemara station. The hybrid plants show some intermediate traits as mentioned by Scannell (1988) and Ballinger & Ballinger (2007) with some traits tending towards one parent. Examination of the hybrid plants also showed the production of seed. The only reference to the hybrid producing fruit is in a letter from P.B. to Druce dated 31 July 1909 (see Nelson & Walsh 1991: 169).

On 6 June 2017 ten seed each from five individuals were sown in a soilbased potting mix with added grit and kept on a bench in a polythene tunnel. Germination was first observed on 30 June 2017 and continued to late August 2017. On 31 August 2017 germination rates of the five seed lots was 2/10, 3/10, 1/10, 3/10 and 1/10. Another ten seeds were sown on 5 July 2017 and left on a mist bench at the National Botanic Gardens, Glasnevin. By 31 October 2017 five seedlings had germinated and the pot removed from the mist bench. The deep colouration of the parent *A. reptans* 'Atropurpurea' has been passed to some of the progeny.

A voucher specimens of the hybrid has been deposited in **DBN** (Accession number 2017.03 and seed has been lodged in the seed bank of the National Botanic Gardens, Glasnevin (Accession number 2017.1130). There is a small amount of additional seed available on application to the author.

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Euphorbia hyberna (Irish Spurge) in southern counties

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Introduction

The Irish Spurge has been reported from Ireland since the middle of the 17th century when it was referred to as *Tithymalus Hibernicus* in the catalogue of plants (Anon., 1650) attributed to William Howe (1620-1656). William Petty (1623-1687), writing in 1672, called it Mackenbory and added that it is a Tythemal 'of which there are vast quantities in that part of *Kerry* call'd *Desmond*' (Petty, 1691). Caleb Threlkeld (1676-1728), who gave no locations but his interest was in the Dublin area, called it *Tithymalus Hibernicus*, Makinboy, Knotted Rooted Spurge (Threlkeld, 1727). John K'Eogh (1680-1754) called it *Tithymalus Hibernicus montanus*, Makinboy, or Makinbeigh au thle, Mountain or knotted rooted Spurge (K'Eogh, 1735) where au thle seems to be an unedited term meant to be *an t-sleibhe* (of the mountain)! Mackinboy is an Anglicization of the Gaelic *Meacan buidhe an tsleibhe* mountain or knot-rooted spurge (O'Reilly, 1821). It was assigned to *Euphorbia hyberna* by Linnaeus who gave its habitat as Ireland, Siberia, Austria and the Pyrenees (Linnæi, 1753).

The plant was of particular interest to early botanists because of the fabulous tales regarding its medicinal qualities, for example, that even carrying it in one's clothes could cause a purging effect (Anon., 1698). Two Irish doctors, writing to John Ray (1627-1705) from Clonmel in 1697, related an incident where, being given a dose of it in milk by a country quack doctor, a young boy died (Derham, 1718). The milky sap was used by the country people in parts of Cork and Kerry to treat warts. The Irish Spurge is extremely toxic to fish and was also used for poaching of salmon and trout when the crushed roots and stems of the plant were placed in the river or floated in a wicker basket.

A member of the so-called Lusitanian flora of Ireland *E. hyberna* may have survived the Last Glacial Maximum as a plant relict or, as suggested by palaeodistribution modelling and phylogeographical studies, recolonized in post-glacial times from refugia in areas of northern Spain and southern France (Beatty *et al.*, 2015). The plant's modern distribution in Ireland, where it reaches its northern European limit, has been reasonably well documented (Preston *et al.*, 2002) occurring mainly in the south of the country in Kerry, Cork, Limerick and eastward as far as Waterford with outlying stations in Galway, Mayo and Donegal (Scully, 1916) as well as occurring as an introduction in Antrim, Down and Monaghan (Wyse Jackson *et al.*, 2016).

The main object of the present study was to collate and plot the author's records of *E. hyberna* in southern counties and to examine its occurrence in relation to factors such as soil and altitude.

Methods

Records of *E. hyberna* were collected in the period 2007 to 2013 in southern Irish counties chiefly during biological surveys of rivers for the Environmental Protection Agency (EPA). Further surveys were undertaken in 2015, 2016 and 2017 in areas not covered in river-monitoring programmes. The areas studied comprised 13 southern Irish vice-counties (**H1-H8**, **H10** and **H11-H14**).

The distribution map of *E. hyberna* was compiled using MapMate. The occurrence at altitude was gauged using the Ordnance Survey Ireland (OSi) Discovery Series (1:50,000) maps from contours rounded to nearest 10m. Soil and subsoil type was determined using the EPA Map Viewer (http://gis.epa.ie/Envision).

Results

E. hyberna was recorded at 140 locations in 70 hectads of southern counties. Most of the records (74%) were riverside locations with 24 per cent at roadsides and two per cent from other habitats including a knoll and wooded islet both of which were sea-coast locations. It was recoded in seven vice counties (**H1-H6** and **H8**) in Kerry, Cork Limerick and Waterford. The occurrence of *E, hyberna* in southern counties from records collected during this study is shown in Figure 1 based on presence in 10-km squares. This clearly shows the species greatest concentration in Kerry and Cork with respectively 47 and 42 per cent of records. The two other counties where it was found, Waterford and Limerick, accounted for seven and four per cent respectively of occurrences.



Figure 1. Occurrence of *Euphorbia hyberna* in southern Irish counties (140 records in 70 hectads) with inset showing study area.

When broken down into vice-county distribution South Kerry (**H1**), followed by West Cork (**H3**) and North Kerry (**H2**) had most recordings accounting for 70 per cent of the total.

E. hyberna was found mostly on Old Red Sandstone which underlies large areas of Cork and Kerry over to west Waterford but occurs in other parts of Ireland where the plant is not found. For example, it has been found on other bedrock types such as on Granite in Galway and Donegal (Hart, 1873) and during the present study on Sandstone and shale. Its association with sandstone is best illustrated by subsoil type where it occurred at 54 per cent of locations on Sandstone till of Devonian age and at 28 per cent of Shale and sandstone till of Namurian age (Figure 2). Overall, 89 per cent of occurrences were on bedrock containing sandstone with the remainder on alluvium, peat and bare rock strata. It was found on five of the nine major soil types in Ireland (Fay *et al.*, 2007), **Podzols**, Brown Podzolics, Grey Brown Podzolics, **Acid Brown Earths**, **Gleys**, Brown Earths, Rendzinas, **Lithosols** and **Peat** as well as **Mineral Alluvium** (Figure 2). A large proportion of the plant's occurrences were from riversides and the soil types that are influenced by water (Alluvial and Gley) accounted for 49 per cent of the soil associations (Figure 2).



Figure 2. Percentage occurrence of *Euphorbia hyberna* on soil and subsoil type in southern counties.

E. hyberna was found at altitudes between 0 and 260m with the highest elevation beside the Glen River, near Glencam Bridge (W422.879), in Cork (**H4**) and the lowest at sea level on an islet, just west of Parknasilla (V705.643), in Kerry (**H1**). The findings show a mean altitude of 108m and median value of 110m with

Altitude	Records		
(m)	Number	%	
0-50	31	22	
51-100	37	26	
101-150	41	29	
151-200	23	16	
201-250	7	5	
251-300	1	1	

Table 1. Occurrence of *Euphorbia hyberna* with altitude in southern counties.

the most frequently occurring elevations 120m and 150m which at seven per cent of sites each is scarcely significant. Perhaps, of more significance is that just six per cent of occurrences were above 200m (Table 1). The data would indicate a trend of decline with altitude although the study was biased in that proportionally less sites were surveyed at higher elevation.

Discussion

The Irish Spurge is a handsome species (Praeger, 1950) displaying stunning elegance and beauty with few equals in the Irish or British flora (O'Mahony, 2011). Praeger (1934) noted that the plant's appearance in summer is often marred by a profusion of the fungus *Uromyces tuberculatus*, now *U. tinctoriicola* (Muskett & Malone, 1980), resulting in a spindly growth and a golden colour to its stem and leaves. During the present study plants dying off in late summer and autumn had stems turning red in colour. In some areas along the south-west coast the plant can persist late into the year as evidenced by a record at Parknasilla in Kerry of it not having started to die back by 18 October 2015 (Fiona Devery, personal communication).

Apart from its intrinsic value and interest from a biogeographical aspect as a member of the restricted Lusitanian flora, *E. hyberna* should also, perhaps, be considered as a heritage species in Ireland due to its cultural value in terms of medicinal use and in the poaching of fish! Recently it has been referred to as 'The not-so-Irish spurge' (Beatty *et al.*, 2015) but it has always been regarded as the spurge of Ireland, as its Latin names (*hibernicus, hibernia* and *hyberna*) attest, and was only known as an Irish species in these islands until first recorded in southwest England in the 19th century (Hore, 1842).

The plant is relatively common in South Kerry (H1), North Kerry (H2) and West Cork (H3). Less so in Mid Cork (H4) where it accounted for 16 per cent of occurrences with under half of that proportion recorded in Waterford (H6) which was reduced by another half in both East Cork (H5) and Limerick (H8). Curiously, it is scarce on the Dingle Peninsula (H1) despite seemingly suitable soil conditions and further west is absent from the Blasket Islands (Barrington, 1883). Regarding its island occurrence it is locally common on the larger islands off West Cork (Akeroyd, 1996) and off Kerry also relatively common on Valencia. On the latter island, during the present study, the invasive species *Gunnera tinctoria* (Giant Rhubarb) was also regularly encountered.

During the study two growth forms were apparent: in open space and as understory vegetation, the former a robust bright green plant and the latter a more delicate darker green specimen. The plant was found under conditions ranging from deep shade through dappled shade to bright light (see photos on back cover). *E. hyberna* was only found on base-poor soils. That the species will only produce viable seeds under certain soil conditions is illustrated by the experience of Arthur Stelfox (1883-1972) who, in his youth, collected a plant from Kerry in 1899 to cultivate. This plant moved with him, from garden to garden, over a long period but only flowered and set seed after he moved north from Dublin to Newcastle in 1956 (Stelfox, 1963). With regard to altitude, the present study strengthens the view that *E. hyberna* is predominantly a lowland species in Ireland with 94 per cent of recording at \leq 200m. Henry Hart (1847-1908) observed that in Kerry while the species was found at heights of 366 and 290m, along Ireland's highest mountain range, it was more common lower down (Hart, 1883).

The observations were largely made during river surveys which particularly favoured riparian-location recording but were somewhat balanced by travel to these as well as specific outings to areas not covered in river-monitoring programmes. Although the distribution of *E. hyberna* appears to be stable in Ireland, local stands of the plant have been lost due to hedge-cutting and road-widening as well as through general land reclamation and river drainage work. In Waterford a few of the river sites are in danger of being overgrown by Rhododendron (Green, 2008) while 'one-off' housing developments have been identified as endangering its hedge-bank habitats in Cork (O'Mahony, 2009).

The first location-specific literature record for the Irish Spurge appears to be by the clergyman-naturalist John K'Eogh (1680-1754) in a place he called Anakirk in Co. Limerick, where he said it grew in abundance (K'Eogh, 1735). However, this location has not been established by later botanists (e.g. Moffat, 1898; Reynolds, 2013). Similarly, the record of Thomas Anderson (1832-1870) on the Waterford side of the Suir, near Clonmel (Anderson, 1851), was not located by the author despite an intensive search of the area in 2015. The records from the present study are particularly valuable in that they supplement the other modern records for Limerick (Reynolds, 2013) and Waterford (Green, 2008) where the species has a limited distribution. The 140 records from this study add substantially to those in the BSBI database and have been donated to the seven respective vicecounty recorders for the *Atlas 2020* project. These records fill a void regarding riparian occurrence in particular and the distribution of *E. hyberna* in southern counties of Ireland can now be said to be reasonably well mapped.

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Recording in Counties Kerry, Mayo and Westmeath for Atlas 2020 with a grant from the Wild Flower Society

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Once again, I was lucky enough to be awarded a grant from the Wild Flower Society to record for *Atlas 2020* in Ireland during 2017. I made two separate visits to Kerry and Mayo and did scattered groups of days in Westmeath.

I was given a target of 200 plus species, for each hectad I visited in Kerry and Mayo, and 300 plus species in Westmeath, where the hectads generally had a much higher number of species recorded, compared to the other two counties. With Kerry, this was no problem, I often reached my goal and to my surprise I frequently recorded more species than the BSBI DDb had listed for the hectads. This was partly due to the fact that I tended to record in the parts of the county that were not well known, as there were no rare species to find or the scenery wasn't stunning. Mayo, on the other hand, was the complete opposite. I hardly ever reached my target of 200 species per hectad as this county has some very large tracks of open moorland and mountains. Even very common species could be a challenge or impossible to find. Westmeath was another story again, as hard as I tried, I never quite seemed to reach my target.

Before I visited each hectad I would spend the evening before looking on the DDb to see which species still needed post 2000 records. Often, it was every species. This would also give me a guide as where to go and what habitats I needed to find in my chosen hectad for the following day, and what species I might encounter. I would also scan the aerial photos on the internet for likely habitats of any rare species that might be on the list for the hectad. One of the frustrating things was that very little data seemed to be available on the DDb, better than at a hectad resolute. An area 10 x 10 km is a very large area to find a species! I soon found that I could pick out a raised bog by the shade of brown on the aerial photos, I used this to find *Vaccinium oxycoccos* (Cranberry), *Andromeda polifolia* (Bog-rosemary) and *Carex limosa* (Bog-sedge), I could find the latter two every time I looked for them.

Kerry H1 & H2

I saw many wonderful species in Kerry from my two visits. The first being in early June and the second visit in August. The highlights for me was finding a new hectad record for *Asplenium obovatum* (Lanceolate Spleenwort), on two tombs in a graveyard at Srugreana (V53127949). The best overall species has to be *Atriplex praecox* (Early Orache) from the shore of Valentina Island (V37647373), as this was a new native species for Ireland. My two favourite memories are, on a very sunny day, fully open *Cicendia filiformis* (Yellow Centaury), hundreds of golden yellow stars in the centre of a track. The other being watching the tourists stopping to take photos of *Crocosmia x crocosmiiflora* (Montbretia) and *Crocosmia pottsii* (Pott's Montbretia), which turn many of the ditches red-orange in the southwest of Kerry. Both may be non-native species, but at least, the general public were taking an interest in the plants.

Mayo H26 & H27

Some of the hectads can be very demanding in this very large county. I pulled over to start recording in M07 (Glennagashleeny), all I could see was brown moorland stretching into the far distance and mountains, thinking this is going to be a challenge. At the same time, a bus of tourist stopped, all the passengers disembarked and started taking photos of the scenery, and at least they were having a good time! The reason for choosing this particular hectad was that, eleven years previous, I had seen Hypericum canadense (Irish St John's-wort) along the same road in the hectad below, northwest of Toormakeady. It wasn't long before I found the Irish St John's-wort on the roadside and along a moorland track. Hearing the roar of water, I followed the river, I soon came across a magnificent waterfall. Gleannagashleeny (M05787017). One bank was a mixture of earth and rocks, dripping in Thalictrum minus (Lesser Meadow-rue), and the other side of the waterfall was an area of scree and large rocks, here were many patches of Phegopteris connectilis (Beech Fern), keeping moist from the spray of the water. A nearby rock ledge had a large patch of *Daboecia cantabrica* (St Dabeoc's Heath) and Vaccinium vitis-idaea (Cowberry), both fully in flower, a combination I have never seen previously. I had a lovely time, a few hours that I will remember for a long time to come. I wonder if the tourist would be able to recollect where they had taken their photos?

One of the reasons for visiting Mayo in September, was to look for new *Atriplex* (Orache) and their hybrids for the county. The real highlight was finding *Atriplex praecox* (Early Orache) on the shore of Roman Island, Westport Quay (L97288463), the third county for this species in 2017. Encounters with strangers can lead to new species being found for a county. I was walking along the shore of Rosclave Channel (L9792) (southwest of Newport) looking for *Atriplex* when a mother, pushing her young child in a pram, stopped and asked what I was doing. It

soon came apparent that she knew what I was talking about. It turned out that she was a past student of Micheline Sheehy Skeffington. I explained I was looking for coastal habitat where there was over hanging Blackthorn and Hawthorn as this was the best place to find *Atriplex longipes* (Long-stalked Orache). She told me to take the next boreen and I would find the habitat I was looking for. Within a few minutes I had found *A. longipes* under the hawthorn. The first record for this species away from the southeast coast of Ireland.

Westmeath H23

This is not a county for wonderful Irish scenery, but certainly makes up for it with the flora. As I don't very often botanise on limestone it just seemed to be a magical area to go plant recording. There were also many loughs, canals, raised bogs and many large areas of waste ground to explore. Orchids were so plentiful, they were rather overwhelming. I had to teach myself the differences between the three Gymnadenia (Fragrant Orchids), something I had never attempted before. Epipactis palustris (Marsh Helleborine) was often found on waste ground, along with Eriophorum angustifolium (Common Cottongrass). Filago vulgaris (Common Cudweed) was a nice find at Kinnegad (N60094514). The best record, from waste ground at Kilmacuagh (N06903985), was three plants of Epilobium x argillaceum a hybrid between E. parviflorum (Hoary Willowherb) x E. brunnescens (New Zealand Willowherb). This is a second record for the planet, the other being from Cornwall. From the River Brosna at Ballinwire (N33753645), Potamogeton x angustifolius (P. lucens (Shining Pondweed) x P. gramineus (Various-leaved Pondweed)) was abundant, and this would appear to be the first county record since 1895. My favourite find was a new county record for the rare native Hypericum hirsutum (Hairy St John's-wort) spotted on a road verge at Crosserdree (N53065902), while driving along on a wet day.

Validating my records on the DDb

I checked all the records I had made, before uploading them from MapMate to the DDb, for any kind of errors. I thought I had noticed them all..! This is where the DDb comes in so handy, it highlighted that one map reference was out to sea, three native species were more than 100 km out of their native range and many of the Mayo monads I had recorded in, were not within the vice-county. To my surprise the modern county boundary for Mayo is nothing like that of the vice-county boundary. County Mayo has swallowed up large areas of West Galway (**H16**) and Sligo (**H28**) and lost land to Roscommon (**H25**).

Overall effort

15,906 records were collected between the three counties. 72 hectads were visited. I spent the best part of a day recording in each of 41 of them: 13 had 100 plus

species recorded, 18 had 200 plus species recorded, 9 had 300 plus species recorded and 1 had 414 species. The other 31 hectads were just visited briefly. A little recording was also done in Counties Galway, Limerick, Roscommon and Sligo. Besides the errors mentioned under 'validating' above, the DDb also highlighted new county records and all the records new for hectads. This was a good way of seeing my achievements at a quick glance.

Cyperus eragrostis Lam. at Taiscumar Reservoir, Mid Cork (H4)

By John Christopher Wallace, Vice-County Recorder for Mid-Cork (H4) E-mail: johnwiegm@gmail.com

Cyperus eragrostis (Pale Galingale) is a native of Tropical America (DeFilipps in Tutin *et al.* 1980) which grows in a wide range of paludal habitats (Verloove, 2014, O'Mahony, 2008). Petřík (2003) who thoroughly documented the spread of the species in Europe states that the earliest recorded occurrence in Europe is for Hamburg in 1854. The earliest record traced for the UK was in 1872 when it was found in ballast near Sandhills Station, Liverpool by John Harbord Lewis (**MANCH** 95581, **MANCH** 95583 see Figure 2 inside cover page 1.). This species seems to be spreading throughout Europe (Weber & Gut, 2005) and more recently this species has been found in Belgium (Verloove 2006), the Netherlands (Bremer 2006) and Slovenia (Dakskobler and Vreš 2009). The earliest record traced for Ireland was in 1997 when a single plant was found on the verge of the N25 by Paul Green and Geraldine Crouch at Abbeyside near Dungarvan, Co. Waterford (**H6**) (Reynolds, 2002).

C. eragrostis was first discovered at Taiscumar reservoir by Tony O'Mahony in 2001 (O'Mahony 2002) and was noted to have spread in the period from 2001 to 2008 (O'Mahony 2008). I first encountered this species in 2007 further upstream at Coolcower (H4, W37K). Taiscumar reservoir is a man-made reservoir created as part of the river Lee Hydroelectric Scheme in the period 1952 to 1957 (McCarthy and O'Donoghue 2008) by the construction of two dams on the river Lee. The largest dam is at Inniscarra (H4, W54.72) which marks the eastern boundary of the reservoir. The smaller of the dams is at Carrigadrohid (H4, W40.72) which marks the western boundary. It is used as a reservoir for the Cork region and to generate electricity for the national grid. It is also used for recreational activity such as swimming, sailing, wake-boarding, skiing, kayaking, canoeing, fishing and is also the home to the Irish National Rowing Centre.

Recently I have noticed this species more and more at the Innisleena recreational area (**H4**, W519.729) where my family and I often go to swim. Tony O'Mahony also commented that this species will most likely spread throughout the

River Lee Reservoir (O'Mahony 2008). I was wondering if this species was indeed spreading or was it just that I was noticing it more. In order to answer this question I thought it imperative that a complete survey of the reservoir was required in order to establish a baseline from which subsequent surveys may assess whether or not the species is spreading.

On the 7th and 21st of July 2017 a survey of the lakeshore was conducted by boat and by foot. The area surveyed was between both dams. This survey highlighted that the largest stands are at W5172, W4973, W5073 and W5072 where several hundred plants occur on the lakeshore. The most abundant site is at the bay in Fergus (W502.722) where this species is the dominant species on the waterline. To the east of these locations there are dotted populations up to Inniscarra Hydroelectric Dam. Several searches to the east of Inniscarra Hydroelectric Dam down river to Ballincollig Regional Park has failed to find this species. The western-most site for this plant is at W4671 where a single plant was found. West of this site no more plants were found. This needs to be observed as this site and sites further west, such as the wetlands near Carrigadrohid (W41.72), are ideal habitats for this species.

The early introductions of this species are most likely associated with shipping from the Americas (Petřík, 2003) as is evidenced from the early Liverpool record being found in ballast. Petřík (2003) also rightly identifies later introductions being associated with horticulture as *Cyperus eragrostis* appears in encyclopedias on gardening and houseplants (Grounds 1979; Walters *et al.* 1984, see also the Royal Horticultural Society's website which lists 10 nurseries currently supplying this species). The likely cause of the introduction of this species into Taiscumar Reservoir is a Garden Centre located on the banks of the reservoir near Dripsey (W5073) or perhaps a Quarry at Inishleena (W5172), both of which are located on the shoreline near the largest stands of this species.

The water level in Taiscumar Reservoir varies depending on rainfall, water consumption and power generation at both dams. *C. eragrostis* seems to prefer the locations that are most often inundated. Hence the species is found closer to the water-margin and in wetter habitats than most other similar species such as *Phalaris arundinacea* (Reed Canary-grass) and *Juncus effusus* (Soft-rush). With the exception of the Fergus site (W502.722) there is good separation between individuals of this species which allows *Phalaris arundinacea*, *Juncus effusus*, *Callitriche* ssp., *Montia fontana* (Blinks) and *Mentha aquatic* (Water Mint) to grow. While this species would not currently be of concern, the fact that it is so dominant at the Fergus site (W502.722) would cause concern. It therefore needs to be monitored over the coming years to ensure that it does not become a pest. This study, though limited in both time and resources, forms the baseline for future monitoring and it is hoped that more detailed studies, discussion and appreciation of a wonderful resource will arise from its publication. Few aesthetically pleasing

creations or even less are the enhancements of nature that arise out of the meagre efforts of mankind remodelling nature, Taiscumar reservoir is one rarity which somehow has achieved both of these.

Acknowledgements:

I would like to thank David Earl, Vice-County Recorder for Lancashire, v.c.c. **59** & **60** for locating the John Harbord Lewis record from 1872 (MANCH95581, MANCH95583) and Dr Rachel Webster, Curator of Botany, Manchester Museum (MANCH) for providing the image of the record.

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Short guide to Ivies growing wild in Ireland

Paul R. Green, Yoletown, Ballycullane, New Ross, Co. Wexford, Y34 XW62

Since I ran a mini Ivy workshop, at the Irish BSBI Members Conference in 2016, I have had a steady follow of members asking about which Ivy they have.

Alison Rutherford and Dr Hugh McAllister, the BSBI Ivy referees, both feel that 99.9% of all Ivies found growing wild in Ireland, are going to be *Hedera hibernica* (Atlantic Ivy). After looking at many Ivies the last two years, including all those brought along to the workshop, I would agree with them.

I have started revisiting the sites where I had recorded *H. helix* (Common Ivy) from over the last ten years. All that I have checked have all been renamed *H. hibernica*.

It wasn't until I was in the Channel Isles in 2016, that I reckon I saw my first 'true' *H. helix*. The clear stalked white hairs were unlike any I had seen before. The same was also true on a visit to Greece.

Main identifying features to look for

Shoots

Only look at young shoots with young leaves that are creeping along the ground/hedge bank. Don't look at shoots that are climbing upwards as these are no good for the purpose of ID, as they are going to be the flowering/fruiting shoots.

<u>Hairs</u>

Only look at hairs on young shoots and the underside of the young leaves. Occasionally there can be so many hairs, that hairs that come unattached, get tangled amongst the other hairs and can give the impression they are sitting away from the surface, making the observer think that the hair has a stalk. You will find on the other hand that some ivies have no hairs, however hard you look.

Hair colour and shape

Be careful as books can be a little misleading describing the hair colour. The hairs are like tiny stars. If possible use a hand lens with a light to help you see the hairs.

Species

Hedera hibernica (Atlantic Ivy) – hairs usually are very pale brown. They can be an off white or very pale brown radiating from the centre of the star to off white on the rays of the star. The star shape hairs sit prostrate on the surface of the shoot or leaf as though they are stuck down with glue.

Hedera helix (Common Ivy) – hairs from my own experience are a pure white with a very obvious stalk (like a palm tree).

Hedera algeriensis (Algerian Ivy) – this has very reddish/ginger hairs which are prostrate on the shoots and leaf surface. Some of the rays may be fused with each other for part of their length.

Hedera colchica (Persian Ivy) – has reddish/tawny hairs which are prostrate and many of the rays are fused together almost to the tip of the hairs.

Leaf shape and marble markings

The shape and size of the leaf is so variable that it isn't really worth taking too much notice of, as with the lobes of the leaves. Some leaves can be very dissected and others hardly have a lobe. This applies to all four species. But generally *H*. *helix* has smaller leaves than the other three species.

All four species can have leaves with marbled marking. Generally *H. hibernica* has no marbled markings. Both *H. algeriensis* & *H. colchica* both have many cultivars which have leaves that are much marbled.

Distribution in Ireland

Hedera hibernica (Atlantic Ivy) – very common. Only native Ivy in Ireland.

Hedera helix (Common Ivy) – uncertain due to taxonomy changes. Likely to be a rare garden escape. In the past all Ivies were recorded as *Hedera helix*.

Hedera algeriensis (Algerian Ivy) – recorded from 33 locations in Co. Wexford (**H12**) since April 2015. Two sites are extensively naturalised in roadside hedges. The other sites are in hedges near old cottages or where a dwelling once stood. It must be elsewhere in Ireland..?

Hedera colchica (Persian Ivy) – recorded from two locations in Ireland. Mount Stewart, Co. Down (H38) and at Traad Point, Co. Londonderry (H40).

Stop press – Would you like to be a VCR? There are opportunities...

We have a number of areas which are vacant, or in need of joint recorders. Let me draw your attention to one in particular. <u>Tyrone</u> is a fantastic county, with an active and extremely knowledgeable recorder. Ian McNeill has been in post for many years, but is planning an orderly stepping down. This would be a fantastic opportunity to come on board as a joint VCR with Ian, and to work in tandem with an established recorder for a good period of time. What better way to get started?! If this interests you at all, or you'd like to know more, get in touch with Maria, the Irish Officer (maria.long@bsbi.org).

Some comments on the phytogeography and morphology of *Rosa* L. Section *Caninae* DC (Dog-rose) species and interspecific hybrids in Britain and Ireland, with particular reference to the cross, *R. sherardii* Davies x *R. rubiginosa* L. (= *R.* x *suberecta* (Woods) Ley)

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Introduction

Following on recent taxonomic and nomenclatural changes in the genus *Rosa* sect. *Caninae* DC., as represented in the British and Irish Flora (Maskew 2017a), *thirteen* indigenous dog-rose species are currently recognised, in addition to one naturalised species of subsect. *Villosae* (DC.) Crep. in England – *R. villosa* L. (Villous Downyrose) (Maskew 2017b, 2018a). The major taxonomic changes that have extended the British and Irish species list, were initiated in an effort to bring the taxonomy of certain taxa within *Rosa* sect. *Caninae*, more in line with the treatment in use on the European mainland. The consequences of such realignments are as follows:

- *Rosa caesia* Sm. subsp. *caesia* is now raised to species rank as *R. caesia* Sm. (Northern Dog-rose).
- *Rosa caesia* Sm. subsp. *vosagiaca* (N.H.F. Desp.) D.H. Kent is raised to species rank as *R. vosagiaca* (N.H.F. Desp.) Déségl. (Glaucous Dog-rose).
- Two (of the four) informal taxonomic groups within *R. canina s.l.*, as utilised in the work, *Roses of Great Britain and Ireland* (Graham & Primavesi 1993), are also upgraded to species status, namely: 'Group *Pubescentes*' is now equated with the species, *R. corymbifera* Borkh. (Hairy Dog-rose), and 'Group *Dumales*' is given species status as *R. squarrosa* (A. Rau) Boreau (Glandular Dog-rose). With regard to these current changes, it is interesting to note that Wolley-Dod (1931-32) and Melville (in Stace 1975) had given species status to three of these taxa, recognising *R. corymbifera* (as *R. dumetorum* Thuill.), *R. vosagiaca* (as *R. afzeliana* Fr.) and *R. caesia* (as *R. coriifolia* Fr.). Moreover, these latter two authors also listed the then-known interspecific hybrids involving these three species.
- In the monumental work, *Hybrid Flora of the British Isles*, Maskew (in Stace *et al.* 2015), recognised ten native species, and thirty-six interspecific hybrids involving these species within sect. *Caninae*, as represented in the British and Irish Flora. However, the increase in species number to thirteen within this group, following on a recent taxonomic review, has resulted in a concomitant increase in the number of interspecific hybrids also, of which
fifty-three are currently recognised (Bakker *et al.* 2017; Maskew & Stace 2018b).

A major conundrum for the rhodologist when dealing with a hybridogenous group such as sect. *Caninae*, is the *virtual lack* of really useful, *qualitative*, delimitation characters within subsect. *Caninae*, which gives rise to near-intractable taxonomic problems on a European scale. Consequently, there is *still* no consensus as to how many 'good' species occur throughout this region. Such a situation is understandable and inevitable, in a subsection that shares a very limited pool of morphological characters, where each 'species' is circumscribed by the particular suite of characters that it has inherited. Moreover, this interlaced pattern of morphological complexity is further compounded and blurred by the reality of ongoing interspecific hybridisation, and by the different species-concepts/speciesinterpretations held by rhodologists.

The biology, morphology and phytogeography of some *Rosa* sect. *Caninae* species and hybrids in Britain and Ireland

The thirteen native, genetically stabilised dog-rose species currently recognised in the British and Irish Flora, are of relatively ancient hybrid origin and their parentage is not known, while they all display partial pollen-abortion, and all can potentially freely interbreed, as no genetic barriers seem to exist within this group. As a consequence, interspecific hybridisation is of widespread and frequent occurrence, and most hybrid offspring are *fruit-fertile*, their dissected hips displaying a full – or near full - complement of developed, viable, ivory-coloured achenes (cf. the account of Maskew in Stace et al. 2015). (Note: In the minority of hybrids within sect. Caninae in which fruit fertility is markedly reduced, this fact is most obviously indicated by the presence of aborted or malformed hips in the infructescences, the malformed hips bearing a variable quantity of undeveloped, often blackened, achenes. My own experience of malformed hips, is that the achenes which have matured, are often *symmetrical* in shape (e.g. ovoid or lanceoloid) rather than being angular, which is the normal achene-shape in fully fertile hips.) Ironically, such hybrid bushes may display no other morphological features that point clearly to the second parent of the binary cross. A much rarer phenomenon, and one seldom, if ever, highlighted in Rosa literature, is the occurrence of interspecific crosses displaying perfectly formed hips which, on dissection, are found to contain mostly aborted achenes. An example of this phenomenon is provided by the cross, Rosa corymbifera Borkh. (Hairy Dog-rose) x R. sherardii Davies (Sherard's Downyrose), which occurs in two disjunct sites in East Cork (H5) (O'Mahony 2007), its high fruit-infertility contrasting markedly, for example, with that of the fruit-fertile cross, R. canina x R. sherardii (= R. x rothschildii Druce). As a consequence of the widespread and frequent occurrence of interspecific hybrids within sect. Caninae throughout Ireland, Britain and mainland Europe, traditionally there has been a prevailing, unquestioning acceptance by rhodologists that these hybrids are of *polytopic* origin, arising spontaneously and freely within those regions where their parental species cohabit. The reality, however, is often *quite at odds* with this view, as a suite of factors have a bearing on the occurrence, recognition, distribution and frequency of any particular *Rosa* hybrid, while their combined effects frequently result in anomalous and wholly unexpected distribution patterns for certain interspecific hybrids in Britain and Ireland. Some examples follow:

1. It is a well-known fact that *reciprocal* interspecific crosses within the polyploid sect. Caninae, are often very different in visual appearance, the hybrids, in each instance, morphologically resembling their respective female parent which, in the case of pentaploid hybrids, provides four-fifths of their genomic inheritance – a factor reflected in their gross morphology. For instance, with regard to the hybrid R. micrantha Borer ex Sm. (Small-flowered Sweet-briar) x R. rubiginosa L. (Sweet-briar) (= R. x bigeneris), it is usually far easier to recognise the cross R. micrantha x R. rubiginosa (given the presence of a variable quantity of acicles on its flowering branches, these inherited from its pollen parent, R. rubiginosa), than the reciprocal cross, R. rubiginosa x R. micrantha, which latter is more nondescript morphologically. No surprise, therefore, to find that the majority of British and Irish records for R. x bigeneris are of the cross, R. micrantha x R. rubiginosa (cf. Maskew in Stace et al. 2015). For the same reason, the hybrid crosses, R. tomentella Léman (R. obtusifolia Desv.) (Round-leaved Dog-rose) x R. canina (R. x dumetorum Thuill) and R. sherardii x R. rubiginosa (R. x suberecta) are more easily and confidently identified than are their reciprocals (see additional data on R. x bigeneris and R. x suberecta below).

2. The near-vicarious distributional ranges of *Rosa stylosa* Desv. (Short-styled Field-rose) and *R. mollis* Sm. (Soft Downy-rose) (the former confined to the south of Britain and Ireland, the latter of predominantly northern distribution) ensures that interspecific hybrids between these two species are likely to be very rare, as their respective ranges barely overlap. In fact, this particular hybrid has not been recorded to date, in either Britain or Ireland (Graham & Primavesi 1993; Stace 2010; Maskew in Stace *et al.* 2015).

3. Particularly noteworthy in phyogeographical terms, are the binary *Rosa* hybrids that *are dominant* either nationally or regionally in Britain, yet do *not* display a mirror distribution pattern on the island of Ireland. The most representative hybrid that immediately springs to mind in this respect, is *R. canina* x *R. vosagiaca* and its reciprocal – and, possibly also, *R. canina* x *R. caesia* and its reciprocal – these taxa



Above: *Fumaria densiflora*. Photo R. McMullen © 2017: (p.54). Right: *Rosa x suberecta*. Photo T. O'Mahony © 2017: (p.35) Below: John, Mary & Faith examine a member of the Brassicaceae in wet conditions. Photo M. Long © 2017: (p.71)









Ajuga x pseudopyramidalis. Above: seedlings. Below: mature plant. Photos B. Sayers (p: 18).





Above: David Webb Working on Flora Europaea with John Akeroyd. (p.7).



Above: Daniel Kelly and David Webb, the Burren, 1992 (photograph by P. Ryan). (p. 7).

being of common occurrence in northern Britain (where *R. caesia* and *R. vosagiaca* have their British headquarters), while they extend southwards in some abundance, as far as the English Midlands and Wales (Graham & Primavesi 1993; Maskew in Stace *et al.* 2015).

4. What is the explanation for the current paucity of British records for Rosa x bigeneris (= R. micrantha x R. rubiginosa and its reciprocal)? The map for R. x bigeneris (in Stace et al. 2015) gives only eighteen hectad records for this hybrid these sparsely scattered across SE and Midland England, where both parents frequently cohabit over extensive areas of chalk and limestone soils. Underrecording, in this instance, seems an inadequate explanation, even allowing for the fact that the cross, R. rubiginosa x R. micrantha is very easily overlooked because of its inconspicuous suite of morphological characters, as mentioned earlier. In Ireland, by contrast, the distributions of R. rubiginosa and R. micrantha rarely overlap, R. rubiginosa mainly occurring along the eastern and northeastern coastal fringe, while R. micrantha is confined to the southern half of the island, where it exhibits an anomalously skewed/contracted distribution pattern, having its headquarters on the calcareous soils of Mid Cork (H4) and East Cork (H5). Equally unexpected, is the fact that *R. micrantha* seems unaccountably *absent* from the extensive calcareous soils of the limestone Central Plain, while R. rubiginosa is only of occasional occurrence there. All the more surprising, therefore, to find that their interspecific hybrid, R. x bigeneris, is virtually confined to Co. Cork – mainly within the dominant area of occurrence of its R. micrantha parent – despite the fact that R. rubiginosa is of very local/rare occurrence within Co. Cork and Munster generally, and very rarely cohabits there with R. micrantha (O'Mahony 2011). To date, (i.e. 2017), I have recorded R. x bigeneris from ten hectads in Co. Cork (see map in Stace et al. 2015).

5. In Britain and Ireland, the interspecific hybrid *R. canina* x *R. tomentosa* and its reciprocal (*R.* x scabriuscula), and *R. canina* x *R. sherardii* and its reciprocal (*R.* x rothschildii), are both of widespread occurrence, as their respective parents commonly cohabit over wide geographical areas. Yet, even in these highlighted examples, there are notable exceptions to the general distribution patterns of both hybrids. For example, in my own extensive Rosa fieldwork in Co. Cork (**H3-H5**) during the period 1975-2017, *R.* x scabriuscula has proved to be the second most frequent hybrid in the county (recorded from at least seventeen hectads and thirty-two monads), the dominant hybrid being *R. sherardii* x *R. rubiginosa* (*R.* x suberecta) (see notes below). Inexplicably, however, only a single, old (1987) record exists for *R.* x rothschildii within this vast county, despite assiduous searches for it. In this instance, it is difficult to fathom what circumstance/factor could be

responsible for the glaring disparity in frequency, exhibited by these two hybrids in Co. Cork.

6. With regard to the hybrid cross, *R. rubiginosa* x *R. stylosa* (*R.* x *bengyana*), Maskew (in Stace *et al.* 2015) stated: "Although there is a rather broad overlap between the ranges of these two species, especially in south-eastern England, there are only two records of the hybrid." (Maskew added that the reciprocal hybrid has not been recorded to date in either Britain or Ireland.) Ostensibly, this situation is baffling, there being no obvious reason why this binary hybrid should be so much rarer in southern Britain than other hybrids involving *R. stylosa*. Contrast this situation with that of the hybrid *R. stylosa* x *R. canina* and its reciprocal (*R.* x *andegavensis*), which latter hybrid is known from 271 hectads, of which 256 were recorded from southern England, and only 15 from Wales (see map in Stace *et al.* 2015). In this particular case, the rarity of *R.* x *andegavensis* in Wales can largely be attributed to the fact that the *R. stylosa* parent is mainly restricted to the environs of the southern Welsh coastline bordering the Bristol Channel.

7. As stated earlier, *Rosa micrantha* has its Irish headquarters in Co. Cork, where it is almost invariably accompanied by an abundance of *R. canina*. Yet, their interspecific hybrid (*R. x toddiae*) has only been recorded *once*, to date – and that from a coastal site well outside the core area of distribution of *R. micrantha* in the county (see map in Stace *et al.* 2015). Equally puzzling, the hybrid between *R. micrantha* and *R. corymbifera* has *not* been recorded so far, despite the fact that these two species commonly associate in many parts of Co. Cork. These two examples fly in the face of the long-held assumption that interspecific hybridisation is to be expected, wherever rose species cohabit frequently.

The phytogeography and morphology of *Rosa* x suberecta in Britain and Ireland

The interspecific rose hybrid cross, *R. sherardii* Davies x *R. rubiginosa* L. (= *R.* x *suberecta* (Woods) Ley), a fully fruit-fertile hybrid, provides a further, excellent example of a most unexpected rose distribution pattern in Britain and Ireland. For, while the parents of this hybrid cohabit frequently in parts of Scotland and Midland England, to date *R.* x *suberecta* has only been recorded from a mere twenty-five hectads in Britain. Moreover, its British sites are widely scattered, predominantly occurring in the far north of Scotland, with only *a single* hectad record from Wales (see map in Stace *et al.* 2015). The phytogeographical pattern of *R.* x *suberecta* in Ireland is even more bizarre, the map in Stace *et al.* (2015) recording it from twenty-eight hectads, its headquarters being Co. Cork (**H3-H5**), where it is shown as present in twenty-one, predominantly contiguous, hectads, the remaining seven scattered hectads being in the north of the island. Furthermore, in stark contrast to

the paucity of records for this hybrid elsewhere in Ireland and Britain, R. x suberecta proves to be the most frequent rose hybrid in Co. Cork – where it is a gregarious and locally common shrub, that often cohabits with R. sherardii and R. tomentosa and, very occasionally, with R. rubiginosa (O'Mahony 2003, 2008, 2013). Currently (2017), the cross, R. sherardii x R. rubiginosa is recorded in Co. Cork (H3-H5) from thirty hectads and at least one hundred monads (i.e. nearly onethird of the county's hectads), and there is every indication that further intensive fieldwork will substantially add to these figures. All of these records were made by me over a protracted time-period (1975-2017). This is a remarkable situation, given the apparent rarity of this hybrid elsewhere in these islands, and bearing in mind that the parent species *verv rarely cohabit* in Co. Cork or Munster. Consequently, a polytopic origin for the Cork/Munster populations of R. x suberecta seems highly implausible. Moreover, virtually all of these widely dispersed populations share the same gross morphology – further arguing against a polytopic origin for them, and strongly suggesting that this cross is represented in Munster by only one or two biotypes. If this is, in fact, the case, then the hybrid must owe its present distribution to the actions of birds distributing its hips to new locations over a protracted period of time - possibly centuries. It is also tempting to attribute this paucity of morphological variation to apomixis - a rare or under-recorded phenomenon in the genus Rosa sect. Caninae, but confirmed relatively recently by Werlemark et al. (1999), Werlemark (2000) and Werlemark & Nybom (2001).

My photograph (see page 38) of R. sherardii x R. rubiginosa (taken in July 2016, near Courtbrack village (H4, W55.80), NW of Cork City) highlights the characteristic, dense aciculate armature that is almost always present on the hips and pedicels of Irish material of this cross, though the aciculate development on the branches beneath the infructescences (present in abundance in the photographed specimen) varies considerably between populations. (Note: Bushes of R. x suberecta displaying sparse, scattered, aciculate armature on the infructescencebranches, can all too readily be misidentified as R. sherardii (Sherard's Downyrose), if not examined in detail. In such circumstances, the subverticillate clusters of unequal-sized stem-prickles (at least some of which are dilated basally and hooked apically), in addition to the *admixture* of *R. rubiginosa*-type glands and *R.* sherardii-type glands on the foliage and sepals, clearly distinguish R. x suberecta from R. sherardii.) All Irish fruiting material of the cross, R. sherardii x R. rubiginosa that I have examined, bears erecto-patent, tardily deciduous sepals, while the fruit-discs are usually deeply concave, the stylar-orifice 1.5-2mm in diameter, and 1/3 or more the width of the disc. Moreover, the orifice-walls are smooth, and usually dilated inwardly, rather than being parallel, while the densely woolly styles form a short, twisted-entangled cylinder, that can easily be removed intact from the hip, by means of a thumbnail. Although a variable quantity of R. rubiginosa-type stipitate-glands are mixed with those of R. sherardii-type glands on the foliage and sepals of the hybrid, I have only ever detected the *resinous* scent characteristic of subsect. *Villosae*, emanating from this cross. With regard to fruiting British material of this cross, Graham & Primavesi (1993: 125) state: "Hips...glabrous or with a few acicles. Pedicels are more or less glandular-hispid, occasionally aciculate." As Maskew (in Stace *et al.* 2015: 90) reiterated this statement, the indications are that Irish fruiting material of the cross *R. sherardii* x *R. rubiginosa* is much more densely armoured than its British counterpart. In the same work, Maskew stated that the reciprocal cross (i.e. *R. rubiginosa* x *R. sherardii*) is very difficult to distinguish from its *R. rubiginosa* parent. With regard to this cross, Werlemark & Nybom (2001), using RAPDs, found that all the maternal molecular markers were transmitted to all of the offspring; that only 41% of the male markers were transmitted to all of the offspring, with a further 36% transmitted to a small proportion of them, and 23% to none of them.

A brief chronology of the recording of *R. sherardii* x *R. rubiginosa* in the Cork and Munster Flora

I began my study of Irish wild roses in 1973. In the summer of 1975, while undertaking Rosa fieldwork in the Glennamought River-valley (H5, W67.75), upriver of Glennamought Bridge, Cork City, I came across a thicket of a Rosa sherardii-like taxon that bore a dense armature of glandular-acicles on the infructescence-branches. Although only a novice rhodologist at that time, it was clear to me that this taxon did *not* accord with the morphological circumscription of R. sherardii as outlined by Warburg (in Clapham et al. 1962). Consequently, material was collected and vouchers were pressed, some of which were later sent to Dr Ronald Melville at **KEW** (the BSBI referee for *Rosa* at that time), who named this taxon as the cross, R. sherardii x R. rubiginosa (= Rosa x suberecta) – an addition to both the Co. Cork and Munster flora. Further voucher material of this hybrid cross was then sent to **DBN**, where it was subsequently re-examined, and reconfirmed, as R. x suberecta, by the BSBI referee Tony Primavesi, prior to the publication of the monograph, Roses of Great Britain and Ireland (Graham & Primavesi 1993). This novelty discovery, coming so early in my study of the genus Rosa, acted as a catalyst for my detailed research in later years and decades, on its distribution within Co. Cork and elsewhere in Munster. As noted in the introduction, it revealed R. x suberecta to be the dominant hybrid rose taxon in Co. Cork; an anomalous and most unexpected result, bearing in mind R. x suberecta's predominantly *northern* distribution in Britain. This fascinating situation clearly indicates that nothing can be taken for granted when it comes to the phytogeography of the taxa within sect. Caninae in these islands.

As noted above, *R. sherardii* x *R. rubiginosa* has been recorded, to date, from 30 hectads in Co. Cork, namely: W0.3., W1.6., W2.6., W3.7., W3.9., W4.6., W4.7., W4.9., W5.5., W5.7., W5.8., W5.9., W6.7., W6.8., W.6.9., W.7.7., W7.8.,

W.7.9., W8.8., W8.9., R2.0., R3.O., R3.1., R4.0, R.4.1., R.5.0., R5.1., R6.0., R7.0., R7.1. While the map of *R*. x *suberecta* in Stace *et al.* (2015) shows no other Munster locations for this hybrid, I have, in fact, also recorded it from Co. Kerry (H1-2) and Co. Waterford (H6) (see records below). At present, however, there are no known sites for *R*. x *suberecta* in the remaining Munster counties, namely: Clare (H9), Limerick (H8) and Tipperary (H7 & H10).

South Kerry (H1, V71.86.) At least one bush on a small roadside outcrop close to Blackstone Bridge on the River Caragh, south of Caragh Lake: 1999 – Tony O'Mahony. **[Unpublished Record.]**

North Kerry (H2, W0.8.) Scattered bushes in hedges and on rock outcrops bordering the southern margin of Lough Guitane, east of Killarney: 1978: Tony O'Mahony. **[Unpublished Record.]**

Co. Waterford (H6, X18.03. & X18.04.) On both roadside banks of the N/S orientated R671 that links the Cappoquin-Dungarvan Road (N72) to the Dungarvan-Clonmel Road (R672): 2017 - Tony O'Mahony. **[Unpublished Records.]** Of the two, disjunct populations seen here, one occurred a short distance north of Millinacoorka Bridge on the River Finisk, and the other further south (western hedgebank), near a quarry holding-area for gravel. These populations showed only a little acicular armature on the infructescence-branches. *R*. x *suberecta* may well be present elsewhere in this part of Co. Waterford, as future fieldwork should confirm.

Acknowledgements:

My thanks go to the late Ronald Melville of KEW (BSBI Referee for the genus *Rosa* in the 1970s), for identifying my first (Co. Cork) vouchers of the rose hybrid cross, *R. sherardii* x *R. rubiginosa* (*R.* x *suberecta*) in 1975. Being a novice Rhodologist at that time, trying to grapple with, and comprehend, the biology and morphology of this complex genus, I greatly appreciated and valued his interesting comments on aspects of the taxonomy of *Rosa*.

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A significant new population and county record for *Epipactis phyllanthes* with some comments on references to *Epipactis* species in Ireland.

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There are five species of *Epipactis* recorded as occurring in Ireland. Four species for Northern Ireland and four for the Republic of Ireland. *Epipactis palustris* (Marsh Helleborine), *E. helleborine* (Broad-leaved Helleborine) and *E. phyllanthes* (Green-flowered Helleborine) are shared while *E. leptochila* is recorded from Co. Antrim and *E. atrorubens* (Dark-red Helleborine) is recorded from County Clare and County Galway. The record of *Epipactis leptochila* observed in Co. Antrim between 1979 and 1986 (National Museums Northern Ireland 2010) has not been included in the three books dealing exclusively with the Irish orchid flora (Sex & Sayers, 2000, Sayers & Sex, 2008, Curtis & Thompson, 2009) and according to Nunn and Hackney (2006) is "probably extinct". Nor is the species included in the *Census Catalogue of the Flora of Ireland* (Scannel & Synnott, 1987) or the last two editions of *An Irish Flora* (Webb, Parnell & Doogue 1996, Parnell & Curtis, 2012).

Sub-specific categories, such as variety and forma, are nowadays considered to be of less significance than previously. Often a variety is described due to its clear distance from a particular trait with the many intermediates being unacknowledged. This is often more evident in the highly variable orchid family. However the recording of morphological traits outside the norm are useful to illustrate how variable species present themselves. Indeed with *Epipactis phyllanthes*, identification must take into account the varieties described as these vary greatly in floral morphology (Lewis 2017).

In 2015 John (Jackie) O'Connell observed plants of *Epipactis phyllanthes*, the green flowered helleborine, on private property in Co. Kildare and on the narrow verge of the public road outside the property. The property is bordered by a high wall, old demesne woodland and a small stream. A year later the adjoining property was visited by plan and also by an alert from the garden restoration consultant who had contacted the senior author coincidently. The properties were once one and the same and are partially bordered by the woodland and small stream. The present day woodland (Fig. 1 (p. 39)) was part of the designed demesne plantings of exotics and dates from the 1720s onwards (F. Reid pers. comm. 14/8/2017). Colonised by natives it now comprises Beech, Horse-chestnut, Ash, Sycamore and Holly with an undergrowth including Ivy, Sanicle, Bramble, Nettle,

violets, Hart's-tongue and Grey Sedge. The demesne woodlands differ in that one is left undisturbed with substantial amounts of Cherry Laurel (*Prunus laurocerasus*) while the other is more managed yet not manicured.

The population is of significance mainly due to the number of flowering stems which was approximately 500 in 2017. The majority of plants occur on the more managed property. The only published flowering counts found in literature is of a population "with more than 100 spikes annually" (Richards 2017) and "163 plants in 2010 and none in 2014" (Clarke 2018). Vegetative traits of the population conform to published literature with the tallest measured stems to 54cm tall, apple-green leaves held horizontal to erect at the base and drooping towards the tip and the upper stems almost totally glabrous.

As mentioned earlier, *Epipactis phyllanthes* presents in populations where individual flowers are very different and in some populations where plants appear to conform to more than one variety. In some plants different flowers on the inflorescence can be attributed to different varieties (John Richards, pers. comm. 21/8/2017).

Of those counted, flower count at the Co. Kildare population was between 4 and 40, but more usually numbering between 10 and 25. The majority of plants had flowers that hang to one side of the stem which may possibly be a response to differing light levels in the shaded habitat. However, in cases where there appeared to be more even light the arrangement of flowers was more evenly arranged on the stem (Fig. 3. (see front cover)).

A measured individual flower had a dorsal sepal of $11 \text{ mm} \times 4 \text{ mm}$ (at widest point), pointed lateral sepals of $11 \text{ mm} \times 3.5 \text{ mm}$ (at widest point) and pointed petals $9 \text{ mm} \times 3.0 \text{ mm}$ (at widest point). The labellum is divided into two distinct sections, the cup-shaped hypochile and the heart-shaped epichile, with a tip that curls under itself as the flowers age (Fig.4 (p. 39)). As expected in a self-pollinating species, the column dries as pollination progresses. A seldom noted feature in recent publications is that also, after approximately a week the whole labellum withers and remains attached while the remaining perianth segments remain fresh (Fig. 5. (p. 39)). This trait was described in the original publication of *E. phyllanthes* to the Irish flora as "a dark, brown crinkled mass is all that there is to be seen in the centre of the flower" (Webb 1953). The ovaries, even on slightly opened flowers, are conspicuous and swell, indicating the self-pollinating nature of the species. Closer examination of a fresh column shows the absence of a viscidium which, when present, acts as a barrier between the pollen and stigma in non self-pollinating species.

The arrangement of tiny, hair-like projections, termed cilia, on the edge of helleborine leaves has been proposed as a confirming character. In *Epipactis phyllanthes* the cilia are bunched irregularly and in other Epipactis species the cilia are evenly presented (Harrap & Harrap 2005). The potential use of this trait as an

aid to identification has been further explored by Wilcox (2013). However, a pencil sketch of a magnified section of leaf edge from the Kildare population (Fig. 6.) and close examination of seven leaf edges would not be best described as having the "distinct clustering of interrupted teeth" of *Epipactis phyllanthes* as illustrated by Wilcox (2013).

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This Co. Kildare population, at a varietal level, is best placed in *Epipactis phyllanthes* var. *pendula*. Most Irish populations of *Epipactis phyllanthes* are considered *E. phyllanthes* var. *vectensis* by Richards but he emphasises that determination is based on a "continuum and every population tends to occupy a slightly different place upon it" (A.J. Richards *pers. comm.* 21/8/2017). There is a 1976 reference to *Epipactis phyllanthes* var. *pendula* in a list of paintings exhibited by Raymond Piper. The titles on one painting reads "pendulous-flowered helleborine, *Epipactis phyllanthes* var. *cleistogama* and var. *pendula*". Although there is no locality given on the painting, Piper is known to have painted specimens collected in Co. Dublin. *Epipactis phyllanthes* var. *vectensis* is described as having a "Labellum embracing the stigma \pm closely", (Young 1952) a character beautifully illustrated by botanical artist Susan Sex (Sex & Sayers, 2000) of a plant in the Co. Fermanagh population (Fig. 7. (p. 39)).

The presence of the green flowered helleborine in Co. Kildare was first published as an aside in an article about the tale of a lost manx shearwater in the Irish Examiner in September 2015 (Collins 2015). A more public announcement was made on the website of the National Botanic Gardens on 25 August 2017.

Since then Declan Kenny and Eddie Gilligan (*pers. comm.* 24/8/2017) alerted us to another site on the banks of the Rye River near Leixlip.

There are other references to *Epipactis* species in Ireland. Plants of *Epipactis* illustrated by Raymond Piper (Piper 1976) and published in *Piper's flowers* (Piper 1987) have annotations that indicate the complexities he observed. Piper exhibited paintings under the names of *Epipactis dunensis* Irish woodland form and Irish 'dune' form. Kodachrome slides of one of the illustrated plants were

taken by Tom Ennis. Digital scans of these slides and two pencil drawings by Piper were made and have been tentatively identified as *Epipactis dunensis* (T. Ennis pers. comm. 9/6/2017 and 22/1/2018).

In recent years observations have been undertaken on plants suspected of being *Epipactis helleborine* var. *neerlandica*, a variety known from Wales and coastal sites in eastern France, Belgium, Netherlands, Germany and Denmark (Harrap & Harrap 2005). Plants of *Epipactis helleborine* exhibiting pendulous flowers like those in the photograph of the Larne, Co. Antrim plant in *Illustrations of British and Irish Orchids* (Turner Ettlinger 1998) have been observed growing in a woodland garden setting in Co. Westmeath (Mary Waldron (*pers. comm.* 14/7/2017). Raymond Piper also illustrated plants he identified as *Epipactis latifolia*, white flowered form, from Co. Kerry and *E. latifolia*, green flowered form, from Notting Hill, Belfast (Piper 1976), the latter which may be attributable to *Epipactis helleborine* var. *chlorantha*.

A molecular investigation of the population is planned for 2018.

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Captions for Figures 1, 4 & 5 on page 39. See above article.

- Fig. 1. The present day woodland is derived from designed demesne plantings of exotics and colonised native species. © Jackie O'Connell.
- Fig. 4. Side view of a flower showing the cup-shaped hypochile and heart shaped epichile with its tip curled underneath. © Marie Hourigan.
- Fig. 5. Four flowers showing the dried column and labella beginning to wither. © Marie Hourigan.

Some recent plant records from the Craughwell and Loughrea area of South-East Galway (H15)

John Conaghan, 11 Dun Ard, Craughwell, Co. Galway

The countryside around Craughwell village is typical of much of east Galway which is largely dominated by improved or semi-improved grassland with frequent stone walls and low hedgerows mainly composed of blackthorn, hazel and ash. Since moving to Craughwell I have come across some noteworthy plant populations which demonstrates that even apparently botanically unexciting areas can turn up the odd interesting record if you tramp the roads, fields and woodlands regularly enough. The majority of species listed appear to have a restricted distribution in South-East Galway (**H15**) and the adjoining vice-counties. Many thanks to the vice-county recorder Micheline Sheehy Skeffington for comments on the records.

Ophrys apifera (Bee orchid) – Three flowering spikes in a green area at Dun Ard housing estate (M514197), July 2017. The species must have established here since the construction of the green area in 2001.

Juncus tenuis (Slender Rush) – Small population along a grassy forestry track in Moyode wood (M517238), April 2017. Appears to be the first record for the species in **H15**.

Carex pendula (Pendulous Sedge) – Very common in recently felled woodland areas at Dunsandle (M5721), June 2015. The species is generally under-recorded in south-east Galway and is an abundant, invasive species in many of the woodland areas around Dunsandle and elsewhere.

Melica uniflora (Wood Melick) – Frequent at the base of a hedgerow along the road south of Craughwell National School (M496207), June 2015. A rare species in the vice-county outside of the Gort area.

Prunus padus (Bird Cherry) – Occasional in areas of recently cleared forestry at Dunsandle (M562215), June 2015. The species has survived the clearance of conifers and appears to be spreading, especially in damper areas which are prone to flooding. Since 2015 I have also seen the species at Monivea woods (M543357) in North-East Galway (**H17**) and at Thoor Ballylea (M481060).

Epilobium brunnescens (New Zealand Willowherb) – Occasional on stone walls along a small canal/drain which flows out of Lough Rea (M616165), August 2017. Apparently uncommon in the vice-county and more typical of damp rock outcrops in upland areas.

Silene vulgaris (Bladder Campion) – A few plants along a roadside wall at Crinnage (M493203).

Galium sterneri (Limestone Bedstraw) – Frequent on a small area of limestone pavement at Coldwood (M456227), August 2008. At this location the

species grows with *Sesleria albicans* (Blue Moor Grass), *Juniperus communis* (Juniper), *Mycelis muralis* (Wall Lettuce) and *Carlina vulgaris* (Carline Thistle).

Orobanche minor (Common Broomrape) – Three flowering spikes seen at the margin of a lawn in Craughwell village (M511197), June 2014. Not seen in subsequent years.

Orobanche hederae (Ivy Broomrape) – Frequent along the base of a hedgerow dominated by ivy at Killora lane (M516195), December 2017. A rare species in South-East Galway which has mainly been recorded recently from the Portumna area.

Chaenorhinum minus (Small Toadflax) – Approximately ten plants growing on gravelly roadsides north-west of the railway crossing at Craughwell village (M502208), June 2015. There are very few recent records for this species in Co. Galway.

Inula helenium (Elecampane) – Well established population in a field east of Killora lane (M515194), May 2014).

Tragopogon pratensis (Goat's-beard) – Common along the road to Loughrea, east of Craughwell village (M520193), June 2015.

Leycesteria formosa (Himalayan Honeysuckle) – Occasional along the railway line at the western end of Craughwell village (M503210), May 2014. According to the DDb there are no previous records for species in South-East Galway however it is probably more widespread than records suggest. I have also seen it growing in 2017 in recently felled woodland areas at Coole Park north of Gort (M439053).

Smyrnium olusatrum (Alexanders) – Well established along the Oranmore to Craughwell road, c. 200 metres east of Derrydonnell crossroads (M433251), April 2015. There are no recent records for **H15**.

Fumaria densiflora in Sallynoggin, Co Dublin H21

Richard McMullen, 75 Silchester Park, Glenageary, Co. Dublin

Some years ago the Deerhunter Pub in Sallynoggin was razed to the ground and on part of the cleared area a new Lidl Supermarket was erected, opening just in time for Christmas 2016.

A sizable area, was not required for the Lidl building or carpark and it was levelled, scraped bare and apparently left for nature to take its course. Spring was very dry, colonisation was slow and when I first visited on 6th May 2017 the ground was still bare and cracked and the scattered young plants and seedlings were mostly native weed species.

However, a strip of land about 20 m wide just N of the carpark seemed to have had a light skiff of more organic-rich soil on top of what looked like organic-poor subsoil. Here the plants seemed a bit further on and *Fumaria officinalis* subsp. *officinalis* (Common Fumitory) was quite common. Some of these seemed to have a deeper pink colour and the flowers were more tightly packed in the inflorescence. On closer examination these turned out to be *F. densiflora* (Dense-flowered Fumitory) (photo page 38), probably the easiest Irish *Fumaria* to identify. The flowers are a deep pink, small (6-7 mms) and the sub-orbicular sepals seem huge in relation to corolla length.

'The sepals can appear so large that the petals of immature flowers seem to peer out from between them' (Spiers 2004). This sentence taken from 'Fumitories of Britain and Ireland' (Miss R.J. Murphy 2009) perfectly described the appearance of the young flowers at the top of the inflorescence.

F. densiflora is rare in Ireland. There are 28 records in the DDb but almost all of these are pre-1969- and several are considerably older. The only other modern record I can locate is by Graham Day for Lough Cowey 7/8/2001. (I am indebted to Graham Day and David Nash for help in tracing records).

The handbook states that the seedbank may well be long-lived so could the provenance of these plants be seeds brought to the surface by earthmoving machinery while preparing the site?

On revisiting he site in Mid-June it became clear that the area had been sown with a Wild Flower mix and lots of aliens were joining our native weed species-Corn Cockle, Cornflower, *Phacelia*, *Leathesia*, etc. So perhaps the Wild Flower seed mix was the source of *F. densiflora*. *F. densiflora* is not common and is locally distributed in SE England and E Scotland and it seems unlikely that it would appear in a Wild Flower mix. Attempts to trace the particular seed mix used proved fruitless.

The area has been mown several times and I have been unable to find any specimens of *F. densiflora* lately. The plans are for a Nursing Home to be built on the site over the next three years so perhaps we might have a year or two to see if they reappear.

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Botanical Recording for Mid-Cork (H4), 2017

By John Christopher Wallace, Vice-County Recorder for Mid-Cork (**H4**) E-mail: johnwiegm@gmail.com

Another year has passed imagine! It seems like it was only a month ago since I wrote my account of 2016 and plan for 2017 (Wallace, 2017). The plan for 2017 was to focus on Hectads with the least number of surveyed Tetrads and to re-find and re-assess some old notable records (Wallace, 2017). Unfortunately, much of 2017 turned out to be very busy on all fronts which required my attention to be taken away from botany. I was able to get some surveying done, but would have liked to have done more. As can be seen from the map below, which indicates tetrads surveyed in 2017 superimposed on pre-2017 tetrads surveyed, I was able to get a lot of recording done in the SW of H4 and in the previously under-recorded hectads of W58 and W56. The lakeshores of Taiscumar Reservoir were also surveyed during the year and will require further investigation in 2018.



 28^{th} On of March a walk near Roove's Bridge W47L resulted in the discovery of a new hectad for Geranium rotundifolium (Roundleaved Crane's-bill). During subsequent weeks I was able to update records for this species from St Joseph's Cemetery (H4, W67.70), Mahon Park W72.71) (**H4**. (O'Mahony 2011). Tramore Road and Lower Friars Walk (H4. W67.69). Blackrock Castle (H4, W72.71) (O'Mahony 2012), Waterpark Castle ruins near Carrigaline town, (H4. W74.62), and at

Woodland near Frenchfurze T-junction (H4, W75.61) (O'Mahony 2009). On the PAGE 56

21st of May I discovered another new hectad for *G. rotundifolium* when I found it growing on limestone walls in Ballincollig Regional Park (**H4**, W57Q). I also discovered a new monad for this species at Currabinny (**H4**, W76W) on 25th of May. On the 11th of April Cliona Byrne contacted me to report *Neottia ovata* (Common Twayblade), *Geum rivale* (Water Avens) and *Ranunculus auricomus* (Goldilocks Buttercup) as occurring in Ballincollig Regional Park. On a visit to this site I was able to discover further patches of *R. auricomus* growing alongside the track. Having previously found *Geum x intermedium* (= *G. rivale x G. urbanum* (Wood Avens)) in Macroom (**H3**) in 2007 where both parents occur in close proximity I searched for this at the Ballincollig site a number of times to no avail, though one remains hopeful.

On 15th of April, the day being warm and cheerful, I decided to walk the stretch of road from Inishannon to Dunderrow. A digression from the road through woodland which hosted many plants of the wonderful *Euphorbia hyberna* to the bank of the River Bandon yielded a most splendid site for *Leucojum aestivum*, the largest quantity that I've ever seen. A check along the river bank at Inishannon showed that this species also occurred there where it is reported to have been introduced (Farrell, 1982).

On 2nd of May I found the nationally rare *Ranunculus parviflorus* (Smallflowered Buttercup) in Ringaskiddy W76. This species has been previously reported for **H4** near Carrigrohane Castle and by the Glanmire Road (Power 1845) and at Vicars Crossroads (**H4**, W66.69), Togher, Cork City, and in arable ground at Robert's head, (W78.54) (O'Mahony 2012). A subsequent conversation with John Diggin revealed that he had previously seen this species at this site and he reported seeing it also near Shanbally (W76M).

On 10th of May John contacted me to report *Catapodium marinum* (Sea Fern-grass) at the side of the road on compacted bare ground on the slip road from the N40 Dual-Carriageway leading to Togher (W66). This along with *Cochlearia danica* (Danish Scurvygrass) adds to the increasing spread of halophytes to inland road networks that is being seen throughout the British Isles as a result of the use of de-icing salt (Scott & Davison, 1982). *Cochlearia danica* was also discovered by Finbarr Wallace growing around the Kinsale Road Roundabout (W66U) and by me on roadside verge of slip road from N40 to Douglas (W66Z).

On 13th of May a walk with the kids to get some fresh Ash leaves and shoots for our Rabbits who love to eat them resulted in finding *Geranium macrorrhizum* (Rock Crane's-bill) growing in hedgerows at Greenfields W56U. This appears to be persisting and spreading from a garden throw-out as garden waste such as grass cuttings which is evident along this stretch of hedgerow that dissects a housing estate. The long and sturdy rhizomes which gives this species its name is ensuring its survival at this site. Also noted at this site were several stands of *Euphorbia mellifera* (Canary Spurge) which probably also arose in the same manner. During the year the ferry port of Ringaskiddy (W76) proved to be a cornucopia for new county introductions and for new monads for adventive species. On 15th of April John Diggin reported *Veronica polita* (Grey Field-speedwell) and *Galium murale* (Tiny bedstraw). The latter was subsequently confirmed by Paul Green who had previously found it in Rosslare (**H12**). On the 17th of May John reported *Herniaria glabra* (Smooth Rupturewort), *Polycarpon tetraphyllum* (Four-leaved Allseed), *Polypogon monspeliensis* (Annual Beard-grass), and *Gnaphalium luteoalbum* (Jersey Cudweed).

The occurrence of *Herniaria glabra*, *Polycarpon tetraphyllum* and *Gnaphalium luteoalbum* here are a bit more difficult to explain. The only other **H4** site for *Herniaria glabra* was made by Sylvia Reynolds where she found it in flower tubs, cultivated in Cork Corporation Nurseries in 1993 (Reynolds, 1994). In the Ringaskiddy site it occurs on roadside verge near flower tubs. So this might indicate that its origin is in horticulture. The stronghold for *Gnaphalium luteoalbum* in Ireland is in and near the Ferry Terminal in Rosslare where *Polycarpon tetraphyllum*, *Veronica polita* and *Galium murale* also occurs. This indicates a possible origin is in ferry traffic or shipping activity for these species. It would seem safe to say that these species all have their origin in human activity such as ferry traffic, shipping activity, construction, engineering and horticulture. What remains to be seen is whether or not the occurrence of these species here is temporary or if they have become a permanent fixture. Adventive plants of *Ophrys apifera* (Bee Orchid) are also found growing around the Ringaskiddy area aplenty on spoil heaps, waste ground and roadside verges.

John also drew my attention to an adventive population of *Mentha pulegium* (Pennyroyal) growing on spoil heaps near the Ringaskiddy Ferry Port. Interestingly this adventive *Mentha pulegium* displayed a very erect growth-habit and had a poorly developed rhizome system as has been described for adventive populations of this species (O'Mahony, 2001). At about the same time I investigated a large population of *M. pulegium* growing in Ballyhemiken quarry nearby after its presence there was brought to my attention by a group concerned that a motorway was being planned to cut through the quarry, posing a risk to the population there. The plants occurring at this site also displayed the same characteristics as those found near Ringaskiddy Ferry Terminal which lead me to the conclusion that these too were indeed putative adventive populations that most probably arose as a grass-seed alien (Briggs, 1997; Kay, 1996; Leach, 1996).

On 27th May a family trip to Jarley's Cove near Kinsale occasioned us to stop for refreshments at the **H4** side of the bridge over the River Bandon (W6449). On returning to the car I noticed what I first thought to be *Silene dioica* (Red Campion). However something about it caught my eye and on looking again I noticed that this was different. On closer inspection I noticed to my joy that this was a *Dianthus*. I had only tangibly seen this genera twice before. The first was in my Mother's garden where she grew *Dianthus carthusianorum* L. (Carthusian Pink) for many years. The second was on a visit to Cheddar Gorge in 1999 where I had the pleasure of seeing *Dianthus gratianopolitanus* Vill. (Cheddar Pink). I have never seen this Genera growing wild in the Irish countryside before. On consulting my goodly companion Stace (2010) this keyed out as *Dianthus deltoides* L. (Maiden Pink).

This identification was verified by Dr. Philip Wilson the BSBI referee for *Dianthus* and *Valerianella*. *Dianthus deltoides* L. was first recorded for Ireland in 1845 when Thomas Power reported it as growing on dry hilly pastures near Dunscombe's Wood, Cork (Power, 1845). This was reported to him by a Mr. Alexander who had gathered many verified specimens. Power further adds that he could not find it though he frequently sought for it.

On the 30th of May an exploration in and around Grange Hill (W56P) led to the discovery of many plants of the beautiful, large-leaved and beautifully aromatic *Geranium endressii* (French Crane's-bill), growing on the roadside verge.

On the 31st May a walk to the Willow-Beech woodland along Wood Road near Ballincollig (W54) resulted in the surprising find of the beautiful *Claytonia sibirica* (Pink Purslane) growing on the damp woodland floor with *Moehringia trinervia* (Three-nerved Sandwort), *Geranium robertianum* (Herb-Robert), and *Scrophularia auriculata* (Water Figwort). *Claytonia sibirica* is a recent introduction to the Irish Flora and all the records for the Irish Republic seem to indicate that this plant occurs in or near anthropogenic landscapes (quarries, arboreta, graveyards, parks etc.). This site too is adjacent to a large working quarry.

It is likely that we will see more of this species in the future (Braithwaite, 2010). Even though *Claytonia sibirica* has a preference for woodland habitats, the fact that species that would otherwise be considered sylvanian on the continent and in Great Britain, do so well on open ground in the Irish Landscape (Webb, 1952) it may well spread into similar damp and shaded areas in the future.

On 5th June a walk to the waterfall at Glashagarriff River (W47) to my great joy yielded the discovery of further stands of *Hymenophyllum tunbrigense* (Tunbridge Filmy-fern) on damp rocks near the waterfall. Using a combination of OS Maps and Google Maps I was able to identify several gorges which I was able to explore at the start of the year in the hope of finding further locations for *H. tunbrigense*. Most of the identified sites had conditions which were perfect for *H. tunbrigense* but none of them yielded any records for this fern. This means that the Glashagarriff River site is the best location for this beautiful fern in **H4** (and possibly the only location for it in **H4**, but let's see what 2018 will bring).

On the 7th of July I surveyed Taiscumar Reservoir, a man-made lake that holds many interesting species, to try to assess the extent of *Cyperus eragrostis* (Pale Galingale). Having found it at several locations over the years I was convinced that there should be more tetrads. On this day I focused on the hectad of

W57. Having previously found it in W57B and W57G I thought that it ought to occur along the south-bank at W57F and W57K. Coming across several large, impassable rocks that penetrated deep into the water at several locations along the course required me to do some swimming. But, as the day was more akin to Hispania than Hibernia this was not an undesirable task. The result of my swimming was the confirmation of the presence of *Cyperus eragrostis* in both tetrads. I was also rewarded with the finding of several plants of the uncommon *Apium graveolens* (Wild Celery) in W57F, a new hectad for this species. On the 21st of July I was able to do more surveying for this *C. eragrostis* by boat. Details of this are published in a separate article in this volume on page 30.

On the 10th of September we had the **H4** field meeting where we surveyed Ringnanean Wood (W6652) and Ballinclashet Creek (W6951). At this meeting we were able to add new County records for *Atriplex* x *taschereaui* and *Ulex* x *breoganii* at Ringnanean Wood (W6652) these were identified for us by Paul Green. At Ballinclashet Creek Paul was also able to also add the new county records for *Atriplex littoralis* (Grass-leaved Orache), *Atriplex* x *gustafssoniana*, *Atriplex* x *hulmeana*, another record for *Atriplex* x *taschereaui* and the first record of *Atriplex glabriuscula* (Babington's Orache) in **H4** since 1965 at Ballinclashet Creek. We all learned a lot from Paul about this difficult and highly hybridised genus, so many thanks for all your help Paul. Finbarr Wallace is also to be singled out for thanks on this day as he diligently and patiently acted as scribe.

Many thanks to all that have helped over the year. Notably Tony O'Mahony for putting up with my incessant questioning and for being so helpful with imparting knowledge. Thanks are also due to John Diggin who is blessed with a sharp eyesight which gives him the ability to see a minute plant from about a mile out and thereby submit many interesting new finds and new county records (keep them coming John), Cliona Byrne for her interesting records from Ballincollig (sadly gone to **H19** but I am sure **H19** will benefit from her presence there), and to many others who have helped along on the journey through 2017.

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Interesting plants in Co. Waterford (H6), 2017

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Despite 2017 being the poorest year for the number of records received since 2000, it certainly made up for with what was found.

Hymenophyllum tunbrigense (Tunbridge Filmy-fern) was the first new hectad record of the year, shown to me by Megan Morris, in steep woodland above the River Blackwater, at Killahaly East (X0994), on 5 February. The same day, we visited Tourin Demense (X0996) and found *Poa nemoralis* (Wood Meadow-grass), on the wall of the walled garden, this being a new site and the first hectad record since 1998.

The first new native species for the county, *Nitella translucens* (Translucent Stonewort), was found by Cliona Byrne in a drain, on the side of a path in a conifer plantation, at Monameean (X211854) on 7 February. *Trifolium occidentale* (Western Clover) was the next new county record, found by Con Breen, on the side of the coast path descending into Portally Cove (X675990) in July. This is the most westerly site in Ireland.

The first species, believed extinct in the county, to be refound in 2017 was *Lepidium latifolium* (Dittander), found on the shore of Youghal Harbour, at Kinsalebeg (X1259079564), in July by Sam Thomas. The last report from here was by Charles Smith in 1746. I went and took a look at the Dittander, on 25 July, and

found abundant *Bromus secalinus* (Rye Brome) as an arable weed, in a field between the church and the estuary at Kinsalebeg (X12867970). This is the first confirmed record for the county. *Phalaris minor* (Lesser Canary-grass) was also plentiful as a weed in the same arable field, a new hectad record.

Pink flowering *Calystegia* (Bindweed) at Cheekpoint (S6813), which I mention in the *Flora of County Waterford* (Green 2008) as having larger flowers than normal *Calystegia sepium* subsp. *roseata*, were checked and these proved, as I half expected, to be *Calystegia x howittiorum* (*C. pulchra* (Hairy Bindweed) x (Large Bindweed) *C. silvatica*), a new hybrid for the county list. I also took a look at the only extant site in the county for *Calystegia pulchra* (Hairy Bindweed), in a roadside hedge at Gorteen (X28119574), this also was renamed as *Calystegia x howittiorum*.

I spent 26 September searching for *Atriplex* species and hybrids, along the coast from Cheekpoint round to Bunmahon, stopping at all the coves and strands where there was easy access to the shore. *Atriplex longipes* (Long-stalked Orache) was found in one location of the Back Strand at Clohernagh (S63670235), on a saltmarsh under over hanging shrubs. This is a new hectad record and 3rd site for the county. *Atriplex glabriuscula* (Babington's Orache) x *A. prostrata* (Spear-leaved Orache) was found new for the county from three hectads, the first site was found at the top of the shore at Cheekpoint (S68671378). *Atriplex x gustafssoniana* (*A. longipes x A. prostrata*) was added to six new hectads and *Atriplex x taschereaui* (*A. glabriuscula x A. longipes*) added new to four hectads.

Besides the new hectad records mentioned above, 8 others were found from scattered sites: on 26 March, Paula O'Meara found *Myosotis sylvatica* (Wood Forget-me-not) on a road verge, Waterford City (S6010) and on the same day, I came across a large clump of *Arum italicum* subsp. *italicum* (Italian Lords-and-Ladies) on a road verge at The Pike (X0287). Swathes of *Milium effusum* (Wood Millet), along either side of a forestry track at Portlaw (S4614), was reported by Finbarr Wallace. I found two *Verbascum phlomoides* (Orange Mullein), on the bank of the new Waterford Greenway at Gibbethill (S588134); *Epilobium roseum* (Pale Willowherb) plentiful on road at Churchquater (X03659072), 4th county record; three *Bidens ferulifolia* (Fern-leaved Beggarticks) self-sown in pavement cracks in Lismore (X0498) and one tussock of *Cortaderia selloana* (Pampas-grass), self-sown on the dune at Bunmahon (X43309870). The last new hectad record of the year was *Glebionis segetum* (Corn Marigold), from the margin of a stubble field, at Ballynamona Lower (X2883), seen by Mary Harris, on 21 December.

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A report on fieldwork in Limerick (H8), 2017

Sylvia Reynolds, 115 Weirview Drive, Stillorgan, Co. Dublin

Recording in Limerick in 2017 concentrated on filling gaps for *Atlas 2020*. Julian and I again worked together and we also had seven enjoyable joint outings with Mike Quirke, Paul Murphy and Tom Harrington. As for the year before, that trio went out recording on a regular basis too, between us all spending some 42 days in the field. A selection of sites visited and plants found is given below.

The five of us started the year by meeting on 2 January in Limerick City where we recorded 51 species for the BSBI's New Year Plant Hunt – *Veronica polita* (Grey Field-speedwell) was in flower and fruit on a wall at the Potato Market (R5757). The previous day Julian and I had found 71 species in flower in the Leopardstown/Stillorgan area in Dublin, including *Sherardia arvensis* (Field Madder) and *Geranium pusillum* (Small-flowered Crane's-bill); it was the top Irish list and altogether one of the longest lists for the NYPH.

We all met again on 11 April in the former estate at Tervoe north-west of Mungret (R5155) to explore woodland where garden escapes and relicts of cultivation were common. Hyacinthoides x massartiana (Hybrid Bluebell) was abundant, mainly with blue flowers (also pink and white) and just a few blueflowered H. hispanica (Spanish Bluebell) were seen. The flowers of Narcissus (Daffodils) and Galanthus (Snowdrops) had gone over, but Symphytum grandiflorum (Creeping Comfrey) was just coming into flower and it was well established in one place. Aegopodium podagraria (Ground-elder) was also abundant in the woodland, with less Petasites fragrans (Winter Heliotrope). Shrubs, probably originally planted, included Prunus laurocerasus (Cherry Laurel), P. lusitanica (Portugal Laurel), Philadelphus coronarius (Mock-orange), Ruscus aculeatus (Butcher's-broom) and Staphylea pinnata (Bladdernut), the last with beautiful pendent white flowers. Finding Allium ursinum (Ramsons) served as an update for that species in R55, last reported in the early 1900s from 'lower Mungret'. Cymbalaria muralis (Ivy-leaved Toadflax), Centranthus ruber (Red Valerian) and some Chelidonium majus (Greater Celandine) grew on the walls of the ruins.

On 10 May the same group of us recorded north of Doon along and near the Gortnageragh River (R8252) where there is semi-natural woodland with Oak. One aim was to look for *Equisetum sylvaticum* (Wood Horsetail), last seen by the river in 1998. When we found that our previous access was blocked by impenetrable shrubs, Tom crossed and recrossed the river further upstream until he got to the grassy site which now contained hundreds of young plants among *Holcus lanatus* (Yorkshire-fog), *Stellaria holostea* (Greater Stitchwort) and *Pteridium aquilinum* (Bracken). Recent systematic recording has added *E. sylvaticum* to five more hectads since the five listed in the Limerick *Flora* (Reynolds 2013). *Carex laevigata* (Smooth-stalked Sedge) was one of the sedges on a wet slope above the wood and *Luzula pilosa* (Hairy Wood-rush) grew on a roadside bank and in the wood.

The following day (11 May), after doing some rather routine recording, Julian and I spotted what looked like an interesting wet area in a depression between low hills with pasture at Kilmihil (R6124). It turned out to be a good quaking swamp with *Carex paniculata* (Greater Tussock-sedge) and the expected *Equisetum fluviatile* (Water Horsetail), *Carex rostrata* (Bottle Sedge), *C. disticha* (Brown Sedge), *C. nigra* (Common Sedge) etc. When we tried to revisit the site later in the year, we were not able to get through the bordering pasture because of a large herd of cows. Habitats along the Shannon Estuary are also usually botanically rewarding, but access is often not easy. A stretch of estuary new to us (via a lane to a disused pier) was west-north-west of Ballysteen (12 July, R3455), with *Apium graveolens* (Wild Celery) and *Carex extensa* (Long-bracted Sedge) in saltmarsh and occasional *Artemisia maritima* (Sea Wormwood) here and in the adjoining monad west of Ballysteen (R3355).

Later in the year we looked for and found two sites where John Wann had recorded for *Atlas 2000* and where good records needed updating. The first, on 10 August, was a fen area at Ballylin (R4040). We only got into a rather degraded part of it, where there was *Schoenus nigricans* (Black Bog-rush), scattered *Parnassia palustris* (Grass-of-Parnassus), stunted *Cladium mariscus* (Great Fen-sedge) etc. Googling this area back at home we saw that we had missed the main fen area! John's other site was south of Croom. We knew it was close to the abandoned railway but it took us a while on 16 September to realise that we had to go over a brambly wall near the old railway bridge and scramble down a steep slope to get to it. This lovely small wet area bordered by grassland with ant hills is east-north-east of Banoge (R5337/R5437). It contained all the species John had recorded 20 years earlier, including *Epilobium palustre* (Marsh Willowherb) and *Eleocharis palustris* (Common Spike-rush), and also some gone-over *Epipactis palustris* (Marsh Helleborine).

Some of our best days out were with Mike, Paul and Tom. On 14 June we joined forces to try to refind the elusive *Pseudorchis albida* (Small-white Orchid) at Ballygeana on a north-west slope of the Galty Mountains (R8424). It was first found there by Ro FitzGerald in 1991 and, despite previous searches and again this time, we did not find it. We took advantage of the day by going further up the slope (few species to record there) and across to a stream near the county boundary with Tipperary (R8524) where there was *Saxifraga hypnoides* (Mossy Saxifrage) and *Meconopsis cambrica* (Welsh Poppy) in flower, and *Huperzia selago* (Fir Clubmoss) on nearby outcrop. Tiny plants of *Euphrasia* (Eyebright) growing in tightly grazed acid grassland at c.450m were collected and pressed. On the way

down (R8425) we found *Alchemilla glabra* (Smooth Lady's-mantle) at the edge of pasture and *Juncus foliosus* (Leafy Rush) in muddy ground.

Our next joint expedition was to two different locations on 18 July. First we went along the Camoge River trying to refind a good wet site I had last visited in 1998 with John Wann. It seems that it has since been drained and only a few of the characteristic species, poorly growing, were seen in a now degraded habitat. However, a highlight that morning was to be shown numerous *Plantago media* (Hoary Plantain) plants in flower on a gentle slope at Ballymacsradeen (R5440), where Tom has known it for many years. It may have been introduced originally by the Palatines. Scattered plants of *Bromus racemosus* (Smooth Brome) grew at the bottom of the same slope nearer the river.

Our second site that day was to visit the fen at Routagh just south of Limerick City (R5952) which Mike, Paul and Tom had discovered on 28 April on their way to record the spring flora in a woodland. When they told me about the fen and the species they saw there, such as Schoenus nigricans (Black Bog-rush), Pinguicula vulgaris (Common Butterwort), Anagallis tenella (Bog Pimpernel) and Antennaria dioica (Mountain Everlasting). I was obviously keen to visit it with them later in the season. This semi-natural site, showing little disturbance and lacking weedy species, was probably the best find of the year! The fen is quite extensive. Schoenus nigricans was dominant, with much Juncus subnodulosus (Blunt-flowered Rush). This species-rich site included Baldellia ranunculoides (Lesser Water-plantain), Carex hostiana (Tawny Sedge), Cirsium dissectum (Meadow Thistle), Drosera rotundifolia (Round-leaved Sundew, growing in Sphagnum), Hydrocotyle vulgaris (Marsh Pennywort), Molinia caerulea (Purple Moor-grass), Parnassia palustris (Grass-of-Parnassus) and Pedicularis palustris (Marsh Lousewort), as well as the orchids Dactylorhiza fuchsii (Common Spottedorchid), Epipactis palustris (Marsh Helleborine), Gymnadenia conopsea s.l. (Fragrant Orchid), Neottia ovata (Common Twayblade) and a single Ophrys apifera (Bee Orchid). A charophyte was collected, associated with Menyanthes trifoliata (Bogbean), Potamogeton coloratus (Fen Pondweed) and Utricularia minor (Lesser Bladderwort). A surprise was to find some going-over Eriophorum latifolium (Broad-leaved Cottongrass, with its distinctive rough peduncles), a species new to Limerick. Another surprise was to find Brachypodium pinnatum (Heath False-brome) in the dry grassland at the south end of the fen, with Danthonia decumbens (Heath-grass), Daucus carota (Wild Carrot), Agrimonia eupatoria (Agrimony), Blackstonia perfoliata (Yellow-wort), Leontodon hispidus (Rough Hawkbit) etc., and occasional Antennaria dioica (Mountain Everlasting) on low limestone outcrop.

Our final joint outing was on 29 August to Red Bog just south of Lough Gur (R6439). This is another swamp, described by Tom as 'scraw'. It was quite wet and springy, but we were able to walk across it between the large tussocks of *Carex*

paniculata (Greater Tussock-sedge) in our wellies. Other common species included Carex diandra (Lesser Tussock-sedge), Epilobium palustre (Marsh Willowherb), Equisetum fluviatile (Water Horsetail), Mentha aquatica (Water Mint) and Menyanthes trifoliata (Bogbean), with Osmunda regalis (Royal Fern) in a couple of places and some Epipactis palustris (Marsh Helleborine) near open water.

On their own outings over some 20 days in 2017, Mike, Paul and Tom recorded systematically, mainly filling gaps in the east of the county. They added *Antennaria dioica* (Mountain Everlasting) to the list for the former limestone quarry area on Tory Hill (19 April, R5343), got into marshy ground with *Bidens cernua* (Nodding Bur-marigold), *Lycopus europaeus* (Gypsywort) and *Scutellaria galericulata* (Skullcap) north-north-west of New Pallas Grean (7 September, R7648), a quarry with *Koeleria macrantha* (Crested Hair-grass) and *Linum catharticum* (Fairy Flax) at Knockcarron east of Knocklong (12 October, R7631), and boggy and heathy ground with *Calluna vulgaris* (Heather), *Erica tetralix* (Cross-leaved Heath), *Jasione montana* (Sheep's-bit), *Juncus squarrosus* (Heath Rush) and *Nardus stricta* (Mat-grass) on Curraghturk (9 November, R7723).

On 25 July, Mike and Paul recorded 34 species along and below the ridge at over 800m between Lyracappul and Carrignabinnia in the Galty Mountains (R8423), including *Campanula rotundifolia* (Harebell), *Festuca vivipara* (Viviparous Sheep's-fescue), *Hymenophyllum wilsonii* (Wilson's Filmy-fern), *Salix herbacea* (Dwarf Willow), *Saxifraga rosacea* (Irish Saxifrage), *S. stellaris* (Starry Saxifrage), *Sedum rosea* (Roseroot) and *Vaccinium vitis-idaea* (Cowberry). They also revisited the Blackrock crags on Knockaterriff on the south side of the Galtys (17 August, R8522), which had several of the same good species as well as *Asplenium viride* (Green Spleenwort). Their and Tom's continuing contribution to *Atlas 2020* is much appreciated.

Miscellaneous records, good in the Limerick context, include: *Fumaria purpurea* (Purple Ramping-fumitory) at a pavement/field edge near Annacotty (11 April, R6356); *Dryopteris aemula* (Hay-scented Buckler-fern) and *Viola palustris* (Marsh Violet) on a wet rock face north of Barnagh Hill (18 April, R2232); *Ranunculus hederaceus* (Ivy-leaved Crowfoot) and *R. omiophyllus* (Round-leaved Crowfoot) both in flower, growing together in a shallow stream south-west of Toornafulla (18 April, R2022); *Dactylorhiza kerryensis* (Irish Marsh-orchid) in a grass verge with *Ficaria verna* subsp. *fertilis* (Lesser Celandine) and *Potentilla anserina* (Silverweed) near Cloonlahard Bridge south-west of Ballyhahill (29 May, R1844), confirmed by Ian Denholm; *Agrostis gigantea* (Black Bent) amid uncut roadside vegetation north-north-east of Ardagh (17 July, R2841); *Hypericum hircinum* (Stinking Tutsan) established on the roadside bank at and near Bunoke Bridge (17 July, R3128); and *Silene vulgaris* subsp. *vulgaris* (Bladder Campion) on a low bank west-north-west of Askeaton (18 July, R3150).

A few other Limerick records of interest were given to me in 2017. Cilian Roden noted much Ranunculus baudotii (Brackish Water-crowfoot) around the north end of Poulaweala Lough near the Shannon Estuary (26 May, R2952) - the only other Limerick record was from near Foynes in 1903. Paul Green included Luzula multiflora subsp. hibernica (Heath Wood-rush) in a list from south-west of Abbeyfeale (11 June, R0923) and Geoff Hunt told me about Scutellaria galericulata (Skullcap) beside the field pond at Ballingaddy south-east of Kilmallock (27 June, R6225). Visiting from England, Mike Wilcox refound and updated the 1990 record for the rare intergeneric grass hybrid X Elvtrordeum langei, with dense Elytrigia repens (Common Couch) bordering saltmarsh at Ringmovlan (22 July, R4057); the other parent, Hordeum secalinum (Meadow Barley), is known in the same area. Paul Green kindly looked at some Atriplex (Oraches) specimens from the Shannon Estuary and it seems there may be interesting hybrids there; more work needs to be done on them.

Julian and I also did six days' recording for Atlas 2020 in Co. Longford (H24), averaging about 500 records per day. It was good for us to get away from the familiar habitats of Limerick and to explore new territory.

Reference:

Reynolds, S.C.P. (2013). Flora of County Limerick. National Botanic Gardens, Glasnevin, Dublin.

Recording in Wexford (H12), 2017

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2017 was another fabulous year for recording towards a Flora of the county. Records were collected over the whole year, by 41 individuals. 23 new species and hybrids were added to the county list, and if you include subspecies, varieties and cultivars there were 27 new for the county. Of these, 8 were native, and include 4 species, 3 hybrids and 1 variety.

My joint vice-county recorder Paula O'Meara collected just over half of all records received in 2017. Paula's best find and only new native species is of Parentucellia viscosa (Yellow Bartsia) from a disused sand pit at Ballyleigh (S75943441). Paula also added new to the county: *Scilla siberica* (Siberian Squill) naturalised in graveyard at Killann (S84894198); Brassica oleracea var. oleracea from a road verge at Kilbride (\$75060813); Paeonia lutea (Yellow Tree-peony) from base of cliff, Cherry's Road, New Ross (S72082799); Bellis perennis f. plena well naturalised on verge of car park, New Ross (S71672132); Sorbaria sorbifolia (Sorbaria) self-sown on high wall at Ballymore Demense (T10125086); Anthriscus *cerefolium* (Garden Chervil) on pile of soil at Tagoat (T10261138); *Anaphalis margaritacea* (Pearly Everlasting) on an overgrown hedgerow away from habitation, Mocurry East (S87684615). Paula came across a weedy beet field at Monart East (S91734283), three of the species found; *Euphorbia exigua* (Dwarf Spurge), *Kickxia elatine* (Sharp-leaved Fluellen) and *Valerianella dentata* (Narrow-fruited Cornsalad) hadn't been reported from the hectad since the 1890s and *Erysimum cheiranthoides* (Treacle-mustard) was the first hectad record since 1994. Paula's *Erigeron acris* (Blue Fleabane) by an abandoned building at Grange Demesne (S82074127) was the first hectad record since 1892, and on the gravel drive of a disused house at Raheendarrig (T09014400), was a new hectad record for this rare species.

Brian Seales's *Phygelius capensis* (Cape Figwort) naturalised on a wall at Ballinesker (T1141329058) is the sixth county record.

Cara Daly found *Vicia sepium* var. *ochroleuca* on a road verge at Ballinacur (T1909753112), this is the eighth county record for this form of Bush Vetch with cream coloured flowers, rather than the normal purplish colour.

Amaranthus hybridus (Green Amaranth) appeared at the base of Frankie Tennant's bird table in his garden at Ballykelly (T0515), the second county record and the first since 1990. Frankie's *Senecio* x *albescens* (*S. cineraria* x *S. jacobaea*) on a road verge on Fourth Commons (S9716618088) is a new hectad record.

Joanna Hodghton did most of her recording in the Killanne (S84) area of the county where she made the seventh county record for the garden escape *Pulmonaria officinalis* (Lungwort).

Mark Roper and Paddy Tobin found several *Ophrys apifera* var. *trollii* on the dunes north of the Raven (T1126), this form of the Bee Orchid has a pointed and asymmetrical labellum rather than the normal rounded one. This is a new county record and would appear to be the first record for Ireland.

Martine Brennan came across *Lamium amplexicaule* (Henbit Dead-nettle) at the base of a wall at Loftus Hall (S74610010), this is the first record for the hectad since 1994.

Roy Watson found 23 patches of *Trifolium scabrum* (Rough Clover) in the centre of a track on the coast at Cullenstown (S8687207806), this is the first report from the area since 1972. Roy added two new sites for *Crassula tillaea* (Mossy Stonecrop) at Rosslare (T0916), from along a sandy track on Rosslare Golf Course and the other by the entrance to a house.

While Zoe Delvin was out with Paula O'Meara at Mountelliott (S7173829792) she found a Gorse that puzzled her. At first it was thought to be *Ulex minor* (Dwarf Gorse), after much examination and help from various friends, it was identified as *Ulex x breoganii* (*U. europaeus* (Gorse) x *U. gallii* (Western Gorse)), a new hybrid for the county.

My favourite find of 2017 was two *Galeopsis ladanum* (Broad-leaved Hemp-nettle) on the margin of a stubble field at Craan Upper (T09276265), a species I had never heard of before, and a new county record. I added 3 native species and 2 native hybrids to the county list. *Taraxacum ronae* being the first of these found on a road bank at Knockroe (S78903058) on 10th January. This Dandelion has black spots on the leaves to help with identification. In May, *Carex canescens* (White Sedge) was found in a bog within a few metres of the Co. Wicklow border at Cummerduff (T05926803). August saw me walking along the shore of Lady's Island Lake (T0904) where I found *Atriplex praecox* (Early Orache) scattered along the shore, where it was with one of the new hybrids *Atriplex glabriuscula* (Babington's Orache) x *A. praecox*. The other hybrid, *Juncus x diffusus* (J. effusus (Soft-rush) x J. inflexus (Hard Rush)) was found in a disused sand quarry at Ballyconnigar (T13583344).

Co. Down (H38) recording in 2017

Graham Day, Cherry Cottage, 11 Ballyhaft Road, Newtowards, Co. Down, BT22 2AW

Ad hoc field trips and monthly field meetings were organised to make records for the forthcoming new Atlas, and in support of the proposed flora of Co. Down. The focus was on under-recorded hectads and taxa of shorter flowering period. Five monthly meetings were organised at Newry, Dromantine, Mount Stewart (with BNFC), Castlewellan and Ballyquintin. Thanks to the members of the Ulster BSBI group for supporting these and the records accrued. I also give grateful thanks to Lesley Crawshaw, Margaret Marshall, Mark Wright and Ian McNeill who sent additional plant records to me.

In April many of the Co. Down hectads were visited to record spring flowering taxa including the *Erophila verna* (Common Whitlowgrass) and *Ficaria verna* (Lesser Celandine) sub-species. While recording at Hillsborough Lake, large quantities of flowering *Lysichiton americanus* (American Skunk-cabbage) were seen.

In May, while visiting Killard NNR to record *Viola* taxa, *Crassula tillaea* (Mossy Stonecrop) was spotted growing on roadside gravel near to Kilclief. While first recorded in **H38** at Newcastle in 1991 and thereafter restricted to Murlough, this species now appears to be expanding through the county.

Also in May, visits to Mount Stewart to record along tracks recently opened to the public, produced widespread occasional *Anisantha diandra* (Great Brome) plants.

The location of *Equisetum hyemale* (Rough Horsetail) by the river at Lenaderg was visited in mid-May and was found to have much changed due to

landfill. Happily, the plant had persisted despite losing the major part of its habitat and several stems were found along the riverbank by a flush.

After a visit to Dromantine in 2016, another visit was made in 2017, to cover further ground. While much of the estate is poorly managed semi-natural woodland, a *Viola* hybrid, *V. x bavarica* (Early x Common Dog-violet) was found beside a presumably previously much-used and now over-grown track.

In late May, the Outlet retail park at Banbridge produced *Senecio viscosus* (Sticky Groundsel), *Cerastium diffusum* (Sea Mouse-ear) and a small population of *Senecio inaequidens* (Narrow-leaved Ragwort).

Recording round the south of Donaghadee in early June produced copious quantities of highly invasive *Hydrocotyle ranunculoides* (Floating Pennywort) clogging a stream at the entrance to The Commons car park. This was reported to EHS, but the colony was still present when another visit was made in September.

Poterium sanguisorba subsp. balearicum (Fodder Burnet) and Anthemis arvensis (Corn Chamomile) were found in a 'wild flower' sowing at Seahill, near Grey Point, in mid-June. A trip to Debbie Gillies' True Harvest Seeds field near Kilclief produced Myosotis discolor (Changing Forget-me-not), Fumaria officinalis (Common Fumitory), F. bastardii ((Tall Ramping-fumitory) and F. muralis (Common Ramping-fumitory). We also saw Phacelia tanacetifolia (Phacelia) and Trifolium incarnatum subsp. incarnatum (Crimson Clover), which were apparently persisting.

Ballykilbeg Fen ASSI and adjacent ground was visited in early July. The fen appeared to have significant growth of scrub and be affected by deep drains. *Carex diandra* (Lesser Tussock-sedge) and *Equisetum palustre* (Marsh Horsetail) were re-found, but other notable species such as *Baldellia ranunculoides* (Lesser Water-plantain) were not. *Lemna minuta* (Least Duckweed) and *Heracleum sphondylium* x *H. mantegazzianum* (Hogweed x Giant Hogweed) were new records for the area.

A good number of recorders appeared for the late July meeting at Castlewellan Forest Park when it was hoped to re-find various pondweeds that had last been seen some years ago. On the day, little variety was seen growing in the water, but some interesting records were made. These included *Urtica dioica* subsp. *galeopsifolia* (Stingless Nettle), *Glyceria maxima* (Reed Sweet-grass), *Typha angustifolia* (Lesser Bulrush), *Potamogeton perfoliatus* (Perfoliate Pondweed), *P. x angustifolius* (Long-leaved Pondweed) and *Littorella uniflora* (Shoreweed).

The Newtownards breakwater held *Achillea ptarmica* (Sneezewort), *Atriplex littoralis* (Grass-leaved Orache) and *Clematis vitalba* (Traveller's-joy) in late July.

Salicornia europaea (Common Glasswort), *S. ramosissima* (Purple Glasswort) and *Cochlearia anglica* (English Scurvygrass) were recorded in Dundrum Inner Bay in early August.

There was a good turnout for the last meeting of the year at the National Trust farmland at Ballyquintin Point in mid-September. *Linum usitatissimum* (Flax) volunteers were recorded in a wheat crop, and a good range of typical east Down arable plants were found including *Fumaria bastardii* (Tall Ramping-fumitory), *Lamium confertum* (Northern Dead-nettle) and *Veronica agrestis* (Green Field-speedwell).

With Paul Green's new and informative *Atriplex* key to hand, Greyabbey was visited in late September. *Atriplex glabriuscula* (Babington's Orache), *A. prostrata* (Spear-leaved Orache), *A. prostrata* x *A. glabriuscula*, *A. x taschereaui* (Taschereau's Orache) and *A. x gustafssoniana* (Kattegat Orache) were recorded as were *Salicornia europaea* (Common Glasswort), *S. ramosissima* (Purple Glasswort) and *S. fragilis* (Yellow Glasswort).

In the last days of December, the New Year Plant Hunt produced flowering *Meconopsis cambrica* (Welsh Poppy), and surprisingly as there are very few recent records in **H38**, *Thlaspi arvense* (Field Penny-cress) near Newtownards.

Of the 42 hectads in County Down, 28 were visited in 2017. 215 new hectad records were made, mostly of non-native, sub-species and hybrids. 122 records were date-class upgrades from the previous Atlas.

Field meeting reports, 2017

Field meetings 2017

In 2017 there were a total of eleven field meetings held which were well scattered throughout the island. As usual I did not get the chance to attend as many field meetings as planned however the ones I did join were memorable for a variety of reasons. My first meeting of the year was the Leitrim field meeting near the end of May where we were greeted by Michael Archer at Dromod Railway station. Although Michael was not well enough to take part in the meeting he was his usual, extremely courteous self and was present to recommend a number of possible locations to visit. During the Kerry five-day recording extravaganza at the start of June I had the good fortune to visit the magnificent Annascaul Lake valley on a beautiful, sunny day where we were treated to fantastic displays of Greater Butterwort, Foxglove and Sheep's-bit. In mid-June I was unfortunate to attend the wetter of the two field meeting days (Sunday) in East Donegal. In the years to come I will recall that Lough Mourne near Ballybofey must one of the most climatically exposed botanising locations in the country. The incessant mid-June rain and gales resulted in a premature end to the recording day however in the late afternoon the rain did manage to stop for long enough to squeeze in a nice coastal walk and some recording near Laghy on the way back south. In July however the rain held off for the West Galway field meeting. In addition to the botanical highlights, which included the relatively large number of widespread alien species, the participants were treated to a magnificent lunch time view on Sunday overlooking the Inagh Valley with the Twelve Bens as a backdrop.

During the 2017 field meetings approximately 12,200 plant records were collected with 5,800 of these recorded during the mammoth five-day Kerry recording event. The Kerry event may also have created a meeting record with around 45 people attending over the 5 days. The 2018 field meeting programme promises to be just as full, diverse and exciting as previous years and is accompanied by an equally busy Rough Crew schedule. Looking forward to meeting you in a Car Park/woodland/island during 2018.

John Conaghan

Dromod, Co. Leitrim (H29), 27th May 2017

Ten botanists attended this field meeting to record in the wonderful county of Leitrim on quite a damp day. Our own Irish Officer (Maria P. Long) and several Vice-county Recorders were on hand to organize and coordinate two groups of four to cover more ground. Group one, including John Conaghan (Vice-county Recorder - VCR, for **H16**), Maria Long, Faith White and Mary Willis, went one way, whilst Group two, consisting of John Faulkner (VCR **H37**), Fiona Devery (VCR **H18**), Cathal O'Brien and Shane Brien, went the opposite way. Locations likely to be good were recommended by the Leitrim VCR Michael Archer, who, though very ill, came along in the morning to give us tips, directions and annotated maps. For this we were very grateful. (Sadly, Michael has passed away since this day.)

Both groups decided to tackle woodland habitats first due to the wet weather conditions. Group two, of which I was part, visited a woodland near Cloone town. On arrival, we noticed information signs at the road entrance which outlined some of the flora to be found along the road and greenway, thanks to Michael Archer. The species we saw along the road included Soft Shield-fern (Polystichum Hawthorn (Crataegus monogyna), Herb-Robert setiferum), (Geranium robertianum), Cleavers (Galium aparine), Jointed Rush (Juncus articulatus) and Ash (*Fraxinus excelsior*), to name but a few. Towards the entrance of the greenway, the habitat conditions started to change into wetland, with Yellow Iris (Iris pseudacorus) distinguishable from the path. Adjacent to the path, just past the entrance, John Faulkner noticed a different looking fern which turned out to be the Narrow Buckler-fern (Dryopteris carthusiana). Further down the greenway there looked to be a somewhat disused area next to a recent plantation - sedge and rushes were quite abundant throughout, such as Pill Sedge (*Carex pilulifera*), Flea Sedge (C. pulicaris) and Soft-rush (Juncus effusus). Fiona picked one wood-rush specimen to remove the seed head to check if had an oval or round shape. The consensus between the botanists confirmed it to be Heath Wood-rush (Luzula *multiflora*). Continuing further down the path the group stopped at what happened to be another of Michael Archer's information stands with a wonderful picture of Wild Teasel (*Dipsacus fullonum*). Proceeding back to the cars we managed to see this plant which had not been in flower but quite noticeable when looking more closely.

After lunch, the rain started to ease off so we headed for our next site, a quick stop off at Roosky Lake to see some aquatic flora. This was a good choice with Frogbit (Hydrocharis morsus-ranae) being seen next to the jetty overlooking the lake. The main site we focused on after our quick stop off was between Rinn Lough and Lough Errew. The woodland on both sides of the road had frequent oak trees (Quercus sp.) and Rhododendron (Rhododendron ponticum), making it a bit difficult to gain entry to areas we wanted to explore. The Rinn Lough side was cover with woodland flora especially with the smell of Ramsons (Allium ursinum). Marsh Marigold (Caltha palustris) was found at the edge of the lough and the woodland. The Lough Errew side proved to be more open, beyond the wall of rhododendron, which was relatively disturbed but regenerating with interesting flora. Common Spotted-orchid (Dactylorhiza fuchsia), Tutsan (Hypericum androsaemum) and Bugle (Ajuga reptans) were quite noticeable against the pebbly ground. After a long days recording, both groups met again at Dromod train station car park, with John Conaghan and Maria Long showing some wonderful plants they stumbled upon, such as Water Avens (Geum rivale) and its hybrid (Geum x intermedium) which was next to the other parent plant, Wood Avens (Geum urbanum).

Shane Brien

H5 event - Ballymacoda & Knockadoon Head, East Cork, 24 June 2017

The morning of the 24th June brought glorious sunshine and 18 attendees to the first official BSBI East Cork event at Ballymacoda and Knockadoon Head hosted by new VCRs Edwina and Finbarr. The event kicked off in the carpark close to the beach at Ballymacoda. From here the eager recorders, both local and from further afield (West Cork, Kerry, Waterford and Wexford), got stuck into recording as they headed down to the beach. No sooner had they left the carpark when the alien Helminthotheca echioides (Bristly ox-tongue) came into view. The beach and cliff area to the east were investigated and then it was a climb up to the road heading to Knockadoon Head. The hedges and grassy verges were recorded, along with field entrances where the rare (for Cork) Lamium amplexicaule (Henbit dead-nettle) was spotted. Lunch was enjoyed back at the carpark and then it was time to explore Ballymacoda beach to the north-west of the carpark. Here the Near Threatened Crambe maritima (Sea kale) was recorded. A track at the edge of a tillage field proved too tempting to ignore and so a slight diversion from the beach was called for. It didn't disappoint as along this track the rarely recorded hybrid Viola x contempta (Wild Pansy x Field Pansy) was found by the eagle-eyed Paul Green.

A total of 268 species were recorded over the day covering 6 monads – due in no small part to having 3 other VCRs (Paul, Clare and Paula) and the Irish BSBI officer, Maria there and helping out!

Edwina Cole & Finbarr Wallace

Leenane and the Inagh Valley (H16) – 22nd and 23rd July 2017

The main purpose of this field meeting was to improve coverage in two hectads in the north Maumturks/Leenane area of West Galway (**H16**) for Atlas 2020. Prior to the meeting both of these hectads had just over 200 taxa recorded and the aim was to increase the species number to at least a semi-respectable 250. A total of 10 people attended the meeting with most present on both days.

The Saturday began with a visit to a small area of salt-marsh habitat along the shores of Killary harbour in Leenane village (L8762). *Plantago maritima* (Sea Plantain) and *Glaux maritima* (Sea Milkwort) provided the bulk of the vegetation cover along with the usual salt-marsh flora. Of additional note was a wellestablished clump of *Zantedeschia aethiopica* (Altar-lily) growing just above the high tide mark.

In the afternoon we moved a little south to the western way at L8361 where, after a leisurely lunch, the creeping alien Epilobium pedunculare (Rockery Willowherb) was found growing along the margins of conifer plantation. This alien species is now relatively frequent in the north Connemara region and is especially fond of tracks and road margins, often within conifer plantations. The walk along the western way revealed a number of interesting species including the alien species Mentha requienii (Corsican Mint) and Juncus planifolius (Broad-leaved Rush) with Oreopteris limbosperma (Lemon-scented fern) on heathy banks and Lythrum portula (Water-purslane) locally frequent in wet puddles. Mentha requienii is a strong-smelling alien mint species which, in terms of general appearance, bears a superficial resemblance to Anagallis tenella (Bog pimpernel). It was a species which we were destined to see frequently over the weekend, mostly along the margins of stony tracks. A nice flush to the south of the Western Way track yielded a good diversity of sedges including Carex hostiana (Tawny Sedge), Carex dioica (Dioecious Sedge), Carex pulicaris (Flea Sedge) and Carex nigra (Common Sedge). Other noteworthy species seen in the flush included Cirsium dissectum (Meadow thistle), Selaginella selaginoides (Lesser Clubmoss) and Pinguicula lusitanica (Pale Butterwort). A quick visit to a small disturbed area close to where the cars were parked yielded a dense crop of Gunnera tinctoria (Giant Rhubarb) with frequent Mentha requienii, Hypericum humifusum (Trailing St. John's-wort), Epilobium brunnescens (New Zealand Willowherb) and Juncus planifolius growing on bare subsoil.

On Sunday we met up further south at the eastern shores of Lough Inagh and explored areas of bog and heath along the south-western slopes of Knocknahillion, mainly in Monad L8454. The botanical highlight of this area was an extensive and very wet blanket bog flush which yielded *Carex limosa* (Bogsedge), *Carex lasiocarpa* (Slender Sedge), *Carex paniculata* (Greater Tussocksedge), *Carex rostrata* (Bottle Sedge), *Potamogeton polygonifolius* (Bog Pondweed) and *Hypericum elodes* (Marsh St. John's-wort). The view at lunch time was magnificent with a fine Panorama of the Twelve Bens and Lough Inagh revealed below us. On the way back to the cars we came across more *Mentha requienii, Lythrum portula* and *Carex dioica* along the Western Way track.

The final stop of the weekend was the eastern shore of Lough Inagh (L8453) where the most notable species recorded were *Eriocaulon aquaticum* (Pipewort), *Lobelia dortmanna* (Water Lobelia) and a small population of *Thalictrum minus* (Lesser Meadow-rue). *Thalictrum minus* is a rare species in Connemara which is usually restricted to base-rich upland rocks and it's occurrence along the shores of Lough Inagh was a surprise.

The field meeting was a successful one which greatly increased the coverage of the hectads visited. A total of 488 records were recorded over the two days. Perhaps the most striking observation of the weekend is that the north Connemara area supports a large number of alien plant species most of which have a local distribution in Ireland. These species have become well naturalized and widespread in the region over the past couple of decades. Although these species are generally still confined to disturbed habitats, mainly along roadsides and tracks, it will be interesting to see if they will spread into more native, undisturbed habitats in the future.

John Conaghan

Eastern Westmeath (H23), Saturday 19th August 2017

The field meeting recorded at three sites within hectad N56 (Delvin).

The first sites visited were in the vicinity of the Dysart lakes 4 km SW of Delvin. A variety of typical Irish midland lakeshore flora was recorded, the most notable species being *Carex elata* (Tufted-sedge), *C. acutiformis* (Lesser Pond-sedge), *Thalictrum flavum* (Common Meadow-rue), and *Hydrocharis morsus-ranae* (Frogbit). The party then travelled a short distance to the nearby Johnstown lake. Here, apart from a range of acidophile flora associated with the peaty fringes of the lake now afforested, the more interesting species recorded included *Carex lasiocarpa* (Slender Sedge) and *Potamogeton coloratus* (Fen Pondweed). The field meeting concluded with a brief visit to the nearby Mullaghcroy bog. Despite the fact that this heavily worked bog had dried out somewhat a variety of species associated with such midland habitats were recorded including *Osmunda regalis* (Royal Fern), *Dryopteris carthusiana* (Narrow Buckler-Fern), *Vaccinium oxycoccos* (Cranberry), *and Andromeda polifolia* (Bog-rosemary).

In all a total of 153 taxa and 211 records were made for hectad N56 and. The attendance was 10.

Note from the Irish Officer Maria P. Long – (maria-long@bsbi.org)

It might be a funny thing to say.... but I'm delighted to say I can't cope!!

Let me explain. There is so much happening in Irish botany, in the BSBI in Ireland, with local groups, on social media, in applying for and using funding, in engaging with volunteers and interested members, with supporting VCRs with their recording work, with field trips and training courses, conferences and VCR days, and in a myriad of other things... that we are finding ourselves swamped. But what a good problem to have! I'm delighted!

While still modest in scale, we have never had such high membership in Ireland. We've never had so many field trips, nor so many training events. We've certainly never before had rough crew events, nor local groups springing up and running events. We have a significant number of new VCRs (Vice-county Recorders), and a good handful more waiting in the wings. And we've never had the reach that we now have through all the social and online media channels currently in use: main BSBI website, Irish webpage, county webpages, Facebook (two main accounts, as well as numerous local groups pages), Twitter (a number of accounts from staff, VCRs and members), podcasts, and much else besides.

But of course it's worth acknowledging that there are still significant challenges. Habitats and species continue to be lost, and plant populations dwindle, as environmental damage and destruction continues, often in the name of 'progress'. VCRs face increasing pressures on their time and resources, and continue to do their job in a world where the digital age makes changes which are both speedy and wide-reaching. And the BSBI faces battles to secure the respect and funding it deserves from organisations who rely on our work.

But overall, I think our challenges are within the bounds of what we'd expect, and our achievements are growing even in the face of these challenges. Let's take a moment to be thankful, to appreciate where we're at, warts and all, and to face into the 2018 recording season with vigour and enthusiasm. Let's all do our bit this year, whatever our role is. Members can go along to more events perhaps. VCRs can eek out an extra day's recording maybe, and get to that faraway square! Best of luck all, and see you outdoors for some recording very soon hopefully!

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Above: David Webb botanising on the Cork-Kerry border, May 1982 (Photograph by the D. Kelly). (p. 7).



Left: David Webb reading a Baedeker guide, with a bunch of specimens tucked under his arm. In the citadel at Alba Iulia in Romania, in the course of a Flora Europaea Symposium, 20 July 1963. (Photograph A. by Chater). (p. 7).



Euphorbia hyberna growing in full light (above) and in dappled shade (below). Photos J. Lucey © 2017 (p. 20).

