Moorea

The Journal of The Irish Garden Plant Society

Vol 6



The Irish Garden Plant Society was formed in 1981 to assist in the conservation of garden plants, especially those raised in Ireland. It also takes an interest in other aspects of the preservation of Ireland's garden heritage.

This journal will be devoted to papers on the history of Irish garden plants and gardens, the cultivation of plants in Ireland, the taxonomy of garden plants and reports of work carried out by the society and its individual members.

The editorial committee invites contributions from members of the society and others. Manuscripts, typed on A4 sheets (double-spaced and typed on only one side of each sheet), may be submitted to the Editor at the National Botanic Gardens, Glasnevin, Dublin 9, from whom further details may be obtained.

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Contents

DAPHNE CHAPPELL	Some Snowdrop Notes	1
J.G.D. LAMB	Snowdrops in an Irish Context	3
SYBIL CONNOLLY	H.P. McIlhenny – An Appreciation	5
MARY DAVIES	An Early Nineteenth-century Conservatory at the Loreto Convent, Bray, County Wicklow	7
E. CHARLES NELSON	'Plan & Section of Mr Bullen's Garden Stove'	8
NORMAN HICKIN	My Favourite Weeds	11
TESSA HOBBS	Old Mill House	17
MARGARET GARNER	Some of Our Holiday Collections	19
PETER S. WYSE JACKSON	*Pachyphragma macrophyllum* (Hoffm.) Busch (Cruciferae); A Most Useful but Overlooked Herbaceous Plant for Irish Gardens	21
PETER S. WYSE JACKSON, JOHN A.N. PARNELL and QUENTIN C.B. CRONK	A Modern Equivalent for the Wardian Case	23
J.G.D. LAMB	A Nineteenth Century Book of Pressed Ferns	25
J.G.D. LAMB and E. CHARLES NELSON	*Prunus* 'Woodfield Cluster'	27
REG MAXWELL	The Bishop Bedell Sycamore at the Palace of Kilmore, County Cavan	28
ROGER D. LONG	*Begonia* x *semperflorens* 'Scarva Cherry': A Case Study for the Rapid Introduction of a New Variety	29
E. CHARLES NELSON	Botany, Medicine and Politics in Eighteenth Century Dublin and the Origin of Irish Botanical Gardens	33
E. CHARLES NELSON	*Begonia* x *semperflorens* 'Scarva Cherry'	44
WENDY WALSH and E. CHARLES NELSON	Genesis of a Tribute to Trinity College Botanic Garden	45
BOOK REVIEWS		46

Front Cover – Tormentil (*Potentilla erecta*), an engraving by J. Gwim, 1727, illustrating a pamphlet by William Maple of the College Botany Garden.

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Dublin

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DAPHNE CHAPPELL

SOME SNOWDROP NOTES

As a member of the National Council for the Conservation of Plants and Gardens and having a particular interest in garden plants and nurseries historically linked with Gloucestershire, I consider myself fortunate indeed to have met the late Herbert Ransom the gardener who, for twenty years, grew the bulbs for Brigadier and Mrs Mathias, owners of The Giant Snowdrop Company.

The company traded at Hyde, near Stroud, Gloucestershire, from 1951 to 1968 and was not only responsible for rekindling an interest in snowdrop growing after the war but also for preventing many older cultivars being lost through lack of recognition. The company has a fascinating history and thanks to Herbert Ransom and Quentin Mathias, son of the owners, I have been able to peruse old company correspondence, order books and a host of other material amassed during its trading days. I was fascinated to find many letters from Ireland and report here a few facts of interest to Irish gardeners.

Although the Straffan snowdrop needs no introduction to Irish gardeners you may be surprised to hear that over seven thousand of these bulbs were exported to England – for sale by the Giant Snowdrop Company – by Nancy Dalgety of Leixlip. Nancy gardened at Leixlip for over fifty years and was a friend of both Lady Moore and Mr Black, gardener to the Duke of Leinster at Carton. Her letters tell us that the bulbs she sent originated in Straffan garden but of the bulbs growing at Straffan she writes, 'Mr Barton tells me that they got a disease and all died out', adding, 'but I grow millions'! Her bulbs were grown on by the Company and offered for sale between 1955 and 1963; they attracted a good deal of attention at the Royal Horticultural Society's Spring shows and proved a popular line being sold to customers from England, Scotland and Wales. I believe it true to say that the bulbs of *Galanthus* 'Straffan' offered by the specialist bulb nurseries today can be traced, through the Giant Snowdrop Company, to Nancy Dalgety's garden.

Another Irish correspondent was Liam Schofield from Cappawhite, County Tipperary. As a lad he had worked as a garden-boy and later travelled for a nursery firm in Dublin which meant he attended exhibitions all over Ireland. He first sent snowdrops for identification in 1953 from his twelve-acre small-holding, explaining that he grew them on a south-facing bank along one of his cow pastures. He became a regular and enthusiastic correspondent, at one stage despairing that the area in which he lived and farmed was 'horticulturally barren' adding unhappily 'there is not one person in Southern Ireland able to talk snowdrops nor a library with any book going farther than . . . *G. nivalis* – found in Europe, naturalised in England'. This, I think, indicates how the Giant Snowdrop Company provided encouragement and became a pivot around which many collectors and growers could operate; many letters from all over the British Isles were written in the same vein.

Liam Schofield collected and grew many good varieties and species and was to supply the company with *Galanthus plicatus*, *G. ikariae*, 'Sraffan' and *G. platyphyllus*, considering the latter his finest snowdrop. He also supplied quantities of *Leucojum vernum* bulbs, both var. *vagneri*

and var. *carpathicum*. His 'Straffan' bulbs had come from a garden called 'Greenfields' in 1940. This garden was owned by the Bagwell-Purefoy family – names probably more familiar to Irish readers than to me – and a member of that family had collected and grown snowdrops there before the 1914 war. Another hybrid obtained by him from that same garden was sent over in 1955, a fine snowdrop which became known as the "Greenfield Form", though a name was never published; I include a description below. It caused quite a stir when first sent for identification and questions and answers flew back and forth. Liam Schofield wrote that he first found three bulbs of it in Greenfield garden about 1950, it had increased well with him and in five years had made one hundred bulbs, 'it always looks distinct even in good company and it is heavily scented'. Although it was never offered in the company's catalogue I suspect bulbs were passed around amongst friends as I often meet it in the gardens of fellow galanthophiles.

I can also mention the snowdrops sent to England by David Shackleton from Clonsilla, Dublin. He wrote to the Giant Snowdrop Company in January 1960 for identification of 'some of my different snowdrops', one of which had come from Miss Blanch Poë , Nenagh, Tipperary. It is now well known that this was the double known as 'Hill Poe' and we are indebted to David Shackleton and the Giant Snowdrop Company who, without doubt, rescued it from oblivion for us to enjoy to this day.

Another of the bulbs he sent was recognised as being distinct and though there is no indication of how many bulbs of this type were eventually exchanged I believe it to be the snowdrop given to me by Herbert Ransom three years ago as *Galanthus* "Shackleton". I seem to recall its parentage being referred to as *G. elwesii* x *byzantinus* but am open to correction on this matter. It is certainly a fine form, a late flowerer, prolonging the season considerably and a welcome addition to a collection. It would appear that Valerie Finnis (Lady Scott) of Boughton House, Kettering, Northants, a friend of David Shackleton, has passed this snowdrop around, as I have seen it in a garden in Oxfordshire and enquiries revealed that it came from that source.

Notes

(1) *The Snowdrop from Liam Schofield*

Leaves (2) flat in vernation, one edge narrowly plicate, mid green, glaucous, thick, strap shaped but tapering at apex, 11 cm long, 1 cm broad. Scape up to 12 cms, sturdy, spathe 4.5 cms, membranous, pedicel approx 3 cms in length. Flowers – outer petals white, obovate, 2.5 cms long, 1.5 cms broad: inner petals white, cuneate with good, deep green, clean heart-shaped mark around the sinus at the apex. Ovary deep green, barrel shaped.

The leaves of this snowdrop open flat after flowering, with a lateral twist; it is extremely sturdy and a good 'do-er' often producing two flowers from one pair of leaves. Flowering end of Feb-March, fragrant.

(2) *The Snowdrop from David Shackleton*

Leaves (2) convolute in vernation, light green, glaucous, 16 cms long, 11 mm broad. Flowers – outer petals white 2.5 cms long, 13 mm broad: inner petals 15 mm long, tubular, marked around sinus with small, light green, narrowly triangular mark and a pale green U-shaped mark at base. Scape to 14 cms, spathe 3.5 cm, pedicel 2 cms. Ovary pale green, narrowly conical.

This snowdrop is of elegant habit, tall and upright, flowering March, fragrant.

Both snowdrops are described from specimens grown in my Gloucester garden since 1983.

NCCPG Gloucestershire, The Mill House, Blaisdon, Longhope, GL17 0AM.

J.G.D. LAMB

SNOWDROPS IN AN IRISH CONTEXT

From the botanist's point of view snowdrops have been classified tidily into three main groups, as in F.C. Stern's monograph *Snowdrops and Snowflakes* (London, 1936). These groups, the nivales, the plicati and the latifolii, are distinguished by the arrangement of the leaves as they come above ground. Geographical isolation and adaptation to local environment are factors in keeping the different kinds distinct from each other in nature, but gardeners have confused the picture somewhat by bringing the species together in cultivation, where good forms and hybrids have selected and propagated.

The common snowdrop (*Galanthus nivalis*) typifies the first botanical group – the nivales – in which the leaves are appressed to each other as they appear above ground. The usual double form, with its untidy conglomeration of petals, makes a fine show of colour in many gardens, but the double yellow – 'Lady Elphinstone' – is rarely seen. It is the markings on the inner segments that are pale yellow, and in some seasons the colour tends to revert to the normal green. The Straffan snowdrop may also be mentioned here as it has the general appearance of a good *G. nivalis*, but is conjectured to be a hybrid with the Crimean snowdrop (*G. plicatus*) as both grew at Straffan House, where Frederick Bedford, the head gardener, noticed the original plant. The very neat and tidy double *G.* 'Hill Poë', with symmetrically arranged inner flower segments, is also regarded as a hybrid with *G. plicatus*, having in some degree the pleated leaf margin characteristic of the latter. This snowdrop was found in a County Tipperary garden. Both these Irish cultivars are satisfactory garden plants, growing strongly and increasing steadily. 'Straffan' is valued for its long flowering season, many of the bulbs producing a second flower. In our experience this feature is not exclusive to the Straffan snowdrop, strong plants of other kinds occasionally producing two flowers. The true 'Straffan' is a fine large flowered kind.

There are two autumn flowering snowdrops allied to *G. nivalis*. These did well in our Malahide garden, but *G. reginae-olgae*, in which the flowers precede the leaves, did not survive the move to the midlands, and *G. corcyrensis* (flowering with the leaves) has dwindled in numbers after an encouraging first two seasons. Though these were planted in a south border we were unlucky in an immediate sequence of two exceptionally severe winters.

G. graecus, another of the nivales, has proved to be fully hardy. It is earlier and dwarfer than the common snowdrop, and can be recognised by the twisted leaves. This species is flowering well and multiplying in a sunny spot. *G. rhizensis*, distinct among the nivales through its smaller size and green leaves, is a recent acquisition that is a cause of anxiety lest it is not going to settle down, though we have seen it doing well in other gardens.

G. plicatus, the Crimean snowdrop, is robust and happy in our garden. Where uncontaminated by hybridisation it is easily recognised by the developing leaves being folded back at the margins, by the glaucous band down the centre of the leaf, and by the large flowers having only the apical

('horseshoe') marking on the inner segments. We have noticed this species in several Irish gardens, sometimes in good forms which, one may suspect, could bear comparison with any that have been named in Britain, such as 'Warham Variety'.

The only other snowdrop with plicate leaves that is at all common in cultivation is *G. byzantinus*. In this species the leaves are wholly glaucous, and the inner segments of the flower bear both apical and basal green markings. This snowdrop is also a good garden plant, readily increasing. Indeed, there is a lonely, deserted garden known to us where *G. byzantinus* has spread freely among the bushes, and, as mentioned by Stern, the flowers vary in size. We picked out a single bulb with extra large flowers, the outer segments 30 mm long, compared with *c.* 20 mm for the common snowdrop, and hope it will retain its characteristics, increase and become established as a good garden plant.

Of the third group of snowdrops, the latifolii, the most familiar is *G. elwesii*, which shows well how the leaves of this group are rolled around each other in the early stages. *G. elwesii*, particularly in the variety *maximus*, is a fine plant with handsome broad foliage. The flowers, which are well marked with two green patches, are very large in the best forms. Though not a snowdrop for the roughest part of the wild garden, it does well in any reasonable place.

G. ikariae is very distinct in having leaves as green as those of a bluebell. We grow two forms, the one called subspecies *ikariae* having shorter outer floral segments than the subspecies *latifolius*. In our garden these two behave differently, *ikariae* spreading freely by seed, *latifolius* increasing mainly by offsets.

One other snowdrop completes our experience of the species. This is *G. caucasicus*, another latifolius type. This has very grey leaves, only horseshoe shaped markings on the flower, and recurved leaves. One form flowers very early. Though we have seen this species doing well in County Wexford, it has not been very free flowering with us, possibly because it is in too shady a spot.

At the end of the last century and in the early 1900s great interest was taken in the garden forms of snowdrop by J.G. Baker, F.W. Burbidge, E.A. Bowles and other leading gardeners of the period. Many were named; Stern lists over one hundred of them, including synonyms. Few of these survive today, and probably still fewer were ever in Ireland. We used to have the single form of *G. nivalis* with yellow markings, variously called 'Flavescens' or 'Lutescens', and still grow 'Magnet', with normal markings but with extra long pedicels, so that the flowers swing in the breeze. 'Arnott's Seedling' is especially good, a very robust plant with large flowers. 'Scharlockii' is a curiosity, a small plant with a divided leafy spathe. 'Viridi-Apice' is a strong growing plant with green tips to the outer segments of the flower. Both of these curiosities increase well by offsets.

Most snowdrops seed freely and so variations are apt to appear in any garden with a good collection. We have been given some unnamed kinds, such as a double with green tips to the outer segments. Stern illustrates 'Merlin' which has wholly green inner segments. A clump of plants with this character grows in our garden, with the plicatus foliage referred to by Stern, but a similar type from a friend's garden has the unfolded leaves of the elwesii group. Very occasionally we have seen plants with two flowers on one stem, once in a nivalis type plant and once in *G. byzantinus*. It seems likely that the bulb has to be well nourished to achieve this. It is interesting to speculate whether such an aberration is in any way an indication of the relationship between snowdrops and snowflakes, as several species of *Leucojum* regularly produce multiple flowered stems.

Woodfield, Clara, County Offaly.

SYBIL CONNOLLY

H.P. McILHENNY — AN APPRECIATION

Mr Henry P. McIlhenny, the philanthropist and collector of nineteenth-century French and English paintings, has died in Philadelphia at the age of seventy-five. From 1937, when he bought the Glenveagh estate in County Donegal from the widow of an American Professor of Art at Harvard University, until 1983, when he left Ireland, he spent several months of every year at Glenveagh. He donated the nineteenth-century castle to the Irish nation in 1981, having earlier sold the estate which consisted of lakes, mountains, woods and bog, as well as the beautiful garden which he had created during the years of his ownership, for a nominal sum, to the Office of Public Works.

I asked him once to explain why he felt so attached to Donegal. In his inimitable Philadelphian accent he exclaimed 'But you see I belong to Donegal. Both my grandfather and grandmother were born and married in the village of Carrigart, from where they emigrated to the United States, where my grandfather invented the gas meter' (source of the family fortune). He continued by telling me how, for the first time in 1937, he had visited Donegal and the village of Carrigart, on a pilgrimage to the roots of his ancestors, and how straight away he felt a strong sense of belonging. In fact, once he had established his home in Donegal, he travelled in Ireland very little outside that county, being content to stay in his castle where he entertained his friends in Sybarite comfort.

Henry was the most generous and amusing of hosts. He was an equally generous guest, being delighted and touched to find himself a guest, however simple the entertainment on offer. He never confined himself to the company of those equally wealthy, nor did he choose to surround himself only with the famous. Anyone he took to, was welcome.

Immediately after the war, he started work on the gardens which surround the castle. Lanning Roper, the famous and talented garden designer, had been a classmate of Henry McIlhenny at Harvard, so he was called in as advisor. During the years which followed, the garden evolved to become the remarkable place which it is today. The Pleasure Ground, the Belgian Walk, the View Garden were all replanted. A great flight of sixty-seven steps, twelve feet wide, up the mountainside to a grassy terrace overlooking the castle and lake was constructed. The steps flanked with profusely seeding *Rhododendron ciliatum* and the top flight lined with lemon pots.

A wall was built around the jardin potager with herbaceous borders at its foot, and the paths between central beds of vegetables were edged with fruit trees and flowers for cutting. Palm trees and tree ferns and many rhododendrons were planted in the Pleasure Garden. In other parts of the garden, tender plants including *Michelia doltsopa, Metrosideros lucida* and fragrant *Rhododendron lindleyi* grow well. Lilies are one of the specialities and there is a great display of *Lilium auratum* var. *platiphyllum* which lines a vista. Always the planting was done to enhance what Henry considered the most important thing about the garden at Glenveagh, and that was the spectacular view of Lough Veagh.

In his last letter to me, just a few weeks before his death, he wrote, 'I miss Glenveagh and Donegal so much.' The loving care and dedication to perfection which Henry McIlhenny spent on Glenveagh, and which now is a glorious heritage for the Irish people and others to enjoy and to learn from, ensures that he has left a fitting memorial in his beloved Donegal, where he will long be remembered with respect and affection.

73 Merrion Square, Dublin 2.

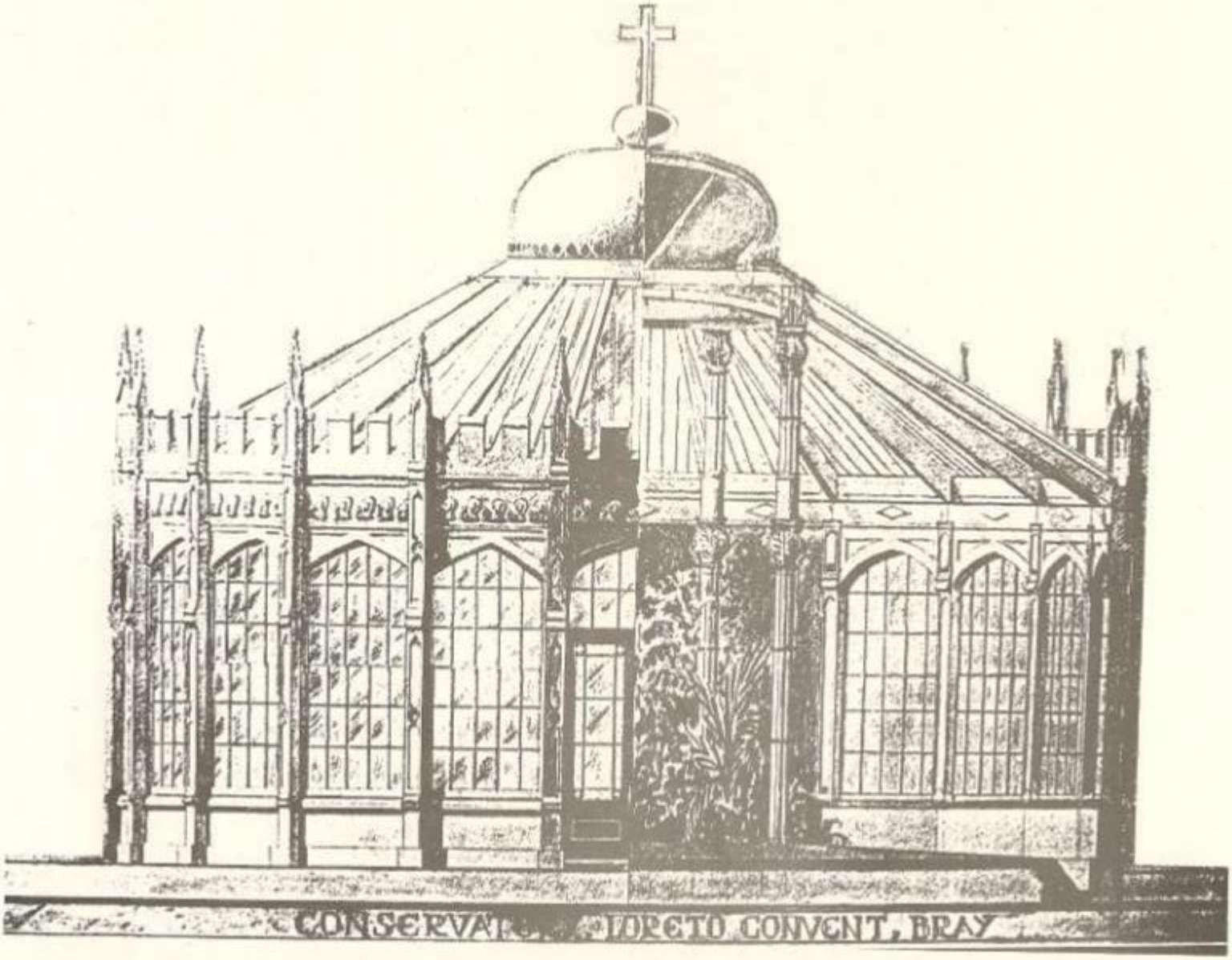


Fig. 1. The conservatory, Loreto Convent, Bray (courtesy Jeremy Williams).

MARY DAVIES

AN EARLY NINETEENTH-CENTURY CONSERVATORY AT THE LORETO CONVENT, BRAY, COUNTY WICKLOW

A delightful circular, gothic-style conservatory dating from 1835 has recently been restored in Bray, County Wicklow (Fig. 1). The structure is approx. 40 feet (12 metres) in diameter, and some 30 feet (9 metres) in height. The pinnacled buttresses that separate its twenty-one sides, the elephant-head crests underneath the crenellated parapet, and the onion-dome crowning the glass roof all add to its air of fantasy. The buttresses, pinnacles, crenellations and six inner columns (supporting the dome) are all of cast-iron, while timber was originally used for the glazing bars and the inner structure of the roof. There was also a heating system, with a furnace and underfloor piping, although this no longer exists.

The conservatory was built for George Putland (*c.* 1780-1841) by the Dublin builder and architect Thomas Ring.[1] The house that it was designed to complement[2] was extensively remodelled, it seems in the 1830s, so that a plain eighteenth-century building had thrown over it 'an elaborate sugar-icing of gothic frivolousness'.[3] This sugar-icing included cast-iron crenellations on the parapet and chimney stacks, and an imposing crenellated cast-iron porch. The conservatory must have been the final touch to the 'modernisation', and both it and the renovations must have been finished by June 1835 when George Putland held a 'splendid fete' graced by the Lord Lieutenant and other aristocrats.[4] In 1837 Lewis's *Topographical dictionary* singled out the conservatory for mention: 'leading from the drawing-room antechamber is a noble conservatory of polygonal form, erected at an expense of £5,000, and containing a fine collection of the most choice and rare exotics'. (The figure of £5,000 seems excessive, and may perhaps have applied to the total renovations.)

After George Putland's death, the property was inherited by his brother Charles. He did not stay to enjoy his relative's architectural frivolities for long, for in 1850 he sold the house and grounds to the Loreto Order. The Order has maintained a convent and school there ever since.

By the beginning of the 1980s the roof of the conservatory was leaking, and a survey showed that extensive repairs were necessary, particularly to secure the dome. The nuns accordingly spent £8,000 on essential work, including the replacement of the iron and timber structure of the roof with a new steel structure. The leadwork was also renewed. The local Cualann Historical Society then raised a further sum by appeal that, although insufficient to allow the total completion of the work, paid for essential painting and glazing, so that the conservatory is once again waterproof.[5]

Acknowledgements

Thanks are due to Sister M. Cyril O'Toole, Loreto Convent, Bray, and to William Garner, John Holohan, Joe Loughman and Jeremy Williams.

References

1. See William Garner, *Bray architectural heritage*, An Foras Forbatha, 1980, pp 61-3. The elephant-head motif derives from the Putland family crest.
2. The house was variously called Newcourt, San Souci and Bray Head, apparently concurrently. To add to the confusion, the adjoining property that Charles Putland removed to in 1850 was also called Bray Head.
3. William Garner, *op. cit.*, p. 61.
4. *Freeman's Journal*, 11.6.1835.
5. The possibility of moving the conservatory to a different site, preferably still in Bray, where it can be properly maintained and supervised is now being explored (April 1987).

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E. CHARLES NELSON

'PLAN & SECTION OF MR BULLEN'S GARDEN STOVE'

Robin Hall, of Primrose Hill in Lucan, County Dublin, has brought to my attention a manuscript inscribed 'Plan & Section of Mr Bullens Garden Stove' (reproduced overleaf). It was discovered by Mr Hall in one of the volumes of Philip Miller's *Gardener's Dictionary* which he acquired some years ago; the particular set of books was originally in the library of the dukes of Leinster at Carton House, Maynooth, County Kildare.

The plan and section show a typical glasshouse of the mid-eighteenth century, the kind of structure that would have been built in the kitchen-gardens of houses like Carton and Marino — it is instructive to compare this plan with that reproduced by O'Connor (1983) in her account of Marino, County Dublin (for a review of Irish greenhouses in this period, see Nelson 1983). There is no evidence, however, that this plan was specifically for a garden stove built at Carton.

The lean-to house, twenty feet long by eight feet wide and seven feet in height, was sited facing due south; thereby it received the full benefit of the sun's rays. The sashes would have been of wood, and the rear wall was brick; it is interesting that no entrance door is shown in the plan. The panes of glass were small. The bulk of the floor was occupied by a pit which was three feet deep and five feet broad; this would most probably have been filled with tanner's bark, the fermentation of which helped to maintain stove conditions in this type of glasshouse.

The house is called a 'garden stove' and thus was intended for the cultivation of exotic flowers and fruits such as pineapples which require high temperatures to mature. Heating was effected by a system of flues in the back wall; from a 'stove or fier place' (marked d in the plan) at the east end of the building, hot air (including smoke and fumes from the open fire) was allowed to flow and counterflow along parallel flues (marked B) and thence up the chimney which was sited at the west end of the house (see Fig. 1 below). The hot gases heated the bricks of the back wall of the house, and thus the house itself — it was quite an efficient system but noxious fumes did pass into the stove if the bricks and mortar were not very well maintained. The Orangery at Marino Point (NET), Foaty Island, County Cork, had such a heating system.

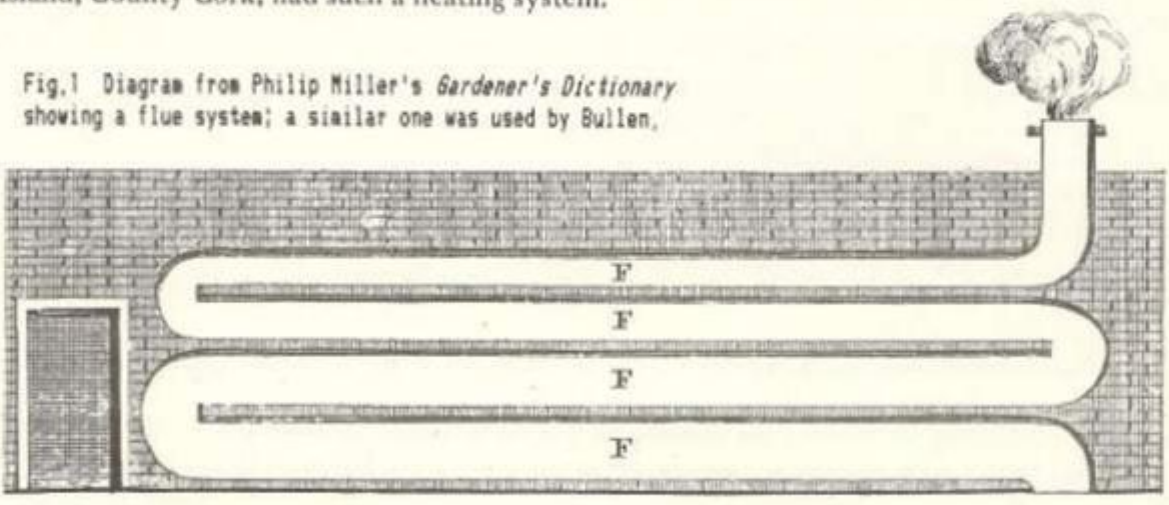
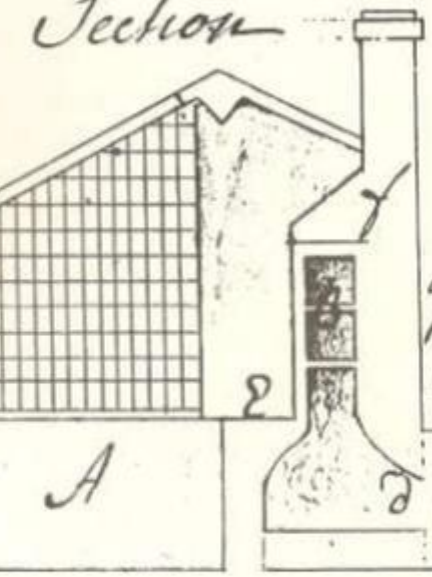


Fig.1 Diagram from Philip Miller's *Gardener's Dictionary* showing a flue system; a similar one was used by Bullen.

Explanation of ye Section
viz

Section

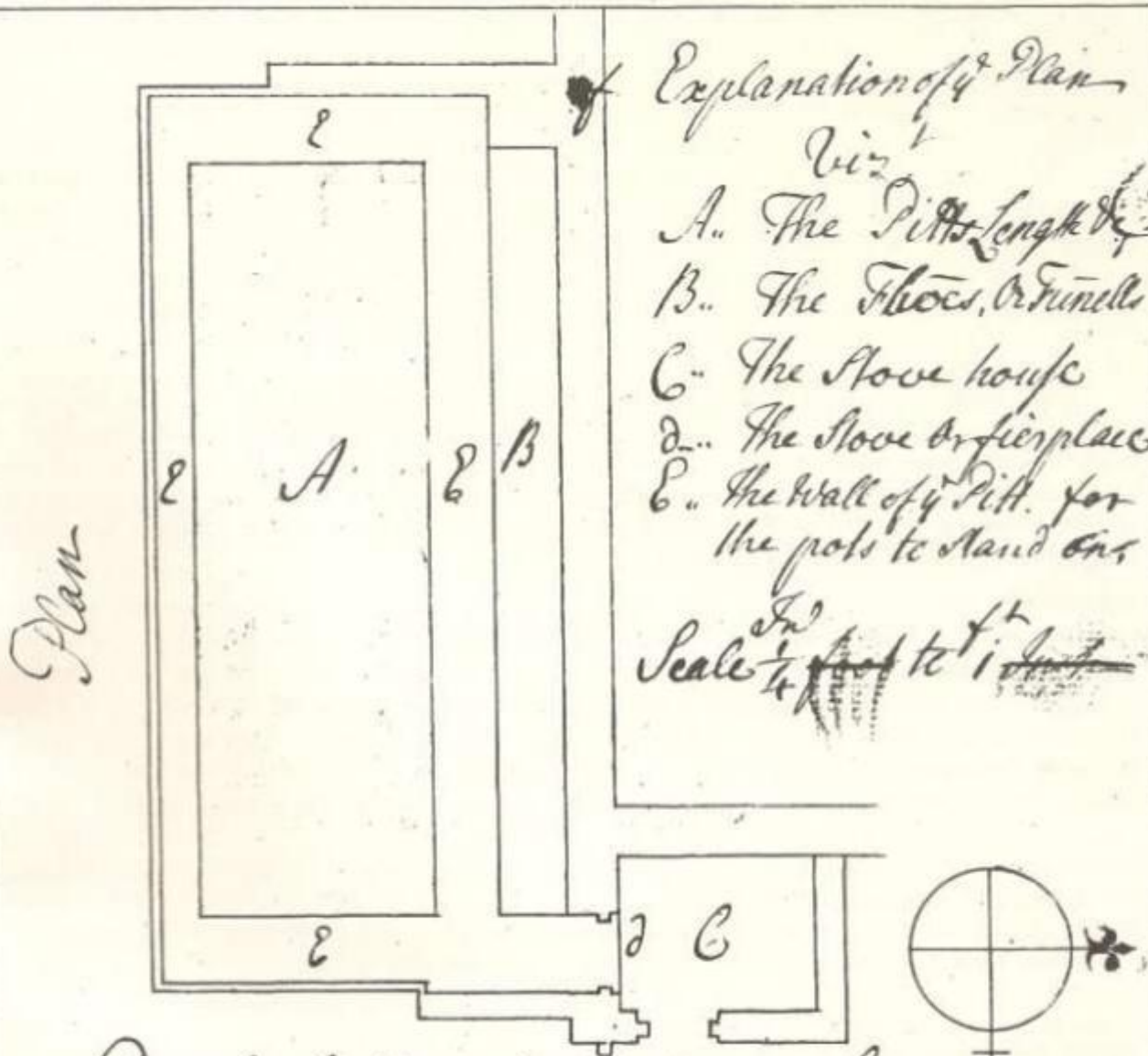


A.. Breadth & depth of ye Pitt
E.. Walls of Ditto.
d.. The fierplace at the
last end of ye flews.
B.. The three flews, With
a row of flags between each.
B.4 West flag of ye 1st flew must
be omitted & the last one of the
second; the smoak returning
along ye 3d goes immediately
up the Chimney at f.

Explanation of ye Plan
viz

A.. The Pitts Length &c
B.. The Flues, or Funells
C.. The Stove house
d.. The Stove or fierplace
E.. The Wall of ye Pitt. for
the pots to stand on

Scale 1/4 [illegible] to 1 [illegible]



Plan

Plan & Section of Mr Bullens Garden Stove.

The most interesting point about this manuscript is the name Bullen, a prominent name in Irish horticulture during the eighteenth century. Indeed, it is possible that this is a plan of a stove-house which actually stood in Bullen's nursery situated in New Street, Dublin, early in the eighteenth century, but it must be stressed the plan is not dated, the paper is not watermarked, and there is no way of telling precisely when the plan was prepared.

Malins & Glin (1976, pp 7-8) note that the formal gardens at Stillorgan, County Dublin, were laid out by one Mr Bullein [*sic*] for Colonel John Allen in 1695. J.C. Walker (1790), writing about the 'rise and progress' of gardening in Ireland, credited a Mr Bullen with the introduction of the pineapple into cultivation here; this plant was first grown in England during the reign of King Charles II (between 1666 and 1685), and Walker dated its arrival in Ireland as the reign of Queen Anne (between 1702 and 1714). According to Walker, Bullen established his nursery during Queen Anne's reign, but it is unlikely that Walker's dating is completely accurate. At one time the New Street nursery-ground contained a series of topiary pieces including '. . . an hare hunt and a boar hunt in box.'

By the mid-1700s pineapples were extensively cultivated in the larger Irish gardens – these tropical fruits had become fashionable, and a corollary of that particular craze was that garden owners had to build stove-houses to accommodate them. Among those who indulged in this passion were Lord Charlemont at Marino (O'Connor 1983), and Lord Trimlestown (Nelson 1983). Writing in 1829, John Robertson of Kilkenny recorded that there were a dozen pine-stoves (i.e. stove-houses for pineapple cultivation) about that city in 1785, and that his father had purchased pineapples from Mr Bullen[1] about 1756 – in 1830 Robertson still had a plant descended from that original Bullen stock. Daniel Bullen, son of the original nurseryman, is recorded as having had premises in Christ-church Lane, Dublin, between 1765 and 1779. Robertson (1830) recalled meeting Daniel Bullen[2] at his shop in Pill Lane about 1776; again the dates are imprecise and not necessarily contradictory. Edward Bray, whose extant nursery and seed catalogue (dated *c.* 1785) is the earliest surviving for any Irish nursery, trained under Daniel Bullen before setting up his own business about 1775. A nursery jointly owned by Bullen and Facon existed between 1789 and 1794 at Smithfield in Dublin (McCracken 1967).

Given Walker's claim that Bullen was the first to grow pineapples in Ireland and that he was still selling them in the 1750s, it is very tempting to postulate that this plan and section represents the house in which they were cultivated. Be that as it may, the plan does exemplify the type of stove-house that would have been constructed in Ireland throughout the eighteenth century, even as early as 1690 when Sir Arthur Rawdon's epocal greenhouse – which must have been heated like this one – stood ready at Moira awaiting its Jamaican plants.

Acknowledgement

I am most grateful to Robin Hall for copying the plan and allowing me to study it.

References

Desmond, R.G.C. (1976). *Dictionary of British and Irish botanists*. London.

McCracken, E.M. (1967). Notes on eighteenth century Irish nurserymen. *Irish Forestry* 24: 39-58.

Malins, J. & the Knight of Glin. (1976). *Lost demesnes*. London.

Nelson, E.C. (1983). Some records (*c.* 1690-1830) of greenhouses in Irish gardens. *Moorea* 2: 21-28.

O'Connor, Cynthia (1983). Gardening at Marino. *Moorea* 2: 29-38.

Robertson, J. (1830). Notes on the former and present state of horticulture in Ireland. *Loudon's Gardeners' Magazine* 6: 26-27.

Walker, J.C. (1790). Essay on the rise and progress of gardening in Ireland. *Transactions of the Royal Irish Academy 4 (Antiquities)*: 3-19.

[1] Robertson uses the name Buller, which clearly is a typographical error; no nurseryman of that name is noted in other sources.

[2] Erroneously listed as Bull in Desmond (1976).

National Botanic Gardens, Glasnevin, Dublin.

NORMAN HICKIN

MY FAVOURITE WEEDS

The title appears to be something of a contradiction in terms. But is it? There is a wide-spread notion amongst gardeners that a weed is a plant in the wrong place or that it is a plant not specifically planted by the hand of the gardener. I know I am on dangerous ground here because there would seem to be almost as many definitions as there are gardeners. But of course I have the advantage of the reader by having looked it up in the *Oxford English Dictionary* a number of times over the years because of an especial interest in an aspect of the subject which will be revealed below.

But first, what does the dictionary say? 'A weed is a herbaceous plant not valued for use or beauty, growing wild and rank, and regarded as cumbering the ground or hindering the growth of superior vegetation'. Nothing about who planted it there, but I believe many gardeners would like to modify the definition to suit their own views. What about trees and shrubs? My silver birches drop copious seed and all those germinating are disposed of, whereas those of the hornbeam which are very few in number are carefully nurtured. But the abundant seed-fall of the silver birch, as much as the beauty of the tree itself, gives me pleasure. Every year a few lesser redpolls are noticed, hopping about under the trees feeding on the minute seeds. This shy little bird is seldom seen otherwise.

A Plant for Recollections

One of the wild-flowers that has attracted me all my life is bugle (*Ajuga reptans*). The association of this earth-hugging species in the light shade of oak trees with the pearl-bordered fritillary butterfly (*Boloria euphrosyne*) and a number of other butterfly species besides, has never failed to give me joy. In fact this association of short-spiked blue flowers and black and tawny-orange winged butterflies had an extraordinary effect on my life. I was contemplating such a scene in 1932 when I met a most beautiful girl in a green frock. She came bounding through the undergrowth towards me. I wondered what on earth I could say to prolong the moment which might never re-occur, but she spoke first asking me what were the plants and what sort of butterflies they were that flitted around them. Her name was Emma Fischer – yes – you've guessed! In October 1986 we had been married for 50 years.

Bugle grows wild in our Kateshill garden in Worcestershire and crops up in unpredictable places. It appears to favour the herb garden and it is never interfered with. It stays in one place three or four years sending runners out each year so that it produces an ever-widening circle. I never disturb it – it's one of my favourite weeds!

A Few Favourites

On the first visit to Kateshill as owner I entered along the south drive and sawed my way past a dead laburnum. The centre of the drive was green and tufted and suddenly I realized that some



Fig 1. Pearl-bordered fritillary sucking nectar from bugle.

of the lesser tufts were unusually lacy. I looked closer and found that they were trailing St John's worts, a wild plant with which I had been familiar for many years along the stony track by Dowles brook in Wyre Forest. Thereafter it appeared every year on the bank – it was always left intact and gave much pleasure.

When Chris Baines, the urban conservationist, was shown around early in our occupation of Kateshill, he pointed out greater celandine as a weed around the house. Chris told me that it was getting uncommon and I should keep a few plants about. This I have done. A member of the poppy family, it is rather an untidy plant when in bloom, but the young plants when they are at the rosette stage are most attractive. Another plant found in the same dampish situations around the outbuildings is ivy-leaved toadflax. I adore it and, although by late summer I have to tear up handfuls of the long trailing stems, some are always left.

Fellow Travellers

We have two personal or family weeds. They travel about with us wherever we live. Firstly the Welsh poppy (*Meconopsis cambricum*) the seeds of which I collected over thirty years ago from the garden of King's Youth Hostel, in a typical Welsh situation for the poppy, three miles from Dolgellau on the rocky foot of Cader Idris. The seeds germinated in Bletchingley, Surrey, but when we

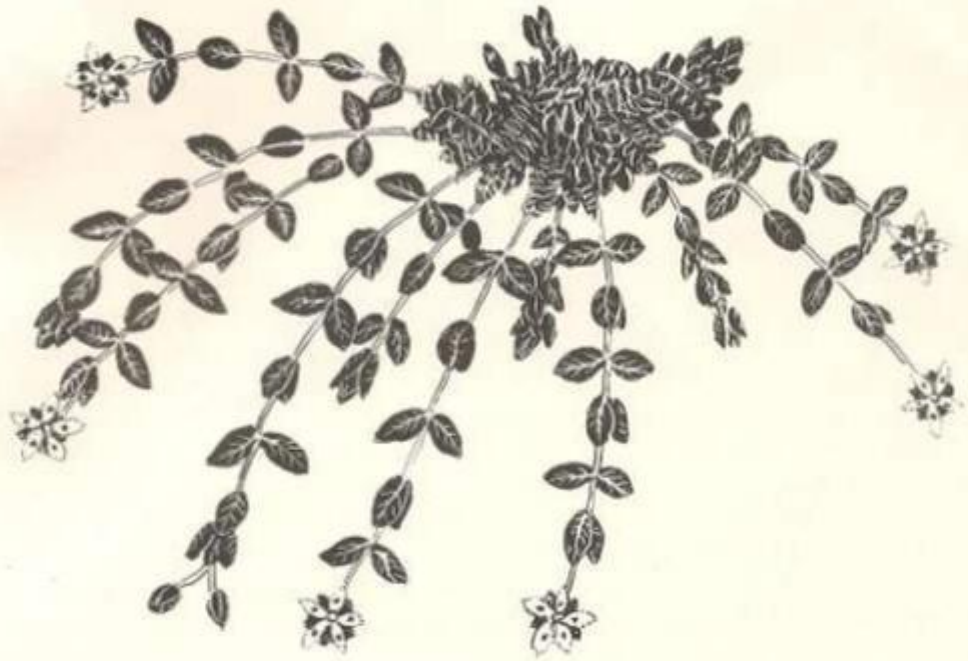


Fig 2. Trailing St John's wort, *Hypericum humifusum*, grows as a weed in the garden at Kateshill. It is never disturbed.

moved to Leatherhead we moved some other plants and obviously a few poppy seeds came too. During the following ten years there were always yellow Welsh poppies around the kitchen door. Then we came to Worcestershire and again a few seeds must have been among the soil around the roots of more obviously transported plants. Now we have been at Kateshill for over fifteen years and wherever the yellow poppies appear they are always welcome.

Another plant has a similar history of travel with us and it originated in the Bletchingley garden many years ago. This is caper spurge (*Euphorbia lathyrus*). I have distributed seed to whoever wished to have some plants but not with any recommendations as to its mole-inhibiting properties. In 1985, ten good plants grew alongside the main lawn in which a mole disported seemingly with neither let nor hindrance. On the other hand you might say that it fought back against its human protector. I took some seed and I must have touched my eyes because for two days I was subjected to such excruciating pain in my eyes and such severe headaches that I was not able to leave my bed. And yet I love the plant – a love/hate relationship if ever there was one.

Kateshill Lawn

Perhaps I should say something of my 'garden'. The house and its outbuildings stand on about three and three-quarter acres. The present house was built in 1730 but other buildings predated it. Now the garden consists mainly of lawn and trees but when I say lawn I mean an area of short grass in which hawkweeds, *Prunella*, thyme, harebell and bird's foot trefoil abound together with a patch or two of heather. In addition there are a few seasonal patches, one of earth-nut and a large area of cowslip. Now in case the reader gets the impression that the lawns are seldom mown, I would disabuse him. Indeed, they frequently feel the mower, perhaps every other week in the growing season, although not always within the same parameters. When one or the other of the lawn guests shows extra activity towards blooming a neat diversion is made around the patch for a few weeks.



Fig 9. The caper spurge, *Euphorbia lathyrus*, made two journeys with us. A few plants occur every year in my garden. Moles are abundant also. A love/hate relationship exists between us.

The main lawn lying immediately to the south of the house is fairly large, measuring 39 m by 13 m. In the early spring a luxuriant moss almost covers the northern half, only a few blades of grass can be seen shyly peeping through. Later, each in its season, there are my favourite weeds. Firstly about three years out of four in July and September in one particular patch we are delighted with the harebell (*Campanula rotundifolia*). It has been with us only about twelve years and has recently found another dry piece of lawn to the east of the house. A curious inhabitant of the lawn is Ling (*Calluna vulgaris*) and because of its situation pains are taken to perpetuate it. There are two plants as far as I can ascertain and they are at least 15 years old. Most years they are shaved with the mower but about every third year they are allowed to flower. The reader must not imagine that our lawn heather is a wiry shrub because it is normally indistinguishable from a distance of a few yards from the lawn grasses. Indeed, it grows in the bonsai style, the stems running horizontally.

It cannot be truthfully said that the hawkweeds (*Hieracium* spp.) are numbered amongst my favourites and yet I have a regard for them. They speckle the drier side of the lawn with yellow and no steps are taken towards their eradication. This is because they appear to be attractive to just one species of butterfly, the Wall (*Lasiommata megera*). Only a few of these are seen each year with their fulvous and brown reticulated wings but in 1986 they were absent and I felt sad that an enjoyment of the season had been denied to me.

The length of lawn on the shaded (and damper) west side and for the distance of a metre gets no attention from the mower until sometime around the middle of June. The flowers in it are then past their best. I refer to the pignut (*Conopodium majus*). The feathery, fern-like leaves unfold followed by the composite inflorescence in a delightful manner. Occasionally the curious, rather fragile-looking day-flying moth, the 'chimney-sweep', is seen here. It is aptly named being sooty-black but there is a fine white tip to the forewings. The larvae feed on the leaves of the pignut.

There are several patches of wild thyme; the purist, I suppose, would banish it from the lawn but here it is proudly pointed out to visitors. Then the common weed bird's-foot trefoil (*Lotus corniculatus*) is present and is given every encouragement. It is looked for every spring and on four occasions the common blue butterfly has bred on it. My desk looks out onto the lawn and the wanderings of the bright blue males are watched and when one has been seen to tarry on the yellow patch I have hurried out and found the recently-emerged dark brown and red-spotted females.

Encouraging Butterflies

The reader will have already guessed that in addition to caring for plants I garden for butterflies. A number of my favourite weeds are welcome as providing food for their larvae, for which few gardeners give a thought although many will plant to attract showy adults such as the Small tortoishell, Red Admiral and Peacock. The immature stages of all these species feed on the common stinging nettle. I feel that everyone should grow a small patch of nettles except when small children have access. It does not have to be a large patch – indeed a couple of dozen stems is often sufficient – but it must be growing in full sun.

And now my favourite weed-gress. Without a doubt this is cock's foot (*Dactylis glomerata*), indeed it is the only grass that causes me any joy. Again this is on account of its butterfly association. It is the preferred larval foodplant of most of the satyrs, those eye-marked, brown butterflies which enliven the countryside sometimes so abundantly. When I was rearing all the members of the Irish Satyridae my eyes were constantly on the look out for the cock's foot and now in my garden at Kateshill it is rigidly preserved wherever it chooses to grow. The Speckled wood butterfly (*Pararge aegeria*), the Gatekeeper (*Pyronia tithonus*) and Meadow brown (*Maniola jurtina*) breed on the old tennis lawn and in addition the Ringlet (*Aphantopus hyperantus*), the Small heath (*Coenonympha pamphilus*) and Wall (*Lasiomata megera*) are constant visitors.

A feature of the garden is the widespread planting of the evergreen Portugal laurel (*Prunus lusitanicus*); this probably dates from 1870 when Kateshill changed from Crown property (under the Mortimer estates) to private property. The dark red petioles and the longer racemes of flowers serve to distinguish this species from cherry-laurel (*Prunus laurocerasus*). There are about twenty in all, some are good trees and others quite small. A few seeds germinate and the seedlings are carefully protected and are given away. Large numbers of blackbirds and mistle thrushes descend on the garden in late autumn to devour the yew arils and the blue-black fruits of the laurels. Very pleasant to see but nothing to be compared with the delight of sighting hawfinches cracking the laurel stones. As I sit at my desk the household believes I am thinking about my writing. They are mistaken, I am looking for hawfinches.

Kateshill, Worcestershire.

Book Review

Royal Kew, by Ronald King. 1985. pp 256, illustrated. Constable. UK£15. ISBN 0-09-466240-1.

One summer's day, just after the end of the last war, I met the late Queen Mary in Kew Gardens. Or rather, while on a family excursion I was drawn to one side of the path to watch, as the dowager Queen, dressed in black and carrying a parasol, passed by, followed by her retinue. I was a child but I remember the incident well as it was my one and only visit to these famous gardens. But having now read Ronald King's account of the history of the Gardens, I am determined to make a second visit to this plantsman's paradise on the banks of the Thames just to the west of London.

Being somewhat short on reading time and expecting a rather heavy, boring tome, I picked up this book reluctantly. But the measure of the writing skills of Mr King, as he leads us through the trials, tribulations and successes of his subject, is such that I could scarcely put the volume down until it was finished.

This is not a gardening or a plant book; in fact there are comparatively few latin names, but the story of the development of the world's most famous botanic garden makes fascinating reading. Mr King takes us from the beginning – the very beginning, as he explains that although this area was not actually covered by ice during the last Ice Age, the flood waters of the Thames swollen by the melting ice to the north, deposited the sands and gravels that give Kew its rather poor and hungry soil.

We learn that Julius Caesar is reputed to have crossed the Thames, in 54 BC, using an ancient ford, at about the site of the present Kew Gardens. We are led up the centuries to the present day by Mr King as he chronicles each tiny interesting detail, including the royal associations, the interest in, and growing of, exotic plants from an early date, the development of scientific thought and the transfer to the State of the Royal Gardens in 1841.

Always at the forefront of scientific botany, Kew has played an important role in the commercial and medical utilization of plant products. It was responsible for the introduction of both the cinchona tree (the source of quinine) in 1860, and the rubber tree (*Hevea brasiliensis*) in 1876, from South America to India and the Far East. Earlier, it was merino sheep from the King's flock, auctioned at Kew in 1804, that formed the basis of Australia's prosperity.

Many were the plant collectors who set out from Kew to brave the perils of the known and unknown world in order to increase our knowledge of the plant kingdom. The very first to be formally assigned this duty was Francis Masson who sailed with Captain Cook in 1772 for South Africa from where, amongst many other specimens, he brought back a small cycad, *Encephalartos longifolius*. That particular plant still grows in the Palm House at Kew Gardens today, two centuries later.

Archibald Menzies, another Kew collector, pocketed some unusual nuts from the dessert tray whilst being entertained by Captain General O'Higgins (yes, an Irish immigrant) in 1794. He germinated these on the voyage home and they became the first monkey-puzzle trees (*Araucaria araucana*) to be seen in Britain.

How many visitors realise that the giant water lily, (*Victoria amazonica*), one of the chief attractions of Kew, has to be grown from seed annually and is not therefore the long-lived plant I, at least, had presumed it to be?

As the story unfolds, the reader is kept enthralled by this account and I have few complaints. But I would have liked more maps and plans. The standard of the illustrations, particularly the ones relating to the present century, leaves something to be desired. Do we really need two pictures of the Jodrell Laboratory or two of the Herbarium or three of the Orangery? There are only two botanical drawings (unattributed) and yet Mr King himself praises the copious work of the Kew artists through the years. The narrative itself is a little confusing at times; following the collectors on their explorations round the globe I was occasionally not quite sure which continent I was on, which is where the maps would have been useful.

Verney Naylor

TESSA HOBBS

OLD MILL HOUSE

On the sheltered southern shore of Belfast Lough, in Helen's Bay, there lies an old scutch mill, relic of Northern Ireland's once thriving linen industry. It has long since been a dwelling but there are many signs of its former use. *The Ancient and Present State of the County of Down* (1744) states that 'the first Scutch Mill in Ireland was in the Parish of Holywood' and it appears to be the only one in this area. The mill is on the first Ordnance Survey map of 1843 but was burnt down in 1850. The present house consists of the barn, stable and manager's house. Steadings and walls, including the hut where the guards lived, still remain. But now the charming house is surrounded by an acre of garden, with a two-acre walled garden adjoining.

Harry and Margaret Garner have been living there since 1956, though Margaret was born in the Old Mill House in 1903, spent her childhood there, and has many tales to tell of a very different world than that to be found outside her gates today. She remembers the launching of the Titanic in 1912, and of many other ships, built at that time in the prosperous Belfast shipyards. A telescope in the house gave a bird's eye view of the wartime shipping movements and eventual removal of the boom across the Lough. Now that view is obscured by trees but one still has a strong feeling of being on the coast from the seagull calls and the wind. Today Margaret Garner is the President of the Natural History and Philosophical Society of Northern Ireland, and a Governor of the Linenhall Library in Belfast, the first time either of these posts has been held by a woman. She worked for sixteen years with the Historic Monuments Council, was a founder member of the Ulster Architectural Heritage Society and was long on the committee of the National Trust in Northern Ireland. She is a prolific writer, has published three books, and lectures to local societies and groups on local history. In the early 1920s she studied at the Glasgow School of Art and gained a Diploma of Art; thre are many of her pictures around the house but sadly she is not painting much any more. Mr and Mrs Garner maintain the garden almost without help and just occasionally open it to the public for various good causes. It is worth visiting.

The garden was originally laid out by Mrs Yeams, Margaret's mother, between the wars, in a grass field. It was she who planned the flagstone paths, incorporating millstones and other interesting shaped stones, and the steps and levels leading to the artificial ponds. Since then it has been extensively altered but the basic axis remains.

On entering the garden one looks down a long lawn, once a tennis court, which I hear gets smaller every year to accommodate the burgeoning population of the borders. On the left there is a border the length of the garden, backed with ornamental trees including *Sorbus sargentiana* with its startling autumn colour and red berries, and *Sorbus* 'Joseph Rock' which is treasured for its long-lasting yellow fruits that survive long after its purple and crimson leaves have fallen. Here too are *Cornus kousa* var. *chinensis*, a striking small tree in May and June with its creamy bracts held flat all along its branches, and *Acer griseum*, a maple whose bark peels to reveal shiny bronze under-

neath with the added bonus of wonderful orange and red autumn colour. Lilacs, fuchsias and philadelphus interweave and the whole is underplanted with a mass of roses, among them *Rosa moyesii*, single crimson pink with huge hips, *R. sericea*, yellow flowered and felty-looking, and *R. macrophylla* (these three grown from seeds collected in the upper Lang Tang district of Nepal in 1974), lilies, peonies and blowsy oriental poppies, bright azaleas and small rhododendrons. There is never a bare piece of earth as one cascade of flowers follows quickly after the other. The tough Siberian pea tree, *Caragana arborescens*, with yellow flowers and the tender South American *Eupatorium*, which produces billows of scented pinkish-white flowers held in corymbs at the end of loosely branching stems in autumn, lead one towards the high Scrabo-freestone wall, sheltering more tender treasures.

Against this wall is *Exochorda racemosa*, happily displaying its paper-white flowers on arching stems, with *Cestrum* 'Newellii' preparing to take over in late June with its dense racemes of rich orange-red tubular flowers. Its less attractive green-flowered relative, *C. parqui*, also benefits from the sunny position. Other unusual shrubs here are *Phygelius capensis*, not yet competing, with attractive tubular scarlet flowers held loosely in terminal panicles, *Clianthus puniceus*, the luxuriant climber with brilliant red pea-like flowers, and a marvellous golden billowing cloud of *Azara microphylla* 'Variegata' whose sprays of dainty foliage conceal the vanilla-scented inconspicuous flowers in early spring. This last acts as host to the twining *Lonicera flava*, with its browny golden flowers. This plant is thought to be the true species. A plant which is difficult to grow in many gardens is *Berberidopsis corallina*, a beautiful evergreen coral plant with thick heart-shaped leaves and deep crimson flowers held on slender dangling stalks in late summer. Another shrub that definitely needs a warm wall is *Buddleja colvilei* – an especially good specimen waiting to show off its rose crimson panicles of white-throated flowers later in June. *Magnolia grandiflora* 'Ferruginea', its shiny leaves a deep brown underneath, and *Camellia* 'Doncklaeri' enjoy this warm spot and look down on a mass of hellebores and hostas, majestic lilies, nerines, pulmonarias, double Japanese anemones and the long downy pale green leaves and dark brick-red claw-like flowers of *Lobelia tupa*.

Turning one's back on the wall and facing the house there is another border leading back to the other side of the lawn. Here is a tall *Nothofagus dombeyi*, an evergreen tree from South America with small dark green glossy leaves with paler undersides, elegantly draped and enjoying the wet Irish climate. The border is a low planting, interspersed with rocks, of rock plants, heathers and small conifers, many with impossible names, but *Picea abies* 'Clanbrassiliana' and *Abies koreana* must have a mention – the spruce for its fine shape and the silver fir for its magnificent violet purple cones shown off against its dark green leaves, white beneath.

Taking a different route and turning to the left down what was originally a broad stone-flagged walk, down three stepped levels, but now a more hazardous journey with the encroaching and intertwining inhabitants competing to put wet fingers down one's neck! A glade on the left is backed by a semi-circle of trees and shrubs, the pale pink panicles of drooping heavy headed *Syringa* x *chinensis*, the Rouen lilac, contrast with the silver willow leaved pear, *Pyrus salicifolia*, and the elegant willow, *Salix purpurea* 'Eugenie' with greenish young bark and pinkish grey catkins in spring. Mock orange, *Philadelphus coronarius*, waves its heavily scented wands and the golden and silver privets *Ligustrum ovalifolium* 'Aureum' and 'Argenteum' are allowed full freedom to add light and height.

The centre of this 'clearing' proceeds through the year with bulbs and clouds of forget-me-nots, self sown blue columbines and magnificent phloxes in the autumn. Lurking at the back, and well worth a scramble through the bushes to get close to in July, are some of the unsurpassed gold-rayed lilies *Lilium auratum*, and the autumn-flowering *Kirengeshoma palmata* with its most unusual thick pale yellow flowers and striking floaty looking leaves; both plants are from Japan but the former opens out to large flamboyant flowers while the other hangs its flowers.

Down another step there is a group of plants chosen largely for their leaf colours. These include two elders, one red-leaved and the other with yellow leaves (*Sambucus racemosa* 'Plumosa Aurea'),

a hummock of copper coloured *Acer palmatum* 'Dissectum Atropurpureum' and a golden fingered *Chamaecyparis pisifera* 'Filifera Aurea'. Two other trees are really eye-catching in autumn; a beautiful spreading *Acer palmatum* 'Osakazuki' with scarlet leaves and *Sorbus vilmorinii* with its pink berries.

Further down we come to the paved area around the ponds, which look anything but artificial: here the scent and humidity are almost overpowering. *Drimys winteri*, its waxy clusters of highly scented flowers against the shiny green leaves, is an enviable sight; next to it are *Hoheria lyalli*, a white cloud in August, and a huge *Choisya ternata*, Mexican orange blossom, with its shiny bright leaves and mass of white scented flowers. Here too is, rather surprising but very attractive, a standard white lilac, copied from those seen at Le Petit Trianon. The pale pink flowers of the rose 'Celestial' and several species roses help to charge the atmosphere with exotic fragrance. *Daphne aureomarginata* flowers happily, with *Myrtus apiculata* and *M. communis* lending more scent and substance to the scene. The ponds are surrounded by small willows, ferns and iris and every crack in the paving is planted. Chamomile gives of its lovely fragrance at every step and the showy little bright pink saxifrage 'Clarence Elliott' flashes around one's feet.

Mrs Garner is particularly proud of her ginger, *Hedychium thyrsiforme*, which she collected as seed in Nepal; it flowered for her for the first time in 1983. A curiosity is *Lonicera chaetocarpa*, which has strange flat greenish flowers followed by very bright red berries and bristly leaves. *Syringa* 'Primrose', the yellow-flowered lilac, has a home here amongst energetic *Cardiocrinum giganteum*, the colossal white lilies, and the dark green billows of *Azara microphylla*. A lovely scented pink *Crinum* is extremely well entrenched at the foot of a small retaining wall, a gift from a friend long since. Every plant is a memory or reminder of places or people so that a walk through the garden is a walk through many years.

Taurus House, HA 4th Armoured Division, BFPO 15.

MARGARET GARNER

SOME OF OUR HOLIDAY COLLECTIONS

In the year 1967 we were in the Lebanon. The Lebanese were most anxious to give us as many plants as we could possibly want; but there was so much to see that there was not enough time to take advantage of the offer.

When we saw the Cedars of Lebanon (*Cedrus libani*) the hillside was deep in snow. Our footwear was only normal shoes but my husband and I reached the cedars up to our knees in the snow. We collected a number of cones and waded back to our bus. The seeds germinated with ease but only a few of the seedlings survived; the others were eaten by rats or mice. Only one remained. It is now about 15 ft high, and continues to grow. Bean says, 'The largest tree on Mount Lebanon was over 40 ft. in girth.'!

In the Lebanon I was able to collect masses of cyclamen in the Gorge of the Dog River where it flows into the Mediterranean. They were growing thickly but not in flower. I have now many of them in my garden popping up where the ants have carried the seed. I also found a few in Turkey in the hills behind the Black Sea. I think they are *Cyclamen repandum*.

Many years later we trekked up the Lang Tang Valley in Nepal. The season was late and many plants were not in leaf, let alone in flower. At about 15,000 ft we were scrambling along a mountain side and came across a large area covered with rose bushes, not a leaf to be seen. We picked hips from the various bushes and the results were *Rosa ecea* and *Rosa macrophylla*. Lower down the valley we found a hillside which must have looked very pretty in full flower. There were only dry stalks and leaves to be seen. These belonged to *Roscoea alpina*. At Old Mill House its purple flowers appear regularly. Another plant, *Hedychium thyrsiforme* has come as a surprise. It has grown well and has spread but only flowered once. I thought its flower would be like a *Cautlea*, but not so. It has a most peculiar flower like some mad insect. We also brought home two *Rhododendron* shrubs. These were just rooted twigs about six inches in height. One has flowered well for the last three years. The flowers are clear white; the reverse of the leaves are of a bright cinnamon indumentum. The other has never flowered though it has grown well. The leaves are dark green and heavily reticulated.

In Turkey near the Mediterranean shore we found some rather dead violets in a wood. We collected some seed and it turned out to be a tiny purple viola. It has now crossed with a yellow one from Donegal, but I still have some purple ones.

One other plant I would like to mention is from nearer home in County Down. It is a bulb, a double Martagon lily. The extra petals grow tightly together and are of dull pink which is quite common. It came from the deserted garden of a ruined cottage near Lisburn. I had no gardening equipment with me and had to use my hands to dig it up; in spite of this rough treatment it has survived but does not spread easily.

Old Mill House, Helen's Bay, Co. Down.

Book Review

Daylilies, the Wild Species and Garden Clones, Both Old and New, of the Genus Hemerocallis, by A.B. Stout. 1986. pp. xxx, 2, 145, illustrated. Segapress, New York. Price not stated. ISBN 0-89831-028-8.

During the visit of a botanical delegation from China in May 1986, I learned of a use for daylilies (*Hemerocallis* spp.) which may surprise those gardeners whose passions extend to these robust, colourful perennials. For centuries the flowers have been a delicacy, used by the Chinese in making soup. And from A.B. Stout's classic monograph, I have now learned that the flowers are also used in China to flavour various meat dishes and noodles. The dried flowers of *Hemerocallis* are sold as gum-tsoy (which means golden vegetable) and gum-jus (golden needle). But those who admire *Hemerocallis* will probably not wish to subject their flowering clumps to such uses!

This reprint provides a good concise treatment of the genus and its older cultivars; of course, since its original publication more than fifty-two years ago innumerable new cultivars of daylilies have been produced. Graham Thomas has added a foreword detailing some aspects of the garden history of *Hemerocallis* and he provides ideas about the use of daylilies within contemporary gardens – as a contrast with *Hosta*, as a compliment to *Phlox* and *Lobelia*, for example. He notes that daylilies provide a wide range of colours from deep brown-red to lemon yellow, and also a variety of heights. Dr App's introduction is an account of Dr Stout's career and the facsimile is illustrated with eleven colour plates taken from watercolours in the library of New York Botanic Garden – these are finely reproduced and provide a sample of the range of flower colours and shapes in the genus.

The review copy was the American issue, stoutly bound in dark maroon cloth, with a pleasant colourful dust jacket. Like so many classic gardening books the text does declare its age, and the half-tone photographs have not reproduced crisply, but these are minor criticisms. In this issue the additional text, including a bibliography, lists of suppliers (as of March 1985) and other materials, constitutes a valuable source of information. I can recommend this to gardeners, both to those who need no conversion to an admiration of daylilies, and to those who, like the reviewer, tend to regard them as too fleeting to be really beautiful. We can always make soup from them.

E.C. Nelson

PETER S. WYSE JACKSON

Pachyphragma macrophyllum (HOFFM.) BUSCH (CRUCIFERAE); A MOST USEFUL BUT OVERLOOKED HERBACEOUS PLANT FOR IRISH GARDENS

Pachyphragma Busch (Cruciferae) is a monotypic genus native to the Caucasus and Turkey (Davis 1965). It is closely related to *Thlaspi*. Of little horticultural merit, *Thlaspi* is represented in Ireland by one alien, an annual weed *T. arvense*, that is recorded from twenty-one botanical vice-counties (Scannell and Synnott 1972).

P. macrophyllum was originally ascribed to the genus *Thlaspi* but around the beginning of the century was removed to its own genus (Davie and Akeroyd 1983). Despite this, the *R.H.S. Dictionary of Gardening* (Chittenden 1951) continues to list the species under *Thlaspi* but acknowledges that it is now often placed in a genus by itself. *P. macrophyllum* is also occasionally listed in botanical and horticultural works under another invalid name *T. latifolium*.

Rhizomatous habit is the main distinction between *P. macrophyllum* and the genus *Thlaspi*. However, important differences in fruit morphology also occur which give rise to the generic name. *P. macrophyllum* has a thick septum in the seed capsule (silicula) (*pachys* – thick and *phragma* – partition). The septum of *Thlaspi* is thin, papery and transparent (Davie and Akeroyd 1983).

P. macrophyllum is a glabrous perennial herb growing to a height of between 20 and 40 cm (9 and 16 inches) (Davie and Akeroyd 1983). In cultivation at the Trinity College Botanic Garden it attains a relatively uniform height of 28 cm (11 in) when in leaf, and 38 cm (15 in) when in bloom. It forms a dense clump, spreading vigorously by rhizomes to form extensive colonies within several years. Its basal leaves are broadly ovate in shape and cordate at the base, smelling strongly of garlic when bruised. The basal leaves are terminally crowded on the rhizome and can be up to 12 cm (5 in) in width. Several small stem leaves occur below the inflorescence.

The plant appears not to have been grown in Ireland to any great extent. Despite an extensive search through the botanical and horticultural literature, I can find no mention of it. A request for information on its occurrence in Irish gardens through the *Irish Garden Plant Society Newsletter* (No. 16) failed to bring any responses. However, at Mount Usher gardens in Ashford, County Wicklow, several colonies of the species are established throughout the garden. No details of the origin of that material are known (J. Anderson, personal communication, 1986).

In Britain one population of the species has become established in a mixed broad-leaved woodland in Avon where it is now fully naturalized and a second in a shady woodland in Shropshire where it grows with other non-native plants (Davie and Akeroyd 1983). It is cultivated at the Royal Botanic Gardens, Kew and at Knightshayes, Devon (S. Andrews, personal communication, 1985). The species may be relatively widespread in British gardens even though its name is unfamiliar to most British gardeners.

P. macrophyllum has been cultivated at the Trinity College Botanic Garden for the past four years. One cutting (a short piece of rhizome) was originally obtained and rooted in a sand/loam mixture before being planted out during the month of April.

The Trinity colony is growing in a north-facing site in the shade of several holly trees and a high wall. Other plants which are planted here include hardy fern species and *Helleborus* hybrids. Despite the poor soil *Pachyphragma* grows vigorously. In four years there has never been any seed set, suggesting that the clone at Trinity is self-incompatible. As a garden plant this is a positive advantage as it can be kept within bounds and will not become a weed by seeding itself. Self-compatibility has been observed by Davie and Akeroyd (1983) but they note that a little seed is produced at the parent colony in Avon.

P. macrophyllum produces large numbers of white flowers each year, borne in dense heads about 2 inches across. As the season progresses the inflorescences elongate as the lowest flowers wither and new ones open at the apex. In Trinity Botanic Garden the plant blooms during the months of March and April. Occasionally during a mild winter the first flowers appear as early as the end of February. For at least a month the plant provides a spectacular show of pure white flowers at a time when few other garden plants are blossoming. As a ground-cover plant for shaded situations this plant has few equals. It deserves to be cultivated more widely by Irish gardeners.

Acknowledgements

My thanks are due to John Akeroyd who originally introduced me to the species and gave me a cutting. I am very grateful to John Anderson and Susyn Andrews for their assistance with regard to the occurrence of the species at Mount Usher and in England respectively.

References

Chittenden, F.J. (1951). *The Royal Horticultural Society Dictionary of Gardening.* Volume IV: Clarendon Press, Oxford.

Davie, J.H. and Akeroyd, J.R. (1983). *Pachyphragma macrophyllum* (Hoffm.) Busch (Cruciferae), a Caucasian species naturalized in Avon, England. *Botanical Journal of the Linnean Society*, 87: 77-82.

Davis, P. (1965). *Flora of Turkey and the East Aegean Islands.* Volume 1. Edinburgh University Press, Edinburgh.

Scannell, M.J.P. and Synnott, D.M. (1972). *Census Catalogue of the Flora of Ireland.* Stationery Office, Dublin.

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Book Review

Notes on Economic Botany of China, by Augustine Henry. 1893. Facsimile edition, 1986. pp 22 + 68. Boethius Press, Kilkenny. IR£7.50. ISBN 0-8614-101-3.

Those of us interested in the life and work of Augustine Henry, the great Irish plant collector, must welcome the new facsimile edition of his *Notes on Economic Botany of China* of which only two copies have previously been available – one in Washington and one in the library of our own National Botanic Gardens at Glasnevin.

Dr Charles Nelson has written an informative introduction which explains how these *Notes* came to be written by Henry for the guidance of fellow expatriates who he hoped would help with the work of collecting plant specimens and samples of local products made from Chinese plants. The title of the book may sound somewhat strange to our ears, but at that time Henry's plant collecting activities were closely allied to his occupation as a collector of Customs. In his professional capacity, he wanted to identify the true sources of such products as plant and vegetable dyes and medicinal remedies so that he could make more accurate customs returns. At the same time he was collecting plants for the Royal Botanic Gardens at Kew, whose own experts were trying to compile information on economically-valuable plants which might be worth transplanting. The plants in which Henry was interested are listed by their Chinese names together with all the information he had available at that time. Dr Nelson has compiled a useful index which did not appear in the original edition, of all the latin names used in the text.

Jan Chapman

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QUENTIN C.B. CRONK[3]

A MODERN EQUIVALENT FOR THE WARDIAN CASE

In the recent past, collectors visiting exotic lands generally returned their plant introductions in the form of seeds and spores. They are easiest to transport, light to carry, can be stored dry and generally remain viable for several years. However, it was not always possible to obtain seeds of desirable plants while on an expedition and many plants remained uncollected. In the case of several economically-important species which were to be transported from one colony to another, great difficulties were faced when seeds were not available. The transportation of a thousand breadfruit plants, *Artocarpus communis*, from Tahiti to the West Indies by Captain Bligh on the Bounty in 1789, is a good example of one of these early movements of live plants. Mortality was extremely high as most plants were stored in the open air on deck and many died before they reached their destination. With the development of the Wardian Case the transportation of delicate live plants became less hazardous.

Dr Nathaniel Bagshaw Ward was a medical practitioner in East London and an amateur naturalist. He observed that plants stored in a sealed glass container could thrive for many months, and indeed years, without attention. To test one of these new cases, plants were sent to Australia from Britain and a cargo of tender and delicate Australian plants returned the same way. On this voyage the Wardian case was subjected to temperature extremes from 20°F to 120°F and considerable battering by storms. However, on arrival in England the Australian plants were in excellent condition. From the 1840s the Wardian case became an indispensable part of the plant collector's equipment. Using Wardian cases of various sizes and shapes, the East India Company was able to introduce tea to parts of the Himalayas from China, and coffee, cinnamon, ginger and indigo from Kew to Queensland, Australia.

In effect, these cases acted as miniature portable greenhouses where high humidity and moisture could be maintained. The hey-day of the Wardian case was the Victorian period. They are rarely, if ever, used today.

Most plant-collecting expeditions today get to their destinations by air. To keep within weight-restrictions most new plant introductions are gathered in the form of seeds or spores. Occasionally if a desired plant is found shortly before departure it may be returned in the form of unrooted cuttings. Live whole plants are very rarely gathered but, of those that are, small alpine species or dwarf herbaceous perennials are the most frequent. They may be stored for relatively long periods in a polythene bag.

The reasons why live plants are rarely collected are threefold. Firstly, the importation of whole plants including soil and composts through customs is fraught with difficulties, requiring considerable tact, determination and patience. Secondly, plants packed in crates are easily damaged by rough handling, decompression, and cold at high altitudes. Thirdly, the cost of transporting live plants in heavy crates is prohibitive.

During preparations for a plant conservation expedition to Mauritius in 1985, it became evident

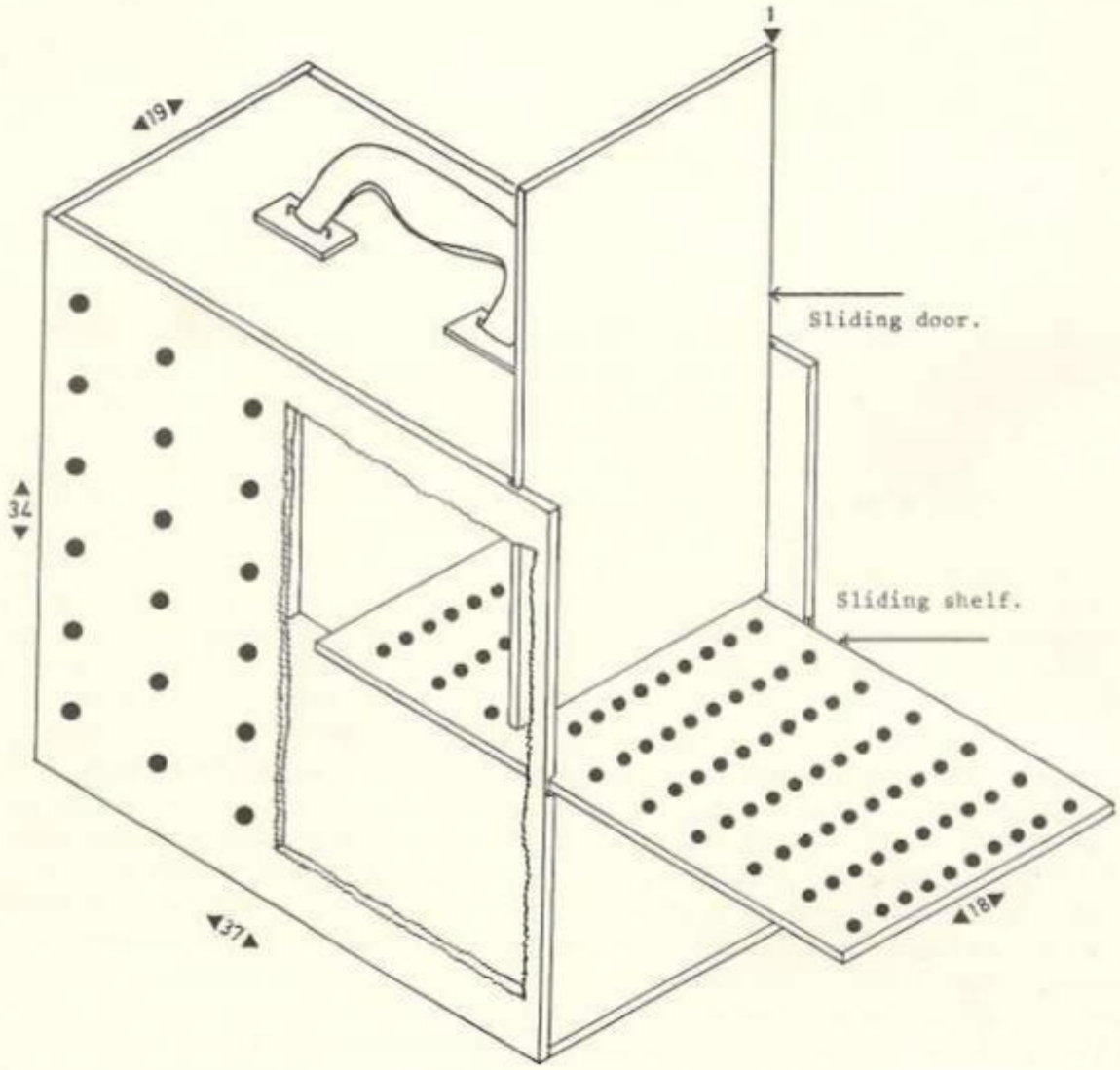


Fig. 1. Plan for plant carrying case designed for the transportation of live specimens during air travel. All measurements in cms.

that it would be necessary to transport live plants from that island back to Dublin. During the trip it was hoped to propagate large numbers of endangered species, particularly woody forest trees from which seeds were often not available. Cuttings were taken and rooted in Mauritius and these small plants were brought back to Ireland. The Department of Agriculture licensed the importation of the plants. However, transport continued to be a problem and a special case was designed (Figure 1) in which the plants were carried.

The case was constructed of thin (0.9 cm thickness) plywood divided horizontally with a sliding shelf of 0.6 cm thickness and with a sliding door of the same thickness at one end. On the top was placed a plastic carry handle. Holes were bored for ventilation on one side of the case only, so that any plants contained could not be damaged by draughts passing through. The total unladen weight was 3.5 kg. Three cases were made for the expedition by the Buildings Office of Trinity College, Dublin.

The case was a piece of hand-luggage. One could easily be carried by each expedition member in the cabin of the aeroplane. It was designed within the dimensions of the largest piece of hand-luggage allowed by most airlines. The cases were stored under the passenger seats lying horizontally on the outward journey, but stored vertically on the floor between the passenger's legs and seat on the return journey.

Small 2.25 inch (5.5 cm) square plastic flower pots proved ideal for the plants that were propagated. These allowed a maximum of 36 plants per case with 18 in each compartment. Each plant could be up to 17 cm tall. Obviously if taller plants (up to 35 cm in height) are carried the partition-shelf must be removed, but the number of plants that can be accommodated is halved. Flexible polythene pots could be used as an alternative so that all the space can be filled; in this instance the

number of plants that can be accommodated is determined by the size of polythene pot and the amount of soil used for potting. When plants were packed tightly, there was little soil spillage or damage during transit despite being knocked considerably on airport trollies. As all plants were in the constant care of the expedition members during the flight it was possible to give water and ventilation as required.

Using these specially designed cases, several dozen rooted cuttings and seedlings of endangered Mauritius species were returned to Dublin without any difficulties. Obviously further possible modifications of the case might help to make it a more comfortable travelling companion and to reduce its weight. However, we hope that this design can be used in the future by other plant-collecting expeditions and so broaden the scope for collecting. The cost of construction of each plant case was approximately IR£20.00, half of that being for materials, a nominal cost within the budgets of most international expeditions.

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J.G.D. LAMB

A NINETEENTH CENTURY BOOK OF PRESSED FERNS

The garden that used to be at Twyford, Athlone, County Westmeath, was typical of the nineteenth century (see J.G.D. Lamb, *Moorea*, 2 (1983)). A survival from that time is the fern book of Edward Hodson, a large account book (19 in x 13 in) bought at the shop of James Martin, 'Account Book Manufacturer, Printer, Bookseller and Stationer', of Athlone. Within are the pressed fronds of twenty-five exotic and fifteen native ferns, plus eighteen cultivars of the latter.

One immediately wonders where Edward Hodson collected the foreign ferns. There never was a conservatory at Twyford, though there was a fern bed in a corner of the garden from which the hardy cultivars could have come, including the fine crested form of the royal fern (*Osmunda regalis*) that survived to be seen there many years ago by the writer. This is represented by a frond in the fern book. As is well known, ferns were at the peak of their popularity in Victorian times and were grown in special fern houses or in fern cases within the owner's dwelling. I remember seeing such a case some forty years ago in the offices of Messrs Thompson D'Olier, wine merchants, Dublin.

Even if he had a fern case, Edward Hodson could not have accommodated such a big species as that beautiful tree fern, *Cyathea dealbata*, of which he mounted an excellent specimen in his book, to show the blue underside of the frond. Though *Cyathea* flourishes in the open in Kerry, many of the other species in the album require warmer conditions than prevail anywhere out of doors in Ireland. It is possible, therefore, that Hodson collected his ferns abroad, or from plants cultivated under glass, or was given them by a fellow fern enthusiast. The first possibility is unlikely; there is no record of Edward Hodson being a traveller, and the species represented come from too many parts of the world (Asia, Central America, West Indies, Brazil, Australasia, S. Africa) for a traveller to have collected them in the ordinary circumstances of that time.

At the National Botanic Gardens, Glasnevin, there is a large collection of Indian ferns collected by H.C. Levinge, of Knockdrin Castle, County Westmeath, when living in India. He was an ardent botanist, well known for his exploration of the flora of Westmeath. Here we have a collection made from the flora of one country. It is possible that he gave some specimens to Hodson, though this is not borne out by the extant book, there being scarcely any ferns in Hodson's album that could be called Indian. A more probable explanation is provided by another fern book bought at an auction in the Drogheda region a few years ago and presented to Glasnevin. It is not known who assembled this collection, though he was evidently a military man, since he mounted his specimens in an army ledger. All the ferns came from Glasnevin Botanic Gardens and are dated 1853. It seems likely, then, that Edward Hodson also obtained fronds from such a collection, though we do not know where. Perhaps they came from Glasnevin, perhaps Trinity College Botanic Gardens, or even from a private grower at a distance, for no great fern house is known to have existed in the Athlone region. Fern lovers may have exchanged specimens much as do stamp collectors today.

Another possibility is the assembly of a collection of dried fern fronds by purchase. For instance, in 1888 the firm of W. & J. Birkenhead, of Sale, near Manchester, advertised fern albums, containing 43 to 50 fronds of ferns and *Selaginella* species. From the home-made appearance of Hodson's album it does not seem very likely that he acquired his specimens in this way.

Edward Hodson was not content just to mount his ferns, writing in the names in careful script. He made a study of them, as shown by the books of ferns from his library. These include *The Fern Manual*, published in 1863 by the *Journal of Horticulture and Cottage Gardener*, and compiled by a number of contributors, including 'Mr. C.W. Croker . . . a respectable pteridological botanist'. Other volumes are *The Fern Garden* by Shirley Hibberd (1872), a prolific horticultural writer of the time, and John Smith's *Ferns: British and Foreign* (1896). These volumes and the book of dried ferns are evocative of the Victorian ferment of interest in natural history, entailing the collecting of ferns, shells, minerals and, alas, bird's eggs.

Acknowledgements

Thanks are due to Mrs Alison Couper, in whose keeping are Edward Hodson's reliquae, to Evelyn Goodbody and Donal Synnott for their helpful comments which stimulated these ruminations on this fern book, and to Donal also for information on the ferns in the herbarium at Glasnevin.

Woodfield, Clara, County Offaly.

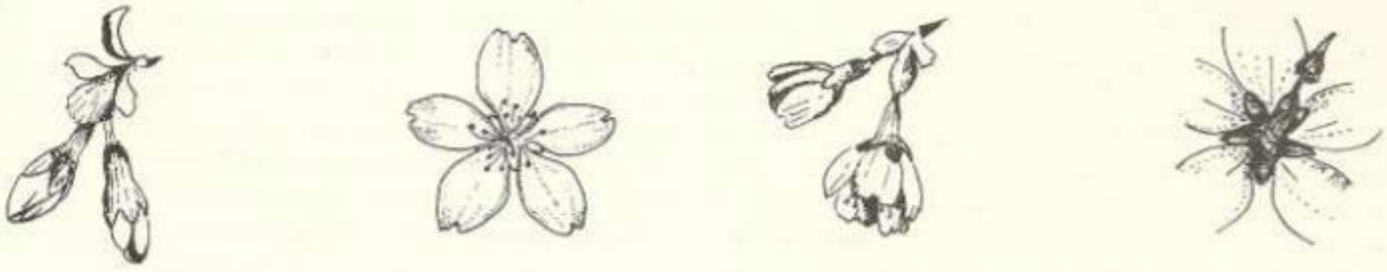
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Prunus 'WOODFIELD CLUSTER'

Dr J.G.D. Lamb has recently released for propagation a flowering cherry which is here formally named 'Woodfield Cluster'. Jan Ravensberg of Clara, County Offaly, recognized the cherry's qualities and has been propagating it; plants have been sent to Schupper's Nurseries at Hazerwoude, and to the Boskoop Horticultural Research Station, both in Holland.

The original tree of 'Woodfield Cluster' grows in the garden at Woodfield, outside Clara, and it is now approximately forty years old. It was a seedling of *Prunus incisa* Thunb. – Dr Lamb collected the fruit from a tree of *P. incisa* growing in the grounds of the Albert College, Glasnevin, Dublin. As that fruit resulted from open pollination, it is impossible to say if 'Woodfield Cluster' belongs to the species, or if it is a hybrid.

'Woodfield Cluster' is now (1987) a mature plant at Clara, about 7 metres tall, with a spreading crown. The trunk and main branches have developed a pleasing bark, silvery purple-brown, marked with prominent corky bands. The ascending branches lead into somewhat pendulous branchlets. Flowers are borne early in the year, towards the end of March and the beginning of April, and are produced profusely on all the short, stout spurs which are closely spaced along the branches.



Details of flowers of 'Woodfield Cluster' (drawings by B. Shine 1986)
(from left to right: buds; detail of fully-open flower; opening buds; calyx and peduncle)

The leaves are glabrous and toothed; each is borne on a hirsute petiole which has two prominent glands towards the apex. The individual flowers are paired on short (*c.* 1 cm long) stalks; each stalk is hirsute towards the base but glabrous at the apex. The receptacle is glabrous, green but tinted red on the upper (sunlit) side. The five calyx lobes are rounded, 9.4 cm long x 0.2-0.3 cm broad, with *c.* 8 teeth towards the apex, and with *c.* 5 marginal cilia on each side towards the base. Flower buds with conical apex, deep rose-pink (RHS Colour Chart 62A) slowly fading as they mature. The five petals are pure white, 1.2 cm long x 0.9 cm broad, deeply notched at the apex and broadest about the mid-point. The style is green and the stigma capitate and glabrous. The stamens have white filaments and yellow anthers.

'Woodfield Cluster' is easily propagated using soft-wood cuttings. Because of its profuse blossom and the earliness of its flowering, this tree is a most welcome addition to our garden flora.

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REG MAXWELL

THE BISHOP BEDELL SYCAMORE AT THE PALACE OF KILMORE, COUNTY CAVAN

This fine old tree is growing on the terrace near to the grave of Bishop Bedell, who, it is reputed, planted it in 1632, ten years before he died. It has been suggested that this was the first sycamore to be planted in Ireland. However, according to the manuscripts belonging to Augustine Henry, a tree was felled in County Donegal with a ring-count that dated the planting to be *c.* 1600.

Alas, it will be impossible to count the rings of the Bedell tree as it is suffering from cavity rot. This must have set in when one of the main limbs of the tree was blown off during a storm sometime in the past. The tree is still healthy, and vigorous growth has replaced the lost limb. I feel it is only a matter of time before the tree could be ripped apart in a gale, as the large limbs are only supported on a slim outer shell of the trunk. H. Fitzpatrick (*The Trees of Ireland Native and Introduced* (1933)) claimed the Bedell tree to be 70' x 21' in size. I measured the trunk this year (1986) and it was 22'7" at 3' from the ground, but I was unable to obtain the height. I wonder if this is still the largest and oldest sycamore in Ireland? Fitzpatrick lists a few notable specimens elsewhere, the second giant being at Kilmacurragh which was 80' x 17'6" in 1933.

The sycamore is an introduced species which has spread rapidly, so much so that it is referred to as a weed. It can become the dominant tree in most woodlands and will crowd out other species, as very little competes with its aggressive root activity and dense canopy. Nevertheless I still think it makes a superb parkland tree, with its large billowing domed head. Often it is the only tree found growing on the industrial sites of our cities. I would be pleased to hear of any information on the Bedell tree or of other fine specimens in the country.

My thanks go to the Very Rev. W.G. Wilson, Bishop of Kilmore, who allowed me to search papers in the library of the See House and to Dr Charles Nelson for drawing my attention to the references in the Fitzpatrick paper and the Henry manuscripts.

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ROGER D. LONG

Begonia x *semperflorens* 'SCARVA CHERRY': A CASE STUDY FOR THE RAPID INTRODUCTION OF A NEW VARIETY

Introduction

In 1986 a new Irish bred *Begonia* was brought to our attention. 'Scarva Cherry' is a prolific flowerer with brilliant crimson double flowers. To facilitate the rapid introduction of this cultivar and in view of the limited amount of mother plant material (1 plant) at our disposal, it was decided to use the modern technology of micropropagation.

Micropropagation is a method of vegetative propagation. The term encompasses a number of different techniques, all involved in the vegetative multiplication of plants, and which have been well described in a previous edition of *Moorea* by Cassells.[1]

Begonia has been widely reported in the literature as being quite amenable to micropropagation techniques.[2,3] The most frequently used method is that which uses explants (tissue pieces) that lack preformed buds. When these are cultured in the presence of plant hormones, vegetative buds can be induced. The type, concentration and combination of hormones used has a profound influence on the ability of explants to respond in culture. Explants of different varieties often require different conditions.

Method

The initial problems with *Begonia* 'Scarva Cherry' were to initiate sterile cultures and to determine the appropriate hormone combination on which this variety would respond in culture. The standard approach to this is to perform what is known as a factorial experiment, where the effect of increasing concentrations of two different hormonal factors, cytokinin (shooting hormone) and auxin (rooting hormone), on shoot regeneration *in vitro* are investigated.

In this case the basic medium contained Murashige and Skoog salts (2.35 g/l), sucrose (15 g/l), Agar (6.0 g/l) with the pH adjusted to 5.6. An auxin (naphthalene acetic acid) and a cytokinin (benzyl amino purine) were added at different concentrations to give a range of combinations as detailed below (Figure 1).

After autoclaving, (121 lbs psi, 121°C, 15 minutes), the medium was allowed to cool and was dispensed into 60 ml glass screw top jars.

The plant pieces used in this experiment were petioles (leaf stalks) and leaf disks. The plant tissue was excised from the mother plant and placed in 80% aqueous ethanol for 30 seconds, this was followed by 15 minutes immersion in a 10% solution of commercial hypochlorite (Domestos) to kill the microflora (fungi and bacteria) on the plant surface. If these are not eliminated they grow on the tissue culture medium and prevent the plant tissue from responding. The material was then rinsed twice in sterile distilled water and the petiole explants trimmed back to approximately 15 mm in length and placed on the range of media. Disks, 10 mm in diameter, were cut from the leaves using a cork borer and the explants positioned on the media. The cultures were then placed in a

Fig 1. Combinations of hormones used to induce bud formation in *B.* 'Scarva Cherry'.

Naphthaleñe Acetic Acid (auxin) concentration mg/l	Benzyl Amino Purine (cytokinin) concentration mg/l			
	0	0.1	1.0	10.0
0	A_1	A_2	A_3	A_4
0.1	B_1	B_2	B_3	B_4
1.0	C_1	C_2	C_3	C_4
10	D_1	D_2	D_3	D_4

growth room, maintained at 22°C with light provided for 16 hours per day by fluorescent tubes.

After six weeks the cultures were assessed. Without exception the leaf explants had all senesced. The petiole explants had senesced on those media not containing cytokinin (e.g. A_1, B_1, C_1 and D_1) and also on those containing auxin at the highest concentration (D_2, D_3 and D_4). Of the remaining media, both C_2 and C_3 had caused large amounts of callus (undifferentiated growth) on the explants, whereas A_2, A_3 and B_2 developed shoots, with explants on medium A_2 being the most prolific. Explants on the remaining media showed no growth apart from swelling slightly and a small amount of callus development at the cut ends.

A small proportion of the cultures (approximately 3%) became contaminated with fungi, a phenomenon that could probably have been overcome with a more rigorous sterilization procedure.

At this stage, approximately 6 weeks after starting, we had about ten cultures which had initiated approximately one hundred very small shoots between them. Our next step was to sub-divide these cultures and replace them on fresh medium, for further growth and development. This we did, choosing medium A_2 which gave a superior performance to the other media in the factorial experiment. This process was repeated yielding approximately 200 jars each containing shoot clusters with about 30 shoots per cluster (Figure 2).

The next step was to induce the shoots to root, which was done by transferring shoot clusters to rooting medium (M+S salts 2.36 g/l, sucrose 15 g/l, kineton 0.01 mg/1, IAA 0.1 mg/l, Agar 6.0 g/l, pH 5.6).[4] These shoot clusters developed roots within 3 weeks, when they were transferred to a peat and sand potting compost in covered seed trays, and the relative humidity gradually reduced. After three weeks they were transferred to 5 cm plastic pots, using a peat and sand potting mixture as in the seed trays. The plantlets quickly developed into attractive, bushy plants of a superior size and habit to conventional cuttings of approximately the same age (see Figure 3).

Discussion

This exercise of using micropropagation to multiply a new Irish plant variety serves to illustrate a number of points.

It highlights a procedure for the introduction of a new plant into tissue culture. In this case it was relatively easy, since members of the *Begonia* family are generally quite amenable to tissue culture and no chronic contamination with micro-organisms was experienced. With material that has been vegetatively propagated by normal means for many years, allowing for the accumulation of micro-organisms, and with members of other families, especially woody species, the introduction into culture can be far more difficult and calls for other, more sophisticated, tissue culture techniques.



Fig.2 (above) Clusters of shoots of *Begonia* 'Scarva Cherry' before root initiation.

Fig.3 (below) Young plant of *Begonia* 'Scarva Cherry' produced by micro-propagation.





Fig.4 *Begonia* 'Scarva Cherry' (nat. size); for description see Nelson, p. 44 (this volume).

If such an exercise were to be done on a commercial basis there would have to be an extensive programme of disease screening and culture indexing of the mother plant to establish the health status of the material to be cultured.[5] Such an exercise is both time-consuming and expensive. In addition, the problems of obtaining mother plant material free from micro-organisms can be enormous, too difficult sometimes for even the most experienced micropropagators. This factor alone can be a most serious block to the use of micropropagation, before even the problem of which tissue culture system to use and finding a medium on which the tissue responds, can be tackled.

In this example the technique of micropropagation has allowed the rapid production of 200 plants within 6 months, from one mother plant, for release to members of the Irish Garden Plant Society. The system has the potential for the production of far higher numbers than this, but these were not required for our purposes. The plants produced are of a superior, bushy habit to those produced by conventional cuttings. This is due to the transfer of clumps of shoots to rooting medium rather than individual shoots. In all other respects the plants are phenotypically similar to those produced by conventional means.

Acknowledgements

I wish to acknowledge the help of the Third Year Plant Science undergraduates of 1986 who performed the initial part of this work as a class exercise and also Jacinta O'Connell and Claire Walsh for their help in completing the work.

References

1. Cassells, A.C. (1984). Micropropagation in horticulture and conservation. *Moorea* 3: 11-21.
2. Cassells, A.C. and Morrish, F.M. (1985). Growth measurements of *Begonia rex* Putz. plants regenerated from leaf cuttings and *in vitro* from leaf petioles, axenic leaves, recycled axenic leaves and callus. *Scientia Horticulturae* 27: 113-121.
3. Takayama, S. and Misawa, M. (1982). Factors affecting differentiation and growth *in vitro* and a mass propagation scheme for *Begonia* x *hiemalis*. *Scientia Horticulturae* 16: 65-75.
4. Cassells, A.C., Minas, G. and Long, R.D. (1980). Comparative tissue culture studies of *Pelargonium* hybrids using meristem and explant culture: chimeral and beneficially infected varieties. In: *Tissue Culture Methods for Plant Pathologists* (Ingram, D.S. and Helgeson, J.P., eds), pp. 125-30. Blackwell, London. ISBN 0-632-00715-X.
5. Cassells, A.C. (1987). Production of Healthy Plants. *Acta Horticulturae* (in press).

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E. CHARLES NELSON

BOTANY, MEDICINE AND POLITICS IN EIGHTEENTH CENTURY DUBLIN AND THE ORIGIN OF IRISH BOTANICAL GARDENS*

Botany is the child of medicine. Its roots lie deep in the ancient arts of healing, in the skill of the apothecary to concoct potions, in the folk-knowledge of the herb-gatherers, the rhizotomoi (for example) of Ancient Greece. This ancient link remained strong in the eighteenth century, and lingered even into the early nineteenth century.

Theophrastus was the first to produce a summary of knowledge about plants, two thousand three hundred years ago. In the first century of the Christian era, Pedianos Dioskoridos, a herbalist, perhaps even a military doctor, and a widely-travelled man, consolidated the work of Theophrastus and compiled an encyclopaedia about medicinal plants. He used many sources now lost to us, and had some of the herbs painted. The significance of Dioskoridos is that it was his encyclopaedia which provided the physicians of the Early Christian and Mediaeval periods with their botanical lore, cures and other information. When botanical texts were printed for the first time in the fifteenth century they were merely 'modern' transcriptions of Dioskoridos's encyclopaedia.

In mediaeval Europe awakening after the slumber of the turn of the first millenium, monastic communities with their store of knowledge gave way in their educational role to institutions of a new type, embryo universities. As well as training young men for the Church, these new universities later helped to instruct students for the two other great mediaeval professions, law and medicine.

In the fourteenth and fifteenth centuries, faculties of medicine were formed in the universities of southern Europe. As early as the first decades of the fourteenth century Irish students travelled to Europe and are known to have studied medicine at Montpellier, where they would have used as text books the manuscripts laboriously copied over the intervening centuries from Dioskoridos's great encyclopaedia. Part of the work of these students was the learning of correct identifications of simples, the plant ingredients of medicine. And to aid these studies, to make the plants available as living specimens, the idea arose of growing simples in gardens. As models, the scholar-physicians turned again to the monastic foundations of Europe, to the *hortus sanitatus* or *hortus medicus* which we know were established within large, well-planned monasteries as early as the ninth century – the great plan for the foundation at St Gall in Switzerland, although it was not a plan for a real monastery but was scheme for an ideal foundation, shows such a garden beside the physician's house. In it, plants were cultivated in separate beds – one bed for one plant – roses and rosemary, onions and mint, lilies and sage (medicinal herbs, not pretty flowers). So the first botanical garden, in the modern sense, also had plants arranged in regular sequence in separate labelled plots.

*This is the text of an address given to a meeting organized by the National Committee for the History and Philosophy of Science, held in the Royal Irish Academy, Dublin, in July 1985. The paper is most relevant this year, 1987, as it recalls some of the events that led to the formation of a Physic Garden at Trinity College (University of Dublin) on 25 June 1687. The text has been edited slightly, and a list of sources has been added.

That first garden was at the University of Padua, and was formed by one of the greatest European botanists, Luca Ghini, who is also credited with the invention of one of botany's other great tools, the herbarium or *hortus siccus* (literally a cut garden) – pressed and dried specimens of plants, glued to sheets of paper, labelled and preserved for future study. From Padua the idea of a botanical garden, or physic garden, spread; in July 1545 one was formed at Pisa and by the end of the sixteenth century there were gardens at Bologna, Montpellier, Heidelberg and Leiden.

Moving nearer to Ireland, botanical studies were stimulated in England in the sixteenth century by the publication of such works as William Turner's *The names of herbes* (1548) and *The Herball* (1551), and almost half a century later by John Gerard's great herbal of 1597. All of these were books about the uses, particularly the medicinal uses of plants – botany was still an adjunct of medicine. That ancient link was emphasized again in 1621 when Lord Danvers gave the University of Oxford land on which to lay out a physic garden, 'A place whereby learning, especially the faculty of medicine, might be improved.' For another half century there was just this one physic garden in Britain. In 1670, a physic garden was formed in Edinburgh by Dr Robert Sibbald and Andrew Balfour, and in 1673, the Society of Apothecaries in London founded the famous Physic Garden at Chelsea on the banks of the River Thames.

By this time, the last quarter of the seventeenth century, botany was beginning to change, to become more independent. In part this was due to the work of explorers and seafarers who were returning to Europe from far distant lands with new plants, quite unlike any of the species known before. These aroused the curiosity of aristocratic landowners, who competed with each other in cultivating these strange plants. The technology of horticulture had already advanced to the point where it was possible to recreate a tropical environment with reasonable success in northern climes – the first greenhouses (albeit with solid roofs) at Leiden in Holland contained the botanical curiosities of southern Africa, the Spice Islands and the Caribbean. A new link was forged between the wealthy collectors – whether of curiosities for their cabinets of curiosities or their gardens – and the physicians who had botanical interests.

In Ireland, without a university and faculty of medicine in the sixteenth century, and without a wealthy, settled aristocracy, the development of medicine and botany was retarded. To be sure, there was an indigenous school of medicine, and indigenous folk-lore about medicinal plants, but this was not codified nor recorded. Gardens had not developed beyond the most basic purpose of providing food and herbs. There were changes in the early seventeenth century – we have records of the gardens in the grounds of Trinity College in Dublin, but these entirely concern the planting of trees and the provision of cabbages for the College kitchens. Not until after the Cromwellian conquest can we glimpse a change, and the substantial advancement of ornamental gardening.

In October 1653, according to the correspondence of Dr Robert Child and Samuel Hartlib, Dr Benjamin Worsley, who was Surveyor-General of Ireland, and Dr William Petty planned the formation of a physic garden in Dublin. We know nothing more than that, but it is significant that the idea was abroad. Petty was a graduate of Oxford's medical faculty and had studied on the continent at Paris, Amsterdam, Utrecht and, most significantly, Leiden, which had a great and remarkable botanical garden. It is just possible – but entirely speculation on my part – that Petty's physic garden was in some way associated with the Fraternity of Physicians formed in Dublin in 1654 by Dr John Sterne; the Fraternity eventually became formalized in 1665 as the College of Physicians in Ireland.

Whatever the outcome of Petty's plans, Irish medicine was beginning to expand at this time, and the formation of the College of Physicians established formal training for young doctors. There had been a medical fellowship at Trinity College as early as 1618, but there was no formal medical faculty and the Fellow was not always a physician.

By the last quarter of the seventeenth century, with the restoration of more stable social and political conditions in Ireland the arts and science began to flourish. In 1683 the Dublin Society,

soon renamed the Dublin Philosophical Society, was established under the watchful eye of William Molyneux, whose younger brother Thomas was at the University of Leiden studying medicine. The Society had rooms rented from an apothecary, off Dame Street, and there it formed a laboratory and, according to William Molyneux, a 'fair garden' for plants. The Society was short-lived and collapsed in 1687, no doubt leaving its 'fair garden' to the weeds. But some of the Society's individual members went on to make significant contributions to science. For example, Alan Mullen, best known for his dissection of an elephant, left Dublin after an indelicate love-affair and sailed to the West Indies in company with James Harlow, the gardener commissioned by Sir Arthur Rawdon of Moira to travel to Jamaica to collect plants for his garden. One other member was Dr Robert Huntingdon, Provost of Trinity College, and a man who had had experience of botanical exploration while serving as chaplain to the Levant Company's factory at Aleppo. It would be nice to know more about Huntingdon's Dublin days for it was during his Provostship, on 25 June 1687, that the Board of Trinity College decided to convert its kitchen garden into a physic garden, at College expense.

This decision is difficult to understand in the absence of contemporary commentaries on the Board's discussions, and it is a remarkable decision for there was no Professor of Physic in the University at the time, no botanist, and no Faculty of Medicine. But the garden was converted – the College muniments are explicit – within eight months of the decision being taken Margaret Armstrong was paid for mending the ditch in the garden, and in November 1688 the Board agreed to raise the wages of the College gardener because of the extra work involved in looking after the physic garden. Thus Ireland's first botanical garden was established, somewhere closeby the site now occupied by the Old Library (see Fig. 1). What is more, the physic garden survived the occupation of the College by Jacobite troops in 1689.

After the Williamite wars, Dublin quickly returned to normality. Exiled intellectuals, like the Molyneuxs, returned, and work resumed at the university. In 1692 the College of Physicians petitioned for a new charter, and it was recommended that the College should form a physic garden of its own. Dr Patrick Dun and Dr Thomas Molyneux were instructed to look for a suitable site, but none was found and the plan lapsed. However, the idea that the College of Physicians *needed* a physic garden was to reappear throughout the following century, usually in the context of the will of Sir Patrick Dun.

Dun left his estates in Waterford to the College of Physicians and he estimated that this would yield about two thousand pounds each year. The money was to be used, according to a deed of 1704, for the provision of professors to give public lectures in various aspects of medical science and 'to read botanic lectures, demonstrate plants publicly, to read public lectures on materia medica'. Dun died in 1711 and then began the sorry tale of the mismanagement of his affairs. His wishes were ignored or misinterpreted, and the Waterford estates were badly run.

In the same year that Dun died, Trinity College finally established its Faculty of Medicine; Thomas Molyneux was made the Professor of Physic. In June of the previous year, the Board of the University had ordered that ground lying near the physic garden should be used for the erection of an Anatomy Theatre, and this was opened with due ceremony on 16 August 1711. Among those who delivered discourses were Molyneux and Dr Henry Nicholson, a newly-wed graduate of the University of Leiden and a failed student of law who had been refused a law degree no fewer than three times by the University of Oxford, but that was no handicap at Leiden – he got his medical degree in a few months.

Nicholson is an interesting character. He was friendly with Jacob Bobart, the curator of the University Botanic Garden in Oxford, and obtained seeds from him. It is more than likely that these included some of the newly discovered *Pelargonium* and *Aloe* species from southern Africa that are listed as growing in the College Physic Garden in 1724. Henry Nicholson was also the author of the first indigenous Irish botanical book, *Methodus Plantarum . . . jamjam disponendarum . . .* of

1712; it is little more than a catalogue of the plants growing in the Physic Garden. By 1715 Nicholson had abandoned the College, Dublin and botany, and had gone to London with his wife and young son to resume his law career. Incidentally, in 1716 he canvassed successfully to become a Fellow of the Royal Society!

After Nicholson's departure, the Physic Garden continued, apparently under the charge of William Maple. Certainly in 1722, Maple was engaged in moving the plants from the original site to a new garden created behind the Anatomy Theatre on the site now occupied by the Berkeley Library (Fig. 1). The reason for the move is not known, but it possibly had something to do with the building of the library.

The second Physic Garden flourished, so much so that in 1725 the College advertised public lectures in botany at the Garden. It had a keen and enthusiastic new professor, William Stephens, in charge – like Molyneux and Nicholson, Stephens was a graduate of Leiden's famous medical school, and a pupil of that most revered Dutch botanist Herman Boerhaave. Stephens set about increasing the collections by enlisting the help of English botanists. In 1725 Dr Stephens published his botanical lecture notes, a remarkable book in which he demonstrated his willingness to accept the new theory about plant sexuality which was then causing ructions in Europe.

Botany thus was still firmly in the domain of medicine; even work on Ireland's native flora was carried out in this ambience. The publication of Caleb Threlkeld's *Synopsis Stirpium Hibernicarum* on Thursday 27 October 1726 laid the foundations for Irish floristic studies, and this list of Ireland's native plants did not demonstrate any departure from the age-old medical tradition; its subtitle included the phrase 'with an abridgement of their virtues'. Threlkeld was a doctor and his book is full of information about medical uses. Dr Threlkeld, however, would seem to have worked independently – he was not associated with Trinity College, as far as is known, although Thomas Molyneux did provide him with some of his notes on native plants.

The year 1726 might be regarded as an early high-point in Irish botanical history – Stephens's and Threlkeld's books were published – but then we enter a 'dark age'. Little happened in the following decades. Stephens abandoned botany in 1733, and proceeded on his distinguished medical career. He was succeeded as Professor of Botany at Trinity College by Charles Chemys, another physician, and shortly thereafter by William Clements. Clements was one of the great administrators of Trinity College and served as Auditor, Librarian and Vice-Provost, as well as being a member of parliament, but as a botanist he is insignificant. In 1763, Clements resigned his chair and James Span was appointed. Span was a popular figure, but not a botanist of note. His main claim to fame is this eulogy in John Gilbourne's poem:

> James Span shakes off the mortuary gloom
> His bright endowments still retain their bloom
> On earth lamented, and admir'd above
> His lovely virtues made him dear to Jove
> Daisies and roses spring where'er he treads
> Tulips and lilies rear their drooping heads
> Nor do plants sensitive his touch avoid
> Who for man's good had all his thoughts employ'd.

Chemys, Clements and Span had barely maintained the College Physic Garden, and by the year of Span's death, 1773, it was a Physic Garden in name only, containing little more than a row of lofty elms, the College's communal bath (used occasionally by the Fellows, and everyone else who had a key), an ancient fig tree and an equally decrepid gardener. The next Professor of Botany, Dr Edward Hill, has left us this colourful description of it:

> The cultivated spot where I am taught to practise a mode of horticulture is in extent, as I have ascertained it by correct mensuration, 250 feet long and 50 feet broad. It is mostly surrounded by lofty elms which over hang its high walls and is continually befogged by the fuliginous vapours of the city. It is the

> only cemetery for the draff and offals of the dissecting room of the anatomical theatre, immediately behind which it lies, and is therefore burrowed by 10,000 rats that have mined and countermined the intire soil in every direction, to the absolute prevention of all vegetation.

Hill was as colourful as his description; he was a physician with a forceful character and the singular ability to make enemies. He had graduated in 1771 from Trinity College, Dublin, and ten years later became Regius Professor of Physic. In 1785 his post as lecturer in botany was formally changed to Professor of Botany and he continued to hold these two chairs for another fifteen years. He had become botany lecturer in 1773 at a time when, in other parts of Europe, botany was becoming established as a subject in its own right.

While Irish botany slumbered in the middle of the eighteenth century, botany in Europe was being infused with new energy. In 1753 the Swedish botanist Carl von Linné published his compendium *Species Plantarum* in which he set out a simple system for naming plants, the binomial system. The time was propitious. New, unnamed species were flooding into Europe in ever increasing numbers, perplexing and amazing the botanists who thought that hitherto they had managed to catalogue *all* created plants. Carl von Linné (Linnaeus) was, like his contemporaries, trained in the medical faculty but he was one of those botanists who took a wider interest in plants, studying them for their own sakes. He travelled through Lapland, not in search of new medicinal herbs, but out of curiosity. His own pupils later circled the globe searching for new species which they catalogued and named in the style formulated by their master.

One of those pupils, Daniel Solander was the companion of Joseph Banks on that Grand Tour to end all Grand Tours, James Cook's engagement with Venus at Tahiti in 1769. During this voyage, Cook landed in New Zealand where Banks and Solander collected many new plants, and later on the eastern seaboard of New Holland they found even greater wonders. Cook, recognizing the impact of those plants on his companion naturalists, named their anchorage Botany Bay. Banks's and Solander's collections from New Holland were to turn European botany inside out. But there were other results. Banks was to make botany a subject of Royal patronage. He turned the Royal Gardens at Kew into an institution engaged in botanical research, with a particular emphasis on the taxonomy of flowering plants, and he assembled there a remarkable collection of living plants from all parts of the world. Royal interest in botany had the result of stimulating other members of the British aristocracy to begin forming collections of plants in their gardens – gardens changed from fine formal landscapes with a few exotics, and began to bloom with novelties imported by casual travellers and later by specially-commissioned collectors.

In Ireland, given the absentee landlords, there was much less impetus from aristocratic collectors; certainly there had been and were some gentlemen who collected exotic plants – Sir Arthur Rawdon of Moira is the prime example – but he is an isolated figure. In the first half of the eighteenth century, horticultural interest in Ireland was centred on 'florists flowers' not on exotic imports. Not until the last quarter of the century is there any good evidence for the formation of plant collections, and then only a few individuals were involved. So both botany and horticulture were still slumbering here, and it was Edward Hill who stirred the 'sleeping beauty'.

Hill was shocked to find the ancient fig tree and ancient gardener in the College. He left the old man alone – 'Humanity forbade me to displace him, but on his death, I refused to attend to the applications of several who solicited to be appointed in his place.' He suggested that the University should not spend any more money on the care of the Physic Garden behind the Anatomy Theatre and instead begged to be allowed to use a vacant plot of land bordering Townsend Street. But Hill's proposition was ignored and things drifted. In January 1775, the Provost was asked to look for a piece of ground suitable for a new botanical garden, but no money was forthcoming and this too came to nought.

Edward Hill was nothing if not persistent, however. In 1783 he was elected President of the Royal College of Physicians and about the same time it was decided to investigate the general

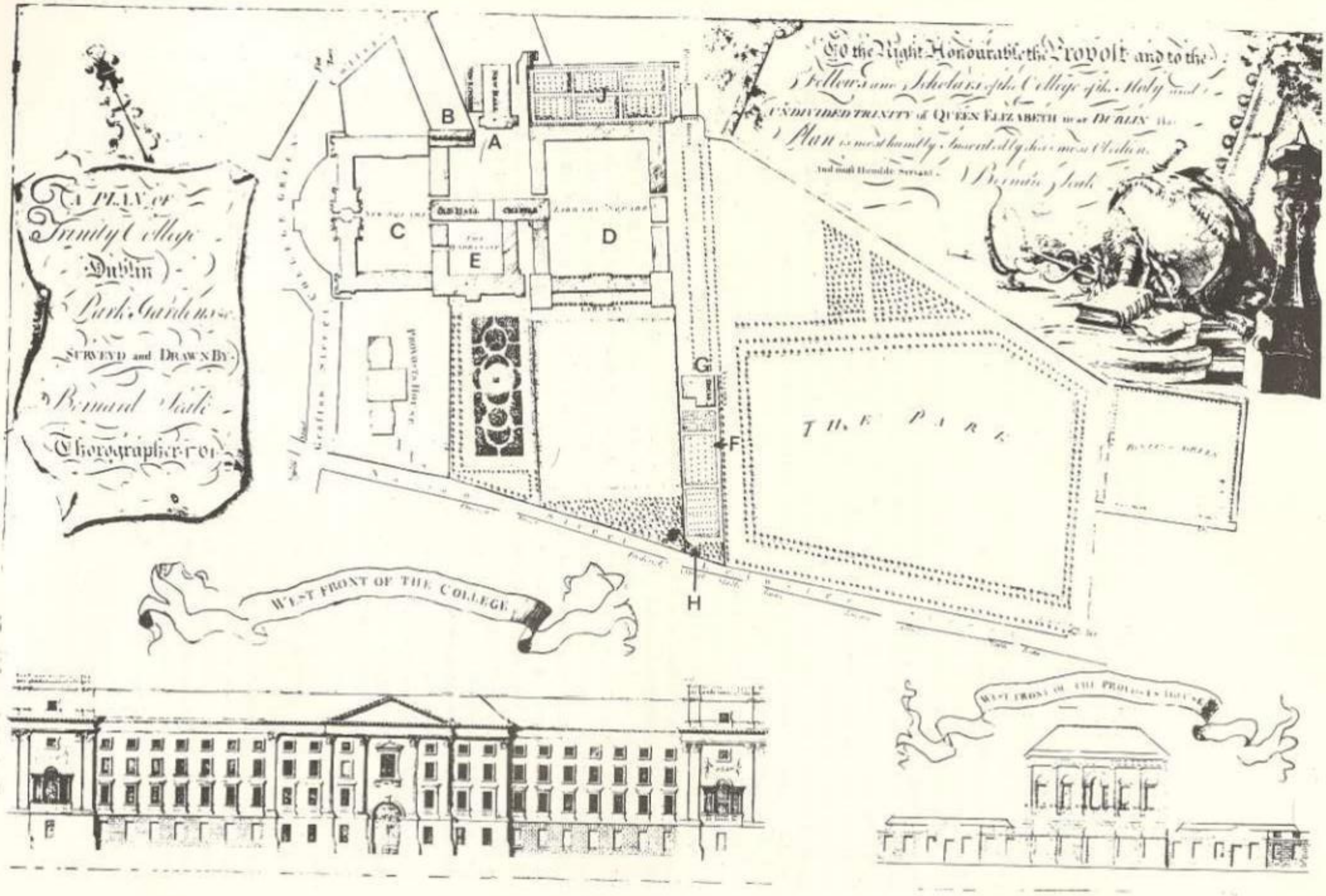

A PLAN of
Trinity College
Dublin
Park Gardens
SURVEYD and DRAWN By
Bernard Scale
Chorographer-General
To the Right Honourable the Provost and to the
Fellows and Scholars of the College of the Holy and
UNDIVIDED TRINITY of QUEEN ELIZABETH near DUBLIN
This
is most humbly Inscribed by their most Obliged
and most Humble Servant
Bernard Scale
A
B
C
D
E
F
G
H
THE PARK
WEST FRONT OF THE COLLEGE

Fig 1 The campus of Trinity College, Dublin

This elegant plan of the park, gardens and buildings belonging to the University of Dublin was printed in 1761; it was prepared by the cartographer Bernard Scale who is best known for his Irish atlas. Many changes have taken place on the campus since 1761, but the West Front, the Provost's House and the Library, at least, still stand. The 'New Hall' A is the famous and recently restored Dining Hall. The present Chapel now occupies the site of the Old Kitchen B. The Old Hall and original 'Chapple' have been demolished so that the 'New Square' C (now 'Front Square') and the Library Square D form a single concourse.

One question which will perhaps never be settled is the site of the first Physic Garden established in 1687. All we know about it is a statement that the Library was built on land '. . . laid out at ye south east corner' of the Physic Garden. That would mean the first Physic Garden was situated where The Quadrangle E appears on this map. More probably the garden occupied part of what became Library Square – an area not so defined in 1687 because the Library was not begun until 1712 and was completed only in 1732. The site of the second garden, established in 1723 is better known. It is the long rectangular walled area F extending from the Anatomy House G to Nassau Street. In Scale's plan it is shown to have four distinct plots, three of these apparently were laid out regularly. The elm trees which overshadowed it are shown clearly on the Park side of the eastern wall. It is also possible to see the bath house H, beside the Nassau Street wall; this was a communal facility to which Fellows and others had keys. The second Physic Garden was actively maintained for a few years only, and by the 1770s was occupied by rats, a fig tree, and little else. However it continued to exist as a distinguishable garden in the early 1800s. The site is now partly occupied by the Berkeley Library, but most of it remains as a lawn.

The third garden at Harold's Cross, created by Dr Edward Hill in the late 1790s, is even more mysterious than the first physic garden on the campus. Its site has not been traced.

The fourth garden, the famous one at Ballsbridge, existed where today stand Jury's and the Berkeley Court hotels.

The fifth, the present garden, is situated behind Trinity Hall, on Dartry Road, near the western edge of Palmerston Park.

Botany Bay J, a square bounded by the Dining Hall, the Graduates Memorial Building, the Printing House and residential blocks, is shown on Scale's map with six rectangular compartments. It was never occupied by a botanical (or physic) garden as far as can be ascertained; thus despite popular folk-lore within TCD its name is not derived from a former use. It is much more probable that its prison-like ambience gave rise to the sobriquet, and that the allusion is to the convict colony at Botany Bay, the bicentenary of which falls in 1988.

efficacy of the King's professorships which had been established under the will of Sir Patrick Dun. In November of that year a petition was drawn up asking the Irish parliament to alter the existing acts governing medical education – the petition was presented to parliament by the Provost of Trinity College, John Hely-Hutchinson, a man variously described as profligate, and 'difficult to manage being jealous and tricking and never to be trusted' – it was also said of him that he was 'willing to fight anything through parliament if well paid'. After the politicing, a bill was drafted to regulate the colleges (both the College of Physicians and Trinity College) but, significantly for our purposes, that part of the bill concerning the formation of a botanical garden was lost – it was opposed on the grounds of cost by the Chancellor of the Irish Exchequer. The Chancellor in the summer of 1785 when the School of Physic Act was passed was the Right Hon. John Foster, shortly to be elected Speaker of the Irish House of Commons, and an implacable foe of John Hely-Hutchinson.

At this point the story really divides into two – one part concerns Edward Hill and his battles with the colleges, and the second concerns 'Mr Speaker Foster' and his actions. The same point also marks the beginnings of the divorce – in the context of Ireland – of botany and medicine.

Let us follow Hill's path. He was very persistent. He was elected President of the Royal College of Physicians for the second time in 1789. On 25 March of that year the Physicians asked for the aid of Trinity College in forming a botanical garden. The Provost of Trinity suggested that the two colleges share the costs, and the University proposed the spending of seventy pounds each year. But nothing more can be discovered about this scheme until 1792 when Dr Hill again prompted the Physicians to act. He proposed that one hundred pounds be appropriated from the Dun legacy for the support of a botanical garden. But, Dr Robert Perceval, who was a bitter personal foe of Edward Hill, mounted a strong campaign to stop this, and to use the money instead for building a clinical theatre. It has to be admitted that in this Perceval was more attuned to the progress of medicine than Hill was, for Hill still saw a botanical garden as an aid in teaching students of medicine – he did not envisage it as a great collection of exotic plants grown for their own sake, for botanical research.

In 1793 John Hely-Hutchinson introduced a bill into the Irish House of Commons to provide funds for a botanical garden. The bill received a first reading. Hill then proposed to the College of Physicians that one hundred pounds be allocated, and this time his motion was accepted – but it had to be passed *three times* before it could have effect. On 11 June, Hely-Hutchinson petitioned that a botanical garden was 'indispensably necessary for the success of a school of physic' but stated that the Trinity College funds were totally inadequate to support one. The matter was referred to a committee of the House and a bill drafted, but the bill was strenuously opposed by John Foster and his cohorts.

Hely-Hutchinson died in 1794 and was succeeded as Provost of the University by Richard Murray. Hill asked the new Provost about leasing ground for a botanical garden and even laid a map before him. The Provost nodded his consent and Hill rushed out and took out a lease. The University could not engage in a perpetual lease, so Dr Hill undertook it personally in trust for the University. He acquired six acres at Harold's Cross. Funds were not available but Hill ploughed on, using his own salary to pay the rent and meet the costs. He was confident that he could swing the College of Physicians behind him too and resolve the whole affair to his satisfaction. But the College of Physicians was uneasy about using Dun's legacy for a garden; legal opinion was sought, and eventually Hill's proposal came forward for the third time – votes were cast equally and the College President cast a vote against. Hill was furious!

To add to his problems the School of Physic Act again came under scrutiny by the Irish parliament and a new act passed which, among other things, forbade anyone holding two chairs in the School of Physic. Hill held two – Botany and Physic – so on the day the act received Royal Assent he resigned his Botany chair. But he was left with the personal burden of the Harold's Cross

garden. Hill asked Trinity College to honour its agreement, reimburse him, and take over the land, but the College and Hill could not agree on terms and a legal battle commenced. The King's Bench decided in Hill's favour and in March 1803 awarded Dr Hill £618 and the lease of the land at Harold's Cross, but ordered him to release the University from its commitment to share the costs. Thus Hill kept the land, lost his chair in Botany, and the University was left floundering, without a botanical garden. The Royal College of Physicians also had no physic garden, but it did not need one now. Botany had freed itself from the harness of medicine.

Hill followed his court battle with a display of pique that is quite extraordinary – he published a pamphlet detailing, blow by blow, his version of the history of the campaign. In its extremely flowery prose we find this passage:

> I indulged that idle propensity of fond imaginings, called building castles in the air. I gave to airy nothing a local habitation and a name. A paradise rose like an exhalation to my view and charmed my senses with its varied beauties; I stood on the border of the lake, that to the fringed banks with myrtles crowned, its crystal mirror held, and viewed its tranquil surface spangled with the snow-white blossoms of all the aquatic vegetable tribes. I ascended the moss-clad rocky mound and from its summit contemplated the subjacent plain on which were spread in wide encampment ten thousand trees and shrubs and flowers, by care and art made denizens of a climate not their own. But, whilst I inhaled their grateful odours and exulted in admiration of their bloom, and varied tints of glowing colours, the baseless fabric, like the aereal pictures of the Fata Morgana, dissolved in air, and was succeeded by the noisome streams and sickening vapoirs of a Lazar-house.

Hill was vanquished. He was behind the times and lost out. The situation meanwhile had been exploited by others.

On 9 February 1790, in the midst of the discussions between the two colleges – discussions which were not always amicable and were getting nowhere fast – a petition was tabled in the House of Commons by a Dublin man-midwife and surgeon, asking parliament to form a public botanical garden in Dublin. The petition seems to come out of the blue – no-one apart from Dr Walter Wade is given credit for devising it, but there is circumstantial evidence that John Foster, 'Mr Speaker', was behind it. Many years later, on the death of Walter Wade, Foster wrote that 'I originally proposed the idea of a botanic garden.' How did this come about?

John Foster was a brilliant man, a skilful politician, son of another able politician, one of Ireland's 'improving landlords' – Arthur Young had described his father, Anthony Foster as 'The Great Improver – such are the men to whom monarchs decree their honours and nations erect their statues.' As a young man, John Foster had, in his own words, 'a rage for planting'. He garnered at Collon in County Louth one of the finest collections of trees and shrubs in Ireland, and indeed one of the finest in Europe. His appetite for new plants was insatiable. He was also passionately interested in the improvement of Irish agriculture – not a disinterested aim, because the improvement of agriculture would improve the income of landlords. Foster, as a politician, was one of the men who held that the Anglo-Irish Ascendancy was the Irish Nation and that that Nation was not the servant of Britain, but the equal – the two great members of the Empire. Britain and Ireland were sisters, not mother and daughter. He opposed the Act of Union in 1800, refused to surrender the Mace of the House of Commons and marched off to Collon with it. John Foster was ever keen to improve the image of Ireland as a nation – he was in many ways responsible for the fine parliament building (now the headquarters of the Bank of Ireland) in College Green – he was dubbed 'the Great Architect'. He wanted Dublin to excel London in grandeur, and London had no public botanical garden (Kew was Royal property) – to establish here a fine botanical garden would be a nice piece of 'one-up-man-ship'! But of course this was never stated – the pretext used was the improvement of Irish agriculture, the education of the landlords and the tenant farmers, the demonstration of new plants and new techniques.

Thus is was John Foster who embarked on a personal mission to run a public botanical garden in Dublin. He used his great authority in parliament to squash the likely rivals (the two colleges) and then steered his own plan through. Foster's influence in parliament has been described as 'amazing' and he was certainly very skilful. Dr Anthony Malcolmson has written that '. . . one thing can be said of Foster, his love of power and office may have been unhealthy, but it derived from his ambition to do good: his conception of good may have been narrow, but at least good, as he conceived it, was the object.' Thus it is naive to argue that Walter Wade acted alone in petitioning parliament – Foster must have been behind him. Foster and his caucus supported the petition, and a clause was inserted into the bill providing monies for the Dublin Society adding three hundred pounds specifically to meet the cost of providing and supporting a botanical garden. The bill was passed on 5 April 1790 – just two months after Wade's petition.

What then was the role of the Dublin Society? It had no primary function – it was another of the tools Foster manipulated. The Society had not discussed the idea of a garden – in July 1790 it had to admit that it had been 'unable to obtain such sufficient information as might enable it to decide the most efficacious mode of applying the grant for the garden.' It sought the advice of the medical faculty, an astonishing decision if the Dublin Society had initiated the idea, but not so when one realizes that the idea of starting a botanical garden was foisted on the Society by John Foster who would have nothing to do with the University or the College of Physicians. This latter fact is reported directly by Hill who recalled that he suggested to Foster that the garden (the Dublin Society one) should be jointly managed by the Dublin Society, Trinity College and the College of Physicians; Hill did this with some exultation, confident of infallible success. Foster was at first 'struck with the idea, but after some pauses, declared peremptorily that he would have nothing to do with the colleges.'

Following the Act of 1790, another three hundred pounds were allocated to the Dublin Society in 1791. In November 1791 the Dublin Society appointed a committee to carry out the proposal, but it was February 1793 (three years after Dr Wade's petition!) before any sign of progress is evident – this committee included John Foster's brother (the Bishop of Kildare) and his brother-in-law Thomas Burgh, among others. Shortly after this committee was formed parliament gave three hundred pounds for the third time. By September 1793 a site had been selected in south Dublin at Roebuck and a map was prepared. For reasons that have not been discovered this site was abandoned, and in September 1793 the committee was investigating the possibility of acquiring Delville, at Glasnevin, for a botanical garden. The lease was found to exclude a future tenant from cutting down trees so this idea was rejected. By September 1794 seventeen hundred pounds were waiting but still no sign of ground. However by the following February the committee had selected a site and on 25 March 1795 the Dublin Society's Botanic Gardens at Glasnevin came into being on land once owned by Thomas Tickell.

Of course, John Foster's approval was sought. And, for the next thirty years it was John Foster who ran the Glasnevin Botanic Gardens, aided by Dr Walter Wade as the Professor of Botany to the Dublin Society and by the gardeners John Underwood and John White. In all matters Foster was consulted, that which he commanded was done; the Society was merely the vehicle used by Foster to direct the money. Thus Glasnevin Botanic Gardens was established without the overshadowing influence of medicine although its 'director' Dr Walter Wade was a medical man. Its aim was to promote agriculture and this was evident in the layout and planting of the Gardens.

The Botanic Gardens were opened for the first time in 1800, the same year in which Dr Edward Hill resigned his Chair of Botany in the University and was succeeded by Dr Robert Scott. Scott did not inherit a botanical garden, but had to look on as Hill and the College sorted out the Harold's Cross Garden. Scott did appoint an assistant – a *horticulturist* – of outstanding abilities, the Scot James Townsend Mackay. For the next few years Mackay was engaged to help Scott in his lectures, to carry out some botanical rambles in Ireland and to tend the old Anatomy Garden

in the college. However in 1805 the University leased land at Ballsbridge and set about forming its fourth botanical garden. Mackay was the main influence on the garden at Lansdowne Road and it was very much a horticultural and botanical garden, rather than a medical garden. Its collections grew and in the late 1820s and 1830s the College Botanic Garden was better than its sister at Glasnevin. Yet medicine still had its hold over botany in the University, to such an extent that no-one could become Professor of Botany or hold a post within botany without medical qualifications. This reached a truly farcical level in 1844 when William Henry Harvey was granted an honorary MD to enable him to become curator of the College herbarium. He wrote, with his usual good humour that '. . . Today [20 March 1844] I was made a doctor in fine style. I hired a cap and gown for the occasion. I was admitted, as a Quaker, and had to stand up while all the rest were kneeling. The Lord Primate conferred the degree which he did in a very worthy manner. He is a very noble looking person, an archbishop every inch'.

Let me conclude by noting briefly the other Irish botanical gardens. In 1803 the Royal Cork Institution was formed. It was well-supported by local people and from 1807 was in receipt of a grant from the government. Its functions included 'the diffusing of knowledge of new and useful inventions and improvements of arts and manufactures'. In 1806, the governors proposed that the institution should have a library and a botanical garden. In 1807 the process of selecting a site began and in 1809 James Drummond was appointed curator. Cork Botanic Garden never developed into a thriving garden and when the government withdrew its grant the garden was abandoned and Drummond emigrated to the Swan River Colony in 1829. The Cork garden lasted only two decades.

In Belfast, a meeting held under the auspices of the Belfast Natural History and Philosophical Society in February 1827 resulted in the formation of the Belfast Botanic and Horticultural Society, the prime purpose of which was to form and manage a botanical garden. The Society acquired land in Bradbury Place, but the arrangement was not a success and two years later in 1829 the land at the junction of Malone and Stranmillis Roads was purchased. A second garden was established, under the care (for a short time) of Thomas Drummond (James's brother). Again this garden had no medical associations – it was almost purely horticultural in origin, and with the need to gain income from its visitors Belfast Botanic Garden had to be popularly attractive.

Conclusions

Botany in Ireland, as in other European countries, owes its origins to medicine. Throughout the eighteenth century, whether in a state of activity or in slumber, botany was the sole preserve of the medics. The strong influence of Leiden may be discerned throughout the eighteenth century for it is remarkable that many of the prominent figures of Irish botany between 1653 (Petty) and the 1780s (Patrick Browne) were graduates of that university. By the end of the eighteenth century, the uneasy relationships between the University of Dublin and the College of Physicians, and the tussles over the application of the Dun legacy, led to an increased separation between botany and medicine. On one hand, Edward Hill wanted to see a botanical garden for the use of students of medicine, but he was unable to achieve his goal. Other forces were at work including the unlikely one of Anglo-Irish patriotism, which eventually brought about the formation at Glasnevin of the largest publicly supported botanical garden in the civilized world. This garden owed nothing to medicine – its founding father John Foster laid down that it was to aid the improvement of Irish agriculture. In time the emphasis changed until it became one of the greatest horticultural centres in the world.

And what of the Royal Dublin Society? I regret that I cannot be fulsome in praise for it – it was forced to do something it had no desire to do, and it had not a clue about how to proceed. For thirty years it allowed Foster to run the Glasnevin Gardens. Its members were often apathetic. In 1841 there was a grave danger that the Gardens would become a nursery as the Royal Dublin

Society fought with the United Kingdom government and in 1846 David Moore, the hard-pressed curator, criticized the Society for not providing adequate funds for an institution that should have been trying to resolve the problem of potato blight. Perhaps that is being too harsh, but it is the other side of the story. The Royal Dublin Society does not emerge from this history with unblemished credit as previous writers would have us believe. All the same, under the 'Fostering Mantle' the Botanic Gardens at Glasnevin was 'the brightest jewel I am proud to say, in the [Dublin] Society's cap, admired by all who have visited it . . .'

Sources and Further Reading

Jackson, P.S. Wyse (1986). *The Story of Trinity College Botanic Garden*. Dublin.

McDowell, R.B. and Webb D.A. (1982). *Trinity College Dublin 1592-1952, an academic history*. Cambridge.

Nelson, E.C. (1982). 'The influence of Leiden on botany in Dublin in the early eighteenth century', *Huntia* 4(2): 133-146. (The principal source for references on the period up to 1733.)

Nelson, E.C. and McCracken, E.M. (1987). *The Brightest Jewel, a history of the National Botanic Gardens, Glasnevin, Dublin*. Kilkenny.

Pyle, F. (1983). *Trinity College Dublin*. Dublin (Eason's Irish Heritage Series: 24). (This contains a very interesting map showing TCD *c.* 1600, with a series of knot gardens.)

Walsh, W.F. and Nelson, E.C. (in press). *An Irish Florilegium 2*. London. (See especially the introduction which recounts the history of the Trinity College Botanic Garden from 1687 to 1987.)

Walters, M. (1981). *The shaping of Cambridge botany*. Cambridge.

National Botanic Gardens, Glasnevin, Dublin 9.

E. CHARLES NELSON

Begonia x *semperflorens* 'SCARVA CHERRY'

John Morris, The Locks Nursery, Scarva, in County Armagh, has released through the Irish Garden Plant Society, a floriferous, double-blossomed seedling of the popular miniature *Begonia* x *semperflorens* which is here given the name 'Scarva Cherry'. Plants were sold during the Society's plant sale at Kilruddery in October 1986, and propagation has been carried out both by rooting cuttings and by micropropagation as described above.

'Scarva Cherry' is a perennial herb, reaching not more than 20 cm in height. The stem and leaves are fleshy. The leaves are bright green, glabrous, heart-shaped, and with conspicuous, but minute glands (resembling pin-pricks). The flowers are borne profusely in clusters. The outer petals are entire, kidney-shaped, enveloping a mass of smaller 'petals' which replace both the stamens (in male flowers) and the pistil (in female flowers); the plant is thus sterile, and the flowers remain on the plant for a longer period. Some of the best flowers on a plant can be almost spherical, so numerous are the inner 'petals'. The blossoms are cherry-red with a pinkish tinge (RHS Colour Chart 46C-45A).

The single, original seedling of 'Scarva Cherry' was raised several years ago by John Morris; it was the only double-blossomed plant among the batch of single, red-flowered ones. He propagated it, and distributed a few plants to friends. He lost his own stock, but was fortunate to be able to recover a plant from one of the people to whom he had distributed it.

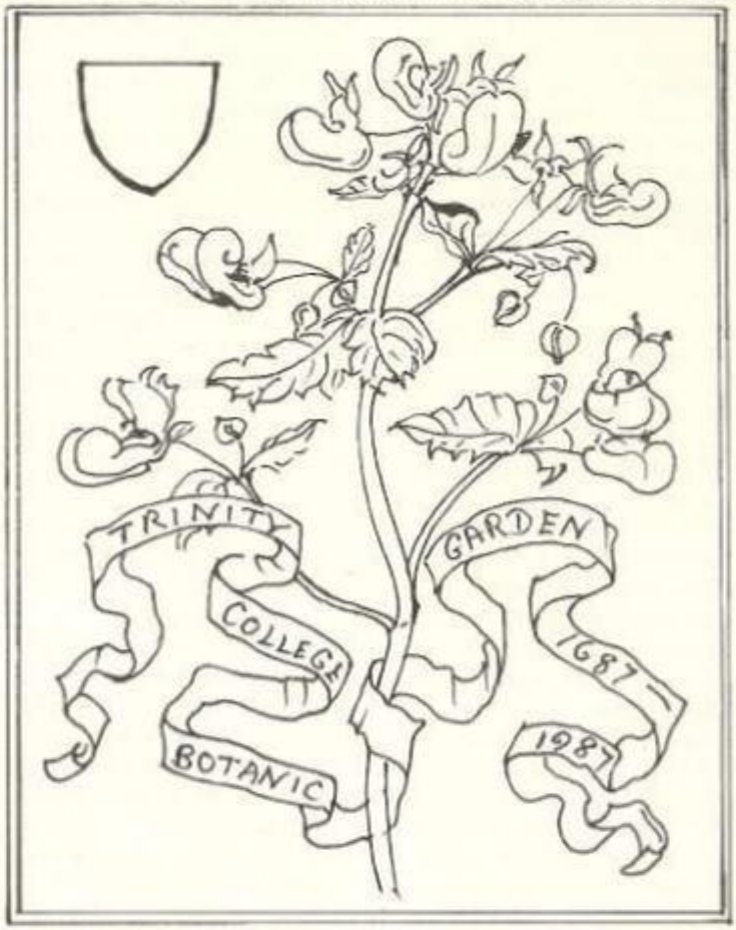
National Botanic Gardens, Glasnevin, Dublin.

WENDY WALSH[1]
AND CHARLES NELSON[2]

GENESIS OF A TRIBUTE TO TRINITY COLLEGE BOTANIC GARDEN

Several years ago (November 1981) we suggested to the Stamp Advisory Committee of the Post Office that a stamp might be issued to mark the three hundredth anniversary of the founding of the botanical garden attached to Trinity College, Dublin. The idea was eventually accepted and last year (1986) Wendy Walsh was asked to prepare artwork for the stamp.

The design of a stamp is a matter for careful thought; the final stamp has to be bold, attractive and relevant. The first thought was one of the plants recently brought back from Mauritius by the College botanists, and this was favoured by Dr Peter Wyse Jackson, but in the end *Calceolaria* x *burbidgei*, the College slipperwort, was selected. Then came the task of devising a 'setting' for the plant. Various ideas were considered and finally it was decided to produce a design which mirrored some of the magnificent old flower paintings of the eighteenth century. One particularly attractive scheme used by artists at that period was the melding of a plant portrait with the coat of arms of a patron. Some fine examples of this type of botanical illustration were prepared, for example, for John Martyn's *Historia plantarum rariorum* (1728). Another device employed so beautifully about the mid-1700s by Georg Ehret was the 'floating ribbon'. Combining these ideas



together produced the rough design shown here for the stamp that was eventually issued on 9 April 1987. In the stamp the dark border was omitted and the drawing was placed on a white ground instead of a tinted, parchment-coloured one. The arms of the University of Dublin in blue and gold are shown, with the inscribed blue ribbon and the yellow-blossomed slipperwort.

Calceolaria x *burbidgei* is an artificial hybrid raised at Trinity College Botanic Gardens, Ballsbridge late last century; its history is included in *An Irish Florilegium*, plate 35.

[1]The Glebe, Lusk, Co. Dublin.
[2]National Botanic Gardens, Glasnevin, Dublin 9.

Book Reviews

Beautiful Backyards, by Roddy Llewellyn. 1985. pp. 96, illustrated. Ward Lock. UK£7.95. ISBN 0-7063-6320-5.

One of the pleasures of gazing out of a train window is the opportunity it gives to overlook other people's back gardens. Irish town plots, seen by courtesy of CIE, are usually unexciting, with a few shrubs and flowerbeds unimaginatively edging a patch of grass. Across the Irish Sea the standards of design and maintenance are higher, and rosebeds, well-rolled lawns and paved patios flash by in endless permutations. The thirty or so London 'backyards' Roddy Llewellyn has gathered together for this book represent a still-higher level of small-scale gardening, though, alas, a less publicly-visible one. These gardens have in common the fact that they have all been carefully (and usually professionally) designed – the products of money and sophisticated taste as well as love of plants. They share too their owners' desires to create illusions; of a rural setting, or of spaciousness, or of grandeur.

The gardens included vary in size from some that can be described as backyards only in the American sense of any rear garden, to one – 'an eastern potentate's garden in Chelsea' – that measures a mere 5.75 x 10 feet. They are grouped into types: 'wild', 'landscaped', 'trompe l'oeil', 'focal point', 'terraced' and 'very small', and each one is described by means of a colour photograph or two, explanatory text and planting diagrams or plans of the layout.

The wild backyards in the first section look suitably bosky, even jungle-like, in the photographs, with their winding paths and dense, informal plantings. Can the illusion be complete in a metropolis, one wonders, or does the sound of traffic or of Concorde drown the birdsong? The landscaped and trompe l'oeil gardens offer fascinating and varied solutions to the problem of creating the effect of space. Judging by the examples shown here, mirrors (suitably weatherproofed) can be used as well for this purpose outside as they can indoors. There is, for instance, a small, shaded 'grandmother's garden', busy with paving and pots, whose owner has been inspired to fix a wrought iron Victorian porch laid flat and filled with mirror glass to the end wall. This has dramatically doubled the apparent length of the garden. Some of the trompe l'oeil effects are even grander, particularly the extraordinary 'artist's garden' that features on the dust jacket, with its painted arch and flight of steps.

Only a few of the photographs give glimpses of the wider setting of these gardens; the camera usually keeps its aim low and we see nothing of the walls and chimney pots of neighbouring properties. But then we have this same ability in viewing our own urban gardens to block out mentally what we do not want to see. This book offers inspiration on how to enact our own particular gardening fantasies even in the most confined and unpromising of areas.

Mary Davies

The National Trust. A Book of Gardening by Penelope Hobhouse. 1986. pp 256, illustrated. The National Trust. UK£14.95.

Penelope Hobhouse, who is the National Trust tenant of the garden at Tintinhull, has written an informative book subtitled 'A book of gardening ideas, methods and designs' based on the gardens of the National Trust. Although some of these are large or formal, there is to be learned from each something which can be applied to the smallest garden, be it methods of clipping hedges, sterilizing soil or buying equipment.

The book is divided into five sections: (1) The garden framework which includes structural planting, planting in patterns and ornamental features. (2) Garden features, borders, rose gardens, water gardens, herb gardens, ferneries and rockeries. (3) Garden walls, orchards, kitchen gardens and wall planting. (4) Informal planting, woodland, meadows, natural planting and low maintenance. (5) Practical maintenance, the single gardener. There are also articles on lawn care, soil sterilization, compost and machinery. In fact there is something on everything for everyone.

Mrs Hobhouse invited most of the National Trust head gardeners to comment on the methods they use. This has resulted in a variety of ideas which they have implemented, the great success of which will be evident to everyone who has visited their gardens. I was particularly interested to read about the method of soil sterilization used at Rowallane by Mike Snowdon. This article includes diagrams and photographs in colour of the progress made. The art of making a successful compost heap is described by Graham Kendall of Montacute House. Sybil Kreutzberger writes about the pruning of shrubs and climbers at Sissinghurst Castle. Many who have visited this beautiful garden will remember how well-shaped and designed were the shrubs and trees. Of interest to me was the description of how at Powis Castle they reshape overgrown hedges by cutting back one side of the trunk the first year and attacking the other side and top of the hedge three years later.

There are numerous coloured photographs and although one or two appear to be rather dark, most are true to colour. There are pictures of borders, avenues of trees, rose gardens, ornamental containers and many more. Especially attractive is one of the wood at Trengwainton with primroses and wood anemones and another of the double border at Mottisfont. There are also many planting plans and diagrams.

This is a book to be enjoyed as well as one from which to learn about every aspect of gardening. The reader will have gathered by now that *A Book of Gardening* is one I am delighted to possess and which I hope will help me to rectify many of the mistakes I have made over the past years.

Rosemary Brown

The Startling Jungle, Colour and Scent in the Romantic Garden, by Stephen Lacey. 1986. pp. 227, illustrated. Viking. UK£12.95. ISBN 0-670-80614-4.

Much credit must go to Stephen Lacey, who is indeed a very young gardener, for his refreshing and stimulating book. He aims to convey 'the spirit of the romantic garden of the 1980s', through colours, scents, informalities and surprises. The author is much influenced by Gertrude Jekyll, whom he says was the first person 'to maintain that the arrangement of colour is the gardener's single most important concern': 'a collection of plants, however good, doesn't make a garden, they must be used to form beautiful pictures'. Inspired by Gertrude Jekyll and by his favourite gardens at Sissinghurst and Hidcote, Lacey enthusiastically creates his romantic garden, preoccupied with colour and scent and with a deep passion for plants.

There is no shortage of information on colour schemes and harmonies in the book and one of his illustrations carries a colour wheel which helps to demonstrate the relationship between colours. Scent in the garden, Lacey feels, deserves much more attention and he helps us to manage scents by acquiring 'a simple understanding of the nature and impact of the ten flower scent groups'. The author then suggests numerous plant associations, and he assembles the plants for us season by season. We emerge from the winter world of foliage, enter the romantic garden of spring, ebb into summer and finally autumn.

The Startling Jungle is both instructive and evocative of colours, shapes, patterns, feel and textures. The book will excite you and it should appeal to all those who are bored with their own gardens, and who long for change, but just don't know where to begin.

There are sixteen pages of attractive illustrations, with three or four colour plates on each page. These, unfortunately are badly spaced on the pages, though artistically arranged. Stephen Lacey will not be the only one 'whose most exciting gardening moments are spent in the bath' – after reading this book, we'll be joining him.

Catherine O'Donoghue

The Vanishing Garden. A Conservation Guide to Garden Plants, by Christopher Brickell and Fay Sharman. 1986. Line illustrations, Christine Grey-Wilson. pp 261, illustrated. John Murray. UK£15.00. ISBN 0-7195-4266-9.

'It is much the rage to obtain new plants and neglect old ones' wrote George Glenny in 1848. How true this is now, as then, is amply illustrated in the course of *The Vanishing Garden*, the authors of which set out to uphold the cause of neglected old garden plants. Some of these simply went out of fashion, while others never reached the attention of gardeners at all, remaining the preserve of a few specialist plantsmen. This book is, as the sub-title declares, 'a conservation guide', intended to stimulate interest in these unfamiliar plants, to ensure their survival, and restore them to their rightful place in today's garden.

The book is well organised: for easy reference plant entries are arranged by genus in alphabetical order, 'each one highlighting some endangered members of that genus'. Several hundred such plants are described. Among the 80 genera dealt with are herbaceous plants, alpines, shrubs, bulbs, trees and greenhouse plants. Included in the discussions of each plant is a treasury of interesting comment, with propagation hints, stories and notes relating to its history and reputation. This, coupled with the fact that the whole book is written in an easy, flowing and most readable style, makes it much more than just another reference book. This is a book which the armchair gardener will enjoy and find hard to put down, and yet the most enthusiastic specialist or collector will be more than satisfied with what he or she finds: a text well supported by references for further study, an appendix which includes a full

bibliography, a list of addresses from which more information can be obtained, and a list of National Collections housing some 37 of the 80 genera dealt with. For my own part, I would have appreciated a complete list of National Collections.

Some of the accounts on how the plants were found or used are fascinating, although I feel there was some confusion of Paeonia roots with mandrake. I particularly liked the account of the development of + *Laburnocytisus adamii*. The tree evolved when Jean-Louis Adam, a nurseryman near Paris, grafted the dwarf purple broom *Cytissus purpureus* on the common laburnum *L. anagyroides*. This was a common practice in 1825. Adam paid little attention to his new plant; since it had different foliage he named it great Austrian broom, but always sold it before it flowered. In 1831 the plant produced laburnum flowers and in 1833, broom flowers as well as a curious mixed blossom. It was, of course, a chimaera-graft hybrid. All existing trees of + *Laburnocytisus adamii* have come from this one plant and the process has not been repeated. Another intriguing story was the discovery of *Rosa gigantea* in the Chinese province of Yunnan in 1892. It was spotted through field glasses from two miles away! It is an impressive plant and possibly the only representative now growing in Britain is at Mount Stewart.

The authors hope to inspire gardeners to take an active part in the conservation of garden plants - to go in search of lost varieties – and in this they should be very successful. The need to conserve is certainly great, and *The Vanishing Garden* tells some wonderful stories of plants that have been saved from extinction by man – the story of the ginkgo tree is a classic illustration.

It is interesting to pick up the many references to old garden plants associated with Ireland; the Slieve Donard nursery played a major role in producing garden varieties. Alas it too is now gone, like so many of its plants.

The excellent colour illustrations, five of which are taken from the *Botanical Magazine*, are located in the centre of the book, and illustrate each of the 80 genera discussed. The line-drawings by Christine Grey-Wilson which also illustrate each genus are delicate and accurate and give added beauty to the book. *The Vanishing Garden* is for all gardeners to use and enjoy. It will make a fine present.

Reg Maxwell

The Story of the Botanic Gardens of Trinity College, Dublin, by Peter Wyse Jackson. 1986. pp 38, illustrated. Trinity College Botanic Garden. IR£2.

This easy-to-read and chatty little booklet gives but an outline of the history of the Trinity College Botanic Gardens. The introduction makes no pretence that the work is in any way a definitive history, it is merely a summary of the major changes that have taken place during the 300 years since the Gardens were founded. The author has his own particular style of writing and selecting short anecdotes about people associated with the Gardens. The illustrations, with the exception of the maps, are not a great success due to the printing process used.

The Gardens can boast a succession of great names; for instance, not only did David Moore spend time at the College Gardens before becoming curator of Glasnevin but so also did Frederick Moore. Large gaps exist in the story begging such questions as 'Did Mackay and William Harvey get on? Why is there scarcely a mention of Coulter and was Perceval-Wright interested in the Gardens?' The period covering Irish Independence and the two World Wars is likewise scarcely mentioned. However, it is clear that a considerable revival took place from 1950 onwards under the leadership of D.A. Webb and later W.A. Watts. This makes fascinating reading and clearly but for their efforts the flourishing Gardens of today might not exist.

One would hope that in the tercentenary of the foundation of the Gardens this little publication may be but a precursor to a more lavish and fuller guide to the TCD Botanic Gardens or even to a definitive history.

I.K. Ferguson

The Irish Garden Plant Society was formed in 1981 to assist in the conservation of garden plants, especially those raised in Ireland. It also takes an interest in other aspects of the preservation of Ireland's garden heritage.

This journal will be devoted to papers on the history of Irish garden plants and gardens, the cultivation of plants in Ireland, the taxonomy of garden plants and reports of work carried out by the society and its individual members.

The editorial committee invites contributions from members of the society and others. Manuscripts, typed on A4 sheets (double-spaced and typed on only one side of each sheet), may be submitted to the Editor at the National Botanic Gardens, Glasnevin, Dublin 9, from whom further details may be obtained.

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Contents

DAPHNE CHAPPELL	Some Snowdrop Notes	1
J.G.D. LAMB	Snowdrops in an Irish Context	3
SYBIL CONNOLLY	H.P. McIlhenny – An Appreciation	5
MARY DAVIES	An Early Nineteenth-century Conservatory at the Loreto Convent, Bray, County Wicklow	7
E. CHARLES NELSON	'Plan & Section of Mr Bullen's Garden Stove'	8
NORMAN HICKIN	My Favourite Weeds	11
TESSA HOBBS	Old Mill House	17
MARGARET GARNER	Some of Our Holiday Collections	19
PETER S. WYSE JACKSON	*Pachyphragma macrophyllum* (Hoffm.) Busch (Cruciferae); A Most Useful but Overlooked Herbaceous Plant for Irish Gardens	21
PETER S. WYSE JACKSON, JOHN A.N. PARNELL and QUENTIN C.B. CRONK	A Modern Equivalent for the Wardian Case	23
J.G.D. LAMB	A Nineteenth Century Book of Pressed Ferns	25
J.G.D. LAMB and E. CHARLES NELSON	*Prunus* 'Woodfield Cluster'	27
REG MAXWELL	The Bishop Bedell Sycamore at the Palace of Kilmore, County Cavan	28
ROGER D. LONG	*Begonia* x *semperflorens* 'Scarva Cherry': A Case Study for the Rapid Introduction of a New Variety	29
E. CHARLES NELSON	Botany, Medicine and Politics in Eighteenth Century Dublin and the Origin of Irish Botanical Gardens	33
E. CHARLES NELSON	*Begonia* x *semperflorens* 'Scarva Cherry'	44
WENDY WALSH and E. CHARLES NELSON	Genesis of a Tribute to Trinity College Botanic Garden	45
BOOK REVIEWS		46

Front Cover – Tormentil (*Potentilla erecta*), an engraving by J. Gwim, 1727, illustrating a pamphlet by William Maple of the College Botany Garden.

Irish Garden Plant Society
Dublin

Distributed free to members of the society Price to non-members IR£5