

The Heather Society's Herbarium, and Ericaceae (*Bruckenthalia*, *Daboecia*, *Erica*) type specimens cited by D. C. McClintock (1913–2001)

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ABSTRACT: Names published by D. C. McClintock for subspecific taxa of *Bruckenthalia*, *Daboecia* and *Erica* and for artificially-produced, interspecific hybrids of *Daboecia* and *Erica* are noted and details of the type specimens designated by the author are listed. The present whereabouts of material cited as being in the herbarium of The Heather Society or “Herb. D. McClintock” is explained. Holotypes are deposited in the National Botanic Gardens, Glasnevin, Dublin (**DBN**), the Royal Botanic Garden, Edinburgh (**E**), The Natural History Museum, London (**BM**) and, principally, the RHS Herbarium, Royal Horticultural Society's Garden, Wisley (**WSY**). Two of McClintock's names, *Erica cinerea* var. *kruessmanniana* and *E. tetralix* f. *aureifolia*, are shown to be invalid because neither holotype comprises a single gathering made at one time.

KEYWORDS: *Erica cinerea* var. *kruessmanniana*, *Erica tetralix* f. *aureifolia*, herbaria, holotype, typification.

INTRODUCTION

“Personally, I keep permanently no dried plants – no more than special ones I am taking an interest in for the time. Any I do collect I pass on ...” (McClintock, 1966: 109).

David Charles McClintock VMH (1913–2001), former President of The Heather Society (1989–2001) (Lee 2002; Leslie 2002; Nelson & Small 2002), sometimes stated that type specimens of the new taxa of Ericaceae – *Bruckenthalia* Reichb. (now incorporated in *Erica* L.), *Daboecia* D. Don and *Erica* L. (*sensu* Oliver 2000: 98–100) – which he named were included in the herbarium of The Heather Society. In a few protologues of subspecific taxa of *Erica* he stated that the type specimens were in “Herb. D. McClintock” although, as quoted above, he avowed that he did not have any herbarium specimens permanently in his possession, a statement apparently confirmed by the fact that Kent & Allen (1984) had no separate entry for David McClintock under “privately owned herbaria”. Furthermore, Kent & Allen (1984) provided no references to any specialized collections of *Bruckenthalia*, *Calluna* Salisb., *Daboecia* or *Erica*, nor to The Heather Society's herbarium. In this paper we explain the present deposition of the types of McClintock's Ericaceae.

The Heather Society (founded 1963), while currently (2008) active, does not maintain a herbarium collection: it never has had a separate “institutional” herbarium. The collection which McClintock referred to as “Hb Heather Society” – or, rarely, as “Herb. D. McClintock” – was a reference collection, mainly of cultivars, which he himself assembled and kept at his home, Bracken Hill, Platt, Kent, UK: it was not held in a public institution. As always intended (see, for example, McClintock, 1991), following McClintock's death in 2001, The Heather Society's herbarium comprising all the specimens of Ericaceae which he had in his care at Bracken Hill, was transferred to the RHS Herbarium in the Royal Horticultural Society's Garden, Wisley (**WSY**) (see Kent & Allen, 1984).

McClintock had a very particular interest in hardy European heathers (see, for example, McClintock, 1989; Lee, 2002), and the majority of the new names which he coined and published were for subspecific taxa within *Daboecia* and *Erica* (see [Nelson] 2002). He did

publish new epithets within some other genera and families (especially Graminae), but these are not relevant to our paper. He also formally published new combinations in various families including Ericaceae, but as these combinations did not involve the citing or designation of types likely to have been in The Heather Society's herbarium, they are also not included here.

Holotypes, in particular, are of fundamental importance in botanical nomenclature and the loss or disappearance of holotypes would be a matter of great concern. Given that McClintock's protologues referred to holotypes in the herbarium of The Heather Society and "Herb. D. McClintock", it is desirable that the present whereabouts of each of these specimens is unequivocally documented. Accordingly, for *Daboecia* and *Erica* (including *Bruckenthalia*), we have personally checked that when a holotype was explicitly cited as being deposited in these sources in McClintock's protologues, the relevant specimen is now in **WSY**. We have only encountered one conflict with the protologues regarding the whereabouts of a holotype: the holotype of *Erica tetralix* f. *stellata* D.C.McClint. is in **WSY**, not in **BM**. However, there are discrepancies between the published dates of collections of several holotypes and the dates on the actual labels; these are noted below.

D. C. McCLINTOCK'S NAMES IN ERICACEAE

The following list contains those new names in Ericaceae that McClintock published as sole or joint author; as already noted, it does not include new combinations. The list was compiled by combining names extracted from the International Plant Names Index (<http://www.ipni.org>, accessed 6 March 2004, searching for "%clint%": although the recommended abbreviation for the author is D.C.McClint. (Brummitt & Powell, 1992), the IPNI database does not consistently employ this exact form) with names extracted from *International register of heather names* (Nelson & Small 2000) and its associated database. The present locations of McClintock's holotypes are indicated by the standard herbarium acronyms. The **BM** and **E** specimens were verified by E.C.N. on 9 June 2004 and 6 June 2006 respectively. The **WSY** specimens have been verified by both authors.

Bruckenthalia

B. spiculifolia (Salisb.) Reichb. f. *albiflora* D.C.McClint.: *Plantsman* **6** (3): 191 (1984): **holo**: "ex horto Sedlonov, Czechoslovakia [planta ex monte Retezat, E. Carpathians, Roumania]", 1 June 1983, *J. Grulich* & *J. Chmelar* **BM!**

Note: While the specimen in **BM** is clearly dated 12 June, not 1 June, 1983, it is undoubtedly the holotype. McClintock's annotation reads, in part, "Handed to me in Brünn 13 June 83 Type", and includes the additional information that the collection originated in J. Grulich's garden in Sedlonov.

When *Bruckenthalia* was transferred back into *Erica*, the name of this taxon became *E. spiculifolia* Salisb. f. *albiflora* (D.C.McClint.) E.C.Nelson & D.C.McClint. (Nelson, 1997).

Daboecia

D. azorica Tutin & E.F.Warb. f. *albiflora* D.C.McClint.: *Plantsman* **6** (3): 191 (1984): **holo**: "Rocky slopes, Pico mountain c. 5,200 ft, Azores", 22 July 1974, *D. McClintock* & *D. Richards* **BM!**; **iso**: **WSY (0100343)!**

Note: The **BM** sheet is labelled "Daboecia azorica f. alba", but the published epithet was *albiflora*. Richards' name is not included on the label, although he is credited as joint collector in the protologue. As well as several pressed specimens, there are two colour photographic prints mounted on the sheet.

There is a sheet labelled “paratype” in “Herb.D.McC.” (**WSY (0100343)!**); like the specimen in **BM**, it is labelled “*Daboecia azorica* f. *alba*”. Almost invariably McClintock used the term paratype when he meant isotype (a duplicate of the holotype); therefore the **WSY** sheet correctly represents an isotype. There are three photographs attached to this sheet (undoubtedly taken by Richards (see Richards, 1976)), the extra one showing a white-flowered plant found by Richards on Faial on 23 July 1974 (Richards, 1976: 18; McClintock, 1984b: 183).

When McClintock’s (1989) decision to make *D. azorica* a subspecies of *D. cantabrica* (Huds.) C.Koch is accepted and followed, the name of this taxon has to be altered to *D. cantabrica* subsp. *azorica* D.C.McClint. f. *albiflora* (D.C.McClint.) E.C.Nelson (see Nelson, 1996).

- D. cantabrica* (Huds.) C.Koch f. *blumii* D.C.McClint.: *Yearbook of The Heather Society* **3** (2): 47 (1984: published 5 March 1984): **holo**: “ex garden at De Voorzienigheid, Steenwijkerwold, Holland”, 20 August 1983, *H.M.J. Blum* **BM!**

Note: The **BM** sheet bears two specimens, and these are annotated in ink (presumably by Herman Blum) “both of same plant”. The right-hand specimen is annotated, in ink, “some weeks earlier (very warm and dry)” and has an additional date, inscribed in pencil in McClintock’s characteristic scrawl, “25 July” (see McClintock, 1984a). Thus the right-hand specimen is not part of the holotype. Only the left-hand specimen, collected on 20 August 1983, can constitute the holotype.

The holotype was obtained from a plant bearing white flowers: the sheet bears the annotation “White-flowering *Daboecia* seedling with upright standing bells found by H.M.J. Blum ...”, and McClintock originally named it *D. cantabrica* f. *alba*.

The publication of this forma name in *Ericultura* no. 54: 26 (April 1984) post-dated that in *Yearbook of The Heather Society*.

- D. × scotica* D.C.McClint.: *Garden* **103** (3): 116 (1978): **holo**: ‘William Buchanan’, “in horto D. McClintock, Bracken Hill, Platt, Kent, culta”, 11 September 1968, *D. McClintock* **E!**

Note: The date on the label is 16 September 1968, not 11 September 1968 as stated in the protologue (McClintock, 1978).

When McClintock’s (1989) decision to make *D. azorica* a subspecies of *D. cantabrica* is accepted and followed, *D. × scotica* is treated as a nothosubspecies *D. cantabrica* nothosubsp. *scotica* (D.C.McClint.) E.C.Nelson (Nelson, 1996).

- D. × scotica* f. *albiflora* D.C.McClint.: *Plantsman* **6** (3): 191 (1984): **holo**: ‘Silverwells’, “ex horto Bracken Hill, Platt, Kent”, 4 July 1982, *D. McClintock* **BM!**

Note: The additional information “ex Alex Duguid” is on the sheet.

When McClintock (1989) decided to make *D. azorica* a subspecies of *D. cantabrica*, the name of this taxon had to be altered because merely to make a new combination created homonyms (Nelson, 1996). This plant, when treated as a forma of a nothosubspecies of *D. cantabrica* is correctly named *D. cantabrica* nothosubsp. *scotica* f. *eburnea* E.C.Nelson. The holotype is the specimen cited above.

Erica

- E. × afroeuropaea* D.C.McClint.: *New plantsman* **6** (4): 207 (1999): **holo**: “Edeweicht-Suddorf, Germany, nursery at Edammerstrasse 26”, 10 April 1989. *K. Kramer* **WSY(0100110)!**

Note: a plastic nursery tag is attached to the specimen by wire, inscribed “E. arborea × baccans HC63D”. McClintock’s annotation reads, in full: “Erica arborea × E. baccans Edeweicht-Süddorf, Germany Nursery greenhouse at Edammerstr 26 c. 10 April 1989 Kurt Kramer overall fertility <0.14% Fl[ower]s Red Purple 63D. Type specimen”.

E. andevalensis Cabezudo & J.Rivera f. *albiflora* D.C.McClint. & E.C.Nelson: *Glasra* 7: 36 (1983, published 16 January 1984): **holo**: “Rio Odiel valley, 7.5km north-west of Zalamea la Real, Province of Huelva, Spain”, 18 July [“viii” in error] 1982, *D. McClintock, E.C. Nelson & D.J. Small* **DBN!**; iso: **BM!**, **MA**, **SEV**, “Herb. D.McC.” (now in **WSY(0100348)!**).

E. arborea L. f. *aureifolia* D.C.McClint.: *Hortus* no. 7: 61 (1988): **holo**: ‘Albert’s Gold’, “Bracken Hill, Platt, Kent”, 13 September 1982, *D. McClintock* “Hb Heather Society”, now in **WSY (0100332)!**

Note: McClintock’s annotation reads: “Erica arborea ‘Albert’s Gold’ Garden at Bracken Hill, Platt, Kent. 13 Sept 1982 DM°C foliage 154A Type”.

E. carnea L. f. *aureifolia* D.C.McClint.: *Hortus* no. 7: 61 (1988): **holo**: ‘Foxhollow’, “Bracken Hill, Platt, Kent”, 5 May 1980, *D. McClintock* “Hb Heather Society”, now in **WSY (0100334)!**

Note: McClintock’s annotation reads: “Garden at Bracken Hill, Platt, Kent, 5 May 1980 DMcC bought as *E. x darleyensis* ‘Dawn Rogue’! Type”.

E. ciliaris L. f. *aureifolia* D.C.McClint.: *Hortus* no. 7: 61 (1988): **holo**: ‘Aurea’, “Letts Nursery, Windlesham, Surrey”, 27 September 1970, *D. McClintock* “Hb Heather Society”, now in **WSY (0100345)!**

Note: McClintock’s annotation reads: “Letts Nursery, Windlesham, Surrey 27 Sept 1970 DM°C Type”; also in pencil on sheet above the label “Type of f. *aureifolia* DM°C Hortus 7: 61 1988”.

E. cinerea L. var. *kruessmanniana* D.C.McClint. nom. illeg.: *Plantsman* 2: 191 (1981): **holo**: ‘W. G. Notley’, “Nursery Garden, Windlesham, Surrey”, September 1964 & September 1965, *J.F. Letts & D. McClintock* “Herb. D. McClintock”, now in **WSY (0100349)!**

Notes: McClintock’s annotation reads: “Nursery Garden, Windlesham, Surrey, Sept 1964 & 16 Sept 1965 M^f J.F. Letts - DM°C Type”.

The *International code of botanical nomenclature (Vienna Code)* Art. 8.2 (McNeill *et al.* 2006) states: “For the purpose of typification a specimen is a gathering, or part of a gathering, of a single species or infraspecific taxon made at one time ...”. Thus this varietal name is not validly published (under Art. 37.2 (McNeill *et al.* 2006)) because the cited “holotype” comprises material gathered on two separate occasions.

E. cinerea var. *kruessmanniana* [nom. illeg.] subvar. *depauperata* D.C.McClint.: *Plantsman* 2: 191 (1981): **holo**: “ex horto, 6 Roedich Drive, Tavenham, Norfolk”, 17 September 1977, *B.G. London & D. McClintock* “Herb. D. McClintock”, now in **WSY (0100331)!**

Note: McClintock’s annotation reads: “Garden at Roedich Drive, Tavenham, Norfolk, 17 Sept 1977 DM°C Seedling in B.G. London’s garden Type”.

E. cinerea f. *aureifolia* D.C.McClint.: *Hortus* no. 7: 62 (1988): **holo**: ‘Golden Hue’, “Experimental Station, Boskoop, Holland”, 6 June 1971, *H.J. van de Laar* 3559 “Hb Heather Society”, now in **WSY (0100342)**!

Note: This specimen has van de Laar’s label only, and the date is clearly “6–8” (i.e. 6 August). McClintock has annotated it “Type”.

McClintock stated in the protologue that there was a “paratype” in “Hb van de Laar”; as noted above under *Daboecia azorica* f. *albiflora*, almost invariably when he used the term paratype, he meant isotype. Van de Laar’s herbarium was deposited in the Boskoop Research Station until 2003 when it was moved to Herbarium Vadense, Wageningen, but there is no record on the database retained in Boskoop of any specimen matching the holotype (M.H.A. Hoffman, pers. comm., email to E.C.N., 7 April 2004).

E. × *darleyensis* Bean f. *albiflora* D.C.McClint.: *Plantsman* 6 (3): 191 (1984): **holo**: ‘Silberschmelze’, “ex horto Bracken Hill, Platt, Kent”, 9 May 1965, *D. McClintock* **BM**!

Note: In pencil, McClintock annotated the holotype “ex Letts”: in other words, he had obtained this cultivar from J. F. Letts.

E. × *darleyensis* f. *aureifolia* D.C.McClint.: *Hortus* no. 7: 62 (1988): **holo**: ‘Jack H. Brummage’, “Heathwood Nursery, Taversham [*sic*], Norfolk”, 24 February 1970, *N. H. Brummage* “Hb Heather Society”, now in **WSY (0100337)**!

Note: McClintock’s annotation reads: “Heathwood Nursery, Tavenham, Norfolk, 24 Feb 1970 N.H. Brummage RHS Heather Competition Type”. The specimen was originally labelled “*Erica carnea* ‘Aurea’”.

E. erigena R. Ross f. *aureifolia* D.C.McClint.: *Hortus* no. 7: 62 (1988): **holo**: ‘Golden Lady’, “Bracken Hill, Platt, Kent”, 14 October 1987, *D. McClintock* “Hb Heather Society”, now in **WSY (0100333)**!

Note: McClintock’s annotation reads: “Garden at Bracken Hill, Platt, Kent, 14 Oct 1987 DM°C”.

E. × *garforthensis* D.C.McClint.: *Yearbook of The Heather Society* 2000: 17 (2000): **holo**: “Garden at 9 Ashlea Close, Garforth, Leeds”, September 1998, *J. Griffiths* **WSY (0096181)**!

Note: McClintock’s annotation reads: “*Erica manipuliflora* ‘Aldeburgh’ × *E. tetralix* ‘Bartinney’ Garden at 9 Ashlea Close, Garforth, Leeds, Sept 1998. J. Griffiths cross made Sept 83, cf HSYB 1987 [i.e. Griffiths, 1987]: 49 Fl[ower]s fragrant Plant 30" high”.

E. × *griffithsii* D.C.McClint.: *New plantsman* 4 (2): 84 (1997): **holo**: ‘Valerie Griffiths’, “cult in horto 9 Ashley Close, Garforth, Leeds”, 12 Sept 1988, *J. Griffiths* & *D. McClintock* **WSY (0028457)**!

Note: McClintock’s annotation reads: “Garden at 9 Ashlea Close, Garforth, Leeds, 22 Sept 1988 DM°C J Griffiths”.

The binomial was in print as early as 1993 in *Der Heidegarten* heft 34: 6 (1993) but as no Latin diagnosis accompanied the name it was not validly published there.

E. × *krameri* D.C.McClint.: *Der Heidegarten* heft 41: 19 (1997): **holo**: “Cult. Edeweicht, NW Germany, 27. Juli 1990”. *D. McClintock* & *K. Kramer* **WSY (0028344)**!

Note: McClintock's annotation reads: "Bruckenthalia spiculifolia × Erica carnea Nursery at Edammerstr 26, Edeweicht-Süddorf, 27 July 1990 DM°C K Kramer 3 of the clones Type".

E. lusitanica Rudolphi f. *aureifolia* D.C.McClint.: *Hortus* no. 7: 62 (1988): **holo**: 'George Hunt', "Bracken Hill, Platt, Kent", 10 April 1983, *D. McClintock* "Hb Heather Society", now in **WSY (0100336)**!

Note: McClintock's annotation reads: "Garden at Bracken Hill, Platt, Kent, 10 April 1983 DM°C Type".

E. mackaiana Bab. f. *eburnea* E.C.Nelson & D.C.McClint.: *Glasra* 7: 37 (1983, published 16 January 1984): **holo**: "Puerto de la Xesta, north-east of Villalba in open scrub, Province of Lugo (Galicia), Spain", 24 July 1982, *M.I. Fraga, D. McClintock, E.C. Nelson & D.J. Small* MNS 126. **DBN!**; *iso*: **BM, MA, SANT**, "Herb. D. McC." (now in **WSY (0100346)**)!

E. mackaiana f. *eglandulosa* D.C.McClint.: *Irish naturalists journal* 21: 85 (1983): **holo**: "L. Sheedagh, E of Carna, Co Galway, [Ireland]", 8 September 1973. *Miss M. Scannell & D. McClintock*. **BM!**, **DBN!**

E. manipuliflora Salisb. f. *albiflora* D.C.McClint.: *Yearbook of The Heather Society* 3 (6): 44 (1988): **holo**: "Lara Bay, Antalya, Turkey", 1 October 1987, *Mrs Olivia Hall* "Hb. Heather Society", now in **WSY (0096182)**!

Note: McClintock's annotation reads: "Type f. *albiflora* Lara Bay, Antalya, SW Turkey, Cliff path down to sea level 1 Oct [Sept] 1987, Mrs Olivia Hall 18" tall".

In cultivation in Britain, in certain conditions (e.g. shade), the flowers of this plant (as *E. manipuliflora* 'Olivia Hall' raised from Mrs Hall's collection; see Joyner (2007)) have a very pale pink corolla and dark anthers (due to the presence of at least small quantities of anthocyanins). Thus, it is not a pure white form, totally lacking anthocyanin. *Erica* clones with pure white flowers have pale gold or pale tan anthers because anthocyanins are absent.

E. × oldenburgensis D.C.McClint.: *Der Heidegarten* heft 39: 35 (June 1996): **holo**: 'Oldenburg', "Baumschule Kurt Kramer, Edammer Str. 26, 26188 Edeweicht, Deutschland", 6 April 1994, *D. McClintock, K. Kramer, D. Small et al.* "Hb. Heather Society", now in **WSY (0100341)**!

Note: McClintock's annotation reads: "E. × *oldenburgensis* No 4 Nursery at Edammerstr 26, Edeweicht-Süddorf 6 Apl 1994 DM°C, K. Kramer, D. Small *et al.* Type specimen 'Oldenburg'."

This binomial had first appeared in print two years before its valid publication. In the following sources there was no accompanying Latin diagnosis or designation of a holotype: *Der Heidegarten* heft 35: 14 (June 1994); *Ericultura* 93: 8 (June 1994); *Bulletin of The Heather Society* 5 (2): 5 (Summer [i.e. June] 1994); *Deutsche Baumschule* 9/1994: 413 (September 1994); *Ericultura* 96: 30 (March 1995); *Ericultura* 98: 14 (September 1995). While a Latin diagnosis was published in the May 1995 issue of *Deutsche Baumschule*, McClintock (1995) did not cite a holotype, and so the binomial was not validly published there. *E. × oldenburgensis* was eventually validated when a Latin diagnosis, accompanied by the citation of a holotype, was published in the June 1996 issue of *Der Heidegarten* (McClintock, 1996).

E. scoparia L. f. *aureifolia* D.C.McClint.: *Hortus* no. 7: 62 (1988): **holo**: 'Madeira Gold', "Bracken Hill, Platt, Kent", 14 October 1987, *D. McClintock* "Hb Heather Society", now in **WSY (0100340)**!

Note: McClintock's annotation reads: "Madeira Gold' Garden at Bracken Hill, Platt, Kent, 14 Oct 1987 DM^cC". This forma belongs to *E. platycodon* subsp. *maderincola* (see following entry).

- E. scoparia* subsp. *maderincola* D.C.McClint.: *Yearbook of The Heather Society* **3** (7): 35 (1989): **holo**: "ex Madeira in horto Bracken Hill, Platt, Kent", 31 May 1980, *D. McClintock* "Hb Heather Society", now in **WSY (0100339)!**

Note: McClintock's annotation reads: "Garden at Bracken Hill, Platt, Kent, 31 May 1980 DM^cC Plant from cutting from Madeira fl[ower]s [illegible] on dying shoots". The folder is labelled "Madeira (Gold)", in McClintock's handwriting.

This taxon is now treated as *Erica platycodon* (Webb & Berthel.) Rivas Mart. & al. subsp. *maderincola* (D. C. McClint.) Rivas Mart. & al. *Itinera geobotanica* **15** (2): 701 (2002).

- E. tetralix* L. f. *aureifolia* D.C.McClint. nom. illeg.: *Hortus* no. 7: 62 (1988): **holo**: 'Ruth's Gold', "Cottswood, West Clandon, Surrey", 27 June 1982 and 5 July 1982, *P. G. Turpin* "Hb Heather Society", now in **WSY (0100335)!**

Note: Four specimens are mounted on a subsheet and labelled by P.G. Turpin "'Ruth's Gold', Cottswood, West Clandon, Surrey, 27 June and 5 July 1982 PGT"; the sheet was annotated "Type" by McClintock.

A previously noted (see *E. cinerea* var. *kruessmanniana* above), the *International code of botanical nomenclature (Vienna Code)* Art. 8.2 (McNeill *et al.* 2006) states: "For the purpose of typification a specimen is a gathering, or part of a gathering, of a single species or infraspecific taxon made at one time ...". Thus this *forma* name is not validly published (under Art. 37.2 (McNeill *et al.*, 2006)) because the cited "holotype" comprises material gathered on two separate occasions.

- E. tetralix* f. *racemosa* D.C.McClint.: *Ericultura* no. 47: 8–9 (1982): **holo**: 'Terschelling', "Zwijnenburg's kwekerij, Boskoop, Holland", 17 August 1975, *D. McClintock* **BM!**

Note: *Ericultura* no. 47 was published in October 1982; the protologue was reprinted in *De levende natuur* **84**: 189, published in November 1982.

- E. tetralix* f. *stellata* D.C.McClint.: *Acta horticulurae* **182**: 283 (1986): **holo**: 'Pink Star', "Harlow Car Gardens, Harrogate, Yorkshire, England", 7 August 1974, *D. McClintock*. **BM** (not traced 2004; see below).

Note: The protologue stated that the type was deposited in **BM**, but there is no specimen of this *forma*, nor of the particular cultivar, in **BM**: this was verified by E.C.N. on 9 June 2004. However, a specimen in McClintock's collection (now in **WSY (0100344)!**) bears the annotation, by McClintock, in pencil "TYPE of f. stellata"; it is labelled "Harlow Car Gdns, Harrogate Heather Soc's trials 7 Aug 1974".

We suspect that McClintock never deposited the holotype in **BM**, and that the sheet remained in his possession until his death. When he retained a duplicate of a holotype he usually (mis)labelled (see above) it as "paratype"; the absence of this designation on the **WSY** sheet tends to support our conclusion that it represents the holotype. Furthermore, it is clear that McClintock very rarely, if ever, collected sufficient specimens from garden plants to provide duplicate sheets (isotypes) – as can be seen from this paper, duplicates exist only for gatherings made by him in the wild.

E. umbellata L. f. *albiflora* D.C.McClint.: *Plantsman* **6** (3): 191 (1984): **holo**: “Arou, La Coruña, Galicia, [Spain]”, 5 June 1979, *M.I. Fraga Vila*. **BM!**

E. vagans L. f. *aureifolia* D.C.McClint.: *Hortus* no. 7: 62 (1988): **holo**: ‘Valerie Proudley’, “Larchwood, Swaffham, Norfolk”, 1 October 1984, *D. McClintock* “Hb Heather Society”, now in **WSY (0100338)**!

Note: McClintock’s annotation reads: “‘Valerie Proudley’ Garden at Larchwood, Swaffham, Norfolk, 1 Oct 1984 DM°C Reverting Type”.

The comment “Reverting” makes this a very strange choice for the holotype of a *forma* distinguished by its “yellow” foliage.

E. vagans L. f. *viridula* D.C.McClint.: *Yearbook of The Heather Society* **3** (7): 54 (1989): **holo**: ‘Viridiflora’, “Garden at Cottswood, West Clandon, Surrey”, 24 October 1981, *Maj.-Gen. P.G. Turpin* “Hb Heather Society”, now in **WSY (0096183)**!

Note: McClintock’s annotation reads: “Garden at Cottswood, W. Clandon, Surrey, 24 Oct 1981 Maj-Gen. P. Turpin f. *viridula* Type”.

CONCLUSIONS

Examination of David McClintock’s designated type specimens showed that the names for two of the taxa which he described were not validly published because the types did not represent gatherings “made at one time” as required under the *International code of botanical nomenclature (Vienna Code)* (McNeill *et al.* 2006). The invalid names are *Erica cinerea* var. *kruessmanniana* and *E. tetralix* f. *aureifolia*. The specimens on the designated sheets cannot be separated unambiguously into unique gatherings.

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