# J. H. Penson: mystery man and mystery record

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### ABSTRACT

J. H. Penson was a little-known British botanist who made several important contributions to plant recording. A biographical note, together with information relating mainly to his activities in Britain but also on the North American continent, is given.

KEYWORDS: *Carex capitata*, Newfoundland, plant records, Scotland, World War 1.

#### INTRODUCTION

In late 2004, the chanced sight of an undated, unaddressed letter written by the late Scottish botanist Robert Mackechnie (1902–1978) led me to a fascinating series of enquiries. In this letter (*in litt.* to A. C. Jermy), when discussing J. W. Heslop Harrison's finds on the Isle of Rhum in the 1940s, Mackechnie stated "My recollection of *Carex capitata* is by now rather vague, but I have the impression that it resembled J. H. Penson's Ben Hope [Scotland] plant more closely than it did material which I saw in Lapland.....". J. H. Penson's Ben Hope plant indeed!

*Carex capitata* (other than Heslop Harrison's dubious 1940s records from the islands of Rhum and South Uist) has never been confirmed from the British Isles although, as an Arctic-montane plant, it is quite frequent in Scandinavia and Iceland and, conceivably, could also occur here, especially in northern Scotland. So Penson's record for Ben Hope could be of particular significance. To follow this up, therefore, one needed to locate the published source (if any) of such an important record and, if a specimen had been collected, to locate and examine the voucher. This, however, was where the difficulties began. Who was J. H. Penson?

Wide-ranging enquiries amongst botanists, especially Scottish, who might have known, or heard of him, led virtually nowhere. A few people vaguely recalled the name but knew little about him and only one person remembered once meeting someone referred to as

"old Penson". A request for information in current botanical publications also met with a similar minimal response, whilst a search through past British botanical literature for any records he might have provided mostly drew a blank. His name is mentioned in the introductory section of The Changing Flora of Glasgow (Dickson et al. 2000) along with a record for *Cirsium heterophyllum* and there are other occasional records in a few issues of the The Glasgow Naturalist but, in neither, is biographical information forthcoming. In addition, and most surprisingly, there appears to have been no published obituary of Penson (assuming him to be no longer alive). An Internet search, however, revealed the existence within the first half of the twentieth century of someone with that surname and initials apparently residing in the U.S.A. and Newfoundland but without any definite British connection stated.

The breakthrough came by chance and in rather unfortunate circumstances. During house clearance following the death of Allan McG. Stirling in 2004, a series of botanical notebooks dating from 1958 onwards, together with a few miscellaneous letters and ephemera, were located; these were clearly the former possessions of J. H. Penson. From such early clues and a firmer establishment of Penson's past connection with the North American continent, it has been possible to provide what is still a rather incomplete summary of some important and interesting facts about this almost unknown, elusive British botanist.

#### A BRIEF BIOGRAPHY

Hubert Penson was born on January 21, 1893, at Hornsey, London and died on June 1, 1979, in the Southern General Hospital, Glasgow. He was the son of Arthur A. Penson, a dairy manager of Cirencester. In 1929 he married Marjorie Doreen Crawford (deceased 1971) with whom he had one son and two daughters. In 1974 he married again, this time Ellen Mary Cumming (deceased 1991).

To date, details of his early life and education are lacking and it is not until his involvement in World War 1, where he served from 1916–1919, that information becomes available. In this conflict he was twice decorated for bravery. As Lt. Hubert Penson (promoted to that rank in 1918) of the 5th Division Signal Company of the Royal Engineers and attached to the 15th Infantry Brigade, he was awarded the Military Cross (MC) in 1918. For this, the citation recognised his "conspicuous gallantry and devotion to duty in maintaining communications which had to be constantly repaired under heavy shell fire. In addition to carrying out his signal duties he sent important information when the situation was obscure". About a year later, serving in northern Russia, he was awarded a bar to his Military Cross. This recognised his "conspicuous gallantry and devotion to duty on August 10, 1919, having guided the Sludka-Lipovets Column for three days, and brought it to within 400 yards of the enemy's position unobserved". On the same day, "the column, having to withdraw from Lipovets owing to shortage of ammunition, he [Penson] guided it out under heavy fire". He was also mentioned in military despatches.

After that the trail goes cold until 1923 at which time he wrote an article entitled 'Translations And the Need of Guidance' (Penson 1923). In this, he stated: "Outwardly men differ widely - in language, in appearance. Inwardly it is the similarity that is remarkable.....Translators of the Russian writers – those of Tolstoy, for example – have to give the world this world-wide appeal". About the same time he moved into Government finance and was still living in the London area as evidenced by recentlydiscovered letters addressed to him, one of which indicated his residence to be in Well Walk, Hampstead. In November 1928, he was appointed Assistant Secretary to the Commission on Museums and Galleries and two vears later wrote an article in the Journal of Royal Institute of International Affairs under the title "The Financing of Russian industry".

His rise in Government circles must now have been rapid for in 1931 he became a member of the Newfoundland Royal Commission and subsequently was appointed there as Commissioner for Finance. Around this time he appears to have spent periods on both sides of the Atlantic and the inference gained from a letter to him dated March 1941 suggests that he retained his house in Hampstead, London, until almost 1940. Despite this, from the mid-1930s, his career was apparently spent mainly on the North American continent. In1937, he lectured on topics of contemporary interest at Memorial University College (St John's, Newfoundland) and in July 1938 issued a report stating Newfoundland's revenues to be the greatest in the country's history. This, no doubt, was a reflection on his astute management! In the following year he advised on slum clearance in St John's but found the project to be financially impractical. In July 1940, as Commissioner of Finance, he stated that, for the remainder of the war, Newfoundland would no longer ask Britain for financial assistance and a year later announced a \$700,000 budgetary surplus. In 1940 he was sent to St Pierre-et-Miquelon (the French enclave in Newfoundland) to meet with the Administrator in order to assess the attitude to the Nazi axis powers. He found this to be distinctly anti-Axis and, in addition, discovered that St Pierre would offer few useful facilities as an enemy military base. Shortly afterwards, his work in Newfoundland was complete and in February 1941 he was replaced as a member of the Commission of Government in Newfoundland. In 1942, for his past services he was awarded the Cross of St Michael and St George (CMG).

There is then a three-year gap until 1944 when he became Secretary-General to the British Supply Mission in Washington. Whether he remained on the western side of the Atlantic all this time is unclear, but bearing in mind the hostilities of World War 2, it is likely. Following the war, he was appointed Attaché to the British Embassy in Washington and remained in that post until his retirement, meanwhile co-authoring a book on the history of Poland for the years 1697–1935 (Reddaway *et al.* 1951). In the New Year Honours List for 1953, he received a further award, the Order of the Bath (CB), for his services at the Washington Embassy.

From then he appears he to have been in semi-retirement, moving back to Britain and living in Nithsdale Road, Glasgow. From this base he botanised over much of the north of Britain and, especially, Scotland. Surprisingly, on his second marriage in 1974 at the age of 81, his occupation was described as "Sales Representative" so he was perhaps still partly employed, even at that age. His rather flimsy, but well-kept botanical note-books conclude abruptly with an entry for a visit to Upper Dallochy, Moray, on July 21, 1978. Possibly this was the result of the onset of a sudden illness, as he died ten months later.

#### BOTANICAL EXPLOITS

To date, the first indication of Penson's interest in botany is a pressed fragment of Linnaea borealis. This, now in E, is marked "N[orth] Russia, 1919", and was presumably collected at the time of his military exploits there with the Sludka-Lipovets Column. Other than this, his known botanical work falls into three phases: (a) early activities in Britain up to the mid-1930s for which there is now only scant evidence; (b) investigations of the Newfoundland (now Canada) and later Washington floras from that date until the mid-1950s. Information on this period is currently unprocessed and held at the Université de Montréal, herbier Marie-Victorin (MT); (c) his semi- or post-retirement period in the British Isles, mostly Scotland, from 1958 when he made several new or first post-1930 "Atlas" (Perring & Walters 1962) records for several vice-counties.

# A. THE PERIOD PRIOR TO THE MID-1930S:

It was only following the discovery of a file containing letters sent to Penson, that anything at all could be said about this time, and even this information is very sparse. The letters only date back to 1933 but, other than the Linnaea specimen mentioned above, are the first indication of Penson's botanical interest. In them are discussions (with Clarice Vurian) regarding Potentilla fruticosa in the Welsh Borders and Spiranthes and Calamagrostis in Ireland, and an offer from Francis Druce to propose Penson for membership of the Linnean Society (which he apparently never took up). Around this time he was in discussion with A. H. G. Alston regarding Cystopteris in Teesdale and also showed an interest in the sugar limestone formations of the area. He also corresponded with F. Godwin regarding various orchids and Pulsatilla vulgaris.

B. NEWFOUNDLAND AND WASHINGTON c.1935 TO THE MID-1950S:

The small amount of information so far located on Penson's records and collections from the North American continent date from the last few years of this period. He was however, active over much of the full period and, prior to his return to Britain, donated his collection of Newfoundland plants to the Université de Montréal, herbier Marie-Victorin (MT). There are extant letters (both in MT and now in E) in which this gift is discussed with Ernest Rouleau, the curator at that time. In one, dated December 10, 1951 (now in E) and addressed to Penson at the British Embassy, Washington, Rouleau states that "especially appreciated would be Graminae, Cyperaceae, Salicaceae, Caryophyllaceae, Draba, Antennaria, Senecio, Epilobium. Also, Dryas drummondii, Myosotis arvensis and Gnaphthalium supinum" and that his [Penson's] "species are considered to be historically important and should be in a Canadian herbarium". At present, in MT, there are two copies of a 72 page unpublished manuscript by Penson under the title 'List of Newfoundland Plants', one copy of which is subsequently annotated by him. There are also additional documents, including a plant list dealing with questions which he had put to Rouleau together with the latter's answers. In addition, his collecting expeditions and explorations are mentioned in the Atlas of the vascular plants of the island of Newfoundland and of the islands of Saint-Pierre-et-Miquelon (Rouleau & Lamoureax 1992). As far as the specimens are concerned, these are still being incorporated at MT, but within the database produced to date, there are already over 250 collections with many more to be added (pers. comm. S. Hay). In addition, other specimens are held at the U.S. National Herbarium at the Smithsonian Institution, Washington (US) and at the New York Botanical Garden (NY). A note in the journal *Rhodora* (Smith 1953) refers to a Penson record for Borrichia frutescens, this confirming the presence of the plant in the District of Columbia whilst in a letter (now in **E**) the Curator of Ferns (**US**) acknowledges his gift of material of Ophioglossum engelmanni. So, it is to the specimens and data held at the above institutions, especially that at MT, that further investigations of his time over there should be addressed.

C. THE BRITISH ISLES (MAINLY SCOTLAND) 1955–1978: Apart from a recently discovered herbarium specimen of *Bartsia alpina* collected on Ben Lawers in August.1955 (E), the earliest of his records (and notebooks) so far traced date from 1958; this was some time after he moved to Glasgow on his return from the U.S.A. For the first few years of this period he botanised mainly in the central Scottish belt. As his interest and experience of Scottish plants widened he ventured further afield, especially to the north and north-west, to Perthshire, to the Clova hills, the Cairngorms and the far north, as well as occasionally into southern Scotland, northern England and even to Ireland. In much of this time he botanised almost the whole year round. To West Sutherland (v.c. 108) alone he made over thirty separate visits, and to Ben Hope, apparently a favourite of his, at least ten. During the 1960s, like many before him, he sought out British rarities which involved visits to the Cuillin for Arabis alpina, the Storr, Skye (v.c.104) for Koenigia islandica, Cul Mhor, W. Ross (v.c. 105) for Artemisia norvegica and to Meikle Kilrannoch (v.c. 90) and Hobcarton Crag, Cumbria (v.c. 70) for Lychnis alpina. He must have been a person with a strong physical constitution since many of his trips involved walks over long distances in rough mountain terrain. Several remarkable excursions were made when he was in his mid-seventies. One, at the age of seventy-seven, was to the distant corries of Beinn a'Bhuird and the northern Slochd Mhor side of Ben Avon (v.c. 94) to search for Saxifraga cespitosa. Although failing to find it in earlier visits, he eventually recorded about 20 "cushions" there on September 24, 1970. Even when over eighty he was tackling Ben Heasgarnich, Ben Hope and Ben Lomond.

Although a few of his plant identifications are rather fanciful, the majority seem reliable and he was never reluctant to attempt to identify hybrids or taxa down to subspecific and (occasionally) to varietal level. He showed a particular interest in critical genera, such as alpine and sub-alpine *Hieracium* and *Salix* and, from Ben Hope alone, recorded 21 taxa of the former and several hybrids within the latter.

As a botanist, Penson appears to have been a 'loner', only rarely in contact with a colleague, although Robert (Bob) Mackechnie (1902–1978) was someone to whom he is known to have written and who also examined some of his rarer specimens. Penson's find of *Carex elongata* at Loch Lomond (see Appendix 1) was probably the start of their association. The only other persons with whom he seems to have kept in touch were Allan McG. Stirling and Basil W. Ribbons.

During his years in Scotland, Penson made several significant finds including first vicecounty and first post-1930 "Atlas" records. Some of the more interesting of these are listed in Appendix 1. As an example of his botanical ability and his willingness to thoroughly explore individual localities, Appendix 2 lists over 160 taxa which he recorded between the years 1969 and 1975 on his favourite mountain, Ben Hope. It is hoped that these records might be of value as a basis for further recording work there.

On his death, Penson's British herbarium passed to the Nature Conservancy Council (N.C.C.), South-West Scotland Office, at Balloch around about 1980 (see letters by his widow and A. McG. Stirling (now in E)). When this organisation (N.C.C.) underwent reorganisation, the material was transferred to Scottish Natural Heritage (S.N.H.) Regional Headquarters at Clydebank (pers. comm. J. Mitchell, 2005). Unfortunately, it has not been possible so far to locate its current whereabouts. However, not all of his collections appear to have been included in the N.C.C. bequest since some of them were retained by A. McG. Stirling. These should come to light when his personal collection is fully processed and incorporated into the Edinburgh herbarium (E).

An interesting sequence of records relating to a population of Hierochloe odorata date from his early time in Scotland and run through to the mid-1970s. This was at the (apparently) threatened Blythswood (v.c. 76) site by the River Cart which was first discovered in 1931 (Dickson et al. 2000). Under its earlier name (Savastana odorata L.), Penson recorded 20-25 flowering plants there in April, 1959 followed by 12 and 64, respectively, in the following two years. In 1962 there were 18, the site having been partly damaged by refuse dumping, whilst in the following year it was entirely covered with water-borne debris and no plants were seen. In 1964 and 1965 there were also none, Penson describing the area as "obliterated by oil and rubbish". However, following the effects of a violent storm in January 1968, much of the rubbish was washed away and 60 plants now flowered. The good news was short-lived, for the following year he described the site as "destroyed" by burnt rubbish with no sign of the plant whatsoever. However, there was another revival, and from then on, despite continued despoliation there, he continued to find the plant as two separate populations right up to his last visit there in 1976. In the early 1970s the number of flowering plants roughly fluctuated between a total of 40 and 80 with a peak of 132 in 1971. Records for his last two seasons showed only 11 and 5 respectively, Penson again expressing concern regarding the deteriorating conditions nearby and the threat of development. However, despite all his apprehension, *Hiero-chloe* is still present at the site with two patches on the east side of the river and one on a small island to the west (pers. comm. K. Watson 2006) and these populations have been recently studied by Tait (2000).

#### SUMMARY

John Hubert Penson, hitherto virtually unknown and unremembered (at least in botanical circles), appears to have been a person of no mean talent. His exploits in World War 1 and his professional career in British Government circles, mark him as someone out of the ordinary. There is still much more to learn about Penson and especially of his botanical work on the North American continent. A summary of this may be provided later when data held at the Université de Montréal, herbier Marie-Victorin (MT) becomes available.

The series of letters written to Penson, his extant field note-books, and most of the peripheral information on which this account is based, is now deposited at the herbarium/ library of the Royal Botanic Garden, Edinburgh. There, additional herbarium material is currently being incorporated which will, no doubt, contain additional examples of his collections. In consequence, more information should then be forthcoming.

Finally, the point where all this started: *Carex capitata*: In one of the Penson notebooks, the entry for July 30, 1973, states: "Ben Hope, W. Suthd., W side to 1500 ft, *Carex capitata*". Unfortunately, the epithet *capitata* has been struck out and the comment "reidentified as *C. dioica*" inserted in Penson's hand. That is probably the last word on the record unless his actual specimen comes to light and, after all, confirms his original determination. Nevertheless, the presence of *C. capitata* in northern Scotland remains a distinct possibility.

All herbarium codes quoted above are as given in Holmgren *et al.* (1990). A detailed examination of Penson's note-books might be of interest to present-day Scottish botanical recorders.

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#### REFERENCES

- DICKSON, J. H., MACPHERSON, P. & WATSON, K. J. (2000). *The Changing Flora of Glasgow*. Edinburgh University Press, Edinburgh.
- HOLMGREN, P. K., HOLMGREN, N. H. AND BARNETT, C. (1990). Index Herbariorum. Part 1: The Herbaria of the World. New York Botanic Garden, New York.
- MITCHELL, J. & STIRLING, A. MCG. (1980). Carex elongata in Scotland. The Glasgow Naturalist 20: 65-70.
- PENSON, J. H. (1923). Translations and the Need of Guidance, The Author 75-76.
- PERRING, F. H. & WALTERS, S. M. (1962). Atlas of the British Flora. Thomas Nelson, London.
- REDDAWAY, W. F., PENSON, J H., HALECKI, O. & DYBOSKI, R. (1951). The Cambridge History of Poland from Augustus 11 to Pilsudski (1697–1935). Cambridge University Press, Cambridge.
- ROULEAU, E. & LAMOUREUX, G. (1992). Atlas of the vascular plants of the island of Newfoundland and of the islands of Saint-Pierre-et-Miquelon. Fleurbec, Québec.

SMITH, L. B. (1953). Borrichia frutescens from Chesapeake Bay. Rhodora 55: 58–59.

- STIRLING, A. MCG. (1978). Common Broomrape, in Mackechnie, R., ed. Short Notes. *The Glasgow Naturalist* **19**: 426–427.
- TAIT, T. N. (2000). The history, habitat and present status of Holy Grass (*Hierochloe odorata* (L.) P. Beauv.) at Blythswood, Renfrew District, v.c.76. *The Glasgow Naturalist* 23(5): 17–20.

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### APPENDIX 1

SOME OF PENSON'S MORE INTERESTING SCOTTISH FINDS (FOR SOME OF WHICH VOUCHERS ARE AVAILABLE)

- *Allium carinatum*: waste ground by River Clyde, Bowling, Renfrewshire (v.c. 76), 29.7.1975 (E)
- Betula pubescens: Glen Doll, Angus (v.c. 90), 25.7.1961 (a form approaching Betula nana) (E)
- *Botrychium lunaria*: an abnormal form with three fertile branches originating from the sterile base of the frond; railway bank, near Cononish River, Tyndrum, Mid Perth (v.c. 88), 4.vi.1974 (E)
- *Carex buxbaumii*: near Arisaig, Westerness (v.c. 97), 5.8.1964 (lacking an inflorescence) (E)
- *Carex elongata*: first recorded by Penson north of Balloch, near Loch Lomond, Dunbarton (v.c. 99) on June 16, 1967 (**E**). He had twice been in the same general area in the previous year but failed to record it. Three years later on June 27, 1970, he recorded "about 75 plants" flowering freely c.1400 yards north of the northern edge of Balloch Park and confined to a small area of about one acre (notebook); also same date and apparently same place in "wet woods" (**E**); first post-1930 "Atlas" record for vice-county. These finds probably led to his introduction to Mackechnie and Ribbons. Further details can be found in Mitchell & Stirling (1980).
- *Carex punctata*: Rocks of Garchew, Wigtownshire (v.c. 74), 5.9.1962 (E); first post-1930 "Atlas" record for vice-county.
- *Cicerbita alpina*: Craig Maud, Clova, Angus (v.c. 90), 31.8.1960 (**GL**), notebook states "...only 4 plants left, poor state, no flowers, looked as if site robbed".
- *Cirsium heterophyllum*: Pollok, Glasgow, Renfrewshire (v.c. 76), 15.6.1959 (see notebook); also Dickson et al. (2000).
- Dryopteris assimilis: "mature spores were lacking", Meall nan Tarmachan, Killin, W. Perth (v.c. 87), 9.10.1965 (*The Glasgow* Naturalist, xviii(9): 520 (1967)).
- *Geranium purpureum*: Largybaan, Mull of Kintyre (v.c. 101), 17.7.1968 (a dubious determination) (**E**).

- *Hieracium alpinum*: Beinn a'Bhuird (v.c. 92), 3000', 8.8.1968 (E).
- *Hierochloe odorata*: Banks of River Cart, Blythswood, Renfrewshire (v.c. 76), 24.5.1969 (E) (for more details see the account above).
- Lathyrus montanus var. tenuifolius: Ben Hope, W Sutherland (v.c. 108), lower slopes, 19.7.1972 (E).
- *Ledum palustre*: Barochan Moss, Renfrewshire (v.c. 76), 2.9.1975 (E), a new v.c. record.
- *Orobanche minor*: Bowling, Dunbarton (v.c. 99), regularly recorded here by Penson in the years 1964–1977, a small colony with a maximum of 20 plants in 1970 (see also Stirling 1978). He attributed the Bowling plants to the taxonomically obscure var. *conciliata* Druce (see notebook).
- *Orobanche rapum-genistae*: Locharbriggs, near Dumfries (v.c. 72), 9 plants on 24.8.1966 (see notebook).
- *Potentilla argentea*: Balthayok, East Perthshire (v.c. 89), 7.6.1960 (E), first post-1930 "Atlas" record for vice-county.
- *Potentilla tabernaemontani*: Ferry Hills, North Queensferry, Fife (v.c. 85), 30+ plants on 24.4.1973 (see notebook); first post-1930 "Atlas" record for vice-county.
- Poa ×jemtlandica: Ben Dorain, Argyll (v.c. 98), 1960 (GL). This is definitely an error and is possibly of *Deschampsia alpina*. However, the specimen is now very degraded and is not possible to be determined accurately. Despite this Penson did record *Poa*×*jemtlandica* on Lochnagar, S. Aberdeen (v.c. 92), (a known locality) on 28.8.1962.
- Polygonatum verticillatum: Den of Reichip, near Dunkeld, East Perth (v.c. 89), 5.8.1961(E); first post-1930 "Atlas" record for vicecounty.
- *Ulex gallii*: 3 miles south of Forsinard, East Sutherland (v.c. 107), 8 clumps in full flower, 17.10.1967; a new v.c. record.

n.b. "Atlas" refers to Perring & Walters (1962)

## APPENDIX 2

PENSON'S PLANT RECORDS FOR BEN HOPE (V.C. 108); (OCTOBER 1969-JUNE 1975)

Agrostis canina subsp. montana Alchemilla filicaulis Alchemilla glomerulans Antennaria dioica (in many forms) Arctostaphylos uva-ursi Arctous alpina Athyrium alpestre Betula nana  $\times$  B. pubescens Betula pubescens  $\times$  B. nana Botrychium lunaria Caltha palustris subsp. minor Cardamine flexuosa Cardaminopsis petraea *Carex canescens* (= C. curta)Carex capitata (re-identified as C. dioica!) *Carex curta*  $\times$  *C. echinata* (= *C.*  $\times$ *biharica*) Carex demissa Carex dioica (or hybrid) Carex elata Carex hostiana Carex lepidocarpa Carex livida Carex oederi Carex pallescens Carex pilulifera Carex pilulifera var. longibracteata Carex pulicaris Carex serotina Catapodium rigidum Cerastium alpinum Cherleria sedoides Cochlearia alpina Cochlearia officinalis subsp. alpina Coeloglossum viride Cornus suecica Cystopteris fragilis var. dentata Dactylorchis fuchsii subsp. hebridensis Dactylorchis fuchsii subsp. hebridensis × subsp. fuchsii Dactylorchis fuchsii subsp. o'kellyi Dactylorchis occidentalis Dactylorchis praetermissa var. pulchella Dactylorchis purpurella Dactylorchis purpurella  $\times$  D. majalis Deschampsia alpina Draba (query) norvegica (later corrected to *Cardaminopsis petraea*) Drosera anglica Drosera intermedia Drosera rotundifolia  $\times$  D. anglica Dryas octopetala Dryopteris abbreviata

Eleocharis multicaulis Eleocharis quinqueflora Eleocharis uniglumis Empetrum hermaphroditum Epilobium alsinifolium Epilobium anagallidifolium Eriophorum gracile Euphrasia borealis Euphrasia brevipila var. subglandulosa Euphrasia confusa (and query) a form of E. micrantha Euphrasia eurycarpa (confirmed) Euphrasia frigida Euphrasia nemorosa var. collina Euphrasia occidentalis var. calvescens Euphrasia rhumica Euphrasia scottica Festuca capillata Festuca ovina subsp. tenuifolia Festuca ovina var. capillata Festuca pratensis Festuca vivipara Galium sterneri (a new station) Glyceria fluitans Glyceria ×pedicellata *Hieracium* (sect. *Cerinthoides*) Hieracium anglicum Hieracium argenteum Hieracium backhousei Hieracium calenduliflorum Hieracium callistophyllum Hieracium cremnanthes Hieracium euprepes Hieracium eximium Hieracium eximium var. tenellum Hieracium gracifolium Hieracium gracilentum Hieracium hanburyi Hieracium hypochaeroides Hieracium pseudanglicum Hieracium pseudocurvatum Hieracium schmidtii Hieracium senescens Hieracium sp. (Sect. Vulgatum) Hieracium submurorum Hieracium anglicum Holcus mollis Hyperichum pulchrum Ilex aquifolium Juncus alpinus Juncus triglumis Juniperus nana

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Lathyrus montanus var. angustifiolius Lathyrus montanus var. tenuifolius Leontodon autumnalis Lobelia dortmanni Loiseleuria procumbens Luzula spicata Melampyrum pratense Melampyrum pratense subsp./var. montana Montia chondrosperma Mvriophyllum alternifolium Nymphaea occidentalis Orchis mascula Pedicularius palustris Pinguicula lusitanica Platanthera bifolia Platanthera chlorantha Polygala serpyllifolia Polygala vulgaris Polystichum lobatum var. lonchitides Polystichum lonchitis Prunella vulgaris Pseudorchis albida Ranunculus flammula var. tenuifolius Rhinanthus borealis (and in pure form) Rhinanthus borealis  $\times R$ . minor Rhinanthus minor subsp. stenophyllus Rhinanthus minor subsp. borealis Rhinanthus minor subsp. minor × subsp. borealis (R. ×gardineri) Rhinanthus minor subsp. monticola Rosa villosa Sagina subulata Salix aurita  $\times$  S. phyllicifolia

*Salix aurita* × *S. repens*? Salix capraea subsp. sericea Salix lanata Salix lanata  $\times$  S. lapponum Salix lapponum Salix lapponum  $\times$  S. repens Salix phylicifolia  $\times$  S. cinerea Salix phylicifolia × S. repens Salix repens Salix repens  $\times$  S. herbacea Salix repens  $\times$  S. myrsinites? Salix repens  $\times$  S. phylicifolia Saussurea alpina Saxifraga aizoides Saxifraga hypnoides Saxifraga nivalis Saxifraga oppositifolia Schoenus ferrugineus? Schoenus nigricans Sedum roseum Silene acaule? *Solidago virgaurea* (+ f. *cambrica*) Taraxacum palustre? Thalictrum alpinum Thymus drucei (form) *Trichophorum cespitosum* subsp. *cespitosum* Trichophorum cespitosum subsp. germanicum Trientalis europaea Trifolium repens Trollius europaeus Vaccinium uliginosum Viola riviniana subsp. minor