

The Genus *Hieracium* (Asteraceae) in the British Isles in 1821

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Abstract

Sixteen species of plants placed in the genus *Hieracium* in 1821 are listed together with the current Latin name now generally accepted. *H. auricula*, of doubtful occurrence, is also mentioned. Problems of nomenclature that still exist are discussed.

Keywords: hawkweed; Hooker; Pugsley

Introduction

In 2021 I wanted to know how many species of the genus *Hieracium* had been recorded in Britain 200 years previously. Hooker (1821) provided the answer with a list of just 16 species, compared with the list published by Sell & Murrell (2006) with just over 400 species.

The account in Hooker (1821) is in the Linnaean System. *Hieracium* appears in Class XIX Syngenesia, and the genus is number 8 of 38 genera in the class. There are 16 numbered species in the genus and it might be thought that with so few species to consider, the problems of nomenclature would be few, but even 200 years ago the influence of Europe was very strong and botanists were just as willing then as now to import names for newly discovered taxa. Also, the genus had not been as closely defined in 1821, and now some species have been moved to adjacent genera. In the list that follows I have given the 200-year old name followed by the current name of the taxon where one is available, and any comments that seem required about the status of the modern name.

1. *H. alpinum* = *H. alpinum* L.

An attempt at lectotypification has been made by the BM Linnaean Plant Name Typification Project, and on the web site they report "Lectotype: Herb. Linn. No. 954.2 (Linn), designated by Pugsley in *J. Linn. Soc. Bot.* 54: 40 (1948)". The attempt has been accepted by Tennant & Rich (2008 p. 60). However, upon checking the designation, I found that Pugsley (1948 p. 40) merely states "*H. alpinum* as here described, agrees with the accounts of Backhouse, Hanbury and W.R. Linton, and with the exsiccata in the Linnaean Herbarium, which according to Jackson, was there before 1753 and must be regarded as the specific type." Pugsley

does not list the sheet now described as the lectotype in his list of *Exsicc.* on page 39. Sheet 954.2 (**Linn**) can be viewed on the Linnean Society website and has two specimens mounted side by side. They are very different in general appearance but *H. alpinum* L. is said to be a very variable plant.

Linnaeus visited Oxford in 1732, staying with Dillenius and obtaining many plants from the Botanic Garden. The account of *H. alpinum* in *Species Plantarum*, (1753 p. 800), includes as a synonym, a reference to *Ray. angl.* 3. p. 169 and marks the entry with a * to indicate the presence of a good description. From this it is clear that the species concept by Linnaeus, in the case of *H. alpinum*, compared with current thinking, is as an aggregate taxon, because the only locality known in 1724 in Britain for *H. alpinum*, when the third edition of *Ray.* was published, was in North Wales. This is confirmed by Hudson (1762 p. 298).

The North Wales taxon was named *H. holosericeum* by Backhouse in 1856 and in Britain the name has remained unchanged. On the continent Zahn (1921-3) published the taxon as *H. alpinum* L. subsp. *alpinum* var. *genuinum* Koch subvar. *villosissimum* Tsch. form *holosericeum* Backh. f., thus reducing it to a taxon of the second lowest rank. The Euro+Med Plantbase Project based in Berlin now accepts the taxon as a species, possibly because it has been lectotypified.

Sheet 954.2 (**LINN**) may not be a suitable choice as a lectotype. If the specimens came from Britain the specimen on the left could be *H. holosericeum* Backh. f. It would be much safer to select a specimen known to have been collected in Lappland, even if that meant selecting a neotype. There is also the extra complication created by the existence of *H. alpina* L. var. *melanostolum* Dahlst. the syntype of which is a specimen collected on the 22nd July 1885 by F.J. Hanbury on the mountains of Aberdeenshire. Zahn (1921-3) included var. *melanostolum* Dahlst. in his subsp. *nigrosetosum* G. Schneid., nine subspecies after his subsp. *alpinum*. Roffey (1925) published subsp. *nigrosetosum* G. Schneid. at the rank of species. Pugsley (1948 p. 40), relegated *H. nigrosetosum* (G. Schneid.) Roffey back to the lower rank of subspecies, *H. alpinum* subsp. *nigrosetosum* Zahn, and included it as a synonym of his *H. alpinum* var. *insigne* Bab.

Hieracium alpinum var. *insigne* Bab. (1856 p. 198), can now be found in Tennant & Rich (2008 p. 128) as a synonym of *H. insigne* Backh. f. with the comment *non sensu* Hanbury, W.R. Linton & Pugsley. They were all writing about the same plant described by Babington "rt.-l. lanceolate with a few large teeth, heads very large," in editions four to nine of the Manual. Backhouse, when the name *insigne* was first published, was doubtful that it should be given the rank of species and in 1856 in his Monograph of the British *Hieracia* placed the taxon with a ? under *H. eximium* var. *tenellum*. Backhouse (1856) also mentions an additional locality, Caness, which with Glen Derry and Corrie Etchachan, provide three more locations for this rare taxon if the identifications are correct.

Hieracium alpinum L. has obviously meant different taxa to the various British authors. From the description in Hooker (1821), it seems very probable that he only saw *H. holosericeum* Backh. f. Of the localities recorded, Ross-shire is a good locality for *H. holosericeum*, and the Skye locality found by Lightfoot is now known to be a station for *H. subglobosum* P.D. Sell & C. West. None of the localities Hooker records are in the Braemar area. Hanbury (1889-98) wrote of *H. alpinum* L. "confined in

Britain to within a radius of 20 miles of Breamar". Pugsley (1948) extends the distribution to three localities in Westernness, which are all to the east of Ben Nevis, in its rain shadow, with extensive north-east facing slopes, on hills reaching over 1000 m. This is the closest the west and north Highlands comes to a habitat approaching the Cairngorms. McCosh & Rich (2018 p. 124), show *H. alpinum* L. with a distribution extending all along the NW side of Scotland, which is rather surprising as Kenneth & Stirling (1970) report *H. alpinum* L. as rather rare in the Western Highlands. To make further progress on the study of *H. alpinum* L. it will be necessary to lectotypify the taxon with a specimen from Lappland, re-examine the Cairngorm population, particularly those specimens named *H. melanocephalum* Tausch by Hanbury, to check the status of this taxon, and to re-examine at least a sample of the records extending the range along the NW Highlands.

2. *H. halleri* = *H. eximium* Backh. f.

Hieracium halleri does not occur in Britain. Hooker (1821) suggests *H. villosum* Sm. as an alternative name. *H. villosum* Jacq. was in cultivation in Britain at an early date. Pugsley (1948 p. 43) discusses various specimens so named in some detail. The species occurs in France and across Europe eastwards. It does not occur in Britain. It is not placed in section *Alpina* by French authors and Zahn (1921-3) places it in section *Villosa*.

Hieracium halleri Vill. also occurs in France and eastwards but not as far as the previous species. It is closely allied to *H. alpinum* so was probably a natural choice as a name for an unknown taxon.

Hieracium eximium Backh. f. is now generally believed to be endemic to Britain. Backhouse (1856) states he had not seen it in large collections from Norway, Switzerland and the Tyrol.

3. *H. pilosella* = *Pilosella officinarum* Vaill.

There has been some dispute over the validity of the name given above and IPNI still declares the authors as F.W. Schultz & Sch. Bip., but Vaill from 1784 now seems to have been accepted by most authorities. Regarded as common throughout Britain, this is just the sort of grassland species that will disappear before recorders notice.

4. *H. dubium* = *Pilosella dubia* (L.) F.W. Schultz & Sch. Bip.

This is another species that is now known not to occur in Britain. As originally defined by Linnaeus, the species was an aggregate that has now been split into three species. The taxon given above is the most widespread, occurring from Germany eastwards across Europe to the eastern border of European Russia. The other two species are more restricted in range.

[*H. auricula* misapplied name = *Pilosella lactucella* (Wallr.) P.D. Sell and C. West subsp. *lactucella*]

Hooker (1821) asks if this could be a var. of *H. dubium*, and at the end of the entry for the genus, Hooker comments, "Scotland produces every British species, except the doubtful *H. auricula*." *P. lactucella* was finally discovered in 1904, according to

Pugsley (1948 p. 319), and he goes on to record many of the problems found in the Linnaean Herbarium when researching *H. auricula*.

Pilosella lactucella only occurred as a patch, in v.c.8 South Wilts and was never seen again as far as is known. The species was found once more in v.c.21 Middlesex, at Harrow in 1964, and was still present in a vegetable garden in 1965, C. West. It was stated to be extinct, in the Supplement to the Historical Flora of Middlesex, but without any supporting details.

5. *H. aurantiacum* = *Pilosella aurantiaca* (L.) F.W. Schultz & Sch. Bip.
Naturalised alien.

6. *H. lawsoni* = *H. cerinthiforme* F. Hanb.

Hieracium lawsonii Vill. does not occur in Britain being a Pyrenean and Alpine species of France, Spain and Italy. Hooker introduces two varieties, un-named.

Var. β = *H. anglicum* Fr.

Var. γ = *H. oxybeles* P.D. Sell

Backhouse (1856) confirms that his *H. cerinthoides* is the *H. lawsonii* Sm. of English Botany (1809) no 2083 and to Hanbury that *H. cerinthoides* is the same as the plant Hanbury proposes to call *H. cerinthiforme*. Backhouse also confirms to Hanbury (1892) J. Bot. Brit. 30: 169 (see footnote), that var. β is *H. anglicum* Fr.

Sell & Murrell (2006) confirm var. γ is *H. oxybeles* P.D. Sell, but no one has actually confirmed that the specimens collected by Borrer and Hooker are correctly identified. The specimens if they still exist are at **K**, and as Backhouse worked at Kew for a number of years he may well have checked them. Pugsley also visited Kew regularly as he lived just a short distance away at Wimbledon and could also have checked them but nothing seems to have been published.

7 *H. murorum* = *H. murorum* L.

Sell (1987) selected a lectotype of *H. murorum* L. from *Hortus Cliffortianus* (**BM**). The sheet is labelled "*Hieracium macrocaulon, hirsutum, folio rotundiore*". P.D. Sell writes "I have selected the stem with 20 capitula as the lectotype of *Hieracium murorum* L. It will enable the Continental botanists to continue its usage in the aggregate sense." The sheet has a label, Lectotype: signed PDS and dated 12.2.1980.

IPNI, in the entry *Hieracium murorum*, makes no mention of the lectotypification, but if you click on POWO, click on the herbarium sheet image, and then the **K** herbarium number you are taken to the herbarium catalogue where there is some confused information about a specimen collected in 1904 by H. Dahlstedt and which he named *H. aethiops*. Sennikov (2003) lectotypified *H. serratifrons* Almq. ex Dahlst. subsp. *aethiops* Dahlst.: Sweden, Småland ad Svenstorp paroeciae Askeryd in prato macro humidiusculo locis subumbrosis, 24. 6. 1884 *Dahlstedt* in Dahlstedt, Hierac. Exs. 2: No. 36 in S. Sennikov (2003) also notes, synonymized here with *H. stenstroemii* Dahlst., thus confirming the statement in POWO [if you type in *Hieracium aethiops* in the IPNI search bar] that the taxon is a synonym. None of the entry in IPNI helps in any way to define *H. murorum* L.

The plate, *E. B. t.* 2082. mentioned by Hooker, is described as collected in May, from Cheddar Cliffs, and is *H. lima* F. Hanb. Sell & Murrell (2006) place it as a synonym of *H. schmidtii* Tausch but it can easily be separated from that species, if the description in Pugsley (1948 p. 84) is used to compare the taxa. *H. lima* F. Hanb. only occurs at Cheddar Gorge, v.c.6 North Somerset.

Var. β = unknown taxon.

Linnaeus (1753) describes var. β *Hieracium laciniatum minus pilosum* and as P.D. Sell points out there is a second sheet so described in *Hortus Cliffortianus* (BM), which can be seen and downloaded from the web site. It is an eye-catching taxon that would have appealed to gardeners of the 18th century. I have no idea of the correct name but it does not occur in Britain and is not *H. pulmonarium*, *E.B. t.* 2307. Linnaeus (1753) names this taxon [in the margin] *sylvaticum*. Pugsley (1948 p. 5) states that none of the four sheets [that includes the sheet mentioned in this paragraph] indicates that one of Linnaeus's varieties is represented. That is not the case now. The var. β is clearly present and *murorum* is underlined.

8. *H. sylvaticum* = *H. argillaceum* Jord.

Hooker refers to *H. sylvaticum* *E. B. t.* 2121 to illustrate his var α . Pugsley (1948 p. 215), uses the same plate to illustrate *H. lachenalii* Gmelin, a name which P.D. Sell refused to continue using when writing *Flora Europaea* because there was no type available at that time. Instead he used the later name *H. argillaceum* Jord. Since then the later name has continued in use, even though the type specimen has now been found, although not lectotypified. The type represents an obscure local German taxon, which seems from the literature to be one of several very similar local taxa. It seems unlikely that any of these local taxa have a large range across Europe, so unless further work is carried out by German botanists to clarify the situation, the French name will prevail.

Var. β = unknown taxon

Hieracium ramosum Waldst. & Kit. is not a British plant. It occurs in Austria eastwards across Europe and around the SE of the Baltic Sea. The account by Hooker of the British plants indicates that two taxa are involved but also includes the story about "brought from Scotland by Mr. Dickson and cultivated by Mr. Forster", a tale usually associated with *H. denticulatum*.

Var. γ = *H. maculatum* Schrank

This taxon was known for many years to British authors as *H. maculatum* Sm., until the publication of Sell & Murrell (2006), when the taxon appeared as *H. spilophaeum* Jord. ex Boreau and *H. maculatum* Sm., *non* Schrank was placed as a synonym. Sell & Murrell (2006) made no comment about the differences between *H. maculatum* Sm. and *H. maculatum* Schrank, but the Euro + Med database states that *H. spilophaeum* Boreau is a heterotypic synonym. Shaw (2020) is the most recent British author to comment on the status of these taxa and under a heading *H. maculatum* agg., simply states " *H. maculatum* Schrank does not occur in Britain and Ireland."

I have compared the specimen of *H. maculatum* Sm. in **LINN** no. LINN-HS 1259.26, the specimen depicted in *E.B. t. 2121*, with the digital images of the lectotype of *H. spilophaeum* Jord. ex Boreau and can confirm my agreement with Sell & Murrell (2006) when they placed *H. maculatum* Sm. as a synonym of *H. spilophaeum* Jord. ex Boreau. I have not yet found a lectotype of *H. maculatum* Schrank.

Var. δ = unknown taxon

Hieracium pictum Scheich. ex Hornem published in 1815 is an isonym of *H. pictum* Pers. Published in 1807 according to IPNI. *H. pictum* is an alpine species occurring in France, Switzerland and Italy and is not a British species. Zahn (1921-3) places the species in section *Lanatella*.

There is an interesting record by Druce (1904 p. 130). This is Don's *H. sylvaticum* "from fir woods near Forfar" in Herb. Palmer. Hooker (1821 p. 231) records, var. γ . Fir wood E. of Forfar, *G. Don* and var. δ . Woods near Forfar, *G. Don*. Var. γ . has leaves ovato lanceolate, var. δ has leaves lanceolate. Leaves lanceolate indicates that the identification by Druce of the plant in Herb. Palmer as *H. sparsifolium* Lindeb. is var. δ .

If the names in the list are interpreted simply to sectional level, an error of interpretation would occur. *H. sylvaticum* would = section *Vulgata* and would include var. δ . now placed in section *Tridentata*. Stace (1998) records that the rank of section was first applied to the genus *Hieracium* by Dumortier in 1827. In Britain the use of sections as we now use them only arrived towards the end of the 19th century.

9. *H. denticulatum* = *H. denticulatum* Sm.

Pugsley (1948 p.232) details the history of this taxon, including the invention of the later synonym *H. borrieri* Syme, the name preferred by Sell & Murrell (2006). Boswell & Duthie (1875 p. 30) report that Boswell is convinced that his *H. borrieri* is the same as *H. juranum* Fr. *non* Rapin. Rich and McCosh (2021 p. 92) use the name *H. jurassicum* Griseb. because *H. juranum* Fr. is a homonym. Zahn (1921-3) placed *H. denticulatum* Sm. with *H. juranum* Fr. subsp. *pseudelatum* Zahn, which at the rank of species is *H. pseudelatum* (Zahn) Prain (1913 p. 119). Zahn (1921-3 p. 1561) described *H. borrieri* Syme as a species *non satis notae vel exclusae*. Whatever the result of any further investigation, *H. denticulatum* Sm., as the oldest name will still be with us.

10. *H. molle* = *Crepis mollis* (Jacq.) Asch.

H. molle Jacq., published in 1774 is a synonym of *Crepis mollis* (Jacq.) Asch., published in 1864. On the Kew POWO website there are images of two specimen sheets stamped Herbarium Hookerianum 1867, collected by G. Don, thus confirming the locality mentioned in the 1821 publication by Hooker. The entry in POWO for *Crepis mollis* also illustrates how useful online botanical information can be when the potential is fully developed.

11. *H. paludosum* = *Crepis paludosa* (L.) Moench

H. paludosum L. published in 1753 is a synonym of *Crepis paludosa* (L.) Moench, published in 1794.

12. *H. cerinthoides* = unknown taxon

This is probably one of the three modern species mentioned under No. 6. I have not been able to obtain a copy of *E. B. t.* 2378.

13. *H. amplexicaule* = *H. amplexicaule* L.

Now known to be an introduced species not a native. The claim by Don to have gathered the taxon on the Clova mountains is now generally believed to be an error of labelling, as this distinctive plant has never been found there again.

14. *H. praenanthoides* = *H. praenanthoides* Vill.

I only ever managed to find this species in Derbyshire and suspect it is now rather rare.

15. *H. sabaudum* = *H. bladonii* Pugsley/*H. obliquum* Jord.

The name of this taxon remained unchanged as *H. sabaudum* L. until 1848 when Fries (1848) published the second part of his *Symbolae ad historium Hieraciorum* and placed *H. sabaudum* of Smith, *E. B. t.* 349 in his new taxon *H. boreale* Fr. British botanists then used *H. boreale* Fr. until 1925 when the 11th edition of The London Catalogue of British Plants introduced the work of Zahn to the genus *Hieracium* in the British list. This led to a great reduction of interest in the genus and in section *Sabauda* some confusion in the nomenclature. Recently Sell & Murrell (2006) re-introduced the name *H. sabaudum* L. to the British list with forma *sabaudum* and forma *bladonii* (Pugsley) P.D. Sell. Forma *bladonii* (Pugsley) P.D. Sell is stated to occur here and there in the range of the species and forma *sabaudum* is the common variant. This is the exact opposite of the distribution given in Pugsley (1948). To add further to the confusion, *H. bladonii* var. *brunckeri* Pugsley is placed under f. *sabaudum* and *H. bladonii* Pugsley under f. *bladonii*. Sell & Murrell (2006) give several synonyms under the two forms but have not lectotypified *H. sabauda* L.

Linnaeus (1753) gave a very limited description of his species "HIERACIUM caule erectomultifloro, foliis ovato-lanceolatis dentatis semiamplexicaulibus." The single character difference between the two forma is of no help whatsoever in deciding which of the several synonyms should be placed under which forma when there is no lectotype to examine.

POWO and the Euro+Med Plantbase both agree that *H. sabaudum* subsp. *sabaudum* does not occur in the British Isles and both ignore f. *sabaudum*. It is important to understand that in the genus *Hieracium*, both POWO and the Euro+Med Plantbase are using a taxonomic system based on the system of Zahn. Stace (1998) describes that system as, "a system of `species principales collectivae' and `species intermediae collectivae', under which the more narrowly defined taxa were recognised as subspecies." When Roffey (1925) imported many new names based on the work of Zahn into the British List, he opted for the traditional use of species as the main rank with variety as a secondary rank. The rank of species

equals the subspecies in the system of Zahn. Thus, to see the distribution of *H. sabaudum* L., as understood under the British system, one must look at the distribution of *H. sabaudum* subsp. *sabaudum* on those websites. The distribution shown under *H. sabaudum* on those websites is that of the species principales collectivae including all 33 subspecies, that is, 33 species under the system used in Britain and Scandinavia.

The Natural History Museum, Linnaean Plant Name Typification Project website comments, "material [in **LINN**] is apparently identifiable as *H. perpropinquum* Druce (Sell pers. comm.)," a name which is a *nom. illeg.*

Hieracium perpropinquum Druce and *H. sabaudum* subsp. *sedunense* var. *perpropinquum* Zahn are given as synonyms under f. *sabaudum* by Sell & Murrell (2006). The name for both taxa at the rank of species is *H. propinquum* Sudre. POWO and the Euro+Med Plantbase now call this taxon *H. sabaudum* subsp. *propinquum* (Sudre) Greuter and show the taxon as present in the British Isles but not Germany, the habitat given by Linnaeus for *H. sabaudum*.

Hieracium propinquum Sudre is the taxon Pugsley named *H. perpropinquum* (Zahn) Pugsley which is not a common taxon even in S.E. England.

Hieracium sabaudum f. *bladonii* (Pugsley) P.D. Sell is accepted by IPNI and by Roskov Y. *et al.* (2018). The Kew POWO website undermines the acceptance by IPNI of *H. sabaudum* f. *bladonii* (Pugsley) P.D. Sell with one Herbarium Catalogue record, *H. bladonii* Pugsley var. *brunckeri* Pugsley, det. Sell P.D., 08/1950, specimen K000796642. As mentioned above, Sell & Murrell (2006) placed var. *brunckeri* Pugsley as a synonym of f. *sabaudum*.

The two forma, in Sell & Murrell (2006), would be better placed at the rank of species as there is more than one morphological difference between them, and this would be in accordance with British practice in naming taxa in the genus *Hieracium* in the last 96 years.

Hieracium bladonii Pugsley needs to be lectotypified and compared with the recently published neotype of *H. obliquum* Jord. Pugsley rejected *H. obliquum* Jord. as a British taxon even though Zahn gave it as present in six counties in England and one in Scotland. If *H. bladonii* Pugsley and *H. obliquum* Jord. are one taxon, the latter name, being the older, will replace *H. bladonii* Pugsley.

16. *H. umbellatum* = *H. umbellatum* L.
Lectotypified by Sennikov (2007).

Summary

Of the 16 species listed in Hooker (1821), four are now placed in the closely related genus *Pilosella*, and two in the genus *Crepis*. Thus, only ten species of *Hieracium* (as now circumscribed) were recorded from the British Isles in 1821. In addition, six varieties were also recorded but it has been possible to identify only three varieties with modern British taxa. Further work at RBG Kew is required to find specimens listed in the original account which may provide identities to unknown taxa. Two species, *H. alpinum* and *H. sabaudum* need to be lectotypified.

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References

- Babington, C.C. 1856. *Manual of British botany*, 4th ed. London: John Van Vorst.
- Backhouse, J. fil. 1856. *A Monograph of the British Hieracia*. York: W. Simpson.
- Boswell, J.T. & Duthie, J. F. 1875. Report of the Curators for 1872-4. *The Botanical Exchange Club*.
- Druce, G.C. 1904. The Life and Work of George Don. *Notes. Royal Bot. Gard. Edin.* XII: 54-290.
- Fries, E. 1848. *Symbolae ad historium Hieraciorum*. *Nov. Act. Soc. Sc. Ups.* 13-14: 1-120.
- Hanbury, F.J. 1889-98 *An Illustrated Monograph of the British Hieracia*. London: published by the Author, Lombard Street.
- Hanbury, F.J. 1892. Further Notes on *Hieracia* New to Britain. *J. Bot. Brit.* 30: 129-134 & 165-169.
- Hooker, W.J. 1821. *Flora Scotica; or A Description of Scottish Plants*, arranged both according to the artificial and natural methods; part 1: 228-233. London: Hurst, Robinson & Co.
- Hudson, W. 1762. *Flora Anglica, exhibens Plantas per regnum Angliae sponte crescentes, Distributas Secundum Systems Sexuale, etc.* London: Impensis auctoris.
- Kenneth, A.G. & Stirling, A. McG. 1970. Notes on the Hawkweeds (*Hieracium sensu lato*) of western Scotland. *Watsonia* 8: 97-120. Available at: <http://archive.bsbi.org.uk/Wats8p97.pdf>
- Linnaeus, C. 1753. *Species Plantarum*, 1st ed., vol 2: 799-805. Stockholm: Laurentii Salvii.
- McCosh, D.J. & Rich, T.C.G. 2018. *Atlas of British and Irish Hawkweeds (Pilosella Hill and Hieracium L.)*, 2nd ed. Harpenden: Botanical Society of Britain and Ireland.
- Prain, D. 1913. *Index Kewensis Plantarum Phanerogamarum, Supplementum quartum, 1906-1910*. Oxford: Oxford University Press.
- Pugsley, H.W. 1948. A Prodrum of the British *Hieracia*. *J. Linn. Soc. (Bot.)* 54: 1-356.
- Ray, J. 1724. *Synopsis Methodica Stirpium Britannicarum*, ed. 3, editor J.J. Dillenius. London: Gulielmi & Joannis Innys Regia Societatis Typographorum, in Area Occidentali D. Pauli.
- Rich, T.C.G. & McCosh, D. 2021. *Monograph of British and Irish Hieracium section Foliosa and section Prenanthoidea*. BSBI Handbook no. 21. Durham: Botanical Society of Britain and Ireland.
- Roffey, J. 1925. *Hieracium* L. in Watson, H.C., *The London Catalogue of British Plants*, 11th ed.: 26-30. London: George Bell & Sons.
- Sell, P.D. 1987. An introduction to the study of the British *Hieracia*, 1. History and classification. *Watsonia* 16: 365-371. Available at: <http://archive.bsbi.org.uk/Wats16p365.pdf>

- Sell, P. & Murrell, G. 2006. *Hieracium* L. in *Flora of Great Britain and Ireland*, vol 4: 218-421. Cambridge: Cambridge University Press.
- Sennikov, A.S. 2003. Typification of some *Hieracium* (Asteraceae) names published by Swedish authors. *Ann. Bot. Fennici* 40:219-23.
- Sennikov, A.S. 2007. A new typification of *Hieracium umbellatum* (Asteraceae). *Nord. J. Bot.* 25: 99-103.
- Shaw, M.M. 2020. *Hawkweeds of South - East England*. BSBI Handbook no. 20. Durham: Botanical Society of Britain and Ireland.
- Stace, C.A. 1998. Sectional Names in the Genus *Hieracium* (Asteraceae) sensu stricto. *Edinb. J. Bot.* 55(3): 417-441.
- Tennant, D.J. & Rich, T.C.G. 2008. *British alpine hawkweeds. A monograph of British Hieracium section Alpina*. London: Botanical Society of Britain and Ireland.
- Zahn, K.H. 1921-3. IV. 280 *Compositae-Hieracium* in Engler, H.G.A. *Das Pflanzenreich*, [Heft 75-77 & 79]. Leipzig.

Online resources

- BM Linnaean Plant Name Typification Project - <https://www.nhm.ac.uk/our-science/>
- Euro+Med Plantbase - the information resource for Euro - Mediterranean plant diversity - <https://www.europlusmed.org>
- IPNI - International Plant Names Index - <https://www.ipni.org>
- POWO - Plants of the World on Line - <https://www.powo.science.kew.org>
- Roskov Y. *et al.* (Eds.) 2018. Species 2000 & ITIs *Catalogue of Life Naturals*, Leiden <https://www.species2000.org>

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