A review of plants treated as *Hieracium angustatum* (Asteraceae) in Britain

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Abstract

Hieracium subangustatum, Lesser-leaved Hawkweed, is described as a new English Lake District endemic; it was formerly included under the Norwegian *H. angustatum* Lindeb. in Blytt (1874) (=*H. angustatum* (Lindeb.) Lindeb., 1877). A lectotype is selected for *H. caesium* Fr. var. *angustatum* Lindeb. (1872), the basionym of *H. angustatum* Lindeb.

Keywords: *Hieracium caesium* Fr. var. *angustatum*; *Hieracium angustatum* (Lindeb.) Lindeb.; *Hieracium subangustatum* T.C.G.Rich; holotype; lectotype.

Introduction

Plants currently named as *Hieracium angustatum* (Lindeb.) Lindeb. from the Lake District in Britain (Sell & Murrell, 2006; McCosh & Rich, 2018) have had a complicated history. They were first reported for Britain by Hanbury (1892) who recorded them, based on Lindeberg's determinations as his H. angustatum, from Ennerdale, Piers Gill (Scafell Pike) and Easedale in the Lake District, and as var. elatum Lindeb. from five Scottish sites. Williams (1902) relegated H. angustatum to his H. orarium var. angustatum (Lindeb.) F. N. Williams, citing only Welsh and Scottish localities. Linton (1905) listed H. angustatum from Ennerdale, Scafell Pike, Easedale, Coniston and two Welsh sites, with var. elatum from Scotland but noted that he was doubtful that the type variety var. *angustatum* occurred in Britain. Pugsley (1948) cited material from Dollywaggon Pike, Helvellyn and Ennerdale in the Lake District and from Wales and Scotland and also remarked he had seen no entirely typical material of *H. angustatum*. Halliday (1997) noted the material Pugsley cited was heterogenous and after considering other material of uncertain identity from the central Lake District concluded that there was insufficient evidence for the occurrence of *H. angustatum* in Britain. Sell & Murrell (2006) revised the material in **CGE** and provided a detailed description of a more tightly defined taxon, still using the name *H. angustatum*.

Following the caution expressed by Tyler (2014) about applying Scandinavian names to British material, McCosh & Rich (2018) suggested that application of the name *H. angustatum* required verification. After several visits to Lake District populations to collect seeds of *H. angustatum* for the Millennium Seed Bank (Rich,

2023) and after growing material in cultivation, and from studying herbarium material, I have concluded that the Lake District plants represent a new species. To clarify the taxonomy and nomenclature of Norwegian plants I have lectotypified *H. caesium* var. *angustatum*, the basionym for *H. angustatum* (Lindeb.) Lindeb.

Review of `*Hieracium angustatum'* from the Lake District

As noted by Halliday (1997), material named as '*H. angustatum*' was somewhat heterogenous but Sell & Murrell's (2006) revision of the taxonomy and **CGE** specimens and D. McCosh's consequent revision of the **BM** material has clarified this heterogeneity resulting in a more tightly defined taxon. Some of the historic records in Hanbury (1892), Linton (1905) and Pugsley (1948) relate to other species (Sell & Murrell, 2006). For example, the Welsh material is now treated as *H. angustatiforme* P.D. Sell & C. West, material from Piers Gill (Scafell Pike) and Little Craigendal are now referred to the variable *H. argenteum* Fr. (though see Tyler (2011) for comments on application of this name), material from Unich Water may be *H. argenteum* or *H. duriceps* F. Hanb. and material from Coniston may now be *H. peroblongum* P.D. Sell. A specimen from Dove Crags is stylose *H. saxorum* (**CGE**). All records for var. *elatum* refer to other species.

I have further refined Sell & Murrell's (2006) material to recognise a relatively small plant with narrowly elliptical, sparsely toothed leaves with sparse, simple eglandular hairs on the adaxial surface as a discrete taxon recorded from the central Lake District (Catstye Cam, Dollywaggon Pike, Easedale, Ennerdale and Helvellyn). The Dollywaggon plants are relatively large which may result from them growing in a gulley rather than on exposed rocks. Material named from Scout Scar named *H. angustatum* in **BM** is *H. argenteum*, but Scout Scar material in **CGE** seems identical to my central Lake District plants so are provisionally accepted here. As, however, they are from lowland limestone rather than upland volcanic rocks, I would prefer to see them in the field before confirming the site, in case specimens have been mislabelled.

Other material referred to *H. angustatum* by P.D. Sell (**CGE**) or D. McCosh (**BM**) I am less certain of. Plants from Angle Tarn (**BM**) have dense stellate hairs on the involucral bracts and probably refer to another species. Plants from Fleetwith Pike (**CGE**) have many glandular hairs on the peduncles and more strongly toothed leaves and may refer to another taxon. Further field work in these sites is required to clarify the taxa present.

There is a distinct similarity between the Norwegian plants of *H. angustatum* and my refined taxon from the central Lake District and it is easy to see how they have been equated. The Norwegian specimens were compared with my central Lake District taxon and were found to differ in three main characters (Table 1). A further difference may be that the rosette leaves of the Lake District plants are notably glaucous, whereas the description of *H. angustatum* in Blytt (1874) implies those of the Norwegian plants are green but I cannot assess this reliably from the old pressed specimens (the description of *H. angustatum* in Blytt (1874, translated from 'old' pan-Scandinavian courtesy of T. Tyler, pers. comm. 2023) cites the leaves as spotted, but this is not seen on the specimens and may be erroneous). These significant differences mean that the refined Lake District taxon can be treated as a distinct species.

Character	Norwegian <i>H. angustatum</i>	Refined Lake District taxon
Simple eglandular hairs on leaves	Glabrous above, hairy below on the midrib and on margins	Sparsely hairy above and hairy below
Glandular hairs on peduncles	Frequent	Few to sparse
Involucral bracts	Broader 1.0–1.5 mm, distinctly narrowing half way up	Narrower 0.8–1.2 mm, tapering gradually
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Table 1. Differences between Norwegian *H. angustatum* and the central LakeDistrict plants

Hieracium subangustatum T.C.G.Rich **sp. nov.**

= *H. angustatum* auct. Angl., non (Lindeb.) Lindeb.

= H. caesium var. *angustatum* auct. Angl., non Lindeb.

Vernacular name: Lesser-leaved Hawkweed

Holotype: Brown Cove, Helvellyn NY3394215542, v.c.69, 8 July 2024, T.C.G. Rich collecting no. 2024-245 (**BM**). Figs. 1 and 2.

Phyllopodous perennial herb with a branched stock. Stem 20-35(-50) cm, pale yellowish-green, sometimes purplish-flushed at base, slender, with a few, long, pale simple eqlandular hairs below, becoming scarce or absent upwards, and with stellate hairs and an occasional, very short, dark glandular hair in the upper part. Leaves alaucous bluish-green or grevish-green on upper surface, paler beneath; basal leaves with lamina $3-6.5(-12) \times 1-2(-3.5)$ cm, outer leaves elliptical, obtuse, cuneate to attenuate, margins remotely denticulate, inner leaves narrowly elliptic, acute, attenuate at base with a few coarse, acute, dentate to mammiform teeth (rarely aguiline-mammiform) mainly towards the base, with scattered, short to medium, pale simple eglandular hairs on the upper surface and more numerous simple eqlandular hairs beneath and on the margins, and scattered microglands; petioles 2-6(-9) cm, with numerous, long, pale, wavy simple eqlandular hairs. Cauline leaves 1-2, sometimes like basal leaves but sessile or shortly stalked, or smaller and linear. Inflorescence with 1-3(-5) capitula, furcate-corymbose. Peduncles long, slender and erect, with dense stellate hairs, numerous, short to medium simple eglandular hairs and occasional, short, dark glandular hairs. Capitula 25-30 mm in diameter, rounded at base. Involucral bracts incumbent in bud, to 10-12 x 0.8–1.2 mm, dark green, the inner with paler margins, all linear-lanceolate, gradually narrowed to a subacute to obtuse apex, with numerous, short to medium, pale, dark-based simple eqlandular hairs and a few to sparse, short, dark or yellow glandular hairs, with sparse stellate hairs mainly on the margins. Ligules yellow, glabrous or sparsely hairy in bud. Styles yellow when fresh or slightly discoloured when dry. Receptacle pits fimbriate-dentate. Achenes 3.7–4.1 mm, blackish.



Figure 1. Holotype of *Hieracium subangustatum*.



Figure 2. *Hieracium subangustatum,* Brown Cove. A, plant. B. basal rosette. C, leaf detail. D, capitulum showing bracts from side. E, capitulum showing styles

Hieracium subangustatum is characterised by the narrowly elliptical, shallowly mammiform-toothed, glaucous-green basal leaves, the 1 or 2 similar but smaller stem leaves, the few-flowered, furcate-corymbose inflorescence with long peduncles with dense stellate hairs, numerous simple eglandular hairs and occasional dark glandular hairs, the subacute to obtuse, dark involucral bracts to 12 x 0.8–1.2 mm, with numerous pale, dark-based simple eglandular hairs, few to sparse glandular hairs and with sparse stellate hairs on the margins, the yellow styles when fresh.

Hieracium subangustatum is one of a group of visually similar species in Britain which may not necessarily be closely related. It is similar in appearance to and may grow with the common and widespread *H. argenteum*, but has peduncles and dark involucral bracts with few, short, dark glandular hairs (*H. argenteum* has peduncles and involucral bracts with numerous, unequal glandular hairs). The other similar species are the Irish *H. argentatum* (Pugsley) P. D. Sell which differs in having nearly entire leaves and numerous glandular hairs on the involucral bracts, the Welsh *H. angustatiforme* P. D. Sell & C. West which differs having basal leaves with more sharp teeth, ciliate hairs along the margins and acute involucral bracts (Rich, 2021), and the Scottish *H. argentiforme* P. D. Sell which differs in having broadly elliptic, lanceolate or ovate rosette leaves and broader bracts (1.0–1.5 mm).

Sectional position

This plant was placed in section *Vulgata* Fr. by Linton (1905) and Pugsley (1948), and in section *Stelligera* Zahn by Sell & Murrell (2006). Here *H. subangustatum* is placed in section *Subalpina* Pugsley (as defined by Sell & Murrell, 2006) based on the presence of microglands on the leaves, the few basal rosettes and few stem leaves, the few-headed inflorescence with straight peduncles, the dark involucral bracts and the sparsely hairy ligule tips.

Distribution

Native. Endemic. *Hieracium subangustatum,* has been reported from at least six high-level gullies and rocks in the central Lake District, and from Scout Scar which requires confirmation. The accepted records are as follows [assumed grid references are given in square brackets]:

v.c.69 Westmorland

Catstye Cam, basic alpine rocks [NY31], August 1956, F. Rose (**BM**). Catstye Cam, NY349159, 21 July 1968, J.N. Mills & C. West (**MNE**). Catstye Cam, NY347160, 21 August 1968, J.N. Mills (**MANCH**).

Dollywaggon Pike [NY31], 4 September 1880, A. Ley (**CGE**). Dollywaggon Pike [NY31], cultivated 8 June 1908, A. Ley (**CGE**). Dollywaggon Pike [NY31], 7 July 1910, A. Ley (**CGE**). Dollywaggon Pike, rock ledge on Borrowdale rock, 2 plants only in association with *Festuca vivipara, Deschampsia cespitosa* and *Vaccinium myrtillus*, 760 m altitude, NY344132, 7 July 1980, J. Bevan, P.D. Sell & T.J. Sell (**CGE**). Easedale, above 300 ft [NY30], 11 August 1888, H.E. Fox (**BM**). Helvellyn, rocks above Red Tarn [NY3415], 1 August 1881, R.P. Murray (**BM**). Helvellyn, crags over 200 ft, August 1890, H.E. Fox (**BM**). Helvellyn, under the main peak [NY3415], 11 July 1905, A. Ley (**BM**). Helvellyn, cliffs, 17 July 1907, T.J. Foggitt (**BM**). Helvellyn [NY31], July 1959, G.A.K. Hervey (**CGE**). Helvellyn, Brown

Cove, NY339156, 10 August 1999, V. Jones (Herb. V. Jones in **LDS**, specimen not seen but site seen in field).

Scout Scar [SD49], 8 July 1905, A. Ley (**CGE**); provisionally accepted but requires verification in field (not refound during a brief search in 2024).

v.c.70, Cumberland Ennerdale [NY11], 30 July 1867, F. Addison (**BM**).

Rejected records

Dove Crags, NY376105, 24 June 1963, J.N. Mills (**CGE**; the specimen is stylose *H. saxorum*).

Angle Tarn [NY20], July 1905, A. Ley (**CGE**; the specimen has dense stellate hairs on bracts).

Fleetwith Pike [NY21], 15 July 1946, Miss C.W. Muirhead (**CGE**; the specimen has many glandular hairs on the peduncles and more strongly toothed leaves).

Lectotypification of Norwegian H. caesium var. angustatum

The name *Hieracium angustatum* (Lindeb.) Lindeb. was first published as *H. caesium* Fr. v[ar.] *angustatum* by Carl J. Lindeberg for the set of specimens no. 64 in his *Hieracia Scandinaviae exsiccata* collected at Isdalen near Bergen, Norway. The set was distributed in 1872 but individual specimens are undated (Lindeberg, 1872).

A lectotype of *H. caesium* Fr. var. *angustatum* Lindeb. has been selected from the set of Lindeberg's exsiccatae in Goteborg (**GB**). Whilst Lindeberg's own herbarium is held in **GB**, parts have been lost at some stage and the lectotype is selected from one of two sheets sent by Lindeberg as a gift to Carl Reuterman. The sheet has three separate plants which may represented different individuals; I hereby designate the central upper plant as the lectotype of *H. caesium* Fr. var. *angustatum* Lindeb. (accession number GB-0211402; Fig. 3).

Hieracium caesium var. *angustatum* Lindeb. was raised to species rank as *H. angustatum* Lindeb. in a preprint of Blytt's (1874) Norwegian flora that appeared later the same year (flora dated October 1874, the preprint undated). It was also published again at species rank by Lindeberg (1877), the origin of the combination *H. angustatum* (Lindeb.) Lindeb. currently used in Britain (Sell & Murrell, 2006). Both combinations are preceded by *H. angustatum* Tausch (Tausch, 1828) which relates to a *Pilosella* species, so a new name may be required for *Hieracium caesium* var. *angustatum* at species rank should a review of Norwegian *Hieracium* show it is a distinct taxon which has not already been described under another name. A description of *Hieracium caesium* var. *angustatum* based on material of Lindeberg's exsiccatae no. 64 seen in **BM** and **LD**, together with images from **GB** is given below which shows the differences from *H. subangustatum*:



Figure 3. Lectotype of *Hieracium caesium* Fr. var. *angustatum* Lindeb. (courtesy GB; accession number GB-0211402). The lectotype is selected as the central upper specimen

Phyllopodous perennial herb, often branched at base. Stem to 50 cm, slender, with a sparse simple eqlandular hairs below and frequent stellate hairs above. Leaves green; basal leaves with lamina $3-6.5(-12) \times 1-2(-3.5)$ cm, elliptic to ellipticlanceolate, acute or sometimes obtuse, narrowly cuneate to attenuate, margins finely denticulate to dentate, more or less glabrous above and with scattered simple eglandular hairs on midrib and margins, petioles 2-6(-9) cm, slender, with sparse simple eglandular hairs. Cauline leaves (0-)1-2(-3), lanceolate, sessile or shortly stalked, the upper sessile and bract-like, subglabrous. Inflorescence with 1–5 capitula, furcate-corymbose; peduncles long and slender with dense stellate hairs and microglands, numerous, short to medium simple eglandular hairs and frequent short, dark glandular hairs. Capitula c.25–35 mm in diameter, rounded at base. Involucral bracts incumbent in bud, to 10–11 x 1.0–1.5 mm, dark green, broadlylanceolate, narrowing at the middle to an obtuse or sometimes subacute apex, with numerous short simple eqlandular hairs and a few, short, pale-headed glandular hairs, with sparse stellate hairs towards the base. Ligules yellow, glabrous-tipped. Styles slightly discoloured. Receptacle pits not seen. Achenes c.3.5 mm, blackish.

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