

Four new species of *Hieracium* (Asteraceae) from southern Sweden

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Three new species belonging to *Hieracium* sect. *Hieracium*, viz. *H. argentarium*, *H. irmae* and *H. mucrodentatum*, are described from the Swedish province of Värmland. In addition, *H. acidolepis* is described anew to accommodate the taxon hitherto known as *H. acidotum* (Dahlst.) Dahlst., because the type specimen (from Värmland) for that name has been shown to belong to a different species.

Key words: Asteraceae, *Hieracium*, new species, nomenclature, taxonomy

Introduction

In 2005, I organized a “*Hieracium* collection camp” in the province of Värmland, SW Sweden. The camp was a great success with 32 participants together collecting more than 3600 specimens from almost all parts of the province. Thus, the number of *Hieracium* specimens collected in the province was almost doubled within a single season and many remote areas, where nothing had been collected before, were visited. The aim was to collect one specimen of each species found at every locality visited, but most of the participants had only limited knowledge of *Hieracium* and thus collected everything that looked somewhat different at first glance.

The old collections from this province mainly emanate from the pioneering work by K.O.E. Stenström (1889; mainly SW Värmland) and from the excursions of H.E. Johansson in the 1920s (the material treated by Folin 1936). Apart from these, there are numerous collections by

Karl Johansson and Gunnar Samuelsson from the mining area Bergslagen in the easternmost part of the province as well as some occasional collections by others and in other parts of the province. In total, 157 species belonging to *H. sect. Hieracium*, *H. sect. Vulgata* and *H. sect. Bifida* were known from Värmland.

The collections made in 2005 contained 122 accepted species (Tyler 2006a, 2006b), 12 of which were new to the province and three of which were new to science. Of the ca. 3600 specimens collected, 98% were referable to previously described species, indicating the state of knowledge in this respect. Of the remaining 70 collections, 33 consist of badly developed or preserved specimens more or less impossible to identify, 18 belong to either of the three accepted species that are described below as new to science and 19 specimens presumably represent additional unknown taxa which, however, are only known from single specimens from single localities and thus, at least at present,

hardly merit taxonomic recognition. Some of these latter may possibly represent alien species introduced in recent years.

While working with this material and critically examining all the old collections from the province kept in the herbaria LD and S, I realized that the original material of *H. acidotum* Dahlst. (1892) from Karlstad in Värmland did not belong to the species currently referred to by this name and not to the species described under this name by Dahlstedt (1893). *Hieracium acidotum* in the sense of Dahlstedt and all later authors is a species with mainly eastern distribution in Sweden and I have actually not found any evidence that it has ever been found in Värmland. The lectotype selected from the original material of *H. acidotum* (Tyler 2007) rather belongs to the species hitherto referred to as *H. urticaefrons* (Dahlst.) Dahlst., originally described from Norway. Thus, a new name has to be coined for "*H. acidotum* auct."

***Hieracium acidolepis* T. Tyler, sp. nova**
(Fig. 1)

Folia rosularia media supra ± glabra, subcaesia vel glauco-virida, ovato-lanceolata, sat acuta, e basi ± inaequaliter sagittata vel truncata et profunde ± inciso et reverso laciniata, ad apicem inaequaliter late et acute duplicato-dentata. Petioli ± longi et angusti, violascentes, interdum appendiculati. Folium caulinum saepe vix evolutum, lineare-filiforme, subtus vix stellatum. Anthela subsimplex, laxa, ramis longis et ± erectis. Rami pedicellique glandulis nigris sparsis pilisque solitariis-sparsis obsiti. Acladium 15–30 mm longum. Involucra 10–11 mm longa, squamis angustis, intermediis et intimis angustissimis-filiformibus producte subulatis, marginibus basin versus sparse stellato-limbatis, supra medium estellatis, glandulis nigris sat brevibus densiusculis et pilis mediocribus, fere a basi albis, copiosis obsitis. Apices squamarum sparse sed sat longe ciliato-comati. Apices ligularum glabri. Stylus siccus dense fusco-hispidulus-nigrescens.

HOLOTYPE: Sweden. 'Suecia Östergötland ad Risbrinken prope Tannefors paroeciae St. Lars locis sterilibus denudatis arenosis in versuris ericetosis, 1890-06-16, legi ipse' (S, ex Dahlstedt, Hierac. Scand. exsiccata I: 18).

ETYMOLOGY: The epithet, meaning "with acute bracts" refers to the unusually narrow and acute phyllaries characteristic for species.

This species is since long well known as '*H. acidotum* Dahlst.' and Dahlstedt (1893: 59) provided the first description of it. However, when first published (Dahlstedt 1892), *H. acidotum* was introduced as a substitute for *H. macrolepis* Kindb. (non Boiss.) and the type of that combination (from Karlstad in the province of Värmland) has recently been shown to belong to a rather different species (until now known as *H. urticaefrons* (Dahlst.) Dahlst.; Tyler 2007). Thus, a new name has to be introduced as above for *H. acidotum* auct. A typical specimen of *H. acidolepis* is shown in Fig. 1. This species is rather common and widespread in the eastern provinces of southern Sweden (from Småland to Uppland including the Baltic islands; Fig. 2) where it occurs on ± base-rich substrates in dry open forests as well as on somewhat shaded cliffs. The species is a typical representative of *Hieracium* sect. *Bifida*.

***Hieracium argentarium* T. Tyler, sp. nova**
(Fig. 3)

Folia rosularia obscure virida, subtus saepe caeruleo-purpurascens, media supra ± glabra, late elliptica, subobtusata, crebre et manifeste irregularissime triangulari-dentata, basi angustata vel anguste truncata, plerumque profunde incisa. Petioli angusti, ± intense purpurei, interdum (e speciminibus luxurioribus) dentibus vel appendices angustissimis-filiformibus paucis affixi. Folium caulinum plerumque abest, si evolutum subtus ± stellato-tomentosum. Anthela laxa, ramis ± verticalibus erectis. Rami pedicellique nudi vel glandulis pilisque solitariis-sparsis obsiti. Involucra 12–13 mm longa, nigro-virida, squamis angustis, saltem intimis angustissime-fere filiformiter subulatis, basin versus ± sparse et aequaliter stellato-tomentosis (ad apicem estellatis), apicibus parum comatis, glandulis nigris mediocribus-longis copiosis, pilis longis crassisque, supra medium usque nigris, copiosis-densis obsitis. Apices ligularum glabri. Stylus siccus dense fusco-hispidulus.



Fig. 1. A representative specimen of *Hieracium acidolepis* (from Sweden, prov. Södermanland, par. Strängnäs).

HOLOTYPE: Sweden. "Projekt Värmlands Hieracier Lokal 694: torr, delvis solexponerad, sandig slänt 100 m V Silverhyttan, Karlskoga s.n.; RN: 65977/14263 (10E9f); 2005-06-23 Owe Nilsson" (LD).

ETYMOLOGY: The epithet is derived from *argentum* (= silver). The species is distributed in a silver mining district, the type locality is at a former silver industry and several related species in *Hieracium* sect. *Bifida* have epithets derived from names of heavy metals (e.g. *H. plumbeum*, *H. molybdinum*). All presently known sites for this species are within the 50 km grid squares 10E and 11E (cf. Fig. 2).

ADDITIONAL SPECIMENS SEEN (paratypes): Sweden. "Projekt Värmlands Hieracier Lokal 358: slagg och askhögar, delvis skogsbevuxna, vid hyttan i Gammalkroppa, Kroppa s.n.; RN: 66194/14158 (11E3d); 2005-07-06 Torbjörn Tyler & Per Larsson & Owe Nilsson" (duplicates LD, S). — "Projekt Värmlands Hieracier Lokal 240: gammal granskog, 100 m S Gammalkroppa hytta, Kroppa s.n.; RN: 66193/14157 (11E3d); 2005-06-29 Jan Teodorsson" (LD). — "Projekt Värmlands Hieracier Lokal 360: skogsbilväg längs SV-sidan av Holmsjön, Rämnen s.n.; RN: 66635/14045 (12E2a); 2005-07-04 Torbjörn Tyler & Owe Nilsson" (duplicates LD, S). — "Projekt Värmlands Hieracier Lokal 722: rikare hygesslänt vid skogsbilväg 200 m NV Lobergsfallet, Karlskoga s.n.; RN: 65941/14321 (10E8g); 2005-06-26 Owe Nilsson" (LD). — "Projekt Värmlands Hieracier Lokal 691: torr solexponerad välgkant, Lokadalen 1650 m N Silverhyttan,

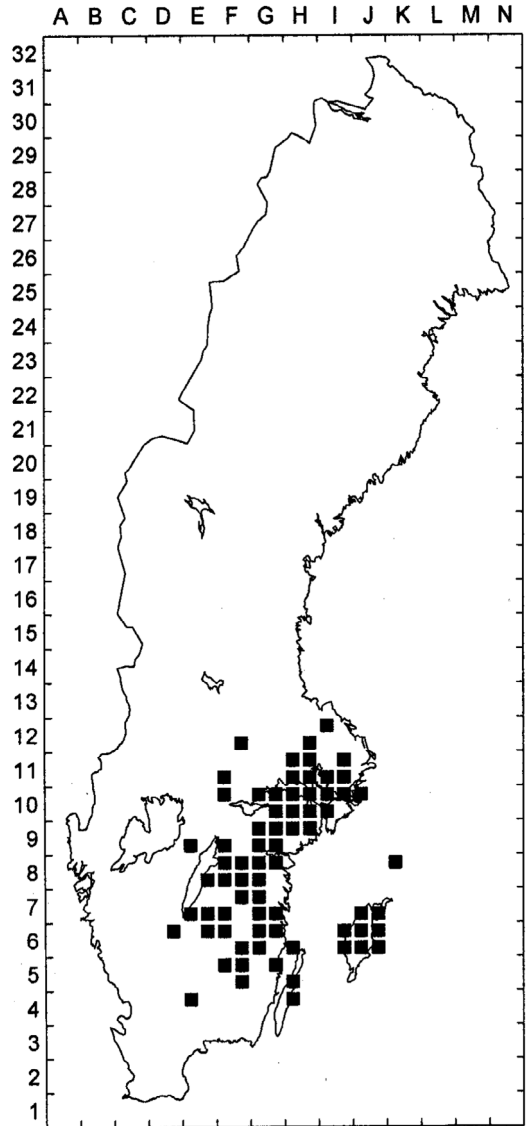


Fig. 2. Map of Sweden showing the known total distribution of *Hieracium acidolepis*.

Karlskoga s.n.; RN: 65994/14264 (10E9f); 2005-06-23 Owe Nilsson" (duplicates LD, S).

This species resembles *H. oxylepium* (Dahlst.) Dahlst. but differs by a distinctly longer indumentum with more numerous glandular hairs on the phyllaries and $\pm$ glabrous pedicels. It appears to be rather frequent in a restricted region close to the border between the provinces Västmanland and Värmland, in particular in the valley Lokadalen.



Fig. 3. The holotype of *Hieracium argentarium*.



Fig. 4. The holotype of *Hieracium irmae*.

***Hieracium irmae* T. Tyler, sp. nova (Fig. 4)**

Folia rosularia tenuia, viridia, subtus interdum purpurascentia, supra sparse pilosa, media late elliptica, subobtusata, ± undulata, crebre et medio-criter et irregulariter dentata, basi rotundata vel in folia exterioria retusa–breviter sagittata. Petioli in latitudinem media, vulgo appendices angustissimis affixi. Folium caulinum unicum, cordatum, in apicem ± longe et anguste attenuatum, subtus in venis maioribus ± dense stellato-tomentosum. Anthela dense composita, ramis ± horizontaliter eminentibus, arcuatis; acladio brevi–mediocri. Rami pedicellique pilis densis et glandulis nullis–sparsis obsiti. Involucra c. 11 mm longa, obscure viridia, squamis angustis, anguste obtusis, marginibus manifeste stellato-limbatis, apicibus comis manifestis et decursivis, glandulis cerinis sat brevibus sed crassis parce et pilis mediocribus, fere a basi albis, densis obsitis. Apices ligularum glabri. Stylus siccus ± dense fusco-hispidulus.

HOLOTYPE: Sweden. “Projekt Värmlands Hieracier Lokal 41: björkbacke, 97 m. ö. h., 500 m N Tannerud, Ny s.n.; RN: 66273/13098 (11C5b); 2005-06-30 Torbjörn Tyler & Alexander Sennikov & Irma Davidsson” (LD; isotype S).

ETYMOLOGY: the epithet is in honor of Mrs. Irma Davidsson, an excellent amateur botanist who collected many specimens during the *Hieracium* collection camp and was with me when we first found this species at the type locality.

ADDITIONAL SPECIMENS SEEN (paratypes, both LD): **Sweden.** “Projekt Värmlands Hieracier Lokal 22. igenväxande f.d. inägor, delvis ännu med ängskaraktär, delvis granskog, vid öde finngård 1,1 km V Långjohanstorp, Gräsmark s.n.; RN: 66378/13343 (11C7g); 2005-06-28 Torbjörn Tyler & Fredrik Ekman”. — “Projekt Värmlands Hieracier Lokal 733: gles björkskog vid sjöstrand vid Svartåna, Brunskog s.n.; RN: 66197/13429 (11C3i); 2005-07-02 Anders Persson.”

This species resembles *H. marginellum* (Dahlst. ex Stenstr.) Dahlst. and is best placed in *Hieracium* sect. *Hieracium* but the indument of the involucre is completely dominated by simple hairs that are translucent almost from the base, the pedicels almost lack glandular hairs, the phyllaries are narrower and longer than in *H. marginellum*, and the leaves are more elliptic–

rounded. The known total distribution is within the 50 km grid square 11C (cf. Fig. 2).

***Hieracium mucrodentatum* T. Tyler, sp. nova** (Fig. 5)

Folia rosularia viridia, exteriora vulgo purpurascentia, media supra sparse, subtus ± aequaliter pilosa, late ovata–elliptica, subobtusata, basi rotundata, margine cuncta sat dense regularissime et aequaliter mucronato-dentata. Petioli ± longi angustique, basin versus ± violacei. Folium caulinum si evolutum ± late ovatum, regulariter mucronato-dentatum (saepe abest). Anthela ± composita, ramis ± eminentibus arcuatisque; acladio brevi–mediocri. Rami pedicellique pilis et glandulis densis obsiti. Involucra 11–12 mm longa, obscure viridia, squamis angustis, acutis, marginibus laxe–sat manifeste stellato-limbatis, apicibus comis patulis et decursivis, glandulis nigris et brevibus tenuibusque densis, pilis mediocribus–sat longis, fere ex medio albo-apiculatis, densis obsitis. Apices ligularum glabri. Stylus siccus ± fusco-hispidulus.

HOLOTYPE: Sweden. “Projekt Värmlands Hieracier Lokal 432: äldre örtrik barrskog vid Lill-Nilserud (600 m VSV Bråne), Glava s:n. 2005-06-30, Gunnar Flygh” (LD; isotype S).

ETYMOLOGY: the epithet meaning “with mucronate teeth” refers to the peculiar dentation of the leaves of this species.

ADDITIONAL SPECIMEN SEEN (paratype): **Sweden**. “Vrml. Boda. Björkenäs 12/7 1924, väkant, K. Johansson” (S, accession number S-VR-12585).

This species resembles *H. marginellum* (Dahlst. ex Stenstr.) Dahlst. and the related species in *Hieracium* sect. *Hieracium* but the leaves are quite different, almost all around evenly dentate with low, mucronate–cuspidate teeth and never undulate or wrinkled, and the branches of the synflorescence are more squarrose and arcuate. The shape of the leaves is thus more similar to species like *H. orbicans* (Almq. ex Stenstr.) Dahlst. and *H. pellucidum* Laest. The indumentum of the involucre is fairly similar to that of *H. marginellum* although the glandular hairs are somewhat shorter and less prominent. The only two known sites for this species are within the 50 km grid square 11C (cf. Fig. 2).



Fig. 5. The holotype of *Hieracium mucrodentatum*.

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