

# Taxonomic and nomenclatural notes on *Hieracium tubulare* (Asteraceae) with description of a new species from the Eastern Carpathians

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*Received 21 Dec. 2005, revised version received 6 Feb. 2006, accepted 7 Feb. 2006*

Szelaĝ, Z. 2006: Taxonomic and nomenclatural notes on *Hieracium tubulare* (Asteraceae) with description of a new species from the Eastern Carpathians. — *Ann. Bot. Fennici* 43: 310–314.

*Hieracium coldei* Szelaĝ, a new triploid ( $2n = 27$ ) species in *Hieracium* sect. *Cernua* R. Uechtr. from the Eastern Carpathians in Romania, is described, illustrated and compared with morphologically similar taxa. It grows in relict habitats in crevices of andesite rock in Băile Tuşnad in the Hargitha Mountains, and is morphologically similar to *H. tubulare* Nyár. from the Retezat Mountains. Based on morphological characteristics, *H. sparsum* subsp. *tubulare* [var.] *pseudoporphyriticum* Nyár. & Zahn, *H. sparsum* subsp. *chlorocaesioides* Nyár. & Zahn, *H. sparsum* subsp. *tubulare* f. *latifolium* Zahn and *H. sparsum* subsp. *tubulare* f. *subevolutum* Zahn were found to be conspecific with *H. tubulare* s. *stricto* and are reduced to synonymy. Lectotypes for the names *H. tubulare*, *H. sparsum* subsp. *chlorocaesioides* and *H. sparsum* subsp. *tubulare* [var.] *pseudoporphyriticum* are designated.

Key words: Asteraceae, *Hieracium* sect. *Cernua*, new species, nomenclature, taxonomy, typification

Since the publication of my “Synopsis of *Hieracium* sect. *Cernua*” (Szelaĝ 2003), I have had the opportunity of studying further European material of the section. In particular, studies on the Alpine and Carpathian collections have led me to reduce several names to synonymy or to alter the taxonomic rank of some taxa (Szelaĝ 2004a, 2004b, 2004c). In this paper, a new species in *Hieracium* sect. *Cernua* from the Hargitha Mountains in the Romanian Eastern Carpathians is described. It grows in a relict habitat in crevices of the Piatra Şoimilor (= Piatra Şoimului) andesite rock in Băile Tuşnad, together with *H. telekianum*, one of the most interesting endem-

ics in the flora of Romania. The locality of the new species has been known for a long time, but plants collected here were previously recorded as *H. tubulare* (cf. Nyárády 1965, Mráz & Szelaĝ 2004). In fact, the plants from the Hargitha Mountains differ from *H. tubulare* from the Retezat Mountains by their oval-obovate rosette leaves with dense, long hairs on the upper surface, unspotted rosette leaves and longer involucrel indumentum. After examination of the type of *H. tubulare* and copious material from the Retezat Mountains, and especially after cultivating plants in the garden, both from the Retezat Mountains and the Hargitha Mountains, I conclude that plants



**Fig. 1.** Holotype of *Hieracium coldei*.

from the Hargita Mountains represent a new species described below.

***Hieracium coldei* Szeląg, sp. nova** (Figs. 1 and 2)

*Species nova e sectione Cernua, ex affinitate H. tubulare a quo foliis basalibus densius et longius albo-pilosis, obovatis vel ovato-ellipticis, immaculatis, integerrimis; foliis caulinis lanceolatis, integerrimis; floribus semitubulosus; involucris minoribus et longius pilosis differt.*

TYPE: Romania. Eastern Carpathians, Hargita Mountains, Mt. Piatra Șoimilor in Băile Tușnad, 46°08'50"N, 25°50'60"E, crevices of andesite rock, 840 m a.s.l., 26.VII.2003 *Szeląg 03/0025* (holotype KRAM; isotypes KRAM, CL, Herb. Hierac. Z. Szeląg).

Phyllopodous. Stem 30–50 cm high with moderate to subdense, 4–7 mm long simple, grey hairs which are denser towards base. Synflorescence branches with sparse, simple and stellate hairs, without glandular hairs. Basal leaves 5–8, petiolate, entire, unspotted, 2–3 outer leaves (absent by anthesis) obovate, rounded at apex, 3–4 × 1–1.5 cm, with dense 5–6 mm



**Fig. 2.** Capitulum of *Hieracium coldei* with semi-tubular florets.

long simple hairs on both surfaces; inner leaves oblanceolate to narrowly elliptical, subacute at apex, 6–14 × 2–3 cm, with scattered, 1.5–2 mm long simple hairs on upper surface and dense 2–3 mm long hairs on margins and along midrib. Cauline leaves 1–2(–3) sessile to subamplexicaul, entire, lanceolate or narrowly lanceolate, acute at apex; upper leaf (leaves) linear, bract-like. Synflorescence with (3)5–8(15) capitula. Branches 5–10 cm long. Acladium (terminal branch of synflorescence) 1.5–3 cm. Peduncles thin, erect, with 2–4 linear bracteoles, covered by dense 0.1–0.3 mm glandular hairs, moderate to subdense stellate hairs and a few simple hairs. Involucres 10–11 mm long. Involucral bracts green with pale margins, lanceolate, up to 1.5 mm wide at base, acute at apex, with dense 2.5–3.2 mm long simple hairs and 0.2–0.4 mm long, yellow glandular hairs (ratio of simple hairs to glandular hairs 1:1) and scattered stellate hairs. Florets yellow, semi-tubular (joined at apex). Styles laterally exserted, yellow with dark microtrichomes. Achenes brown, (3.7–)3.9–4.0 mm long. Triploid ( $2n = 27$ ), apomictic (Mráz & Szeląg 2004). Pollen spherical and of heterogeneous size. Flowering: end of June and July.

ILLUSTRATION: Fl. Rep. Pop. Romîne 10: 515, tab. 98, figs. 2, 2a. 1965, as *H. tubulare* var. *solyomköense*.

ETYMOLOGY: The species name honours Dr. Gheorghe Coldea, Cluj-Napoca, for his contributions to the knowledge of the flora and vegetation of Romania.

The plants from the Piatra Şoimilor rock ('Solyomkő' in Hungarian) in Băile Tuşnad were described as *H. tubulare* Nyár. var. *solyomköense* (cf. Nyárády 1965: 729). This name, according to Art. 37.1 of Greuter *et al.* (2000), is invalid because the type was not indicated. In the herbaria in which the Nyárády's collections are stored, no specimens labeled as *H. tubulare* var. 'solyomköense' collected by him on the Piatra Şoimilor rock or on the Mt. Cetăţii in Băile Tuşnad, i.e. on the second locality enumerated in the protologue, have been found.

Distribution: Endemic to the Hargita Mountains in the Eastern Carpathians, known only from the Piatra Şoimilor andesite rock in Băile Tuşnad, at an altitude of 750–850 m a.s.l. (Fig. 3). The second locality 'Mt. Cetăţii' published by Nyárády (1965: 729) has not been confirmed.

*Hieracium coldei* and *H. tubulare* can be distinguished as follows:

1. Rosette leaves obovate, subacute at apex, entire, unspotted, with dense 5.0–6.0 mm long simple hairs, petiole equal to or slightly longer than blade; involucre 10–11 mm long; florets semi-tubular; styles laterally exserted; achenes (3.7–)3.9–4.0 mm long ..... *H. coldei*
1. Rosette leaves oblanceolate, acute at apex, dentate, dark-purple-spotted, with scattered 2.0–2.5 mm long simple hairs, petiole shorter than blade; involucre 12–13 mm long; florets tubular; styles included; achenes 3.4–3.6(–3.8) mm long ..... *H. tubulare*

*Hieracium tubulare* is a South Carpathian endemic and occurs in the Retezat Mountains and the neighbouring Godeanu Mountains (Fig. 3). From the other Carpathian representatives of *Hieracium* sect. *Cernua*, *H. tubulare* can be distinguished by its tubular florets. According to Zahn (1922, 1929, 1938) and Nyárády (1965), *H. tubulare* s. lato has been treated as a polymorphic species comprising nine infraspecific taxa. These are: *H. tubulare* s. stricto (*H. sparsum* subsp. *tubulare* Zahn, nom. illeg), *H. sparsum* subsp. *tubulare* f. *latifolium* Zahn, *H. sparsum* subsp. *tubulare* f. *subevolutum* Zahn, *H. sparsum*

subsp. *tubulare* [var.] *evolutum* Nyár. & Zahn, *H. sparsum* subsp. *tubulare* [var.] *pseudoporphyriticum* Nyár. & Zahn, *H. sparsum* subsp. *tubulare* [var.] *pseudotubulare* Nyár. & Zahn, *H. sparsum* subsp. *tubulare* [var.] *subkotschyanum* Zahn, *nom. inval.*, *H. tubulare* var. *chlorocaesioides* (Nyár. & Zahn) Nyár., and the above mentioned *H. tubulare* var. *solymköense*, *nom. inval.*

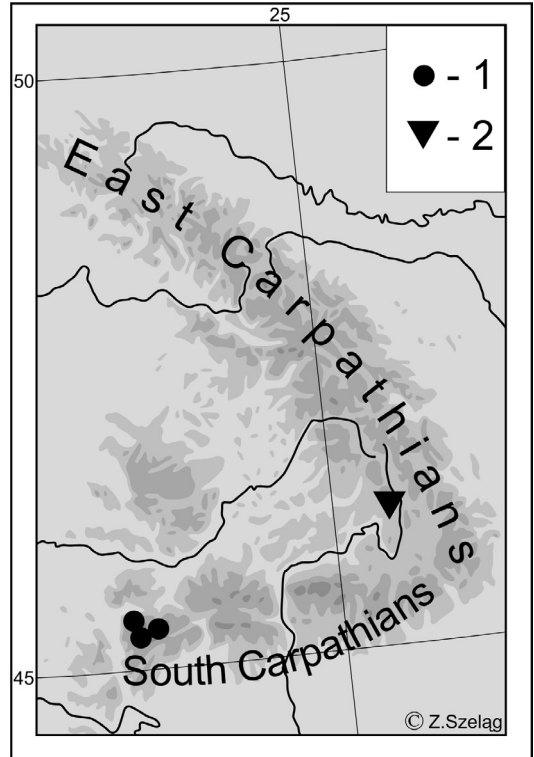
Based on examination of living plants in the wild and in the garden, including plants from the *loci classici* of all the discussed taxa, as well as comparison of the corresponding original specimens, I came to the conclusion that *H. tubulare* var. *chlorocaesioides*, *H. sparsum* subsp. *tubulare* [var.] *pseudoporphyriticum*, *H. sparsum* subsp. *tubulare* f. *latifolium* and *H. sparsum* subsp. *tubulare* f. *subevolutum* are conspecific with *H. tubulare* s. *stricto* and do not merit taxonomic recognition. The remaining two valid taxa with typical ligulate florets, i.e. *H. sparsum* subsp. *tubulare* [var.] *evolutum* and *H. sparsum* subsp. *tubulare* [var.] *pseudotubulare*, belong to the *H. borbasii* group and were thus excluded from *H. tubulare* (Z. Szeląg unpubl.).

### *Hieracium tubulare* Nyár.

Bul. Gräd. Bot. Cluj 8: 144. 1929. — *H. sparsiflorum* subsp. *tubulatum* Zahn, Magyar Bot. Lapok 5: 81. 1905. — *H. sparsum* subsp. *tubulare* Zahn in Engler, Das Pflanzenreich IV. 280: 1022. 1922, *nom. illeg.* — Ind. loc.: Com.[itatus] Hunyad Hungariae, Retezat in m. Vurfu Pelaga 2000–2300 m, leg. A. de Degen, 19.VIII.1903; Bosnia, in rupium fissures m. Veternik Ljubična planinae, leg. G. de Beck, VII.1888. — LECTOTYPE (designated here): Hungary. Flora Hungarica, Comit. Hunyad. Retezat, Vurfu Pelaga, alt. c. 2000–2300 m, 19.VIII.1903 A. de Degen (BP 191291!; isolectotypes BP 191292!, BP 191289!, BP 191290!, CL 157691!, WRS�!).

*H. sparsum* subsp. *chlorocaesioides* Nyár. & Zahn, Bul. Gräd. Bot. Cluj 8: 65. 1929, *syn. nov.* — *H. tubulare* var. *chlorocaesioides* (Nyár. & Zahn) Nyár., Fl. Rep. Pop. Romîne 10: 501. 1965 — Ind. loc.: Inter Gura Zlata et lacum Zănoaga, 1500–1700 m. — LECTOTYPE (designated here): Romania. Mtes Retezatzenes. Inter Gura Zlata et Zănoaga 1500–1700 m, 21.VII.1927 E. I. Nyárády [det. Zahn] (CL 156224!; isolectotype CL 155443!).

*H. sparsum* subsp. *tubulare* [var.] *pseudoporphyriticum* Nyár. & Zahn, Bul. Gräd. Bot. Cluj 8: 69. 1929, *syn. nov.* — Ind. loc.: Romania. In valle Zlătuia, 1500 m; infra lacum Gemenea, 1600 m; in monte Paltina, 1700 m; ad lacum Zănoaga, 1850–2100 m; sub cac. Vrf. Rătezat, 1800–1900 m. — LECTOTYPE (designated here): Romania. Mtes Reteza-



0 50 100 150 200 250 km

0 500 1000 2000 3000

Fig. 3. Distribution of *Hieracium tubulare* (1) and *H. coldei* (2).

tenzes. Circa lacum Zănoaga 1850–2100 m, 20.VII.1927 E. I. Nyárády (CL 156284!). — SYNTYPES: Romania. Mtes Retezatzenes. In valle Zlătuia sub cacumine Vrf. Retezat 1800–1900 m, 3.VIII.1925 E. I. Nyárády (CL 156259!); Mtes Retezatzenes. In valle Zlătuia supra Gura Zlata 1550 m, 7.VIII.1925 E. I. Nyárády (CL 156260!).

*H. sparsum* subsp. *tubulare* f. *latifolium* Zahn, Bul. Gräd. Bot. Cluj 8: 68. 1929, *syn. nov.* — Ind. loc.: In valle Zlătuia infra Vrf. Rătezat, 1500–1600 m. — TYPE: not found.

*H. sparsum* subsp. *tubulare* f. *subevolutum* Zahn, Bul. Gräd. Bot. Cluj 8: 68. 1929, *syn. nov.* — Ind. loc.: In valle Zlătuia infra Vrf. Rătezat, 1500–1600 m. — TYPE: not found.

*H. sparsum* subsp. *tubulare* [var.] *subkotschyanum* Zahn in Ascherson & Graebner Synop. Mitteleur. Fl. 12(3): 654. 1938, *nom. inval.* (sine descr. lat.). — ILLUSTRATIONS: Fl. Rep. Pop. Romîne 10: 491, tab. 92, figs. 2, 2a; 495, tab. 93, figs. 1, 1a, 1b. 1965.

NOTE: The author of *H. tubulare* is Nyárády,

because *H. sparsum* subsp. *tubulare* Zahn was an illegitimate name for *H. sparsiflorum* subsp. *tubulatum*. Consequently, the lectotype of *H. tubulare* was selected from among specimens collected by de Degen in 1903. In the protologue of *H. sparsiflorum* subsp. *tubulatum*, Zahn (1905: 82) mentioned two localities: Mt. Peleaga in the Retezat Mountains in Romania and Mt. Veternik in the Ljubična Planina Mountains in Bosnia. In the Retezat Mountains *H. tubulare* is a relatively common species, however its occurrence in Bosnia remains doubtful. Unfortunately, I did not find any specimens collected by Beck in 1888 on Mt. Veternik in Bosnia. Field investigations are necessary for clarifying the occurrence of *H. tubulare* in Bosnia.

### Acknowledgements

I am grateful to Dr. Gheorghe Coldea for his hospitality during my visits in Cluj-Napoca, to the Curator of CL for making available for study the relevant collections. I thank Dr. Lajos Somlyay, the Curator of the BP, for the loan of herbarium material. Thanks are due to Dr. Tim C. G. Rich, Cardiff, for language revision and critical suggestions on an earlier version of the manuscript and to an anonymous reviewer for helpful comments and suggestions. This study was supported by the State Committee for Scientific Research (KBN) grant no. 2 P04G 042 28.

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