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A new species in *Hieracium* sect. *Alpina* (Asteraceae) from the Eastern Carpathians in Romania

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Abstract

Hieracium ciucasense is a new, apomictic species described from the Ciucaș Mountains in the Eastern Carpathians, Romania. It belongs to the *H. pietroszense* aggregate comprising taxa of presumably hybrid origin between *H. alpinum* L. and *H. bifidum* s. lat. The new species is illustrated with photographs of the holotype and living plants; it differs from the other taxa of the *H. pietroszense* aggregate in the Carpathians in that the leaves are brown-purple spotted. The distribution of the *H. pietroszense* aggregate in the Carpathians is mapped.

Keywords: apomictic plant, Europe, Ciucaș Mountains, *Hieracium*, Carpathians, taxonomy

Introduction

In 2019, during my studies of *Hieracium* sect. *Alpina* (Griseb.) Grebli (1881: 269) in the Eastern Carpathians (Szeląg 2019, 2020), in the Romanian Ciucaș Mountains I found a population of plants with morphological features intermediate between *H. alpinum* Linnaeus (1753: 800) and *H. bifidum* s. lat., which I include in the *H. pietroszense* aggregate *sensu* Mráz (2003). These plants differed from other taxa of this group known from the Carpathians by having the brownish-purple spots on the young rosette leaves. Considering the apomictic mode of reproduction, as indicated by the result of excision of plants grown in the garden, I hereby describe the plants found in the Ciucaș Mountains as a new species.

Hieracium ciucasense Szeląg, sp. nov. (Figs. 1–3)

Type:—ROMANIA. Eastern Carpathians, Ciucaș Mts., the “Babele la Sfat” rocks along a path to Ciucaș summit, shaded calcareous scree, 1800 m a.s.l., originally found on July 21, 2019, specimens from plants cultivated from seed in the author’s garden, pressed on June 5, 2021, *Z. Szeląg* (holotype KRAM; isotypes Herb. Hierac. Z. Szeląg).

Paratypes:—ROMANIA. Eastern Carpathians, Ciucaș Mts., the “Babele la Sfat” rocks along a path to Ciucaș summit, shaded calcareous scree, 1800 m a.s.l., July 21, 2019, *Z. Szeląg* (Herb. Hierac. Z. Szeląg); Ciucaș Mts., along a tourist path from the Ciucaș shelter to Mt. Ciucaș, 1770 m a.s.l., July 21, 2019, *Z. Szeląg* (Herb. Hierac. Z. Szeląg).

Description:—Phyllopodous with overwintering brown-purple spotted rosette leaves. Stem 20–30 cm high, purplish at base, in lower and middle part with sparse pale simple hairs 1.0–1.3 mm long and numerous stellate hairs; within synflorescence with dense stellate hairs, scattered dark-based simple hairs up to 1.5 mm long, and with dispersed blackish glandular hairs 0.3–0.5 mm long. Synflorescence branches 0–3, monocephalous, up to 6 cm long. Acladium up to 5 cm long. Rosette leaves 6–12, up to 11 cm long and up to 2 cm wide, cuneate at base, tapered to a long, purplish petiole at base, with brownish-purple spots visible before anthesis and in autumn; outer leaves obovate, rounded at apex, remotely denticulate at the base of lamina; inner leaves broadly lanceolate, acute at apex, sharply denticulate; upper surface glabrous, somewhat glaucescent; lower surface with sparse or numerous, pale simple hairs up to 1.0 mm long, without or with few stellate hairs only on the midrib; margins with numerous pale simple hairs up to 1.0 mm long and dispersed yellowish glandular hairs 0.2 mm long. Cauline leaves 1–3, rapidly reduced in size upwards; lowest leaf (if present) similar to inner rosette leaves in shape and indumentum; upper cauline leaves linear, bract-like; lower surface covered by dense pale simple hairs, scattered stellate hairs and a few glandular hairs; upper surface

glabrous. Peduncles erect with dense stellate hairs, moderately numerous dark-based simple hairs up to 1.0 mm long and scattered blackish glandular hairs 0.3–0.5 mm long. Bracteoles 0–2, blackish green with numerous dark-based simple hairs up to 1 mm long, sparse blackish glandular hairs and sparse stellate hairs. Involucres 12–13 mm long, subglobose at base, with moderately dense indumentum. Involucral bracts in three rows; outer bracts shorter and squarrose; dark green, only inner bracts with pale margins, lanceolate, subulate, with numerous, black in lower half, simple hairs up to 1.3 mm long, moderately numerous stellate hairs and blackish glandular hairs 0.3–0.5 mm long. Ligules yellow, sparsely ciliate at apex. Styles almost black. Achenes black, 3.6–3.8 mm long. Pappus pale grey. Pollen in anthers very sparse. Flowering: July.



FIGURE 1. Holotype of *Hieracium ciucasense* (KRAM).



FIGURE 2. Holotype of *Hieracium ciucasense*: capitulum.

Distribution and habitat:—Endemic to the Ciucaș Mountains in the Eastern Carpathians (Fig. 4). In 2019, the population of *H. ciucasense* comprised several dozen plants, most of them flowering. They were growing on shaded calcareous scree around the massive conglomerate outcrops, at 1800–1850 m a.s.l., as well as on the southern slope along a tourist path from the Ciucaș shelter to Mt. Ciucaș, at 1770–1800 m a.s.l.



FIGURE 3. *Hieracium ciucasense* cultivated in the garden: the young leaves and previous year's leaves have visible brown-purple spots on April 13, 2020 (left); the same plants two weeks later (right).

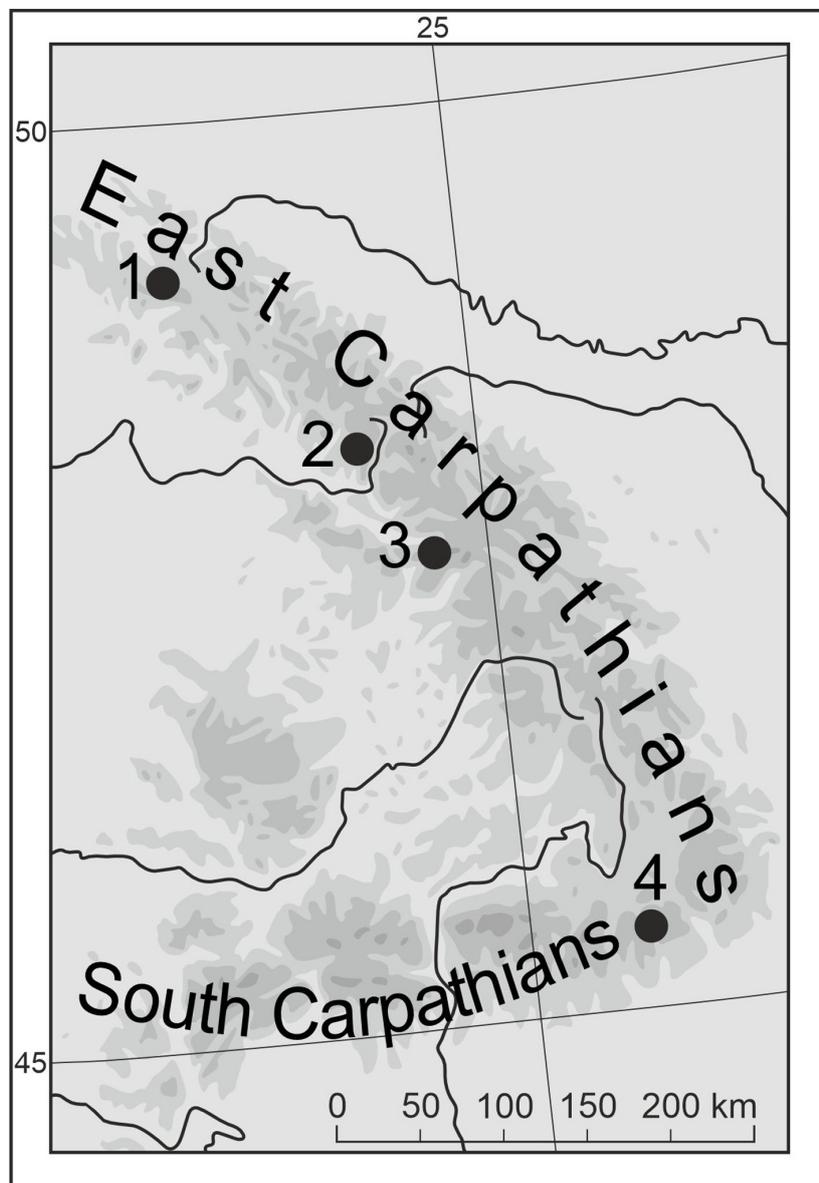


FIGURE 4. Distribution of the *Hieracium pietroszense* aggregate in the Carpathians: 1. *H. jasiewiczii*; 2. *H. deylii*; 3. *H. pietroszense* and *H. borsanum*; 4. *H. ciucasense*.

Notes:—Hitherto, the only representative of the *H. pietroszense* aggregate in the Ciucaş Mountains was *H. pietroszense* subsp. *bifidifolium* Degen & Zahn in Zahn (1907: 72) described from the Rodna Mountains in the Eastern Carpathians (Nyárády 1965). According to Nyárády (1965) it occurs also in some other mountain ranges of Romania, but according to Mráz (2003), it only grows in the Rodna Mountains and most probably is conspecific with *H. pietroszense* Degen and Zahn in Zahn (1907: 72). In addition, my long-term field observations have led to the conclusion that in different mountain ranges of the Carpathians, the stenoendemic taxa of the *H. pietroszense* aggregate have originated *in situ* as a result of hybridization between sexual *H. alpinum*, a common species in the Romanian Carpathians, and the local populations of *H. bifidum* s. lat. Many of these taxa are still waiting to be described, and their morphological differences are subtle and only become clearly visible when grown in the garden (Fig. 3). Therefore, such a wide distribution of *H. pietroszense* subsp. *bifidifolium* as suggested by Nyárády (1965) seems to be unlikely.

Besides newly described *H. ciucasense*, the following species of the *H. pietroszense* aggregate are known in the Carpathians: *H. jasiiewiczii* Szelağ (2019: 72) in the Bieszczady Mts. in Poland, *H. deylii* Mráz (2003: 311) in the Svydovets Mts. in Ukraine, and *H. pietroszense* and *H. borsanum* Mráz (2001: 329) in the Rodna Mts. in Romania (Fig. 4).

Affinity:—Apart from the brownish-purple spotted rosette leaves, which differentiate *Hieracium ciucasense* from the other taxa of the *H. pietroszense* aggregate in the Carpathians, the new species differs from *H. pietroszense* also in its (1) narrower (up to 2 cm wide) rosette leaves, cuneate at the base and glabrous on the upper surface, (2) involucre bracts with shorter (up to 1.3 mm long) simple hairs, and (3) smaller (up to 12 mm long) involucres. *Hieracium ciucasense* differs from *H. jasiiewiczii* in its (1) somewhat glaucescent leaves, and (2) much shorter simple hairs on the involucre bracts; and from *H. borsanum* and *H. deylii* in its (1) glabrous on the upper surface rosette leaves, and (2) shorter simple hairs on the involucre bracts.

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References

- Gremler, A. (1881) *Excursionsflora für die Schweiz*. Ed. 4. J.J. Christen, Aarau, 486 pp.
- Linnaeus, C. (1753) *Species plantarum*. L. Salvius, Holmia, 1200 pp.
<http://dx.doi.org/10.5962/bhl.title.669>
- Mráz, P. (2001) Chromosome numbers in selected species of *Hieracium* sect. *Alpina* from Central and Eastern Europe. *Folia Geobotanica* 36: 321–332.
<https://doi.org/10.1007/BF02803184>
- Mráz, P. (2003) The *Hieracium pietroszense* group in the Carpathians. *Folia Geobotanica* 38: 299–318.
<https://doi.org/10.1007/BF02803201>
- Nyárády, E.I. (1965) *Hieracium* L. In: Nyárády, E.I. (Ed.) *Flora Republicii Populare Romîne*, vol. 10. Editura Academiei Republicii Populare Romîne, Bucureşti, pp. 214–746.
- Szelağ, Z. (2019) Two new species in *Hieracium* sect. *Alpina* (Asteraceae) from the Eastern Carpathians in Poland. *Phytotaxa* 406 (1): 71–78.
<https://doi.org/10.11646/phytotaxa.406.1.4>
- Szelağ, Z. (2020) *Hieracium richianum* (Asteraceae) a new species of *H.* sect. *Alpina* from the Eastern Carpathians in Romania. *Phytotaxa* 436 (1): 93–96.
<https://doi.org/10.11646/phytotaxa.436.1.11>
- Zahn, K.H. (1907) Beiträge zur Kenntnis der Archieracien Ungarns und der Balkanländer I. *Magyar Botanikai Lapok* 5: 62–94.