## HIERACIUM ALBINUM (ASTERACEAE) REDISCOVERED

## ZBIGNIEW SZELĄG

**Abstract**. A new locality of *Hieracium albinum* Fries, a species regarded as extinct, has been found in the Potok Szrenicki valley on the Polish side of the Karkonosze Mts. A map of the general distribution of the species and illustrations of the specimens collected are presented.

Key words: Asteraceae, distribution map, endemic, Hieracium, Karkonosze Mts, Sudetes

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Hieracium albinum Fries is endemic to the Karkonosze Mts in the Western Sudetes. It belongs to the *H. umbrosum* agg. which comprises *ca* 23 taxa presumably of hybrid origin and the morphological formula *H. murorum* > *H. prenanthoides*, which Zahn conservatively kept at subspecies rank (Zahn 1938). Taxa of *H. umbrosum* agg. are distributed mainly in the Alps. Disjunct localities of a few taxa are known from the Pyrenees, Apennines, Corsica, Balkans, Carpathians, Sudetes and Scandinavia (Zahn 1921–1923).

Hieracium albinum was described from the Czech side of the Karkonosze Mts in the vicinity of the Laba River (Elbe in German) springs (Fries 1862). According to Knaf (1870), however, the locus classicus of the species was situated in the Mały Śnieżny Kocioł glacial cirque [Kleine Schneegrube in German] and not in the Laba River springs (see also Čelakovský 1870). It is a very rare species found at eight stations in the Czech Karkonosze Mts: Mt. Krkonoš, Petrova bouda chalet, Labské jamý glacial cirque, Velká Kotelní jámá glacial cirque, Mt. Kotel, Horní Rudník, Dlouhý důl valley and Modrý důl valley (cf. Procházka & Chrtek 1999; Chrtek 2004), and at six stations in the Polish Karkonosze Mts: Mały Śnieżny Kocioł glacial cirque, Wielki Śnieżny Kocioł glacial cirque, Mały Staw glacial cirque, Mt. Kopa, Kocioł Łomniczki glacial cirque and Stara Polana glade (Zahn 1938; Šourek 1969) (Fig. 1).

The last time *H. albinum* was reported from the Polish Karkonosze Mts in the 1950s, by Šourek (1969) in the Mały Śnieżny Kocioł and Wielki Śnieżny Kocioł glacial cirques. Unfortunately, in Šourek's herbarium (stored at PR) there are no specimens from these stations (J. Chrtek, pers. comm. 2011). The only specimens of *H. albinum* to be found in his herbarium are from the Czech part of Karkonosze, collected in the Velká Kotelní jámá glacial cirque in 1949, in the Modrý důl valley in 1952, and in the Dlouhý důl valley in 1952. During field studies in 1992–2000 I failed to confirm any *H. albinum* site in the Polish Karkonosze Mts (Szelag 2003).

On the Czech side of the ridge the prospects seem better, as in the 1980s and 1990s the existence of 5 of 8 previously known locations were confirmed: Petrova bouda chalet, Labské jamý and

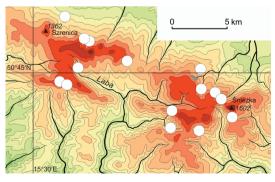


Fig. 1. General distribution of Hieracium albinum Fries.

Velká Kotelní jámá glacial cirques, and the Dlouhý důl and Modrý důl valleys (Procházka & Chrtek 1999). In 2003, Jindřich Chrtek collected *H. albinum* in the Labské jámy glacial cirque (J. Chrtek, pers. comm. 2011).

In the latest edition of the Red List of the Karkonosze Mts (Štursa *et al.* 2009), *H. albinum* was listed as extinct (EX) in the Polish part of the mountains and as critically endangered (CR) in the Czech part. In the most recent overview of the mountain vascular plants in the Sudetes (Kwiatkowski & Krahulec 2011) *H. albinum* was reported to be extinct or missing in the whole Karkonosze Mts. This prompts me to provide the information that in 2004 I managed to find a new station of *H. albinum* in the Polish part of the Karkonosze Mts (Fig. 2); the species remains an extant component of the flora.

The new station is situated in the Szrenicki Potok valley at *ca* 900 m a.s.l. along the road from Szklarska Poręba to Mt. Łabski Szczyt. *Hieracium albinum* grows in a tall-herb community in association with *Mulgedium alpinum*, *Prenanthes purpurea*, *Ranunculus platanifolius*, *Rosa pendulina* and *Senecio ovatus*. The population was composed of 25–35 flowering individuals. This occurrence of *Hieracium albinum* was confirmed in September 2010.

## Hieracium albinum Fries

Fig. 2

Epicr. Gen. Hierac.: 103. 1862. – *H. umbrosum* subsp. *albinum* (Fr.) Zahn

Stem 30–60 cm high, robust, at the base with numerous, pale, 2–3 mm long simple hairs; in the middle with scattered to numerous simple hairs



Fig. 2. Specimens of Hieracium albinum Fries from the newly discovered Polish station.

and scattered stellate hairs; within synflorescence with sparse to scattered, darkish glandular hairs, scattered stellate hairs and few, 2 mm long, pale, dark-based simple hairs. Basal leaves 2-4 (usually withered at anthesis) petiolate, obovate to elliptic, obtuse at apex, 5-7 cm long and 3.0-3.5 cm wide, sparsely denticulate. Cauline leaves 2–4 dark green, gradually reduced upwards; on both surfaces covered by numerous, 1.0-1.5 mm long simple hairs; on the margins and along the midrib with numerous and somewhat longer simple hairs, and on the margins mixed with glandular hairs. The lower cauline leaves tapered to a winged petiole, obovate to oblanceolate, acute at apex, remotely denticulate, 7–9 cm long and 2.5–4.0 cm wide; the upper cauline leaves sessile or semi-amplexicaul, obovate to oblanceolate, acute at apex, entire or sparsely denticulate. Synflorescence with 3-12 capitula. Synflorescence branches monocephalous or bicephalous. Acladium 2.0–3.5 cm long. Peduncles thin, erect, blackish green, with numerous to dense, 0.3-0.8 mm long glandular hairs and numerous stellate hairs and without simple hairs. Involucres cylindrical and subglobose at the base, 9-10 mm long, covered by moderately dense indumentum. Involucral bracts lanceolate, obtuse to subacute at apex, the outer bracts dark green to blackish green with numerous 0.3-0.5 mm long glandular hairs and sparse stellate hairs and without simple hairs; the inner bracts with wide, pale margins and less dense indumentum. Ligules yellow, 15-17 mm long with few simple hairs at apex. Styles dark. Achenes reddish brown, 3.7-3.9 mm long. Flowering: second half of July. (Description based on plants from the Szrenicki Potok valley).

Morphologically *Hieracium albinum* is very similar to *H. pseudalbinum* R. Uechtr., a species endemic to the Karkonosze Mts, belonging to the *H. juranum* agg. (*H. prenanthoides* > *H. mu-rorum*). The two taxa are distinguished by number of cauline leaves: *H. pseudalbinum* has (4–)5–7 of them, which suggests the predominance of *H. prenanthoides* characters, while *H. albinum* has only 2–3(–4).

ACKNOWLEDGMENTS. I am grateful to Dr. Jindřich Chrtek (Průhonice) for detailed information on the occurrence of *Hieracium albinum* in the Czech Republic and on Šourek's herbarium, and for valuable remarks on the manuscript. This study was supported in part by the Polish Ministry of Science and Higher Education (grant No. 2 P04G 042 28).

## REFERENCES

- ČELAKOVSKÝ L. 1870. Hieracium albinum Fries. Nachschrift. Verh. Bot. Ver. Prov. Brandenburg 12: 88–92.
- CHRTEK J. 2004. Hieracium L. In: B. SLAVÍK, J. ŠTĚPÁNKOVÁ & J. ŠTĚPÁNEK (eds), Květena České Republiky. 7: 540–701. Academia, Praha.
- FRIES E. 1862. Epicrisis Generis Hieraciorum. Edquist & Berglund, Upsaliae.
- KNAF J. F. 1870. Hieracium albinum Fries. Verh. Bot. Ver. Prov. Brandenburg 12: 87–88.
- KWIATKOWSKI P. & KRAHULEC F. 2011. The distribution of high mountain species of vascular plants within the mountains of the Sudetic System. In: B. ZEMANEK (ed.), Geobotanist and Taxonomist. A volume dedicated to Professor Adam Zając on the 70<sup>th</sup> anniversary of his birth, pp. 69–89. Institute of Botany, Jagiellonian University, Cracow.
- PROCHÁZKA F. & CHRTEK J. JUN. 1999. Hieracium albinum Fries. In: J. ČEŘOVSKÝ, V. FERÁKOVÁ, J. HOLUB, Š. MAGLOCKÝ & F. PROCHÁZKA (eds), Červená kniha ohrožených a vzácných druhů rostlin a živočichů ČR a SR. 5. Vyšší rostliny, p. 183. Príroda, Bratislava.
- ŠOUREK J. 1969. Květena Krkonoš. Český a Polský Krkonošský Národni Park. Academia, Praha.
- ŠTURSA J., KWIATKOWSKI P., HARČARIK J., ZAHRADNÍKOVÁ J. & KRAHULEC F. 2009. Černý a červený seznam cévnatých rostlin Krkonoš. *Opera Corcontica* **46**: 67–104.
- SZELAG Z. 2003. Górskie gatunki rodzaju Hieracium w Sudetach. Przemiany i zagrożenie. In: Z. KĄCKI (ed.), Zagrożone gatunki flory naczyniowej Dolnego Śląska, pp. 197–215. Instytut Biologii Roślin, Uniwersytet Wrocławski, Polskie Towarzystwo Przyjaciół Przyrody 'pro Natura', Wrocław.
- ZAHN K. H. 1921–1923. Hieracium L. In: A. ENGLER (ed.), Das Pflanzenreich Regni Vegetabilis Conspectus. IV/280: 1–1705. Wilhelm Engelmann, Leipzig.
- ZAHN K. H. 1938. *Hieracium*. In: P. GRÄBNER FIL. (ed.), *Synopsis der Mitteleuropäischen Flora*. **12**(3): 1–708. Borntraeger, Berlin.