

First record of *Pedicularis kaufmannii* (Scrophulariaceae) from Poland

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ABSTRACT: *Pedicularis kaufmannii* Pinzger has been recorded in Kulaszne in the Bieszczady Mts (the Carpathians) and this is the first discovery of the species in Poland. The species is briefly described and a map of its geographical distribution in Europe is provided.

KEY WORDS: *Pedicularis*, distribution, new locality, Carpathians, Poland

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During a field trip in the Bieszczady Mountains in May 1999, a locality of *Pedicularis kaufmannii* Pinzger was found. The species had not been reported from Poland before (Jasiewicz 1963; Mirek *et al.* 1995). The locality was discovered in Kulaszne (lat. 49°25'N, long. 22°10'E). The specimens grew in wayside grass surrounding a cemetery on a slope ca 570 m a.s.l. In the community of *Pedicularis kaufmannii* the following species were found: (Char. *Molinio-Arrhenatheretea*) – *Achillea millefolium*, *Arrhenatherum elatius*, *Bromus inermis*, *Dactylis glomerata*, *Galium boreale*, *Galium mollugo*, *Geranium pratense*, *Knautia arvensis*, *Salvia verticillata*, *Tragopogon pratensis*, *Trifolium pratense*, *Vicia cracca*; (Char. *Festuco-Brometea*) – *Bromus erectus*, *Filipendula vulgaris*, *Plantago media*, *Sanguisorba minor*; (Char. *Trifolio-Geranietea sanguinei*) – *Agromonia eupatoria*, *Coronilla varia*, *Clinopodium vulgare*, *Medicago falcata*; and (others) – *Artemisia vulgaris*, *Convolvulus arvensis*, *Cruciata glabra*, *Cuscuta epithymum*, *Pimpinella saxifraga*, *Polygala vulgaris* (nomenclature after Mirek *et al.* 1995).

The whole population of *Pedicularis kaufmannii* (ca 20–30 specimens) occupied an area of 10 m². However, based on present knowledge it is difficult to determine whether the locality is natural or has remained after previous cropping, as in the case of *Centaurea mollis* Waldst. & Kit. The material collected has been deposited in KRAM, KTU and WA.

***Pedicularis kaufmannii* Pinzger**

Fig. 1.

Progr. Sald. Realsch. Brandenb. 1868: 17.

Syn.: *P. comosa* L. p.p.; *P. comosa* auct. non L.; *P. campestris* auct. polon. non Griseb.

Pedicularis kaufmannii is morphologically very similar to *P. comosa* s.l., which is often split into two subspecies: *P. comosa* subsp. *comosa* and *P. comosa* subsp. *campestris* (Griseb.) Soó (cf. Mayer 1972).

The main difference between *P. kaufmannii* and *P. comosa* s.l. is the shape and length of the bracts as well as the pubescence of the stem and calyx. Both corolla length and corolla lip pubescence are definitely of less diagnostic value. Diagnostic features are compiled in Table 1.

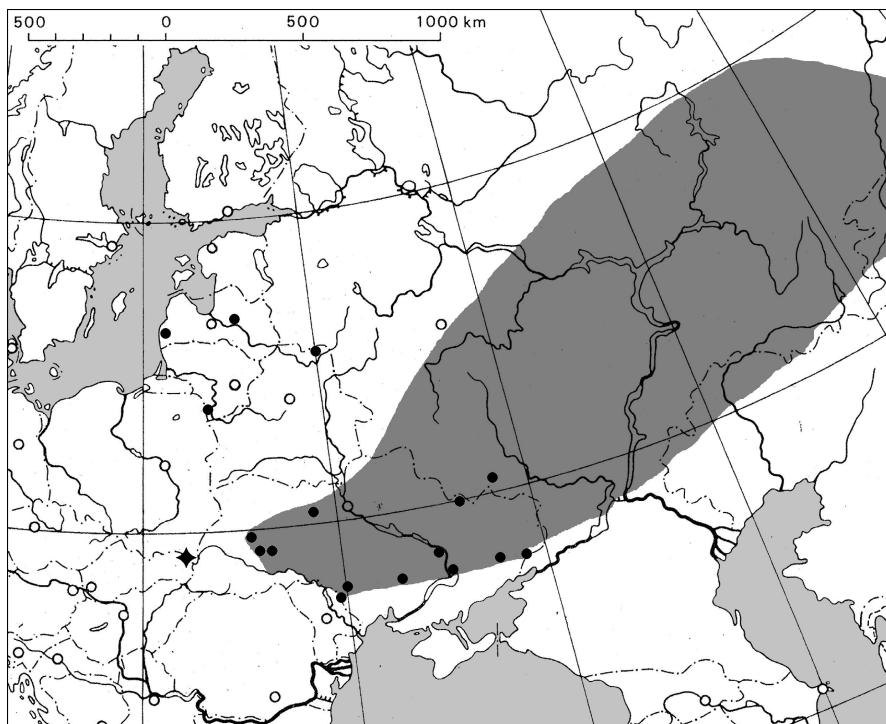


Fig. 1. *Pedicularis kaufmannii* Pinzger. Phot. I. R. Moraczewski.

Table 1. Differences between *Pedicularis kaufmannii* Pinzger and *P. comosa* s.l.

Character	Taxon		
	<i>P. kaufmannii</i> Pinzger	<i>P. comosa</i> L. subsp. <i>comosa</i>	<i>P. comosa</i> L. subsp. <i>campestris</i> (Griseb.) Soó
stem	lanate	crispate-pubescent	nearly smooth
bracts	almost all pinnatisect, leaf-like, always exceeding the flowers	the upper 3-lobed or toothed, as long as or shorter than flowers	the upper 3-lobed or toothed, shorter than flowers
calyx	usually hairy	pubescent on the angles	glabrous
corolla (pale yellow)	2.6–3.2 cm long	2.5–3.0 cm long	2.0–2.5 cm long
lower lip of corolla	sparsely ciliate or glabrous	ciliate	glabrous

The geographical range of *Pedicularis kaufmannii* extends from Belorussia, Lithuania and Latvia in the west to the Urals, West Siberia, the Caucasus and Black Sea in the east. (Vvedenskij 1955; Kotov 1960; Mayer 1972; Aigare *et al.* 1985; Prokudyn *et al.* 1987; Baleviciene 1992; Ingelög *et al.* 1993; Sachanka *et al.* 1993;). The new locality discovered in Poland is about 300 km from the nearest localities in Ukraine (Fig. 2). As *P. kaufmannii* occurs in a seminatural plant community where it seems to be well settled it should probably be treated as a hemiagriophyte (Kornaś 1990).

**Fig. 2.** Distribution of *Pedicularis kaufmannii* Pinzger (after Hulten & Fries 1986, modified). ♦ – new locality.

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REFERENCES

- AIGARE V., ANDRUŠAITIS G., LIPSBERGS J., LODZINA I. & TABAKA L. (eds). 1985. Sarkana gramata Latvijas PSR [Red Data Book of the Latvian SSR]. 527 pp. Zinatne, Riga (in Latvian).
- BALEVICIENE J. 1992. Kaufmano glinde. – In: K. BALEVIČIUS (ed.), Lietuvos raudonoji knyga [Red Data Book of Lithuania]. 220 pp. Lietuvos Respublikos Aplinkos Apsangos Departamentas, Vilnius (in Lithuanian).
- KOTOV M. I. 1960. Scrophulariaceae. – In: A. I. BARBARIČ, O. D. VISJUDINA, J. D. KARNAUCH, M. V. KLOKOV & M. I. KOTOV (eds), Flora URSSR. **9**, pp. 405–631. Vidav. Akademii Nauk Ukrainskoy RSR, Kiev (in Ukrainian).
- HULTEN E. & FRIES M. 1986. Atlas of North European vascular plants north of the tropic of cancer. **2**, pp. xi + 499–968. Koeltz Sc. Books, Königstein.
- INGELÖG T., ANDERSON R. & TJERUBERG M. (eds). 1993. Red Data Book of the Baltic Region. Part **1**. 95 pp. Swedish Threatened Species Unit, Uppsala in cooperation with Institute of Biology, Riga.
- JASIEWICZ A. 1963. *Pedicularis* L. – In: B. PAWŁOWSKI (ed.), Flora polska [“Flora of Poland”]. **10**, pp. 339–352. Państwowe Wydawnictwo Naukowe, Warszawa – Kraków (in Polish).
- KORNAŚ J. 1990. Plant invasions in Central Europe: historical and ecological aspects. – In: F. DI CASTRI, A. J. HANSEN & M. DEBURSCHE (eds), Biological invasions in Europe and the Mediterranean Basin. – Monogr. Biol. **65**: 19–36.
- MAYER E. 1972. *Pedicularis* L. – In: T. G. TUTIN, V. H. HEYWOOD, N. A. BURGES, D. M. MOORE, D. H. VALENTINE, S. M. WALTERS & D. A. WEBB (eds), Flora Europaea. **3**, pp. 269–276. Cambridge University Press, Cambridge.
- MIREK Z., PIĘKOŚ-MIRKOWA H., ZAJĄC A. & ZAJĄC M. 1995. Vascular plants of Poland: a checklist – Polish Bot. Stud. Guideb. Ser. **15**: 1–308.
- PROKUDYN J. N., DOBROCHAEVA D. N., ZAVERUKHA B. V., CHOPIK V. I., PROTOPOPOVA V. V. & KRITZKA L. I. (eds). 1987. Opredelitel' vyschikh rasteniy Ukrayiny [“Vascular plants of Ukraine”]. 548 pp. Naukova Dumka, Kiev (in Russian).
- SACHANKA B. I., KURLOVICH M. M., MALASEVICH J. V., SAMUEL S. P. & KHAURATOVICH I. P. (eds). 1993. Chyrvonaya kniga Respubliki Belarus' [“Red Book of Belarus”]. 560 pp. Belaruskaja Encyklopädyja, Minsk (in Belorussian).
- VVEDENSKIY A. I. 1955. Mytnik – *Pedicularis* L. – In: B. K. ŠIŠKIN & E. G. BOBROV (ed.), Flora SSSR [Flora URSS]. **22**, pp. 687–795. Akademija Nauk SSSR, Moskva – Leningrad (in Russian).