

New localities of *Symphyotrichum ciliatum* (Asteraceae) in Poland

Marcin Nobis & Artur Pliszko

New localities of *Symphyotrichum ciliatum* (Asteraceae) in Poland. – Acta Mus. Siles. Sci. Natur. 65: 283-286, 2016.

Abstract: The paper presents two new records of *Symphyotrichum ciliatum* in Poland with information on its population size and habitat. Distribution map of the species in Poland based on the ATPOL cartogram method is provided.

Key words: alien species, distribution, human-made habitats, vascular plants

Introduction

Symphyotrichum ciliatum (Ledeb.) Nesom belongs to the Asteraceae family. It is an annual plant which can reach up to 60 cm in height and flowers between August and October (Brouillet *et al.* 2006, Tucharz *et al.* 2011). Its native range comprises North America and Central Asia where it occurs on moist brackish soils, in prairies, steppes, salt marshes as well as in human-made habitats such as winter-salted highways, railways and waste ground (Brouillet *et al.* 2006). North American and European populations of the species are diploid, $2x=14$ (Nesom 1994, Mraz 2005, Brouillet *et al.* 2006, Tucharz *et al.* 2011), and the number of chromosomes is considered an important character in distinguishing plants from the genus *Brachyactis* Ledeb. ($x=9$) and the genus *Symphyotrichum* Nees ($x=7$) (Tucharz *et al.* 2011). In Central Europe, occurrence of *S. ciliatum* has been recorded in several countries, i.e. Moldova, Poland, Romania, Russia, Slovakia, Ukraine (Tucharz *et al.* 2011, Sîrbu *et al.* 2015). In Poland, *S. ciliatum* was reported for the first time by Guzik (2002, 2003) from Kraków, and a few years later, its occurrence was also confirmed in the central and south-eastern parts of the country (Bróz & Podgórska 2005, Nobis *et al.* 2006, Szymański 2010, Tucharz 2011, Oklejewicz 2012, Stadnicka-Futoma & Oklejewicz 2013, Nobis & Nobis 2015). *Symphyotrichum ciliatum* is an established species in Poland being considered as potentially invasive (Tokarska-Guzik *et al.* 2012). As it was evidenced in Romania (Sîrbu *et al.* 2015) it can pose a threat to native flora, especially when its diaspores drift into the stands of inland salt marshes (Nobis & Nobis 2015).

New localities

During field studies conducted in 2016 in Poland, the authors found two new localities of *Symphyotrichum ciliatum* located in the central and southern parts of the country (Fig. 1):

- 1) Nasiłów near Puławy, three individuals, on the roadside, between the stones on the left bank of the Vistula River (Fig. 2), 51°21'7.37"N/ 21°58'46.18"E, ATPOL square: FE13, 29 September 2016, M. Nobis (KRA);
- 2) Mogilany near Kraków, several dozen individuals in two small patches, on the roadside near the Zakopianka road (Fig. 3), 49°55'56.7"N/19°53'21.36"E and 49°55'55.98"N/19°53'20.52"E, ATPOL square: DF89, 14 September 2016, A. Pliszko (KRA).

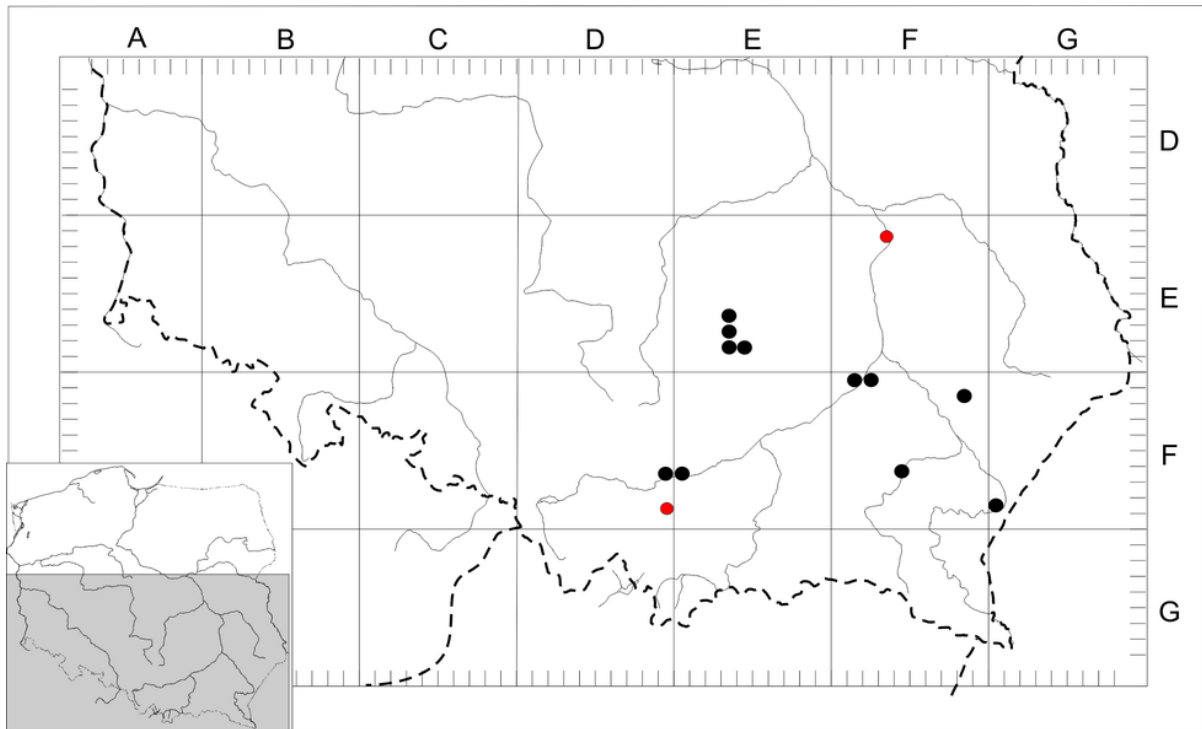


Fig 1: Distribution map of *Symphyotrichum ciliatum* in Poland based on the ATPOL cartogram method (Zając 1978). New localities are indicated with red dots.



Fig 2: *Symphyotrichum ciliatum* in Nasilów near Puławy (photo by M. Nobis).



Fig 3: *Symphyotrichum ciliatum* in Mogilany near Kraków (photo by A. Pliszko).

References

- Brouillet L., Semple J.C., Allen G.A., Chambers K.L. & Sundberg S.D. (2006): *Symphyotrichum* Nees. pp. 465-539. In: Flora of North America Editorial Committee (eds): Flora of North America, vol. 20, Oxford University Press, New York, Oxford.
- Bróz E. & Podgórska M. (2005): *Symphyotrichum ciliatum* (*Brachyactis ciliata*) (*Asteraceae*) w Polsce. – *Fragm. Flor. Geobot. Polonica* 12(2): 291-299.
- Guzik J. (2002): Hałda Huty im. Sendzimira w Krakowie – miejscem występowania interesujących obcych gatunków roślin. Sesja Naukowa: Hałda przemysłowa – obiekt obserwacji procesów biologicznych, p. 7. Uniwersytet Śląski w Katowicach.
- (2003): Hałda Huty im. Sendzimira w Krakowie – miejscem występowania interesujących obcych gatunków roślin. – *Arch. Ochr. Środ.* 29(2):13-19.
- Mraz P. (2005): Chromosome number and DNA ploidy level reports from Central Europe - 1. – *Biologia* (Bratislava) 60: 99-103.
- Nesom G.L. (1994): Review of the taxonomy of *Aster* sensu lato (*Asteraceae*: *Astereae*), emphasizing the New World species. – *Phytologia* 77: 141-297.
- Nobis M. & Nobis A. (2015): *Symphyotrichum ciliatum*. pp. 175-176. – In: Zając A. & Zając M. (eds): Distribution of kenophytes in the Polish Carpathians and their foreland. Institute of Botany, Jagiellonian University, Kraków.
- Nobis M., Nobis A. & Nowak A. (2006): *Typhetum laxmannii* (Ubrizsy 1961) Nedelcu 1968 - the new plant association in Poland. – *Acta Soc. Bot. Polon.* 77(5): 325-332.
- Oklejewicz K., Puszkar L. & Wolanin M. (2012): Stanowisko *Symphyotrichum ciliatum* (*Asteraceae*) w Rzeszowie. – *Fragm. Florist. Geobot. Polon.* 19(1): 197-199.

- Sîrbu C., Ferus P., Eliáš Jr. P., Samuil C. & Oprea A. (2015): *Symphotrichum ciliatum* in Romania: trends of spread and invaded plant communities. – *Open Life Sciences* 10: 147-164.
- Stadnicka-Futoma A. & Oklejewicz K. (2013): Nowe stanowisko *Symphotrichum ciliatum* (Asteraceae) na Przedgórzu Rzeszowskim. – *Fragm. Florist. Geobot. Polon.* 20(2): 386-388.
- Szymański W.M. (2010): Nowe stanowiska *Symphotrichum ciliatum* (Asteraceae) w Polsce. – *Fragm. Florist. Geobot. Polon.* 17(2): 415-416.
- Tokarska-Guzik B., Dajdok Z., Zając M., Zając A., Urbisz A., Danielewicz W. & Hołdyński C. (2012): Rośliny obcego pochodzenia w Polsce ze szczególnym uwzględnieniem gatunków inwazyjnych. Generalna Dyrekcja Ochrony Środowiska, Warszawa, 197 pp.
- Tucharz M., Nobis A. & Nobis M. (2011): Chromosome data - a useful tool in taxonomy of *Symphotrichum ciliatum*. – *Acta Biol. Cracov. Ser. Botanica* 53: 117-119.
- Zając A. (1978): Atlas of distribution of vascular plants in Poland (ATPOL). – *Taxon* 27: 481-484.

Authors' addresses: Marcin Nobis & Artur Pliszko, Institute of Botany, Jagiellonian University,
Kopernika 27, 31-501 Kraków, Poland
E-mail: m.nobis@uj.edu.pl (corresponding author)