ISSN 2336-3193 DOI: 10.1515/cszma-2016-0012

Published: online August 2016, in print 1st September 2016

Erigeron acris subsp. baicalensis (Asteraceae), a new combination in Asian Erigeron

Artur Pliszko

Erigeron acris subsp. *baicalensis* (Asteraceae), a new combination in Asian *Erigeron*. – Acta Mus. Siles. Sci. Natur. 65: 97-100, 2016.

Abstract: Erigeron acris subsp. baicalensis (Botsch.) A. Pliszko is proposed as a new combination for Asian E. baicalensis Botsch.

Key words: Erigeron sect. Trimorpha, nomenclature, plant taxonomy, Siberia.

Introduction

Erigeron baicalensis Botsch. (Asteraceae) occurs on mountain meadows and steppe slopes in Eastern Russia (eastern and southern Siberia) and northern Mongolia (Botschantzev 1959, FloraGREIF 2010+). It belongs to Erigeron sect. Trimorpha (Cass.) DC. which consists of perennial, biennial or annual herbs with three types of flowers in each capitulum, i.e. outer female ray flowers with filiform lamina, inner female ray flowers without lamina and inner bisexual disc flowers (Šída 1998, Nesom 2008). According to Botschantzev (1959) and Šída (1998), E. baicalensis is morphologically very similar to Eurasian E. podolicus Besser, however, it can be distinguished from the latter species by less numerous cauline leaves, less numerous and larger capitula, as well as by shorter peduncles. Moreover, both species do not overlap in geographical distribution (Botschantzev 1959). Considering that E. podolicus and several other closely related European and Eurasian taxa of Erigeron sect. Trimorpha are currently treated as the subspecies of E. acris L. (Greuter 2003, 2006+, Greuter & Raab-Straube 2005), I assumed that there is a need to transfer E. baicalensis at subspecies rank to E. acris. The recognition of subspecies within the *E. acris* complex is based on the fact that its members are morphologically very similar to each other, and they are more or less geographically isolated (Halliday 1976, Greuter 2003, 2006+, Pliszko 2015).

Material and methods

Morphological characters of *Erigeron baicalensis* were critically revised based on nine scanned herbarium sheets of specimens deposited in LE, including the type specimens (Fig. 1–2), and compared with the data from the literature (Botschantzev 1959, Šída 1998).

Results and Discussion

Erigeron acris subsp. *baicalensis* (Botsch.) A. Pliszko, **comb. nov.** ≡ *Erigeron baicalensis* Botsch. in Shishkin, Fl. SSSR 25: 584. 1959. − Holotype: Russia, Zabaykalsky Krai, Nerchinsk Mountain District (near Kluczevskoje, Bolschoi Kadaluj), 6 Aug 1911, *V. Smirnov 4989* (LE! 01015465; isotype LE! 01015466).

Additional specimens examined: Russia. Southern Siberia, western shore of Lake Baikal, between 53°N and 55°N, 9 Jul 1928, V.N. Sukachev s.n. (LE! 01017362); eastern Siberia, Sakha (Yakutia) Republic, left bank of the Aldan River, 534 km from the estuary of the Maya River, 9 Aug 1928, G. Melvil s.n. (LE! 01017363); eastern Siberia, Sakha (Yakutia) Republic, Lena River valley, 8 Jul 1912, G. I. Dolenko s.n. (LE! 01017364); Buryat Republic, 1931, ? (LE! 01017365); Buryat Republic, Upper Angara river basin, 5 Aug 1912, V.N. Sukachev & G. Pop-

lavskaya s.n. (LE! 01017366); Zabaykalsky Krai, Nerchinsk, *Turchaninov s.n.* (LE! 01017367); Zabaykalsky Krai, Chita, left bank of the Ingoda River, 1923 (LE! 01017368).

Erigeron acris s. l. is considered to be a morphologically variable taxon, especially in indumentum, number of cauline leaves and arrangement of capitula (Halliday 1976, Pliszko 2015). The aforementioned features are important in taxonomy of Erigeron sect. Trimorpha (Šída 1998, Pliszko 2015). Morphological characters of the examined specimens of E. baicalensis, in my opinion, reflect the variability of E. acris under the level of subspecies. Erigeron baicalensis is similar in leaf shape to E. podolicus and E. acris s. str. but differs in having larger capitula. It resembles E. podolicus and E. acris s. str. in its indumentum as it is a plant densely covered by unbranched non-glandular trichomes on its stems, leaves and involucral bracts. Therefore, E. acris subsp. baicalensis is proposed as a new combination for better understanding the variability of E. acris s. l. In this respect, it is worth mentioning that Huber & Leuchtmann (1992), Huber & Nilsson (1995), Noyes (2000) and Jafari et al. (2015) demonstrated the close genetic affinity between many European, Eurasian and Asian taxa of Erigeron sect. Trimorpha.

Acknowledgements: I would like to thank the curatorial staff of the Herbarium of Vascular Plants of the V.L. Komarov Botanical Institute of the Russian Academy of Sciences in Saint Petersburg (LE) for providing me access to the scanned specimens of *Erigeron baicalensis* and for allowing me to use the scans of the type specimens in the publication. I am also grateful to the anonymous reviewer for valuable comments.

References

- Botschantzev V.P. (1959): *Erigeron.* pp. 191-288. In: Shishkin B.K. (ed.): Flora SSSR, vol. 25. Izdatelstwo AN SSSR, Moskva & Leningrad.
- FloraGREIF (2010+) [continuously updated]: Virtual Guide to the Flora of Mongolia. Computer Centre of University of Greifswald [online]. Published at http://greif.uni-greifswald.de/floragreif/ [accessed 20 March 2016].
- Greuter W. (2003): The Euro+Med treatment of Astereae (Compositae) generic concepts and required new names. Willdenowia 33: 45-47.
- (2006+) [continuously updated]: Compositae (pro parte majore).
 In: Greuter W. & Raab-Straube E. von (ed.), Compositae. Euro+Med Plantbase
 the information resource for Euro-Mediterranean plant diversity [online].
 Published at http://ww2.bgbm.org/EuroPlusMed/ [accessed 20 March 2016].
- Greuter W. & Raab-Straube E. von (eds) (2005): Euro+Med Notulae, 1. Willdenowia 35: 223-239.
- Halliday G. (1976): *Erigeron* L. pp. 116-120. In: Tutin T.G., Heywood V.H., Burges N.A., Moore D.M., Valentine D.H., Walters S.M. & Webb D.A. (eds): Flora Europaea, vol. 4. Cambridge University Press, Cambridge.
- Huber W. & Leuchtmann A. (1992): Genetic differentiation of the *Erigeron* species (Asteraceae) in the Alps: a case of unusual allozymic uniformity. Plant Syst. Evol. 183: 1-16.
- Huber W. & Nilsson Ö. (1995): Close genetic affinity of northern and other Eurasiatic *Erigeron* species. pp. 197-222. In: Hind D.J.N., Jeffrey C. & Pope G.V. (eds): Advances in Compositae Systematics. Royal Botanical Gardens, Kew.
- Jafari F., Kazempour Osaloo S. & Mozffarian V. (2015): Molecular phylogeny of the tribe Astereae (Asteraceae) in SW Asia based on nrDNA ITS and cpDNA *psbA-trnH* sequences. Willdenowia 45: 77-92.
- Nesom G.L. (2008): Classification of subtribe Conyzinae (Asteraceae: Astereae). Lundellia 11: 8-38.
- Noyes R.D. (2000): Biogeographical and evolutionary insights on *Erigeron* and allies (Asteraceae) from ITS sequence data. Plant Syst. Evol. 220: 93-114.
- Pliszko A. (2015): Taxonomic revision and distribution of *Erigeron acris* s.l. (Asteraceae) in Poland. Phytotaxa 208: 21-33.
- Šída O. (1998): Taxonomic problems in *Erigeron* sect. *Trimorpha* (Compositae) in Eurasia. Preslia 70: 259-269

Author's address: Artur Pliszko, Department of Plant Taxonomy, Phytogeography and Herbarium, Institute of Botany, Jagiellonian University in Kraków, Kopernika 31, 31-501 Kraków, Poland. E-mail: artur.pliszko@uj.edu.pl



Fig 1: Holotype of Erigeron baicalensis deposited in LE.



Fig 2: Isotype of Erigeron baicalensis deposited in LE