



Lectotypification of *Senecio praealtus* var. *borysthenicus* (Asteraceae)

Authors: Mosyakin, Sergei L., Shiyan, Natalia M., and Hodálová, Iva

Source: *Candollea*, 74(2) : 217-221

Published By: The Conservatory and Botanical Garden of the City of Geneva (CJBG)

URL: <https://doi.org/10.15553/c2019v742a10>

Lectotypification of *Senecio praealtus* var. *borysthenticus* (Asteraceae)

Sergei L. Mosyakin, Natalia M. Shiyán & Iva Hodálová

Abstract

MOSYAKIN, S.L., N.M. SHIYAN & I. HODÁLOVÁ (2019). Lectotypification of *Senecio praealtus* var. *borysthenticus* (Asteraceae). In English, English abstract. *Candollea* 74: 217–221. DOI: <http://dx.doi.org/10.15553/c2019v742a10>

Senecio praealtus var. *borysthenticus* DC. (Asteraceae) was described based on specimens from Ukraine provided by Wilibald S.J.G. von Besser (1784–1842) and annotated by Antoni L. Andrzejowski (1785–1868) as “*Senecio borysthenticus*”. This taxon was previously recognized as *Senecio borysthenticus* (DC.) Andrzej. ex Czern. and is currently accepted as *Jacobaea borysthentica* (DC.) B. Nord. & Greuter. A lectotype is designated for this name based on a specimen collected near the village of Kyslyakivka, Kherson Governorate (now Lymany, Mykolayiv Region, Ukraine), one of three original specimens studied by Augustin-Pyramus de Candolle (1778–1841) and deposited in G-DC. The authorship of *Senecio borysthenticus* and *Senecio jacobaea* var. *borysthenticus* is also discussed.

Keywords

ASTERACEAE – *Jacobaea* – *Senecio* – Nomenclature – Ukraine

Addresses of the authors:

SLM, NMS: M.G. Kholodny Institute of Botany, National Academy of Sciences of Ukraine, 2 Tereshchenkivska Street, Kyiv (Kiev), 01601, Ukraine.

E-mail: s_mosyakin@hotmail.com

IH: Plant Science and Biodiversity Centre, Institute of Botany, Slovak Academy of Sciences, Dúbravská cesta 9, 845 23 Bratislava, Slovak Republic.

Submitted on March 24, 2019. Accepted on October 22, 2019.

First published online on December 2, 2019.

ISSN: 0373-2967 – Online ISSN: 2235-3658 – *Candollea* 74(2): 217–221 (2019)

© CONSERVATOIRE ET JARDIN BOTANIQUES DE GENÈVE 2019

Introduction

The name *Senecio borysthenticus* (DC.) Andr. ex Czern. (= *S. praealtus* var. *borysthenticus* DC.) (Asteraceae) was widely applied to a mainly southern (steppe and partly forest-steppe zones) East European psammophytic taxon recognized as a distinct species of *Senecio* L. in many taxonomic treatments and floras (SCHISCHKIN, 1961; MINDEROVA, 1962; PRIVALOVA, 1969; POPESCU, 1972; CHATER & WALTERS, 1976; TZVELEV, 1986; KONECHNAYA, 1994).

After molecular phylogenetic studies have convincingly demonstrated the isolated position of the genus *Jacobaea* Mill. as distinct from *Senecio* s.s. (PELSE et al., 2002, 2004), *Senecio borysthenticus* was subsequently transferred to the genus *Jacobaea* as *J. borysthentica* (DC.) B. Nord. & Greuter (GREUTER & RAAB-STRAUBE, 2006). This name is currently widely accepted in botanical literature and databases (e.g., OSTAPKO et al., 2010; YENA, 2012; MOSYAKIN & YENA, 2017; GREUTER, 2019).

Typifications of names of some Ukrainian species of *Senecio* s.l. were published by SHIYAN et al. (2013) but *S. praealtus* var. *borysthenticus* has never been effectively lectotypified. This nomenclatural act is necessary for a correct application of that name in this taxonomically difficult group (see HODÁLOVÁ et al. 2015; MERED'A et al., 2016; MOSYAKIN, 2018).

Senecio praealtus var. *borysthenticus* was published by CANDOLLE (1838: 351) with the following diagnosis and geographical information: “β *Borysthenticus*, fol. lobis angustissimis acutis involucrisque glabris. – in pratis Podoliæ, Cherson. Russiæ circ. Borysth. (Bess.). Sen. Borysthenticus Andr. ex Bess. in litt. (v. s.)”. “*Senecio borysthenticus*” named by Antoni L. Andrzejowski (1785–1868) was communicated to Augustin-Pyramus de Candolle (1778–1841) by Wilibald S.J.G. von Besser (1784–1842). Besser provided (most probably in 1831) three specimens collected in western and southwestern Ukraine, somewhere in the southern part of the Podolian Governorate of the former Russian Empire (“in pratis Podoliæ”) and the Kherson Governorate near the Dnipro (Dnieper, Borysthenthes) River (“Cherson. Russiæ circ. Borysth.”). Those three original specimens are syntypes currently deposited in G-DC [G00471752, G00471753, G00471754].

We are aware of several other original specimens collected and annotated by Besser and Andrzejowski and deposited at present in the Besser and Turczaninow memorial collections in the National Herbarium of Ukraine (KW), and probably there are some more duplicates in other herbaria (such as LE). These original and some other historical specimens will be discussed in a separate article in the context of rather complicated issues of nomenclature, taxonomy and distribution of *Jacobaea borysthentica* and some of its related species.

Nomenclature

Jacobaea borysthentica (DC.) B. Nord. & Greuter in Willdenowia 36: 712. 2006.

= *Senecio praealtus* var. *borysthenticus* DC., Prodr. 6: 351. 1838. = *Senecio borysthenticus* (DC.) Andr. ex Czern., Consp. Pl. Charcov.: 32. 1859. = *Senecio jacobaea* var. *borysthenticus* (DC.) Trautv. in Bull. Cl. Phys.-Math. Acad. Imp. Sci. Saint-Petersbourg 12: 351. 1854.

Lectotypus (designated here): **UKRAINE. Reg. Mykolayiv:** “circa Kislakowka gub. Cherson. 29.” [Vitovs’ky Distr., Lymany], s.d., Anon. [Andrzejowski] s.n. (G-DC [G00471753]!). **Syntypi:** **UKRAINE. Reg. Mykolayiv:** “Kislakowka. Gub. Cherson”, s.d., Anon. [Andrzejowski] s.n. (G-DC [G00471752]!). **Reg. unknown:** “E pratis Pod[oliae]. austr.”, s.d., Anon. [Andrzejowski/Besser] s.n. (G-DC [G00471754]!) (Fig. 1).

Notes. – We designate the specimen G00471753 as lectotype as it is the most complete material and bears the most complete locality information precisely identifying the collection site as Lymany, formerly Kyslyakivka village, transliterated by ANDRZEJOWSKI (1823: 23) in Polish as “Kiślakówka”. Furthermore, it bears the annotation “*Senecio borysthenticus* Andr.” in Besser’s handwriting. The syntypes bear two other determinations: “*Senecio affinis tenuifolio borysthentico*” [G00471752] and “*Senecio tenuifolius? involucri squamis enerv. ciliatis apice spha[...]*” [G00471754].

Each original specimen in G-DC bears a blue label with words “Herb. W. Besser” typographically printed in the bottom right corner (Fig. 1). This blue paper is identical to the one used for publication of the first edition of Besser’s *Catalogue* (BESSER, 1810). The number “29” on the label of the lectotype has a stroke above, meaning 1829; that was Besser’s usual manner of indicating the year of collection or provenance. In that case it is the year of provenance by Besser and not the actual collection year, because Andrzejowski (who was the actual collector, based on historical data; see ANDRZEJOWSKI, 1823, 1830) visited the area not in 1829 but earlier, in the 1810s and early 1820s but not later than 1824.

The geographic location of the specimen G00471754 is uncertain because the label data indicating Southern Podolia may refer to any area in the southern part of the former Podolian Governorate, now partly in Khmelnytskyi (south), Vinnytsya (south), Odesa (north), and Mykolayiv (west) regions of Ukraine.

The authorship of the recombination *Senecio borysthenticus* was sometimes attributed to Leopold F. Gruner (GRUNER, 1869: 423), Sergei S. Stankov (STANKOV & TALIEV, 1949: 651; see CHATER & WALTERS, 1976), or to Boris K. Schischkin (SCHISCHKIN, 1961: 718). In fact, the species-rank combination was validated by Vasiliy M. Czerniaëw (also sometimes Romanized as Basilius Czernajew) (CZERNIAËW, 1859: 32),



Fig. 1 – Lectotype of *Senecio praedaltus* var. *borysthenicus* DC. in G-DC.

who cited this species under *Senecio* as “748. Borysthenicus. Andr. Ch. [Charkovia – Kharkiv]. In arenosis”. Czerniaëw partly misapplied that name to East Ukrainian specimens of *Jacobaea vulgaris* and (probably) *J. andrzejowskyi* (Tzvelev) B. Nord. & Greuter as it is evident from his herbarium specimens at KW. The authorship of the combination *Senecio jacobaea* var. *borysthenicus* was occasionally attributed in literature to Ivan Fedorovich (Johannes Theodor) Schmalhausen (SCHMALHAUSEN, 1886) or L.F. Gruner (GRUNER, 1869). However, this combination (as “*borysthénica*”) was validated already in 1854 by Ernst R. von Trautvetter (TRAUTVETTER, 1854: 351; see also TRAUTVETTER, 1855: 131), with the direct reference to the basionym and to the unpublished species-rank name proposed by Andrzejowski.

Acknowledgments

We are grateful to Laurent Gautier, Fred Stauffer, and Nicolas Fumeaux (Conservatoire et Jardin botaniques, Genève, Switzerland) for facilitating herbarium research of Sergei Mosyakin at G in August 2017. Our gratitude is due to Karol Marhold and Pavol Meredá Jr. (Botanický ústav SAV / Institute of Botany, Slovak Academy of Sciences, Bratislava, Slovakia) for discussing some aspects of taxonomy of *Jacobaea*; to Alisa V. Shumilova and Svitlana I. Antonenko (M.G. Kholodny Institute of Botany, National Academy of Sciences of Ukraine, Kyiv, Ukraine) for providing assistance during our herbarium research at KW, and to Martin Callmander and Lorenzo Ramella (Conservatoire et Jardin botaniques, Genève, Switzerland) for their valuable editorial comments and suggestions.

References

- ANDRZEJOWSKI, A. (1823). *Rys botaniczny krain zwiedzonych w podrózach pomiędzy Bohem i Dniestrem od Zbruczy aż do Morza Czarnego odbytych w latach 1814, 1816, 1818 i 1822*. Nakładem i drukiem Józefa Zawadzkiego, typografa Imperatorskiego Uniwersytetu, Wilnius.
- ANDRZEJOWSKI, A. (1830). *Rys botaniczny krain zwiedzonych w podrózach pomiędzy Bohem a Dniestrem aż do uścia tych rzek w morze odbytych w latach 1823 i 1824*. Ciąg 2. Nakładem i drukiem A. Marcinowskiego, Wilnius.
- BESSER, W.S.J.G. (1810). *Catalogue des Plantes du Jardin Botanique de Krzemieniec en Volhynie*. Kremenets.
- CANDOLLE, A.-P. DE (1838). *Prodromus systematis naturalis regni vegetabilis*. Vol. 6. Treuttel et Würtz, Paris.
- CHATER, A.O. & S.M. WALTERS (1976). *Senecio*. In: TUTIN, T.G. et al. (ed.), *Fl. Eur.* 4: 191–205.
- CZERNIAËW, B.M. (1859). *Conspectus plantarum circa Charcoviam et in Ucraina sponte crescentium et vulgo cultarum*. Typis Univ., Charcovia [Kharkiv].
- GREUTER, W. (2019). Compositae. In: *Euro+Med Plantbase – the information resource for Euro-Mediterranean plant diversity* [<http://ww2.bgbm.org/EuroPlusMed/PTaxonDetail.asp?NameId=14103&PTRefFk=7000000>].
- GREUTER, W. & E. VON RAAB-STRAUBE (ed.) (2006). *Euro+Med Notulae*, 2. *Willdenowia* 36: 707–717.
- GRUNER, L.F. (1869). Enumeratio plantarum, quas anno 1865 ad flumina Borysthenum et Konkam Inferiorem in Rossiae australis provinciis Catherinoslaviensi et Taurica collegit Mag. L. Gruner [Part 2]. *Bull. Soc. Imp. Naturalistes Moscou* 41: 406–459.
- HODÁLOVÁ, I., P. MERED’A JR., J. KUČERA, K. MARHOLD, M. KEMPA, K. OLŠAVSKÁ & M. SLOVÁK (2015). Origin and systematic position of *Jacobaea vulgaris* (Asteraceae) octoploids: genetic and morphological evidence. *Pl. Syst. Evol.* 301: 1517–1541.
- KONECHNAYA, G.Yu. (1994). *Senecio*. In: TZVELEV, N.N. (ed.), *Fl. Partis Europaeae URSS* 7: 52–63. [In Russian]
- MERED’A, P. JR., J. KUČERA, K. MARHOLD, D. SENKO, M. SLOVÁK, M. SVITOK, B. ŠINGLIAROVÁ & I. HODÁLOVÁ (2016). Ecological niche differentiation between tetra- and octoploids of *Jacobaea vulgaris*. *Preslia (Praha)* 88: 113–136.
- MINDEROVA, E.V. (1962). *Senecio*. In: ZEROV, D.K. & O.D. VISYULINA, *Fl. Ukrainian SSR* 11: 371–411. [In Ukrainian]
- MOSYAKIN, S.L. (2018). “*Senecio ucranicus*” Besser (1822) versus *Senecio ucranicus* Hodálová (1999) and *Jacobaea borysthénica* (Asteraceae): a nomenclatural clarification. *Novosti Sist. Vyssh. Rast.* 48: 126–130.

- MOSYAKIN, S.L. & A.V. YENA (2017). *Jacobaea taurica* (Asteraceae), the new combination for a Crimean protected species. *Ukrayins'k. Bot. Zhurn.* 74: 303–309.
- OSTAPKO, V.M., A.V. BOIKO & S.L. MOSYAKIN (2010). *Vascular plants of the Southeast of Ukraine*. Knowledge Publ., Donetsk. [In Russian]
- PELSE, P.B., B. GRAVENDEEL & R. VAN DER MEIJDEN (2002). Tackling speciose genera: species composition and phylogenetic position of *Senecio* sect. *Jacobaea* (Asteraceae) based on plastid and nrDNA sequences. *Amer. J. Bot.* 89: 929–939.
- PELSE, P.B., C. VAN DEN HOF, B. GRAVENDEEL & R. VAN DER MEIJDEN (2004). The systematic value of morphological characters in *Senecio* sect. *Jacobaea* (Asteraceae) as compared to DNA sequences. *Syst. Bot.* 29: 790–805.
- POPESCU, A. (1972). O specie nouă pentru flora României – *Senecio borysthenicus* Andrz. *Acta Horti Bot. Bucurest.* [1970–1971]: 589–592.
- PRIVALOVA, L.A. (1969). *Senecio*. In: WULFF, E.V. (ed.), *Fl. Taurica* 3(3): 225–231. [In Russian]
- SCHISCHKIN, B.K. (1961). *Senecio*. In: SCHISCHKIN, B.K. & E.G. BOBROV (ed.), *Fl. URSS* 26: 699–788. [In Russian]
- SCHMALHAUSEN, I.F. (1886). *Flora of South-Western Russia, or Governorates of Kiev, Volhynia, Podolia, Poltava, Chernigov, and adjacent territories*. O.V. Kulzhenko Publ., Kiev. [In Russian]
- SHIYAN, N.M., S.L. MOSYAKIN & M.M. FEDORONCHUK (2013). Typification of taxa of the family Asteraceae in the flora of Ukraine: genera *Scorzonera* L., *Senecio* L., *Serratula* L., *Solidago* L., *Sonchus* L. *Ukrayins'k. Bot. Zhurn.* 70: 42–44. [In Ukrainian]
- STANKOV, S.S. & V.I. TALIEV (1949). *Identification manual of higher plants of the European part of the USSR*. Sovetskaya Nauka, Moscow. [In Russian]
- TRAUTVETTER, E.R. (1854). Ueber die Seneciones des Kiewschen Gouvernements. *Bull. Cl. Phys.-Math. Acad. Imp. Sci. Saint-Petersbourg* 12(21–22): 350–352.
- TRAUTVETTER, E.R. (1855). Ueber die Seneciones des Kiewschen Gouvernements. *Mélanges Biol. Bull. Phys.-Math. Acad. Imp. Sci. Saint-Petersbourg* 2(2): 129–133. [Reprinted from TRAUTVETTER, 1854]
- TZVELEV, N.N. (1986). De plantarum speciebus nonnullis pro parte Europaea URSS novis et raris. *Novosti Sist. Vyssh. Rast.* 23: 254–263. [In Russian]
- YENA, A.V. (2012). *Spontaneous flora of the Crimean Peninsula*. N. Orianda Publ., Simferopol. [In Russian]