

## “*Senecio ucranicus*” Besser (1822) versus *Senecio ucranicus* Hodálová (1999) and *Jacobaea borysthenea* (*Asteraceae*): a nomenclatural clarification

### “*Senecio ucranicus*” Besser (1822) versus *Senecio ucranicus* Hodálová (1999) и *Jacobaea borysthenea* (*Asteraceae*): номенклатурное уточнение

S. L. Mosyakin

M. G. Kholodny Institute of Botany, National Academy of Sciences of Ukraine  
Department of Systematics and Floristics of Vascular Plants  
Tereshchenkivska Str., 2, Kyiv (Kiev), 01601, Ukraine  
s\_mosyakin@hotmail.com

С. Л. МОСЯКИН

Институт ботаники им. Н. Г. Холодного НАН Украины  
Отдел систематики и флористики сосудистых растений  
ул. Терещенковская, 2, Киев, 01601, Украина  
s\_mosyakin@hotmail.com

**Abstract.** It is demonstrated that the name “*Senecio ucranicus*” has never been validated by Besser (1822) because he did not accept that name; moreover, this binomial is non-existing because the word “*ucranicus*” was not intended as a species epithet. The unnamed species № 1082 discussed and compared to some other taxa by Besser in his “Enumeratio...” is identifiable as the currently recognized species *Jacobaea borysthenea* (*Senecio borystheneus*). Consequently, the name *S. ucranicus* Hodálová (1999) proposed for a Carpathian species of *Senecio* s. str. is legitimate, and the name *S. hercynicus* Herborg subsp. *ucranicus* should be considered a nomenclatural combination with the authorship “(Hodálová) Greuter”. Synonymy of *Jacobaea grandidentata* is briefly discussed and updated.

**Keywords:** “*Senecio ucranicus*”, *Senecio ucranicus*, *Jacobaea borysthenea*, *Asteraceae*, nomenclature.

**Аннотация.** Показано, что название “*Senecio ucranicus*” Besser не было действительно обнародовано, поскольку В. Г. Бессер (Besser, 1822) не принял это название; более того, слово “*ucranicus*” не предназначалось автором в качестве видового эпитета. Вид без принятого названия, приведенный Бессером в “Enumeratio...” под номером 1082, с обсуждением и сравнением с некоторыми другими таксонами, сейчас известен под принятым позднее названием *Jacobaea borysthenea* (*Senecio borystheneus*). Таким образом, название *S. ucranicus* Hodálová (1999), предложенное для карпатского вида *Senecio* s. str., является законным, а название *S. hercynicus* Herborg subsp. *ucranicus* должно рассматриваться как номенклатурная комбинация с авторством “(Hodálová) Greuter”. Кратко обсуждена и уточнена синонимика *Jacobaea grandidentata*.

**Ключевые слова:** “*Senecio ucranicus*”, *Senecio ucranicus*, *Jacobaea borysthenea*, *Asteraceae*, номенклатура.

### Introduction

In the course of ongoing nomenclatural and taxonomic studies of various East European taxa, including species of *Senecio* L. and *Jacobaea* Mill. (*Asteraceae*), especially those occurring in southern and western Ukraine, several nomenclatural problems were addressed (Mosyakin, Yena, 2017, and manuscripts in preparation). In particular, when preparing an article (in progress) on nomenclature (including lectotypification) and taxonomy of *Jacobaea borysthenea* (DC.) B. Nord. et Greuter, I considered also a relevant issue of the nomenclatural status of the name *S. ucranicus*, which is briefly reported below.

### Results and discussion

A species of *Senecio* L. sensu stricto was described from Ukraine in 1999 as *S. ucranicus* Hodálová (1999:

334). However, in IPNI (2017–onward; accessed 31 August and 21 November 2017) this name was listed as “nom. illeg. later homonym non Besser (1822)”, and the homotypic name *S. hercynicus* Herborg subsp. *ucranicus* Greuter (2003: 247; originally published as a new combination based on *S. ucranicus* Hodálová) was cited as a replacement name for the supposedly illegitimate name *S. ucranicus* Hodálová. However, the supposedly valid name “*Senecio ucranicus*” Besser is not in current use; moreover, if it is indeed valid, it might be the earliest available species-rank name for the taxon currently accepted as *Jacobaea borysthenea* (DC.) B. Nord. et Greuter (= *Senecio borystheneus* (DC.) Andr. ex Czern.).

Already in 1822, long before the epithet “*borystheneus*” has been validated in *Senecio* [as *S. praealtus* Bertol. var. *borystheneus* DC. (Candolle, 1838: 351), now accepted as *Jacobaea borysthenea*], W. G. Besser (1822:

33) in his “Enumeratio...” discussed a taxonomically problematic species from Ukraine, which he considered to be related to *S. jacobaea* L. (now *Jacobaea vulgaris* Gaertn.), and compared that species to some other similar taxa, such as *S. arenarius* M. Bieb. (non Thunb. 1800), *S. tenuifolius* Jacq. 1775 (non Burm. f. 1768), and *S. erucifolius* L. It should be noted also that one specimen (G!, G00471754, a syntype of *S. praealtus* var. *borystheneus*; lectotype to be designated in a special article, in progress) provided by Besser to A. P. de Candolle was annotated (also by Besser) as “*Senecio tenuifolius?*”.

Besser (1822: 33) listed under his number 1082 the following names:

(*arenarius*. MB. *In lit.*

(*tenuifolius*. Ucranicus. *Cat. h. Cremen. 1816. p. 129.*

The following discussion was provided (Besser, 1822: 33): “Species haec mihi nondum clara. Possideo specimen siccum inscriptum “Folia subcarnosa, sicut tota planta incana. Affinis *S. erucae-folio*” ab ipso Auctore. Specimina nostri Senecionis ucranici cum illo communicate declarat pro *S. arenario*, ast nostri folia nec subcarnosa, nec similia specimini prius memorato ex Rossiae minoris arena mobile; neque similis *S. erucae-folia* ab Ill. Steven mecum communicato. Nostrum non esse. *S. tenuifolium* austriacum patet ex calyce (Confer. *Cat. H. Cremen. l. c.*) Foliorum forma variabilis uti affinium”.

It is evident from that discussion that Besser considered this taxon № 1082 as an insufficiently known species that was earlier referred to as *S. arenarius* (at that time it was an unpublished provisional name proposed by F. A. Marschall von Bieberstein) and as *S. tenuifolius* sensu Besser (1816), non Jacquin sensu stricto, but different from both those entities. Thus, by the word “Ucranicus” following the epithet “*tenuifolius*” Besser simply indicated that the name *S. tenuifolius* was (mis)applied by him in 1816 (Besser, 1816: 129) to Ukrainian plants. In modern terms, it is equivalent to the following citation: “*S. tenuifolius* sensu Besser (1816), quoad pl. ucr., non Jacquin (1775)”. Indeed, *Senecio “tenuifolius* Jacq. 1\*) A.” is mentioned by Besser (1816: 129) in his “Catalogus...”; the name is accompanied by a description [footnote 1\*)] on page 128: “Radius lineam latus patentissimus, apice reflexo emarginatus. Calyculi squamae subsphacelatae adpressae. Bractea patulae. Folia obscure viridia, laciniis angustis”. The letter “A.” after the plant name indicates that the specimens were collected and/or provided to Besser by A. L. Andrzejowski (see Besser, 1816: 156).

It is also worth mentioning that in the phrase “Specimina nostri Senecionis ucranici...” (meaning “Our specimens of Ukrainian *Senecio*...”) the words “Senecionis ucranici” are not given in italics, in contrast to

Latin names of other species accepted by Besser (1822) in his “Enumeratio...” It means that, in this context and for that taxon, the word “Ucranicus” was not intended by Besser as a specific epithet (Art. 23.6(b) of ICN: McNeill et al., 2012).

I was unable to find any mention of the name “*S. ucranicus*” attributed to or associated with Besser in other works by Besser and in numerous publications of other authors, including A. L. Andrzejowski (1823, 1830, 1862, 1869), E. R. Trautvetter (1854, 1855, 1883), L. F. Gruner (“1868”, published 1869), V. V. Montresor (1886), I. F. Schmalhausen (1886, 1897), B. K. Schischkin (1961), G. Yu. Konechnaya (1994) and many others. The name “*S. ucranicus*” is also not mentioned on labels of herbarium specimens of *Senecio* sensu lato in the Besser memorial collection held at KW (National Herbarium of Ukraine – Herbarium of the M. G. Kholodny Institute of Botany). In 1823 in his comparative botanical and geographical analysis of Volhynia and Podolia Besser (1823: 212) mentioned only the name “*Senecio arenarius* M. B.? Enum. n. 1082, p. 30” (in fact, page 33 in Besser, 1822), but not “*S. ucranicus*”. The total absence of the name “*S. ucranicus*” in publications by Andrzejowski (see above, incl. 1862) is especially important, since Andrzejowski closely collaborated with Besser and was well familiar with Besser’s publications and herbarium specimens. Consequently, Besser (1822) neither validated nor accepted (Art. 23.6(b) and Art. 36.1(a) of ICN: McNeill et al., 2012) the name “*S. ucranicus*” and left his species № 1082 unnamed because he was yet uncertain about its taxonomic status.

The real identities of the three species names mentioned by Besser (1822) for comparison in his discussion under his species № 1082 is rather evident:

(1) *S. arenarius* M. Bieb. is currently recognized as *Jacobaea grandidentata* (Ledeb.) Vasjukov (in Raab-Straube, Raus 2015: 452); see Greuter, Raab-Straube (2006), Iamonico, Managlia (2015), Vasjukov in Raab-Straube, Raus (2015), IPNI (2017–onward), and discussion and updated synonymy below;

(2) *S. tenuifolius* Jacq. (1775, non Burm. f. 1768) is now accepted as *J. erucifolia* (L.) G. Gaertn., B. Mey. et Scherb. subsp. *tenuifolia* (J. Presl et C. Presl) B. Nord. et Greuter (= *J. tenuifolia* J. Presl et C. Presl: see Greuter, Raab-Straube, 2006), and

(3) *S. erucifolius* L. is *J. erucifolia* subsp. *erucifolia*.

Moreover, there is almost no doubt that the species № 1082 (in the sense of “*tenuifolius*. Ucranicus. *Cat. h. Cremen. 1816. p. 129*”), as discussed in Besser’s text, corresponds to the species currently accepted as *Jacobaea borysthenea*. If we just assume, as a thought experiment, that the name “*S. ucranicus*” was validly

published by Besser in 1822 [because Besser clearly provided morphological differences of Ukrainian plants distinguishing them from taxa discussed under the names *S. arenarius* M. Bieb. and *S. tenuifolius* Jacq., and also made a reference to a short Latin description of “*S. tenuifolius* Jacq. 1\*) A.” in Besser (1816)], then the supposed species epithet “ucranicus” in *Senecio* sensu lato would have priority over the epithet “*borysthenticus*” and the new combination would be needed for the species currently widely recognized and accepted as *Jacobaea borysthencica*, which will not serve nomenclatural stability in the group.

The mention the name “*Senecio arenarius* M. B.?” in Besser (1823: 212, see above), with the reference to Besser (1822) poses another question: should that be viewed as the validation of the name *S. arenarius* M. Bieb. [ex Besser]? According to Art. 36.1 of ICN (McNeill et al., 2012), “Art. 36.1(a) does not apply to names published with a question mark or other indication of taxonomic doubt, yet accepted by their author”. From that viewpoint, Besser in 1823 accepted that name, although with some doubt. Moreover, in 1822 Besser mentioned the specimen obtained from Marschall von Bieberstein, and cited its label: “*Folia subcarnosa, sicut tota planta incana. Affinis S. erucae-folio*”. No other description of *S. arenarius* was provided in Besser (1822), and the name was definitely not accepted there. Besser simply mentioned that name for comparison, but indicated that the unnamed species № 1088 (to which his description and discussion apply) is not the same as *S. arenarius* sensu M. Bieb. If the above citation of the specimen (with a brief description copied from the label, and indication of differences from other taxa) is to be viewed as a sufficient validating description, which, I think, is the case, then the name *S. arenarius* M. Bieb. ex Besser was indeed validated by Besser in 1823, who accepted the name (although with some doubt indicated by the question mark) and provided an unequivocal reference to his “Enumeratio...”

The species name *S. arenarius* was also mentioned or accepted later by Eichwald (1830: 148), Andrzejowski (1823: 19, 49; 1830: 40; 1862: 103, with indirect reference: “6. *arenarius* MB. *erucae-folius* Enum. Bess.”), and by some other authors.

In any case, the exact date of validation and the authorship of the name *S. arenarius*, as applied to East European plants, is nomenclaturally irrelevant because this name is illegitimate, being a later homonym of *S. arenarius* Thunb. described in 1800 from South Africa. The complicated synonymy of *Jacobaea grandidentata* is well summarized by Vasjukov (in Raab-Straube, Raus, 2015), with only one minor correction and one addition needed: (1) the name *S. arenarius* was vali-

dated by Besser in 1823, not in 1822, and (2) the name *S. erucifolius* ≡ [var.] *arenarius* Schmalh. was validated (with a brief description in Russian and indirect reference to Marschall von Bieberstein) by Schmalhausen (1886: 308).

The updated synonymy of *Jacobaea grandidentata* is provided below.

***Jacobaea grandidentata*** (Ledeb.) Vasjukov, 2015, in Raab-Straube a. Raus, Willdenowia, 45: 452. ≡ *Senecio grandidentatus* Ledeb. 1845, Fl. Ross. 2: 636. ≡ *S. erucifolius* L. subsp. *grandidentatus* (Ledeb.) V. E. Avet. 1971, Биол. журн. Армении, 24(11): 44.

= *Senecio arenarius* M. Bieb. in Besser (1822), nom. inval. (not accepted by Besser). ≡ *S. arenarius* M. Bieb. ex Besser, 1823, Мém. Soc. Nat. Moscou, 6: 212, nom. illeg. (non Thunb. 1800). ≡ *S. erucifolius* L. var. *arenarius* Schmalh. 1886, Фл. Юго-Зап. Росс.: 308. ≡ *S. erucifolius* L. subsp. *arenarius* Soó, 1969, Acta Bot. Acad. Sci. Hung. 15: 346, nom. inval. ≡ *Jacobaea arenaria* E. Wiebe, 2000, Turczaninowia, 3(4): 62, nom. inval. ≡ *Jacobaea erucifolia* (L.) G. Gaertn., B. Mey. et Scherb. subsp. *arenaria* B. Nord. et Greuter, 2006, in Greuter a. Raab-Straube, Willdenowia, 36: 712, nom. inval. (see Besser 1822, 1823; Schmalhausen 1886; Soó, 1969; Wiebe, 2000; Greuter, Raab-Straube, 2006; Raab-Straube, Raus, 2015).

## Conclusion

Since the name “*S. ucranicus*” has never been in fact validated by Besser or by subsequent authors before Hodálová (1999), the name *S. ucranicus* Hodálová applicable to a Carpathian species of *Senecio* s. str. is thus legitimate, and the name *S. hercynicus* subsp. *ucranicus* should be considered a nomenclatural combination with the authorship “(Hodálová) Greuter”, as it has been done in the original publication (Greuter, 2003).

## Acknowledgments

I am grateful to Dr. Iva Hodálová and Dr. Pavol Mreďa Jr. (Botanický ústav SAV / Institute of Botany, Slovak Academy of Sciences, Bratislava, Slovakia) for productive discussion.

## 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. [Ciąg 1.] Wilno: J. Zawadzki; typ. Imp. Uniw. viii + 127 p.
- 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. Wilno: A. Marcinowski. vii + 93 p.

- Andrzejowski A. 1862. Continuatio enumerationis plantarum sponte in Gubernio Podolico et locis adjacentibus crescentium // *Universitetskie Izvestiya* (Kiev). [Vol.] 1862, № 7. P. 94–142. [In Latin] (Андржейовский А. 1862. Продолжение исчисления растений Подольской губернии и смежных с нею мест // *Университетские известия* (Киев). [Т.] 1862, № 7. С. 94–142).
- Andrzejowski A. 1869. Flora Ukrainy, czyli opisanie roślin dziko rosnących w Ukrainie przed-Dnieprowej i w sąsiednich z nią okolicach Wołynia, Podola i gub. Chersońskiej. Warszawa: Druk. Gazety Polskiej. 83 s.
- Besser W. [W. S. J. G.] 1816. *Catalogus plantarum in Horto botanico gymnasii Volhyniensis Cremeneci cultarum. Cremeneci.* [6] + 161 p.
- Besser V. S. [W. S. J. G.] 1822. *Enumeratio plantarum hucusque in Volhynia, Podolia, Gub. Kijoviensi, Bessarabia Cis-Tyraica et circa Odessam collectarum, simul cum observationibus in primitiis florae Galiciae Austriacae.* Vilnae: J. Zawadzki. 111 p.
- Besser W. [W. S. J. G.] 1823. *Aperçu de la géographie physique de Volhynie et de Podolie // Mém. Soc. Imp. Nat. Moscou.* T. 6. P. 185–212.
- Candolle A. P. de. 1837 [publ. 1838]. *Prodromus systematis naturalis regni vegetabilis.* Vol. 6. Parisiis: Treuttel et Würtz. 687 p.
- Czerniaëw B. M. [V. M.] 1859. *Conspectus plantarum circa Charcoviam et in Ucraina sponte crescentium et vulgo cultarum.* Charcovia: Typis Univ. 90 p. [In Latin, with preface in Russian and French] (Черняев В. М. 1859. Конспект растений дикорастущих и разводимых в окрестностях Харькова и в Украине. Харьков: Унив. типогр. 90 с.).
- Eichwald E. von. 1830. *Naturhistorische Skizze von Lithauen, Volhynien und Podolien in geognostisch-mineralogischer, botanischer und zoologischer Hinsicht.* Wilna: Joseph Zawadzki. 256 p.
- Greuter W. 2003. The Euro+Med treatment of *Senecioneae* and the minor *Compositae* tribes – generic concepts and required new names, with an addendum to *Cardueae* // *Willdenowia.* Vol. 33. P. 245–250.
- Greuter W., Raab-Straube E. von (eds.). 2006. *Euro+Med Notulae, 2 // Willdenowia.* Vol. 36. P. 707–717.
- Gruner L. F. 1868 [publ. 1869]. *Enumeratio plantarum, quas anno 1865 ad flumina Borysthenem et Konkam Inferiorem in Rossiae australis provinciis Catherinoslaviensi et Taurica collegit Mag. L. Gruner [Pars 2] // Bull. Soc. Imp. Nat. Moscou.* T. 41, № 3. P. 406–459.
- Hodálová I. 1999. Multivariate analysis of the *Senecio nemorensis* group (*Compositae*) in the Carpathians with a new species from the East Carpathians // *Folia Geobot.* Vol. 34. P. 321–335.
- Iamónico D., Managlia A. 2015. Lectotypification of the Bertoloni’s names in the genus *Senecio* L. (*Asteraceae*) // *Pl. Biosyst.* Vol. 149, № 1. P. 48–53.
- IPNI. 2017–onward. The International Plant Names Index. <http://www.ipni.org> (Accessed August – November 2017).
- Konechnaya G. Yu. 1994. Род Крестовник – *Senecio* L. [Genus Ragwort – *Senecio* L.] // *Flora Partis Europaeae URSS.* T. 7. St. Petersburg: Nauka. P. 52–63. [In Russian] (Конечная Г. Ю. 1994. Род Крестовник – *Senecio* L. // *Флора европейской части СССР.* Т. 7. СПб.: Наука. С. 52–63).
- Ledebour C. F. 1844. *Flora Rossica, sive Enumeratio plantarum in totius Imperii Rossici provinciis Europaeis, Asiaticis et Americanis hucusque observatarum.* T. 2. Stuttgartiae: Sumptibus Librariae E. Schweizerbart. vi + 937 p.
- McNeill J., Barrie F. R., Buck W. R., Demoulin V., Greuter W., Hawksworth D. L., Herendeen P. S., Knapp S., Marhold K., Prado J., Prud’homme van Reine W. F., Smith J. F., Wiersema J. H., Turland N. J. (eds.). 2012. *International Code of Nomenclature for algae, fungi and plants (Melbourne Code)* adopted by the Eighteenth International Botanical Congress Melbourne, Australia, July 2011. *Konigstein: Koeltz Scientific Books on behalf of the International Association for Plant Taxonomy.* 232 p. (*Regnum Vegetabile*, vol. 154).
- Montresor V. 1886. Overview of plants, being parts of the flora of Governorates of the Kiev Educational Department: Kiev, Podolian, Volhynian, Chernigov, and Poltava. Iss. 2. Kiev: I. N. Kushnerev & Co. P. 249–508. [In Russian] (Монтрезор В. В. 1886. Обзорение растений, входящих в состав флоры губерний Киевского учебного округа: Киевской, Подольской, Волынской, Черниговской и Полтавской. Вып. 2. Киев: И. Н. Кушнерев и К. С. 249–508).
- Mosyakin S. L., Yena A. V. 2017. *Jacobaea taurica (Asteraceae)*, the new combination for a Crimean protected species // *Ukr. Bot. J.* Vol. 74, № 4. P. 303–309.
- Raab-Straube E. von, Raus Th. (eds.). 2015. *Euro+Med-Checklist Notulae, 5 In: Notulae ad floram euro-mediterranean pertinentes 34 // Willdenowia.* Vol. 45. P. 449–464.
- Schischkin B. K. 1961. Род Крестовник – *Senecio* L. [Genus Ragwort – *Senecio* L.] // *Flora URSS.* Т. 26. Москва; Ленинград: Ed. Acad. Sci. URSS. P. 699–788. [In Russian] (Шишкин Б. К. 1961. Род Крестовник – *Senecio* L. // *Флора СССР.* Т. 26. М.; Л.: Изд-во АН СССР. С. 699–788).
- Schmalhausen I. F. 1886. *Flora Yugo-Zapadnoi Rossii... [Flora of Southwestern Russia...].* Kiev: O. V. Kul’zhenko. xlviii + 783 p. [In Russian] (Шмальгаузен И. Ф. 1886. *Флора Юго-Западной России, т. е. губерний: Киевской, Волынской, Подольской, Полтавской, Черниговской и смежных местностей.* Киев: Тип. О. В. Кульженко. xlviii + 783 с.).
- Schmalhausen I. F. 1897. *Flora Srednei i Yuzhnoi Rossii, Kryma i Severnogo Kavkaza [Flora of Middle and Southern Russia, Crimea and the North Caucasus].* Vol. 2. Kiev: I. N. Kushnerev & Co. xvi + 752 p. [In Russian] (Шмальгаузен И. Ф. 1897. *Флора Средней и Южной России, Крыма и Северного Кавказа.* Т. 2. Киев: И. Н. Кушнерев и К. xlviii + 783 с.).
- Soó R. 1969. *Species et combinationes novae Florae Europae praecipue Hungariae.* VIII // *Acta Bot. Acad. Sci. Hung.* T. 15. P. 344–346.
- Trautvetter E. R. 1854. *Ueber die Seneciones des Kiewschen Gouvernements // Bull. Cl. Phys.-Math. Acad. Imp. Sci. Pétersb.* T. 12, № 21–22. P. 350–352.
- Trautvetter E. R. 1855. *Ueber die Seneciones des Kiewschen Gouvernements // Mém. Biol. Bull. Phys.-Math. Acad. Imp. Sci. Pétersb.* T. 2, № 2. P. 129–133.



Trautvetter E. R. 1883. Incrementa florum phaenogamiae rossicae. Fasc. II // Acta Horti Petropol. T. 8, № 2. P. 299–576.  
Wiebe E. I. 2000. The annotated check-list of the tribe *Senecioneae* Cass. (*Asteraceae*) in Siberia // Turczaninowia.

Vol. 3, № 4. P. 58–63. [In Russian with English abstract]  
(Вибе Е. И. 2000. Конспект трибы *Senecioneae* Cass. (*Asteraceae*) в Сибири // Турчаниновия. Т. 3, № 4. С. 58–63).