

Atlas Florae Europaeae notes. 9–11.

Ranunculaceae

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Jalas, J. 1988: Atlas Florae Europaeae notes. 9–11. Ranunculaceae. — Ann. Bot. Fennici 25:295–299. Helsinki ISSN 0003-3847

(9) The hyphenated epithets, such as "cassubicus-binatus", used by Z. Schiller, in 1917, in the names of "transitional species" of the *Ranunculus auricomus* group are found not to be discordant with the ICBN when the ending of the first part is changed in line with Rec. 73G.1.(a): "cassubico-binatus". The resulting species names are legitimate, though some of them may be superfluous later synonyms. (10) The nomenclaturally correct spelling for the epithet given in Flora Europaea as [*Ranunculus* x] *spitsbergensis* [Hadač] is "spitsbergensis". *R. pallasii* var. *spitsbergensis* Nathorst is a heterotypic synonym of *R. spitsbergensis*. (11) The taxonomic treatment of *Anemone narcissifolia* L. ("narcissiflora") s. lato is surveyed, with notes on *A. narcissifolia* subsp. *biarmiensis* (Juz.) Jalas, comb. nov.

Key words: *Anemone narcissifolia*, hyphenated epithets, nomenclature, orthography, *Ranunculus*

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9. Hyphenated epithets given by Z. Schiller for taxa of the *Ranunculus auricomus* group

Well prior to the classic studies of the *Ranunculus auricomus* group by P.N. Ovczinnikov (1922), M.A. Rozanova (1922) and W. Koch (1933), an original paper on the subject was published by Schiller (1917). His paper contains interesting views on the evolution of the group and an innovative effort at taxonomic treatment of the multitude of variants, which certainly call for a serious evaluation of their own. Here only a nomenclatural detail will be discussed.

Within the *Ranunculus auricomus* group Schiller (1917: 386, 405) recognizes four main species ("species principales"), using segmentation and shape of the radical and cauline leaves as main criteria: *R. binatus* Kit., *R. auricomus* L., *R. cassubicus* L., *R. flabellifolius* Heuffel. The range of variation between every pair of the main species is then divided into two parts, to form in all 12 series of transitional variants, each of which is given the rank of species, as well. A graph showing the system is reproduced here in its original form from Schiller (1917: 387) (Fig. 1). Slightly modified versions of it have been published by E.I. Nyárády (1934: 90) and E.I. Nyárády and Soó (1942: 230).

The species representing the 12 transitional groups of variants are provided with a diagnosis in Latin, and with some additional comments in Hungarian. In one case, *Ranunculus cassubicus-binatus*, citation of an earlier synonym makes the new species name superfluous. The 12 species are as follows (with the synonymy as given by Schiller 1917: 421–438, with the correct status and author(s) added; see also E.I. Nyárády 1934: 91–94).

1. *Ranunculus binatus-auricomus* Schiller
Syn. "*R. sibiricus* Gl." = *R. auricomus* var. *sibiricus* Glehn
2. *Ranunculus auricomus-binatus* Schiller
Syn. "*reniformis*", on p. 433 "*R. auricomus* var. *reniformis* in Hegi", not "*R. reniformis* Kitt."
3. *Ranunculus binatus-cassubicus* Schiller
Syn. "*R. fallax* W. Gr.", p.p.; acc. to E.I. Nyárády (1934: 91), "pr. minore parte"
4. *Ranunculus cassubicus-binatus* Schiller
Syn. "*R. fallax* W. & Gr." = *R. auricomus* var. *fallax* Wimmer & Grab. (*R. fallax* (Wimmer & Grab.) Sloboda)
5. *Ranunculus binatus-flabellifolius* Schiller
6. *Ranunculus flabellifolius-binatus* Schiller
7. *Ranunculus auricomus-cassubicus* Schiller
Syn. "*R. incisifolius* Rchb." = *R. auricomus* var. *incisifolius* Reichenb.; "*R. fallax*" p.p.

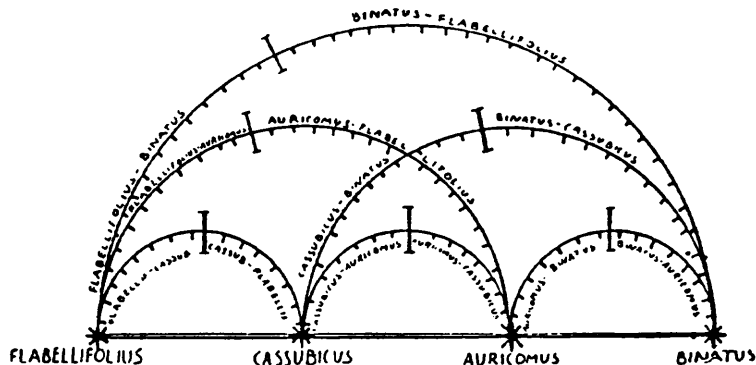


Fig. 1. The system of the *Ranunculus auricomus* group as graphically elucidated by Schiller (1917: 387). "Main species" marked with an asterisk along the bottom line (from right to left): *R. binatus*, *R. auricomus* [s. str.], *R. cassubicus* and *R. flabellifolius*. Sections of "transitional species" along the three lowest arches (from the right): *R. binatus-auricomus*, *R. auricomus-binatus*, *R. auricomus-cassubicus*, *R. cassubicus-auricomus*, *R. cassubicus-flabellifolius*, *R. flabellifolius-cassubicus*. The same along the two arches in the middle: *R. binatus-cassubicus*, *R. cassubicus-binatus*, *R. auricomus-flabellifolius*, *R. flabellifolius-auricomus*. Sections of the arch highest up: *R. binatus-flabellifolius* (on the right) and *R. flabellifolius-binatus*.

8. *Ranunculus cassubicus-auricomus* Schiller
Syn. "*R. fallax*", acc. to Nyárády op. cit., p. 94 "pro maiore parte"
9. *Ranunculus auricomus-flabellifolius* Schiller
Syn. "*R. alliariifolius* Rchb.", acc. to Nyárády op. cit., p. 94 "pro max. p." = *R. auricomus* var. *alliariifolius* Reichenb.; "*R. flabelliferus* Borb." = *R. cassubicus* var. *flabellifer* Borbás ("*flabelliferus*")
10. *Ranunculus flabellifolius-auricomus* Schiller
Syn. "*R. alliariifolius*", acc. to Nyárády op. cit., p. 94 "pr. p." = *R. auricomus* var. *alliariifolius* Reichenb.
11. *Ranunculus cassubicus-flabellifolius* Schiller
12. *Ranunculus flabellifolius-cassubicus* Schiller
Syn. "*R. ambiguus*", acc. to Nyárády op. cit., p. 94 "auct. Transs. non Schur" [nec Kerner].

The epithets of the above taxa are unusual in that each of them consists of epithets of two of the "main species" joined by a hyphen. It may be asked whether the names so formed are in accordance with the rules.

In describing his new species, Schiller (1917) follows the traditional scheme of his time, including a Latin description, as follows.

"5. *Ranunculus binatus-auricomus* mihi

R. foliis radicalibus reniformibus partim segmentatis, partim inpartitis; caulinis digitato partitis, laciniis linearilanceolatis, integerrimis.

..."

A. Nyárády (1953: 585–591) gives the Schiller species with compound epithets in the synonymy under hybrid taxa which are given binary names. It is evident, however, that Schiller himself expressly

avoided calling his "transitional species" hybrids. Consequently, it is not possible to apply Art. H.10.3. of the ICBN (Voss et al. 1983), according to which "designations consisting of the epithets of the names of the parents combined in unaltered form by a hyphen, or with only the termination of one epithet changed, ... are considered to be formulae and not true epithets"; in this case "parents" do not exist. Nor can epithets of the present kind plainly be rejected under Art. 23, although, according to Rec. 23B.1.(d), it is desirable "to avoid those [epithets] formed of two or more hyphenated words". From this it follows that the hyphenated epithets used by Schiller (1917) are not against the rules of the ICBN.

In his extensive introduction in Romanian to the Schiller system, E.I. Nyárády (1934) strictly follows the original spelling of the species epithets. However, in a special treatment (in Hungarian) of the "auricomus group" published as an appendix to the genus *Ranunculus* in "Kolozsvár Flórája" by E.I. Nyárády and Soó (1942: 229–233), the ending of the first part of the compound epithets has been changed in line with Rec. 73G.1.(a) (cross-referenced in Art. 73.8, hence mandatory) of the present Code: e.g. *flabellifolio-cassubicus* instead of *flabellifolius-cassubicus*. This orthographic adjustment will be followed.

From the legitimacy of the names given by Schiller to the "transitional species" within the *Ranunculus auricomus* group it follows that in one case a species (hybrid) name given by A. Nyárády (1953: 589) appears to be illegitimate, since a Schiller name was cited as synonymous:

R. x auricomoides A. Nyárády & L. Alex., nomen illeg. (superfl.) = *R. auricomiflabilifolius* Schiller

Under two invalid species names (nomina nuda) by Soó (1964: 227, 231), a Schiller name is given as synonymous. When these species (*R. estherae* Soó and *R. pseudosilvicola* Soó) were validly described in the following year (Soó 1965: 397, 401, 402), no Schiller synonyms were mentioned in the protologue. Accordingly, the "premature" synonymy does not affect the legitimacy of the species described by Soó.

10. "spetsbergensis", "spitsbergensis" or "spitzbergensis"?

In Flora Europaea (Tutin 1964: 233), under 81. *Ranunculus pallasii*, there is a note on *R. x spitzbergensis* Hadač, which is considered the hybrid *R. lapponicus x pallasii*.

Hadač (1942: 3, 4), while describing a new species, *Ranunculus spitsbergensis* (sic!), gives *R. pallasii* var. *spitsbergensis* Nathorst as a synonym (not as a basionym) and rejects the opinion that it is a (primary) hybrid.

This variety was originally described as *Ranunculus pallasii* var. *spetsbergensis* (sic!) by Nathorst (1883: 21), and this original spelling was also recognized later by Hadač (1944: 36).

As regards the nomenclaturally correct spelling for the epithet in question, it is clear that the youngest one, "spitzbergensis", is to be omitted as differing from the original.

Which of the two others is to be considered "original" in this case, depends on whether *Ranunculus pallasii* var. *spetsbergensis* is considered a homotypic or heterotypic synonym of *R. spitsbergensis*. If homotypic, then Rønning (1964: 40) was right in giving Nathorst as the first (bracketed) author of the taxon (although he used an incorrect spelling of the epithet): *R. spetsbergensis* (Nathorst) Hadač ("spitsbergensis"). If heterotypic, then no bracketed author should be given for the Hadač species.

From the papers by Hadač (1942: 3, 1944: 36), it is clear that the author definitely considered *Ranunculus pallasii* var. *spetsbergensis* a heterotypic synonym of his new species. Neither the variety nor the species name have been typified. Nathorst (loc. cit.) lists syntype material collected from several localities in 1868, 1870 and 1882, the first two specimens being from "Adventbay" and "Kolbay". The type material for the species name is given by Hadač (1942: 3) as "Locus class.: apud Longyearbyen [i.e. Advent Bay area], leg. VII.1939". He does not directly cite any material of Nathorst.

From the available data it is evident that the plant in question is a vegetatively propagating triploid

(with $2n = 24$), as suggested by Hadač (1942). This view is shared by Cody et al. (1988), who recently reported the taxon for the first time from North America (and used the incorrect spelling "spitzbergensis" throughout their paper, except on p. 34: *Ranunculus x spitsbergensis* "(Nath.) Hadač"). The chromosome counts available for the taxon are listed by Engelskjøn (1979: 18).

To summarize the results of the above analysis, the synonymy of the Hadač taxon (here given simply as species), runs as follows.

Ranunculus spitsbergensis Hadač

Studia Bot. Cechica 5:3. 1942. — *Coptidium spitsbergense* (Hadač) Hadač in Å. Löve & D. Löve (eds.), North Atlantic biota and their history, p. 218. Oxford etc. 1963.

Ranunculus pallasii var. *minimus* Rupr., Fl. samojed. cisural., p. 18. St. Petersburg 1845.

Ranunculus pallasii var. *spetsbergensis* Nathorst, K. Svenska Vet.-Akad. Handl. 20(6): 21. 1883. — *R. spetsbergensis* (Nathorst) Rønning ("*spitsbergensis*"), comb. inval., Svalbards flora, p. 40. Oslo 1964.

11. *Anemone narcissifolia* L. subsp. *biarmiensis* (Juz.) Jalas, comb. nov.

Basionym. *Anemone biarmiensis* Juzepczuk, in B.K. Shishkin (ed.), Flora SSSR 7:567. 1937. — *Anemonastrum biarmense* (Juz.) Holub, Folia Geobot. Phytotax. (Praha) 8:165 (1973). — *Anemone narcissiflora* subsp. *biarmiensis* (Juz.) Hultén, Fl. Alaska Yukon 4:736. 1944.

Syn. *Anemone narcissiflora* L. var. *uralensis* Shipchinski, Acta Horti Bot. Univ. Imp. Jurjev. 13(2): 100. 1912.

Within *Anemone* subgenus *Homalocarpus* DC. (i.e. *A. narcissifolia* ("*narcissiflora*") sensu lato), there are two European species among the 13 Soviet species recognized by Juzepczuk (1937: 269–282, 566–569): *A. laxa* (Ulbr.) Juz., extending from the Ukraine to S. Poland, and *A. biarmiensis* Juz. from the C. Urals.

Since Pawlowski (1956: 281), the European populations west of the Ural mountains (including *Anemone laxa*) have, in spite of their well-known variability, been treated as belonging to a single species *A. narcissifolia* ("*narcissiflora*") or to its typical subspecies, subsp. *narcissifolia* ("*narcissiflora*"). Outside Europe, the area of subsp. *narcissifolia* extends to North-East Anatolia, where it meets *A. narcissiflora* subsp. *willdenowii* (Boiss.) Davis (*A. umbellata* Willd. non Lam., *A. impexa* Juz.), and to Caucasia, where it is said to intergrade with *A. narcissiflora* subsp. *chrysantha* (C.A. Meyer) Ulbr. (fide Juzepczuk = *A. speciosa* Adams, *A. chrysantha* (C.A. Meyer) Grossh.), which is peculiar in having (golden) yellow tepals (Davis et al. 1965: 135).

Most of the Siberian, Far East and North American representatives of the complex, several of them

originally recognized as varieties (Shipchinski 1912) and/or species (Juzepczuk 1937), have been given subspecific status under *Anemone narcissiflora* by Kitagava (1939: 213) and Hultén (1944); see also Hämet-Ahti (1970: 288).

From the descriptions available (notably Juzepczuk 1937), it seems that *Anemone biarmiensis* is not strongly differentiated morphologically from the closely related taxa surrounding it, at a distance, in the east, south and southwest (Shipchinski 1912: map 1 after p. 100). The main features, besides range, characterizing *A. biarmiensis* and the other members of the *A. narcissifolia* complex seem to be slight and frequently more or less overlapping quantitative differences in size, shape and hairiness of different parts (see Hultén 1944: 735, 736). And all of these are easily fitted within the specific frame of *A. narcissifolia*.

Since 1979, plants of *Anemone biarmiensis* and *A. narcissifolia* s. str. (matching *A. laxa* sensu Juzepczuk) have been cultivated by Mr. M. Ohenoja, side by side in a private garden in Sipolanperä, Kiiminki church village, 18 km N.E. of Oulu (c. 65°07'N, 25°50'E). The plants were raised from seed distributed by Hortus Bot. Arcto-alpinus, Kirovsk, Kola Peninsula, as nos. 305 and 307 of the Index Seminum for 1979. Their wild origin is given as follows.

- no. 305 (as *A. biarmiensis*): 1945 Sverdlovsk,
no. 307 (as *A. narcissiflora*): 1958 "Pek pod Snezkoi".

An analysis of herbarium material (H, OULU) collected from the above cultures on 20.VI.1987 (flowering) and 19.VII.1987 (fruiting), gives the following picture of some morphological differences between the two taxa.

No. 305 (*Anemone biarmiensis*): stems measuring 33, 37 and 48 cm from base to involucre (no. 307: c. 48 cm), sparsely hairy, hairs c. 2 mm, weak, irregularly spreading or somewhat reflexed (307:

densely hairy, hairs c. 3 mm, spreading to somewhat reflexed).

Radical leaves with petiole 12–22 cm (307: 28–31 cm); blade 4–6 x 7–10.5 cm (307: 5.5–8.5 x 10.5–15 cm) reniform in outline, basal sinus (sometimes widely) open (307: basal sinus narrow or close, frequently with overlapping segments), segments petiolulate (307: segments sessile); blades almost glabrous above, sparsely hairy below (307: hairy along the veins above, sparsely hairy throughout below).

Involucral leaves entire to the lowest third, with wide base (307: entire to the lowest fourth, with cuneate base).

Peduncles 1–6, up to 12 cm (307: 3–7, up to 20 cm).

Tepals c. 20 x 14 mm, glabrous (307: 22 x 11 mm, glabrous above, hairy below along a median line).

Anthers 1.6–1.8 mm (307: 1.5–1.6 mm).

Achenes 9–11 mm (307: 6–8 mm).

The above details (except for stem hairiness) are well in line with the descriptions given by Juzepczuk (1937, English translation 1970) of *Anemone biarmiensis* and *A. laxa*. The shapes of the radical leaves of the two taxa, as reproduced in Plate 17 (Figs. 3 and 1), could well represent the material analysed here. More material should certainly be studied, preferably at the level of populations, but the present analysis does not at any rate seem to contradict the view that *A. biarmiensis* is well worth recognition as one of several subspecies under *A. narcissifolia*.

ACKNOWLEDGEMENTS

My sincere thanks are due to Pekka Isoviita (Helsinki) for nomenclatural discussions and advice. I also gratefully acknowledge the help given by Martti Ohenoja (Kiiminki) and Tauno Ulvinen (Oulu) in providing me with instructive herbarium material of *Anemone narcissifolia*.

REFERENCES

- Cody, W.J., Blondeau, M. & Cayouette, J. 1988: *Ranunculus x spitzbergensis* (Nath.) Hadač, an addition to the flora of North America. — *Rhodora* 90:27–36.
- Davis, P.H. et al. (eds.) 1965: *Flora of Turkey and the East Aegean Islands*. 1. — 567 pp. Edinburgh.
- Engelskjøn, T. 1979: Chromosome numbers in vascular plants from Norway, including Svalbard. — *Opera Botanica* (Lund) 52:1–38.
- Hadač, E. 1942: *Notulae ad floram Svalbardiae spectantes*. — *Studia Bot. Cechica* 5:1–5.
- Hadač, E. 1944: Die Gefäßpflanzen des "Sassengebietes" Vestspitsbergen. — *Norges Svalbard-Ishavs-Undersøk. Skr.* 87:1–72 + Tafel I–XIV.
- Hämet-Ahti, L. 1970: A.K. Cajander's vascular plant collection from the Lena River, Siberia, with his ecological and floristic notes. — *Ann. Bot. Fennici* 7:255–324.
- Hultén, E. 1944: *Flora of Alaska and Yukon*. 4. — K. Fysiogr. Sällsk. Handl. N.F. 55(1) (Lunds Univ. Årsskr. N.F. Avd. 2, 40(1)): 569–795.
- Juzepczuk, S.V. 1937: *Anemone* L. — in K. Shishkin (ed.),

- Flora SSSR 7:236–282. Moskva – Leningrad. [English translation: Flora of the U.S.S.S.R. 7:184–219. Jerusalem 1970.]
- Kitagawa, M. 1939: Lineamenta Florae Manshuricae. — Rep. Inst. Scient. Res. Manchoukou 3, App. 1:1–488 + 1 folded map + Tables I–XII. Hsinking.
- Koch, W. 1933: Schweizerische Arten aus der Verwandtschaft des *Ranunculus auricomus* L. Studien über kritische Schweizerpflanzen II. — Ber. Schweiz. Bot. Ges. 42: 740–753.
- Nathorst, A.G. 1883: Nya bidrag till kändedomen om Spetsbergens kärlväxter, och dess växtgeografiska förhållanden. — K. Svenska Vet.-Akad. Handl. 20(6): 1–88 + Tafl. 1–2.
- Nyárády, A. 1953: *Ranunculus* L., Sectia *Auricomus* Spach Hist. vég. Phan. VII (1839) 210. — In: Săvulescu, T. (ed.), *Flora Republicii Populare Române* 2:577–591.
- Nyárády, E.I. 1934: Despre grupa "auricomus" a genului *Ranunculus*. — Bull. Grad. Bot. Cluj 13:85–101.
- Nyárády, E.G. & Soó, R. 1942: R.[anunculus] "auricomus" csoport és átméleti alakjai. — In: Nyárády, E.G. & Soó, R., *Kolozsvár és környékének flórája*, p. 229–233. Kolozsvár.
- Ovczinnikov, P.N. 1922: De *Ranunculo auricomus* et *Ranunculo cassubico* auct. fl. Sibir. — Not. Syst. Herb. Horti Bot. Petropolitani 3(13–14): 49–56.
- Pawłowski, B. 1956: *Flora Tatr. Rośliny naczyniowe*. 1. — 672 pp. Warszawa.
- Rønning, O.I. 1964: *Svalbards flora*. — 123 pp. Oslo.
- Rozanova, M.A. 1922: Sur la question de la transition des morphes de *Ranunculus auricomus* L. et *Ranunculus cassubicus* L. — Zeitschr. Russ. Bot. 7:31–45.
- Schiller, Z. 1917: *Ranunculus binatus* Kit. Filogenetikus-rendszertani kísérlet. — Math. Termész. Értesítő 35: 361–447.
- Shipchinski, N. 1912: O formakh *Anemone narcissiflora* L. — Acta Horti Bot. Univ. Imp. Jurjev. 13(2): 85–103.
- Soó, R. 1964: Die *Ranunculus auricomus* L. emend. Korsh. Artengruppe in der Flora Ungarns und der Karpaten. I. — Acta Bot. Acad. Scient. Hung. 10:221–237.
- Soó, R. 1965: Die *Ranunculus auricomus* L. emend. Korsh. Artengruppe in der Flora Ungarns und der Karpaten. II. — Acta Bot. Hung. 11:395–404 + Figs. 1–42.
- Tutin, T.G. 1964: *Ranunculus* L. Subgen. *Ranunculus*. — In: Tutin, T.G. et al. (eds.), *Flora Europaea*. 1:223–237. Cambridge.
- Voss, E.G. et al. 1983: International Code of Botanical Nomenclature, adopted by the 13. Bot. Congress, Sydney, August 1981. — *Regnum Vegetabile* 111: i–xv + 1–472.

Received 22.III.1988