

Typifications of Kerner names 1: *Achillea neilreichii* (Compositae)

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Achillea neilreichii A. KERN., Oesterr. Bot. Z. 21: 242 (1871)

≡ *A. nobilis* subsp. *neilreichii* (A. KERN.) VELEN., Fl. Bulg.: 263 (1891).

≡ *A. nobilis* var. *neilreichii* (A. KERN.) BECK, Fl. Nieder-Österreich: 1198 (1893)

Lectotypus (hoc loco design.): Hungary: "E flora insulae Csepel / Achillaea L. / [manu Keneri:] Achillea Neilreichii / Schilling e humidis umbrosis / Legit: 24 Julio 1868 / E herbario Dr Julii Tauscher" [WU-KERNER].

Further syntypes in herb. WU-Kerner: 3 other sheets collected by J. Tauscher, 1 by A. Kerner, 1 by A. Steffelkuf (all from Hungary); Rochel no. 204 (cultivated material). – Only one of these were determined as *A. neilreichii*, but all were collected in one envelope under this name in the Kerner collection.

KERNER partly referred to plants recorded by NEILREICH (1859: 343) from Lower Austria (Wiener Becken; but according to Neilreich "in neuerer Zeit nicht wiedergefunden") and from Burgenland. KERNER mentioned an Austrian and a Bohemian place as westernmost occurrences, and in addition referred to some exsiccata (e. g. Rochel) he had seen. However, in particular he recorded a considerable number of Hungarian localities, from where he had observed the plant, or had received herbarium material. Vouchers of some of these records are present in the KERNER herbarium, 6 of them collected prior to 1871. It is reasonable to select one of these as lectotype, which shows all the characters emphasized by KERNER in the protologue.

In the last revision of the *A. nobilis* complex (BÄSSLER 1963) *A. neilreichii* was treated at subspecific rank under *A. nobilis*; the name was left untypified. It is presently accepted as subspecies in the "Euro-Med Plantbase" and the "Med-Checklist" (GREUTER & RAABE-STRAUBE 2008). The differentiation of this eastern race from a western *A. nobilis* subsp. *nobilis* is still problematic, however, and rests mainly on the yellowish ligule colour and a less dense indumentum of the plant. Differences in leaf shape and leaf dissection need a more sophisticated study of its parameters keeping in mind the variability in S & S.E. Europe and the presence of diploid and tetraploid populations within the species.

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Typifications of Kerner names 2: *Alyssum ovirense* (Cruciferae)

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Alyssum ovirense A. KERN., Fl. Exs. Austro-Hung. no. 594 (1882); Sched. Fl. Exs. Austro-Hung. 2: 99 (Apr 1883).

Lectotypus (hoc loco design.): Austria: "Flora exsiccata Austro-Hungarica / 594. Alyssum Ovirense / A. Kerner / I. Carinthia. In glareosis montis Ovir (Obir) non longe infra cacumen; solo calc.; 2150^{mt.} s. m. / [sine dato] Jabornegg" [WU]

Iso-Lectotypes: 2 sheets in WU; further Syntypes present in WU.

Kerner did not formally describe *A. ovirense* as a new species, but just noticed the differences against the similar *A. wulfenianum* and *A. cuneifolium* and referred to the ample description of WULFEN (in JACQUIN 1790: 227) for "*A. alpestre*" (not of LINNAEUS), and to the pertinent figure (t. 4 f. 1) which illustrates the plant growing on mount Hochobir (" initio Julii in Ovirensibus supra Ebriacum alpibus in copia florentem inveni solo aprico rupestri calcareo-sabuloso"). Exsiccata from 2 different localities were distributed with KERNER's protologue printed in schedis prior to the paginal edition of the "Schedae " We prefer the first one, from mount Hochobir as type locality, in correspondence with the epithet. The other collection ("II. Ad confines Tiroliae australis in ditone Bellunensi Venetiae, in glareosis inter cacumina montis Serva") came from Italy, Alpi Venete N of Belluno (legit R. Huter).

A. ovirense is an unproblematic species with its main distribution in the southeastern calcareous Alps east of Val Lagarina (Italy, Austria, Slovenia) with an outpost in the North-east (Hochschwab) and a second, widely disjunct area in the Dinarids, where it is known from high mountain ranges of Hercegovina and Montenegro.

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Typifications of Kerner names 3: *Dianthus pontederæ* (Caryophyllaceae)

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Dianthus pontederæ A. KERN., Fl. Exs. Austro-Hung. no. 539 (1882); Sched. Fl. Exs. Austro-Hung. 2: 67 (Apr. 1883)

- ≡ *D. carthusianorum* subsp. *pontederæ* (A. KERN.) HEGI, Allg. Bot. Z. 17: 16 (1911)
- ≡ *D. giganteiformis* subsp. *pontederæ* (A. KERN.) SOÓ, Acta Bot. Acad. Sci. Hung. 15: 339 (1970)
- ≡ *D. sabuletorum* subsp. *pontederæ* (A. KERN.) HOLUB in Folia Geobot. Phytotax. 9: 214 (1984).

Lectotypus (hoc loco design.): Hungary: "Flora exsiccata Austro-Hungarica / 539. *Dianthus Pontederæ*. / A. Kerner. / Hungaria centralis. Copiose in graminosis ad Budapest: 100^{mt}. s. m. / Borbás" [WU].

The Borbás collection presents the only obligate type material, which was distributed by Kerner in his Exsiccata together with the diagnosis. The WU sheet consists of complete 2 plants (with additional single flowering stems) which show well the characters given in the description.

D. pontederæ is ecogeographically rather well separated from *D. carthusianorum* L. though morphologically intermediate populations may be found in the narrow contact zones at the westernmost border of *D. pontederæ* in Lower Austria. They do not, however, obscure the distinction between these two species (GREIMLER ined.; cf. GREIMLER 1993), if attention is paid also to the petal-size variation depending on the sex of the gynodioecious flowers. In the eastern parts of its area, however, there is a large overlapping region with other equally small flowered pinks presently classified as *D. giganteiformis* BORBÁS (e. g. in Flora Europaea: TUTIN & WALTERS 1992), or as *D. sabuletorum* HEUFF. (acc. to HOLUB 1986). Critical studies are still needed to evaluate the taxonomy and nomenclature of these lowland *Dianthi* as well as those of the mountain races linked to *D. carthusianorum*.

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Typifications of Kerner names 4: *Knautia baldensis* (Dipsacaceae)

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Knautia baldensis A. KERN. ex BORBÁS in BORBÁS & WALZ, Del. Semin. Hort. Bot. Univ. Univ. (Kolozsvár) 1904: 37, 42. 1904.

Lectotypus (hoc loco design.): "Flora exsiccata Austro-Hungarica / 2280 *Knautia magnifica* / Tirolia australis. Val di Ledro, in pascuis alpinis; solo calcareo; 1800 usque 2000^{mt.} s. m. (Locus classicus *Kn. baldensis* A. K. / Porta)" [WU].

Syntypus in WU: "Herbarium normale / 4059. *Knautia magnifica* Austria. Tirolia austr. Judicaria. In pascuis montis Lanciada; solo calc. 1300–1500 m. s. m. / Augusto 1894 / leg. P. Porta"

In the protologue Borbás reports 2 collections: "In Tirolia australis valle di Ledro, in pascuis alpinis, solo calcar. 1800–2000 mt. s. m., in monte Lancida ibid. (Porta)" and "In pascuis graminosis supra rupes vallis frigidae montis Baldi, solo calcar. 15–1700 mt. s. m. (30 jul. 1878 Rigo)", and refers to WETTSTEIN (1892, 1893), who had (wrongly) equated Kerner's unpublished name with the Macedonian *K. magnifica* BOISS. & ORPH. There is a single Kerner collection in herb. Kerner ("*Knautia baldensis* / Tirol. Grasige steinige Plätze am Gehänge des Altissimo di Nago am Monte Baldo. 5000–6000' / [1]870 / Kerner"), with a handwritten diagnosis, but it is "leider erst in Knospen" and "Ist in Blüten und fruchtend weiter zu untersuchen" (KERNER in sched.). Borbás gave his diagnosis (on p. 37) within a key for the taxa of his (rankless) group of "*Longifoliae*" and enumerates *K. baldensis* as "Species et abberationes [sic] affines" after *K. magnifica*. It was accepted indubitably as species at least since SZABÓ (1910).

According to EHRENDORFER (1962) *K. baldensis* is one of the tetraploid species combining features of *K. longifolia* with those of diploids of the *K. velutina* group; it is confined to the mountains around Lago di Garda.

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Typifications of Kerner names 5: *Knautia persicina* (Dipsacaceae)

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Knautia persicina A. KERN., Fl. Exs. Austro-Hung. no. 2275 (1883); Sched. Fl. Exs. Austro-Hung. 6: 99 (1893).

Lectotypus (hoc loco design.): Austria: "Flora exsiccata Austro-Hungarica / 2275. *Knautia persicina* / A. Kerner in Schedis / Ad confines Tiroliae australis et Venetiae. In pascuis Malera montium Lessinensium; 1800–1700^{mt}. s. m.; solo calcareo. / [sine dato] Rigo" [WU].

Original material of this species is confined to the "Flora exsiccata" collection of Rigo.

K. persicina, of the mountains east of Lago di Garda, is another tetraploid species like *K. baldensis* (see above), and is linked to the latter with putative hybrids.

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Typifications of Kerner names 6: *Arabis petrogena* (Cruciferae)

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Arabis petrogena A. KERN., Oesterr. Bot. Z. 13: 141 (1863)

≡ *Cardaminopsis petrogena* (A. KERN.) MĚSÍČEK, Preslia 32: 246 (1970)

≡ *Cardaminopsis arenosa* subsp. *petrogena* (A. KERN.) SOÓ, Acta Bot. Acad. Sci. Hung. 16: 371 (1971)

≡ *Arabidopsis petrogena* (A. KERN.) V. I. DOROF., Turczaninowia 5(3): 36 (2002).

Lectotypus (hoc loco design.): Hungary: "Arabis petrogena Kerner / Adlersberg bei Ofen / [sine dato] Kerner" [WU-KERNER]

In the protologue Kerner reported that the plant occurs in Hungary in "locis petrosis montium circa Budam" from where it was reported earlier by J. Sadler as "*A. arenosa*", and specifies its occurrence as "communissima in monte Adlersberg et in rupibus dolomitibus vallis Auwinkel" There are 3 sheets in his herbarium named "*Arabis petrosa*" collected by himself from "montibus budensibus" resp. "Adlersberg bei Ofen",

and with labels in his handwriting. One consists of 2 complete plants, one in an early and one in a well developed flowering stage, respectively, plus an inflorescence in an early fruiting stage. Another consists of 2 plants with rather ripe fruits, with a note "unterscheidet sich außer den von mir in der Diagn. angegebenen Merkmalen auch durch den fehlenden Griffel" The third sheet ("In montibus budensibus") consists of 3 flowering specimens. Though undated, these 3 sheets obviously represent eligible original material. The first one is preferred here as lectotype as it is well preserved, and the central specimen especially shows the conspicuous white petals which are diagnostic for the taxon.

Arabis petrogena belongs to *Arabidopsis arenosa* agg. (*Cardaminopsis arenosa* (L.) HAYEK sensu lato in most floristic papers, following SCHOLZ 1962; *Arabidopsis arenosa* (L.) LAWALRÉE as defined by O'KANE & AL-SHEHBAB (1997) in their recent synopsis of the emended genus). This aggregate circumscribes a mainly Central European complex of several diploid and tetraploid cytotypes (MĚSÍČEK 1970), with greatest diversity in the Carpato-Pannonian region. *Arabidopsis petrogena* is one of the morphologically better defined taxa according to MĚSÍČEK (1970) and KRÁLIK (2002), occurring with diploid and (presumably auto-) tetraploid populations in eastern Central Europe. Materials from the type region belong to the latter cytotype (MĚSÍČEK 1970) which is more widespread than are the diploids (KRÁLIK 2002). It is known to occur at the Devinska kobyła (Slovakia) but is missing on the opposite (Austrian) side of the Danube in the region of Hainburger Berge.

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Typifications of Kerner names 7: *Anthyllis montana* var. *jacquinii* (Leguminosae)

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Anthyllis montana var. *jacquinii* [A. KERN.] RCHB.f., Icon. Fl. Germ. Helv. 22: 83 (1866); op. cit. 22: t. 125 [= MMCLXXVI] f. II, 14–20 (1867)

≡ *A. jacquinii* A. KERN., Z. Ferdinandeums Tirol 15: 287, t. II f. XXII (1870) [reprinted as: Nov. Pl. Sp. 1: 41, t. II f. XXII]

≡ *A. montana* subsp. *jacquinii* (RCHB.f.) ROHLENA, Sitzungsber. Kön. Böhm. Ges. Wiss. Prag, ser. 2, 1912 (1): 30 (1912); HAYEK, Repert. Spec. Nov., Beih. 30 (1): 885 (1926) [isonym].

Neotypus (hoc loco design.): Austria: "Flora exsiccata Austro-Hungarica / 27. Anthyllis Jacquini / A. Kerner / Austria inferior. In rupestribus montis Geissberg ad Perchtoldsdorf. / [sine dato] Wiesbaur" [WU].

KERNER considered the populations of the southeastern Alps (E of Lago di Garda) and the mountains of the Balkan peninsula as a species separate from the western *A. montana* L. Prior to his own publication in 1870 he used the name *A. jacquinii* on herbarium labels at least as early as 1864, and may have distributed plants with this designation also to Reichenbach (son), who described validly such plants in respect to the flower colour ("flore multo pallidiori, subcarneo") as variety, and expressible refers to KERNER'S (yet undescribed) species. The epithet mirrors the fact that JACQUIN'S coloured figure in his "Flora Austriaca" (1776: 17, t. 344) well represents the taxon that KERNER had in mind when he differentiated it from the emended *A. montana* L. JACQUIN did not indicate from where he had received the illustrated plants, but most probably these were collected from one of the very few populations known near Vienna, i. e. from the region "Gaisberge" or "Geißberg" (the former designation of the mountain range W of Perchtoldsdorf). From that locality it is documented as early as in the beginning 19th century (W 0021549: leg. F. v. Portenschlag, who died in 1822). From this "locus classicus" J. Wiesbaur in 1880 collected several hundred specimens ("102 Ex[emplare] zu je 2–3 fr[utificans] & 3–4 fl[orens] Individuen") for KERNER'S Flora exsiccata Austro-Hungarica (No. 27).

None of the specimens today present in the Reichenbach collection in W can be directly linked to one of the references in the protologue except a collection of G. Dolliner. This sheet (W 1889-0344280, with 2 labels) is, however, undated and without the locality "Geissberg" cited by Reichenbach, and it is named *Anthyllis montana* only, without any further regard for a variety or to the name "*jacquinii*" It cannot, therefore, be regarded

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as obligatory type material. In absence of indubitable original material linked to the protologue, it seems advisable to select a neotype with relation to Kerner. A good choice for it is a specimen of the collection distributed as *Anthyllis jacquinii* in the first series of Kerner's Exsiccata.

As a species KERNER's name is antedated, however, by the previously described *A. atropurpurea* (VUK.) SCHLOSS. & VUK. from Croatia, which was regarded by Kerner "als seltene Abart mit schwarzpurpurnen Blüten", but at subspecific rank the epithet "*jacquinii*" is valid. Both, molecular data and a detailed morphometric study of *A. montana* (sensu lato) have corroborated KERNER's conception of a western and an eastern race within this complex (KROPF 2008; KROPF & al. 2002). Taxonomically this situation is best expressed at subspecific rank.

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