

THE CORRECT NAME FOR VERONICA AQUATICA Bernhardt

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The section *Beccabunga* Griseb. of the genus *Veronica* Linn. includes three plants found in the British Isles, namely *V. Beccabunga* L., *V. Anagallis-aquatica* L. and *V. aquatica* Bernh. This last plant was long confused with *V. Anagallis-aquatica* and it was first described as a separate species by Bernhardt (1834). Unfortunately, S. F. Gray (1821) had already used the name *Veronica aquatica* to designate *V. anagallis-aquatica* L. Therefore, under Article 61 of the International Rules of Botanical Nomenclature (1935), *Veronica aquatica* Bernh. is an illegitimate later homonym and must be rejected. It has thus become necessary to establish the correct name for this plant, although Keller (1942, 1944) has proposed that *V. aquatica* Bernh. be retained as a *nomen conservandum*.

Fernald (1939) first drew attention to this matter and advocated the use of *Veronica salina* Schur, and earlier Jávorka (1925) had in fact used this name. Fernald has also been followed by Pennell (1943) in his latest work. Mansfeld (1940) and Hylander (1945) have not accepted this name and have proposed *Veronica comosa* Richter instead.* I do not consider either of these names to be applicable and propose the adoption of *VERONICA CATENATA* Pennell (1921).

Possible synonyms may be found in Römpp's and Schlenker's monographs (Römpp, 1928; Schlenker, 1936); in historical sequence these are:—

- 1791 *Veronica tenerrima* Schmidt
- 1792 *Veronica acutifolia* Gilibert
- 1830-1832 *Veronica indica* Roxburgh ex A. Dietrich
- 1866 *Veronica salina* Schur
- 1885 *Veronica comosa* Richter
- 1921 *Veronica catenata* Pennell
- 1935 *Veronica connata* Rafinesque sensu Pennell

Schmidt's original sheet of *V. tenerrima* is in the Vienna herbarium and Schuster, commenting on it, says:

“Auf der originale Tikette bermerkt Schmidt: ‘An varietas sit Anagallidis, adhunc dubito, donec cultura decidat.’ Da sie Schmidt (1793) in seiner Flora Boëmica als Art aufnahm, scheint sie sich samenbeständig gehalten zu haben. Wegen der ganzrandigen teilweise kurz gestielter unterem Blätter hielt sie Beck vermütlich für eine Form von *beccabunga*, aber alle Merkmale, namentlich die vierkantige Stengel, sprechen für *aquatica*.” (Schuster, 1906.)

“On the original label Schmidt remarks, ‘An varietas sit Anagallidis, adhunc dubito, donec cultura decidat.’ As Schmidt took up the

*Fernald (1950, *Gray's Manual of Botany*, ed. 8, 1284) has, while this paper was in the press, also adopted this name, but without explanation.

species in his *Flora Boëmica* (1793) it seems to have bred true for him. Beck believed it to be most likely a form of *beccabunga* because of the entire, sometimes shortly-petioled, lower leaves, but all the characters, especially the four-angled stem, suggest *aquatica*."

As Schuster remarks, the four-angled stem militates against *V. Beccabunga*, but there is general agreement (Britton, 1928; Schlenker, 1935/6, 1936; Glück, 1936) that the leaves, even the primary leaves and those of depauperate forms, of *V. aquatica* are never petiolate. It seems probable, therefore, that Schmidt's plant is referable to that form usually known to British botanists as *V. Anagallis-aquatica* L. var. *montioides* Boiss. (Hiern, 1898), and indeed Schlenker so determined Schmidt's original specimens. Therefore, although I have not actually seen the original sheet, the circumstantial evidence is so strong that *Veronica tenerrima* Schmidt may safely be rejected from the synonymy of *V. aquatica* Bernh.

There appears to be no specimen extant of Gilbert's *Veronica acutifolia* but it is clear from his description that he is merely re-describing a form of *Veronica Anagallis-aquatica*. This name may therefore be rejected outright for *V. aquatica* Bernh. as was done by Römpp and Schlenker.

Römpp cites *V. indica* Roxb. in the synonymy of *V. aquatica*, but this is an error. Roxburgh used this name "in litt." for *V. undulata* Wallich, a form closely allied to *V. Anagallis-aquatica* L., and it was published by A. Dietrich in his (6th) edition of the *Species Plantarum*. It is clearly irrelevant to the present issue.

Fernald (1939) has adopted Schur's name *Veronica salina* and supports his view by quoting extensively from the original description. Nevertheless, he omits the description of the capsule, namely "capsula elliptica, obtusa calycem superante" (italics mine). Surely this phrase, coupled with "floribus minimis numerosissimis" and "rachi pedunculis calycibusque parce glanduloso-pilosis," indicates that Schur was, in fact, re-describing *Veronica anagalloides* Guss., despite his statement that the plant had a reddish corolla. Pennell (1921) has remarked, "*V. salina* Schur Enum. Pl. Transsilv., 492, 1866, very similar to *V. anagalloides*," and, although he has since adopted Fernald's usage, it seems likely that Schur considered this to be the true affinity of his plant, since his description, No. 2649, follows, and is separated from that of *V. Anagallis-aquatica* by, that of *V. anagalloides*.

As the type sheet was destroyed during the war at Lwow, it is only possible to decide on the merits of this name from the description. I consider that the description is ambiguous and, in certain important particulars, e.g., the capsule-shape, incorrect for *V. aquatica* Bernh., and I therefore propose that *Veronica salina* Schur be rejected as a *nomen dubium*.*

*Since this paper went to press I have received a sheet of *Veronica salina* from the Vienna Herbarium, named by Schur himself. It is without doubt *Veronica anagalloides* Guss. so completely disposing of Fernald's claim

In 1940, Mansfeld drew attention to the fact that Bornmüller (1907) had referred *Veronica comosa* Richter to *V. Anagallis* L. var. *aquatica* (Bernh.) f. *bracteosa* Bornm. (= *V. anagalloides* Guss. var. *bracteosa* Hausskn. et Bornm.). Accordingly he suggested that *V. comosa* Richt. should be taken up for *V. aquatica* Bernh., and he is followed in this by Hylander (1945). Schlenker, under the heading "Doubtful forms," wrote:

"f. *bracteosa* Bornm. in Bull. l'Herb. Boiss., Sér. II, T, VII, 1907, 970. Synonym: ?*V. comosa* Richt. ex Stapf in Denkschr. k. Akad. Wiss., 50, II, 1885, 24? . . . Die originale der *V. comosa*: Persia borealis, ad Rescht, 23. April 1882 Herb. Wien sind sehr junge Pflanzen vom Habitus der *V. aquatica* Bernh. Die (unreifen) Kapseln sind sehr klein und ziemlich schmal, die Fruchtstiele bis über 7 mm. lang. Das von Bornmüller gesammelte Exemplar dieser Form: Mesopotamia Austr. ad Basra (exs. No. 547) im Herb. Berlin besitzt ebenfalls kleine, jedoch breitere Kapseln und kürzere Fruchtstiele und kann mit grösserer Sicherheit zu *V. aquatica* subsp. *laticarpa* gerechnet werden. Die Vergrösserung der Deckblätter ist wohl bei beiden Exemplaren durch äussere Einflüsse bedingt." (Schlenker 1936, p. 18.)

"The originals of *V. comosa*: Persia borealis, ad Rescht, 23 April 1882, in Herb. Vienna are very young plants with the habit of *V. aquatica* Bernh. The (unripe) capsules are very small and rather narrow, the peduncles up to over 7 mm. long. The example of this form collected by Bornmüller: Mesopotamia Austr. ad Basra (exs. No. 547) in Herb. Berlin also possesses small yet broader capsules and shorter peduncles and can be referred to *V. aquatica* subsp. *laticarpa* with greater certainty. The enlargement of the bracts is probably caused, in both specimens, by external influences."

It is evident, therefore, that Schlenker was not entirely satisfied with the identity of *V. comosa* Richt., and, indeed, the absence of mature capsules or of indication of the flower-colour (which is not given in Richter's original diagnosis) causes a precise determination to be difficult. I have not seen the original sheet, but, through the courtesy of the Director, Royal Botanic Gardens, Kew, I have been able to study an isotype. This sheet is illustrated in Plates 1 and 2a. One is immediately struck by the characteristic appearance of the plant, which is largely determined by its habit and the form of the bracts and the flowers. The habit is unusual in that the internodes are very short in relation to the length of the leaves. I have never seen such a combination in normal or depauperate herbarium material of *V. aquatica* or even in the developmental phases of living plants. The leaves themselves are remarkable for their coarse and close serration, which is quite unlike anything I have seen in *V. aquatica*, although this condition is approached in some specimens of *V. Anagallis-aquatica*. Finally, there are the relatively slender pedicels arising at acute angles from the rachis, subtended by long elliptical bracts (up to 1.2 cm.) with acute to acuminate tips, and the lanceolate sepals; these are quite unlike

such structures in *V. aquatica* Bernh., which has relatively robust pedicels subtended by oblong-obtuse bracts and narrowly ovate, obtuse sepals. These dissimilarities and the absence of mature capsules make the identification of *V. comosa* Richt. with *V. aquatica* Bernh. very uncertain, and indeed, in my opinion, the former plant more closely resembles *V. Anagallis-aquatica* L. (Richter himself remarked, "Vorliegende Pflanzen steht der *V. anagallis* L. ziemlich nahe, und dürfte sich vielleicht einst als Varietät derselben herausstellen"—"The plant under consideration is rather near *V. anagallis* L. and may possibly in the future turn out to be a variety of this plant.") *Veronica comosa* Richt. should therefore be rejected as a synonym of *V. aquatica* Bernh.

In 1921 F. W. Pennell described under the name *V. catenata* a Water Speedwell which he believed to be indigenous to North America. The type plant, P. A. Rydberg, No. 926, is illustrated in Plates 2b and 3. Through the courtesy of the Director, New York Botanic Garden, I have been able to examine the holotype, and I find it quite impossible to distinguish it from European material of *Veronica aquatica* Bernh. This view has also been expressed by Römpp, by Schlenker and by Fernald, the last two having also seen the holotype. *V. catenata* possesses linear-lanceolate, sessile leaves; fewer-flowered racemes with robust divergent pedicels (becoming horizontally spreading in fruit), each subtended by an oblong-obtuse bract; and obcordate, deeply-notched capsules usually longer than the narrowly lanceolate-ovate, obtuse sepals. All these features are characteristic of *V. aquatica* Bernh.

It will be noticed, however, that the sheet is also annotated "*V. connata glaberrima* Pennell F.W.P. 1934." In this year Pennell adopted Rafinesque's poorly-characterised *V. connata* (Rafinesque, 1830) of which no type material is known, claiming it to be conspecific with his *V. catenata*. Pennell (1935) describes this plant as having "leaves lanceolate and acute, connate and entire, racemes divaricate and very long, pedicels twice as long as bracts, capsule bi-lobed and compressed." This is clearly a description of *V. scutellata* L., and indeed in 1921 Pennell had referred *V. connata* Raf. correctly to this species, suggesting that it was merely a long-leaved variant. Both Römpp and Schlenker refer *V. connata* Raf. unequivocally to the synonymy of *V. scutellata* L., and with this view I concur. Therefore *V. connata* Raf. may be eliminated from the synonymy of *V. catenata* Pennell.

It may be concluded with some degree of certainty, therefore, that the correct citation of the plant hitherto known as *Veronica aquatica* Bernhardi is in fact *VERONICA CATENATA* F. W. Pennell, 1921, *Rhodora*, 23, 37.

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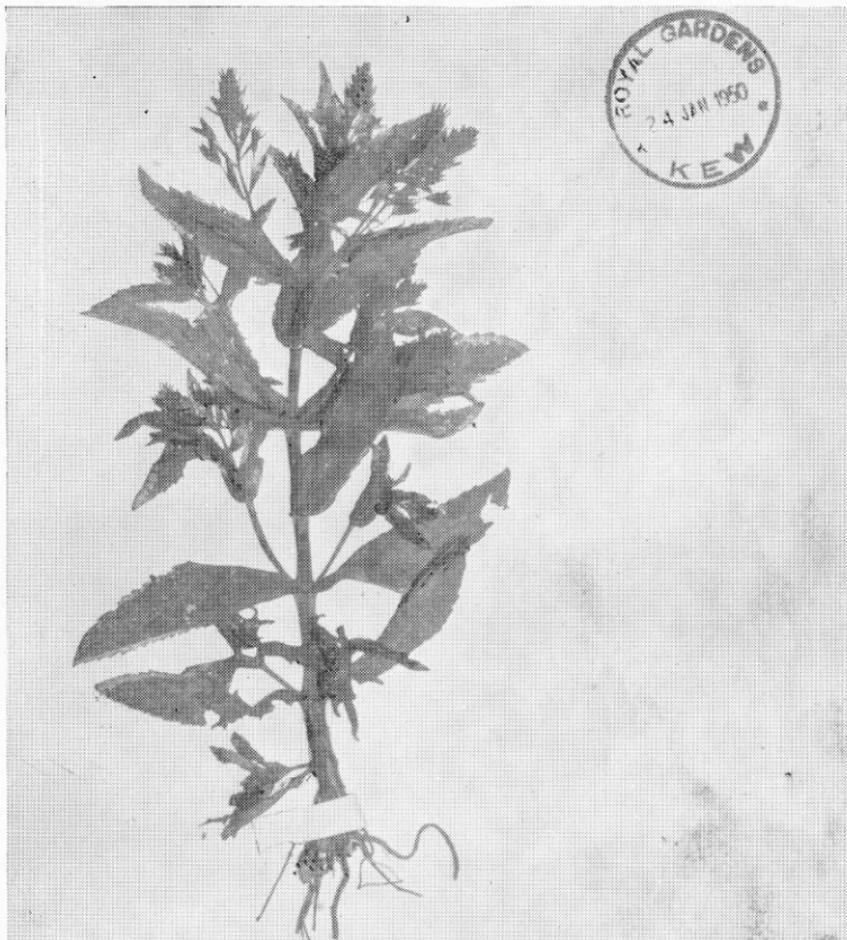
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Museum botanicum universitatis Vindobonensis.

Her Persicum Dⁿⁱ J. E. Polak. 1882.

Veronica comosa Richt.

Persia borealis.

Ad Rescht, in fossis

Legit Th. Pichter.

HERBARIUM ORIENTALE,
Dr. C. STAPE purchased 1891.

Plate 1. *Veronica comosa* Richt. Isotype. $\times \frac{2}{3}$ approx.

From the Trower Fund.



Plate 2a. *V. comosa* Richt., single flower. $\times 5$.

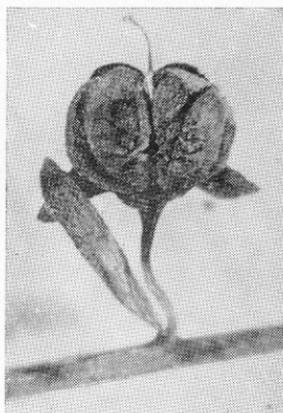
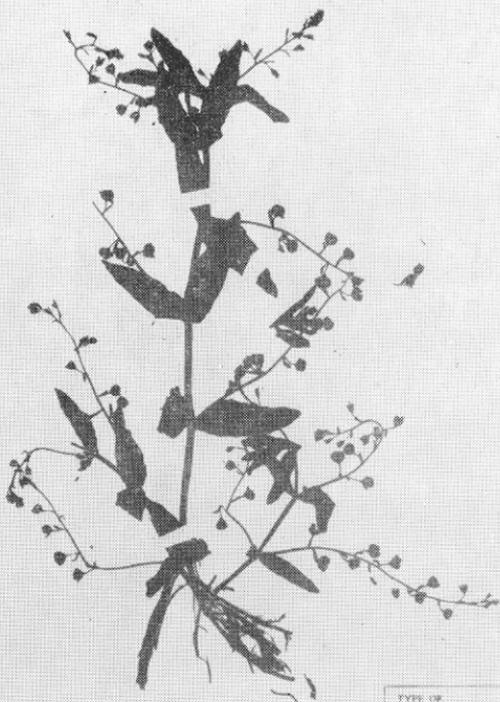


Plate 2b. *V. catenata* Pennell, capsule. $\times 5$.

From the Trower Fund.



TYPE OF
Veronica catenata Pennell
 Specimen 13327. 1921.

V. cuneata glaberrima Pennell
 FWP 1914

V. catenata Pennell
 TYPE FWP 1914

No. 926

FLORA OF THE BLACK HILLS
 OF SOUTH DAKOTA.

Veronica angustifolia L.

HERBARIUM JUNE 16 1921
 DR. P. A. RAVENHILL Alt. 3500 Feet.

ROSEN
 NYBERG

Plate 3. *Veronica catenata* Pennell. Type. $\times \frac{1}{3}$ approx.
 From the Trower Fund.