

A FURTHER NOTE ON  
CEANOTHUS HERBACEUS VERSUS *C. OVATUS*<sup>1</sup>

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TORREY AND GRAY (Fl. N. Am. 1: 264–268. 1838) seem to have been the first to study critically the genus *Ceanothus* (Rhamnaceae) in the eastern United States. The large number of species described from that area up to that time (nearly 10 by Rafinesque, three by Pursh) was reduced by these authors to five, which have been recognized by all subsequent authors dealing with the flora of North America. Although Torrey and Gray's delimitation of these species was basically correct, some changes in the circumscription, or at least in the synonymy, of *C. americanus* L. and in the nomenclature of the species generally known as *C. ovatus* Desf. are necessary.

These two rather similar, but actually quite distinct, species are widely distributed in eastern North America, the first extending south to Florida, the second to central Tennessee and Arkansas in the southeastern United States. "When compared with each other these two species resemble each other very much from seedling to mature plant. But characteristic of *C. ovatus* is, however, the [short-peduncled] terminal inflorescences [in contrast with the axillary, long-peduncled inflorescences of *C. americanus*] and the narrower leaves with stomata on both sides" (T. Holm, Am. Jour. Sci. 22: 530. 1906). Although the leaves of *C. americanus* are typically ovate, rounded or subcordate at the base, and usually more or less pubescent, while those of *C. ovatus* are elliptical and typically glabrous, there are specimens intermediate between the two species in the shape of the leaves and the degrees of pubescence, as well. The further feature which is characteristic of *C. americanus* is that "the flowering branches [are] herbaceous, new each year" (Fernald, Gray's Man. Bot. ed. 8. 993. 1950), a character not recorded for *C. ovatus*.

Apparently this last character was the reason that *Ceanothus herbaceus* Raf., 1808, originally described as a plant with annual stems, was included in *C. americanus* by Torrey and Gray as var. *herbaceus* (Raf.) Torr. & Gray, with *C. perennis* Pursh in synonymy. Most botanists in the succeeding century generally followed Torrey and Gray in identifying *C. herbaceus* Raf. with *C. americanus*, rather than with *C. ovatus*. More recently, however, Shinnars proposed (Field Lab. 19: 33, 34. 1951) to substitute *C. herbaceus* Raf., "1809," for *C. ovatus* Desf., 1809, on the basis of the presumed misapplication of the latter name. Although this proposal ap-

<sup>1</sup> Continuing a series of miscellaneous notes and papers on the flora of the southeastern United States made possible through the interest and support of George R. Cooley and a grant (GB-171) from the National Science Foundation.



parently has not met with general recognition, it induced me to investigate further the taxonomic and nomenclatural status of *C. herbaceus* Raf.

A few botanists prior to Shinnars identified Rafinesque's species, described from "near the falls of the Potowmack, between the rocks," with that of Desfontaines, described from material cultivated in France. Thus, in 1919, Hitchcock and Standley (Fl. District Columbia, p. 201) noted under *C. ovatus*, "Plants from our region were described by Rafinesque as *C. herbaceus*." The authors of *The Flora of Vermont* (E. J. Dole, editor, ed. 3. p. 186. 1937) listed *C. herbaceus* in the synonymy of *C. ovatus*. Finally, Merrill (Index Raf. p. 162. 1949) referred *C. herbaceus* Raf., Med. Repos. II. 5: 360. 1808, to *C. ovatus* Desf., but quite inexplicably regarded *C. herbaceus* Raf., Jour. Bot. Desvaux 1: 227. 1809, as *C. americanus*, although Rafinesque's article in the *Journal de Botanique* was an exact translation of that in the *Medical Repository*.

Despite the discrepancies in the taxonomic treatment of Rafinesque's species, no attempts were made to reinvestigate its taxonomic and nomenclatural status until 1951, when Shinnars proposed to substitute *C. herbaceus* Raf., 1809, for *C. ovatus* Desf., 1809. The conclusion he reached is correct, but the basis for the substitution is not. Having examined some recent collections of *Ceanothus* from the type locality of *C. herbaceus* Raf. and having compared the original description of the latter with that of *C. ovatus*, Shinnars concluded that 1), although the type of Rafinesque's species was probably not preserved, his species is identifiable by the collections from the type locality; 2) *C. herbaceus* Raf., 1809, is conspecific with *C. ovatus* auct., not Desf., and with *C. ovalis* Bigel., 1824; 3) *C. ovatus* Desf. is an unidentified cultivated species (perhaps a hybrid), and "perhaps mere resemblance in name was an inducement to substitute *C. ovatus* for *C. ovalis*"; and hence, 4) *C. herbaceus* Raf., 1809, is to be substituted for *C. ovatus* Desf., 1809, the name of a different and unknown species.

The circumstance that in the vicinity of Washington, D. C., *Ceanothus ovatus* Desf. "is confined to the Potomac shore, where it inhabits the rocks at 'Little Falls'" (Holm, p. 523; see also L. F. Ward, Guide Fl. Wash., p. 72. 1881, and Hitchcock & Standley, *loc. cit.*), while *C. americanus* occurs in dry copses or in open fields (Holm, *loc. cit.*), fully supports Shinnars' conclusion regarding the conspecificity of *C. herbaceus* with *C. ovatus*, but his statement that *C. ovatus* Desf. is an unknown species, different from that to which this name was applied, is incorrect.

In their treatment of *Ceanothus*, Torrey and Gray (Fl. N. Am. 1: 264, 265. 1838) at first placed *C. ovatus* Desf. in the synonymy of *C. americanus* [var.]  $\gamma$ . *herbaceus* (Raf.) Torr. & Gray, considering it different from *C. ovalis* Bigel. After having seen an authentic specimen of *C. ovatus* Desf., these authors (*loc. cit.*, p. 686) removed the latter from the synonymy of *C. americanus* var. *herbaceus* to *C. ovalis* Bigel. with the remark, "To this belongs *C. ovatus* Desf., which is the prior name, but less appropriate, as the leaves are never ovate." This authentic specimen of *C. ovatus* Desf., with the label "Herb. Webbianum. Ex Herb. Desfontaines," with

pencil marks on the sheet "W. T." [William Trelease] and "[type]," is preserved in the collections of the Gray Herbarium. Since *Ceanothus ovatus* Desf. is clearly typified in the sense in which the name has been used since Torrey and Gray, Shinnery's second to fourth conclusions are untenable.

There is, however, another reason for taking up *Ceanothus herbaceus*: the priority of Rafinesque's name over that of Desfontaines. *Ceanothus herbaceus* Raf. was first published in 1808, not in 1809, thus antedating *C. ovatus* Desf., of 1809, and being the correct name for this species of northeastern and central North America.

**Ceanothus herbaceus** Raf. Med. Repos. N. Y. II. 5: 360. 1808,  
"Canothus," sphalm.; Jour. Bot. Desvaux 1: 227. 1809.

*C. ovatus* Desf. Hist. Arbr. Arbriss. 2: 381. 1809.

*C. ovalis* Bigel. Fl. Boston. ed. 2. 92. 1824.

Topotype collections of *C. herbaceus* Raf. seen: In vicinis of Washington, D. C., *L. F. Ward*, July 18, 1880 [fruiting specimen] (GH). (The same sheet also bears a flowering specimen collected June 4, 1881.)



Brizicky, George K. 1964. "A Further Note on *Ceanothus herbaceus* versus *C. ovatus*." *Journal of the Arnold Arboretum* 45(4), 471–473.

<https://doi.org/10.5962/p.324685>.

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