

TYPIFICATION OF *VERBENA SPURIA* L. (VERBENACEAE)

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ABSTRACT

A neotype is designated for *Verbena spuria* L.—the plant mounted as *Clayton 431* in BM, apparently mislabelled, since the label information clearly refers to *V. urticifolia* L. It is possible or even probable that the plant was among those studied by Linnaeus in his formulation of the description of *V. spuria*, but since it cannot be unequivocally demonstrated to be original material, neotypification is appropriate.

KEY WORDS: *Verbena spuria*, Linnaeus, neotype

According to Jarvis (2007), a type for *Verbena spuria* has not been designated and original material has not been traced. It is argued here that a plant representing *V. spuria* indeed is in the Clayton herbarium and that it perhaps was studied by Linnaeus in the formulation of his concept of *V. spuria*. That plant, however, is mislabelled as *V. urticifolia*. Because it cannot be unequivocally demonstrated to be original material, the Clayton plant is designated as neotype.

Verbena spuria L., Sp. Pl. 1: 20. 1753. *Verbena officinalis* L. var. *spuria* (L.) Hook., Companion Bot. Mag. 1: 176. 1836. **NEOTYPE** (designated here): [USA]. Virginia. *Clayton 431*, the plant but not the accompanying label, which misidentifies it as *V. urticifolia* (BM-Clayton digital image).

The protologue for *Verbena spuria* is this: "12. VERBENA tetrandra, spicis filiformibus, foliis multifido-lacinatis, caulibus numerosis. Hort. ups. 8. Veronica humilior, foliis incis. Clayt. virg. 8. Habitat in Canada, Virginia." This essentially repeated the text of *Verbena* species No. 3 of Hortus Upsalensis—also repeating the references to the relevant page number from that publication ("Hort. ups. 8") as well as from a species in Gronovius's *Flora Virginica* ("Clayt. virg. 8").

Verbena No. 3 in Hortus Upsalensis is described in this way: "3. VERBENA tetrandra [sic], spicis filiformibus, foliis multido-lacinatis, caulibus numerosis. Verbena humilior foliis incis. Clayt. virg. 8." The first phrase is repeated from a description in Hortus Cliffortianus that clearly refers to *V. officinalis*. The second phrase is repeated from the brief description on p. 8 of *Flora Virginica*.

Only a single collection of *Verbena* sensu stricto is in the BM-Clayton herbarium—the one identified as *V. urticifolia* (*Clayton 431* from Virginia, annotated by J.L. Reveal in 1990 as a syntype of *V. urticifolia*), the one apparently presumed to be associated by Gronovius in *Flora Virginica* (p. 7) with the concept of *V. urticifolia*. This specimen, however, is not *V. urticifolia* but instead *V. officinalis*.

The *Clayton 431* label obviously was intended originally for a collection of *Verbena urticifolia*, because the label information matches the concept of that species: "Verbena alta fol. urticae, fl. dilute caeruleis spicatum in summis caulibus congestibus, Clayt. n. 431," this repeated in the *Flora Virginica* text (p. 7) for *V. urticifolia*. But the leaves on the Clayton specimen are linear-

oblong, the margins not at all serrate but instead with a few narrow proximal lobes, the spikes are few and uncrowded, the fruits are distantly remote but distinctly larger than in *V. urticifolia*, and the corollas are larger than in *V. urticifolia*. There would have been no other species other than *V. officinalis* in Clayton's area that could have matched this collection. *Verbena officinalis* probably was planted by the early colonists for its medicinal properties and perhaps already was naturalizing when Clayton collected it.

Because the plant mounted on the Clayton 431 sheet does not match the concept of *V. urticifolia*, and because even the early descriptions of *V. spuria* (or *V. officinalis*) and *V. urticifolia* are distinct, it is probable that confusion in labeling occurred. Reveal (1985) noted other examples of misapplication of names resulting from specimens mislabelled by Gronovius and Linnaeus. The plant with the 431 label, however, could match the briefer description on p. 8 of Flora Virginia ("VERBENA humilior foliis incis. Clayt."), especially since it presumably would have been an unnumbered collection ("Clayt.") before the 431 label was mistakenly associated with it. Published descriptions of *V. spuria* only referred to, directly or indirectly, the species on p. 8 of Flora Virginia, without reference to a numbered collection by Clayton. Linnaeus cited "Gron. virg. 7" (referring directly to the description on p. 7, thus indirectly to Clayton 431) in association with *V. urticifolia* in both Hortus Upsalensis and Species Plantarum, but it is unlikely that he would have identified the plant now associated with Clayton 431 as *V. urticifolia*, so dissimilar is it.

Verbena urticifolia has been lectotypified by a LINN specimen by Méndez Santos and Caffarty (2001, p. 1140). They noted that, as part of the original material, Clayton 431 was "seen by Linnaeus," but in the interpretation here, Linnaeus may not have seen a Clayton plant of bonafide *V. urticifolia*, since he only referred to the description by Gronovius. The path and ultimate fate of the Clayton collection properly associated with the 431 label is unknown.

***Verbena officinalis* and *V. spuria* in North America**

Early North American floristic accounts by Michaux (1803) and Pursh (1814) included *Verbena spuria* but not *V. officinalis*. Subsequent treatments by Torrey (e.g., 1826) and Gray (e.g., 1848) also included *V. spuria* (without *V. officinalis*), but the revised edition of Gray's Manual of Botany (1859) apparently was the first to treat it as a synonym of *V. officinalis*. Gray studied in London in 1838-1839 and 1855 (Dupree 1959) and perhaps on the second of these trips became convinced of the equivalence of the two names.

A plausible explanation of the choice of the epithet "spuria" supports the synonymy of *Verbena spuria* and *V. officinalis*. Linnaeus would have recognized the resemblance of the plant in the American collection to the European *V. officinalis*, and although he was familiar with *V. officinalis* and surely aware of variability in its native range, he may have been reluctant to identify the American plant as the same species. A comparison of authentic and inauthentic is implicit in the definition of "spurious."

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Figure 1 (left). Neotype of *Verbena spuria* L., Clayton 431 at BM (see text).



Figure 2 (below). Label of Clayton 431, enlarged and superposed.