

PROCEEDINGS
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TWO NEW VIOLETS FROM THE EASTERN UNITED STATES.*

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Viola tenuipes.

Stem simple, erect, 8-15 cm. high, from a short horizontal or ascending knotted rootstock emitting numerous long, thick fibrous roots; leaves, 3 to 5, usually 4, borne at the summit of the stem: blades glabrate, ovate-lanceolate or hastate-lanceolate, with a truncate base and acute apex, the margins repand-denticulate; stipules ovate, membranaceous; petiole 1-1.5 cm. long, appreciably shorter than the blade; flowers on filiform peduncles exceeding the leaves; sepals irregular, from linear-ovate to linear; corolla yellow, 1.5 cm. broad, the petals narrow, beardless, and quite free from markings; capsules smooth, ovoid.

In dry soil, northern Georgia and Alabama to Florida. Type from, Chattahoochee, Florida, March, 1897 in the Chapman herbarium, now the property of the Biltmore herbarium. The type sheet is a remarkably full one, bearing twelve individuals of uniform size and characters except that the rootstock of one of these produces two stems in place of a solitary one. A photograph of the type sheet is deposited in the U. S. National Herbarium. The species is also well represented by collections made at Auburn, Alabama, April 11, 1899, by Mrs. F. S. Earle; at Cullman, Alabama, May 1, 1901, by representatives of the Biltmore Herbarium: at Tuscaloosa, Alabama, by Professor Lester F. Ward; and at Rome, Georgia, by Dr. Chapman.

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The publication of this species is the result of a critical study of the violets belonging to the *hastata* group in the South, wherein my own field observations have been supplemented by information kindly given me by other collectors. For many years Elliott's *V. tripartita* was regarded as a variety of *V. hastata*, although the most superficial examination of the rootstock in the two species ought to have dispelled such an opinion. Yet even after Dr. Small had demonstrated this character it was noticeable to southern botanists at least that certain forms remained which could not well be disposed of in connection with either of these species. More recently Mr. Roland M. Harper* attempted to solve the difficulty by the reinstatement of Gingins' *V. hastata glaberrima*†, which he treated as an entire leaved variety of *tripartita*, remarking in this connection: "It differs from typical *tripartita* in having leaves all undivided and glabrous, but is in other respects very similar. It seems to extend farther south than the type, and is the plant which was taken for *V. hastata* in Florida." But Mr. Harper has here fallen into the very natural error of placing in a single category all the plants with undivided leaves, regardless of range, and his statement in the concluding portion of above quoted paragraph is also a trifle too broad. While much of the material referred by Dr. Chapman to *V. hastata glaberrima* has nothing in common with *hastata*, the latter species does, notwithstanding, occur in Florida, as is abundantly proven by excellent specimens in the Biltmore Herbarium, collected in Liberty County. A mere glance at the whitish, succulent, tuberous rootstock is sufficient to establish the identity of this species.

Let us now examine the range of the dubious forms under consideration. The type of *V. tripartita* came from Athens, Georgia, and the species has been collected there by many different persons since Elliott's day, so that we have no difficulty in establishing a positive diagnosis of its characters. North of this point it ranges through the mountains of North and South Carolina and eastern Tennessee, being common near Biltmore, N. C., where I have carefully studied it. Throughout this range, and nearly always associated with the typical form, as shown by notes on collector's labels, is a plant of almost identical appearance, except that the leaves are undivided and have a tendency to become glabrous with age. This is the true *glaberrima*, which may well stand as a variety of *tripartita*, where it has been placed by Mr. Harper.

If now we examine the collections from south of Athens, we find an entire-leaved yellow-flowered violet represented in abundance, but no *tripartita*. It is this plant which was familiar to Dr. Chapman in Florida, and which Mr. Harper has confused with the more northerly form. *V. tripartita* and its variety are relatively tall, coarse plants, even at flowering time, having flowers with the corolla distinctly veined, and with rather broad sepals. This violet is very slender, of remarkably uniform size, with smaller flowers, quite imaculate petals, and leaves strongly sug-

*Bull. Torr. Club. 27: 337. 1900.

†Gingins in D. C. Prodr. 1: 300. 1824.

gesting those of *hastata*, while the leaves of *tripartita glaberrima* resemble rather those of *V. scabriuscula* in shape. This species, which I have described above under the name *tenuipes*, is of southern range exclusively. From the true *hastata*, which also occurs in Florida, it may be distinguished by the rootstock, which is of the same type as that of *tripartita*.

I wish to express my appreciation of the courtesy of Mr. C. D. Beadle, Curator of the Biltmore Herbarium, for the loan of many sheets of specimens, and to Mr. Frank Boynton, of the same institution, for assistance in field work.

Viola Mulfordae.

Acaulescent, tufted, from a short, thick and nearly vertical caudex: scapes and foliage finely puberulent; leaf-blades oblong or ovate-oblong outline, in the earliest 1.5-2 cm., the latter 3-4 cm. long; the margins coarsely crenate, frequently incised at base with one or more lobes, the apex very obtuse; petioles about twice the length of the blades; scapes 12-15 cm. high, surpassing the leaves; flowers deep violet-purple, nearly 2 cm. broad; sepals linear-lanceolate, finely ciliate; petals obovate, very obtuse, copiously bearded at the base with glistening white hairs; scapes of the cleistogenes evidently erect.

Type, No. 404,998 in the United States National Herbarium, collected by Miss F. A. Mulford at Hempstead Plains, Long Island, N. Y., May 13, 1902. The species belongs to the coastal plain region, its affinities being with *V. Brittoniana*, with which it is found growing. Miss Mulford was the first to detect the obvious differences in both flowers and foliage, and after a full season's observation of both plants in the field concluded that they should not be referred to the same species. In recognition of her courtesy in contributing material and the result of her investigations, I take pleasure in naming the plant as above. It will be remembered that the leaves of *V. Brittoniana* are distinctly ovate in outline and pinnately lobed, while the flowers are of another shade, and do not exhibit the white pubescence.