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A NEW VARIETY OF *TRILLIUM PUSILLUM* (LILIACEAE) FROM THE VIRGINIAS¹

NORLYN L. BODKIN AND JAMES L. REVEAL

Bodkin, Norlyn L. (Department of Biology, James Madison University, Harrisonburg, VA 22807) and James L. Reveal (Department of Botany, University of Maryland, College Park, MD 20742). A new variety of *Trillium pusillum* (Liliaceae) from the Virginias. *Brittonia* 34: 141–143. 1982.—A montane population of *Trillium pusillum* Michx. from the crest of Shenandoah Mountain on the Virginia-West Virginia state line is newly described as *T. pusillum* var. **monticulum**. It differs from the related coastal plain variant, var. *virginianum* Fernald, by its broader and shorter leaf and sepal ratios, typically notched petal apices, consistently sessile flowers (not at all pedicellate), slightly shorter style, and reduced stature. The var. **monticulum** is restricted to the ridge crest of the mountains at 1190 m (3900 ft) elevation while the var. *virginianum* is restricted to the coastal plains of eastern Maryland and Virginia at elevations less than 30 m (100 ft).

The 1978 report by Roe of *Trillium pusillum* Michx. var. *virginianum* Fern. occurring in the high mountains on the Virginia-West Virginia state line was questioned by Reveal and Broome (1981) who commented that this montane population “might represent another minor expression in the species.” The rediscovery of the montane plants in the spring of 1981 by the senior author allowed us to make careful, detailed population comparisons between it and the typical coastal expression as found on the Delmarva Peninsula of eastern Maryland. As a result of our studies, we conclude that the high elevation expression is distinct from var. *virginianum* and should be formally recognized.

Trillium pusillum Michx. var. **monticulum** Bodkin & Reveal, var. nov. (Fig. 1)

A var. *virginiano* statura breviori, foliis ellipticis 1.5-plo (nec anguste ellipticis 3-plo) longioribus quam latioribus, sepalis anguste ovatis 2-plo (nec lanceolatis 3-plo) longioribus quam latioribus, floribus sessilibus petalis que apice saepe emarginatis differt.

Stems slender, 0.5–2 dm tall, arising from a stout underground rhizome 0.6–0.8 cm in diameter; leaves elliptic, sessile, (2.2) 2.5–4.5 (4.8) cm long, 1.5–2.5 (2.8) cm wide, dark green above and below with a purplish tinge below, rarely so above, acute to subobtusely apically, acute basally; pedicels lacking; sepals erect, exceeding the petals in length, narrowly ovate, (1.3) 1.5–2 (2.4) cm long, 0.6–1.2 (1.4) cm wide, dark green with a thin, hyaline often wavy margin, the apex distinctly cymbiform; petals spreading, white to pink especially after anthesis, 1.5–2 cm long, 0.5–1 cm wide, narrowly ovate, the margin undulate with an emarginate apex; stamens 0.8–1 cm long, about half the length of the petals, the filaments broadened at the base, about the length of the linear anther, the connective purple; style straight, 0.2–0.3 mm long, green, with each of the recurved 0.6–0.8 mm long whitish stigmas bearing a slightly wavy margin (Fig. 1).

TYPE: UNITED STATES. VIRGINIA. Rockingham Co.: Shenandoah Mt., 1.5 km NNE of Briery Branch Gap and the jnct. of Virginia Rte. 924 along Forest Service Road 85 (Flagpole Knob Road), on Hampshire (Catskill) Formation of chiefly red sandstone with some flagstone, shales and mudrock in various stages of disintegration, associated with *Pinus pungens*, *P. strobus*, *Tsuga canadensis*,

¹ This paper is dedicated to Dr. Russell G. Brown in celebration of his 50th year at the University of Maryland.

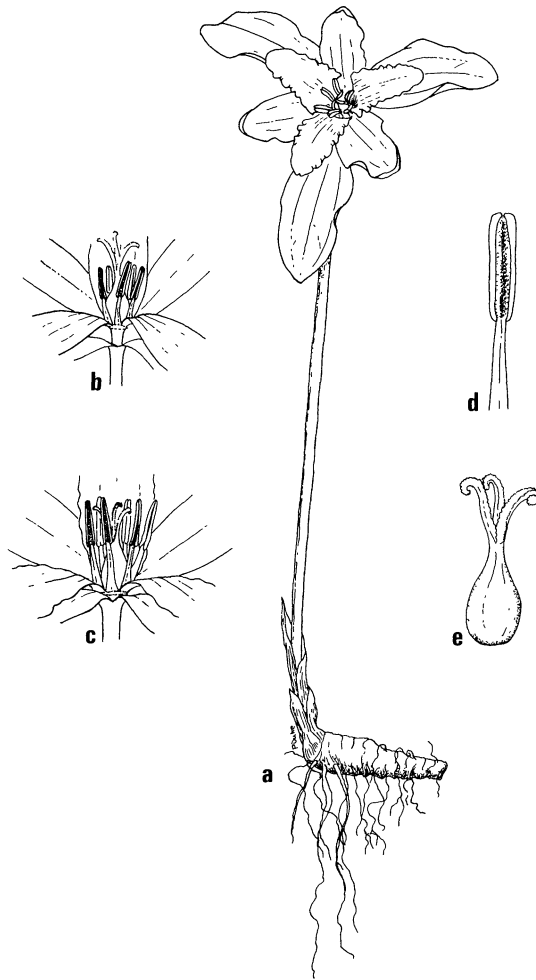


FIG. 1. *Trillium pusillum*. A. Habit of var. *monticulum*, $\times 1$. B. Flower of var. *virginianum*, $\times 2$. C. Flower of var. *monticulum*, $\times 2$. Note the relative position of the styles and anthers in the two (B and C). D. Anther of var. *monticulum* showing the broad connective, $\times 4$. E. Ovary of var. *monticulum* showing the wavy stigma portion of the style and stigma, $\times 4$.

Quercus prinus and *Pieris floribunda*, with scattered *Prunus serotina* and *Kalmia latifolia*, in protected places usually at or near base of shrubs in grassy areas, at 1190 m (3900 ft) elevation, 18 Apr 1981, *Reveal & Bodkin 5586* (HOLOTYPE: MARY; ISOTYPES: CAS, JMU, NY, US).

As noted by one of us (Reveal & Broome, 1981), *Trillium pusillum* is composed of varieties that are geographically isolated and weakly distinct morphologically. The var. *pusillum* is restricted to North Carolina, South Carolina, Alabama and perhaps Tennessee, while var. *texanum* (Buckley) Reveal & Broome is found only in Texas. The var. *ozarkanum* (Palmer & Steyermark) Steyermark is found in southern Missouri and northern Arkansas and has an outlying population in south-central Kentucky. All of these have well-defined pedicels and white styles about as long as the ovary.

The more northern varieties, var. *virginianum* and the newly proposed var.

monticulum (from “monticulus” the Latin for “little mountain”), differ from the others in having flowers that are sessile or nearly so (sessile in var. *monticulum* and up to 0.8 cm long in var. *virginianum*) with greenish styles less than half as long as the ovary. None of the varieties overlap geographically.

Trillium pusillum var. *monticulum* differs from var. *virginianum* as in the following key:

- | | |
|---|-------------------------|
| 1 Flowers sessile or with a pedicel up to 8 mm long, the petals entire; leaves narrowly elliptic, 3.5–8.5 cm × 1.5–2.8 cm; sepals not obviously cymbiform; style 0.3–0.5 mm long; coastal Maryland and Virginia | var. <i>virginianum</i> |
| 1 Flowers sessile, the petals wavy-margined; leaves elliptic, 2.2–4.8 cm × 1.5–2.8 cm; sepals cymbiform; style 0.2–0.3 mm long; montane Virginia and West Virginia | var. <i>monticulum</i> |

Acknowledgments

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- Roe, G. F. 1978. Additions to the range of *Trillium pusillum*. *Castanea* 43: 187–191.

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