

The Ecological Status of Six Rare Plants in Kentucky, with Reference to a Recent Publication on Endangered Species

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ABSTRACT

Documented comments on the occurrence of 6 rare plant species in Kentucky include 5 species referred to in a recent publication entitled "Endangered Plants and Animals of Kentucky" by Jan V. Babcock. Evidence is presented to show that the actual ecological status of 5 of those species in Kentucky is quite different from that reported by Babcock, and the sixth species, *Satureja glabella*, was not mentioned. The scientific merit of the plant section of Babcock's publication is questioned.

INTRODUCTION

Jan V. Babcock (1977) recently compiled a book entitled "Endangered Plants and Animals of Kentucky." With regard to the plant species in that publication, there are gross inaccuracies concerning their present ecological status in Kentucky, and some rare species that occur in Kentucky were not included. The purpose of this article is to comment on the ecological status of 6 of the Commonwealth's rare plant species, with special reference to Babcock's book. Those 6 species not only are rare in Kentucky but are rare throughout their narrow geographic ranges.

Viola egglestonii Brainerd

Babcock indicated that *V. egglestonii* occurs in Warren, Hart, and Bullitt counties and suggested, by symbols on his map, that the species is "abundant" in Warren County and "common" in Hart and Bullitt counties. The only mention in the literature of *V. egglestonii* in Warren County is in a report entitled "Violets of North America" by Ezra Brainerd in 1921. In that report, Brainerd mentioned a single specimen collected by Sadie F. Price from near Bowling Green in Warren County on 11 April 1899. The only report of its occurrence in Hart County was by Braun (1943) who had a single collection of it from Hart County. Furthermore, Braun did not list *V. eggles-*

tonii as occurring in Warren County, and Hart is the only county from which she had a collection of it. We (Baskin and Baskin 1978) have searched the cedar glades, the natural habitat of *V. egglestonii*, in Warren and Hart counties and have not found it in either county. Furthermore, in a taxonomic treatment of the violets of central and eastern United States, Russell (1965) did not indicate that *V. egglestonii* occurred in Kentucky because he could not find herbarium specimens to document its occurrence there.

We recently discovered a few small populations of *V. egglestonii* on Silurian limestone in eastern Bullitt County (Baskin and Baskin 1975), but the species certainly is not common there, contrary to what is indicated on Babcock's distribution map. In 1975, Bullitt was the only county in Kentucky in which living populations of *V. egglestonii* were known to occur. More recently, however, we found 3 small populations in Nelson County, south of Bardstown (Baskin and Baskin 1978).

Leavenworthia torulosa Gray

Babcock depicted *L. torulosa* as "abundant" in Warren County, "common" in Logan County, and "probable" in Simpson County. For Warren County, he gave 1 specific location, "twelve miles north of U.S. 68," which he must have taken from Rollins (1963). In his field studies of the

genus *Leavenworthia*, Rollins (1963) found only 1 population of *L. torulosa* in Kentucky and gave its location as "cedar glade situation, 12 mi. north of U.S. Highway 68 on state route 1083, Warren County." Nowhere in his book did Babcock refer to Rollin's monograph.

Presently, only 2 extremely small populations, 1 in Warren County and 1 in Logan County, are known in Kentucky, and the Warren County population referred to by Rollins no longer exists (Baskin and Baskin 1977). Certainly, *L. torulosa* is not common or abundant anywhere in Kentucky, and probably never was. The reasons we conclude it never was common or abundant are: (1) its specialized cedar glade habitat of seasonally wet or flooded shallow soil over limestone in pools or depressions is not common, and (2) very few collections of the species have ever been made in Kentucky. The species was collected by Short in 1840, Rollins and Channell in 1959 (Rollins 1963), and Baskin and Baskin in 1973 (Baskin and Baskin 1977). Rollins made the following statement concerning the occurrence of *L. torulosa* in Kentucky "I searched for the species in Kentucky in three different years before finding it and I have not seen any specimens from that state collected in the interim between those of Short in the 1840's and the small population we found in 1959."

Leavenworthia exigua var. *laciniata* Rollins

Babcock wrote that *L. exigua* var. *laciniata* is "common" in Bullitt and Jefferson counties. As with other plant species in his book, Babcock did not cite specific literature references or herbarium specimens. Rollins (1963), who first described that variety of *L. exigua*, gave only 1 location, on Ridge Road in Bullitt County, Kentucky, and he cited only 2 collections from that site. *Leavenworthia exigua* var. *laciniata* does occur in Bullitt and Jefferson counties, as Babcock indicated, but it is not common. We have searched extensively for *L. exigua* var. *laciniata* in Bullitt County and in the southern portion of Jefferson County. It is fairly common in a small

portion of eastern Bullitt County, but we have found only 1 small population in Jefferson County, just north of the Bullitt-Jefferson County line.

Conradina verticillata Jennison

Babcock noted that *C. verticillata* is "common" in McCreary County, but then described its distribution in Kentucky as "South Fork of Cumberland River, submerged upon completion of Wolfe Creek Dam." Braun (1936) first reported the species from Kentucky along the banks of the South Fork of the Cumberland River in McCreary County. Apparently, that is the only locality from which the plant has ever been collected in Kentucky. In his synopsis of *Conradina*, Shinnars (1962) cited specimens from a single collection of *C. verticillata* made by Braun at the above locality on 18 June 1935. Gray (1965, unpublished doctoral dissertation, Vanderbilt University, Nashville, Tennessee) in his study of *Conradina*, cited specimens collected by Braun at the same locality on 6 September 1934 and 18 June 1935. In her catalogue of Kentucky spermatophytes, Braun (1943) wrote "Very rare and local on banks of South Fork Cumberland River, where it will be submerged upon completion of the Wolf Creek dam: *McCreary*."

Gray (unpublished dissertation) doubted that *C. verticillata* still exists in McCreary County, Kentucky, and wrote "... the only reported station of its occurrence (Braun 1936) is situated upstream from the present site of Wolf Creek Dam on the South Fork of the Cumberland River. The presumed site of the population is now submerged."

Apios priceana Robinson

Babcock noted *A. priceana* as occurring only in Warren County and suggested that its occurrence is only "probable." According to Browne and Athey (1976), specimens collected by Sadie F. Price near Bowling Green in Warren County are on deposit in GH, NY, and US. Those specimens probably were collected in the late 1890s. The species has been collected

in at least 3 other Kentucky counties in the 1970s. In their study of the flora of the Land Between the Lakes of Kentucky and Tennessee, Ellis et al. (1971) reported the species from Trigg County, Kentucky. More recently, Browne and Athey (1976) reported it from Livingston and Lyon counties, Kentucky.

Satureja glabella (Michx.) Briq.

Satureja glabella is an example of a rare plant in Kentucky (and throughout its range) that was not included in Babcock's treatment. The species is known only from a few localities in middle Tennessee, northwestern Arkansas, and central Kentucky (Baskin and Baskin unpublished information). The University of Kentucky herbarium has 2 specimens of *S. glabella* [labeled *Cunila glabella* Michx., an old synonym for *Satureja glabella* (Michx.) Briq.] collected by Short. One specimen was collected in 1836 but has no collection site, and the other specimen has neither a date nor a collection site. In 1943, Braun said that the species occurred in Henry and Owen counties. Since then, Wharton (No. 10,267b in UK, 9 August 1956) has collected *S. glabella* in Franklin County, making a total of 3 Kentucky counties from which the species has been collected.

CONCLUSION

We conclude that the plant section of Babcock's book contains inaccuracies and should be used with caution as a source of floral documentation in preparation of

environmental assessments by federal or state agencies or contractual consultants to those agencies.

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