

## *Valerianella* in Cherokee County, Oklahoma

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While studying the plants of Cherokee county as a master's thesis problem under the direction of Prof. U. T. Waterfall, the author in 1951 collected *Valerianella ozarkana* Dyal. This unusual find led the author into a more thorough study of the distribution of the genus as illustrated by intensive collecting done on a trip made across the county from the southwest to the northeast. This was done on May 11, 1952 with regular stops made every mile, plus additional ones whenever a long-flowered *Valerianella* was seen. Starting from a point one mile northeast of Fort Gibson, the author went east for eight miles and thence southward one mile to State Highway 10 which was followed through Tahlequah northward to the Adair County line.

The results show *V. radiata* (L.) Dufur. to be the most common species, as it could be found within one-tenth of a mile of every stop. Thirty-six collections of this species were made, in habitats varying from stony hilltops to creek valleys, and from moderate shade to full exposure. Fifteen of these have pubescent fruits, sixteen glabrous fruits and five have one plant with glabrous fruits and another with pubescent fruits. Whether this indicates that most colonies of *V. radiata* consist of plants having only pubescent or only glabrous fruits is a question requiring further investigation.

*V. Nuttallii* (T. & G.) Walp. was found four times along both open and semi-shaded creeks within 7.4 miles east of Fort Gibson.

One collection of *V. longiflora* (T. & G.) was made. It was found 6.3 miles east of Fort Gibson on open creek banks.

*V. ozarkana* Dyal and *V. Bushii* Dyal were collected twice at the extreme north end of the county (22 miles north of Tahlequah) as mixed colonies in open woods of Black Hawk Creek. *V. Bushii* was recorded by Dyal (1) from Missouri and Arkansas. Recently Waterfall (3) reported it from Mayes County, Oklahoma. *V. ozarkana* was similarly recorded by Dyal (1) from Missouri and Arkansas. Last year Goodman (2) reported it from Adair County, Oklahoma. My report is the first for each of these two species from Cherokee County.

*V. longiflora*, *V. Bushii* and *V. ozarkana* all have corolla tubes 7-9 mm. long, while *V. Nuttallii*, although having the same type of salver-form corolla, has a tube 4-5 mm. long. The corolla of *V. radiata* is no more than 2 mm. long. The smoothish, nearly orbicular fruits of *V. longiflora* and *V. Nuttallii* are very similar. *V. Bushii* has a narrow pubescent fruit with the fertile cell as wide as the two sterile cells. *V. ozarkana* has a laterally compressed fruit with hairs in three distinct lines. These characteristics are well illustrated by Dyal (3).

The author's collections of this genus are in the herbarium of Oklahoma A. & M. College.

### LITERATURE CITED

1. DYAL, S. C. 1938. *Valerianella* in North America. *Rhod.* 40: 185-212, pls. 492-494.
2. GOODMAN, G. J. 1952. Notes on Oklahoma plants. *Proc. Oklahoma Acad. Sci.* 32: 39.
3. WATERFALL, U. T. 1952. Further studies of the Oklahoma flora. *Rhod.* 54: 129.