

## Additions to the Oklahoma Flora from Cherokee County

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This report deals primarily with some of the plants collected by Charles Wallis during the years of 1951-1953 while working on a Masters Degree in Botany at Oklahoma A. and M. College. The results of this investigation were incorporated into a thesis (9) done under the direction of U. T. Waterfall.

The taxa which are prefixed with an asterisk in the following account are believed to be additions to the state's flora. Unless otherwise stated, the cited specimens are to be found in the Herbarium of Oklahoma A. and M. College. The private herbarium of Charles Wallis usually contains duplicates.

*Potamogeton crispus* L. This introduced species is cited by Ogden (7) from as near as southwestern Missouri. Muenscher (6) indicates this species' presence in Oklahoma on a map showing its distribution. In Cherokee County it was found in a fishpond at Tahlequah. It is represented by Wallis 1398 and 394. Presumably its occurrence within the state is still quite sporadic.

\**Clematis ligusticifolia* Nutt. So referred is Wallis 860 because it has five coarsely-toothed leaflets instead of the three leaflets of *C. virginiana* reported below. *C. dioscoreifolia* also has five leaflets, which, however, are entire or undulate. The flowers of the last species are perfect, while they are imperfect, according to Bailey (1), in both *C. ligusticifolia* and *C. virginiana*. Fernald (3) says that *C. ligusticifolia* ranges as far southeast as "W. Mo. and Kansas."

\**Clematis virginiana* L. is represented by Wallis 847, open fence row, creek valley, 21 miles northeast of Tahlequah, July 29, 1951. Fernald (3) states that this species extends as far southwest as "La. and e. Kans."

\**Ranunculus Harveyi* (Gray) Britt., distinguished from *R. abortivus* and *R. micranthus* by the petals being 2-2.5 times as long as the slightly clawed sepals, is represented by the following: Prier, on dry hillsides, south of Tahlequah, April 18, 1925; Bebb 5055, in canyon, Braggs Hill, Muskogee Co., April 1, 1940; Hughes, Beaver Bend State Park, McCurtain County, April 6, 1941; Wallis 1056, collected on a shaded creek bank, 3.8 miles south and 6 miles southeast of Tahlequah, April 6, 1952. Benson (2) states that this species, in its typical variety, occurs in southeastern Missouri . . . Arkansas . . . and in two counties in Alabama. It is interesting to note that the type locality is in nearby northwestern Arkansas, and that the cited collections fulfill Fernald's (3) logical prediction "to be expected in eastern Oklahoma".

\**Armoracia aquatica* (Eat.) Wieg. was collected from mud flats, edge of Grassy Lake, 4 miles south and 4 miles east of Tom, McCurtain County, June 6, 1949 as Waterfall 8879, and from Cherokee County as Wallis 1419, shallow and shaded water in Spainard Creek, 8 miles north of Sequoyah County and 1.5 miles east of Muskogee County, June 3, 1953. Fernald (3) gives the western limit of distribution as being Ontario to Louisiana.

\**Rhamnus lanceolatus* Pursh, var. *glabratus* Gleason was collected from a shaded creek valley, 3.6 miles northeast of Tahlequah, as Wallis 566 on June 10, 1951. Wolf (11) cites material of this species from Kansas, Arkansas, and Texas, but none from Oklahoma. Gleason (4) in describing var. *glabratus*, with young leaves and branches glabrous to glabrate in contrast to var. *lanceolatus* in which they are densely pubescent, states that this taxon is "the midwestern plant, extending from Ohio and Kentucky

to Nebraska, Kansas, and Arkansas". In the Cherokee County specimen cited above, the young leaves are nearly glabrous, and the old ones have only a few hairs on the petioles. Jeffs and Little (5) record this species in their list of "Species recorded from Oklahoma in published lists but which have been omitted from the present list".

*Lysimachia ciliata* L. Waterfall has recently (10) proposed the exclusion of this species from the recorded flora, even though it is listed by Jeffs and Little (5), as the only specimen found in the Bebb Herbarium of the University of Oklahoma, hence the probable basis for the inclusion of this species in their checklist, proved to be *L. lanceolata*. *L. ciliata* is now vouched for by Wallis 682, collected in open woods in creek valley, 22 miles northeast of Tahlequah, June 24, 1951, and by Wallis 796, shaded creek bank, 11 miles northeast of Tahlequah, July 8, 1951. On the basis of these collections it seems that this species grows in more moist and protected habitats, where we find several eastern species at the western limit of their range, while *L. lanceolata*, our more common species, grows in somewhat more xeric habitats, and farther west.

*Aster novae-angliae* L. was collected as Wallis 238 and 988, found 5.7 and 6.9 miles northeast of Tahlequah. Both Kansas and Arkansas have been previously stated as being within the range of this species by Fernald (3), who says that it is cultivated and escaped elsewhere. Stemen and Myers (8) list it in their flora. It is possible that the cited collections represent the species in its natural range, but it is not impossible that they are garden escapes.

*Aster laevis* L. is another species known previously, according to Fernald (3), from the adjacent state of Arkansas, and from Louisiana. It is also listed by Stemen and Myers (8). It was collected in oak-hickory woods on a hillside 13 miles northeast of Tahlequah on Oct. 13, 1951 as Wallis 1034.

\**Liatris aspera* Michx., var. *aspera*, forma *Benkii* (Macbr.) Fern., differing from the typical form in having white corollas, was collected as Wallis 863, prairie, 3.5 miles south of Tahlequah, July 29, 1951.

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