The Genus *Lythrum* in Oklahoma

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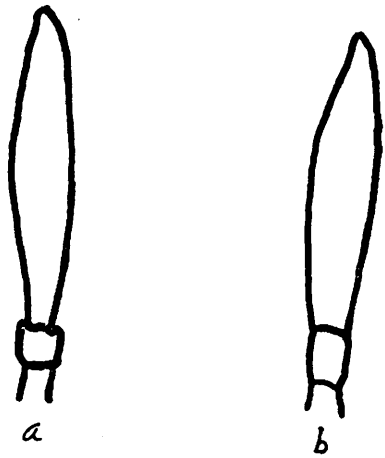
This paper is based on an investigation carried on at Oklahoma A. and M. College, under the direction of Professor U. T. Waterfall. The purpose of the investigation was to ascertain the number of species of *Lythrum* in Oklahoma, and to account for the four species of the genus that have been reported for the state.

Collections of the genus *Lythrum* have been examined at the herbarium of Oklahoma A. and M. College. Additional material has been loaned by Dr. George J. Goodman, Curator of the Bebb Herbarium of the University of Oklahoma. The author wishes to thank him for the opportunity to study this material.

As a result of this study, it is concluded that only two species are represented in the state collections. These are *Lythrum lanceolatum* Ell. and *Lythrum alatum* Pursh.



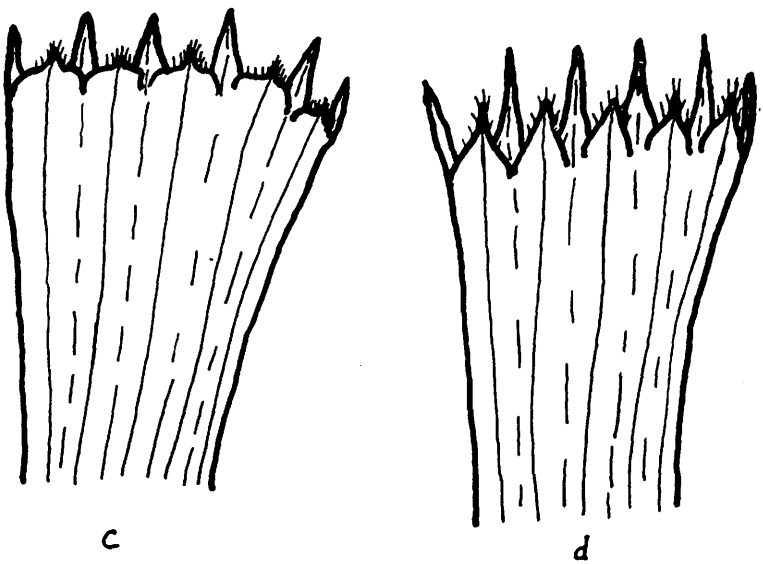


FIGURE 1.

a. *Ovary and Annulus of L. linearifolium (A. Gray) Small.*
b. *Ovary and Annulus of L. lanceolatum Ell. or L. alatum Pursh.*
c. *Portion of Hypanthium of L. linearifolium (A. Gray) Small.*
d. *Portion of Hypanthium of L. lanceolatum Ell. or L. alatum Pursh.*

1. *Lythrum lanceolatum* Ell. These plants lend themselves much more readily to identification if they are collected while they contain the lower stem leaves. Otherwise they may be difficult to distinguish from *L. alatum*, a species with very similar floral characteristics. The stem leaves are attenuate to the base, a characteristic not found in the leaves of *L. alatum*. They may be readily distinguished from *L. lineare* L. by the presence of the annulus at the base of the ovary. This structure is lacking in the latter. They may be distinguished from *L. linearifolium* (A. Gray) Small by the diameter of the annulus compared to that of the ovary. The diameter of the annulus and that of the adjoining part of the ovary are about equal in *L. lanceolatum* (Fig. 1, b) but in *L. linearifolium* (Fig. 1, a) the diameter of the annulus is about twice that of the adjoining part of the ovary. The calyx teeth are mucrolike to triangular in this species (Fig. 1, d) while *L. linearifolium* has calyx teeth with short tips and definite shoulders (Fig. 1, c). *L. lanceolatum* is quite common along streams in most of the eastern half of the state but seems to be rare in the western half.

2. *Lythrum alatum* Pursh. The floral characteristics of this species are so similar to those of *L. lanceolatum* that they are of little or no value in distinguishing the two. They may be used, however, to distinguish this species from *L. lineare* and *L. linearifolium*. The cordate or rounded bases of the stem leaves serve best to separate *L. alatum* from *L. lanceolatum*. *L. alatum* may be found in low moist prairies, ditches, and swamps throughout the state.

The two species *L. linearifolium* and *L. lineare* have been reported for the state. The former was listed by Jeffs and Little (1) but there seems to be no material among the present collections to verify its occurrence in the state. *L. lineare* was reported for the state by Hopkins (2), based on a specimen in the Bebb Herbarium, *J. E. McClary* no. 49, collected near McAlester, Pittsburg County. The present author has found that this plant has short-peduncled terminal flowers, no hypanthium, nine stamens, a trifid style, and unilocular capsule in contrast to the axillary flowers, presence of a hypanthium, six stamens, single style and bilocular capsule that characterize *L. lineare*. It is evident that this specimen is *Hypericum Drummondii* (Grev. & Hook) T. & G. in the Guttiferae.

LITERATURE CITED

1. Hopkins, Milton. 1943. Notes from the Bebb Herbarium. Rhod. 45:252.

2. Jeffs, R. E., and E. Little. 1930. A preliminary list of the ferns and seed plants of Oklahoma. Publ. Univ. Oklahoma Biol. Surv. 2(2):39-101.