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## Floristic Elements of the Pope County, Arkansas, Area

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## Floristic Elements of the Pope County, Arkansas, Area

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Pope County, Arkansas, a primarily mountainous county of the Arkansas River valley in west-central Arkansas, is a unique area floristically. The area has a rich flora representing a number of different habitats and vegetation types: rock outcrop (sandstone, shale, and limestone); unconsolidated sand dunes; several deciduous climax forest types, principally dominated by oaks of several species, often accompanied by one or more species of hickory, but with mesophytic species prevailing on moister, cooler sites; cypress-tupelo swamp forest; several forest types of successional nature, including shortleaf pine; various aquatic and semiaquatic vegetation types; and disturbed habitats in several stages of succession. Extensive agricultural land utilization and building construction activity allows for an abundance of weedy species.

Extensive vascular plant collections have been made within Pope County, and surrounding counties, within the past three years. Preliminary examination of these and other herbarium specimens has revealed several important phytogeographical elements within the flora of the area.

Any area, regardless of geographic location, will harbor species having many different geographic ranges. Any area, therefore, will have certain "rare" species which are either local endemics, disjuncts, or at least marginal in range. Many workers, therefore, think it idle to mention "northern" or "southeastern" or "western" species of an area. Such species, to be sure, are usually not of consequence if considered individually. It is less than easy, however, to discount large assemblages of such species groups on the basis of present distribution patterns alone. An assemblage of "rare" or "marginal" species is often instructional in interpreting past geological history, former distributional patterns,

and, in many cases, present ecological conditions of an area.

The following lists of taxa broadly categorize the phytogeographical affinities of important elements of the flora of Pope County and surrounding area. Sources of distribution data include Gleason and Cronquist (1963), Harrington (1966), Radford et al (1968), and Steyermark (1963). The lists are not exhaustive and are not intended to represent major contributions toward a check list of the area. They are offered as evidence of a diverse flora which offers much potential for serious study.

Specimens cited are on deposit in the Herbarium of the Biology Department, Arkansas Polytechnic College, unless otherwise noted.

### TAXA HAVING PRIMARY DISTRIBUTION IN SOUTHEASTERN STATES

- Trichomanes petersii* Gray — Pope County (Redfearn, University of Arkansas Herbarium)
- Aira elegans* Willd. ex Gaud. — Pope County (Tucker 4191)
- Dichromena colorata* (L.) Hitchc. — Pope County (Tucker 4776)
- Rhynchospora macrostachya* Torr. — Pope County (Tucker 3624)
- Tradescantia hirsuticaulis* Small — Pope County (Wilson s.n.)
- Anilema keisak* Hassk. — Conway County (Tucker 7760)
- Ulmus crassifolia* Nutt. — Conway County (Tucker 8357)

- Planera aquatica* Walt. ex Gmel. — Pope County (Tucker 3610)
- Brunnichia cirrhosa* Gaertn. — Pope County (Stringfellow s.n.)
- Podostemum ceratophyllum* Michx. — Pope County (Tucker 8029)
- Neviusia alabamensis* A. Gray — Conway County (Tucker 6897)
- Cladrastis lutea* (Michx. f.) Koch — Pope County (Tucker 3543)
- Glottidium vesicarium* (Jacq.) Mohr. — Johnson County (Tucker 8241)
- Aeschynomene indica* L. — Pope County (Moore s.n.)
- Sesbania exaltata* (Raf.) Rydb. ex Hill — Pope County (Tucker 7622)
- Zanthoxylum clava-herculis* L. — Pope County (Tucker 7131)
- Berchemia scandens* (Hill) Koch — Pope County (Tucker 7702)
- Eryngium prostratum* Nutt. — Pope County (Tucker 7210)
- Trepocarpus aethusae* Nutt. — Pope County (Tucker 7995)
- Apium leptophyllum* (Pers.) Muell. — Pope County (Tucker 7998)
- Nyssa aquatica* L. — Pope County (Tucker 3607)
- Lyonia ligustrina* (L.) Britt. — Pope County (Tucker 7215)
- Lyonia mariana* (L.) D. Don — Pope County (Tucker 7214)
- Fraxinus caroliniana* Mill. — Pope County (Tucker 8038)
- Forestiera acuminata* (Michx.) Poir — Pope County (Tucker 7107)
- Verbena brasiliensis* Vell. — Pope County (Tucker 7132)
- Spermacoce glabra* Michx. — Pope County (Tucker 7548)
- Sherardia arvensis* L. — Pope County (Tucker 7993)
- Sphenoclea zeylandica* Gaertn. — Yell County (Tucker 6801)
- Senecio tomentosus* Michx. — Pope County (Reddell s.n.)
- Liatris elegans* (Walt.) Michx. — Pope County (Tucker 3498)
- Mikania scandens* (L.) Willd. — Pope County (Tucker 3613)
- Facelis retusa* (Lam.) Sch.-Bip. — Pope County (Tucker 7030)
- Baccharis halimifolia* L. — Pope County (Grabill s.n.)
- Soliva pterosperma* (Juss.) Lessing — Pope County (Tucker 7930)

**TAXA HAVING PRIMARY DISTRIBUTION IN  
NORTHERN AND EASTERN STATES**

- Carex albursina* Sheldon — Pope County (Tucker 7873A)
- Cypripedium calceolus* var. *pubescens* (Willd.) Correll — Pope County (Wright s.n.)
- Orchis spectabilis* L. — Pope County (Tucker 7918)
- Goodyera pubescens* (Willd.) R. Br. — Pope County (Tucker & Hodges s.n.)
- Actaea pachypoda* Ell. — Pope County (Tucker 7650)
- Magnolia acuminata* L. — Pope County (Tucker)
- Magnolia tripetala* L. — Pope County (Tucker 7666)
- Physocarpus opulifolius* (L.) Maxim — Pope County (Tucker 7652)
- Cornus alternifolia* L. f. — Pope County (Tucker 7663A)
- Panax quinquefolius* L. — Pope County (Tucker 7672)
- Halesia carolina* L. — Pope County (Tucker 3553)
- Fraxinus quadrangulata* Michx. — Pope County (Tucker 3539)
- Viburnum molle* Michx. — Pope County (Tucker 6867)

**TAXA HAVING PRIMARY DISTRIBUTION  
IN WESTERN STATES**

- Festuca dertonensis* (All.) Aschers. & Graebn. — Pope County (Tucker 5003)
- Eragrostis oxylepis* (Torr.) Torr. — Pope County (Tucker 7235)
- Cycloloma atriplicifolium* (Spreng.) Coult. — Pope County (Tucker 7205A)
- Froelichia gracilis* (Hook.) Moq. — Pope County (Snodgrass s.n.)
- Dalea lanata* — Pope County (Tucker 7173)
- Cotinus obovatus* Raf. — Pope County (Tucker 5804)
- Sapindus drummondii* Hook. & Arn. — Pope County (Tucker 7043)
- Callirhoe involucrata* (T. & G.) Gray — Pope County (Tucker 8041)

*Spermolepis echinata* (Nutt.) Heller — Pope County  
(Tucker 7106)

**TAXA HAVING PRIMARY DISTRIBUTION  
IN MISSISSIPPI RIVER VALLEY**

*Cynoscadium digitatum* DC. — Pope County (Tucker  
8039)

*Hydrolea uniflora* Raf. — Pope County (3621)

**TAXA HAVING PRIMARY DISTRIBUTION  
IN OZARK HIGHLANDS REGION**

*Carya texana* Buckl. — Pope County (Flanagin s.n.)

*Castanea ozarkensis* Ashe — Pope County (Tucker 4182)

*Phlox pilosa* var. *ozarkana* Wherry — Pope County  
(Moore 54-100)

*Penstemon arkansanus* Pennell — Pope County (Wilson  
s.n.)

*Ruellia pedunculata* Torr. — Pope County (Tucker 7996)

*Galium arkansanum* Gray — Pope County (Williamson  
s.n.)

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## Land Use In Northwestern Arkansas: A Case Study

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The area of study is a civil township in Benton County in northwestern Arkansas. The topographical features range from a flat prairie surface in the southern portion of the township to a rugged, stream dissected surface in the northern portion. The total acreage of the area is 7,851.6 acres. The physical elements of the region will allow the growing of most mid-latitude crops but only a few are found in the area. Therefore, the author turned to the cultural factors to determine the use of land, while keeping in mind that physical controls would exert some influence. In an attempt to get an insight into the cultural involvement, the population was divided into groups based on whether they were full-time farmers, part-time farmers, non-farming families, or absentee owners of farms. A questionnaire was used and all affected people were interviewed.

The major categories used are cropland, pasture land, abandoned agricultural land, farmsteads, forest land, and public and semi-public land.<sup>1</sup>

A total of 536 acres, 6.8 per cent of the township,

(1) Data was collected during the week of March 24, 1969.

is used for crops. There are four commercially grown crops in the area. Green beans utilize 276 acres, wheat 143 acres, soybeans 67 acres, and corn 50 acres.

Green beans are raised as a cash crop, and all are sold to Allen's Canning Company in Siloam Springs, Arkansas. One farmer who resides in the township raises 80 acres of green beans in addition to producing beef cattle and poultry. The remaining 196 acres are grown by two absentee owners who reside close to the township. Both of these farmers engage in beef production as well as green beans. They raise no other crops. All beans are grown in the southern portion of the township where the soil has developed under prairie vegetation. This soil is productive farming land when properly drained and limed.

All three farmers who grow green beans moved into the area from another state and brought capital with them. This cultural influx has had an impact on cash crop production in these prairie areas. Several years ago much of the prairie area was in apple orchards but because of disease, insects, and the ease of pasturing cattle, the orchards were allowed to die and were never replanted. The native people regarded the land as too