

THE WOODY FLORA OF LAND BETWEEN THE LAKES, KENTUCKY AND TENNESSEE

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ABSTRACT

The known woody flora of Land Between the Lakes is presented in an annotated list. The list includes 178 species and 10 varieties representing 49 families and 99 genera. Thirty-four of the taxa are first reports from the area.

INTRODUCTION

The flora of Land Between the Lakes, a 170,000-acre tract in western Kentucky and Tennessee under development by TVA as an outdoor recreation and conservation facility, has been under study since 1965. Published works include studies on lichens (Phillips, 1970), bryophytes (Clebsch, 1974) and a preliminary checklist of flowering plants (Ellis, Wofford, and Chester, 1971). Since the preliminary list, investigations on the vascular flora have continued and this paper summarizes available data on the woody flora.

The following annotated list includes 178 species and 10 varieties representing 49 families and 99 genera. A total of 73 new county records and 34 new taxa (indicated by an asterisk) are included which were not in the original list; six taxa have been deleted or their questionable status noted. Counties for which voucher specimens are on deposit in the Herbarium of Austin Peay State University are indicated by: L, Lyon Co., Kentucky; S, Stewart Co., Tennessee; T, Trigg Co., Kentucky. Nomenclature follows Fernald (1950) except for some cultivated species for which Rehder (1940) was followed.

ANNOTATED CHECKLIST

PINACEAE

Juniperus virginiana L. Red Cedar. Throughout but more abundant in the southern end; old fields, fencerows, bluffs, and successional forest stands. (L, S, T)

**Picea abies* (L.) Karst. Norway Spruce. A rare remnant of habitation. One rather large specimen persisting at an old homesite above Fords Creek Bay (T)

**Pinus echinata* Mill. Shortleaf Pine. Probably native in the area (Shanks, 1952; Clebsch, 1957) but all of our collections are from specimens planted around old homesites. (S, T)

**P. strobus* L. White Pine. A few scattered plantings have been observed. (S)

P. taeda L. Loblolly Pine. Planted throughout, sometimes in rather large plantations, and slowly spreading into adjacent old fields. (L, S, T)

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P. virginiana Mill. Virginia Pine. Dry sites throughout but never frequent or abundant. (L, S, T)
Taxodium distichum (L.) Rich. Bald Cypress. Apparently limited to coves, banks, and swampy ravines along the Tennessee River; infrequent. Not known from the Cumberland drainage system. (L, S, T)

GRAMINEAE

Arundinaria tecta (Walt.) Muhl. Cane. Scattered throughout; often abundant along streams and around bays where "brakes" sometimes are found. (S, T)

LILIACEAE

Smilax bona-nox L. Greenbrier. Infrequently found in thickets and old fields, usually in moist situations. (L, S, T)

S. glauca Walt. Sawbrier. Throughout; fencerows, fields, thickets, and dry woodlands. (L, S, T)

S. hispida (Muhl.) Fernald. Bristly Greenbrier. Local; mostly in lowland forests and thickets. (S, T)

**S. rotundifolia* L. Greenbrier. Infrequent in moist thickets, fencerows, and woodlands. (S)

S. walteri Pursh. Red-Berried Greenbrier. Rare in mesic woodlands and thickets. (S, T)

SALICACEAE

Populus alba L. Silver Poplar. Persisting and spreading around old homesites and cemeteries; scattered throughout, often in dense stands due to vegetative spreading. (L, S)

P. deltoides Barrt. Cottonwood. Throughout but mostly confined to lowlands where it is an important member of most forests; also frequent on moist roadsides and in bottomland fields. (L, S, T)

Salix babylonica L. Weeping Willow. Rare; persisting from former plantings. (S, T)

S. caroliniana Michx. Carolina Willow. Locally abundant on creekbanks and around bays. (S, T)

S. humilis Marsh. Prairie Willow. Scattered throughout but rarely abundant; roadside ditches, edges of upland forests. (L, S, T)

S. interior Rowlee. Sandbar Willow. Rare; streambanks and around bays, often in shallow water. (S, T)

S. nigra Marsh. Black willow. Throughout; often abundant around ponds, streambanks, bays, and in roadside ditches. (L, S, T)

JUGLANDACEAE

**Carya caroliniana-septentrionalis* (Ashe) Engel. & Graebn. Southern Shagbark. Rare in slope forests. (S)

C. cordiformis (Wang.) K. Koch. Bitternut. Throughout but usually restricted to mesic slopes and in ravine and streambank forests. (S, T)

C. glabra (Mill.) Sweet, Pignut. Throughout; often abundant in dry ridge and slope forests. (L, S, T)

C. illinoensis (Wang.) K. Koch. Pecan. Rarely persisting around old homesites and orchards. Specimens from swampy forests on the Tennessee River appear to be native. (S, T)

C. laciniosa (Michx. f.) Loud. Big Shellbark. Local and infrequent along streambanks and in ravine and bottomland forests. (S, T)

C. ovalis (Wang.) Sarg. var. *ovalis*. Red Hickory. Throughout on mesic to dry slopes (L, S, T). The var. **obcordata* (Muhl.) Sarg., Northern Red Hickory, is with the typical variety but rare. However it is perhaps more frequent than records indi-

cate since mature fruits are required for identification (S).

C. ovata (Mill.) K. Koch. Scalybark, Shagbark. Frequent in almost all forests and in fencerows and old fields. (L, S, T)

**C. pallida* (Ashe) Engel. & Graebn. Sand Hickory. Scattered throughout, especially in Lyon and Trigg Counties, but never abundant; dry ridges and slopes. (L, S, T)

C. tomentosa Nutt. Mockernut. Dry woodlands throughout. (L, S, T)

Juglans cinerea L. Butternut, White Walnut. Rare in ravine and streambank forests. (S, T)

J. nigra L. Black Walnut. Throughout; most frequent in bottomlands and ravines. Also often persisting from plantings around old farmsteads. (L, S, T)

CORYLACEAE

Alnus serrulata (Ait.) Willd. Alder. Throughout; lakeshores, creekbanks, lowland swampy areas, and around springs. (L, S, T)

Betula nigra L. River Birch. Scattered throughout but confined to streambanks and adjacent flooded fields; sometimes along the lakeshores. (L, S)

Carpinus caroliniana Walt. Blue Beech. Throughout; a frequent understory member of ravine and mesic slope forests and on streambanks. (L, S)

Corylus americana Walt. Hazelnut. Scattered throughout; most frequently observed on roadsides and along old logging trails; sometimes in open woodlands and thickets. (L, S, T)

Ostrya virginiana (Mill.) K. Koch. var. *virginiana*. Hop Hornbeam. A rather constant understory shrub or small tree in slope and ravine forests (S, T). The var. *lasia* Fernald, with villous branchlets, is more frequently encountered than the glabrous variety (S, T)

FAGACEAE

Castanea dentata (Marsh.) Borkh. American Chestnut. Probably never abundant in the area; a few stump sprouts remain in slope and ridge forests. (S, T)

Fagus grandifolia Ehrh. American Beech. Fairly common in moist slope forests southward but apparently rare in the northern end. (S, T)

Quercus alba L. White Oak. Throughout in slope and ridge forests. (L, S, T)

Q. coccinea Muenchh. Scarlet Oak. Throughout in dry forests but rarely abundant. (L, S)

Q. falcata Michx. var. *falcata*. Southern Red Oak. Throughout on drier sites (L, S, T). The var. *tribola* (Michx.) Nutt. is rarely with the typical variety (S). The var. *pagodaefolia* Ell. Cherrybark Oak, is infrequent on mesic slopes and in lowland forests (L, S).

Q. imbricaria Michx. Shingle Oak. Rather general along streams and the lakeshores and in wet to mesic woodlands. (L, S, T)

Q. lyrata Walt. Overcup Oak. Rare; we have a few collections, all from embankments and shores of the Tennessee River. (S, T)

Q. marilandica Muenchh. Blackjack Oak. Rather general in dry woodlands. (L, S, T)

Q. Michauxii Nutt. Swamp Chestnut Oak. Rare in bottomland forests. (S, T)

Q. Muehlenbergii Engelm. Chinquapin Oak. Infrequent on mesic slopes, in bottomlands, and on limestone outcrops. (S)

**Q. nigra* L. Water Oak. Rare on the banks of the Tennessee River. (S)

Q. palustris Muenchh. Pin Oak. Rare along lakeshores and in lowland forests. (L, S, T)

Q. phellos L. Willow Oak. Rare; presently known only from the old Ft. Henry area on the Tennessee River. (S)

Q. prinus L. Chestnut Oak. Throughout in drier woodlands. (L, S, T)

Q. rubra L. Northern Red Oak. Throughout in slope forests, usually in mesic situations. (L, S, T)

Q. shumardii Buckl. var. *shumardii*. Shumard Oak. Infrequent in bottomland and mesic slope forests (S, T). The var. **Schneckii* Sarg., Schneck Red Oak, is apparently quite rare; all of our collections are from floodplains (S)

Q. stellata Wang. Post Oak. Rather general in dry woodlands and fields. (L, S, T)

Q. velutina Lam. Black Oak. A constant member of dry woodlands throughout. (L, S, T)

ULMACEAE

Celtis laevigata Willd. Southern Hackberry, Sugarberry. Throughout in lowland forests, fencerows, old fields, and around old homes. (L, S, T)

C. occidentalis L. Hackberry. Fairly common along streams and in lowland forests, infrequent on mesic slopes. (L, S, T)

Ulmus alata Michx. Winged Elm. A common species of dry woodlands, old fields, fencerows, and roadsides. (L, S, T)

U. americana L. American Elm. Frequent but rarely abundant in lowland and streambank forests; sometimes persisting from plantings around old homesites. (L, S, T)

U. pumila L. Chinese Elm. Rarely persisting from plantings around old dwellings. (T)

U. rubra Muhl. Slippery or Red Elm. General in mesic woodlands and on roadsides, in fencerows, and in old fields. (L, S, T)

MORACEAE

Broussonetia papyrifera (L.) Vent. Paper Mulberry. Rarely persisting from old plantings in cemeteries and around homesites. (T)

Maclura pomifera (Raf.) Schneid. Osage Orange. Rather frequent in lowland fencerows and thickets; rarely in woodlands. (L, S)

Morus alba L. White Mulberry. Rarely persisting around old homes and orchards. (S)

M. rubra L. Red Mulberry. Throughout but never abundant; usually found in mesic woodlands. (L, S, T)

CANNABINACEAE

**Humulus lupulus* L. Hops. Rare; we have one collection of this introduced species from a mesic roadside thicket. (S)

LORANTHACEAE

Phoradendron flavescens (Pursh) Nutt. Mistletoe. Scattered throughout on various hardwood species but most often observed in lowlands. (L, S)

ARISTOLOCHIACEAE

**Aristolochia tomentosa* Sims. Dutchman's Pipe. Rare; known only from a few locations along the Cumberland River where it is a high-climbing vine. (S)

POLYGONACEAE

Brunnichia cirrhosa Gaertn. Ladies Eardrops. Locally abundant in thickets along the lakeshore and bays of the Tennessee River. (L, S, T)

RANUNCULACEAE

Clematis virginiana L. Virgins Bower. Scattered throughout in fencerows and thickets, especially in bottomlands. (S, T)

MENISPERMACEAE

Callicarpum lyoni (Pursh) Nutt. Cupseed. Rare in rich woodlands and thickets. (S, T)

Cocculus carolinus DC. Snailseed. Infrequent; fencerows, thickets, and moist woodlands. (S, T)

Menispermum canadense L. Moonseed. Rare; all of our collections are from rich woodlands along creeks in the extreme southern portions. (S)

MAGNOLIACEAE

Liriodendron tulipifera L. Yellow Poplar. Scattered throughout; often an important species of ravine and mesic slope forests and a frequent invader of moist fields. (L, S, T)

ANNONACEAE

Asimina triloba (L.) Dunal. Pawpaw. A rather constant understory shrub or small tree in mesic woodlands; infrequent in upland forests. (L, S, T)

LAURACEAE

Lindera benzoin (L.) Blume. Spicebush. Scattered but locally abundant in ravines, along streams, and around springs. All of our specimens are the var. *pubescens* (Pal. & Steyerl.) Rehder. (L, S, T)

Sassafras albidum (Nutt.) Nees, var. *albidum* Sassafras. Through-

out and often abundant in fields, on roadsides, in young forest stands, and in cutover forests (L, S, T). The var. **molle* (Raf.) Fern. is more frequently encountered (L, S, T)

SAXIFRAGACEAE

Hydrangea arborescens L. Wild Hydrangea. Scattered throughout in moist woodlands, especially on streambanks and bluffs. (L, S, T)

**Phaiadelphus pubescens* Loisel. Mock Orange. Rarely persisting around old homesites and in cemeteries. (L, S, T)

HAMAMELIDACEAE

Liquidambar styraciflua L. Sweetgum. Throughout in wet woodlands and along streams; a frequent invader of moist fields. (L, S, T)

PLATANACEAE

Platanus occidentalis L. Sycamore. Rather general along streams, around ponds, and in moist to wet woodlands and fields. (L, S, T)

ROSACEAE

Amelanchier arborea (Michx. f.) Fern. Serviceberry. A scattered understory shrub or small tree in woodlands and along forest borders. (L, S, T)

**Chaenomeles lagenaria* (Loisel.) Koidz. Quince. Rarely persisting and vegetatively spreading around old homesites. (L, S) *Crataegus calpodendron* (Ehrh.) Medic. Hawthorn. Infrequent in and around moist, rich woodlands. (L, T)

**C. crus-galli* L. Cockspur-Thorn. Infrequent on dry slopes and ridges. (S, T)

C. phaeopyrum (L. f.) Medic. Washington Thorn. Infrequent in woods around the lakeshores, bays, and creeks. (S, T)

Prunus americana Marsh. Wild Plum. Occasional in woodlands, on roadsides, and along forest borders. (L, S, T)

**P. angustifolia* Marsh. Chickasaw Plum. Scattered throughout, usually forming thickets in fencerows and fields. (L, S, T)

P. persica (L.) Batsch. Common Peach. Persisting around old homesites and orchards. Sometimes observed on roadsides and around old trash dumps. (L, S, T)

P. serotina Ehrh. Wild Black Cherry. Generally distributed throughout in fields, fencerows, and woodlands. (L, S, T)

Pyrus angustifolia Ait. Crabapple. Local and usually infrequent in dry woodlands and along forest borders. (L, S, T)

**P. communis* L. Common Pear. Rarely persisting around old homesites and orchards. (S)

P. malus L. Common Apple. Commonly persisting around old homesites and orchards. (L, S, T)

Rosa carolina L. Carolina Rose. Infrequent in woodlands, fields, fencerows, and on roadsides. (L, T)

R. multiflora Thunb. Multiflora Rose. Spreading from plantings throughout; fencerows, fields, roadsides. (L, S, T)

R. setigera Michx. Prairie Rose. Scattered throughout in fencerows, thickets, and fields. (L, T)

Rubus argutus Link. Blackberry. Often in extensive colonies in fields, on roadsides, and in cut-over forests. (L, S, T)

**R. flagellaris* Willd. Dewberry. Occasional on roadside banks, in thickets, and cut-over woodlands. (S, T)

R. occidentalis L. Black Raspberry. Persisting and spreading from former plantings; homesites, streambanks, roadsides. (L, S, T)

R. phoenicolasus Maxim. Wineberry. Rarely persisting from former plantings. (S)

**Spiraea vanhouttei* (Briot.) Zab. Bridal Wreath. Rarely persisting around old homesites and in cemeteries. (S, T)

LEGUMINOSAE

Albizia julibrissin (L.) Duraz. Mimosa. A frequent remnant of habitation; spreading around homesites and cemeteries. (L, S, T)

Amorpha fruticosa L. False Indigo. Local and infrequent; lakeshores, around bays and on streambanks. (L, S)

**A. nitens* Boynton. About the same habitats as *A. fruticosa* but apparently rare. (S)

Cercis canadensis L. Redbud. A frequent understory shrub or small tree in forests throughout and also frequent in fields. (L, S, T)

Dioclea multiflora (T. & G.) Mohr. Rare around and in lake-shore thickets. (L, T)

Gleditsia triacanthos L. Honey Locust. Frequent in fields, thickets, fencerows, and along forest borders. (L, S, T)

**Lespedeza bicolor* Turcz. Bicolor. Infrequently planted by TVA for wildlife food and cover. (S)

Pueraria lobata (Willd.) Ohwi. Kudzu. Plantings found throughout; rapidly spreading and often a serious threat to indigenous vegetation. (L, S, T)

Robinia hispida L. Bristly Locust. Local; spreading from plantings around homesites and on roadbanks. (L, S, T)

R. pseudoacacia L. Black Locust. Abundant in fields, young forest stands, and in disturbed areas throughout. (L, S, T)

Wisteria frutescens (L.) Poir. Wisteria. Rarely found in thickets and woodlands along streams and the lakeshores. (S, T)

RUTACEAE

Ptelea trifoliata L. Wafer Ash. Occasional on wooded bluffs, in rich woodlands, and in fencerows. (S, T)

SIMAROUACEAE

Ailanthus altissima (Mill.) Swingle. Tree-of-Heaven. Persisting from plantings; locally adventive into woodlands, on roadbanks, and in waste areas. (S, T)

ANACARDIACEAE

Rhus copallina L. Winged Sumac. A characteristic species of fields, thickets, and fencerows. (L, S, T)

R. glabra L. Smooth Sumac. Throughout; same habitats and often with the winged species. (L, S, T)

R. radicans L. Poison Ivy. Abundant in woodlands, thickets, fencerows, and around old dwellings. (L, S, T)

AQUIFOLIACEAE

Ilex decidua Walt. Deciduous Holly. Throughout along streams, bays, and the lakeshores; less frequent in moist woodlands and on ridges and slopes. (L, S, T)

I. opaca Sol. in Ait. American Holly. Perhaps native to the area but not collected as such. Known only from a planted specimen at an old homesite. (S)

CELASTRACEAE

Euonymus americanus L. Heart's-a-Busting. Local; moist woodlands, especially in ravines and on streambanks. (S)

E. atropurpureus Jacq. Wahoo. Infrequent along streambanks, in ravines, and along the lakeshores. (S, T)

STAPHYLEACEAE

Staphylea trifolia L. Bladdernut. Throughout but infrequent; wooded ravines, streambanks, and on moist slopes and bluffs. (L, S, T)

ACERACEAE

Acer negundo L. Boxelder. Abundant throughout on moist roadbanks, along streambanks, and in thickets and fields; rarely in slope forests. Also frequently persisting from yard plantings. (S, T)

A. rubrum L. var. *rubrum*. Red Maple. Throughout in lowland fields and woodlands (L, S, T); the var. *trilobum* K. Koch. is infrequently found with the typical variety (S, T).

S. saccharinum L. Silver Maple. A characteristic species of streambank and lowland forest. More frequently encountered southward. (S)

A. saccharum Marsh. var. *saccharum*. Sugar Maple. General in mesic woodlands and a frequent indicator of old homesites (L, S, T). The var. *schneckii* Rehd. is commonly found with the typical variety (L, S, T)

HIPPOCASTANACEAE

Aesculus glabra Willd. Ohio Buckeye. Infrequent southward in alluvial woodlands and apparently rare northward. (S)

A. pavia L. Red Buckeye. Rare; all of our collections are from woodlands in the extreme southern portions. (S)

RHAMNACEAE

Ceanothus americanus L. New Jersey Tea. General in drier woodlands and along roadsides and forest borders. (L, S, T)

Rhamnus caroliniana Walt. Carolina Buckthorn. Infrequent in mesic woodlands and in fencerows and thickets. (L, S)

VITACEAE

**Ampelopsis arborea* (L.) Koehne. Peppervine. Rare in thickets along the Tennessee River. (S)

A. cordata Michx. Heart-leaf Ampelopsis. Throughout and often abundant in lowland thickets and woodlands; rare in uplands. (S, T)

Parthenocissus quinquefolia (L.) Planch. Abundant throughout in almost all habitats. (L, S, T)

Vitis aestivalis Michx. Summer Grape. Common in woodlands, fencerows, and thickets (L, S, T).

**V. palmata* Vahl. Red Grape. Rare in thickets along bays of the Tennessee River. (S)

V. rotundifolia Michx. Muscadine. Scattered but locally abundant in fencerows, thickets, and woodlands, most often in bottomlands. (S, T)

**V. vulpina* L. Fairly common throughout in thickets and woodlands. (S, T)

TILIACEAE

Tilia heterophylla Vent. Basswood. Rare around the lakeshores and in streambank forests. (S, T)

MALVACEAE

Hibiscus syriacus L. Rose-of-Sharon. Often persisting around homesites and cemeteries. Sometimes spreading to adjacent fields and roadsides. (L, S)

GUTTIFERAE

Ascyrum hypericoides L. St. Andrews Cross. A frequent small shrub in dry woodlands and on roadbanks. No attempt has been made here to differentiate the several named varieties. (L, S, T)

Hypericum densiflorum Pursh. St. John's Wort. Rare along streambanks and in slope forests. (T)

H. proflificum L. Known from several scattered locations along the lakeshores and streambanks. (S, T)

NYSSACEAE

**Nyssa aquatica* Marsh. Water Tupelo. Rare; our collections are from swampy forests along Hughes Bay (Tennessee River). (S)

N. sylvatica Marsh. Black Gum. Throughout in almost all woodlands; often abundant in mesic sites. (L, S, T)

ARLIACEAE

Aralia spinosa L. Devil's Walking Stick. Frequent in woodlands, along trails, and forest borders; most abundant in cut-over forests. (L, S, T)

**Hedera helix* L. English Ivy. Rarely persisting around homesites and in cemeteries. (S, T)

CORNACEAE

Cornus amomum Mill. Red Willow. Often abundant along the lakeshores and in lowland thickets and fields. (L, S, T)

C. florida L. Flowering Dogwood. A rather constant understory shrub or small tree in slope and ridge forests throughout. Also common in fields. (L, S, T)

**C. obliqua* Raf. Silky Dogwood. Rare along wooded streambanks. (S, T)

ERICACEAE

**Gaylussacia baccata* (Wang.) K. Koch. Black Huckleberry. Vary rare on xeric ridges. (T)

Kalmia latifolia L. Mountain Laurel. Rare on bluffs, mostly about the Tennessee River. (S)

Oxydendrum arboreum (L.) DC. Sourwood. Scattered throughout on dry roadsides and in ridge and slope forests. (S, T)

Vaccinium arboreum Marsh. Farkleberry or Sparkleberry. Scattered throughout, mostly in ridge and slope forests. (S, T)

V. stamineum L. Deerberry. Scattered, dry woodlands. (S, T)

V. vacillans Torr. Low Blueberry. Rather rare along roadsides and in dry woodlands. (S, T)

SAPOTACEAE

Bumelia lycioides (L.) Gaertn. Carolina Buckthorn. Rare in rich woodlands, most often on alluvium. (S, T)

EBENACEAE

Diospyros virginiana L. var. *virginiana*. Throughout in fields, on roadsides, and in younger forest stands (L, S, T). The var. **pubescens* (Pursh) Dippel is more frequently encountered (L, S, T)

STYRACACEAE

Halesia carolina L. Silverbell. Very rare; known only from a few locations along or near the Tennessee River in mesic woodlands. (S)

**Styrax americana* Lam. Storax. Very rare; we have one collection from a swampy forest near Hughes Bay on the Tennessee River. (S)

OLEACEAE

Forsythia suspensa (Thunb.) Vahl. Forsythia. Rarely persisting around old homes and in cemeteries. (S)

**F. viridissimi* Lindl. Rarely persisting around old homes. (S)

Fraxinus americana L. var. *americana*. White Woodlands, fields, and fencerows throughout (L, S, T). The var. *biltmoreana* (Beadle) Wright is infrequent with the typical variety (L, S)

F. pennsylvanica Marsh. Green Ash. Often abundant around lakeshores, in bottom land thickets, and lowland fields. All of our specimens are the glabrous var. *subintegerrima* (Vahl.) Fernald (S, T)

**F. quadrangulata* Michx. Blue Ash. Very rare in moist slope forests. (S)

Ligustrum vulgare L. Privet. Persisting and spreading into fields, thickets, and onto roadsides. (S)

Syringa vulgaris L. Lilac. Rarely persisting from yard and cemetery plantings. (S)

APOCYNACEAE

Vinca minor L. Periwinkle. Persisting and slightly spreading around homesites and in cemeteries. (S, T)

SCROPHULARIACEAE

Paulownia tomentosa (Thunb.) Steud. Empress Tree. Persisting and spreading into fields, onto roadsides, and along forest borders. (S, T)

BIGNONIACEAE

Bignonia capreolata L. Cross-Vine. Scattered in alluvial woodlands, thickets, and fencerows. (S)

Campsis radicans (L.) Seem. Trumpet Creeper. Weedy in fields, fencerows and thickets, most abundant in bottomlands. (L, S, T)

Catalpa speciosa Ward. Catalpa. Persisting from plantings and spreading into fields and woodlands. (L, S, T)

RUBIACEAE

Cephalanthus occidentalis L. Buttonbush. Often very abundant along the lakeshores and in wet fields. (L, S, T)

CAPRIFOLIACEAE

Lonicera japonica Thunb. Japanese Honeysuckle. Thickets, fencerows, and waste areas throughout. (L, S, T)

L. sempervirens L. Coral Honeysuckle. Rare in roadside and lakeshore thickets. (S, T)

Sambucus canadensis L. Elderberry. Throughout on moist roadsides, fields, and around lowland forests. (S, T)

Symphoricarpos orbiculatus Moench. Coralberry. A constant member of thickets, fencerows, and fields throughout. (L, S, T)

Viburnum molle Michx. Blackhaw. Rare; presently known only from mesic woodlands in the Hematite Lake area. (T)

V. prunifolium L. Rare in moist woodlands. (L, T)

V. rufidulum Raf. Infrequent in moist woodlands, mostly along streams. (S, T)

EXCLUDED AND QUESTIONABLE TAXA

The following taxa were included in the original list (Ellis, Wofford, and Chester, 1971) but are excluded here for reasons noted:

Amorpha glabra Desf. ex Poir. Specimens previously assigned to this taxon have been identified as *A. nitens* Boynton by Dr. Robert L. Wilbur of Duke University.

Celtis tenuifolia Nutt. var. *Georgiana* (Small) Fern. & Schub.

We have specimens tentatively identified as the Georgia Hackberry but it has not been included here pending further study. *Fraxinus pennsylvanica* Marsh. var. *pennsylvanica*. Specimens previously assigned to this variety are the variety *subintegerrima* (Vahl.) Fernald. *Populus grandidentata* Michx. Previous reports of this species from Trigg County have not been confirmed. *Quercus bicolor* Willd. This report was based upon vegetative material and is deleted here pending further collections, especially of fruiting specimens. *Vitis labrusca* L. Specimens assigned to this taxon were based upon a misidentification of *V. aestivalis* material.

DISCUSSION

Land Between the Lakes is a narrow peninsula about 40 miles long and six to eight miles wide lying between the Tennessee River (Kentucky Lake) to the west and the Cumberland River (Barkley Lake) to the east. The northern boundary is a man-made canal connecting the two rivers while the southern boundary, which has no natural or man-made demarcation, lies north of U. S. Highway 79 between Dover and Paris Landing, Tennessee. Of the 170,000 total acreage, TVA itself originally owned 4,000 acres along the shore of Kentucky Lake. The Kentucky Woodlands Wildlife Refuge covered almost 60,000 acres, and the Corps of Engineers owned 12,000 acres for the Barkley Dam and reservoir. The remaining 95,000 acres were in private ownership and consisted of numerous small farmsteads and communities (Smith, 1971).

Presently, all former residents have been relocated. Several camping facilities and a 5,000-acre conservation-education center have been developed. Some of the more fertile lands, especially bottomlands, are leased to farmers for hay and small grains and numerous grain plantings are made each year for wildlife. Also, many old fields and roadway and powerline rights-of-way are maintained for wildlife by "bushhogging." One area of several hundred acres has been fenced to enclose a herd of American Bison. Some selective timber cutting is carried out and numerous small forest openings have and are being developed. Otherwise, the area consists of second-growth timber, pine plantings (mostly *Pinus taeda*), abandoned farmlands, homesites, old roadways and trails, and orchards in various

successional stages. Most of the many cemeteries scattered throughout are maintained.

Physiographically the area is located within the western Highland Rim Section of the Interior Low Plateau Province as defined by Fenneman (1938). The topography is rolling to hilly with some floodplains and swampy areas adjacent to the two rivers and along major streams. The elevation varies from about 300 to 600 feet above sea level (Austin, et al., 1953).

Although surrounded on three sides by water, much of the area tends to be rather xeric. There are few streams which flow all year but numerous small ponds are scattered throughout and dozens of other ponds and waterholes have been or are under construction by TVA. Four inland lakes are present: Hematite Lake in Trigg County is a 90-acre impoundment built in the late 1930's as a federal work-relief project. Three sub-impoundments of Barkley Lake include Honker Lake (190-acres) and Energy Lake (370-acres), both in Trigg County, and Bards Lake (320-acres) in Stewart County.

Most of the upland soils are poor, dry, and cherty and many fields severely eroded in areas where agricultural practices were attempted. Tuscaloosa gravel is exposed throughout with a few Mississippian limestone outcrops (Clebsch, 1974). Most of the richer, alluvial bottomlands were and are still cultivated, limiting bottomland vegetation to narrow ravines, stream-banks, and other areas otherwise unsuitable for farming. Most of the 300 miles of shoreline along the rivers are artificial and few bluffs are present.

While Braun (1950) includes the area within the Western Mesophytic Forest Region, much of the upland forests are oak-hickory. Clebsch (1974) notes that these forests are more open on the Tennessee River watershed while those on the Cumberland side have a greater mixture of species and more dense understories. Smith (1971) estimates that about 80 percent of the area is occupied by secondary forests.

The general nature of the forests may be seen from data of Gansner and Debal (1966) for Lyon and Trigg Counties (Table 1). Data on Stewart County forests

(TVA, 1960) indicate that 93 percent of 234,300 forested acres are upland hardwoods, three percent cedar-hardwoods, two percent bottomland hardwoods, and one percent each of loblolly pine (planted) and black-jack oak-hardwoods. Hedlund and Earles (1971) and Earles (1973) describe the Stewart County forests as including 214.4 thousand acres (97 percent) oak-hickory and 6.7 thousand acres (3 percent) cedar.

While the woody flora is not particularly diverse and includes taxa expected in the area as described by Braun (1950), some extraneous elements are present. Insight into the floristic elements present can be gained by comparing data with the floristic regions of Tennessee established by Shanks (1958). A limited number of species present are more characteristic of the Appalachians: these include *Halesia carolina*, *Kalmia latifolia*, *Pinus virginiana*, and *Gaylussacia baccata*. Species indicative of the "limestone flora" of Middle Tennessee include *Bumelia lycioides*, *Fraxinus quadrangulata*, and *Ptelea trifoliata*. As might be expected, elements of the bottomland hardwood forests more characteristic of western Tennessee and Kentucky are present but are mostly confined to the Tennessee River drainage system. Included are *Ampelopsis arborea*, *Brunnichia cirrhosa*, *Carya illinoensis*, *Diospyros virginiana* var. *pubescens*, *Ilex decidua*, *Nyssa aquatica*, *Quercus falcata* var. *pagodaefolia*, *Q. lyrata*, *Q. michauxii*, *Q. nigra*, *Styrax americana*, *Taxodium distichum*, and *Vitis palmata*.

Remnants of plantings and cultivation around old farms, homesites, orchards, and in cemeteries add significantly to the flora. Such species as *Broussonetia papyrifera*, *Morus alba*, *Picea abies*, *Prunus persica*, *Pyrus communis*, *P. malus*, *Salix Babylonica*, and *Syringa vulgaris* are often conspicuous but will probably be eventually eliminated from the flora. Others, such as *Albizia julibrissin*, *Ailanthus altissima*, *Hibiscus syriacus*, *Ligustrum vulgare*, and *Populus alba* have become naturalized and are often weedy in fields and on roadsides. Such species as *Pinus taeda* and *Pueraria lobata*, which were planted extensively for commercial or erosion control purposes, are also spreading.

The present woody flora is an assemblage of various elements that have been strongly influenced by human activity. Further studies will be required to determine vegetational composition and the effects of tourism, farmstead abandonment, altered shorelines, and TVA activities upon the flora.

LITERATURE CITED

- Austin, M. E., C. B. Beadles, R. W. Moore, B. L. Matzek, C. Jenkins, and S. R. Bacon. 1953. Soil survey of Stewart County, Tennessee. United States Department of Agriculture. 224 p.
- Braun, E. Lucy. 1950. Deciduous forests of eastern North America. The Blakiston Co., Philadelphia. 596 p.
- Clebsch, A. 1957. Warioto woodlore notes on the trees and other woody plants occurring in Montgomery and Stewart Counties of Tennessee. Cogioba District, B. S. A., Clarksville, Tenn.
- 1974. Bryophytes of Land Between the Lakes, Kentucky-Tennessee. *Castanea* 39: 295-339.
- Earles, J. M. 1973. Forest area statistics for midsouth counties. United States Forest Service, Resource Bull. SO-40. 64 p.
- Ellis, W. H., E. Wofford, and E. W. Chester. 1971. A preliminary checklist of flowering plants of the Land Between the Lakes. *Castanea* 36: 229-246.
- Fenneman, N. M. 1938. Physiography of eastern United States. McGraw Hill Book Co., N. Y. 714 p.
- Fernald, M. L. 1950. Gray's Manual of botany, ed. 8. American Book Co., N. Y. 1632 p.
- Gansner, D. A., and P. S. Debal. 1966. Kentucky forests, western unit. United States Forest Service, Resource Bull. CS-8. 34 p.
- Hedlund, A., and J. M. Earles. 1971. Forest statistics for Tennessee counties. United States Forest Service, Resource Bull. SO-32. 58 p.
- Phillips, H. C. 1970. An annotated list of foliose and fruticose lichens in Land Between the Lakes. *Journ. Tenn. Acad. Sci.* 45: 97-109.
- Rehder, A. 1940. Manual of cultivated trees and shrubs, ed. 2. The MacMillan Co., N. Y. 996 p.
- Shanks, R. E. 1952. Checklist of woody plants of Tennessee. *Journ. Tenn. Acad. Sci.* 27: 27-50.
- 1958. Floristic regions of Tennessee. *Journ. Tenn. Acad. Sci.* 33: 195-210.
- Smith, F. E. 1971. Land Between the Lakes, experiment in recreation. The University of Kentucky Press, Lexington. 124 p.
- Tennessee Valley Authority. 1960. Forest inventory statistics for Stewart County, Tennessee. *Forestry Bull.* 90. 16 p.

TABLE 1: Forests of Lyon and Trigg Counties, Kentucky.*

Forest Type	Lyon County		Trigg County	
	Acres	Percent	Acres	Percent
Oak-Pine	500	0.6	600	0.6
White Oak	2000	2.5	3900	2.6
Oak-Hickory	42800	53.1	80800	54.5
Central Mixed Hardwood	17600	21.8	30700	20.7
Oak-Gum-Cypress	4700	5.8	8600	5.8
Elm-Ash-Cottonwood	13000	16.1	23700	16.0
Total Forested Acres	80600		148300	

*Gansner and Debal (1966).

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