

Fall 2002

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Recommended Citation

Coleman, Janet (2002) "Native Plants: The Preservation and Restoration of Native Plants in Designed Landscapes in Northwest Arkansas," *Inquiry: The University of Arkansas Undergraduate Research Journal*: Vol. 3 , Article 5.

Available at: <http://scholarworks.uark.edu/inquiry/vol3/iss1/5>

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Coleman: Native Plants: The Preservation and Restoration of Native Plants

NATIVE PLANTS: THE PRESERVATION AND RESTORATION OF NATIVE PLANTS IN DESIGNED LANDSCAPES IN NORTHWEST ARKANSAS

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Abstract:

A decline in Northwest Arkansas's native plant population has occurred over the past 50 years, as documented by the U.S. Forest Service in the Ozark-Ouachita Highlands Assessment. This decline has been caused by increased human development in natural areas and the replacement of native plants with exotic, non-native plants. As a result, a generation has grown up not knowing what an Ozark wake Robin trillium (Trillium pusillum var. ozarkanum) or Blood root (Sanguinaria canadensis) look like, because these plants are difficult to find in nature, are not commonly grown in designed landscapes, and are largely unavailable in garden centers.

The loss of Arkansas's native plants has led to a second problem: the loss of the region's landscape identity. A proposed solution focuses on restoring the region's landscape identity by landscaping with native plants. The benefits of native plants include the following: the creation of native habitats, an increase in biodiversity, the conservation of natural resources, a reduction in long-term landscape costs and a decrease in landscape maintenance requirements and costs. Interviews with regional suppliers and users of native plants identified sources of information and methods of growing these plants. As a result, guidelines on how to incorporate native plants into designed landscapes were developed and are presented with a listing of native plant experts and nurseries, a partial listing of plants for Northwest Arkansas (organized by site conditions), a suggested reading and reference list, and a listing of public gardens that emphasize native plants.

Problem:

In this project two related problems were identified in Northwest Arkansas: the loss of natural areas due to increased population growth and development and the loss of the region's

landscape identity. Industrial, commercial and residential construction is on the rise in Northwest Arkansas. Lands that were previously undeveloped are rapidly becoming developed, resulting in a loss of natural habitats. This is followed by the replacement of preexisting native plants with commonly available non-native plants, thereby resulting in loss of the region's native landscape identity.

Methods:

Information was gathered by a review of literature, personal interviews with native plant experts, data collection from the native plant questionnaire, and from native plant workshops. This research clarified the problems and proposed solutions. It also suggested methods of data collection and analysis.

Goal of Project:

The goal of this project was to study the use of native plants in designed landscapes in Northwest Arkansas.

Obstacles:

A lack of knowledge about local native plants is the largest obstacle in the use of native plants. Many homeowners, and even landscape designers, lack the horticultural knowledge to make optimum plant choices and are easily influenced by the generic, non-native offerings of plants available through local nurseries or catalogs. Another obstacle to using native plants is the creation of a standard concept of aesthetics for American landscapes. This phenomenon of *homogenization* is occurring throughout the United States. "Somehow we have arrived at the point in which homogenization and monotony are called 'aesthetically pleasing' and not cutting the lawn is called 'un-American.'" ¹ The last obstacle that stands in the way of native

plant usage is the lack of local resources and the associated high cost of native plants. However, this is changing as more native plant nurseries enter the market.²

Proposed Solution:

To use native plants in designed landscapes instead of commonly available non-native plants.

Benefits:

Psychologists Stephen and Rachel Kaplan have clearly documented throughout their 20 years of research that humans have lower stress levels and improved quality of life if they live and/or work near natural settings.³ Books they have written on this subject include the following:

Humanscape: Environments Are For People and With People In Mind: Design and Management For Everyday Nature. The benefits of natural environments are related to other living things as well. Native plants and their communities are the foundation of natural habitats. In addition, native plants provide a framework of associations that other living creatures can then build upon.

The more species living within an ecosystem, the higher its productivity and the greater its ability to withstand drought and other kinds of environmental stress. Since we depend upon an abundance of functioning ecosystems to cleanse our water, enrich our soil, and manufacture the very air we breathe, biodiversity is clearly not an inheritance to be discarded carelessly [however] biodiversity is our most valuable but least appreciated natural resource.⁴

There have been numerous studies done that clearly demonstrate that loss of habitat directly correlates to declining numbers of insects, birds and other forms of wildlife. Scientists have documented alarming declines in the number of songbirds, "warblers, vireos, flycatchers, and thrushes have declined by 50 percent or more in the past few decades."⁵ According to associate director of conservation for the National Audubon Society, Vincent Muehter, "the number one reason for the declining bird population is habitat degradation"⁶ In addition, many of the non-native plants that are commonly planted do not provide adequate habitats for local wildlife. Author Sara Stein so aptly suggests, "Remove a pheasant's cover or the butterfly's flower and you have erased its space."⁷

Native plants in designed landscapes also decrease the amount of time and energy required to maintain that landscape, thereby saving natural resources. Once established, most native plants do not require herbicides or pesticides, nor extra water or fertilizer, and they need only occasional mowing or pruning.

The Preservation of Regional Landscape:

Gardening with native plants serves as a link to the regional landscape and fosters a true sense of place, "something that is

missing from most of our homogenized, look-alike landscapes."⁸ The sense of place of Northwest Arkansas is threatened because of the rapid growth that has occurred in recent years. University of Georgia, Landscape Architecture Professor, Darrel Morrison proposes to solve this problem "by utilizing patterns and processes that are intrinsic to naturally evolved landscapes, we can create designed and managed landscapes that are clearly of the place and that approach the ideal of sustainability."⁹ The identity of a place, like Northwest Arkansas, is defined by its geology, terrain, climate, soil conditions, native vegetation and wildlife. This knowledge is necessary to design a landscape using native plants.

Questionnaire:

Fourteen (local and national) native plants people were interviewed ranging from residential homeowners to nurserymen to professors in horticulture and landscape architecture. As a result, their experiences related to native plants varied significantly. However, a common factor was an overriding desire to promote the use of native plants, because they promote a sense of place, often cost the same as non-native plants, and native plants are typically easier and cheaper to maintain

Guidelines for Starting a Native Plant Garden:

It is recommended that interested persons read books and journals on the subjects of garden design, garden installation and maintenance, native plants and plant communities. Local lists of regional suppliers and sources should be gathered. To begin the plan obtain the lot dimensions and draw a base map of the site. Complete an inventory of the existing site including all features and document the findings. Make a wish list of the desired elements and features. The design should consider the type of setting that the site is located in (rural, suburban, urban), the natural characteristics of the site, the information derived from the site inventory, the desired formality of the design, items from the wish list, the available finances and time that can be invested into the project. The design of the garden can be naturalistic or formal as native plants can be used in either setting.

Conclusions and Recommendations:

This project supports the use of native plants in designed landscapes to promote the over all health of the planet and its human inhabitants. This information was based on the literature search and was expanded by interviewing suppliers and users of native plants. As a result, guidelines on how to incorporate native plants into designed landscapes were developed. A listing of local and national experts and nurseries, a partial listing of native plants for Northwest Arkansas (organized by site conditions), a suggested reading list, and a listing of public gardens that emphasize native plants, are available from the author.

Future recommendations to further the discussion on native plant use in Northwest Arkansas include informal discussions at

local venues, a continuation of native plant workshops, the development of a Web site and future research projects related to the use of native plants in designed landscapes that create specific habitat types.

Endnotes:

¹ Daniels, Stevie. 1995. *The Wild Lawn Handbook: Alternatives to the Traditional Front Lawn*. (New York: Macmillan) xiii.

² See list of native plant nurseries. (Omitted due to space limitations. Contact the author.)

³ Kaplan, Rachael and Stephan Kaplan. 1989. *The Experience of Nature: A Psychological Perspective*. (Cambridge: Cambridge University Press).

⁴ Wilson, Edward, O. 1999. *The Diversity of Life*. (New York:

W. W. Norton & Co) xxiii & 281.

⁵ Wasowski, Andy and Sally Wasowski. 2000. *The Landscaping Revolution: Garden with Mother Nature, Not Against Her*. (Chicago: Contemporary Books) 100.

⁶ Wasowski, Andy and Sally Wasowski. 2000. *The Landscaping Revolution: Garden with Mother Nature, Not Against Her*. (Chicago: Contemporary Books) 101.

⁷ Stein, Sara. 1991. *Noah's Garden: Restoring the Ecology of Our Own Back Yards*. (Boston: Houghton Mifflin) 46.

⁸ Wasowski, Sally. 1994. *Gardening with Native Plants of the South*. (Dallas: Taylor) x.

⁹ Morrison, Darrel G. Forward. 1924. *American Plants for American Gardens*. By Edith Roberts & Elsa Rehmann. (Athens: The University of Georgia Press) xi.

Addenda:

1. Native ferns:

<u>Scientific Name</u>	<u>Common Name</u>	<u>Comments</u>
<i>Adiantum pedatum</i>	Maidenhair Fern	Moist rich soil, med to hvy shade, ht 1 1/2'
<i>Asplenium platyneuron</i>	Ebony Spleenwort	Rocky, limestone, shade, small plant
<i>Athyrium filix-femina</i>	Lady Fern	Moist rich, shade. Water edges. Ht 2-5'
<i>Asplenium trichomanes</i>	Maidenhair Spleenwort	Fine texture, small fern
<i>Cystopteris bulbifera</i>	Bulblet Bladderfern	Rocky water edges, wet or moist, neutral ph
<i>Cystopteris protrusa</i>	Lowland Bladderfern	Shade, rocky sites.
<i>Dryopteris marginalis</i>	Marginal Shield Fern	Well drained woods, evergreen, leather texture, ht 1-2'
<i>Onoclea sensibilis</i>	Sensitive Fern	Moist swamps/ woods sun to shade, colonies, ht 1-2'
<i>Phegopteris hexagonoptera</i>	Broad Beechfern	Rich woods, acid, deciduous, ht 16 - 24"
<i>Polypodium polypodioides</i>	Polypody	Loamy soil, moist, part to full shade, deciduous
<i>Polystichum acrostichoides</i>	Christmas Fern	Evergreen, moist, rich soil, lite to heavy shade, ht 2 1/2'
<i>Pteridium aquilinum</i>	Brackenfern	Sun to part shade, acid, inferile soil, ht 3 - 5'
<i>Woodsia obtusa</i>	Bluntlobe Cliff Fern	Moist, acid, shady, rocky sites, evergreen, small

2. Native Grasses

<u>Scientific Name</u>	<u>Common Name</u>	<u>Comments</u>
<i>Arundinaria gigantea</i>	Gaint Cane	Large grass, wet or dry, wildlife food
<i>Bouteloua curtipendula</i>	Side Oats Gamma	Lite shade, birds and butterflies
<i>Carex flaccosperma</i>	Blue Wood Sedge	Part shade, drought tolerant, blue leaves
<i>Carex grayi</i>	Gray's Sedge	Sun to lite shade, moist rich soil,
<i>Carex lurida</i>	unknown	Moist soils, along ponds & streams
<i>Carex stricta</i>	Tussock Sedge	Fine leaves, wet soils, water
<i>Chasmanthium latifolia</i>	River Oats	Moist sun or dry shade, dangling seed heads,
<i>Elymus virginicum</i>	Virginia Wild Rye	Bunch grass, sun to lite shade
<i>Eragrostis spectabilis</i>	Purple Love Grass	Showy clumps, low growing, sun to lite shade
<i>Panicum virgatum</i>	Switch grass	Sun to lite shade, many cultivars
<i>Sorghastrum nutans</i>	Indian Grass	Sun, tall , butterflies & birds, flower spikes
<i>Sparatina pectinata</i>	Prairie Cord Grass	Aggressive in moist conditions, contain in pots
<i>Sporobolus cryptandrus</i>	Sand Dropseed	Sun, not attractive, sandy, use as soil stablixer
<i>Sporobolus heterolepis</i>	Prairie Dropseed	Sun to lite shade, small and cascading form
<i>Triden strictus</i>	Longspike Tridens	Sun, golden flower heads, birds,

3. Native Herbaceous Plants for Sunny Sites

<u>Scientific Name</u>	<u>Common Name</u>	<u>Comments</u>
<i>Amsonia tubernaemontana</i>	Blue Star	Star shaped spring flowers, light shade ok.
<i>Apocynum cannabinum</i>	Dogbane or Hemp	Dry areas, bark used to make rope, white summer flowers
<i>Aquilegia canadensis</i>	Columbine	Moist, part shade to sun, red/yellow spring flowers
<i>Asclepias incarnata</i>	Pink Milkweed	Pink summer flower clusters, dry sites, butterfly attractor
<i>Asclepias purpurascens</i>	Purple Milkweed	Grows 4', rocky dry sites, purple summer flower clusters
<i>Asclepias tuberosa</i>	Butterfly Weed	Bright orange summer flowers, +butterflies
<i>Aster anomalus</i>	Aster	Dry sites, idle land, wildlife food, fall lavender flowers
<i>Aster patens</i>	Spreading Aster	Purple fall flowers, rocky dry sites
<i>Aster pilosus</i>	White Heath Aster	Dry open areas, white late fall flowers

<i>Astranthium intefrifolium</i>	Western Daisy	Rocky, sandy soils, pink spring flowers
<i>Bidens aristosa</i>	Tickseed Sunflower	Adaptable, grow in large stands, yellow summer flowers
<i>Baptisia australis</i>	Blue False Indigo	Purple summer flowers, grow from seed, limestone
<i>Baptisia alba</i>	White Wild Indigo	White summer flowers, 4-5', dry open sites
<i>Baptisia sphaerocarpa</i>	Yellow Wild Indigo	Bright spring yellow spikes, pinelands, sandy soils
<i>Callirhoe involucrata</i>	Purple Poppy Mallow	Pink summer flowers, dry open areas, good drainage
<i>Camassia scilloides</i>	Wild Hyacinth	Adaptable, long stalks of white spring flowers
<i>Castilleja coccinea</i>	Indian Paintbrush	Rocky, alkaline, limestone, red spring flower
<i>Ceanothus americanus</i>	New Jersey Tea	White spring flower clusters, wildlife food, dry soil
<i>Clitoria mariana</i>	Butterfly Pea	Pale pink summer flowers, dry sandy soils, wildlife food
<i>Coreopsis lanceolata</i>	Lance Leaf Coreopsis	Wildlife food, dry open areas, yellow late spr. Flowers
<i>Delphinium carolinianum</i>	Carolina Larkspur	Purple summer flower spikes, open, well drained soil
<i>Delphinium treleasei</i>	Trelease's Larkspur	Glades, open areas, limestone, purple summer spikes
<i>Echinacea pallida</i>	Pale Purple Coneflower	Pinelands, disturbed soil, tall pinkish summer flowers
<i>Echinacea purpurea</i>	Purple Coneflower	Idle ground, deep pink summer flower, insect attractor
<i>Erigeron philadelphicus</i>	Philadelphia Fleabane	Wildlife food, open areas, pink daisy like spring flowers
<i>Eupatorium coelestinum</i>	Mist Flower	Moist area, fuzzy lavender late summer flowers
<i>Eupatorium fistulosum</i>	Joe Pye Weed	Damp, very tall plant, large groups of pink sum. flowers
<i>Gaura longiflora</i>	Biennial Gaura	Open sunny areas, small summer flowers open in the evening
<i>Gentiana puberulenta</i>	Downy Gentian	Prairies, dark purple summer-fall flowers
<i>Helianthus annuus</i>	Common Sunflower	Dry idle areas, large summer flowers, wildlife food
<i>Heliotropium tenellum</i>	Heliotrope	Drought resistant, white summer flowers, colonies, rocky
<i>Hibiscus laevis</i>	Rose Mallow	Wet areas, large pink summer hibiscus flowers
<i>Hypericum spp.</i>	St. John's Wort	Dry, open areas, wildlife food, yellow summer flowers
<i>Hypericum hypericoides</i>	St. Andrew's Cross	Yellow summer cross flowers, adaptable, low growing
<i>Iris brevicaulis</i>	Short Stemmed Iris	Wet areas, ponds, marshs, sun, purple spring flowers
<i>Iris cristata</i>	Crested Iris	Rocky, sandy, streams, hillsides, lavender spring flowers

<i>Iris virginica</i>	Southern Blue Flag	Wet, swampy areas along ponds, pink spring flowers
<i>Justicia americana</i>	Water Willow	Moist, lake edges, thick growth, lavender summer flowers
<i>Liatris aspera</i>	Rough Blazing Star	Rocky, sandy soils, short stalk lavender sum. Flowers
<i>Liatris pycnostachya</i>	Prairie Gayfeather	Open areas, pink-purple summer flower stalks
<i>Linaria canadensis</i>	Blue Toadflax	Fallow or disturbed soil, shades of blue summer flowers
<i>Lithospermum canescens</i>	Orange Puccoon	Rocky, sandy, dry soils, orange spr-summer flowers
<i>Monarda fistulosa</i>	Beebalm	Disturbed ground, pink summer flowers, wildlife food
<i>Oenothera fruticosa</i>	Sundrops	Yellow summer day flowers, dry soil, sun or shade
<i>Oenothera speciosa</i>	Showy Primrose	Pink spr-summer flowers, drought resistant, easily grown
<i>Opuntia humifusa</i>	Prickly Pear	Cactus, showy summer flowers, wildlife food, dry sites
<i>Oxalis violacea</i>	Violet Wood Sorrel	Nice lavender flower, shamrock like foliage, adaptable
<i>Penstemon digitalis</i>	Foxglove Beard Tongue	Tall plants, crisp white summer flowers
<i>Phacelia hirsuta</i>	Hairy Phacelia	Damp areas upright lavender spring flowers
<i>Phlox bifida</i>	Sand Phlox	Rocky or sandy areas, lavender spring flowers
<i>Phlox pilosa</i>	Downy Phlox	Dry thin soils, openings in woods, pink spring flowers
<i>Physostegia virginiana</i>	Obedient Plant	Moist open areas, showy pink summer flowers
<i>Pycnanthemum albescens</i>	Mountain Mint	Dry soil, interesting green summer bracts & flowers
<i>Pycnanthemum tenuifolium</i>	Slender Mtn. Mint	Slender leaves, white-lavender summer flowers
<i>Ratibida pinnata</i>	Gray Head Coneflower	Open idle areas, drooping yellow summer flowers
<i>Rudbeckia grandiflora</i>	Large Coneflower	Dry areas, yellow summer flowers, grow in large stands
<i>Rudbeckia hirta</i>	Black Eyed Susan	Wildlife food, eroded land, yellow summer flowers
<i>Salvia azurea</i>	Blue Sage	Tall plants, lite blue summer-fall flowers
<i>Salvia lyrata</i>	Cancer Weed	Adaptable plant, lite blue-lavender spr-summer flowers
<i>Satureja arkansana</i>	Calamint	Rocky soil, small lavender summer flowers, mint odor
<i>Schrankia nuttallii</i>	Sensitive Brier	Wildlife food, trailing habit, pink puffy summer flowers
<i>Sedum nuttallianum</i>	Yellow Sedum	Sun, dry, rocky areas, grows in low clumps
<i>Silene virginica</i>	Fire Pink	Open areas or lite shade, red flowers, hummingbird attr.

<i>Silene regia</i>	Royal Catchfly	Full sun, red flowers, slow grower, hummingbird attractor
<i>Silphium perfoliatum</i>	Cup Plant	Large leaves form a cup, moist, yellow summer flowers
<i>Silphium terebinthinaceum</i>	Prairie Dock	Lg. Spade leaves, limestone, yellow summer flowers
<i>Sisyrinchium campestre</i>	Blue Eyed Grass	Not a true grass, grass like leaves, clumps, blue flowers
<i>Solidago petiolaris</i>	Goldenrod	Rocky, yellow late summer flower spikes
<i>Talinum calycinum</i>	Fame Flower	Rocky, dry sites, cedar glades, bright pink flowers
<i>Tephrosia virginiana</i>	Goat's Rue	Pale pink pea like flowers, vetchlike plants, wildlife food
<i>Teucrium canadense</i>	Wood Sage	Dry or moist soil, elongated lavender summer flowers
<i>Glandularia canadensis</i>	Rose Vervain	Sandy, rocky, open areas, lavender spring-summer flowers
<i>Veronicastrum virginicum</i>	Culver's Root	Adaptable open or shade, white summer flower spikes
<i>Yucca arkansana</i>	Arkansas Yucca	Dry, uplands, large spikes of white summer flowers

3. Native Shrubs for Dry Sites

<u>Scientific Name</u>	<u>Common Name</u>	<u>Comments</u>
<i>Amelanchier arborea</i>	Seviceberry	White flowers, +fruit, sun/shade
<i>Amorpha canescens</i>	Lead Plant	Dry or moist sun, compound leaves, gray green color
<i>Ceanothus americanus</i>	New Jersey Tea	Part shade, dry
<i>Hamamelis vernalis</i>	Ozark Witch Hazel	Winter frag. flower, wildlife attractor, yellow fall
<i>Hamamelis virginiana</i>	Witch Hazel	Fragrant winter flowers, fall color, forms colonies
<i>Philadelphus pubescens</i>	Gray Mock Orange	Fragrant white flowers, tough shrub.
<i>Physocarpus opulifolius</i>	Common Ninebark	Tough adaptable shrub, white flowers, nice bark
<i>Ribes missouriense</i>	Missouri Gooseberry	Adaptable shrub, wildlife food
<i>Ribes odoratum</i>	Golden Current	Frag yellow flowers, wildlife food, sun to part shade
<i>Rhus aromatica</i>	Fragrant Sumac	Hot, dry sun, red fall, good for massing, wildlife food
<i>Rhus copallina</i>	Winged Sumac	Dry, sun or shade, orange fall, wildlife food
<i>Rhus glabra</i>	Smooth Sumac	Forms thickets, common, red fall, wildlife food, slopes
<i>Rosa arkansana</i>	Prairie Rose	Pink rose, drought tolerant, wildlife food
<i>Rosa caroliniana</i>	Pasture Rose	Pink rose, drought tolerant, wildlife food, compact

<i>Rubus species</i>	Blackberry	Thorns, edible fruit, tolerates sun, dry soil
<i>Rubus occidentalis</i>	Black Raspberry	Edible fruits, thorns, tolerates dry, sun
<i>Salix humilis</i>	Prairie Willow	Dry open areas, pussy willow buds, short shrub
<i>Sambucus canadensis</i>	Elder-Berry	Wildlife attractor, edible fruit, dry or moist soil
<i>Symphoricarpos orbiculatus</i>	Coral berry	Wildlife attractor, red fall fruit, dry soil

4. Native Shrubs for Moist Sites

<u>Scientific Name</u>	<u>Common Name</u>	<u>Comments</u>
<i>Aesculus glabra</i>	Ohio Buckeye	Pale yellow flowers, nuts, occ fall color
<i>Amelanchier arborea</i>	Seviceberry	White flowers, fruit, sun/shade, adaptable to soil
<i>Amorpha canescens</i>	Lead Plant	Dry or moist sun, compound leaves, gray green color
<i>Amorpha fruticosa</i>	Indigobush Amorpha	Pinnate foliage, tough plant, purple flowers, moist
<i>Cornus racemosa</i>	Gray dogwood	Moist or rocky soil, white flower
<i>Dirca palustris</i>	Leatherwood	Shade, yellow flowers and fall, woodland
<i>Euonymus americana</i>	Strawberry bush	Moist woodlands, bright red fruit
<i>Euonymus atropurpureus</i>	Burning Bush, Wahoo	Moist, fall color, part to full shade
<i>Hamamelis vernalis</i>	Ozark Witch Hazel	Winter frag. flower, wildlife attractor, yellow fall
<i>Hamamelis virginiana</i>	Witch Hazel	Fragrant winter flowers, fall color, forms colonies
<i>Hydrangea arborescens</i>	Wild Hydrangea	Moist, part shade or sun, fall color
<i>Hypericum prolificum</i>	Shrubby St Johnswort	Yellow flowers, sun to part shade, well drained
<i>Lindera benzoin</i>	Spicebush	Acid soil, sun to part shade, yellow flowers
<i>Physocarpus opulifolius</i>	Common Ninebark	Tough adaptable shrub, white flowers, nice bark
<i>Rhododendron viscosum</i>	Texas Azalea	Frag white/pink flowers, moist rocky soil, part shade
<i>Salix eriocephala</i>	Rigid Willow	Good for wet areas, sun, fine texture
<i>Sambucus canadensis</i>	Elder-Berry	Wildlife attractor, edible fruit, dry or moist soil
<i>Sapindus drummondii</i>	Soapberry	Limestone, fruit, pinnate leaves, gold fall
<i>Staphylea trifolia</i>	Bladder-Nut	Interesting fruit, striped bark, part shade to sun
<i>Viburnum prunifolium</i>	Blackhaw	White flowers, fall color, wildlife attractor
<i>Viburnum rufidulum</i>	Southern Blackhaw	White flowers, fall color, glossy leaves, wildlife

5. Native Shrubs for Shady Sites

<u>Scientific Name</u>	<u>Common Name</u>	<u>Comments</u>
<i>Aesculus glabra</i>	Ohio Buckeye	Pale yellow flowers, nuts, occ fall color, part shade
<i>Amelanchier arborea</i>	Seviceberry	White flowers, +fruit, sun/shade
<i>Ceanothus americanus</i>	New Jersey Tea	Part shade, dry
<i>Cephalanthus occidentalis</i>	Buttonbush	Part shade or sun, moist, attracts butterflies, birds
<i>Cornus racemosa</i>	Gray dogwood	Moist or rocky soil, white flower
<i>Dirca palustris</i>	Leatherwood	Shade, yellow flowers and fall, woodland
<i>Euonymus americana</i>	Strawberry bush	Moist woodlands, bright red fruit
<i>Euonymus atropurpureus</i>	Burning Bush, Wahoo	Moist, fall color, part to full shade
<i>Hydrangea arborescens</i>	Wild Hydrangea	Moist, part to full shade, fall color
<i>Lindera benzoin</i>	Spicebush	Acid soil, sun to part shade, yellow flowers
<i>Physocarpus opulifolius</i>	Common Ninebark	Tough adaptable shrub, white flowers, nice bark
<i>Sapindus drummondii</i>	Soapberry	Limestone, fruit, pinnate leaves, gold fall, part shade
<i>Staphylea trifolia</i>	Bladder-Nut	Interesting fruit, striped bark, part shade
<i>Symphoricarpos orbiculatus</i>	Coral berry	Wildlife attractor, red fall fruit, dry soil, part shade
<i>Rhododendron viscosum</i>	Texas Azalea	Frag white/pink flowers, moist rocky soil, part shade
<i>Ribes odoratum</i>	Golden Current	Frag yellow flowers, wildlife food, sun to part shade
<i>Rhus copallina</i>	Winged Sumac	Dry, sun or shade, orange fall, wildlife food
<i>Vaccinium arboreum</i>	Huckleberry	Fruit, low fert. acid soil, red fall, sun or part shade
<i>Viburnum prunifolium</i>	Blackhaw	White flowers, fall color, wildlife food, part shade
<i>Viburnum rufidulum</i>	Southern Blackhaw	White flowers, fall color, glossy leaves, wildlife

6. Native Shrubs of Sunny Sites

<u>Scientific Name</u>	<u>Common Name</u>	<u>Comments</u>
<i>Aesculus glabra</i>	Ohio Buckeye	Pale yellow flowers, nuts, occ fall color
<i>Amelanchier arborea</i>	Seviceberry	White flowers, +fruit, sun/shade
<i>Amorpha canescens</i>	Lead Plant	Dry or moist, attracts butterflies, gray green color
<i>Amorpha fruticosa</i>	Indigobush Amorph	Pinnate foliage, tough plant, purple flowers, moist

<i>Cephalanthus occidentalis</i>	Buttonbush	Part shade or sun, moist, attracts wildlife
<i>Cornus racemosa</i>	Gray dogwood	Moist or rocky soil, white flowers
<i>Hamamelis vernalis</i>	Ozark Witch Hazel	Winter frag. flower, wildlife attractor, yellow fall
<i>Hamamelis virginiana</i>	Witch Hazel	Fragrant winter flowers, fall color, colonies
<i>Hydrangea arborescens</i>	Wild Hydrange	Moist, part shade or sun, fall color
<i>Hypericum prolificum</i>	Shrubby St Johnswort	Yellow flowers, small shrub, well-drained soil
<i>Lindera benzoin</i>	Spicebush	Acid soil, sun to part shade, yellow flowers
<i>Philadelphus pubescens</i>	Gray Mock Orange	Fragrant white flowers, tough shrub.
<i>Physocarpus opulifolius</i>	Common Ninebark	Tough adaptable shrub, white flowers, nice bark
<i>Ribes missouriense</i>	Missouri Gooseberry	Adaptable shrub, wildlife food
<i>Ribes odoratum</i>	Golden Current	Fragrant yellow flowers, wildlife food
<i>Rhus aromatica</i>	Fragrant Sumac	Hot, dry, red fall, massing, wildlife food
<i>Rhus copallina</i>	Winged Sumac	Dry, sun or shade, orange fall, wildlife food
<i>Rhus glabra</i>	Smooth Sumac	Forms thickets, common, red fall, wildlife food
<i>Rosa arkansana</i>	Prairie Rose	Pink rose, drought tolerant, wildlife food
<i>Rosa caroliniana</i>	Pasture Rose	Pink rose, drought tolerant, wildlife food
<i>Rubus occidentalis</i>	Black Raspberry	Edible fruits, thorns, tolerates dry, sun
<i>Rubus species</i>	Blackberry	Thorns, edible fruit, tolerates sun, dry soil
<i>Salix eriocephala</i>	Rigid Willow	Good for wet areas, sun, fine texture
<i>Salix humilis</i>	Prairie Willow	Dry open areas, pussy willow buds, short shrub
<i>Sambucus canadensis</i>	Elder-Berry	Wildlife attractor, edible fruit, dry or moist soil
<i>Sapindus drummondii</i>	Soapberry	Limestone, fruit, pinnate leaves, gold fall
<i>Staphylea trifolia</i>	Bladder-Nut	Interesting fruit, striped bark, part shade to sun
<i>Symphoricarpos orbiculatus</i>	Coral berry	Wildlife attractor, red fall fruit, dry soil
<i>Vaccinium arboreum</i>	Huckleberry, Farkleberry Fruit,	low fert. acid soil, red fall
<i>Vaccinium pallidum</i>	Low Bush Blueberry	Delicious fruit, wildlife food, acid soil, colonies
<i>Viburnum prunifolium</i>	Blackhaw	White flowers, fall color, wildlife attractor, sun
<i>Viburnum rufidulum</i>	Southern Blackhaw	White flowers, fall color, glossy leaves, wildlife

Native Plant Book List

- A Sand County Almanac*. Aldo Leopold. 1966.
- American Plants for American Gardens*. Edith Roberts & Elsa Rehmann. 1996
- Gardening with Native Plants of the South*. Sally Wasowski. 1994.
- Gardening with Wildflowers & Native Plants*. Brooklyn Botanic Garden Record. 1990.
- Going Native: Biodiversity in Our Own Backyards*. Brooklyn Botanic Garden Record. 1994.
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Editor's Note:

Ms. Coleman's addenda also included the following lists of plant materials:

Native trees for dry sites

Native trees for moist Sites

Native vines

Native woodland herbaceous plants

She also included extensive lists of individuals and agencies from whom information on native plants can be secured, as well as local, state and national sources for native plant materials listed, a native plant book list, an annotated questionnaire used in collecting her data, and plans of three local gardens that use native plants extensively. Space limitations of this journal do not allow the inclusion of this material. It is available, however, from the author who can be reached at 123 Snapfinger Way, Athens, GA 30605.

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Faculty Comments:

Professor Laurie Fields, Chair of the Department of Landscape Architecture, made these comments about Ms. Coleman's work:

Though I did not work directly with Ms. Coleman on her research project, I have read her paper and believe that it is thorough, significant and worthy of broad dissemination.

With the prestigious SILO Research Grant for undergraduates and numerous awards and scholarships, the faculty and the university have recognized Ms. Coleman potential as a designer and achievements as a scholar. Ms. Coleman is a non-traditional

student whose intelligence is reflected in design work marked by rigor and originality, and in the research project on native plants that she is currently completing. Having participated in her process of investigating and applying to graduate schools, it is clear that she is thorough, organized and thoughtful.

Ms. Coleman potential as a scholar is evident in this paper and in the fact that she was accepted at every graduate school to which she applied. She has decided to attend the University of Georgia where she will continue work on native plants with Professor Darrell Morrison. This paper represents the beginning of a graduate research agenda and application to landscape architectural design.

Professor David Lewis worked closely with Ms. Coleman throughout the duration of the project. He had this to say about his experience:

While teaching in the University of Arkansas Department of Landscape Architecture it was my pleasure and good fortune to work with many good students and one extraordinary one: Ms. Janet Coleman. As a student and budding scholar, Ms. Coleman positioned herself at the top of her class, carefully completing assignments in a timely and appropriate fashion, but looking beyond, or through, the assignments to examine what she was learning and how to fit that knowledge with what she knew and what she wanted to know about the profession of landscape architecture. Janet was thoughtful, motivated and curious; she pushed herself forward, taking her classmates and the profession along with her.

Ms. Coleman's interests forced her to work with other professionals, particularly horticulturists. Her interest in the use of native plant species in residential applications suggest that her impact on the world will extend beyond traditional practices of landscape architecture and make her valuable as a designer and teacher of new ways to conceive individual landscapes.

As Ms. Coleman's mentor, I have followed her research into the use of native plant materials. The work that she is submitting for publication in *Inquiry* is important not only as a representation of how designed landscapes are influenced by and are significant to multiple disciplines (environmental design, environmental science, psychology, horticulture, and others), but it also demonstrates how to make connections not only among the various disciplines but with the public as well. Her attempt is to identify what is significant about the use of native plants in designed landscapes, not for the specialists but for the people who could be utilizing them everyday. I strongly encourage the consideration of Ms. Coleman's paper for publication as her work attempts to educate the public about how to make a difference in the quality of the environments in which we all live.

Ms. Coleman's faculty mentor, Karen Rollet-Crocker, describes the value of Ms. Coleman's research as follows:

Janet Coleman's research project is part of an effort in the landscape architecture profession to create a new area of knowledge that can be applied to landscape design: the use of native plants in designed landscapes. This requires an understanding of native plant associations, ecology, and landscape preservation in unique regional environments. Robert Grese of the University of Michigan and Darrel G. Morrison of the University of Georgia have done academic research in this area. The University of Arkansas Landscape Architecture Horticulture departments have begun developing courses and research in this subject and applying this information to specific projects such as the Garvan Botanical Garden in Hot Springs and the Compton Gardens in Bentonville.

Ms. Coleman's study developed information on the subject through interviewing experts and attending workshops. A literature search was done based on suggested categories. This initial work produced an understanding of general issues about the use of native plants in designed landscapes. It also resulted in a list of constraints created by current landscaping

practices. The current American garden aesthetic with its flowerbeds and lawns wastes resources and degrades habitats for both plants and animals. A number of economic issues, including the limited availability of native plants, add to the problem.

A questionnaire helped to develop a methodology for using native plants. It allowed Janet to discover what information and techniques were most helpful to people who were actively involved in this kind of landscaping. She found that self-education and experimentation were keys to their success.

The summation lists guidelines from all aspects of her study, framed in a format typically used by landscape architects for design purposes. She then applied these guidelines to several small design projects.

The importance of this project lies in the application of general knowledge about the value of using native plants to design landscapes in a specific region: Northwest Arkansas. The study process could be replicated in any regional environment, using regional source material. This would tailor the plant and habitat information to a specific location while following the general goals and guidelines listed in the study.