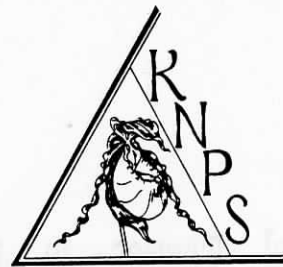


Kentucky Native Plant Society *NEWSLETTER*



Vol 6. Number 3. August 1991.

1991 Fall Field Trips and Activities

13-15 September, Hugo L. Blomquist Bryological Foray, Pine Mountain Settlement School, Harlan County. This is a regional event that this year is being held in Kentucky. Field trips to Line Fork Cavern and Bad Branch will be taken to observe mosses and liverworts. For details of the schedule call Allen Risk at 606-784-8896, after 6 pm.

4-6 October. Annual Fall Meeting of KNPS--Symposium on Disturbance and Restoration of the Kentucky Landscape. Kentucky Leadership Center, Wayne County.

The Annual Fall Meeting of the KNPS will be held at the Kentucky Leadership Center, multi-purpose conference center that include meeting rooms, dining facilities, and overnight accommodations. It is located on Lake Cumberland, 16 miles south of the Cumberland Parkway. Take Nancy Exit on HW 80 (this is a toll exist requiring exact change of \$0.20), go south on HW 80, past the church and one house, then turn right at the small Faubush sign. This road dead-ends into KY 196 at Faubush (3.2 miles). Turn right (south) onto 196, following it 7.2 miles to Jabez, where HW 196 takes a sharp left (south) turn, then 5 miles to Center (see map). Hiking and boating are available in the area. Reservation for the symposium must be made through KNPS (a form is enclosed). Do not call the center and make independent arrangements.

Schedule of Events: (See enclosed brochure for further details)

Friday:

4 pm--General tour of the facilities and grounds.
6 pm. Dinner
7 pm. KNPS Executive Board Meeting, open to all members
8:30 pm. Discussion on the Kentucky Bicentennial Exhibit on Natural Landscapes. Led by Julian Campbell

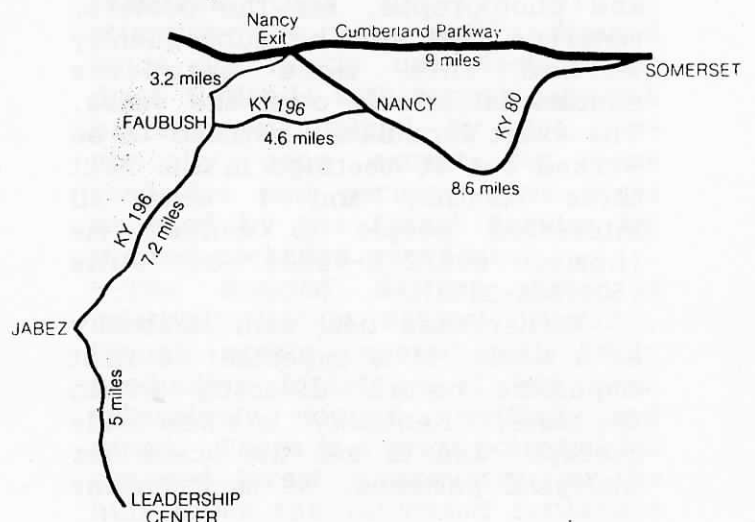
Saturday

7 am--Breakfast
8 am-12 pm--Paper presentations. A listing of the talks is given in the enclosed brochure.
12 noon--Lunch
1 pm-4:30 pm. Paper presentations.
4:30 pm--Afternoon hike--How to recognize a disturbed habitat.
6 pm. Dinner.
7 pm. Annual Business Meeting of KNPS.

8:30 pm. Evening talk.

Sunday.

7 am--Breakfast.
8 am--12 pm. Field trip to selected sites in general area.



General Themes in the Natural History of Kentucky: Ideas for a Bicentennial Exhibit.

Julian Campbell, President, KNPS

I am sticking my presidential neck out again, and committing the society to public education as its central goal. This is now becoming realized as preparations are made for a bicentennial exhibit next year, commemorating Kentucky's acquisition of statehood. Julie Smithers, Coordinator for Environmental Education in the Natural Resources Cabinet, has instigated a plan for several organizations to work together on exhibiting the natural history of the state, as an essential backdrop for the litany of environmental and social changes. As Kentucky becomes a more environmentally aware state, I feel this project is an ideal vehicle for the Native Plant Society to deepen its involvement in the community. What we envisage in next year's exhibit is a straightforward series of posters (for the grown-ups) complemented by a series of interactive exhibits crafted by the Lexington Children's Museum--to be toured at libraries and other locations. Clearly, KNPS can contribute much knowledge, texts and photographs, for the posters, materials that can be subsequently worked into more intensive educational efforts over the years. The exact formulation remains to be worked out at meetings in the next three months, and I urge all interested people to contact me (home: 606/271-4392) or Julie (502/564-3350).

Rather than deal with Kentucky as a whole, it is important to first emphasize natural diversity within the state. "Kentucky" is a man-made concept, and to set the scene for biological patterns, we must outline

the natural regions represented here, most of which extend into other states. This introduces the concept of "biological diversity" at a broad landscape scale, which can lead, if so wished, to an increasingly detailed examination of the characteristic species in each region, and how they are suited to particular habitats through their physiology. Also, this initial emphasis on natural regions provides the setting for an understanding of the Indian cultures and how pioneers moved into the area for settlement.

The following rough notes illustrate the kind of themes that I think should underpin this exhibit. Space only permits four of the seven major geographic regions to be included here. A more complete version is available from me. Please send comments, and get involved if you can.

BLUEGRASS REGION: THE LAND OF CANE AND CLOVER

The challenge here is somehow to illustrate the sequential connection:

from mineral-rich deposition in sea just west of ancient Appalachia,

to phosphatic limestones in bedrock of Lexington Plain,

to deep fertile soil on uplands (and old Kentucky River meanders),

to productive vegetation,

to attraction of large herbivores and man,

to burning by Indians, then clearance by settlers,

to wealth initiated by agriculture, then horse-farms,

to financial and political power centered in Lexington area.

KNOBS REGION: BLACK SHALE HILLS AND INTERVENING BOTTOMLAND.

At first sight, it difficult to find a common theme in the environmental history of this region. Perhaps the best "lesson" is that the varied geology and topography has caused a variety of focuses for human effects, complicating patterns in modern remnants of the region's natural diversity. This mosaic of interaction would include the following components:

--Indian farming and hunting on the bottomland and Silurian foothills is known to have persisted almost until Virginian settlement, probably maintaining prairie-like areas; to what extent they also travelled along the ridges, using fire to increase game there, perhaps communicating from knob to knob with smoke signals, and hiding silver in little old caves, remains mysterious.

--Soon after settlement, there was intensive exploitation (and exhaustion?) of Devonian iron ore and the timber needed to extract the metal; virtually no original forest remains.

--Early agriculture was largely restricted to richer bottomland and calcareous uplands, but increasing use of fertilizers has allowed more of the poorer acid shale soils to be used, and increasing drainage has converted terraces and flats with fragipans.

--Oil and gas finds have been limited, but extensive mining of the black shale for "synfuel" production was recently a serious proposition.

APPALACHIAN PLATEAU: WASIOTO (Indian name); EASTERN COAL FIELD.

A lot of grumbling and griping goes on concerning the environmental history of Appalachian Kentucky. At the core of any general presentation

must be an emphasis of the great natural diversity of this region, the great variation in major resources--watercourses, timber, productive soils, oil, gas and coal--and the great contrasts in potential for further destruction and conservation. These contrasts are best understood in terms of the major geographic divisions of the region, from west to east:

--The Cliff Section, approximating the bulk of Daniel Boone National Forest, has extraordinary natural diversity, with several globally unique features along its streams and cliffs (also holding important evidence of Indian occupation). There is a long history of river impoundments, timber extraction, localized oil/gas/coal extraction, and miscellaneous disturbances like digging of herbs and Indian sites. However, in recent years the U.S. Forest Service has begun to realign its management goals to emphasize biodiversity as well as resource extraction. The Nature Conservancy, a private (non-governmental) organization has developed a partnership with USFS in the accelerated conservation within this section.

--The Low Hills Belt, mostly highly disturbed by logging, farming and mining, has some special natural features that deserve urgent attention--the more poorly drained lands are mostly unprotected; the drier flatlands with former pine-oak barrens, maintained by fire, are virtually gone except for some roadsides and perhaps some areas managed by the Forest Service for the red-cockaded woodpecker.

--The Rugged Eastern Area is relatively low in natural diversity, though mostly covered with fairly productive forests. It has been extensively logged, settled and mined. There is a great potential for renewed forest conservation on the hills given the refocused settlement

on the bottomlands, but continued pressures to extract coal threaten to leave almost no watershed untouched. Even land owned by the state (including Robinson Forest and Lilley-Cornett Woods) or federal government (outlying parts of Daniel Boone National Forest) is being sought by the coal industry. Stands need to be taken against forces for sacrifice of these coal fields in exchange for conservation of the Cliff Section.

With this geographic background, a general presentation must emphasize forest and coal as major, sometimes incompatible resources in this region; contrasting coal, formed millions of years ago from trees, as non-renewable, versus trees and other forest products as renewable.

CUMBERLAND MOUNTAINS

This remarkable region is a thin, 10-15 mile wide strip of the Appalachian Plateau that seismic forces broke out and folded up at the edges along its length, exceeding 200 miles from Tennessee to West Virginia. Most of the rock is still Pennsylvanian, but along the outer edges, Mississippian rocks were pushed up and exposed. As might be expected, almost the full range of diversity found on the Appalachian Plateau is also found here. In addition, the higher elevations, especially along the central ridges of Black Mountain, are higher than anywhere else in Kentucky, and are notably cooler. Several northern plants animals are found here, but nowhere else in the state.

A diversity of human interactions has occurred in this complex piece of Kentucky. Cumberland Gap was, of course, a major route for the early settlers of Kentucky, following the ancient paths of Indians and their game animals between the east coast and the interior. Settlement within this rugged region has been largely restricted to valley bottoms and lower

slopes. However, as late as 1910(?), a few families refused to stay down, and walked up Cumberland Mountain to found the Hensley Settlement, now abandoned but enshrined in the Cumberland Gap National Historical Park. With such notable exceptions, the uplands are still almost entirely forested, though with much timber cut out. As in upper strata of the Appalachian Plateau, the central Black Mountain section of these mountains is rich in coal. Strip-mining is progressing around these mountains, and it may be that "mountain-top removal" will eventually reduce the maximum elevations of Kentucky on these peaks. (Would most Kentuckians feel any shame at this?)

Some large parts of the outer mountain ranges--Pine Mountain and Cumberland Mountain--are owned and protected by federal or state agencies. (The Nature Conservancy has a large part of the Bad Branch Nature Preserve.) However, Black Mountain remains virtually without protection.

RESTORE THE NATURAL BLUEGRASS LANDSCAPE (WITH NATIVE PLANTS)! (Part II)

By Julian Campbell

Editor's Note: Part I of this article appeared in the May, 1991 KNPS Newsletter.

TREES AND SHRUBS FOR POORER
SOILS (especially Eden Shale Belt)

Carya glabra (pignut hickory). This is the most typical hickory of average "oak-hickory" forest in Kentucky (with white oak and black oak, on moderately dry soils with medium fertility). Like most other hickories

it is somewhat more shade tolerant than the oaks, and, in the wild, tends to concentrate in a subcanopy layer below the tallest oaks. This species has small bitter nuts.

Carya ovata (shagbark hickory). This species is most typical of moister oak-hickory forest and transitions to beech or sugar maple. Its nuts are edible (for humans), but smaller than "shellbark hickory" (C. laciniosa).

Cornus florida (flowering dogwood). One of the best-known ornamental trees from the wild, this species might appear to need no further introduction to horticulture. However, a recent fungus blight (anthracnose) in northeastern states, perhaps already spread to Kentucky, may prompt a search for resistant types. As in most widely propagated woody species, few genetic types are usually available in the nursery trade. If these types prove susceptible to diseases, most may be lost. It might behoove the nursery industry to build up some genetic variety in stock to reduce the long term impact of such risks. Those interested in natural restoration within the Bluegrass Region should be aware that this species was not typical of the deep, rich soils of more agricultural areas.

Corylus americana (hazel). This shrub produces relatively small nuts, and it was probably uncommon in Bluegrass forests, but it deserves some interest for restoration and wildlife use, especially along woodland edges and in hedges.

Diospyros virginiana (persimmon). Persimmons are the only large North American trees that produce fruit with "climacteric" ripening--reaching an abrupt, aromatic edibility peak like pears and bananas. (Pawpaws and perhaps some plums are the only other woody species like this). It is amazing to me how much waste of this

delicious food item takes place in Kentucky every year. The Indians used to make "pemmican" from the pulp mixed with meat--has the recipe been lost? There is a lot of potential for experimenting with different genetic types in Kentucky--there is much variation in fruit size. Trees seem to thrive, at least with fruit production, on relatively poor, dry soils in sunny spots.

Euonymus americanus (strawberry-bush). This small shrub or ground covering plant is typical, and locally abundant, in moderately moist forest (especially with beech). However, dense deer populations may reduce it, since it is a favorite of theirs; perhaps cattle and hogs have also reduced it in the past. Its bright "strawberry-like" fruits ("heart's a' bursting"), give it special ornamental value. It is ridiculously easy to propagate.

Fagus grandifolia (beech). Beech was formerly abundant on moister sites in the Eden Shale Belt (especially on Garrard Siltstone), and along river bottoms, but it was virtually absent from upland areas with richer soils. Planted beeches often do not do well in the Bluegrass Region. Can we bring it back, or has soil erosion progressed too far (stripping more leached soil horizons, especially loess, that might have favored this species over the omnipresent sugar maple)? Let's keep trying. Without increasing seed source artificially, many areas have little chance to recover in the foreseeable future.

Juglans cinerea (butternut, white walnut). This species was formerly frequent in Kentucky, especially in moist, successional forest associated with yellow poplar and beech. It has declined drastically throughout most of its range due to bark diseases. In 10 years of field work in Kentucky, I ain't never seen no nuts. Until

recently there has been little professional interest in finding disease resistant trees and propagation. A general search for nut-producing trees deserves our urgent attention.

Nyssa sylvatica (blackgum). This attractive species, with particularly strong red fall color and blue-black fruits, is typical of oak-hickory forests. It is rather uncommon in the Bluegrass Region, but would probably do well in a variety of situations. Large trees even occurred in the Lexington area until recently, but I only know of one large tree here today--in Ecton Park.

Prunus angustifolia (chickasaw plum). This is the most edible wild plum in Kentucky, and is truly delicious when ripe. Potential problems with pests (e.g. Japanese beetles) and frosts should not deter us from spreading this vigorous thicket-former around for trials. It thrives on relatively dry, poor soil.

Quercus alba (white oak). Before settlement, this species was probably the most abundant tree in states east of the Mississippi. In the Bluegrass Region it was concentrated on the Eden Shale Hills, and also blufftops near larger streams and rivers. There are still many sites with young trees, but this species should be the main focus of long-term restoration plans on Eden Shale. Of course, it has great potential for wood supply, majestic form for a shade tree, and a lot of acorn production for wildlife.

Quercus velutina (black oak). An associate of white oak, but perhaps more common in disturbed stands or on drier sites, this species also deserves much replanting effort in the Eden Shale Hills. It may be more rapidly growing, and could form a useful shade cover sooner than white oak.

TREES AND SHRUBS FOR WETTER SOILS

Acer rubrum (red maple). This species, abundant in most of Kentucky, was surprisingly infrequent in the Bluegrass Region, except for seasonally swampy sites on poorer soils (and rarely on Eden Shale hilltops). There is great genetic variety in this species, and the commonly available types in the nursery business are probably inappropriate for its restricted native habitat in this region.

Cornus obliqua (silky dogwood). This shrub is prolific along less disturbed banks of larger streams, especially on gravel and cobbles in full sun. It may have special use for revegetation of streambanks in farmland and urban settings.

Liquidambar styraciflua (sweetgum). Although widely planted as a shade tree (with good purple, red, black or yellow fall colors), the native habitat of this species in the Bluegrass Region was just the more swampy bottoms along major creeks and rivers (like red maple). I have never seen seedlings coming up from planted trees in this region. It should not be included in natural restoration projects on well-drained sites.

Nyssa sylvatica (blackgum). This species has a wide moisture range on poorer soils, from swampy to dryish sites (like red maple). See general notes on this same species above.

Quercus bicolor (swamp white oak). This species is restricted to a few seasonally swampy sites in the wild. Sun leaves have a remarkably white (hairy) lower surface. It has been planted much less than most other swamp trees in this region, and it may deserve a special place in restorations on wet, rich bottoms.

Quercus palustris (pin oak). This abundantly overplanted species should be generally left out of any restoration efforts. In the wild, it is restricted to the few remaining seasonal swamps on poorer soils (mostly along the Kentucky River and on the flat bottoms surrounding the Bluegrass, e.g., near Clay City). One of its worst characteristics in urban settings is the slow decomposition rate of fallen leaves, making it pretty useless for soil building. The related species, shumard oak (see above), is far superior for most uses in the Bluegrass Region.

Rosa palustris (swamp rose). This is a scrambling species typical of swampy sites, especially in sunny spots. Unfortunately, the exotic multiflora rose is now far more common than this native species (or the prairie rose--see above). It is a pity that the Soil Conservation Service promoted that pesky exotic for hedging and "erosion-control" instead of the natives.

HERBACEOUS SPECIES

There is not enough space in these notes to detail potential uses of herbaceous species native to the Bluegrass Region. Instead, the following list merely divide species that deserve attention into different ecological groups, corresponding to the preceding woody plant groups. Wildflower guides and botanical manuals should be consulted for information on identification, flower colors and seasons, etc.

WILD FLOWERS AND GRASSES FOR FORESTS ON RICHER SOILS

Actaea alba (doll's eyes). Moist slopes.

Adiantum pedatum (maidenhair fern). Moist slopes.

Allium tricoccum (broad-leaved ramps), A. burdickii (narrow leaved ramps). Moist to (in latter species) moderately dry slopes; A. burdickii is relatively rare.

Asarum canadense (wild ginger). Moist slopes.

Aster cordifolius (heart-leaved aster), A. shortii (Short's aster). Moist to (in latter species) moderately dry slopes, especially at edges.

Blephilia hirsuta (white downy wood-mint). Moist bottoms, especially at edges? Rare.

Camassia scilloides (wild hyacinth). Moist slopes and uplands. Formerly abundant in areas converted to farmland.

Campanula americana (tall bellflower). Moist or moderately dry woods and edges.

Caulophyllum thalictroides (blue cohosh). Moist slopes.

Collinsia verna (blue-eyed Mary). Moist slopes and bottoms. One of the few woodland annuals, perhaps able to recolonize bare ground in formerly grazed woods quite quickly, and then remain in a seed bank.

Cystopteris protrusa (fragile fern). Moist slopes, spreading by thick rhizomes.

Diarrhena americana (a broad-leaved woodland grass). Moderately dry slopes. Forming large patches.

Dicentra canadensis (Dutchman's breeched), D. cucullaria (squirrel corn). Moist slopes and (in latter species) sometimes bottoms.

Dryopteris marginalis (marginal wood-fern). Moist slopes. A large handsome ("male") fern.

Elymus "interior", E. villosus, E. svensonii (wild ryes) and E. hystrix ("bottlebrush grass"). Moist bottoms to dry slopes. Formerly the most abundant grasses in this region, and still abundant in many remnants.

Erythronium americanum (yellow trout lily), E. albidum (white trout lily). Moist bottoms to (in latter species) moderately dry slopes. Formerly abundant on uplands, but very slow to recolonize disturbed areas.

Eupatorium incarnatum (pink snakeroot). Moderately dry slopes. Uncommon but locally frequent (e.g., Buckley Hills Wildlife Sanctuary).

Hepatica acutiloba (acute-leaved hepatica). Moist slopes.

Hydrophyllum appendiculatum, H. canadense, H. macrophyllum (waterleaf). Moist or damp bottoms to moderately dry slopes. Locally abundant, quick to spread.

Isopyrum biternatum (false rue anemone). Moist slopes and bottoms. Formerly widespread on uplands?

Jeffersonia diphylla (twinleaf). Moderately dry slopes. Formerly widespread on uplands?

Laportea canadensis (wood nettle). Moist or damp bottoms and some slopes. Probably reduced a lot by hogs and cattle. This dangerous plant might be useful for deterring trespassers on streambanks--but could one be sued by parents of careless children?

Lespedeza violacea (a bush-clover). Moderately dry slopes.

Mertensia virginica (bluebells). Moist bottoms and slopes.

Monarda clinopodia (wood bergamot). Moist bottoms and slopes. Rare.

Osmorhiza claytonii, O. longistylis (sweet cicely). Moist slopes and (in latter species) deeper soil on bottoms and uplands.

Pachysandra procumbens (wood spurge). Moist slopes. Rare.

Phacelia bipinnata ("purple haze"), P. purshii ("Miami mist"). Moist rocky slopes (former); and deeper soil on uplands, especially at edges (latter).

Prenanthes crepidinea (giant wood-lettuce/rattlesnake root). Moist deep soils; perhaps reduced greatly, now very rare.

Sanguinaria canadensis (bloodroot). Moderately dry slopes.

Solidago flexicaulis, S. ulmifolia (rich wood goldenrods). Moist to moderately dry slopes.

Stylophorum diphyllum (wood/yellow poppy). Moist slope bases.

Synandra hispidula (white dragonhead). Moist to damp slopes and bottoms. Uncommon, a biennial with whole populations generally flowering in alternate years.

Tradescantia subaspera (broad-leaved spiderwort). Moist slopes and deeper soil.

Trillium flexipes (a bent trillium), T. sessile (a sessile trillium or wakerobin). Moist slopes (former) and deeper soil (latter).

Trifolium stoloniferum (running buffalo clover). Moist deep soil in grazed, mowed or flood-scoured zones, with partial shade. Federally classed as "Endangered"; of great historical significance in the Bluegrass Region, it might be re-established in shady lawns if herbivores can be controlled.

Uvularia grandiflora (large bellwort). Moist slopes.

Valeriana pauciflora (valerian). Moist slope bases and bottoms.

Viola canadensis (white-and-purple stemmed-violet), V. pubescens (yellow stemmed-violet). Moist slopes (and latter in deeper soil?).

Using Fruit Color and the Cut Test to Determine Seed Ripeness

Dennis Feedback, Frankfort, KY.

While natural seed dispersal is the most reliable means of determining seed ripeness, there are situations where other indices should be used. Many fruits are relished by wildlife and if the seed collector is to be successful the seeds must be collected as soon as possible and still be ripe. It seems that wildlife is very adept at determining ripeness and palability and unfortunately they seem to like fruit a day or two less ripe than the collector deems necessary for acceptable seed collecting. Even if they only eat the fruit and not the seeds the seeds are usually lost.

In species with pulpy fruits, ripeness can be determined by size, taste, odor, and color. The fruits of most species are initially green, dry, sour, better or astringent developing softness, sweetness, moistness, and color as they ripen. Color is the most reliable and safest indice for the collector. The ripe color normally develops from the stem end of the fruit toward the blossom end. Once the color change has reached the blossom end and the other physical criteria (odor, taste, etc.) are present, the fruit and its seeds can be assumed to be ripe. Once the fruit of dogwood, mulberry, plums, crabapples, and persimmons, etc. are ripe they are readily consumed by wildlife and the seed collector must

act quickly to be successful. The entire fruit crop can be consumed in a matter of a day or two. The collector must be observant and ready to act once ripeness has been reached.

There are a few situations where the initial fruit color is not green. Red maple, for example, has fruits that start out as a vivid red and fade to a pale reddish straw color when ripe and ready for dispersal by the wind. It is important for the collector to know the species he plans to collect if he is not to be disappointed. The Woody Plant Seed Manual referenced at the end of the article has a very good section on determining seed ripeness by many indices for many species. I would recommend that anyone collecting woody plant seeds read it.

Determining when seeds are ripe enough for collection can be perplexing to the novice collector. Ideally the seeds should be allowed to fully ripen on the plant. Unfortunately, many plants disperse their seeds as soon as they are ripe and would be lost to the collector if he is not very watchful. Indications of ripeness include size, color, taste, odor, fullness, hardness of seed coat, and attractiveness to birds and animals. However, these exterior parameters do not necessarily reveal what is happening inside the seed. Once it is suspected that the fruit is ripe a few should be collected and a cut test made to further confirm that the seeds are ripe. A cut test will reveal the degree of ripeness better than exterior criteria.

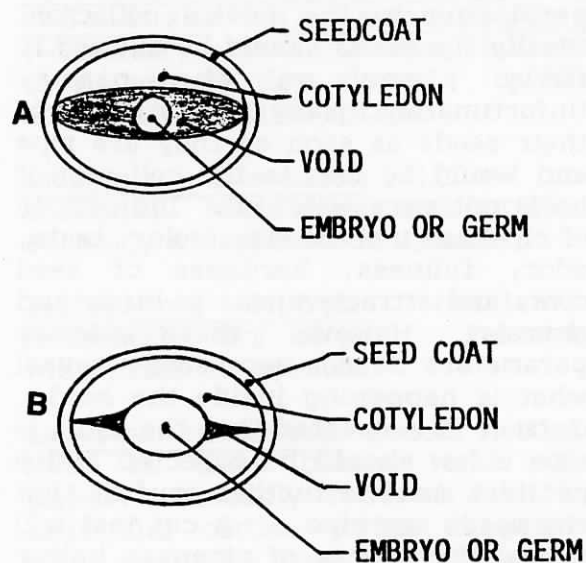
The cut test is a very simple procedure that entails cutting through several sample seeds with a sharp instrument and observing the interior. All that is needed is a razor blade or exacto knife and with very small seeds a hand lens to see the necessary details.

When observing the seed interior check for milkiness, fullness, of the embryo or germ, and firmness of the

tissue. The germ grows into a void between the cotyledons (dicotyledon plants) and when the seed is mature the space is almost completely filled (see Figures 1). The existence of a large void between the cotyledons indicates an immature seed. The larger the void the more immature the seed. After the void is filled by the enlarging cotyledons and germ the tissues turn from watery or milky to quite firm indicating a ripe seed. Probe the tissue with a needle to determine firmness.

The cut test can also be made on entire pods, cones, flower heads, etc. The same parameters should be checked as indicated above but be aware that many seeds will be cross sectioned.

Figure 1. Cross sections of immature (A) and mature (B) dicot seeds.



References

1. Seeds of Woody Plants In The United States Forest Service, U.S. Department of Agriculture, Agriculture Handbook No. 450, U.S. Government Printing Office, Washington, D.C.

Students Create Roadside Wildflower Laboratory

by Brad Goodrich, Sassafras, KY

As the nation becomes more aware of its environmental problems, many citizens are recognizing that small local projects can lead the way to improving existing conditions. Knott County is a small, mountainous rural area in the coal fields of southeastern Kentucky. For several years citizens and county leaders have been pursuing various means of improving the areas environment and quality of life. Efforts so far have included the successful implementation of a county-wide mandatory garbage collection system. In addition, local sportsmen and conservationists have taken an active role in assuring the success of efforts to reintroduce whitetail deer and wild turkey to the area. As a result of this unprecedented support, the populations of these two species are now thriving where none existed just a few years ago.

Realizing that the community's sincere interest in conservation and environmental programs encouraged the local tourism committee to initiate several county beautification projects. The first project, establishing roadside wildflower plantings, was recently completed with plots located along two major roadways. Although the county promotes a successful litter clean-up event each year, this group felt that something was needed to provide visitors with more variety, color and interest. County planners looked for areas that were aesthetically appealing, easily viewed from the road, and accessible so that visitors would be encouraged to stop for a closer look.

Its one thing to say "We'd like to do something", and another thing to actually do it. This project was the

result of cooperation from several governmental agencies and especially hard work of several volunteers. The two sites are located near Carr Fork Lake along state highways 15 and 160. The local office of The Kentucky Department of Transportation granted permission for use of the right-of-way at these sites, and The Knott County Fiscal Court provided funds to purchase seed and other supplies. Students from Alice Lloyd College provided a tractor and the labor to prepare the seed bed.

On a cool day in early December, 52 enthusiastic 5th graders from Carr Creek Elementary School, literally got a "hands on" learning experience. They listened eagerly as Corps of Engineers personnel from Carr Fork Lake explained what they would be doing. Asking for volunteers to help with specific tasks, such as mixing the seeds with damp sand instantly brought a show of hands accompanied by a chorus of "Meeee's" from students grateful for an afternoon outside the class room. A representative from the County Extension Office provided assistance with organizing the event and took pictures for the local paper. A retired carpenter, Mr. Delbert "Deb" Blair donated several blue bird boxes for the students to place around the edges of the wildflower plots. Mr. Blair, when he's not fishing, is also the chairman of The Carr Fork Clean-Up Committee. This group has been promoting a very successful annual clean-up event at Carr Fork Lake which has spilled over into other communities.

Both of the wildflower sites are in open sunny locations with fairly well-drained soils. Using this information Marc and Sherri Evans of **Shooting Star Nursery** were able to recommend a seed mixture that includes native annuals and perennials. The group is anxious for a good show of color the first year, so some non-native annuals were

included to provide brilliant color. These non-native annuals were chosen on their ability to grow and bloom here but would not be likely to spread or compete with our native species of wildflowers. Two species of native azaleas were donated to the project by Danny Barrett of **Barrett's Native Plants**. The flame azalea and the pinkster flower were planted around the edges to provide a brilliant spring display.

What has become perhaps the first roadside wildflower planting sponsored by a county government in Kentucky was the result of a lot of interest and cooperation from several sources. The students from Brenda Center's 5th grade classes who wanted a conservation project to work on got more than they bargained for. They not only got an afternoon outdoors, but they now have an outdoor laboratory--a place they can return to for wildflower identification and to learn what kinds of birds, insects and other wildlife will benefit from their work. Perhaps the greatest benefit will be reaped by the casual passerby who will find a little more beauty along these winding mountain roads. Like the flowers it is hoped that the idea will "take hold" in other places.

News and Announcements

KNPS T-Shirts and Caps for Sale

There are still some Wildflower Weekend T-shirts and quite a number of KNPS caps still available for our members. Both T-shirts and caps are \$8, including postage. The T-shirts are a light blue, all cotton, Haynes Beefy-T's type, with a dark-blue spiderwort on the front. The caps are green with the KNPS logo (a ladies-slipper) embroidered on the front. Only large and X-large T-shirts remain; the caps are the adjustable type--one size fits all. Please indicate on the membership renewal/order form what would you like to purchase.

The Kentucky Native Plant Society
Department of Biological Sciences
Eastern Kentucky University
Richmond, KY 40475

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The Kentucky Native Plant Society, Inc. was founded in 1986 as a botanical organization for all persons interested in the native flora and vegetation of Kentucky. The goals of KNPS are to serve as a medium of information exchange, to promote native plant conservation, public education in botany, and botanical research in Kentucky. Annual dues of \$5.00 (Family \$7.00) may be sent to KNPS, c/o Tom Bloom, 900 Keenon Rd., Harrodsburg, KY 40330.

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