Kentucky Native Plant Society *NEWSLETTER*

Volume 5. Number 3.

1990 FALL FIELD TRIPS AND ACTIVITIES

1 September (Saturday), 10 AM to 3 PM, EDT. Workshop on Moss Identification at Morehead State University. Meet at Lappin Hall, Room 301, on the campus of Morehea State University. Alan Risk will direct a 4 hour workshop on the morphology and identifying features of mosses, in preparation for the **moss hike on 15 September in Mercer County.** Specimens and microscopes will be provided, just bring an inquiring mind. Space is limited, so if you want to attend this workshop please call (before 7 pm--606-783-2322, after 7 pm--606-784-8896), and reserve your place.

15 September (Saturday), 9 AM, EDT. Moss and Wildflower Hike at Shawnee Run, Mercer County. Meet at parking lot of Ft. Harrods State Park, across from north wall of fort. Led by Alan Risk. There will be some moderate to strenuous hiking down hillsides and cross country to view the picturesque limestone cliffs and cascading stream. The emphasis will be on moss identification. Be sure to bring a 10X handlens, as well as a lunch.

5-7 October (Friday - Sunday). Symposium on the Use of Native Plants in Gardening and Landscaping, at Maywoods Environmental and Educational Laboratory, Garrard County.

This event is limited to 50 participants (25 people have already registered). Please send in the enclosed form soon if you want to attend!

SCHEDULE OF EVENTS

FRIDAY, OCT 5

4:00 pm. Tour of Maywoods facilities and grounds. Leader--Homer Strong.

6:00 pm. Dinner at Maywoods Lodge.

7:00 pm. KNPS Executive Board Meeting. Open to all KNPS members. Discussion and planning session on future activities of KNPS.

SATURDAY, OCT 6

7:00 am. Breakfast at Maywoods Lodge.

8:30 am. Paper Presentations--Introduction by Ron Jones

8:45 am. Taxonomy and propagation of native azaleas. Danny Barrett and Ron Jones.

9:15 am. Techniques for preserving hardwood germplasm through grafting, with reference to American chestnut. John Brittain.

9:45 am. Landscaping and gardening to attract wildlife. Charles Elliott.
10:00 am. Break.

10:30 am. Creating and managing a wildflower meadow. Mark Evans.
11:00 am. Landscaping with native plants and seed mixes. Sherri Evans.
11:30 am. Uses of native plants in wetland creation and restoration. Hal Bryan

12:00 pm. Lunch at Maywoods

1:00 pm. Restore the natural Bluegrass Landscape. Julian Campbell.
1:15 pm. Woody species in nature and in cultivation. Bob McNeil.
1:30 pm. Dormancy types and seeds of wild plants. Carol Baskin.
2:15 pm. Forest soils as sources of native plants species. Gary Wade.
2:45 pm. The value of planting native species along roadsides. Ron Jones.

3:00 pm. Open Discussion

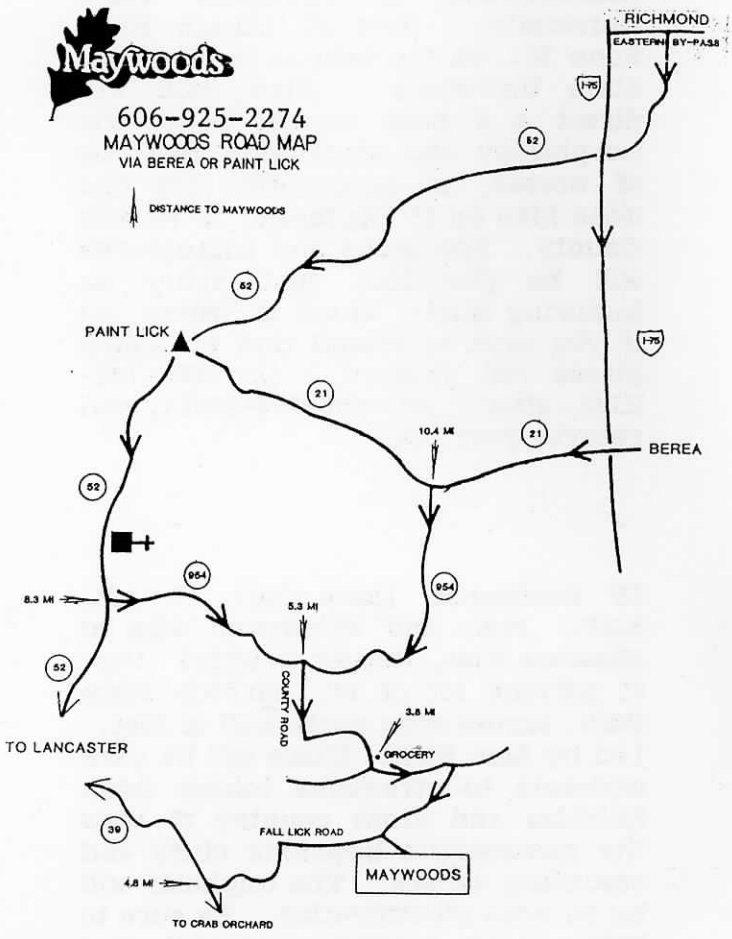
3:45 pm Break

4:00 pm Concurrent Hikes.
Hike 1. Walk with a Landscape Horticulturist. Emphasizing identification of native species useful in landscaping and gardening. Bob McNeil.

Hike 2. Walk with an Ecologist. Maywoods trails and sites with planted prairie species. Bill Martin
6:00 pm. Dinner at Maywoods Lodge.

7:30 pm. Evening talk: Maywoods: An Experimental Natural Area. Speaker--Bill Martin
8:00 pm. Annual Fall meeting of KNPS

SUNDAY, OCT 7.
7:00 am. Breakfast at Maywoods Lodge.
8:15 am. Concurrent Hikes.
Hike 1. Walk with a Botanist. Emphasizi ID of native species useful in landscaping and gardening. Joe Isbell.
Hike 2. Walk with an Ecologist. Maywoods trails and sites with prairie plantings. Bill Martin.



Further Ideas for KNPS Projects

by Julian Campbell (President)

In the last newsletter, I outlined my general interests as the new president of KNPS. We are currently an organization that revolves mostly around the newsletter and field trips. There is much that we can do to increase the usefulness of the newsletter and field trips, and possibly that is really what we should still focus on during the next few years. However, it is important to think about what the society can apply itself to in a broader arena. These applications can be organized under three general categories: education, conservation and politics.

I am inclined to leave major conservation projects on the back-burner until we can affiliate with a botanical garden, or even start one ourselves. There are many small things we can do currently to support the Kentucky State Nature Preserves Commission and The Nature Conservancy, especially by finding out about new sites of interest, facilitating landowner contacts, and offering help with any management activities. However, our own big conservation initiative will best be left until we have a place to propagate plants, especially rare species, for show or sale.

I, myself, am also inclined to stay out of politics in the near future, though I have nothing against the society being involved in lobbying and letter writing of various kinds, and I will be glad to help draft important letters. It's just that others in Frankfort have more familiarity with such things. I am all for creating a committee, adding extra KNPS board members, or whatever, to promote these matters. Although I think that to attempt some legislated protection for rare Kentucky plants would be too ambitious at present, there is one particular political area that we should urgently pursue--wildflower conservation and planting on roadsides.

Some small planting experiments have begun, but an obvious project for State Government that has been virtually ignored so far is to use the best existing wildflower roadsides in the State: identify them, study them, collect seeds from them, maintain them and encourage people to appreciate them. We already have a lot of information about where some good roadsides are. In several cases, extremely rare species are found only on roadsides; these may often be relics from presettlement openings maintained by fire or grazing. I urge any of you who have the time for pursuing this theme with the Department of Transportation to let me know. We need a few good people to spearhead this, and I, myself, just don't have the time. Just to produce a list and map of the important known roadside sites in the State would be an important first step. Then, in addition to lobbying in Frankfort for further surveys and protection, we could use someone in each county to monitor the sites and write letters trying to influence maintenance at the local level.

For the rest of this presidential address, I want to provide more details of what I would like to promote most actively as a KNPS project. This project could initially be titled "Educational Materials for Kentucky Botany". Much of the effort in our newsletter articles and slide-shows at meetings could be planned around this central goal: to produce, within a few years (5-10?), a set of texts, photographs and videotapes that would bridge the vast informational gap that exists between professional botanists and those members of the general public that have some interest in the diversity of plant life in this state.

At first, the audience I have in mind is the potential membership of KNPS, and also those in transition

from high school to college (when minds are often most receptive to new interests in life). Subsequently, we could modify the material to fit into a regular grade school curriculum, with the help of teachers. Also, I seriously believe that trying to explain botany to non-professionals can increase scientific insights; the more open-minded, "lateral" thinking that is often required to relate technical matters to daily life can provoke new questions and logical connections. With enough originality, our KNPS efforts could even be extended to provide a broader regional treatment, and even some theoretical advance. Kentucky, with 3000 plant species, is after all, at the center of the Eastern Deciduous Forest Region of North America. We have a great, yet sadly neglected, opportunity to kindle a down-to-earth understanding of the most important themes in the natural history of this region.

The essential breakdown of subject matter for this project could be as follows. Ultimately these could be chapter headings for a book or videotape series, but in the meantime, we can draft and edit them for a planned (and somewhat solicited) series of newsletter articles that would each become linked with a slide collection.

(1) Introduction: Why should we care about Kentucky plants, other than those with economic importance? What is special about Kentucky's flora and vegetation (within the context of Eastern North America)? What is the history and present state of Kentucky botany?

(2) The Natural Regions of Kentucky: six separate texts for Mississippian Embayment, Shawnee Hills, Appalachian Plateau, Mississippian Plateau, The Knobs Escarpment and Bluegrass Region. Founded on geological and other basic geographic features, these sections would introduce people to the important ecological factors and biogeographic features of each region, referring to major vegetation types and obvious examples of individual plant species. They would include notes on the best natural areas remaining in each region and some important rare species. To some extent, such treatments have already been initiated in the "Flora and Vegetation" booklet printed by KNPS already, but we can add much more detail, depth, thoroughness and illustration without becoming too technical and academic.

(3) An Interpretation of the Kentucky Flora, comprising general notes on taxonomy and ecology (NOT with identification keys to all species) of the 20 or so major taxonomic groups of vascular plants: FERNS (with allies) and GYMNOSPERMS; DICOTELEDONS, i.e., magnolia (wild-ginger, laurel) and buttercup (poppy) types; camellia (holly, St. John's Wort), ericad (heath) and knotweed types; pink (chickweed) and goosefoot types; spindle, wood-sorrel and flax types; willow, violet and mustard types; basswood, elm and spurge types; maple, walnut and pea types; witch-hazel and oak types; rose and saxifrage types; evening-primrose and loosestrife types; ash, bedstraw, foxglove and mint types; waterleaf (borage), phlox and lobelia types; dogwood, umbellifer and honeysuckle types; composite (aster and lettuce) types; MONOCOTELEDONS, i.e., lily, iris and orchid types; swamp-potato and pondweed types; aroid and duckweed types; and graminoid (cattail, rush, sedge and grass) types.

This listing is a popularized version of modern taxonomy (following Robert F. Thorne especially), based on evolutionary theories, with special emphasis on chemical similarities between species. Its application to regional floras remains to be tested, and an attempt to implement it in a general description of the Kentucky flora, with an exploration of ecological,

chemical and economic relationships, would no doubt lead to great insights. I am not suggesting a rigorous academic exercise that would involve only professional botanists, but a series of popular, hypothetical, and intuitive essays--attempts, indeed, to explore how these natural groups of plants can be perceived and used by the educable public. Let's see how far we can gain a grass-roots feel for these groups, referring whenever possible to easily visible morphological characters (vegetative in addition to details of flower structure), chemical characters (taste, nutrition, medicine and related uses), and ecological characters (biogeographic, edaphic--to do with soil preferences, biotic--especially animal interactions, and successional).

(4) Miscellaneous additional chapters might summarize general themes of the project and applications in conservation, education and economic uses for the whole native flora.

Hints of the kind of language that could be used in popularized versions of such texts may be found in newsletter articles already printed, especially by Jim Conrad and John Thieret et al. Based on responses to my outlined plan, I may try, with Ron Jones (our editor) to solicit individuals for drafting individual texts as newsletter articles, spread over the next few years. I may soon attempt a first draft for the "Natural Regions" outline or the "graminoid" group of plants, as models for others to criticize, improve or follow. If too little interest is expressed, I will conclude that Kentucky is not yet ready for a broad-based advance in its botanical consciousness, and I will content myself with the society just enjoying and exploring sites, and communicating ideas on a more ad hoc basis. PLEASE LET ME HAVE YOUR IDEAS ABOUT THIS PROJECT NOW!

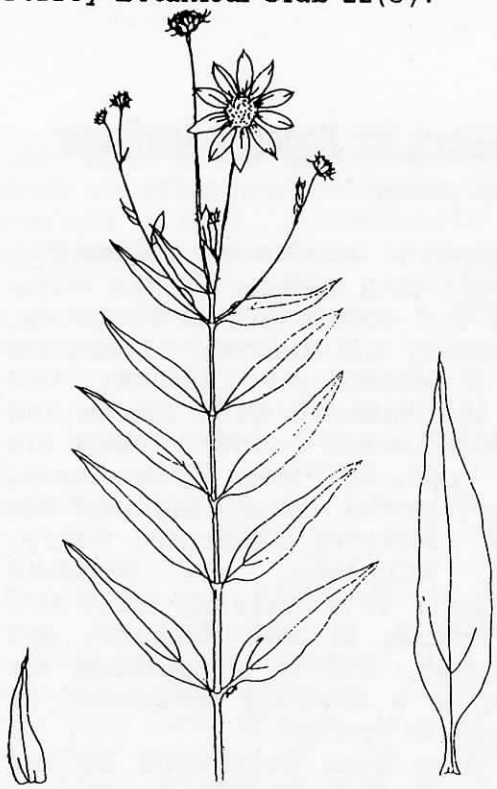
The Search for Eggert's Sunflower

by Ron Jones

Eggert's sunflower (Helianthus eggertii) is a member of the Aster family that occurs only in Kentucky, Tennessee, and Alabama. There are only 2 records for Kentucky, one from the Mammoth Cave region and one from Lincoln County. There are more records from Tennesssee, mostly from the Western Highland Rim region (Dickson, Lawrence, Maury, Lewis, Williamson, and Davidson Counties). It is currently listed as a rare species in both Kentucky and Tennessee, and is a candidate for listing as a federally threatened or endangered species.

I have been contracted by the U.S. Fish and Wildlife Service to conduct a status survey on this species. One of the main objectives of the study is to locate as many new sites as possible in order to evaluate its true rareness. I would like the help of KNPS members in locating populations of this sunflower. It is fairly easily recognized: a tall (sometimes over 6 ft) perennial that has a bluish coloration of leaves and stems, and is waxy-whitish on the leaves and stem; the leaves are opposite, nearly sessile (unstalked), ovate-lanceolate, 10-20 cm long, smooth and entire to few-toothed; the heads are surrounded by linear bracts, and measured across the yellow rays the heads are about about 6-8 cm broad (Figure 1). The plants send out elongate rhizomes and often form colonies. It should be looked for in south-central Kentucky (Todd to Edmonson to Lincoln to Wayne Counties)and in the Highland Rim regions of Tennessee. It is also known to occur on the Cumberland Plateau in Tennessee, so it could be in the eastern Kentucky coalfields. The plants begin flowering in early August and continue into late September.

Figure 1. Illustration of Eggert's Sunflower, from Memoirs of the Torrey Botanical Club 22(3).



The best areas to search are oak-hickory woodlands on level to rolling terrain over limestone. Common associates include white oak, southern red oak, blackgum, persimmon, dogwood, and sumac. Plants can be found in fence rows, field edges, open areas within woodlands, etc. It may grow with other sunflowers, such as the hairy-stemmed sunflower (H. hirsutus) and the small-headed sunflower (H. microcephalus)

If you think that you have found a population, do not dig up any plants, just clip off a flowering branch, place it in a baggie with some moist newspaper, and mail it to me along with details on how to reach the locality. Send to: Ron Jones, Dept. Biology, EKU, Richmond, Ky 40475. This information will be very helpful in this status survey of Eggert's Sunflower, and may aid in preventing the extinction of the species.

PHOTOGRAPHING KENTUCKY'S FLORA

by Marty Bray, Nicholasville.

Two years ago I took my 35mm camera out of the closet cobwebs and began seriously photographing Kentucky's plants and animals. For obvious reasons, it has been much easier to document the plants (trees don't run away).

However, the subject is not without its problems and frustrations. Considerations like composition, color, and depth-of-field can make the difference between an uninspired snapshot and a stunning enlargement....or even a published photograph. Through much reading and trial-and-error in the field, I have learned a few techniques that improved my photographs 100 percent--and may help other KNPS photographers as well. I realize many ot these "tricks" may be common knowledge but, hopefully, one or two others will be new.

Sharpness. After film and camera, a tripod is probably the most important piece of equipment a photographer can own. Even the best hand-held photos will be somewhat blurry after enlarging. Indeed, the comparative sharpness between a tripod-braced picture and one hand-held is surprising. The difference is well worth the tripod's extra weight and bulk on a hike. I am comfortable just hand carrying my tripod, but pack straps and carrying cases are available. For additional protection against camera movement, consider using a cable release to trip the shutter.

Bracketing. Picture bracketing is used to increase the chances of a successfully-exposed photograph. After photographing, say, a trillium at the camera-recommended f-stop, take two more pictures using one f-stop greater and lesser than the

the trillium at f11, take another exposure at f8, and a third at f16. Then if the initial shot turns out to be less than desirable, the second or third bracket will most likely be correct.

Composition. As a general guideline (though not always), placing the subject smack in the center of the picture is boring and redundant. It is possible to correctly document a plant and still have an aesthetically-pleasing image. This is where the rule of thirds comes in. When composing a photograph, mentally divide the frame by threes. Then position the subject or subjects in the boxes or where the lines intersect. A bit of experimenting with combinations and placements will quickly lead to more pleasing compositions.

Depth-of-Field. The most complicated and time-consuming photographic concept for me is the camera's depth-of-field, or, how much and what part of the subject can, and should, I focus on. Ignoring depth-of-field will probably give me an unacceptable photograph. Basically, depth-of-field is controlled by various combinations of f-stop (aperture opening) and shutter speed. The two main points I keep in mind are:

> In order to get as much of the subject as possible in sharp focus, use a small aperture(i.e. f11, 16, 22, 32).
>
> In order to blur what would otherwise be a distracting background, use a wider aperture (i.e. f2, 2.8,4).

Naturally, a smaller aperture setting will require a slower shutter speed (to let more light through to the film), and a larger aperture setting will need a faster shutter speed (to cut down on the amount of light). Although these two points may seem easy enough, wind, sunlight or clouds, and distance between camera and subject will complicate the formula. A little experimenting and compromising will enable the photographer to adjust and combine the f-stop and shutter speed to meet any given field circumstance.

Color Saturation. Finally, a trick that has improved my photographs more than any other is to reset the film ASA to a setting slightly higher than the one recommended by the manufacturer. So, instead of setting my Kodachrome 64 film at ASA 64, I'll adjust it to the next higher notch--about ASA 90. This will underexpose the film a bit, but wonderfully increase the color saturation, giving the photographs greener greens, deeper reds, and glowing yellows. Note: I'm familiar only with the changes that occur in Kodachrome slide film; print film and film by other manufacturers may need different adjustments. Again, play with a test roll or two until you find the ASA setting that gives the best results.

It may be apparent by now that these suggestions will demand, for a while anyway, a lot of additional time and effort on the part of the photographer. I admit I've spent as much as an hour setting up and photographing a single lobelia. But you will soon find that the rules can be mastered, and your results will get better, with each new venture into Kentucky's wilds.

A "Stinging Rain" could be affecting our forests!

by Richard G. Guetig, Atherton High School, Louisville.

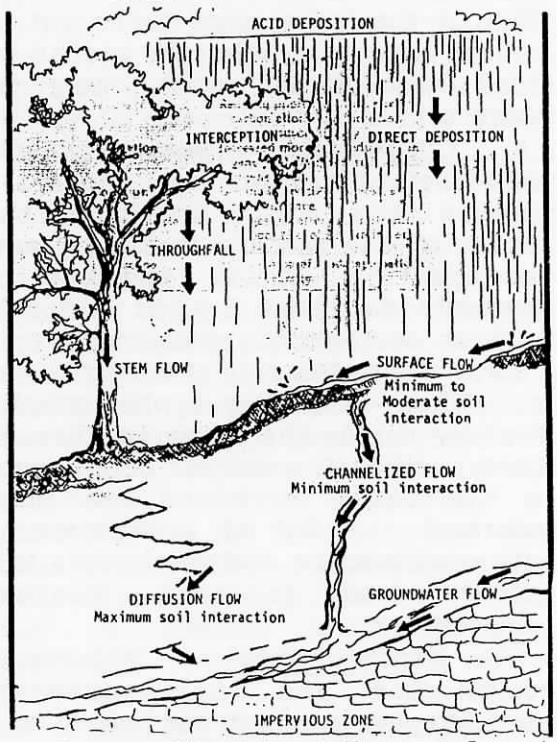
".....A sickening fog of smoke from British coal drops in a grimy pool upon the land, befouls the vernal green and chokes to death each lovely shoot....."
-Norwegian playwrite, Ibsen, 1866.

Over the years, several publications have documented the affects of acid rain on aquatic resources (lakes and streams), while others have implicated this "stinging" precipitation for the decline of forest trees in the northeastern United States, Great Smoky Mountains, and forests of West Germany. The term "acid rain" is a catch all phrase for acid deposition, which may be of a wet form (rain, snow, dew, and fog) or a dry form (dust and wind blown particles). The term was coined in 1872 by Robert Angus Smith, who believed it stemmed from the Industrial Revolution.

Acid rain forms when sulfur dioxide and nitrogen oxides are emitted into the atmosphere from the burning of fossil fuels (power plants, automobiles, etc.). Once these pollutants come in contact with moisture in the clouds (or on the ground), oxidation reactions occur causing sulfur dioxide to form sulfates (such as sulfuric acid-H_2SO_4) and nitrogen oxides to produce nitrates (including nitric acid-HNO_3)). Sulfuric and nitric acids are considered "secondary pollutants". This acid precipitation may be transported hundreds to even thousands of miles by meteorological conditions before it falls to the earth. This will eventually cause surface water to become acidic and soils and vegetation to be leached of important nutrients.

Determining the effects of acid rain on forest ecosystems is a difficult task. There are so many pollutants besides acid rain that causes damage to our trees, it is hard to single out one source. The leading culprit that is extremely toxic to plants and humans is ozone. Like acid rain, ozone is a secondary air pollutant. Before we look at the damage acid rain may inflict on forest ecosystems, we must understand how it effects trees both directly and indirectly.

Figure 1. Deposition Routes of Acid Rain



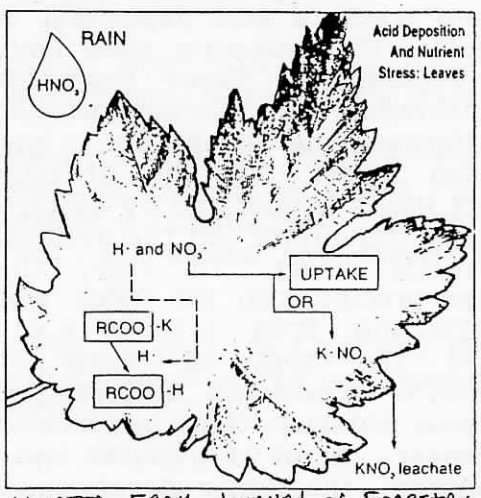
When acid rain falls on forest canopies, it washes over three tiers before it reaches the soil. It is intercepted by the canopy, occurs as throughfall, and also as stemflow (Fig. 1). Acid rain causes physiological damage along each route before the soil receives it. The damage begins at the cellular level, effecting the cuticle, guard cell, stoma, and cytoplasmic components of the plant. Unfortunately, we may not see visible symptoms of the damage for years. By this time, it may be too late for recovery of the species or the ecosystem.

Nutrients important for healthy growth, such as potassium, sugars, proteins, and amino acids may be leached from the vegetation directly by nitric acid. The nitrate ions may combine with potassium and remove it from the leaf (as KNO_3) (Fig. 2). Visible symptoms of damage will eventually surface, taking the form of leaf yellowing in both deciduous (around leaf edges) and coniferous (stems and needles) trees, deformed

shoots, deterioration of root systems, a progressive thinning of tree crowns, and inevitably tree death.

Indirectly, nutrients are leached from forest soils by sulfuric acid (Fig. 3). Hydrogen ions will displace nutrient cations, while sulfate ions (if not taken up by soil

Figure 2. Depletion of vegetation by nitric acid.



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microorganisms or absorbed to iron and aluminum oxides) combine with calcium, magnesium, sodium or potassium and remove the nutrient from the soil (i.e. CaSO4). Toxic ions, such as aluminum, may also become mobilized by acid rain and cause adverse affects on the trees ability to take up nutrients. The tree may suffer from a so-called "physiological drought", causing the water transportation system of the tree to be hampered, leading to brittle stems and thinning of the canopy.

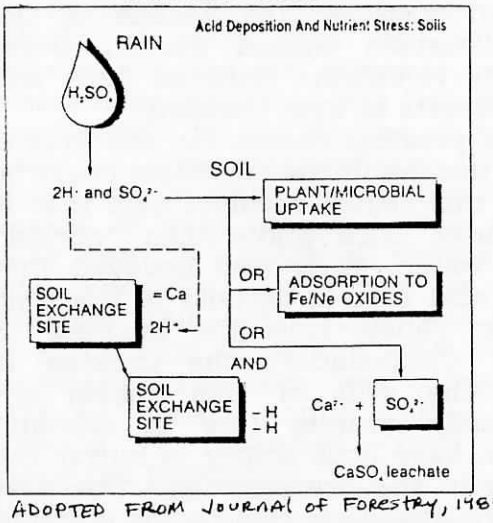
Acid rain may not only affect individual trees, but it may eventually cause irreversible damage to our forest ecosystems. Currently, our knowledge of the effects of acid rain on forest ecosystems is very poor. Ecosystems experience a variety of natural and man-made disturbances (wildfires, windstorms, pollution, etc.) that make it hard to single out the so-called "culprit" of the damage. Long term monitoring programs need to be implimented and carried out for several years in order for us to get a good understanding of how acid rain causes damage at the ecosystem level. Several studies have shown massive tree decline in the Northeastern United States, Great Smoky Mountains National Park and the forests of West Germany.

A possible reason for the drastic tree decline in the northeast could be that this region receives rain that is 40 times more acidic than "normal" rain water. It is also believed that this acid rain is derived in the Ohio River Valley from the burning of coal. Compounding the problem is that the soils of this region are primarily granite (low in calcium) which have little ability to buffer the acids in the precipitation. The most severe damage of this region is found in forests occupying high elevations in New York, Vermont, and New Hampshire. The trees that are primarily affected include red spruce, balsam fir, and white birch.

In the Great Smoky Mountains and other southern Appalachian mountain ranges, acid rain is believed to be the reason for high elevation streams and forests showing signs of damage and species population decline. The forest soils of this mountain range tend to be thin and adversely affected by acid precipitation because of it's poor buffering ability. Mountain streams have been recorded as having pH levels of about 4.0, which may cause organisms to have difficulty living in this type of environment. The red spruce has suffered the most damage at high elevations throughout the Appalachians (similar to West Germany) while damage to the eastern white pine has been scattered over the Appalachian and Great Smoky Mountains.

The most dramatic effects of acid deposition on forest ecosystems have

Figure 3. Depletion of soils by sulfuric acid.



ADOPTED FROM JOURNAL of FORESTRY, 1985.

been observed in forests of West Germany. In 1983, it was estimated that 34% of the country's forest land was being damaged by air pollutants. This included about half of the "Black Forest". The Black Forest contains four of the nations most important tree species; Norway spruce, White fir, Scotch pine, and Beech. Of those four Norway spruce occupies the largest forest area in West Germany and consequently enough, suffered the most damage. Eah species was showing signs of deterioration, which raised major concerns for the economy of West Germany. This massive decline has been given the name "Waldsterben" which literally means forest death.

If acid rain is the main cause of forest decline in NE U.S. and West Germany, could this pollutant damage Kentucky's forest resources? In 1977, a forest inventory and analysis survey of Kentucky revealed that 48% of the state is covered with forest. Forty-seven percent of this is classified as commercial forests. Our forest resources include timber, provide habitat for wildlife, jobs in lumber and related fields, provides outdoor recreation, and prevents erosion. So acid deposition could have a drastic economic affect on the state.

Kentucky's forests are primarily deciduous, located on soils which provide an excellent buffering ability. There are approximately 7 major forest types in the state, with the Oak-Hickory type (covering 7.5 million acres) being the most common. To keep track of acid deposition in Kentucky, 13 monitoring sites have been established. Three important sites include; Lilly Cornett Woods, Land Between the Lakes (LBL), and Robinson Forest. The site at Lilly Cornett Woods is operated by Eastern Kentucky University and the Division of Natural Areas. In 1986, the average precipitation pH value was 4.4 (ranging from 3.7 to 6.6). Because the soils of much of Kentucky's forests are buffered by calcareous material, there appears to be a lesser threat of nutrient loss. Furthermore, the higher elevations in the state are not subjected to "acid clouds and fog" that the southern Appalachians experience. Acid rain has therefore had less of an impact on Kentucky's forests than in other more susceptible regions, but does pose a potential threat if the problem is not alleviated by controlling the sources of the acid.

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Field Trip Reports.

May 26, Roaring Paunch Creek, with Cyperipedium kentuckiense. With the threat of rain, only about eight people showed up. We did see the orchid, but most plants had been mashed down and muddied by recent floods. Doug Stephens could not relocate the few plants he had seen in a previous year upstream of the Route 742 bridge; several miles of the creek upstream of the bridge remain unexplored for plants. Julian Campbell.

June 9, Sturgeon Creek Field Trip. Nineteen peole attended this field trip to see the Kentucky Lady Slipper, the Smooth and Cumberland Azalea, and a number of summer wildflowers, including ginseng and goldenseal. Although the walk was strenuous and rain caused a premature ending, everyone had an enjoyable time. Danny Barrett.

July 21, Cumberland Lake boat-trip from Burnside. Again, the threat of rain kept us down to eight people, in two fishing boats. Although the basic morning trip to the Pachistima (cliff-green, mountain-lover, rat-stripper) site was a success, except for the unruly wakes of the Ohio Navy (or boating "buckeyes"), the day was plagued with problems. I was half-an-hour late due to a wreck on US 27; people who said they would bring boats did not show up; Burnside Marina boats for rent were almost all gone by 10 a.m.; one of our boats broke its starting spring when we turned back after lunch, and we had to be towed 10 miles back to Burnside; late for the planned downstream exploration in the afternoon, rain at last came and the three of us who had braved onward huddled under a small overhanging cliff while the boat took on half-an-inch; then Charlie Chandler slipped and fell dangerously but luckily not hurt badly, and, finally in the boat again after the worst rain, a gust of rainy wind blew off his favorite K-Mart hat, which sank. But after all, Joyce Porter's Guiness Stout rewarmed our dampened selves back at Burnside; no, we took no alcohol on the boats, but the marina policeman was convined that my recycled apple-juice water-bottle was spiked. I feel confident that we can improve our luck, with more planning, and will offer further trips on the Cumberland and Kentucky River next year for the hardy sailor types amongst us. Julian Campbell.

PASSIONVINE SEEDS NEEDED

A plant breeder in Florida is interested in obtaining seeds of the passionvine (maypop, apricot vine)--Passiflora incarnata. He will reimburse the postage charges. Send to: F. Moser, 2121 Hamilton Ave., Alva, FL 33920.

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

Contents

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.

The KNPS *NEWSLETTER* is published quarterly (Feb., May, Aug., Nov.). Please notify us four weeks in advance of any changes of address. Back issues of the *NEWSLETTER* are available for $1.00 each. Send articles and correspondence to: Editor, KNPS *NEWSLETTER*, Department of Biological Sciences, Eastern Kentucky University, Richmond, KY 40475.