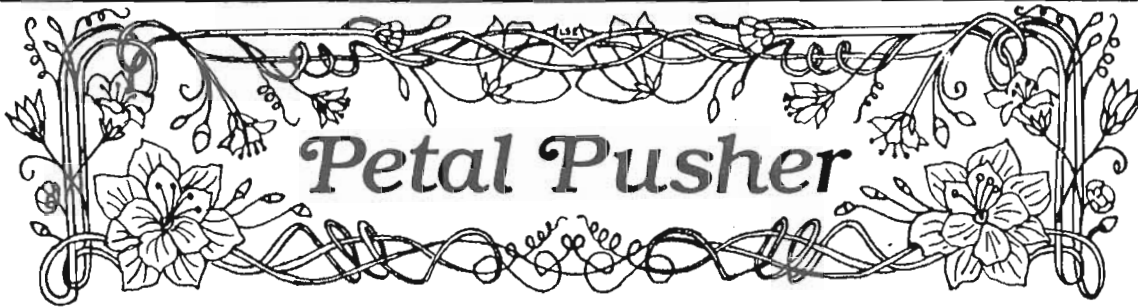


Missouri Native Plant Society



Volume I Number 5 1986

FALL SCHEDULE

Oct. 4 - Saturday - The Conservation Dept. will hold a "Day on the River" at Highway 8 and the Meremac River at the Woodson K. Woods Wildlife Area. The event features guided river walks as well as tailgate talks on the birds, mammals, invertebrates, fish, amphibians and reptiles on the river. The talks run continuously from 8:00am to 4:00pm. It takes about 3 hours to see everything. This is an experience you and your family will not want to miss.

Oct. 7 - Tuesday - 7:30 PM - JCMONPS Monthly meeting at the Thomas Jefferson Library. Conservation Dept. Botanist, Sherry Morgan will talk about her work in monitoring rare and endangered plants.

Oct. 11 - Saturday - St. Louis Seminar First fall study session. Contact Katherine Chambers, 314-863-9346.

Oct. 14 - Tuesday - 6:30 PM - KC Meeting at Ernie Miller Nature Park. On highway 7 west of Olathe, Ks. Contact Patrice Dunn for directions.

Oct. 23 - Thursday - St. Louis Monthly meeting - to be announced

Nov. 1 - Saturday - St. Louis Seminar Contact Katherine Chambers. Family: Juglandaceae

Nov. 4 - Tuesday - 7:30 PM - JCMONPS Monthly meeting at the Thomas Jefferson Library. Merv Wallace to discuss wildflower propagation.

Nov. 11 - 6:30 PM - KC Monthly meeting at Westport Library. A slide show will be presented. Bring your slides and photos for viewing and identification.

Nov. 27 - Thursday - St. Louis No meeting due to Thanksgiving.

Dec. 2 - Tuesday - 7:30 PM - JCMONPS Monthly meeting. Jim H. Wilson, Endangered species coordinator for the Conservation Dept. will discuss Ginseng: the plant, the law, and other interesting anecdotes and facts.

Dec. 6 - 9:00 AM - 4:00 PM The December meeting will be in Jefferson City. Contact Ginny Wallace for the location. This will be a business meeting only (no field trip).

The Missouri Botanical Garden is honoring Art Christ with a luncheon celebrating his 80th birthday. We are all invited. It will be November 13th at noon in the Beaumont room of the Ridgway Center. If you would like to come call Nell Menke (314-962-1000) for details.

PONDBERRY LISTED
by Ginny Wallace

On September 2, Pondberry (*Lindera melissifolia*) was officially listed as an endangered species under the authority of the 1973 Endangered Species Act. Pondberry is a small shrub related to spice bush that inhabits bottomland hardwood stands, poorly drained depressions and margins of limestone sinks. Reported originally from nine southeastern states, only 19 populations are known to remain in Arkansas, Georgia, Mississippi, Missouri, North Carolina and South Carolina. It is endangered by land clearing operations, timber harvesting, and drainage activities.

The Missouri population was discovered in Ripley Co. by botanist Julian Steyermark in 1948. After Steyermark left the United States to work in Venezuela, botanists were unable to relocate the population until one rainy night in the Spring of 1979. On that particular evening a botanist from Arkansas was searching for the lost pondberry when his car broke down. He stopped to get help at a nearby farmhouse, and was asked what he was "doing in these parts." When he explained his purpose the farmer exclaimed that those plants were on his farm! The pondberry was rediscovered.

The farmer, O.K. Hamlett passed away and in 1980 the Conservation Department was able to purchase his farm which is now Sand Ponds Natural History Area. Since then, The Nature Conservancy has purchased two other tracts as additions to Sand Ponds, both harboring pondberry populations. They purchased the Robb tract which was subsequently purchased by the Department as the Nancy B. Altwater Pondberry Preserve Addition to Sand Ponds Natural History Area. The Small tract remains in TNC ownership although it will eventually be added to Sand Ponds.

With these purchases, the survival of pondberry in Missouri would seem

assured, and for the most part we hope it is. However, in the fall of 1985, a logging operation on adjacent land encroached on the Small tract, cutting about two acres of timber and damaging one of the larger pondberry populations at the site. (TNC filed suit.)

Since the damage was already done, we decided to make the best of a bad situation and monitor the response of the pondberry to the open canopy and soil compaction. Don Kurz, Sherry Morgan, Matt Gray and myself have set up a series of plots that we can return to each year and record the condition of the plants, both on the cut area and an undisturbed area immediately adjacent. We are looking at such factors as fruit production, stem density and leaf size. Perhaps we will learn more about the requirements or limits of this species.

What does endangered status mean for pondberry? It means any Federal agency may not authorize, fund or carry out any activity likely to jeopardize the existence of the species. It also prohibits the removal of the plant from any Federal area. This is important because pondberry occurs on Federal land in two states. In addition a recovery plan will be prepared that will outline strategies for preserving existing populations.

In Missouri, we will continue to monitor and study the plants at Sand Ponds Natural History Area to try to better understand their reproduction and needs for survival. We will also try to grow them, to preserve more of the gene pool, and have plants available for experimental purposes. The Missouri Botanical Garden is propagating pondberry as a participating institution in the Center for Plant Conservation.

Backyards Are Not Just For People

Somewhere in America, 3,500 backyard gardeners have their yards registered with the Backyard Wildlife Habitat Program, a project sponsored by the National Wildlife Federation. These are just a few of the 7.3 percent of the U.S. population who maintain plantings to attract wildlife. Craig Tufts is director of the Federation's Urban Wildlife Programs. He recommends three essentials for a successful backyard habitat: cover to protect from weather and predators; food sources, plants rich in seeds, berries or nectar; a water source, for drinking and bathing. Even those with little land can put up a bird feeder, or plant butterfly or bird attracting plants. A couple in Wisconsin have transformed their quarter acre in the suburbs by planting over 300 shrubs and trees, 35 species of prairie wildflowers, and other native plants.

Source: *National Wildlife Magazine*, April-May 1986

For more information write

Backyard Wildlife Habitat Program
National Wildlife Federation
1412 Sixteenth St. N.W.
Washington, D.C. 20036



Source: *Newsletter, Florida Native Plant Society, Naples Chapter, 3/86*

SIERRA CLUB WILDERNESS ALERT

Your two U.S. senators are about to cast votes that will determine the fate of national forest land all across America. They will decide whether our forests will continue to include havens for hikers and wildlife, or whether they will be converted to clearcuts and roadways at taxpayer's expense. Your letters to your two senators will help alot.

Every year the U.S. Forest Service comes before Congress for an appropriation. The agency submits a proposed budget, and Congress decides the level of funding for each national forest program. In recent years, the Forest Service has routinely requested less money than its own planners say it requires for recreation, trails, and wildlife programs. At the same time, the agency regularly requests, and Congress regularly funds, more logging roads than the agency planners say is needed to harvest the timber they plan to sell.

This fiscally irresponsible action has disastrous implications. Every year thousands of unnecessary roads are built into wild lands, many of which are unsuitable for timber harvesting. The result is eroded soils, silted streams, loss of fish and wild life habitat, obliterated trails, reduced recreational opportunities, and the permanent disqualification of the areas from wilderness consideration.

The Forest Service budget is way out of balance. Timber cutting (much of it sold at a loss to taxpayers because sales expense exceeds income) and associated logging road construction costs so much that there is little left for the rest of the multiple uses that are supposed to receive equal consideration in the budget process.

Year after year the Forest Service builds more roads than it says it needs. For the fiscal year 1987, the Forest Service requested \$178 million for roads. Some of this money is necessary to repair existing roads or to access timber that has been sold but at least \$67 million is earmarked for roads that are unnecessary, expensive, and destructive.

In June, we convinced the House of Representatives that the road budget was unnecessarily inflated, and the House voted overwhelmingly to cut it by \$44 million. At the same time, the House restored badly needed money for fish and wildlife, recreation and trails.

The Senate, however, is very resistant to reforms. In fact, in early August the Senate Appropriations Committee actually voted to increase the timber harvest from the national forests and raise the forest road building budget by \$75 million above the agency's \$178 million request! This

road budget is over twice the amount needed and appears to be designed to build roads into as many roadless areas as possible so that they can no longer qualify for wilderness. In fact, language in the Senate committee report earmarks additional funding specifically for advance road work in roadless areas nationwide.

We need the vote of your senators to turn this mindless road-building binge around. In the era of belt tightening, this special treatment for road building is unconscionable.

The Forest Service already has 343,000 miles of roads - eight times more than the entire Interstate Highway System. It proposes to build 580,000 miles by the year 2030 - enough to go to the moon and back and then four times around the Earth. If the trend is allowed to continue, soon we will not be able to see the forests for the roads.

Please contact your two senators as soon as you finish reading this letter. The Senate may vote on the Forest Service FY '87 appropriation as early as September 8. You can write your senators at:

Hon. _____
Senate Office Building
Washington, D.C. 20510

or call:

(202) 224-3121

Sincerely,
Larry Downing
President

(we have nine sections of Mark Twain National Forest in Missouri)

PROPOSED MKT (KATY) RAILROAD ACQUISITION NEEDS SUPPORT

A number of conservation organizations are calling on Governor Ashcroft, legislators and federal officials to take the necessary actions to secure abandoned 200-mile stretch of the KATY railroad from St. Charles to Sedalia for use as a recreation trail. The desire is to preserve a long corridor for linear recreation uses, wildlife benefits, utility easements, local economic development, historic preservation and natural history education. The route along the north side of the Missouri River parallels that of Lewis and Clark from Machens in St. Charles County to Boonville, then angles southwest through Cooper and Pettis counties to Sedalia.

Many believe that this is a once-in-a-lifetime opportunity to create a cross-Missouri trail, ultimately linking the two great metropolitan areas.

If you wish to become involved in the KATY Trail Coalition, write to Marti Kardinal, 1264 Sunset Dr., Columbia, MO 65230 or call 314-443-8564. You may wish to contact your state representative and state senator to let them know your views on the proposed trail. If you send letters, be sure to copy the Governor, urging his support.

BOLTONIA DECURRENS REDISCOVERED IN MO

Alan Brant and Roy Gereau, MoNPS members from the Missouri Botanical Garden, were botanizing the Mississippi River bottoms one Sunday when they discovered two unusual plants. One was the rare Boltonia decurrens (or asteroides var. decurrens) which had not been seen in Missouri for many years. This perennial member of the Aster family was historically known only from Illinois and three Missouri counties: Lincoln, St. Charles and St. Louis. It is a candidate for Federal listing.

The other plant they found was a small, annual in the Elatinaceae, Bergia texana. Bergia was previously known from an 1897 collection in Jackson County, and Pat DeLozier found it a few years ago in Ray County (this year that site is a soybean field).

Congratulations, Al and Roy on two exciting and important finds!

NEWS FROM OUR MEMBERS

Dr. Steve L. Timme has accepted a position in the Department of Biology at the University of North Alabama. He will be teaching biology and botany courses and continuing research on neotropical and southeastern U.S. bryophytes. Dr. Timme is currently editor of the Mississippi Native Plant Society Newsletter.

Congratulations Steve, and good luck!

Kansas City Chapter News

On Sept. 9th, the Kansas City chapter met at a member's apartment in north KC and carpooled to Hidden Valley Park. This area is owned by KC Parks and Recreation Dept. and registered with the Mo. Conservation Dept. Access is by a maintained trail which takes you through wooded areas, by a spring fed pond, through a recovering prairie to a series of deep ravines carved by creeks on their way to the Missouri River. One would never guess that this area is there. It is located so close to a large industrial area that you can hear highway traffic and coal trains while viewing ferns, orchids, and 200 year old maples. Among these varied areas we did find several interesting plants. Members located Botrichium dissectum var. obliquum (Grape Fern), Onoclea sensibilis (Sensitive Fern) Spiranthes cernua (Nodding Ladies Tresses) and Corallorhiza odontorhiza (Late Coral Root) to mention but a few. After a mandatory Desmodium picking session, we had our business meeting and refreshments. Thanks to the members who brought flashlights as our enthusiasm outlasted the daylight.

MONPS

JEFFERSON CITY CHAPTER NEWS

On August 16 our chapter took a field trip to Three Creeks State Forest near Columbia. After a summer hiatus, we had our first fall evening meeting on September 2nd. Our vice-president, Dennis Figg, presented an excellent program on the importance of insects, especially as they relate to prairie and prairie plants. Our October program will be presented by MoNPS VP Sherry Morgan on monitoring work she has done on several rare and endangered plants. Our October meeting will be on Tuesday, the 7th at 7:30 pm at the Thomas Jefferson Library.

We are planning a composite identification workshop for September 13 (history by the time you read this), and a trip to the Department of Conservation's "Day on the River" to be held October 4. We welcome any MoNPS members to attend any of our functions or become a member. Our dues are \$5.00, and can be sent to John Logan, RR 1, Meta, MO 65058.

PLANT RECOGNITION AND IDENTIFICATION WORKSHOPS

Two different five-day workshops will be offered Dr. Robert H. Mohlenbrock in Carbondale, Illinois, during 1987. Each workshop may serve as a refresher in plant recognition and identification, or as an introduction to plant recognition and identification. In addition, family characteristics will be stressed so that species may be recognized anywhere in the United States.

Wetland and Lowland Plant Workshops

Field trips from 8 a.m. to 5 p.m. Monday through Friday to wetland and lowland habitats where 300-400 species of trees, shrubs, and herbs (including ferns) will be studied. Dr. Mohlenbrock will point out the distinguishing characteristics of each species and discuss its ecology, distribution, and usefulness. Special lectures on endangered species and natural areas will be included in each workshop.

Upland Plant Workshops

Field trips from 8 a.m. to 5 p.m. Monday through Friday to upland habitats where 400-500 species of trees, shrubs, and herbs (including ferns) will be studied. Other aspects of the course are as outlined in the previous paragraph.

1987 Dates: Wetland Workshop #1 - May 26-30
(Tues.-Sat.)
Wetland Workshop #2 - June 8-12
(Mon.-Fri.)
Wetland Workshop #3 - Aug. 17-21
(Mon.-Fri.)
Upland Workshop #1 - May 18-22
(Mon.-Fri.)
Upland Workshop #2 - June 1-5
(Mon.-Fri.)
Upland Workshop #3 - Aug. 10-14
(Mon.-Fri.)

For further information and application forms, write: Dr. Robert H. Mohlenbrock
#1 Bird Song Drive, Route # 6
Carbondale, Illinois 62901

WELCOME NEW MEMBERS

Bill Boulter, Jefferson City
Arlene Collett, Eldorado Springs
Carol Fuller, Bolivar
Marylin Groves, Noel
Richard Humphrey, Springfield
John Osenbaugh, Lucas, Iowa



FERNS AWAY FROM HOME

On August 9, I joined members of the American Fern Society at Amherst, Massachusetts, for the Annual Fern Foray. This was a trip thru Vermont by bus to see several areas noted for unusual fern populations. Vermont habitats are very different from most found in Missouri since it is further north, receives more moisture, was glaciated and has green schist hills. Because of these and other differences, some plants which are uncommon in Missouri are very common there and vice versa. In addition, Vermont is at the southern margin for several sub-arctic species. The areas we visited were mostly private property and collecting was permitted for all but the most rare species.

Our first stop was at a black gum swamp in the southern part of the state (black gum is rare there) where we saw the Massachusetts and New York ferns (*Thelypteris simulata* and *T. noveboracensis*), Virginia chain fern (*Woodwardia virginica*) and woodland horsetail (*Equisetum sylvaticum*). We also saw several clubmosses (*Lycopodium*) and the trip expert gave us tips and demonstration on telling them apart. Unfortunately, this group is in the midst of major reclassification so I still wasn't sure just what I'd seen as everyone was using different names. The place was also rich in many other ferns such as all three *Osmundas* and hayscented fern (*Dennstaedtia punctiloba*).

Our second stop was a wooded hillside near Woodstock which was very like some in Missouri. There were sandstone cliffs and a lovely waterfall. The big difference was that the whole hill was covered in acres of ferns, including nearly all the *Dryopteris* species. I was overwhelmed as these are less common in Missouri and have a reputation for being hard to identify even before they hybridize. And hybridize they do! We found numerous hybrids both here and at later stops. I was amazed at how the experts were able to identify them so quickly and point out various characteristics to look for. Here we also found *Polystichum braunii* and its hybrid with *P. acrostichoides*, *P. x potterii*, and the silvery glade fern (*Athyrium thelypteroides*) and the orchid Helleborine epactis growing as a ditch weed.

A very interesting stop was Belvedere Mountain, site of an asbestos mine. Parts of the mine are many decades old and have developed a unique vegetation. The orchid *Malaxis unifolia* was so thick we had to walk on it and shining clubmoss (*Lycopodium lucidulum*) was collected here and at another stop in large plastic bags. Since both these are so rare at home, I could not bring myself to collect more than a small piece. We found smooth horsetail (*Equisetum variegatum*), rusty woodsia (*Woodsia ilvensis*) oak fern (*Gymnocarpon dryopteris*) and *Ophioglossum pucillum* growing respectively in a mucky mine bottom, on a high, loose rockslide, in a shallow cave high on a dry cliff and under brambles.

The night was spent at Craftsbury Nature Center on a small lake where the usual six pack appeared and I was a star (notwithstanding dirty looks from the bus driver) when my library came out of my luggage. People had brought specimens and photos with them and, along with the finds of the day, these provided a lot of interesting conversation well into the night.

Sunday morning started off with a trip to Smuggler's Notch, named for a history of events involving whiskey and Canada. The mountains are of schist, much of it loose and wet. However, those brave (or dumb) enough to climb were rewarded with rabbit foot clubmoss (*Lycopodium lagophus*), fragrant fern (*Dryopteris fragrans*), *Woodsia glabella*, *Woodsia alpina* and slender cliffbrake (*Cryptogramma stelleri*) all rare in the United States.

The last stop was one eagerly anticipated by many. We rode down miles of country road, walked across fields and climbed hills and boulders to a bluff about 100 feet above Lake Champlain. Here we took turns hanging head down over the rock (with friends holding our legs) to see one of the rarest ferns in Vermont -- the smooth cliffbrake (*Pellaea glabella*): At last I was vindicated for being the butt of much laughter because of my excitement over their common weed, the hayscented fern.

This trip was a wonderful opportunity to become more familiar with ferns not often found in Missouri and to soak up the expertise of the great fern gods such as Drs. Warren H. and Florence Wagner and Dr. John Mickel. And I talked with some people doing research on *Asplenium* hybrids, an area of special interest to me. One of them lives only forty miles from Kansas City at Kansas University.

It was also refreshing to get a different perspective on the relative rareness of species in different areas.

Sue Hollis

COLLECTING ETHICS

At its meeting in June, the Plant Conservation Roundtable adopted its recommended guidelines on plant collecting for scientific purposes. The Conservation Guidelines are intended to apply to collection of United States native plants for use as herbarium specimens; as research material for biochemical assay or anatomical study, for teaching, or for experimental horticulture.

1. Know which taxa are locally or nationally rare or protected. Find out and follow all necessary legal procedures for collecting.
2. Obtain needed permits for scientific collecting on public lands. On private lands, obtain the permission of the landowner before collecting. Report any illegal collecting that you encounter to the appropriate authorities.
3. Do not collect indiscriminately, even in large populations. Collect only the minimum amount of plant material necessary for documentation or research purposes. When feasible, use photography or other methods of documentation. When collecting take into account the cumulative effect of all collecting at the site.
4. Avoid collecting from a population of fewer than 100 plants. When essential to verify a possible new record for the area, or to obtain a scientific voucher, collect only a single specimen. Do not collect whole plants when plant parts are sufficient. Do not collect samples so large as to affect adversely the population's reproduction and survival. For voucher specimens, take only a small part if this would be adequate for positive identification. Never collect the only plant at a site.
5. If you encounter a plant with which you are unfamiliar, assume it is rare and exercise one of the following options:
 - a. Small populations; possible to return. Photograph the plant for identification and return for collecting only if the collection would add significantly to scientific knowledge.
 - b. Small population; difficult to return. Collect at most a single specimen.
 - c. Large population. Follow these guidelines.
6. When collecting multiple specimens for exchange with other herbaria or for population studies or other purposes, make sure there is a clear need for the number of specimens you wish to collect. Be sure the plant is abundant enough to justify the collection of multiple specimens. Collect population samples only as part of a scientifically designed sampling plan for a specific scientific purpose. Collect no more than 5% of the plants visible in any population.
7. Collect discreetly so as not to encourage others to collect indiscriminately. Be prepared to explain what you are doing and why. Avoid unnecessary damage to the site and its aesthetic values.
8. If you discover a new plant record, notify an appropriate conservation official or land manager. Be cautious in providing site locations of rare plants to others.
9. If you learn that rare or protected taxa or their habitats may be destroyed, notify your state conservation agency or The Nature Conservancy,

10. Conduct salvage (rescue) projects only in sites that are scheduled for imminent destruction and only in conjunction with appropriate state agencies or conservation organizations. Obtain prior permission of the landowner. Do not collect from portions of the state that will remain in a natural state. Use salvaged plants only for such purposes as relocation, public education, botanical research or documentation, or as propagation stock, and not for sale to the public.
11. Care properly for the specimens you collect. Deposit herbarium specimens in an appropriate, recognized, publicly accessible collection. Follow standard methods such as the guidelines issued by the Association of Systematics Collections for labelling the specimens.
12. If you plan to maintain living plants, collect in a manner to ensure the survival of the individual plants.
13. Do not purchase wild-collected plants (or plant parts) of rare or protected taxa even for research, teaching, or herbarium specimens.
14. When choosing live plant material to use for scientific research, if possible use plants or plant parts from existing collections or from propagated sources. If you must collect living plants from the wild for scientific research, collect in a manner least likely to damage the wild population. In order of general preference, collect (1) seeds (if abundant), (2) cuttings or other plant parts, (3) whole plants. Leave behind some reproductive or regenerative parts such as fruits, roots, or rhizomes.
15. When discussing your research results, describe conservation considerations underlying your collecting techniques.
16. Teach your students about proper and careful collecting. When taking students into the field, visit only non-sensitive areas, taking care not to trample the site. Avoid frequent visits to the same natural site. For classroom use, collect only those plants both common in the region and locally abundant at the site. Generally, collect only the portions of a plant necessary for identification, such as a leaf, flower, or fruit.

NATIVE AMERICAN MEDICINE MAN TO TEACH AREA WORKSHOP

Oct. 30th, SUN BEAR, a Native American Teacher and Medicine Man will lecture on "The Path Of Power". The lecture will start at 7:30 PM at the Community Christian Church, 4601 Main St., KCMO. Donation, \$5.00 at the door.

The Sun Bear Reservations maintain a wild edible seed bank and teach natural methods of agriculture and conservation of earth energies. For further information contact Mr. Nate Scarritt, 913-764-7756.

MISSOURI NATIVE PLANT SOCIETY

P.O.Box 6612

Jefferson City, Mo. 65102

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DUES TIME

What? Already?! Yes, it hardly seems possible, but its time to start thinking about sending in your MoNPS dues. Dues are payable by January 1, 1987. Why not pay them now while you are thinking about it. We are a tax exempt organization so your contribution is tax deductible. So why not make out your check before the end of 1986.

If you do not belong to a chapter, send the form along with your dues to:

MoNPS Treasurer
P.O. Box 6612
Jefferson City, MO 65102

If you belong to a chapter, give the form with your dues directly to your chapter treasurer. (We realize this is confusing, and we are working to change the system. But until then this is how we have to do it).

NAME _____
ADDRESS _____
CITY _____ STATE _____
ZIP CODE _____ PHONE _____

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REGULAR (5.00)
CONTRIBUTING (15.00)
SUSTAINING (100.00)
GIFT FOR _____

Please designate additional contributions for state or your local chapter. Don't forget to add chapter dues if you are a chapter member. Check with your chapter treasurer for amount and due date.