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# NEWSLETTER

SPRING 1991

volume 9, number 1

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## DUES REMINDER

Do you know anyone who would like to join the LNPS? Tell them to send their dues (\$5) to our Treasurer:

Mary Moseley  
122 Justin  
Shreveport, Louisiana 71105

## DEADLINES FOR NEXT 4 NEWSLETTERS:

Don't forget! In an effort to better coordinate the distribution of information concerning field trips as well as other dated information the newsletter uses the following deadline policy. Any information received after the deadline will be included in the next newsletter. Deadlines for the next four newsletters are as follows:

Summer Newsletter:	June 1, 1991
Fall Newsletter:	September 1, 1991
Winter Newsletter:	December 1, 1991
Spring Newsletter:	March 1, 1992

## NEWS FROM OUR WINTER MEETING

Last but not least, our 1991 officers were elected:

President:	John Mayronne
Vice-President:	Bill Fontenot
Secretary:	Beth Erwin
Treasurer:	Mary Moseley
Editor:	David Heikamp

New Board Members (3-year terms):  
Amy Burgess  
Marion Drummond  
Jessie Johnson



Our new President, John Mayronne, explained the plans for Louisiana Project Wildflower to initiate legislation this year to incorporate protection of existing populations and to insure the use of natives on roadsides in the state roadside management plan. John also commented favorably on the conference the LNPS held in Ruston, Louisiana in 1990, announced the upcoming conference in New Orleans in June of 1991.

John stated that the T-shirt sales were very successful. Beth Erwin presented a potential design for the New Orleans conference featuring a bog habitat. The membership voted in favor of the design to be printed on 100% cotton shirts at a cost of about \$6.00 (or slightly more) per shirt, depending on the addition of colors.

Amy Burgess reported on the LNPS brochure. It is finished and copies are in the mail to certain LNPS members to look over for final approval. Amy also reminded members about the Hodges Gardens workday for the society. It is scheduled for April 6, 1991 - John requested that Amy make a list of species needed for the plantings there.

John urged society members to seek ways to give the society positive media exposure by submitting articles, publicizing workdays, and field trips.

Dr. Charles Allen announced the dates and times of the spring tour of the restored prairie in Eunice, Louisiana. He stated that he and Dr. Malcolm Vidrine have begun a roadside prairie research project with certain species using different management methods and that these would also be on the tour.

Robert Murry announced a project sponsored by the Vernon Parish Tourism Commission in May, 1991 for people interested in red-cockaded woodpeckers and wildflowers. It is to be held May 25th and 26th and features guided tours of the featured habitats.

Annette Parker introduced guests at the meeting from the U.S. Forestry Service. They were Mr. Danny Britt, Supervisor of the Kisatchie National Forest, and Mark Webb, Administrative Assistant from the Pineville office. Annette addressed the group on a number of forestry service procedures that she felt the society should become more involved in. They included the land exchange program, the range program that allows cattle to be grazed on Forestry Service land. Annette also mentioned some policies and practices of the Forestry Service - planting only natives in landscaping projects on USFS land, ceasing the practice of clearcutting, stopping the use of herbicides on highway roadsides through federal land by roadside management personnel, and listing bogs as separate habitats and managing them as such.

Mr. Britt addressed the group in rebuttal. He encouraged members to request to be put on the mailing list to receive notices on opportunities for public input. He expressed a willingness to work with the society in allowing input when plans were being put in place or revised. The issue of pinestraw harvesting leases was also raised.

John stressed the need for public educators to be made aware of the opportunities at the New Orleans conference to learn about environmental education issues, and that only by teaching our children will we have any real impact in the long run. He called for the formation of an Environmental Issues Committee to be headed by Richard Johnson along with members Nelwyn Gilmore of the Natural Heritage Program and Annette Parker as well as any other volunteers. Bill Fontenot pointed out that this committee would have to be very much an action committee and that members should be prepared for the time and work involved. There were no other volunteers. The motion was made and seconded to form the committee, and the motion passed.

Another motion, to give the Cajun Prairie Restoration Project \$500 to help the group further establish itself, was made, seconded, and passed.

The summer business meeting location was discussed, members voted in favor of holding it at the New Orleans conference. The meeting was adjourned.



## CAJUN PRAIRIE SPRING WILDFLOWER FEST

The Cajun Prairie Spring Wildflower Fest will take place Friday and Saturday, May 10th and 11th. A \$5.00 registration/donation is requested and all proceeds go to the Cajun Prairie Habitat Preservation Society. The agenda is as follows:

- Friday May 10, 1991: 1:00 PM to 5:00 PM - tour the Cajun Prairie Restoration sites. Meet at the corners of Martin Luther King Drive and East Magnolia Avenue. Join us at any time between 1:00 PM and 5:00 PM and see the spring flowers.
- Saturday May 11, 1991: 9:00 AM to Noon - tour remnant strips of Cajun Prairie; meet at the corners of Martin Luther King Drive and East Magnolia Avenue. Each participant is responsible for his/her own transportation, food, water, etc.
- 1:00 PM to 2:00 PM - view the Cajun Prairie Wildflower video in the newly opened Jean Lafitte National Park Visitor Center in Eunice.
- 2:00 PM to 4:00 PM - attend the hands-on Cajun Prairie habitat workshops at Eunice City Hall. At 2:00 PM the workshop is on Cajun Prairie plants as food, spices, and medicines. At 3:00 PM the workshop is on creating a butterfly habitat or garden.
- 6:00 PM to 8:00 PM - attend the live Cajun Prairie music show at the Liberty Theater.

For more information contact Cajun Prairie Habitat Preservation Society, P.O. Box 172, Eunice, La. 70535. Or call, Dr. Charles Allen (318) 457-7311 or (318) 546-6208, Dr. Malcolm Vidrine (318) 457-7311 or (318) 457-4497, Phil Bourgeois (318) 546-0650 or (318) 457-3641, or the City of Eunice (318) 457-7389 or (318) 457-6575.

### NOTES ON HAWTHORNS (*Crataegus* sp.) OF THE DEEP SOUTH by Bill Fontenot

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~~Ed Note:~~ Bill is a fellow LNPS member and Curator of Natural Sciences, Lafayette Natural History Museum.

Hawthorns (*Crataegus* sp.) represent one of the most enigmatic plant groups in the northern hemisphere. Many of us who take field trips for regular "botanizing expeditions" are well familiar with conversations like this:

"Hey. There's a hawthorn."

"Yeah."

"Look. The spines are pretty long on this one."

"Yup."

"Only a slight curvature, too. Look. Here's a bloom. It's got - oh - looks like 11 anthers. They're pinkish. Or reddish. Yeah, reddish is more like it."

"Uh-huh."

"Sure looks like a Cock's-spur type."

"Mmm."

"Huh. Well, you wanna walk on?"



"Definitely."

Proper identification of hawthorns, whether in the field or in the lab, has traditionally been fraught with inconsistency and uncertainty. Despite the courageous attempts by botanists like Tidestrom (1933), Kruschke (1965), Ernest Palmer (30 years of study), and lately J. B. Phipps (who has taken the battle to new heights with computer-generated systematics and taxonomy data, or cladistics), this genus has remained mysterious and obscure.

Beyond his cladistical work, Phipps has conducted biogeographical and paleontological research (1983) in order to discover the origins of Crataegus. From this work, Phipps is convinced that hawthorns arose out of central Asia, probably about 50 million years ago. From that point, they radiated eastward into Europe, and westward across the Bering land bridge into North America. Phipps believes that ancient Crataegus populations may have collapsed in the more northerly areas as a result of glacial activity at the onset of the Pleistocene epoch, which began about 2 million years ago. Since glaciers did not penetrate into the southern United States, this left the southern populations to continue their adaptational processes unabated. Later, when climatic conditions allowed, Asian hawthorns probably made a second migrational push into the northern United States and Canada. So what we are left with today in North America is a group of northern hawthorns that bear some resemblance to a common Asian ancestor, and a larger group of southeastern hawthorns that have differentiated from their common ancestor so long ago that they currently bear no close resemblance to any Asian species. Further, these southern species have been developing and adapting for so long that none of them bear close resemblance to one another anymore. And here's where things get complicated!

Here in the southeast is a group of hawthorns that appear to be unrelated due to the fact that they have had quite a long time to develop and differentiate into separate species. You'd think that by now a group as old as they are would have developed characteristics in foliage, flower, fruit, bark, or habitat that folks could use to nicely separate them into species. To some extent, this has come to pass. The vase-shaped growth form of Green Haw ( Crataegus viridis ), the unmistakable foliage of Parsley Haw ( Crataegus marshallii ), and the blue fruits of Blue Haw ( Crataegus brachycantha ) are good examples.

Yet another monkey wrench was thrown into the works at the turn of the century when we began to cut down our once-stable, southeastern climax forests. Elbert Little (1953) explains: " Crataegus is regarded as an unstable genus characteristic of openings and exposed areas, which has expanded and evolved rapidly following the clearing of forests, and the origin of vast new areas suitable for colonization. The variable, expanding populations probably produced numerous hybrids. Progeny tests have shown that many of these variations have perpetuated." The once stable, older, southeastern population received quite a jolt when millions of acres of new habitat opened up. As communities of different hawthorn species moved in, characters such as growth form, leaf shape, fruit size and color, and others began to vary within each particular species.

Today, variability within many species has reached epic proportions. Check the foliage on a single mayhaw ( Crataegus opaca or Crataegus aestivalis ) as an example. You'll see a variation in leaf shape on a single plant that far surpasses that seen by entire genera of some other plant groups! So, as Alice once exclaimed to the Cheshire Cat, "Things are getting curiouiser and curiouiser!"

And there's more. Many of the hybrid forms that Little mentioned display a strange reproductive phenomenon known as an "apomictic" character. Normally, apomictic individuals arise from the hybridization of closely



related species, where the progeny end up possessing 2, 3, 4 or more times the normal chromosome number of their parents - a condition known as polyploidy. It seems that certain organisms possess the capability of producing offspring without the involvement of sex cells. They don't even need eggs or pollen in order to reproduce. Fruits with viable seeds may appear in places where ovum and pollen never dreamed of meeting!

Hopefully, you now have some idea of what was, and still is, facing taxonomic and systematic botanists who attempt to tackle Crataegus. It's no wonder that around 1,100 hawthorn species have been proposed for North America in the past 40 or so years. Today, things have settled down a bit, with around 145 species recognized worldwide (Phipps, 1983). In the southeastern United States, about 35 species seem to be valid (Duncan and Duncan, 1983). The jury is still out on the number of deep south species. Dr. Phipps suggested that I use Thomas and Allen's (1982) treatment of our Crataegus until further notice. They list 13 species, following Little's earlier (1979) treatment, but they indicate the need for more work.

Here's the Louisiana list:

Crataegus berberifolia, or Barberry Hawthorn, with several forms  
Crataegus brachantha, or Blue Haw  
Crataegus calpodendron, or Pear Hawthorn  
Crataegus crus-galli, or Cock's Spur Hawthorn, with several forms  
Crataegus flabellata, or Fanleaf Hawthorn  
Crataegus marshallii, or Parsley Haw  
Crataegus mollis, or Downy Hawthorn  
Crataegus opaca, or Mayhaw  
Crataegus pearsonii, or Pearson Hawthorn  
Crataegus sabineana, or Little-hip Hawthorn  
Crataegus uniflora, or One-flower Hawthorn  
Crataegus viridis, or Green or Hog Haw

I haven't seen a "good" checklist for any of our adjacent states (and I doubt that one exists for Texas), but I would expect comparable treatments except for the extreme northern areas of these states, which probably possess a tad more diversity (possibly 3 to 7 more species) than Louisiana.

Now I'll go into the culture and uses of our hawthorns. Native American, Asian, and European peoples have used Crataegus for food and medicine (primarily as a heart stimulant - very possibly a good one) for centuries (Hobbs and Foster, 1990). Of course, animals also utilize the flowers and fruits to a large extent. Thus, the desirability of hawthorns for these purposes has always been high. Sadly, but not surprisingly, these plants (with the exception of the Washington Hawthorn, Crataegus phaenopyrum) have been largely ignored by the general gardening and horticultural community. In Natives Preferred, Caroline Dorman lamented this fact, as she was so often forced to do with respect to many other native plant groups. Without belaboring the point, it is certainly hard to understand why such a hardy, beautifully blooming group of small trees and shrubs could possibly be eschewed.

The word Crataegus is of greek extraction (Vines, 1960) and means "strong". This is in obvious reference to their tough, dense wood. This strength somehow translates into the growth form of most hawthorns, for mature specimens of the larger species certainly convey a strength of character. Twigs are robust, gray to brown, and mottled throughout with shades of charcoal. Trunks are gray to brown, often fluted, with varying degrees of thin, flaky, or exfoliating bark. Larger trees (25 to 30 feet with 8 to 10 inch trunks) often display a twisted, contorted, or bowed trunk which, when combined with the fluting, produces a wonderful "wized" effect. Indeed, this effect is not unwarranted, for many hawthorns are particularly











