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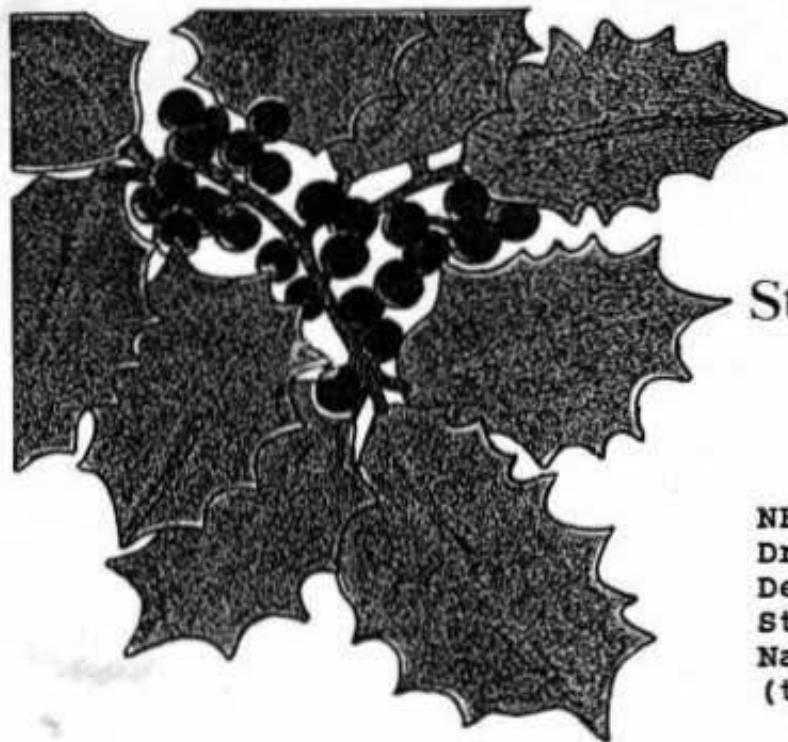
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# Friends of the Stephen F. Austin State University Arboretum

NEWSLETTER NO. 11, SEPTEMBER, 1991  
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Nacogdoches, Texas 75962  
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## NOTES FROM THE GARDEN

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Welcome back to the Arboretum Newsletter! How about the new format? This issue focuses on an assortment of topics; hope you enjoy it, learn a little, and become an enthusiastic part of the wonderful world of horticulture. The SFASU Arboretum just passed the six year-old mark. However, it really wasn't until mid-1987 that the gardens really got going with the expansion project into the LaNana creek bottom land. For such a young planting, I would say we've done quite well. Our collection has not only endured the ravages of record mid-winter cold, occasional floods, pests, plagues and human-induced aberrations, the garden has prospered. The Arboretum is now a happy home to many rare, uncommon, and unusual species and cultivars. Yet, we all know there's no reason to rest on our laurels; so much remains to be done.

**THE DAYLILY GARDEN:** The new daylily garden is a wonderful collection gifted to the arboretum by the Nacogdoches chapter of the American Hemerocallis Society. Just to the south of the glass greenhouse, nearly 200 varieties are now well-established. This small garden is also home to a number of expensive hybrid *Crinum* varieties; give them a few more years and they'll be knockouts. The fountain is a main feature of the garden, funded by the local chapter, and is an example of another arboretum project that ended up being a lot more work than we originally expected. A group of students in Mr. John Daniel's sculpture class designed the fountain and the local chapter accepted the concept. Six months later, several of the students are still working on the project without a lot of fanfare. Hats off to students Susan Elking, Judy Saunders, Mike Adams, Renea Locke, Mitch

Scott and the others for their willingness to stick something through to the end! Heavy rains in the spring turned the concrete moat construction project into a muddy nightmare. Design changes, needed to insure that the fountain flows sheets of water evenly into the moat, also slowed the project. Finally, the semester ended and we were left without a work crew. I appreciate the local chapter's patience and I know they'll grimace when I say, "it takes one-hundred years to build a garden and that's if you rush it." Now that the students are back, the project should move ahead quickly. Patience is a virtue?

Related to the Daylily project is a new garden in the design phase. Mr. Peter Loos, graduate teaching assistant, received a two-thousand dollar scholarship that will help him design and accumulate *Iris* species for the garden. Thank you, American Iris Society!

The garden will be placed just below and to the south of the Daylily Garden. That spot is a perfect location for an Iris evaluation and display garden. It's naturally moist and requires little modification to be an outstanding site. The proposed garden location includes about 10,000 square feet of potential growing space in a full sun area. A natural stream, actually a drainage ditch in sad need of a landscape effort, bisects the garden. Water flows or lies in pools most of the year and the soil there is usually wet even in summer. In addition, the proposed garden site enjoys a nearby knoll for dry loving *Iris* species. Further strengthening the quality of this site is that it rests on the northern edge of the SFASU Intramural field and can be seen from a great distance. With high visibility, easy access, and a "natural" site, the garden is sure to make a strong educational/research statement in the future.

The proposed project is assured success by the nature of the participants involved. Nacogdoches, Texas, is blessed with an outstanding daylily hybridizer, Ms. Jean Barnhart. Jean enjoys a remarkable reputation in the American Hemerocallis Society with over 51 registered Daylily varieties to her credit. She won the prestigious Fuqua award in 1987 and has received several Junior Citations. Jean was partially responsible for setting in motion the daylily garden at the SFASU Arboretum that now displays an almost-complete "Stout Medal" series, the best daylily for each year since 1950 voted on by the American

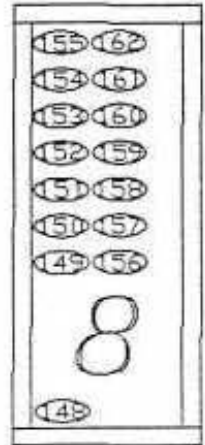
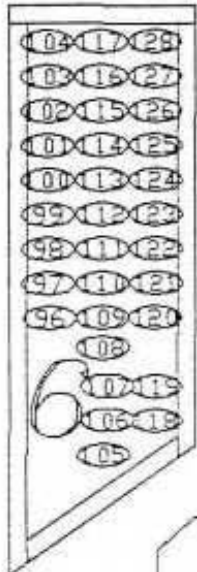
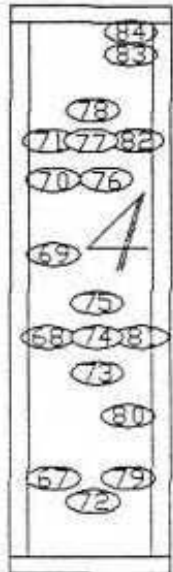
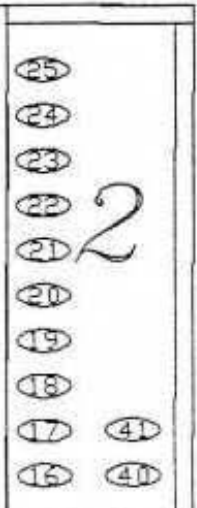
Hemerocallis Society. Jean is a member of the American Iris Society and displays an outstanding Iris collection in the garden at her "Hayden Edwards Inn" (a Bed and Breakfast, circa 1861 home). Besides an fabulous daylily collection, the garden includes over 500 registered Bearded Irises, an extensive Japanese Iris collection, and a small Iris species collection. Carlita Arrant is the President of the local chapter of the American Hemerocallis Society (and an Iris enthusiast) and has been a dedicated volunteer in the Daylily Garden. Delores Jones has an inspiring daylily and Iris collection and is an avid supporter of the Arboretum. With the talent in the local chapter of the American Hemerocallis Society, I'm convinced that we can build a terrific evaluation and display garden at low cost.

Specifically, we are planning to develop a streamside Louisiana Iris collection in a systematic order of display: first, a species collection, then outstanding cultivars of past years, and finally the latest registereds. The drier slopes facing the stream can be developed into island beds of other Iris species. While the project may seem ambitious, all the resources are in place to make this happen. The recent scholarship grant to Mr. Peter Loos, graduate teaching assistant, will put a wonderful "American Iris Society" stamp of approval on the project. This project is destined to create a garden of high educational and display value in the Arboretum.

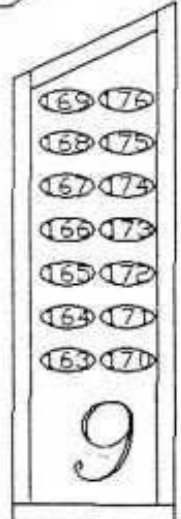
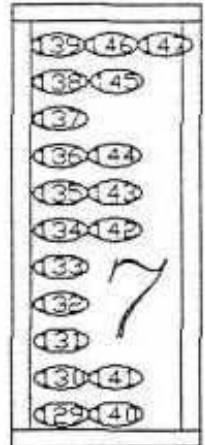
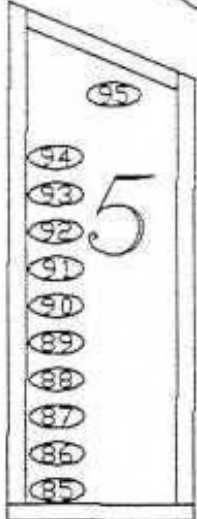
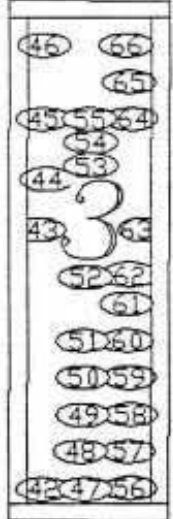
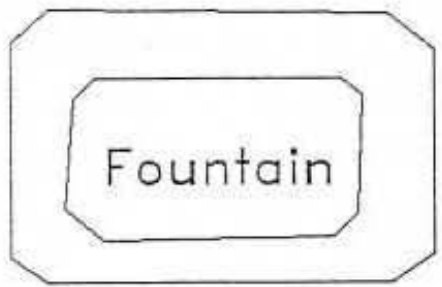
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# The Daylily Garden

GLASSHOUSE



*Hemerocallis*



THE DAYLILY GARDEN  
 of the S.P.A.S.U. Arboretum  
 a gift of the  
 Jacksonville Chapter of the  
 American Horticultural Society  
 May 15, 1987. Drawn by J. Wilson

June, 1991

Scale up

STOUT AREA SONGS WRITTEN 1950-1990

382 1A2

1. 'Empress' - 1960
2. 'Painted Lady' - 1961
3. 'Potentate' - 1962
4. 'Revolute' - 1963
5. 'Tealines' - 1964
6. 'Prime Donna' - 1965
7. 'Naranja' - 1965
8. 'Ruffled Pinacore' - 1967
9. 'High Noon' - 1968
10. 'Salmon Sheen' - 1969
11. 'Fair Wings' - 1969
12. 'Mullonmah' - 1961
13. 'Bess Ross' - 1962
14. 'Mullonmah' - 1963
15. 'Frances Fay' - 1964
16. 'Luxury Lace' - 1966
17. 'Cartwheels' - 1966
18. 'Full Reward' - 1967
19. 'Satin Glass' - 1968
20. 'May Hall' - 1969
21. 'Ava Michelle' - 1970
22. 'Renee' - 1971
23. 'Hortensia' - 1972
24. 'Lavender Flight' - 1973
25. 'Winning Ways' - 1974
26. 'Clarence Simon' - 1975
27. 'Green Flutter' - 1975
28. 'Green Gutter' - 1977
29. 'Mary Todd' - 1978
30. 'Moment of Truth' - 1979
31. 'Bertie Ferris' - 1980
32. 'Ed Murray' - 1981
33. 'Ruffled Apricot' - 1982
34. 'Sable' - 1983
35. 'My Belle' - 1984
36. 'Stella de Oro' - 1985
37. 'Janet Gayle' - 1985
38. 'Becky Lynn' - 1987
39. 'Martha Adams' - 1988
40. 'Broched Gown' - 1988
41. 'Fairy Tale Pink' - 1990

382 3

42. 'Seductress' - 1979
43. 'John Carlo' - 1973
44. 'Bed Run' - 1974
45. 'Frozen Jade' - 1975
46. 'Attribution' - Spalding 1976
47. 'Christmas in' - Yancy 1975
48. 'Dance Ballerina Dance' - Peck 1979
49. 'Marie Smith' - Lenington 1974
50. 'Gleeman Song' - Peck 1973
51. 'Elizabeth Ann Hudson' - Munson 1975
52. 'Jean Wooten' - Kirchoff 1976
53. 'Gleeman Button Box' - Henry 1978
54. 'Midnight Magic' - Kinnedrow 1979
55. 'Quinn Bank' - Peck 1975
56. 'Gentle Shepherd' - Yancy 1980
57. 'Joel' - Harris 1978
58. 'Joan Sealer' - Durie 1977
59. 'Rajah' - Durie 1974
60. 'Joyful Occasion' - Spalding 1976
61. 'Catherine Neal' - Carpenter 1981
62. 'Shock Wave' - Brown 1978
63. 'Loving Memories' - Spalding 1973
64. 'Charles Johnston' - Gates 1981
65. 'Sue Rothbauer' - 1981
66. 'Wind Song' - Bryant 1974

382 4

67. 'Well Return' - Spalding 1983
68. 'Top Honors' - Childs 1975
69. 'Texas Sunlight' - Lewis 1981
70. 'Emerald Dew' - Harris 1980
71. 'Harry Barras' - Monette 1974
72. 'Little Deane' - Goldry 1980
73. 'Cherry Festival' - Yancy 1973
74. 'Rose Emily' - Pierre 1982
75. 'Chorus Line' - Kirchoff 1981
76. 'Molokai' - Whately 1978
77. 'Mountain Violet' - Munson 1973
78. 'Homeward Bound' - Spalding 1978
79. 'Graceful Eye' - Spalding 1981
80. 'Beechsnack' - Munson 1980
81. 'Dorthea Louis' - Peck 1975
82. 'Elizabeth Yancy' - Yancy 1973
83. 'Sombroso Way' - Secamp 1973
84. 'Lady in Question' - Barnhart 1980

382 5

85. 'Jade' - Spalding 1982
86. 'Queen's Gift' - E.C. Brown 1960
87. 'Queen's Delight' - E.C. Brown 1964
88. 'Ruffled Magic' - E.C. Brown 1981
89. 'Scarlet Orbit' - Gates 1964
90. 'Seeing Double' - Kirchoff 1983
91. 'Jackie Boy' - Carpenter 1984
92. 'Rose Sunset' - E.C. Brown 1962
93. 'Roughed Talkman' - Munson 1981
94. 'Fire Power' - Brown 1984
95. 'Seeing Double' - Watson

382 6

96. 'Super Song' - Dove 1988
97. 'Kathy Barnhart' - Barnhart 1987
98. 'Mary and Mim' - Barnhart 1990
99. 'Nacogdoches Ring Cherry' - Barnhart 1987
100. 'Nacogdoches Baby' - Barnhart 1987
101. 'Nacogdoches Eves' - Barnhart 1987
102. 'Nacogdoches Ace' - Barnhart 1985
103. 'Charolett Bell' - Barnhart 1987
104. 'Granny Dew' - Barnhart 1987
105. 'Jackie Renee' - Barnhart 1984
106. 'Nacogdoches Toot-toot' - Barnhart 1986
107. 'Lois Dewes' - Barnhart 1988
108. 'Richard Barnhart' - Barnhart 1987
109. 'Patricia Hayes' - Barnhart 1987
110. 'Nacogdoches Jie' - Barnhart 1985
111. 'Michael Hayes' - Barnhart 1987
112. 'Super Ron' - Barnhart 1988
113. 'Nacogdoches Pansy' - 1988
114. 'Nacogdoches Fire' - Barnhart 1987
115. 'Maw maw Frances' - Barnhart 1988
116. 'Crystal Bell' - Barnhart 1984
117. 'Robert Nix' - Barnhart 1987
118. 'Grand Masterpiece' - Dove 1984
119. 'Super Love' - Dove 1983
120. 'Micky Eggs' - Dove 1983
121. 'Super Delight' - Dove 1982
122. 'Nettie Brunette' - Dove 1984
123. 'Super Poems' - Dove 1986
124. 'Sugar Time' - Dove 1977
125. 'Super Goddess' - Dove 1986
126. 'Super Lovely' - Dove 1982
127. 'Inspired Word' - Dove 1979
128. 'Fabulous Edna' - Dove 1980

382 7

129. 'Raindrop' - Kennedy 1972
130. 'Puddin'' - Kennedy 1972
131. 'Lola Mae Purnell' - Krus 1981
132. 'Little Finger' - Lanckhart 1979
133. 'Tinker Bell' - Stevens 1964
134. 'Red Wilkins' - Heinsmann 1988
135. 'Little Grapette' - Williamson 1970
136. 'Bertie Ferris' - Winniford 1989
137. 'Butter Pat' - Kennedy 1970
138. 'Little Celeste' - Williamson 1970
139. 'Toyland' - Secamp 1985
140. 'Stella de Oro' - Jablonski 1976
141. 'Fox Grape' - Allgood 1973
142. 'Corky' - Fischer 1959
143. 'Pardon Me' - Apps 1982
144. 'Peach Fairy' - Viets 1974
145. 'Apricot Angel' - Holman 1983
146. 'Squaky' - Winniford 1970
147. 'Pandora's Box' - Talbot 1980

382 8

148. 'Luxury Lace' - Spalding 1980
149. 'McPik' - Lenington 1967
150. 'Melon Balls' - Wild 1980
151. 'Little Infant' - Monette 1972
152. 'Bessie Young' - Kennedy 1962
153. 'Little Greenie' - Winniford 1972
154. 'Little Wart' - Spalding 1984
155. 'Little Rainbow' - Secamp 1983
156. 'Ed Murray' - Grewell 1971
157. 'Shuffy's Doll' - Williamson 1989
158. 'Whoom Purple Plum' - Henry 1970
159. 'Bambi Doll' - Wild 1983
160. 'Green Flutter' - Williamson 1964
161. 'Renee' - Dal 1962
162. 'Guardian Angel' - Gore 1964

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163. 'Little Big Man' - Cruise 1979
164. 'Tetra' - Winniford 1982
165. 'Soury Roger' - Hudson 1984
166. 'Pye Wicket' - Hudson 1977
167. 'Little Anna Ross' - Williamson 1984
168. 'Baby Lucy' - Grewell 1966
169. 'Little Bean' - Cruise 1981
170. 'Hamlet' - Talbot 1982
171. 'Double Dream' - B. Brown 1978
172. 'Gypsy Gambler' -
173. 'Mac Graham' - Spalding 1977
174. 'Red Volunteer' - Oakes 1984
175. 'Riley Barron' - Munson 1977
176. 'Rose Jubilee' - J. Carpenter 1987

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## THE DRY GARDEN

It is really quite amazing how well this garden has taken to the harsh location on the north side of the Art building. With only a few irrigations this summer, the collection has thrived. Peter and I weeded the garden in one two hour effort and that was about it for the summer. We are using *Lantana*, *Ratibidas*, *Coreopsis*, and *Monarda citriodora* as herbaceous perennial ground covers. They are robust enough to smother the ground and shade out weeds. We have pocketed small trees, Agaves, Yuccas and Dasyliirions here and there in the open spots. One standout, in our opinion, was our very own native *Verbena*, blooming constantly all spring and early summer. When cut back to six inches in mid-summer, the plants put on another long show in the fall. Dry sandy soils are choice soils if species are chosen correctly. *Salvia* and *Penstemon* species have performed well. Both are gaining in popularity and arboretum visitors are bound to see more of these in the years ahead. They are easy to grow, robust, showy and simple to propagate from cuttings. Except for the most tender species, they return from a clump year after year. Another plant that will find a home on the main campus this next year is *Hamelia patens*, the firebush. That's the showy colony located at the front of the Arboretum on the northwest corner of the Agriculture building. While not totally hardy in our area, the plant is worth the effort. We have enjoyed this plant in the Arboretum for several years and

have noticed that the plant does return each spring from the crown, but ever so slowly and discouragingly late. It may be simpler for us to treat the plant as an annual, taking cuttings in the late fall, rooting them, and growing on in the greenhouse until spring planting season. Bob Rogers, SFASU Grounds, who is never fast to take to a new plant, has taken to this one and wants to move it to some of the color beds on campus. It doesn't really reach its peak of show here until mid-summer, but it is outstanding in late summer and all the way to frost. A great butterfly plant, the species sports insect and disease resistant red leaves and provides a long-lasting show of numerous, bright red tubular red flowers. The plant responds to a dry location, moderate fertilizer, and a few weedings in the spring and gets tall enough to shade out most weeds.

*Ruellia brittoniana*, dwarf form, is a special little plant that has done well in the dry garden as well as in moister spots in the arboretum. Rarely more than six to nine inches tall, the plant sports showy lavender, petunia-like blooms. While the species reaches two feet in height, this form is definitely dwarf and, even more remarkable, the seedlings come true for this characteristic. It's easy to increase numbers by potting up the numerous seedlings that pop up in container-grown plants. This herbaceous perennial returns reliably year after year. The plant should be mulched with pine straw after the first hard frosts of winter and then raked away in the spring when plants

emerge from their slumber. We have included this plant in our giveaway program for years and the feedback is always positive. We have two colonies established by the headhouse and have mixed in a companion crop of low-growing *Alyssum*, the annual variety called 'Carpet of Snow'. The white and lavender blooms blend in a pleasing fashion and neither plant intrudes too much on the other.

The Dry Garden is going to be mapped and entered into our AutoCad mapping project this fall by a volunteer student. That map will be included in the next newsletter.

### THE PERENNIAL BORDER

The perennial border took less work this year than the first. Plants were stronger and grew more vigorously. The *Monardas*, *Pentas*, *Salvias*, *Echinaceas*, *Achilleas* and others made robust plants by early spring. Some of the standouts include *Salvia guarantica*, *farinacea*, *coccinea*, and *leucanthea*. The ornamental grasses were very strong this year. Some of the failures of last year have been replaced with more promising types. A bush morning glory has been a standout plant. Most surprising to me is that most of the columbines survived, even the Rocky Mountain species. Foxglove, although certainly one of the showiest perennials in the garden, has made a habit of suddenly dieing in the garden. *Phlox paniculata* "Mt. Fuji" is a surprise, sporting weather-resistant white trusses of large florets.

The perennial border is only one-hundred feet long and twelve feet wide and can absorb only a few more plants. We are making plans for a new garden near the vegetable plots. With several hundred new plants in the collection, we are eager to begin a long-term evaluation program. The SFASU Arboretum has one of the largest collections of herbaceous perennials in the state. Now, our only obstacle is to establish a mapped and labelled display garden.

### THE TEXAS HERITAGE GARDEN

On May 4, 1991, the Arboretum enjoyed the groundbreaking of the Texas Heritage Garden. This new garden is to be located between the Agriculture building, the glass greenhouse and the Intramural Field. The garden will display a collection of "old-timey" plants, plants that graced Texas landscapes in the mid-1800's. You might ~~not~~ think there is<sup>enough</sup> old literature to really understand the landscapes and landscape philosophy that long ago, but there is. Ms. Pam Puryear, a Historian whose PhD dissertation from Texas A & M University covered the topic, has opened my eyes to what is out there. She has been kind enough to loan us two boxes (!!) of old nursery catalogs,<sup>4-1</sup> xerox copies of old letters, articles, and manuscripts that she dug from the dusty corners of various library archives in Texas. I am quite impressed with her holdings and they certainly will help us in the planning process. Pam has visited our gardens and promises to be an excellent



resource for this new twist to our activities. Pam is forming a new group in Texas called the Pioneer Plant Society of Texas, a kind of spin-off to the now well-known "Rose Rustlers of Texas" group, an interesting crowd of Texans that get excited by retrieving old roses from residences, cemeteries, churches, and old buildings in Texas (often under the cover of darkness). The group is quite well known nationally and the Antique Rose Emporium carries many of the old rose varieties. The old clones are much more likely to get by without a spray program and many are quite stunning. Though not usually blessed with the flower size of the hybrid teas, old roses make up for that with more flowers and a tough disposition. We will, of course, be placing an "Old Blush" onto an overhead arbor or two since it once dominated Texas landscapes.

at a couple (too rotten), I still haven't come up with one. If any readers can give us a lead on a small log barn, let us know! Ms. Shannon Short, an undergraduate in Horticulture will be working on this project this fall.

**A NEW "GRASSES" GARDEN**

After several years of student encouragement, the SFASU Arboretum is going to add a "grasses" section to the Arboretum. Scott XXXXXXX, Billy Brown, and Clarence Henderson, all Agronomy majors, spent a few busy days putting together a series of railroad tie framed beds. Located just to the north of the "bog", the garden will feature primarily the native grasses of Texas. These dedicated students are putting a collection together that will be interesting, aesthetic, and educational.

*I'll get the Edward*

Because it's going to take a while to accumulate, identify, and verify the collection, the students involved are going to "let" me park a good number of ornamental grasses that the Arboretum has added to the inventory. As the result of an east coast collection trip (described later), about forty taxa need to find a home in the garden. Until they find their final resting place, they will reside in the Agronomy Club's "Grasses of Texas" garden. Those of you that have been to the student center lately have noticed the wonderful bed of Purple Fountain grass on the north side of that complex. I suspect that you will see more of that striking ornamental on our campus in the future!

. . . it appears that the neglect of attention to the cultivation of flowers in Texas, must evidently be regarded as a want of good taste. Nothing presents a greater evidence of refinement than a tasteful adornment of dwellings and their environs, with trees and flowers; and it would be a great advance towards refined and decent civilization in Texas if more attention were paid to the transplanting of forest trees and shrubbery around buildings. Melinda Rankin, Texas in 1850.

I had hopes of finding a small, old log barn to disassemble and move to this garden. Although I've looked

Some of the grasses collected for the SFASU Arboretum include *Calamagrostis epigeios*, *Erianthus ravennae*, *Arundo donax* 'variegata', *Calamagrostis* X *acutiflora* 'Karl Foerster', seven varieties of *Miscanthus* and five varieties of *Pennisetum*, two of which have bold horizontal stripes that run across the blades, 'Zebrinus' and 'Strictus'. They are quite bold and always command a second look.

grasses showing  
insertion.

# NOTES FROM THE BOG

by Peter M. Loos

---

Welcome to the third installment of Notes from the Bog. There have been many exciting things happening at the bog since I last wrote. We have included yet another carnivorous plant in the bog collection, a Venus Fly Trap, *Dionaea muscipula*, a native to the east coast that we received as a gift from Lynn Lowrey. I also obtained four yellow fringed orchids, *Habenaria ciliaris*, that were collected from a site in Newton county threatened by development. The bog received a transfusion of leatherwoods, *Cyrilla racemiflora*. These were mixed here and there in the Sweetspire border that defines the northern edge of the bog garden. These plants were purchased from Ted Doremus Wholesale Nursery of Warren, Texas. Ted owns a fabulous native plant nursery which employs SFASU horticulture graduate and former bog caretaker Mark Bronstad. Also obtained from Doremus was a pond cypress, *Taxodium distichum* var. *nutans*, Montezuma cypress, *Taxodium mucronatum*, and a water tupelo, *Nyssa aquatica*. These were planted near the southeast corner of the garden. Three Loblolly bay trees, *Gordonia lasianthus*, were set in the garden and have grown well during their first summer. Will Fleming has again contributed plants for the bog. A male myrtle-leaf holly, *Ilex myrtifolia*, was planted near the western catwalk ramp. A chokecherry, *Aronia*

10

*arbutifolia*, a red bay, *Persea borbonia*, and a dwarf *Leucothoe*, *Leucothoe* sp. were also added.

East Texas has experienced one of the wettest years on record. In fact, if rains continue, 1991 could end up as one of the wettest on record. A ferocious storm in early May dropped several inches of rain in a two hour period that caused LaNana creek to leave her banks. The bog was covered in almost a foot of water but the next morning the garden looked no worse for the wear: certainly an encouraging sign. The garden has responded favorably to a little extra attention this year. My goal is to create a natural look to the garden and to quietly favor the preferred species.

I added a sandy soil mound that is 10 feet long, 3 feet tall, and 7 feet wide. This small well-drained knoll in the middle of the wetland collection will soon display a collection of native southern deciduous Azaleas. Finally, the Bog Garden is now incorporated into the SFASU Arboretum's computer database. This spring while learning Autocad (CADD stands for Computer Assisted Drafting and Design), I mapped and then updated the bog garden. That map is attached. CAD is an excellent way to keep up with ever-changing garden plantings.

The past six months have been busy and exciting. In

addition to my studies and helping maintain the rest of the garden, I have two projects that I'm working on that deserve mention. First, is a research paper for Dr. Lowrey in Forestry that involves a study of the silky camellia, *Stewartia malacodendron*, in the only two populations known in east Texas. The study will include propagation experiments, both asexual and sexual. Soil samples will be collected from both sites for analysis by the SFASU Soil Testing Lab. The habitat and vegetation will also be analyzed. The other project is to design and begin the construction of a new Iris Garden destined for the south side of the daylily garden along the drain. I am pleased to announce that this project allowed me to be selected as this years recipient of the American Iris Society's \$2000 scholarship.

One of my favorite wetland plants is *Cyrilla racemiflora*, Swamp Titi, Cyrilla, or Leatherwood, a member of the *Cyrillaceae* or Leatherwood Family. Leatherwood is a semi-deciduous shrub or small tree that is found in the Big Thicket, east of the Trinity River, south of US Highway 190, and north of the coastal prairie. The plant is often found in acid shrubby bogs, along alluvial and non-alluvial stream courses, flatwoods, and seepage areas in woodlands. It can be found east of Texas to the central peninsula of Florida then north to southeast Virginia. In the wild, Leatherwood reaches 30 feet tall and usually branches near the ground giving it a symmetrical, well rounded crown.

*Cyrilla* has simple alternating leaves that are without stipules. The leaves appear stiff or leathery at maturity and are of variable size but usually two to three inches long and one-half inch wide, oblanceolate or narrowly obovate. The tree can be considered semi-deciduous and leaves carry hues of yellow, red, and orange in the fall.

The fragrant, white flowers are borne in narrowly cylindrical racemes, four to six inches long and are attractive to bees making it an excellent honey plant. The raceme cluster, which appears to look like a whorl of racemes, occurs at the tips of twigs from the previous years growth. The flowers are bisexual and bloom in late May and June. The seed is an indehiscent drupe with the calyx persistent at its base. The spent brownish-tan racemes persist all winter, adding to the beauty of this plant. The mottled bark is smooth in appearance on younger wood and fissured with a maroon color on older wood.

*Cyrilla* commonly reproduces vegetatively by sprouts from its shallow horizontal roots often forming dense thickets. Plants are often found in association with gallberry holly, *Ilex coriacea*, wax myrtles, *Myrica cerifera* and *M. heterophylla*, Loblolly Bay, *Gordonia lasianthus*, sweetpepper shrub, *Clethra alnifolia*, bald cypress, *Taxodium distichum*, swamp Azalea, *Rhododendron oblongifolia*, swamp redbay, *Persea borbonia* var. *pubescens*, and sweetbay magnolia, *Magnolia virginica*. Leatherwoods occur

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along the edges of swamps and sphagnum bogs which it slowly invades as part of the natural succession that leads to the formation of a new forest. Two facts about Cyrilla's thicket forming habit are worth noting. First, it is considered that Cyrilla and gallberry holly (also called Inkberry) played a role in naming the region we know as the "Big Thicket" and, second, it seems to pose the largest natural threat to Pitcher Plant bogs in east Texas (particularly in and around unburned managed forests).

The lack of exposure for this incredible native is difficult to understand, particularly when you note that it is normally found in wet places, often so difficult to deal with in urban landscapes. Wet sites are often troublesome to homeowners; leatherwood is a natural for such a site. In spite of its wet soil tolerance, the plants also performs well in drier, well-drained soils. Will Fleming, famed landscaper from Tomball, is so fond of Cyrilla that he tries to use it in all of his designs to the point it has become the signature plant of his landscapes.

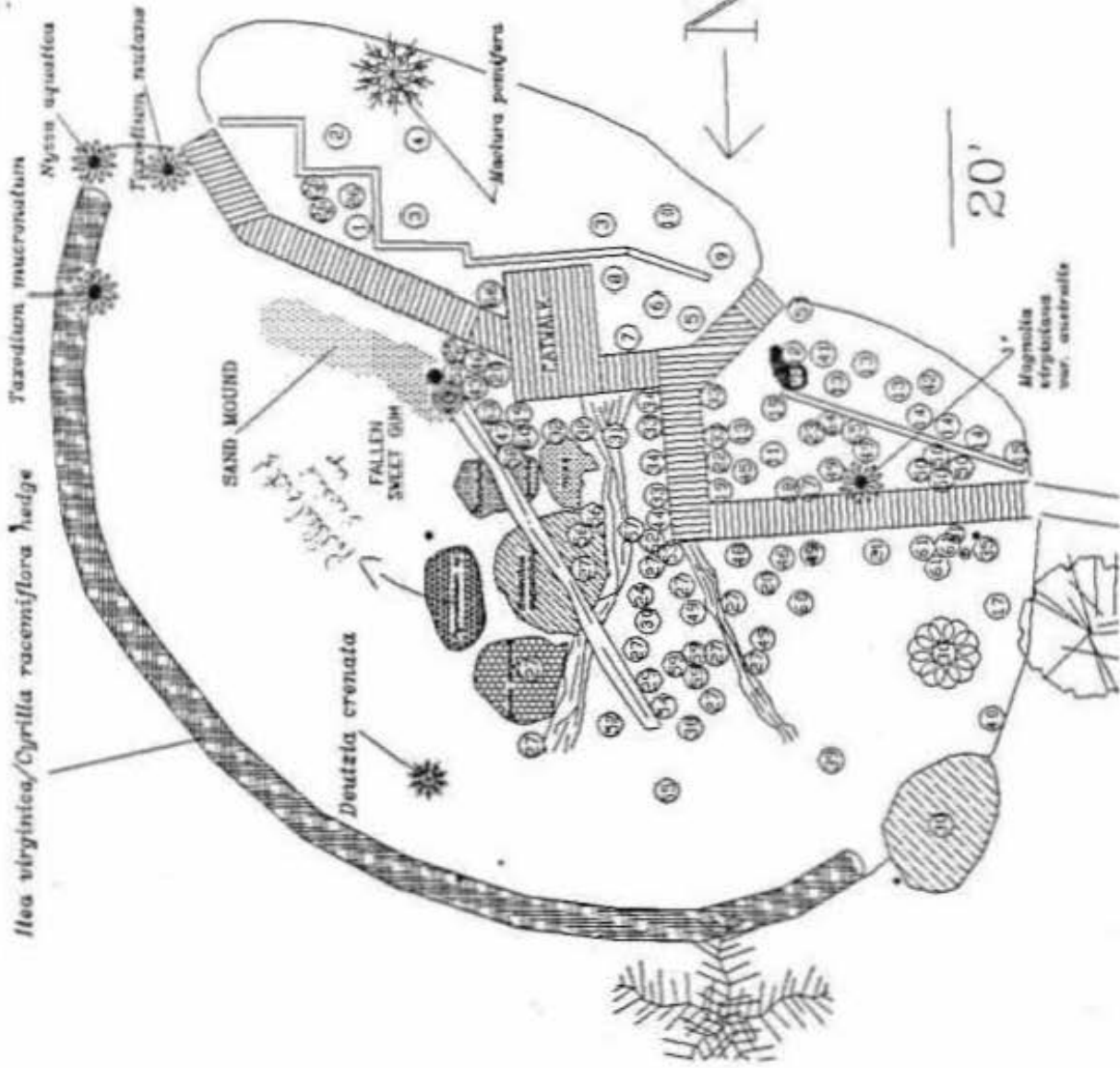
Propagation of Cyrilla can be accomplished by seeds although there is very little information available for this method. Most propagation is done by taking root and softwood cuttings. Root cuttings should be no less than one-half inch in diameter and taken in the late fall or winter. Take softwood cuttings in early summer from current season's growth and treat with IBA solution or one of the

rooting powder talcs. Under a mist system, rooting usually takes place in eight weeks.

In the SFASU Bog Garden we have planted two *Cyrilla racemiflora*'s from east Texas plus twenty-five plants in the border hedge. Two of our specimens come from Alabama and one from Mississippi. We have planted a much less common dwarf *Cyrilla*, *Cyrilla parviflora*, which is native to northern Florida with smaller leaves and racemes. We completed the collection of native members (southeast US to Texas) of the *Cyrillaceae* family in the bog garden with two specimens of buckwheat tree, *Cliftonia monophylla*, an evergreen shrub or small slender tree with leaves smaller than *Cyrilla*. Its flowers are also borne on racemes which are only 1 to 2 inches long and upright. When the seed ripens the raceme resembles buckwheat, hence the name. The native range is recorded as being from southeast Louisiana. I have only seen it east of the Pearl River at the Louisiana and Mississippi stateline and east to Florida.

If you are looking for something different, something new, a good honey plant, or just an attractive and care-free native, then maybe *Cyrilla racemiflora* is for you. Remember: the Arboretum is open year-round, dawn to dusk, seven days a week, so come by and let us know that you like what we're doing! GOOD GARDENING!

# THE SFASU BOG



## Plant List

1. *Crataegus opaca*
2. *Agrostis populifolia* (Leucanthos)
3. *Illicium* sp.
4. *Citrus trifoliolata*
5. *Alnus serrulata*
6. *Nympha sylvatica* var. *bicolor*
7. *Viburnum nudum*
8. *Cephalanthus occidentalis*
9. *Hammamelis virginiana*
10. *Myrica cerifera*
11. *Crataegus brachyacantha*
12. *Crataegus uniflora*
13. *Sabal minor*
14. *Symphoricarpos orbiculatus*
15. *Magnolia pyramidalis*
16. *Magnolia virginiana* var. *australis*
17. *Styrax grandifolius*
18. *Styrax americanus* var. *puberulentum*
19. *Cyrilla racemiflora*
20. *Cliftonia monophylla*
21. *Ilex vomitoria* var. 'Will Fleming'
22. *Styrax americanus*
23. *Leucothoe racemosa*
24. *Rhododendron oblongifolium*
25. *Ilex virginica*
26. *Ilex japonica* var. 'Bobu'
- 26A. *Manfreda virginica*
28. *Sarracenia alata*
29. *Gallardia acutifolia* var. *winkleri*
30. *Hibiscus acutifolius*
31. *Hibiscus coccineus*
32. *Hibiscus leucophyllus*
33. *Hibiscus militaris*
34. *Iris Asagosa* X *Iris flava* (Zaubers Iris)
35. *Ilex myrifolia*
36. *Hammamelis virginiana*
37. *Pinus glabra*
38. *Lycium salicaria*
39. *Aronia arbutifolia*
40. *Ilex coriacea*
41. *Synonymus americanus*
42. *Persea borbonica*
43. *Rhododendron chapmanii*
44. *Rudbeckia hirta*
45. *Rudbeckia mariana*
46. *Zizia aurea*
47. *Viburnum nitidum*
48. *Siphium gracile*
49. *Aletris aurea*
50. *Thalictrum dasycarpum*
51. *Cardenia lantanifolia*
52. *Rapizica shaernocarpa*
53. *Ilex glabra*
54. *Pyrenanthus* sp.
55. *Physalis bracteata*
56. *Dichromena latifolia*
57. *Eryngium yuccifolium*
58. *Apocynum glaberrimum*
59. *Schoenolobos croceum*
60. *Erigeron* sp.
61. *Stachytaraxa pratinseum*
62. *Batimaria ciliata*
63. *Trillium texanum*
64. *Dianthus macrocarpa*
65. *Helianthus maximiliani* X *H. angustifolia*
66. *Carex* sp.

# NOTES FROM THE HERB GARDEN

by Kurt Whiting

Herbs are useful plants that increase the personal satisfaction of those who incorporate them into their lifestyles. I often tell others, "You don't have to grow them to use them," but if you do, you may appreciate herbs even more. Their habit, color, scent, assortment, and usefulness all lead to the the mystique of utilizing and enjoying herbs in the garden.

There is often a fine line between herbs and spices even though botanically we can easily distinguish the difference. The following references to herbs will blur the distinction to include selected trees and shrubs as well as annuals, biennials, and perennials. While certainly not conclusive, the lists of herbs that follow are those that do well in Nacogdoches.

The herb garden at the SFASU Arboretum is being developed through various theme gardens. With a grey/green and a fragrant herb garden now well established, we are now building ~~additional~~ terraced raised beds on the east and south slopes adjacent to the existing herb garden. One thing we have learned from constructing the railroad tie retaining walls is that you should always install deadmen along the wall. A deadman anchors the wall to the slope at intervals. This helps hold the wall in place when soil is backfilled behind the wall. Without this easy and simple precaution the terraced

retaining wall can bulge or even give way under the weight and pressure of backfill. In the ~~near~~ future we hope to add the following theme gardens: culinary, tea, medicinal, dye, biblical, and landscape herbs.

## COOKING WITH HERBS

Cooking is one of the most basic and popular uses for herbs due to the production of volatile plant oils from these multi-purpose plants. Whether you do the cooking yourself or someone else cooks for you or if you eat prepared foods, the chances are that one or more herbs have been added to your food as a flavoring agent.

Fresh cut herbs are best when harvested in mid-morning just after ~~the~~ dew has evaporated. For plant vigor, you should never remove more than one-third of the foliage at any given time during the growing season. The strongest flavor generally occurs just before the herbs are about to bloom. When plants bloom, the energy is directed to seed development, thus decreasing the strength of plant oils in herbs. Fresh herbs can be stored in a refrigerator for up to one week.

Dried herbs are available in many forms from ~~an array of companies,~~ at grocery stores and through mail-order businesses. Because dried herbs are a more concentrated form, less dried herb (approximately one-third) is used when cooking than with its fresh counterpart. You can also experiment with drying

your own fresh herbs to "extend the growing season." Store dried herbs in a dry, cool and dark environment for best flavor and color retention. The shelf life of dried herbs is usually six to nine months.

Your desire to grow herbs as well as your personal growing technique will determine your success. You should be happy to know that herbs are commonly free of pests, thus reducing or eliminating the need for toxic pesticides. If you do find bugs on your plants, use insecticidal soap or a homemade spray made with garlic. You can try pyrethrum dust, a natural botanical insecticide.

The following culinary herbs can be grown in most areas of Texas: basil, bay, borage, cardamom, cayenne pepper, chervil, chives, cilantro, dandelion, dill, elderberry, epazote, fennel, french sorrel, french tarragon, garlic, ginger, horseradish, lemon verbena, mexican mint marigold, mints, oregano, parsley, rosemary, sage, salad burnet, sassafras, savory, scented geranium and thyme.

**LANDSCAPING WITH HERBS**

There are many gardeners that enjoy growing herbs solely for their beauty. In fact, many people grow herbs in the landscape without even knowing that the plants are herbs. Most herbs demand a well-drained soil. Raised beds and containers provide that condition and are preferred.

Raised bed gardening is the best way to grow herbs. The bed can be any size and

shape, with or without borders or retaining walls. It should, however, be at least six inches above the existing soil line to insure adequate drainage. I have developed a unique technique for growing herbs that appears to do well in our rainy climate. Dr. Creech calls it "Kurt's volcano technique." I start by building a six to twelve inch high mound of sand. A four-inch, six-inch, or one-gallon container-grown herb is then planted in an opening made at the top of the mound. A large area surrounding the mound is then mulched to the new soil line around the plant. It's important not to mulch too deep near the plant or disease, stem rot, and even termites can get a foothold. The mounds or "volcanos" can be placed in any pleasing arrangement and new mounds can be added at any time. The heavy application of mulch needed in this method holds the soil and plants in place and eliminates the need for expensive border materials. Many low-cost mulches are available and serves other purposes in the garden. It insulates plant roots, preventing wide swings in soil temperature. Noxious weeds are less likely to get a foothold and if they do, they are easily removed, roots and all. This technique provides a copious volume of organic matter for the years ahead, slowly decomposing to form a humic fraction that herb roots love to proliferate in. Finally, a smooth layer of mulch has a beauty in itself and lends a touch of continuity and character to the garden. Although many references describes herbs as plants that love poor soil, they do respond

Mulch



to occasional light applications of fertilizer. Once or twice per year, I prefer to spread a thin layer of composted chicken litter around the plants, avoiding the crown of the plant. Light applications, placed on the mulch surface well away from the plant crown, will not burn plants. If the smell bothers you or your neighbors, cover it a thin layer of mulch.

Consider using herbs around roses and in vegetable gardens as companion plants to deter pests and to increase the oil production in some scented herbs. If you are so inclined, consider *planting by the signs* for healthier and more robust plants, a practice of many early settlers.

Container gardening gives the homeowner the mobility that just can't be found from growing plants in the ground. Herbs in containers can be moved as needed. Whether you decide to place your plant under the rays of the sun or beneath the shade of your favorite tree, herbs in containers become intimate objects to enjoy and move about. Bring them in for special occasions. Set them out to enjoy a spring rain. Dress up your patio for a party. Always use a container sized in proportion to the plant root ball and repot into a slightly larger container when the plant demands more space. A container too small for the plant restricts plant growth and necessitates frequent watering. Container and greenhouse-grown herbs are more susceptible to insect problems as well as problems with under or over watering and nutrient

leaching. My advice is to *observe your plants often*; allow them to tell you what they need. There are so many ways to enjoy the growing of herbs. Try a collection of herbs that attract butterflies. Create a small biblical, historic, or native herb garden. The following herbs do well in Texas landscapes:

ajuga, artemesias, brazilian buttonflower, calendula, chicory, columbine, conradina, echinaea, germander, hyssop, lamb's ear, lavender, mexican mint marigold, monarda, pennyroyal, purslane, rose campion, rue, salvia, santolina, tansy, vanilla grass, vetiver, yarrow.

#### MEDICINAL HERBS

Folklore medicine is one of the most controversial uses for herbs. Many people in other countries use herbs as medicines without a prescription. However, I always state that *self-medication is dangerous* and is often just a placebo at best. That's not to say that herbs aren't useful as medicine. Many are. Several have served as the blueprint for many of the synthetic drugs prescribed by licensed physicians today. But, let's face it. Some self-prescribed herbs are lethal (i.e., Foxglove, the source for digitalis, a heart medicine). Because herbs are so variable, it is almost impossible to know just what "dose" one is taking. Plants vary in strength from year to year and season to season. One exception may be *Aloe vera*, ~~referred to~~ in the literature as an excellent burn remedy. Other ~~recognized~~ over-the-counter remedies such as clove oil for tooth aches and

recognized

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witch hazel lotion as a skin astringent are available in most drug stores. Nothing can create a controversy quicker than discussing the merits of aromatherapy, chiropractic nutrition, homeopathy, and naturopathy. Using medicinal herbs as part of the treatment or prevention of disease is still an unknown science. The best advice, if you are ill or injured, is to see your doctor. If you self-medicate, use common sense and moderation. Some of the medicinal herbs that grow well in Texas are: aloe, comfrey, echinacea, feverfew, foxglove, garlic, ginseng, gotu kola, horehound, lavender, mullein, pleurisy root, rosemary, rue, sage, sassafras, and witch hazel.

#### HERBAL TEAS

Dozens of companies sell loose, cut and bagged dry herb tea. Canned, bottled, and aseptic packaged ready-to-drink herb teas are also available. Most herb growers prefer to grow their own herbs for special teas. There is a sense of pride in growing your own herbs for tea. To many, knowing that the product is free from contaminants makes the drink more enjoyable. Herb tea can be made from fresh or dried plant material. Herb tea, hot or cold (called ice box tea), can be made to any strength, and then consumed, sweetened, or unsweetened or mixed with fruit juice. Herb tea is a refreshing caffeine-free change from the common tea that most of us know so well. Herbs that make worthy tea ingredients include basil, catnip, chamomile, hibiscus flowers, lemon balm, lemon grass, lemon verbena, mints,

monarda, rose hips, sassafras, scented geranium and sumac.

#### HERBS FOR THE ARTS AND CRAFTS

Using herbs for arts and crafts is a "value-added extra." Since herbs need periodic pruning for the basic health and vigor of the plant, the pruned trimmings can be used in many practical and creative ways. You can make scented oil, herb vinegars and jellies or concoct cosmetics and herbal soaps. You can fashion herbal wreaths and swags or create your own potpourri or scented candles. The list of things to do with herbs is endless and many books address the topic. I even read about how to make your own herb-scented, homemade, recycled note paper.

Herbs are often used to make natural dyes. Certain herbs combined with the proper moderant yield an array of soft earthy colors suitable for dyeing natural fabrics. No special equipment is required but following exact directions for the proper moderant, dye bath temperature, and timing is essential for reliable and consistent results. Dye plants that grow well in Nacogdoches include ajuga, calendula, dandelion, indigo, madder, oak, onion, and woad.

The herb garden is an educational tool, a kind of living laboratory for students and visitors. The Arboretum gardens are the result of volunteers, students and your help. I finally realized the other day that the arboretum will never be "finished." Let's hope not. Stop by and smell the lemon grass!

# THE LANANA CREEK TRAIL PROJECT

The LaNana Creek Trail project is finally getting the kind of attention that it deserved all along. For years, the idea of a creek trail walk rested only in the minds of a few local citizens. Now, the trail runs along the western banks of LaNana creek and winds its way north from Main Street, across Park and Martinsville streets, under the Starr Avenue bridge, through the SFASU Arboretum, under the bridge at College Avenue, to finally end in the woods known to most Nacogdoches citizens as the "Tucker" property, a pristine forty acre woodland recently acquired by SFASU. The LaNana creek trail is destined to become a significant and special feature in our fair city.

split up!

The LaNana creek project is more than just an effort to provide local citizens and tourists with a jogging and walk trail. The project promises to become a benchmark for other Texas communities in its emphasis on conserving local botany. While the LaNana creek has many fine stretches of streamside woodland patriarchs, much of the creek has suffered from man-induced degradation. The first focus of the trail project is to restore the streamside forest to good health. That will reduce an alarming rate of erosion occurring in channelized sections. Thousands of trees have been planted by volunteers in the last few years. Thousands more need to be set. The trail project will be introducing a

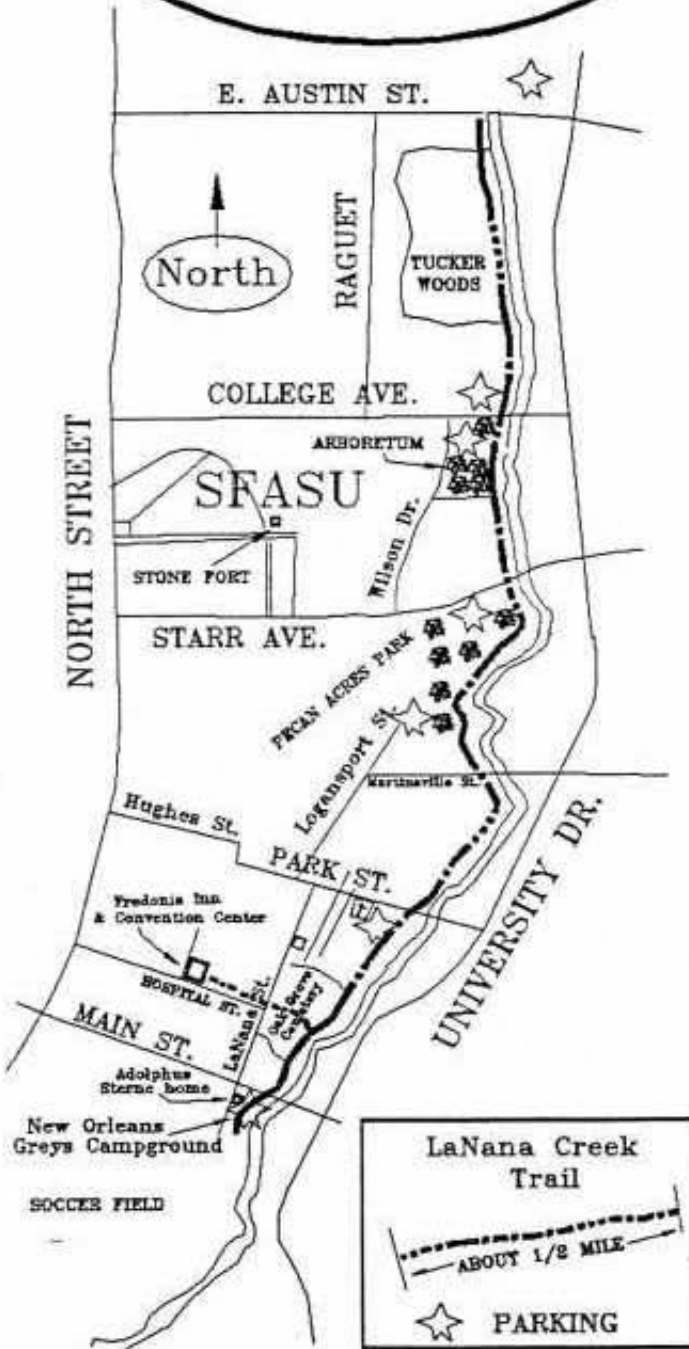
conducting

wide-ranging complement of native trees and shrubs. Trees come from a wide range of donors and the SFASU Arboretum inventory. Doremus Nursery, Warren, Texas, is due a tremendous note of thanks for donating over four-hundred wonderful oaks in five gallon containers. That will go a long way to healing our woodland stream.

recently

Those of you that have walked the trail recently must have noticed that a signage and interpretation project is underway. The objective is to create an educational and conservation resource right in our own back yard. Twenty-five tree species have been labelled and that project will continue until the entire trail is interpreted. An incredible amount of effort has reduced the thickets of invasive exotics that have chased away native plants. Thickets of privet, long stretches of vining Japanese honeysuckle, and the nuisance of tallow trees and mimosas have been reduced. Bridges and benches have been set; more are needed. After the forest has been secured with new plantings, the understory complement will be added. The creek environment has many pockets highly suited to native plant reintroduction. With just a little help, the trail walk can dramatically display hundreds of different native plant colonies. Citizens interested in helping with this project should contact Dr. Francis Abernethy, Trail Director (568-4076) or Dr. Dave Creech (568-3705).

The  
LaNana Creek  
Trail  
Nacogdoches, Texas



The LaNana Creek Trail begins in the New Orleans Grey's campground, now the Nacogdoches Soccer Field at the foot of Pillar Hill. The trail was once the pathway for Caddo Indians and Spanish colonials and is in the most historic area of old Nacogdoches. Nearby are the Adolphus Sterne home and the Haden Edwards house.

The trail meanders north, dipping under the bridge at El Camino Real (Main Street) before passing by the site of "The Eyes of Father Margil," the miraculous springs brought forth by a Spanish padre in 1716. A branch of the trail wanders west by the spring, through the historic charm of Oak Grove Cemetery, and on to the Fredonia Inn and Convention Center.

The trail crosses Park Street to the east of Zion Hill Cemetery before wandering north to Pecan Acres Park, a spacious picnic and recreation area created in the old Rusche pecan grove.

The LaNana Creek Trail then dips under the Starr Avenue bridge, meanders north past the SFASU Intramural Field before entering the university arboretum. The arboretum's mission statement focuses on the conservation, selection and use of native plants. Theme gardens include a fine herb garden, a daylily garden, a "Texas Heritage" garden, a perennial border, a dry garden, and a wetland bog. Open dawn to dusk, the arboretum is a delightful place to take a break, look around, and smell the roses.

The trail passes under the bridge at College Avenue, then snakes north, past the shotgun range, and then on into the Tucker Woods, a forty-acre tract of pristine forest owned by the university. The LaNana Creek Trail ends at East Austin Street.

The LaNana Creek Trail is approximately 2.5 miles long from Pillar Street to East Austin. The trail is a project of the Nacogdoches Sesquicentennial Celebration of 1986. The trail and the arboretum are the results of a cadre of volunteers and enthusiasts that want to make Nacogdoches a better place to live.

F.E. Abernethy, Chairman  
LaNana Creek Trail Committee  
409-568-4407

Dave Creech, Director  
SFASU Arboretum  
409-568-4343

THE CARPENTER ELEMENTARY SCHOOL  
AND  
SHELBY COUNTY COURTHOUSE PROJECT

The arboretum's two major outreach projects have enjoyed a rainy spring and summer with few losses. Both projects involve highly visible plantings that display a wide range of native tree and shrub species.

"Native woodland" projects are not unique to the SFASU Arboretum; they are becoming popular nationwide. Essentially, these are civic movements to plant indigenous plant materials in educational settings, sign and interpret the plant material, and then encourage the use of the collection as a ~~kind of~~ outdoor classroom.

In February, 1991, the Men's Garden Club of Nacogdoches planted an excellent cross-section of east Texas native trees in the bare, somewhat beaten-down island that lies at the front of the school. We had about twenty excited and enthusiastic kids help, and in about four hours all of the holes were dug, the six-foot trees were set, and bark mulch was applied. I think we only lost one tree this summer. Peter Loos, graduate teaching assistant, has mapped the area, entered the plant material and then provided <sup>large</sup> maps to teachers at the school. We will be returning later this fall to begin setting the "understory" collection, a wide range of small trees and shrubs. The key to this kind of project is to involve the kids. The theory is that if the kids are an active part of the process, then they will take care to not

<sup>protect</sup> vandalize the trees and will take an active interest in keeping alive "their very own woods." The environmental message is clear: trees and plants are the lungs of the earth and conserving native plants is a good thing.

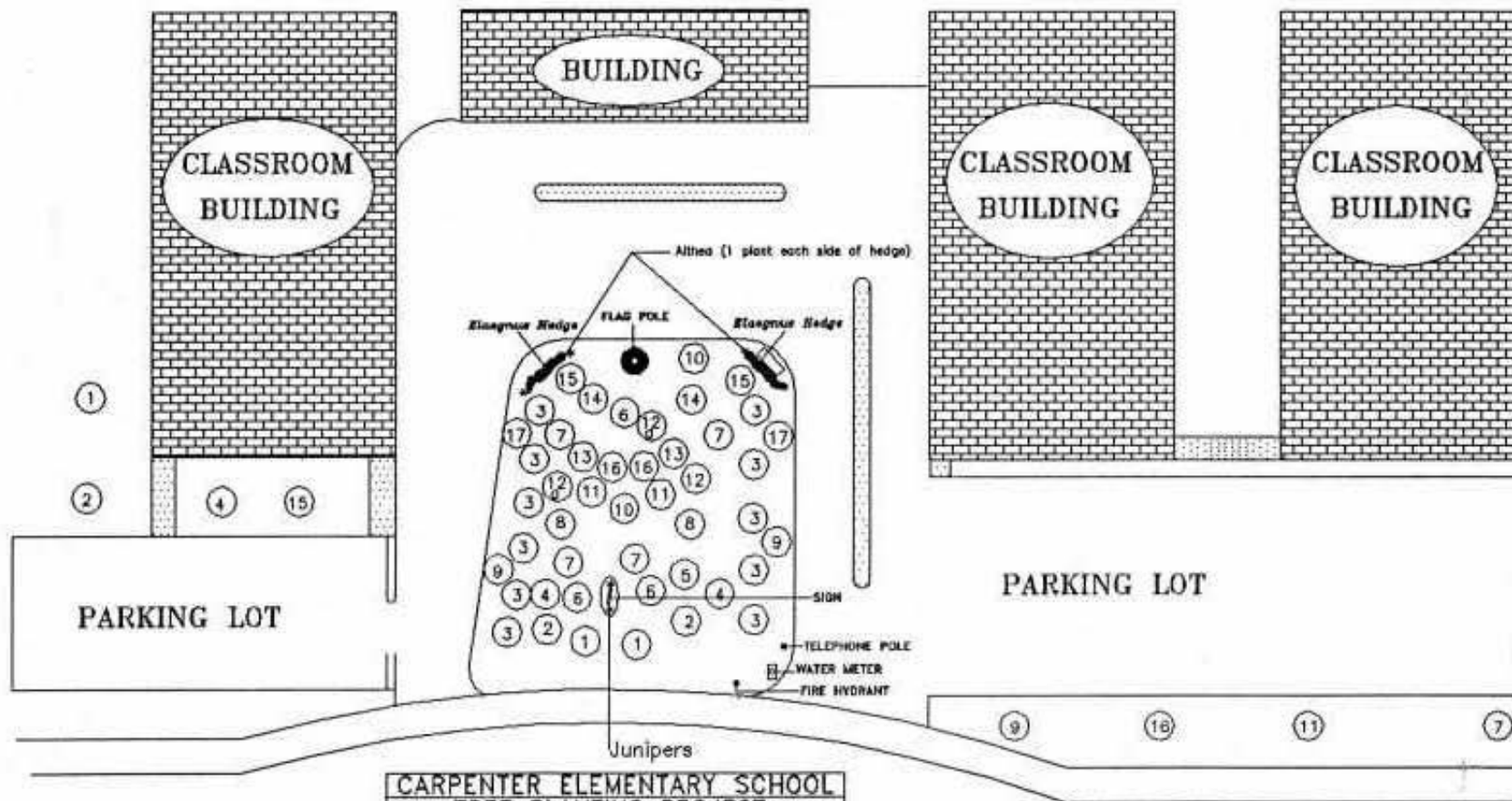
The Shelby county courthouse project is a little different. Now three years old, the tree collection is well-established. Working with the Chamber of Commerce, the Shelby County Historical Commission and volunteers, the Arboretum has acted as the source of "wonderful collection of natives. Except for a few, old patriarch trees set in a beaten-down lawn, there was nothing growing on the acre-plus site three years ago. With volunteerism, the courtyard is now home to a beautiful collection of native trees and shrubs with a few exotics thrown in here and there. In spite of some discouraging words from skeptics and human-induced damages, the collection has prospered.

The Arboretum is working with Ron Lundgren at the Nacogdoches High School to establish a similar project there. Projects like this are excellent examples of Arboretum outreach that add quality and class to the community. We encourage you to drive by and enjoy the results.

# Carpenter Elementary School

1. *Quercus texana*  
Texas Red Oak
2. *Quercus nuttallii*  
Nuttall Oak
3. *Lagerstromia indica*  
Crepe Myrtle
4. *Quercus michauxii*  
Swamp Chestnut Oak
5. *Forsythia sp.*  
Forsythia Variety
6. *Magnolia grandiflora*  
Southern Magnolia
7. *Ilex opaca*  
American Holly
8. *Carya illinoensis*  
Pecan
9. *Acer leucoderme*  
Chalk Maple

10. *Acer saccharum*  
Sugar Maple
11. *Nyssa sylvatica*  
Blackgum
12. *Magnolia virginiana*  
Sweetbay Magnolia
- 12A. *Magnolia virginiana var australis*  
Evergreen Sweetbay Magnolia
13. *Acer drummondii*  
Swamp Red Maple
14. *Quercus lyrata*  
Overcup Oak
15. *Quercus alba*  
White Oak
16. *Quercus phellos*  
Willow Oak
17. *Carya cordiformis*  
Bitternut Hickory



CARPENTER ELEMENTARY SCHOOL  
TREE PLANTING PROJECT  
DRAWN BY: Peter M. Loos  
SPASU Arboretum Outreach Program  
DCX 13000 Dept. of AG, Nacogdoches, TX 75968  
DATE: 30 APRIL 91



## NOTES FROM THE ROAD

From July 19 to August 4, 1991, I enjoyed another great adventure to the gardens of the northeast, most new to me. The trip was partially funded by a grant from the Houston Livestock Show and Rodeo. In addition, a university research enhancement mini-grant allowed me to ~~collect~~<sup>collect</sup> about four hundred new herbaceous perennials for our collection. Here are a few of the highlights:

Davis Park, Charleston, West Virginia, is located along Lee and Capitol Streets and features a large rose garden, a beautiful gazebo and plenty of statuary. Immaculately kept, this city beautification project, in the middle of busy downtown, is a model for other like-minded communities. (Telephone: 304-341-8000).

Sunrise Museum and Gardens, Charleston, West Virginia, is a museum complex embodying two art museums, a historic home and a children's museum. The site is the past home of the former Governor and is full of historical interpretation. Commanding a view of downtown Charleston from one of the highest hills in the region, the gardens display a pristine forest, an herb garden, a small rose garden, and statuary. The view from the old mansion is worth the visit. (746 Myrtle Road, Telephone: 304-344-8035).

The Core Arboretum, Morgantown, West Virginia lies just below the Pennsylvania border and is located on the Evansdale campus of West Virginia University. The 75-acre arboretum contains over 500 different types of plants and includes the state champion Chinkapin Oak. Most of the arboretum is actually a nature preserve bordering the Monongahela River. Three and a half miles of steep trails lead visitors through undisturbed

patches of wildflowers, seeps, rocky slopes, and flood plain forests. The Arboretum is under the Department of Biology and is supported through state funding. (Telephone: 304-295-5201).

The Scott Arboretum at Swarthmore College in Swarthmore, 500 College Avenue, Pennsylvania, is about 15 miles west of Philadelphia. The campus-as-arboretum is beautifully done. Jack Potter, Horticulturist, led me through some of the interesting collection and loaded me down with cuttings and several containerized plants. I was eager to get cuttings of *Itea virginica* "Henry's Garnet". Even though we have this special clone of the sweetspire, I wanted one from the campus where it originated (just in case ours is not really the real thing). The Scott Arboretum is a green oasis uniquely situated on the campus of this small liberal Arts College. Over 110 acres create the landscape and over 5000 different kinds of plants are grown, selected for their ornamental qualities, ease of maintenance and resistance to disease. Major collections include: Flowering cherries, Corylopsis, Crabapples, Lilacs, Magnolias (now over 64 taxa), Native Azaleas, Ornamental Grasses, Tree Peonies, Viburnums, Wisteria, and Witch

kill all lines

kill cups

many

The total work force includes over 300 full and part-time employees. Students from the University of Delaware, Maryland have had a long-standing graduate education program on the grounds, a program that is considered by most as the premier public gardening program in the U.S. Students enjoy a busy hands-on program that uses the many theme gardens as living laboratories. The gardens themselves are beyond description. Water, running and still, is an ever present feature. The fountain show is breath-taking. Immaculately pruned hedges frame many meticulous color beds. My favorite stop was the "Idea Garden", a series of theme gardens intelligently interpreted and signed. The Vegetable gardens included a children's garden, an oriental garden, a salad garden and a southwestern garden. Each garden was signed to educate visitors about the many techniques to produce food for the table. The fruit garden displayed all kinds of trellising, pruning and training techniques, new varieties, advice for homeowners, and a wonderful crop of berries, peaches, apples, plums, and other not-so-common fruits.

The annual color garden exhibited a wide range of vivid annuals, all in the prime of health. Annuals were organized in beds for 1) cool colors, 2) warm colors, 3) shade, 4) dry areas, 5) texture, 6) children, 7) cutting, 8) and for testing All-American Selections and new varieties.

A new, extensive garden displays herbaceous perennials, plants that return year after year from a crown or clump. Areas were arranged for natives, old-fashioned, dry shade, dry soils, new or underused, multi-season interest, for attractive foliage, for ability to attract hummingbirds, butterflies, and moths, and for fruiting interest. Each spot was signed and interpreted with tasteful silver-on-white anodized aluminum labels.

The herb garden was designed in a formal fashion and organized to display medicinal, culinary, industrial, and fragrance. Again, small metal signs interpreted each theme and individual plants were identified by genus, species, common name and area of origin.

A special section, created in 1988, did a remarkable job displaying the latest rage in gardening in the northeast, ornamental grasses. I counted over fifty taxa and couldn't help but write all the scientific names down and vow that the SFASU Arboretum make plans to do the same. One word sums up my impressions of the use of ornamental grasses: outstanding.

Other outstanding features include a Hillside Garden, a Wisteria Garden, an Italian Garden (under restoration), a rose garden, a collection of vines, a stunning topiary garden, a natural area forest walk featuring an ancient overstory of beautiful trees, a wildflower meadow. Over four acres of conservatory cap the grounds with collections of



26  
palms, orchids and tropicals.

Longwood Gardens is one of the premier gardens in the area. A full day is needed to walk the trails, to sit and enjoy the legacy of Mr. du Pont. (Telephone: 215-388-6741).

Morris Arboretum is one of the most well-known arboretums in the world. Located in the northeastern section of Philadelphia, the gardens are now surrounded by urban sprawl. Chief Horticulturist Judy McKewen led me through the basic collection, filled me in on the history of the gardens, and described the operations of the organization. Part of the University of Pennsylvania, the arboretum has a long history that goes back to the gardens of the Morris family. This former governor found great joy in acquiring the trees of China, many from the Wilson trips in the late 1800's. Some of the original trees remain and are now stately giants. A Katsura tree, *Cercidiphyllum japonicum*, was perhaps the most impressive, as wide as it was tall with giant branches sweeping the ground. Our eight-foot tree at the SFASU Arboretum gives little indication of its ultimate potential as a shade tree.

The North Carolina State University Arboretum at Raleigh is as close to heaven that a plant lover can get. If you want to see a lot of different ornamental plants in a small place, this is the place for you. The eight-acre garden has as many rare and unusual plants as anywhere I've ever been. Not only is the collection attractively displayed, they

serve as a foundation for improving and encouraging diversity in gardening. Dr. Raulston, Director, encourages diversity in gardening and is always quick to share a new plant. His enthusiasm to get new plants into the trade is well known.

I spent a busy morning collecting cuttings for the SFASU Arboretum and then rushed to the UPS office for a one-day delivery. Special collections included cuttings from a number of *Wisteria floribunda* cultivars. I was very impressed with the arboretum's sensible display technique for these aggressive vines; trained against an eight-foot steel post to a tree form, the vines can be contained rather easily. That's a bit different approach than commonly used. *Wisteria*, as we all know, can get away from a homeowner and become a nuisance and an aggravation.

The North Carolina Arboretum at Chapel Hill is dedicated primarily to conservation of the native plants of the sand hills and to educating the public about the issues surrounding habitat protection. Nature trails, an outstanding collection of aquatic plants including some impressive work with *Saracenia* spp., are major thrusts of this garden. A must stop. The herb garden is outstanding, in my opinion, because of excellent interpretation.

The Atlanta Botanical Garden, Atlanta, Georgia. Mildred Pinnel, Horticulturist, and Robert Bowden, Director, were kind enough to provide me with some time during my four hour sojourn through the sixty acres

of collections. Neat as a pin, the arboretum features a refined landscape that has enjoyed several years of expansion. A new conservatory is a centerpiece to the sweep of graceful theme gardens that surround it. A "children's garden" was delightful and featured a six-foot chicken sculpture topiary. A wide range of herbaceous perennials are under evaluation at the gardens and Mildred Pinnel, the chief horticulturist, and I are working on some exchanges.

*graphics insertion*

### NORTH CAROLINA SPECIALTY PLANT MAIL-ORDER NURSERIES

The following list was provided by Dr. J.C. Raulston, North Carolina State University Arboretum. I'm including this list because so many of the plants offered are adapted to east Texas gardens and because receiving plants by mail is so easy. In general, UPS Second Day Air is the best approach and remember: no PO Boxes. Make sure you have a street address so UPS can find you. Our experiences with this method have always been favorable. Late fall, winter, and early spring shipments can be made via the less expensive but slower (four-five days) ground transport method. My recommendation is to try the technique with a small order, gain some confidence, and then go on to bigger orders. Finally, if you intend to make a trip to the nurseries listed or other primarily mail-order nurseries, please call ahead for an appointment.

Boothe Hill Tea Company and Greenhouse, Nancy Easterling, 23B Boothe Hill, Chapel Hill, North Carolina 27514 (919-967-4091): Specializing in wildflower seed for naturalizing in the garden.

Camellia Forest Nursery, Kai Mei Parks, 125 Carolina Forest Road, PO Box 291, Chapel Hill, North Carolina 27514 (919-967-5529): Specializing in uncommon *Camellia* hybrids, rare Asian trees and shrubs.

Cardinal Nursery, Bill and Barbara Storms, Rt. 1 Box 316, State Road, North Carolina 28676 (919-874-2027): Specializing in *Rhododendron* hybrids.

Donnelly's Nursery, Russell Donnelly, Rt. 7, Box 420, Fairview, North Carolina 28730 (704-298-0851): Specializing in *Hosta* and *Ivies*; SASZ for catalog.

Holbrook Farm and Nursery, Allen Rush, Rt. 2; Box 223B, Fletcher, North Carolina 28732 (704-891-7790).

Jernigan Gardens, Bettie Jernigan, Rt. 6 Box 593, Dunn, North Carolina 28334 (919-567-2135): Collector *Daylilies*, *Hostas*, and *Iris*.

Lamtree Farm, Lee A. Morrison, Rt. 1 Box 162, Warrensville, North Carolina 28693 (919-385-6144): Native tree and shrub species, including the rare *Franklinia* with plants of many sizes available.

Little River Farm, Keith Bonn and Mel Oliver, Rt. 1 Box 174, Middlesex, North Carolina 27557 (919-965-9507): Concentration on perennials.

Montrose Nursery, Nancy Goodwin (Doug Ruhren, Rich Hartlage), PO BOX 957, Hillsborough, North Carolina 27278 (919-732-7787): Great range of perennials including nursery propagated *Cyclamen*, local and heritage plants; \$1.50 for catalog.

Niche Gardens, Kim and Bruce Hawks, 1111 Dawson Rd., Dept. R, Chapel Hill, North Carolina 27516 (919-967-0078): Nursery propagated southeastern U.S. native plants plus a wide range of perennials and grasses, some interesting woodies; \$3.00 for catalog.

Powell's Gardens, Loleta Powell, Rt. 3 Box 21, Princeton, North Carolina (919-936-4421): *Iris*, *daylilies*, *hostas*, *ferns* *sedums*, *sempervirens*, *dwarf conifers*, and *perennials*; \$2.50 for catalog.

Rasland Farm, Sylvia Tippet, NC 82 at US 13, Godwin, North Carolina 28344 (919-567-2705): Wide selection of *herbs*, *scented geraniums* and *herb products*; \$2.00 for catalog.

Sandy Mush Herbs, Fairman Jayne, Rt. 2 Surrett Cove Rd., Leicester, North Carolina 28748 (704-683-2014): A fine list of herbs and perennials; \$4.00 for catalog/handbook.

The Gathering Garden, Bill Barker, Jr., Rt. 1 Box 41E, Efland, North Carolina 27243 (919-563-6595): Over 600 types of herbs, flowering perennials, wildflowers, groundcovers and ornamental grasses.

The Wildwood Flower, Thurman Maness, Rt. 3 Box 165, Pittsboro, North Carolina 27312 (919-542-4344): Nursery propagated native wildflowers and ferns including hybrid lobelias.

Vine and Branch Nursery, Steve and Rhonda Burns, Highway 54E, Box 212B, Chapel Hill, North Carolina 27515 (919-967-7629): Specialty nursery with many rare woodies.

Washington Evergreen Nursery, Jordan Jack, PO Box 388, Brooks Branch Road, Leicester, North Carolina 28748 (704-683-5418 April to October and 803-747-1641 November to March): Dwarf conifers, *Rhododendron* and *Kalmia*.

We-Du Nursery, Dick Weaver and Rene Duval, Rt. 5 Box 724, Marion, North Carolina 28752 (704-738-8300): Rare botanical species, rock garden plants, uncommon bulbs, Japanese specialties.

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## A FEW SPECIAL PLANTS IN THE SFASU ARBORETUM

Now that the arboretum is six years old, there are a number of plants that have emerged as winners. The fact that the arboretum has endured some of the most tragic weather variables is further proof of the adaptation ability of some of these never-before-tested-in-Texas taxa. While this accounting is certainly not complete, the list includes those that have impressed visitors the most.

*Abelia chinensis* is rarely seen in Texas and has been an outstanding performer in the arboretum. While the plant is normally deciduous in most of our winters, I have found the plant superior to the more common *Abelia X grandiflora* and other cultivars, used, I suppose, because they are evergreen. *Abelia chinensis* has a much more dramatic bloom and provides a fragrant charm that its evergreen cousins can't touch.

*Cornus controversa* is the giant dogwood from China. Our twelve-foot tall tree is located in Asian valley and has reached that height in less than four years. The tree sports a striated bark, large leaves and graceful form. While it has yet to bloom, it has shown an obvious tolerance for heavier soils, unlike its *Cornus florida* cousin, our common dogwood. High on my wish list is *Cornus controversa* 'variegata', an outstanding connoisseur plant with distinctive variegation and outstanding form. I have noticed that our giant dogwood seems to push new growth late, exhibiting delayed foliation. Perhaps, this is because our winters are a bit too warm and the chilling requirement is higher for the species than what we receive here in Nacogdoches. Still, the tree is beautiful and certainly one that deserves more use in east Texas landscapes.

*Glyptostrobus lineatus*, the China Water Fir, is a member of Taxodiaceae and is considered rare in its native habitat in China. While Krussman describes the tree as zone 9, our tree never blinked when hit with the December 23rd, 1989, arctic cold blast that drove the temperature to minus one degrees fahrenheit. Our tree is ten feet tall after four years in the garden and makes a graceful cypress-like addition to any tree planting. This species roots easily and grows fast if provided with water, mulch and good fertility.

next plant brought  
up ↑

*Euschapis japonica* may be marginally hardy in our area but suffered no damage during the last two winters. A monotypic genus, this deciduous shrub or small tree features striated bark and yellowish flowers in long stalked, three to four-inch wide panicles. Our six-foot plants are located in Asian valley and come from a National Arboretum collection expedition to Japan.

*Euodia danielii* and *hupehensis* are very similar trees that reach a height of twenty to thirty feet. The tree sports white flowers in four-inch wide corymbs and opposite, odd pinnate leaflets. The blooms are followed by beak-shaped red berries. There are twenty species in China and our trees have been trouble-free for four years.

*Kolkwitzia amabilis* 'Pink Cloud', beauty bush, is a diminutive shrub to seven or eight feet. In many respects, the plant is a smaller, more subdued *Weigela*. I must admit that we have lost three or four plants before we finally found a spot that the plant seems to thrive in. I would suspect that we may be a bit far south for this species but seeing the bush in bloom on the east coast made me want to try it. Our cultivar comes to us from cuttings taken at Arnold Arboretum by Sandi Elsik many years ago. Indigenous to China, this zone five plant has five lobed, campanulate pinkish white blooms that appear in May. While we only had a few blooms this year, the plant is robust and happy in its spot in Asian valley.

*Arbonia arbutifolia* 'Brilliantissima' is a cultivar of Chokeberry that has performed well for several years in the arboretum. Our specimen is located in the Phase 2 area near first raised bed in that garden. Our five-foot plant sports white flowers in the spring, followed in autumn by a glossy coat of red berries and showy leaves. Benny Simpson, premier native plantsman at Texas A & M University, drove over last fall to catch the plant at its best. The quarter-inch fruit resembles tiny apples. Best in part shade, the plant also responds to bark mulching by sending up numerous suckers from the crown.

*Chimonanthus praecox*, Wintersweet, produces fragrant, pale yellow blooms during the winter period. We have several plants in the arboretum that appear well established. The largest specimen rests just to the right of the entrance gate at the north end of the Agriculture/Art parking lot. The lustrous green leaves are reported to reach ten inches in length; ours are commonly five to six inches long. The plant needs a moist, well-drained spot and appreciates generous applications of bark mulch.

# THE POTENTIAL OF FIELD-GROWN CUT FLOWERS IN EAST TEXAS

## INTRODUCTION

Market analysis by the Texas Department of Agriculture and the Texas A & M University Experiment Station indicate an opportunity for field-grown cut flowers as never before. This optimism is based on remarkable growth in floral sales, averaging over a ten percent increase per year for the last decade. The increase in cut flower sales has been attributed to:

1. The entry of cut flowers and potted plant departments into supermarkets has been a tremendous stimulant to sales. Over 600 supermarkets in Texas market cuts and the figure nationwide is now over 80%. Average per store dollar sales of cut flowers has increased over four fold since 1982. That trend is predicted to continue.
2. An organized wholesale marketing system and a national advertising program via FTD emphasizing "mixed bouquet" themes has made sending flowers easy and the "expected" thing to do.

Texans spend about \$500 million dollars per year on cut flowers. The portion produced in Texas is minuscule. If Texas producers could capture just ten percent of that market, Texas-grown flowers would have a retail value of about \$50 million dollars. To do that, Texas producers need to identify market niches and then choose flower varieties that will satisfy those markets. No one doubts that Texas growers face stiff competition from a sophisticated industry. Imports have increased dramatically in the last ten years. For instance, according to the Floral Trade Council,

the increase in cutflower imports from 1989 to 1990 alone, for high volume crops averaged over 20%:

Colombia now dominates over 60% of the market and other countries are jockeying to get a piece of the action (primarily from Central and South America and European auction houses and brokerages). The movement to a free trade status muddies the picture even further. There is room for optimism, however.

The growth in popularity of the "mixed bouquet" has allowed for an explosion in new cutflower species to be

*Drawing of Echinacea  
purpurea, Purple  
Coneflower  
by Art  
Student*

introduced and accepted by florists, accounting for the strong growth of cuts in the "others" category. That trend has made it much easier to introduce new species into common practice. Florists are always looking for the new and the different, provided they are confident of quality and vase life characteristics.

Drawing  
of  
Chacosmia

This proposal will install an ongoing testing program for field-grown cut flowers. This has never been attempted in east Texas. For a field-grown cut flower industry to evolve in east Texas, it is essential that benchmark data be collected from promising native species and exotic cultivars. Analysis of the Texas cut flower market potential indicates that potential "niches" with promise include:

1. Non-traditional cutflowers that may fit into the "mixed bouquet" concept. Two obvious candidates would be cultivars of native *Echinacea* spp. (Purple Coneflower) and *Liatris* spp. (Gayfeather). Major emphasis will be placed on herbaceous perennials (plants that crop three or more years, generally from a crown). Breeding and selections from the wild of perennial species has resulted in many excellent cultivars, most not tested under Texas conditions. In addition, perennials are currently enjoying a "boom" in horticulture, resulting in strong markets for cut flowers as well as started plants. Yield on perennials can be very high. Flowers of many species are new to the consumer, resulting in the advantage and disadvantage of newness. Problems to overcome with perennials include the following: 1) a long time frame to harvest (six months to over one year), 2) difficult seed germination, 3) a narrow harvesting/marketing window, and 4) labor intensity.
2. Varieties that are highly perishable or delicate to transport great distances. Texas growers would have a decided advantage over out-of-state competitors with crops requiring a minimum time frame between harvest and retail sale. Some perennial species with outstanding visual quality need to be cut and in a vase as soon as possible; even when cooled and humidified, some plants perform poorly if their stems are out of water for even a small period of time (hours). Growers near major



flower distribution houses in Texas (Houston, Dallas, San Antonio) enjoy a strong market advantage with difficult-to-transport types.

- 3. Varieties that are ready for market when supplies tend to be low and demand high. Gladioli can be forced to produce much earlier in Texas, of course, than northern growers and many overseas competitors. Just how much earlier and wider a marketing window can be developed will depend on variety testing and cultural treatments. The use of black poly mulch promotes some species to bloom a week or more earlier. Late setting of transplants, while often reducing yield, can also delay the start of harvest by several weeks. Expanding the marketing window is essential to capturing market share increases.

This project has strong value to gardeners in Texas. Because many perennials that are popular as cut flowers also perform well in the garden, this project should be of interest to a wide swath of gardening consumers. Gardening is now considered big business. Gallup's 1990-91 National Gardening survey recently reported a dramatic upturn in gardening activities and interest. Expenditures for all gardening now exceeds \$284 per household and lawn and garden retail sales in the U.S. is a \$20+ billion industry. More importantly, the survey indicates that flower gardening retail sales increased to 2.1 billion dollars in 1990, up from \$1.9 billion in 1989. Flower bulb retail sales totaled \$580 million in 1990, up from \$470 million in 1989. The results of this work will be of interest to Texas homeowners looking for color, perennality, and interesting plants that are different from everyone else down the block. Herbaceous perennials have surged in popularity on the east and west coast and are gaining favor in Texas. Perennials have always been

difficult to market; unlike traditional bedding annuals, perennials are rarely in bloom during the peak spring sales period and customers are unlikely to know what they are buying. Slick marketing (color display pictures in retail outlets that provide a visual cue to plant color, form, height, and cultural needs) has much to do with the increased popularity of perennials. The SFASU Arboretum is uniquely poised and capable of contributing to this ongoing trend.

The arboretum has already accumulated a rather impressive inventory of herbaceous perennials, many recognized as cut flower candidates. The fact that the arboretum plant inventory is now networked with the National Arboretum, the North Carolina State University Arboretum, and others, insures that the latest cultivars and selections can be secured. Cultivars and advanced selections of the following species will be included:

PERENNIALS

1. *Achillea*
2. *Aconitum*
3. *Aquilegia*
4. *Aster*
5. *Astilbe*
6. *Astrantia*
7. *Campanula*
8. *Centaurea*
9. *Chrysanthemum x superbum*
10. *Dianthus barbatus*
11. *Echinacea*
12. *Helianthus angustifolius*
13. *Iris*
14. *Kniphofia*
15. *Monarda*
16. *Phlox*
17. *Physostegia*
18. *Platycodon grandiflorus*
19. *Salvia*
20. *Scabiosa caucasica*
21. *Sedum spectabile*
22. *Thalictrum*

COMMON NAME

- Yarrow
- Monkshood
- Columbine
- Aster
- Astilbe
- Masterwort
- Bellflower
- Bachelor button
- Shasta Daisy
- Sweet William
- Purple and white coneflower
- Sunflower
- Iris
- Red Hot Poker
- Bee Balm
- Phlox
- Obedient plant
- Balloon flower
- Sages
- Pincushion flower
- Sedum
- Rue

BULB SPECIES

1. *Acidanthera*
2. *Allium*
3. *Anemone*
4. *Brodiaea*
5. *Crocoshia*
6. *Iris Dutch*
7. *Eremerus*
8. *Gladiolus*
9. *Liatris*
10. *Lilies (hybrid)*
11. *Narcissus*
12. *Ornithogalum arabicum*
13. *Ornithogalum thyrsoides*
14. *Ranunculus*
15. *Zantedeschia*

COMMON NAME

- Peacock Orchid
- Flowering onion
- Lily-of-the-field, windflower
- Brodiaea
- Montebretia
- Iris
- Desert candle, King's Spear
- many species
- Gayfeather
- Many new cultivars
- Daffodils
- Star of Bethlehem
- Wonder flower
- Buttercup, many species
- Calla lily

The species selected to initiate this project have been targeted by southern floriculturists as likely outflower candidates (Wilkerson at TAMU and Armitage at the University of Georgia). Other species will be included as

they are made available and their merits appreciated.

The project will secure plant materials through specialty nurseries, cooperating growers, arboreta, and plant enthusiasts. For

example, one form of the species, *Patrinia scabiosifolia*, has been a consistent performer in the Arboretum for over three years with dependable summer-long blooms that remain showy and fresh for three to four weeks. The species is the result of a 1987 National Arboretum seed collection trip to remote regions in Korea and the species is first in Texas at the SFASU Arboretum. We have an excellent bed of this species along the north side of the head house. The plant shows strong promise in the south.

CONCLUSIONS

This project has strong outreach potential and is a natural extension of the SFASU Arboretum. The project links the resources of the SFASU Arboretum with the needs of a potential cut flower industry in Texas. The project promises to generate new information to gardeners looking for something a little different in their landscaping activities.

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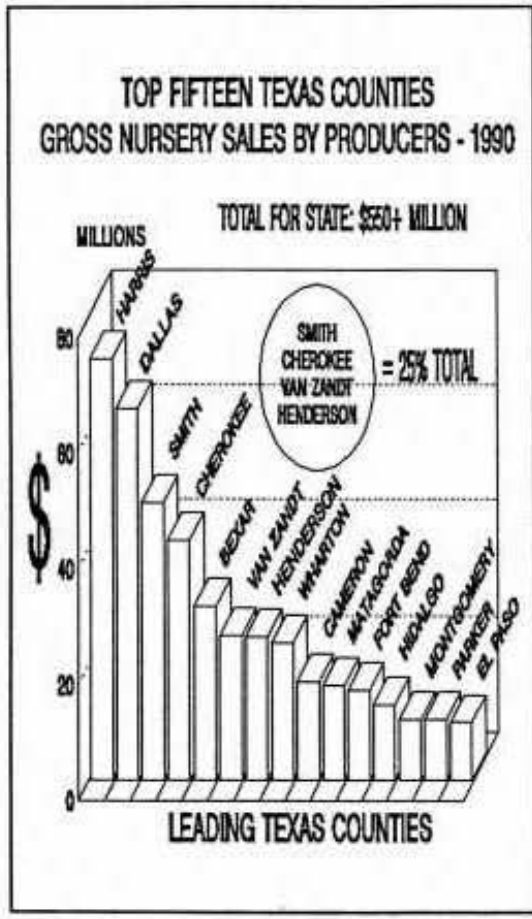
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of  
*Liatris*  
(Gayfeather)

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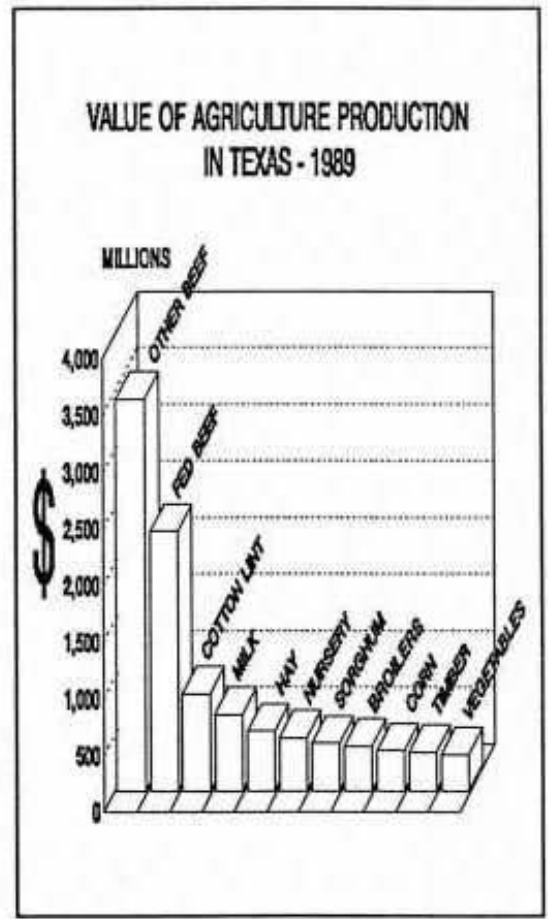
### HOW BIG IS THE NURSERY INDUSTRY IN EAST TEXAS?

There's little doubt that the nursery industry is big business in east Texas. A new set of figures compiled by Anderson and Summerour, Agricultural Economics, Extension Service, seems to underline how dramatic the industry has become. The figures are most surprising because of what they have to say about east Texas.

While these figures reflect the value of gross sales by nursery producers by county, they do not reflect the retail, green industry, landscape and other components related to the nursery industry: Impressive, indeed. Texas has always been an agriculture-based economy. Although many people do not know it, the nursery industry has now passed poultry and timber. As the following graph illustrates, however, it's going to be a while before anyone catches up with beef!



Not only does east Texas have over four of the top 15 counties in the state, the region can now boast of having over 25% of the state's gross value.



## UPCOMING EVENTS

1. Every second Thursday of the month is the monthly meeting of the Native Plant Society of Texas Lufkin/Nacogdoches chapter. The meeting place is Room 108 in the Agriculture Building on Wilson Drive, SFASU. Contact Peter Loos, 409-568-3705.
2. On October 5-7, 1991, the annual meeting of the Texas Fruit Growers Association will be held at the Fredonia Inn Convention Center in Nacogdoches. Growers from all over the state will converge on our town to learn the latest from the best horticulturists in Texas. The mood should be good; 1991 was a great fruit year and follows many that were plagued with spring freezes or low prices. Contact the Nacogdoches Chamber of Commerce for details on registration.
3. On October 22-24, 1991, the Texas Blueberry Growers Association will meet at the Fredonia Inn Convention Center for their annual conference. Two days of speakers and a day of field tours. The mood should be excellent; the Texas Blueberry Marketing Association enjoyed its first million lb. year and fruit quality, demand, and prices were excellent.