



GREEN THUMB NEWS

A Pair of Annual Dinners for 1984

Past Annual Membership Dinners have been so popular that this year two will be held so all of our members can attend. For two evenings, Tuesday, February 28 and Wednesday, February 29, members will gather in the new Morrison Horticultural Demonstration Center.

Excitement continues to build at Denver Botanic Gardens as the new Morrison Center moves closer to opening its doors to the public. To
(continued on page 5)

For Members Only: A Horticultural Workshop

Members of Denver Botanic Gardens can look forward to an exciting horticultural workshop on Saturday, March 10, 1984. Entitled, "A New Face for the Old Garden," the program features four prominent speakers who will provide advice on how to reconstruct an older garden.

A graduate of Lowthorp School of Landscape Architecture for Women and a Fellow of the American Society of Landscape Architects, Jane Silverstein Ries will share

landscaping pointers gleaned from her 51 years of experience as a landscape architect. "Old-Fashioned Garden Varieties" is the topic of Dr. James Feucht's presentation. A Horticulture professor at Colorado State University, Dr. Feucht is well known to readers of the *Green Thumb News* as the former author of "Gardening Tips."

(continued on page 5)

Inside:

Education Offerings page 5



Japanese Garden in winter white

2 Colo. Federation of Garden Clubs Course

The Colorado Federation of Garden Clubs, Inc., announces Course I, the first of a series of four courses designed to stimulate interest in gardening. Scheduled for Wednesday, March 2 and Thursday, March 3 at the Colorado Federation of Garden Clubs headquarters and Denver Botanic Gardens; the program includes plant structure and function, soils, plant propagation, and African violet information. A tour of a teaching greenhouse will also be offered.

For additional program information please contact Mrs. Joanne Carpender, State Chairman, Gardening Study Courses at 4709 Regency Drive, Ft. Collins, Colorado 80526, (303-223-8559). Registration details can be obtained from Mrs. Richard Coburn, Registrar, at 8236 Conifer Street, Denver, Colorado 80221, (303-428-2566).

Agave filifera
peaking out
from snow in
search of
spring.



Tributes

In memory of Isabel Boyle
Dr. and Mrs. Richard Garnand
In memory of Dabney Otis Collins
Kevin E. Dunn
In memory of George Fukuma
Rocky Mountain Bonsai Society
In memory of Robert Logan Gee
Otto Eastland, Jr.
In memory of Mary E. Grogan
Mrs. Thomas S. Yancy
In memory of Mary D. Hutchison
James E. Hutchison

From the Director

We have decided to combine the Annual Reports for 1982 and 1983 into a single document, which we hope to mail to members in March or April of this year. I regret any inconvenience this may cause those members who returned a coupon previously, but did not receive a 1982 Annual Report last year. Completing the enclosed coupon and returning it to the Gardens will

I wish to receive a copy of the 1982/83 Annual Report of the Denver Botanic Gardens, Inc.

Name _____

Street Address _____

City & State _____ Zip _____

Telephone Number _____

REQUEST MUST BE RETURNED
BY MARCH 1, 1984 to:

Annual Report
Denver Botanic Garden
909 York Street
Denver, Colorado 80206

ensure your being sent the 1982/83 Annual Report, which is currently being edited for publication.

If you completed and returned the coupon from the January newsletter, please disregard this notice. Your name is already on the mailing list.

Merle Moore
Executive Director

Note To All Members

The Membership Committee is grateful for your enthusiastic response to our recent members' survey and we are in the process of considering your suggestions. As a result, we hope to use your ideas to make your membership more meaningful.

Green Thumb News Number 84—2 February 1984

Published monthly by the Denver Botanic Gardens Education Department, 909 York Street, Denver, Colorado 80206, and edited by Carolyn Knepp and Patricia A. Pachuta. Subscriptions to this newsletter are a benefit of membership in the Botanic Gardens. For membership information, please write the Membership Department at the above address or call 575-3751.

Deadlines for this newsletter are: Major news stories and feature material (including photographs or artwork) for the March issue—January 20, for April—February 20, for May—March 20. Short news notes are due not later than February 1 for March, March 1 for April, April 1 for May.

Please plan in advance and meet deadlines. Late material cannot be used. Stories must be typed, double-spaced, preferably on copy paper provided by the editor. Please call the Education Department at 575-3751 for details.

In memory of Elly Mauthner
Ikebana International, Denver
Chapter 66
In memory of Fred A. Swensen
Elsie Swensen
Marian Teichmann
In memory of Joseph L. Yrisarri
Mr. and Mrs. John C. Mitchell
Donations of cash, goods, or services
have been received from the following
friends:
Earl Howell
Mary Klinger
Richard Riedy
Marcia Rolander
Alva Schloss
Southern Hills Planters
Swingle Tree Company

Water Gardeners Get Ready

Interested in knowing more about aquatic plants and gardening? You will be happy to learn that the Colorado Water Garden Society will hold meetings on the second Sundays of March, April, May, July, and September this year. Each meeting will be in the Denver Botanic Gardens House at 2 p.m.

Activities scheduled for 1984 include field trips, lawn and pool visits, picnics, and possibly a patio barbecue followed by a discussion of DBG's pools.

Prospective members wanting additional information about the Colorado Water Garden Society may call John Mirgon at 922-9559.

New Conservatory Guides are attentive as Peg Hayward discusses some plants in the Conservatory.



1984 Summer Internship Program Announced

Applications are currently being accepted for summer 1984 college internships in applied horticulture at Denver Botanic Gardens. This work-learning experience will provide the opportunity to work side-by-side with our professional staff for ten weeks.

Included will be planting, pruning, weeding, and watering on the outside grounds; seeding, transplanting, and propagation in the greenhouses; tropical and subtropical plant displays and maintenance in the Conservatory and Lobby Court areas; plus work in the Library, Education Department, and Herbarium. In addition to regular scheduled work activities, the program includes classes and field trips. Interns will receive a taxable stipend of \$2000 for the ten-week term.

To qualify, students must have completed their sophomore year of college and have a grade point average of 2.50 or higher on a scale of 4.00. Detailed course requirements and applications are available in the Education Office. Applicants are reminded that the completed application must be returned by March 2, 1984.

Colorado Garden and Home Show

The Colorado Garden and Home Show will open its doors for the 25th year on February 4 and will run through February 12, at Currigan Hall in downtown Denver. The show has progressed a long way since the first days in the Stockyard's sawdust arena, and 1984 promises to be spectacular.

In honor of the show's 25th Anniversary, silver will be the dominant theme in many of the gardens. Also featured is a special breakdown of house construction presented by the Home Builders Association—to show where your building costs go. This year's special attraction will be demonstrations by Chef Tell, who will appear at the show for three days, February 6 to 8.

DBG will incorporate the excitement of the new Morrison Horticultural Demonstration Center into our display. A special brick pathway will enable all of the visitors, particularly the handicapped, to pass through our garden setting. The pathway will be wheelchair accessible, as will the planters, workbench, and vertical gardens. These special adaptive-gardening designs will represent some of the special features found in the completed Morrison Center.

The doors will open from noon to 10 p.m. every day except Sundays, when the show will close at 6 p.m. Denver's giant spring extravaganza features more gardens than almost all other national shows—be sure to see it!

Additional details can be obtained by calling 458-5615.



Botany Club's February Program Announced

Dr. and Mrs. John Edwards will help prepare Botany Club members for early summer visits to Utah on Friday, February 17. They will give a presentation on "Flowers of Utah National Forests in Early Summer" to members and visitors.

This meeting is scheduled for 7:30 p.m. in Classroom C. The meeting is free and the public is encouraged to attend.

Help Wanted

Would you like to be employed just three to five days each month? Our Membership Department is in search of a person to address and prepare our publications for bulk mailing. If you are interested, please call Joyce Schillen, Administrative Assistant, 575-3751, by February 10.

4 Library Gardens: Where Dreams Are Made

Volumes of nursery and seed catalogs have recently been arriving in the library mail offering us much vicarious pleasure this winter. Frustrated, winter-bound gardeners cause library circulation to increase each new year. People are eager to garden and since they cannot, they peruse the nursery and seed catalogs.

Our catalogs provide information on new varieties, cultivars, and hybrids as well as old favorites, all in dazzling color to attract and delight the eager reader.

Helen Fowler Library receives 200 catalogs each year. Some cover broad categories; offering annuals, vegetables, perennials, and house plants. Specialized houses offer cultivars and hybrids of a particular genus such as dahlia or iris, or provide ground covers, ornamental grasses, or alpine plants.

Eleanor Casebolt, library volunteer, records the arrival of each catalog. Her responsibilities include entering each company name, as well as the firm's address, on a card. All of the library holdings for one catalog house are maintained on this card. If the company specializes in a particular genus or category, the information is noted in another file where companies are cross-referenced according to their specialty.

Both the current and previous years' catalogs are housed in the library basement. They can be used in the library as reference material, but they do not circulate. Because each provides accurate historical information about plant introduction to specific areas and the plant's availability at a particular time, they are all preserved. The latter has been of value to people involved in restoration of period gardens.

Miss Casebolt records the new arrivals each week, a busy task this time of year. All of the records, files, and catalogs are available for the asking. Eager, impatient gardeners are encouraged to dream and plan their way into spring at our library tables. Library hours are 9:00 a.m. to 4:45 p.m. daily except Sunday, when they are 1:00 p.m. to 4:45 p.m.

Raised planters make gardening more accessible for handicapped gardeners.

Community Gardening

As a result of changing interests, the community gardening program at Denver Botanic Gardens has evolved from a successful children's garden in 1960 to the present family-oriented garden. Throughout these 23 years, the gardens have offered Denver area residents a place of their own to cultivate food crops, horticultural knowledge, and friendships.

The program provides a variety of services in addition to the rental of 150-square-foot plots. A class, highlighting basic techniques, is scheduled for participants in early spring. As a follow-up to this class, gardeners have several resources available to them throughout the summer. Staff is on site at all times to answer questions and provide assistance, gardeners receive a vegetable gardening manual specifically written for Colorado, and regularly scheduled seminars on topics such as canning, herbs, and pests are held. For many people, practical experience is the easiest way to learn, so novice gardeners are encouraged to "dig right in." All the basic materials required to garden are included in the \$25 fee—tools, soil amendments, water, and a variety of popular bedding plants and seeds.

With the completion of Community Garden Square, the community gardens have expanded into more than 230 plots which are

cultivated by nearly 400 people, most of whom live close to the gardens. Every year the primary benefits of gardening in a community setting are noticeably visible. From the day the gardens open in March, through the summer potlucks, and on into the fall harvest, gardeners share their expertise, supplies, and friendship. Gardening soon becomes an enjoyable educational and social experience and leisure-time pursuit as well as a source of high-quality, low-cost produce.

For those people who have the luxury of gardening in their own backyards, I encourage you to drop by some evening or weekend during the growing season. There are few places where one can see so many different gardening techniques and varieties on one site. We also have a demonstration garden designed to test new vegetable varieties and gardening methods, providing a perfect opportunity to get new ideas for next year!

If you would like to participate in Denver Botanic Gardens' community gardening program, contact Lynn Thompson at 575-3751. Space is limited, so persons will be served on a first come, first served basis.





Annual Dinner

for members of the Denver Botanic Gardens

Tuesday, February 28, 1984

Wednesday, February 29, 1984

John C. Mitchell II Hall, Denver Botanic Gardens

“New Beginnings with Plants”

an illustrated talk by

Judy K. Carrier

DBG Horticultural Therapist



Social Hour 6:00 p.m.

in the Morrison Horticultural Demonstration
Center across York St. from the Conservatory

Dress Informal

Dinner 7:00 p.m.

in John C. Mitchell II Hall

\$15.00 per person

Reservations are limited and are accepted on a space available basis until February 24 only.

Tuesday, February 28 Kindly reserve _____ places for me at the Annual Dinner.

OR

Wednesday, February 29 My check for \$ _____ is enclosed (\$15 per person).

Name _____

Names of those attending (for name tags): _____

Address _____

_____ **Telephone** _____

This reservation form together with your check must be received by February 24. Please send to:

Denver Botanic Gardens (Attn: Annual Dinner)
909 York Street, Denver, Colorado 80206

Annual Dinners

(continued from page 1)

enable you to better understand Horticultural Therapy a special treat is being prepared.

Judy Carrier, Horticultural Therapist, will be the guest speaker for both Annual Dinners. DBG members are being offered a special opportunity to see this exciting new facility, meet Judy, and hear her speak on horticulture in therapy and rehabilitation. As horticultural therapist, Judy will be the coordinator of therapy training and services offered in the new center.

Plan to attend one of the dinners and take advantage of the opportunity to welcome Judy Carrier to DBG and to learn about the exciting programs she will be coordinating at the Morrison Center. The Dinners will begin at 6 p.m. with a "Look-n-See" social hour in the Morrison Center. We will then go over to the John C. Mitchell II Hall for our dinner meeting where Judy will speak on "New Beginnings With Plants."

We anticipate a large turnout for these dinners, so please complete and return the enclosed reservation form, designating the night of your preference.

For Members Only:

(continued from page 1)

In addition, the program includes two Denver Botanic Gardens staff members: Assistant Director Andrew Pierce and Plant Propagator Jim Borland. Andrew Pierce will share his expertise on perennials, and Jim Borland will discuss plant propagation techniques suitable for the home gardener.

Scheduled for 9:00 a.m. to 2:00 p.m. in John C. Mitchell II Hall, "A New Face for the Old Garden" is open to DBG members only. The registration fee is \$10.50 with a box lunch provided or \$5.00 for those who wish to bring their own lunch. Complete the Education Department registration form on page six to reserve your place.



Chinese Cooking: Fundamentals

Saturday, February 18
Classroom A 10 a.m. to 2 p.m.

This class has been scheduled for a second date due to high demand.

Chinese cuisine is well-known as both an efficient and economical approach to cooking. In this class, the important techniques of slicing and chopping, stir-frying, and steaming will be demonstrated as Moo-Shu pork and Chinese pancakes, spicy chicken, mixed vegetables, and a fish dish are prepared. Learn flexible methods of preparing Chinese dishes in your own kitchen. Bring an appetite—lunch is provided!

Instructor: Josephine Fung was born and raised in China and has been teaching Chinese cooking for over ten years. Her class in our "Asian Festival of Arts and Culture" last August was a delicious success.

Fee: \$21 members/\$23 non-members (includes \$5 for lunch)

Limit: 16

Tree Walk at South High Campus

Saturday, February 11
(one session) 2 to 4 p.m.

Here is another opportunity to learn plant identification with an expert using winter characteristics. On a walk at South High campus, numerous species such as catalpa, black walnut, hackberry, European larch, Russian olive, and ginkgo will all be observed and discussed.

Leader: Frederick W. Lenhart is author of *117 Trees and Shrubs Identified* and has conducted tree walks for the Denver Museum of Natural History as well as CSU Extension Service.

Meet: At 2 p.m. near the north door of South High at South Williams and Louisiana Streets. Please dress appropriately including boots or other warm footwear.

Fee: \$2.50 members/\$3 non-members

Seeds and Flowers

Saturdays, February 18, 25
March 3

(three sessions)

Classroom B 10 a.m. to noon
For Children in Kindergarten Through Grade 2 (ages 5-7)

Explore the wonderful world of seeds and flowers. Take a detective's tour through the Gardens and see if you can solve some seed riddles and flower mysteries. Create a sunlight flower to fill a window with color. Design seed jewelry and decorate your own paper with real pressed flowers.

Instructor: Jo Duranceau-Cannon

Limit: 12

CLASSES

Winter
1984
Denver Botanic Gardens





For the Birds

Saturdays, February 18, 25
March 3

(three sessions)

Classroom B 1 to 3 p.m.

For Children in Grades 3 Through 6
(ages 8-11)

Learn surprising ways to make your own bird feeders. Explore the Gardens to see what flowers and trees will attract birds to your backyard. Follow recipes to make a bird feast. Color-in a guidebook to help identify your feathered visitors.

Instructor: Jo Duranceau-Cannon studied art at the University of Washington and the University of Denver and has taught children's art classes at the Denver Museum of Natural History, Denver Art Museum, Colorado Historical Society, and the University for Youth at the University of Denver. She is currently an elementary school art teacher for the Cherry Creek School District.

Fee: \$20 members, \$22.50 non-members

Limit: 12

Developing Your Home Landscape

Saturday, February 18

(one session)

Classroom B 8 a.m. to 5 p.m.

In this all-day workshop students will learn how to plan a landscape for a new or existing home. Four hours of instruction by slide lecture and discussion will be followed by four hours of students designing their own master landscape plans with the guidance of the instructors.

The following topics will be covered: design procedures and principles for developing and building a landscape that suits your needs, site analysis and circulation planning, micro-climates, grading and drainage, paving and patios, irrigation systems, ecology of the home landscape including trees, shrubs, ground covers, lawns, native grasses, and flowers such as roses, perennials, and wild flowers.

An illustrated 96-page text and printed materials will be furnished. Each student will need to bring an accurate drawing of your site, floor plans of your house, a photo survey of your property (registrants will be furnished with directions for this), and a list of family needs.

A box lunch will be provided. A group discussion and short tour of the DBG demonstration areas are planned for the lunch hour.

Instructors: Thomas L. Stephens has been a practicing landscape architect for over 20 years and has taught home landscaping classes for 14 years. Janet Caniglia has worked in Colorado for three years on environmental planning, visual management, subdivision planning, and community design.

Fee: \$60 members/\$66 non-members (includes all materials and a box lunch)

Limit: 25

PROGRAM

- 8 to 8:30 a.m. —Registration, ductions.
- 8:30 to 10:15 —Lecture: Why Landscape? The Design Process. Design Principles. Getting Started on Your Project.
- 10:15 to 10:30 —Break. Students can browse through books and look at sample plans.
- 10:30 to noon —Workshop lab for students to work on their own projects. Students will review needs and budget range, site survey, and site analysis.
- Noon to 12:45 p.m. Box lunch, short tour and group discussions.
- 12:45 to 2:45 —Lecture and slide program on site planning, circulation planning, construction materials and methods for walks, patios, decks, walls, fences, lighting, and plants.
- 2:45 to 3:00 —Break.
- 3:00 to 4:45 —Workshop, lab, or students' projects. Instructors consult and critique projects and help students develop designs.
- 4:45 to 5:00 —Final wrap-up including questions and answers. Workshop evaluation.

Registration Form for Classes and Field Trips

Fees for courses should be paid in advance by check or money order made out to Denver Botanic Gardens. Fees should be sent in with the completed registration blank not later than one week prior to the first meeting of the course so that materials may be ordered as needed. Since the space is limited in many courses, registration should be mailed in promptly. Your registration will NOT be acknowledged. Your name will be placed on the class list on the day your money is received. No enrollments for fee class by phone please. All courses are given subject to a minimum enrollment of ten students. For further information, please call 575-3751.

The enclosed check, in the amount of _____, is to cover the registration fees for the following classes:

Name and section of classes _____

Name _____

Address _____

City _____ State _____ Zip _____

Home Tel. No. _____ Business Tel. No. _____

Member of Denver Botanic Gardens? Yes No

Gardening Tips for February

February represents the doldrums of winter, yet holds us with anticipated energy until spring. So much of what applies at this time of year is either a carry over from January or appropriate for March.

At this time of year branches from early flowering shrubs and trees may be cut, brought inside, and forced into early bloom. The closer the plant is to its natural flowering time, the easier it is to force. For example, forsythia, flowering quince, pussy willow, and alder blossom earlier than crab apple, redbud, and cherry, and will force easier this time of year.

Pruning is also suitable activity for February. While plants are bare of leaves, their growth patterns and forms can be studied. A word of caution: Because other gardening activities are less intense, pruning should not become a pursuit to keep busy. Every cut may be viewed as a wound and should be selectively planned, as pruning in itself is a dwarfing process.

For eager gardeners, cold frames offer ample opportunity to start vegetable crops, such as lettuce, radishes, and spinach, earlier than their normal season. They do, however, require close attention. Solar heat warms the soil during clear days and heat radiated back at night keeps the plants warm. The skill of maintaining a successful cold frame lies in manipulating the ventilation so that temperatures do not exceed 70°F or fall below 40°F.

Other tasks can be considered routine in February. Make certain mulches and other protective coverings still guard your plants. Be sure your evergreen boughs are not next to tree trunks providing shelter for rodents who nibble on the bark. Check to see that your small plants and bulbs have not been heaved out of the soil from alternate freezing and thawing.

The most challenging tasks for any serious gardener are to be continually aware of environmentally induced stresses of storms and deal with them on a timely basis.

As February draws to a close, events often associated with spring occur. A variety of crocuses and irises break ground. Migrant birds begin their return. A variety of buds swell in anticipation of spring.

The color of evergreens intensifies and differences in gardening art become apparent, as in the Rock Alpine and Japanese Gardens. The Rock Alpine Garden has numerous selections of evergreen conifers. They vary in size, color, and form and have been chosen to emphasize winter artistry. The evergreens of the Japanese Garden also dominate their scene, although they are, for the most part, of one species, *Pinus ponderosa*.

Throughout the year so much happens—flowers bloom, fruit ripens, and foliage turns. Now, in the quiet of winter, it is easier to observe the gardens' framework. Both gardens render horticultural art by combining man's creative handiwork with the beauty and intricacy of the world of nature.

February is an important month—no less important than the other eleven that complete the gardening story.

Gayle Weinstein
DBG Botanist
Horticulturist




C A L E N D A R F E B

Regular Meetings of Plant Societies

A number of plant and horticultural groups meet fairly regularly at the Denver Botanic Gardens. Here is a listing of those groups and a general indication of when they usually meet. For more specific meeting times and locations as well as for information on how to contact a representative of the group, please call the Botanic Gardens switchboard during business hours at 575-3751.

African Violet Society, 4th Thurs. of 7 months; Bonsai Society, 1st & 3rd Tues.; Botany Club, 3rd Fri.; Cactus & Succulent Society, 2nd Tues.; Civic Garden Club, 1st Fri.; Dahlia Society, 2nd Fri.; Gladiolus Society, call for info.; Gloxinia Gesneriad Growers, 1st Sat.; Hemerocallis Society, 3rd Sun. of 4 months; Ikebana International, 4th Fri.; Indoor Light Gardening Society, 3rd Thurs.; Iris Society, spring & fall dates; Men's Garden Club, 4th Thurs.; Mycological Society, 2nd Mon.; Native Plant Society, call for info.; Orchid Society, 1st Thurs.; Rock Garden Society, 3rd Wed.; Rose Society, 2nd Thurs.; Ultra Violet Club, 4th Mon.

S	M	T	W	T	F	S
5	6	7	1 Feb. 1—Feb. 5 A FLOWERING OF SCIENCE	2	3	4
12	13	14	15	9	10	11 Chinese Cooking: Mongolian Hot Pot Tree Walk at South High Campus
19	20	21	22	16	17	18 Developing Your Home Landscape, Seeds and Flowers, and For the Birds
26	27 Coming Next Month	28 Annual Membership Dinner March 10 For Members Only: A Horticultural Workshop	29 Annual Membership Dinner March 13 & 14 Dutch Flower Show	23 24 	24	25

Denver Botanic Gardens, Inc.
909 York Street
Denver, Colorado 80206
303-575-3751

TIME VALUE

February 1984

Address correction requested



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Denver Botanic Gardens

January 1984

Number 84-1



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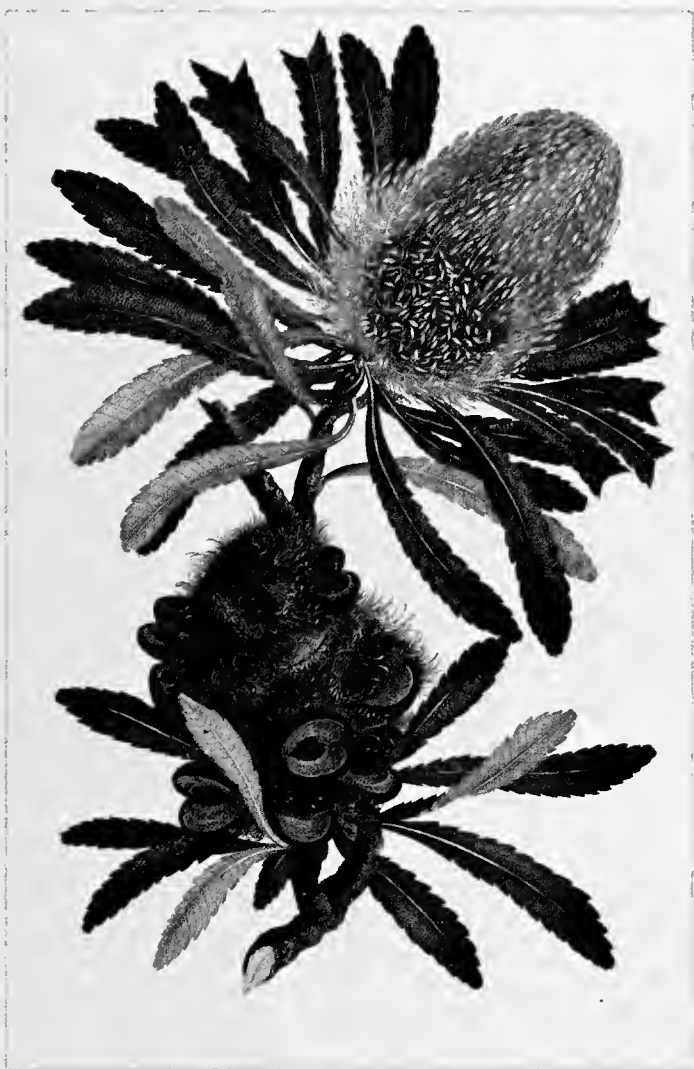
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A FLOWERING OF SCIENCE

PLANTS FROM CAPTAIN COOK'S FIRST VOYAGE 1768-1771



An exhibition created and produced by the British Museum (Natural History) and Alecote Historical Editions. Circulated by the Smithsonian Institution Traveling Exhibition Service.

Denver Botanic Gardens

January 7-February 5, 1984

A FLOWERING OF SCIENCE

Finally, the long-awaited opening of the Smithsonian Institute's exhibit, A FLOWERING OF SCIENCE: PLANTS FROM CAPTAIN COOK'S FIRST VOYAGE, 1768-1771, has arrived! January 7 begins the month-long showing of this exciting exhibit.

A week of unloading crates and setting up the display will precede the opening of the exhibit. Close attention will be given to details and specifications provided by the Smithsonian, but it will be worth the trouble.

Those of you who attended the Gift Shop Holiday Sale had a preview of the event if you saw the poster. The posters will be on sale for \$15.00 each during the show.

FLOWERING OF SCIENCE will be unveiled daily from 9 a.m. to 4:45 p.m. at no charge to members. Non-members need only pay the regular gate admission.

Plan to visit the Gardens and FLOWERING OF SCIENCE. The show will only be here until February 5. Allow several hours from your day to come and feast your eyes on the exquisite workmanship.

Inside:

Classes Galore!
page 5

Library Lines
page 9

*Commemorative
Smithsonian
Exhibit poster.*

January Botany Club Program Announced

On Friday, January 20, Dr. William G. Gambill, Jr. will share his slides with members of the Botany Club. He will highlight the more memorable experiences of his recent trip to Africa.

This meeting, scheduled for 7:30 p.m. in Classroom C, will be free. The Botany Club urges the public to attend this slide show.



From the Director

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Merle Moore
Executive Director

Tributes

In memory of Dallas L. Christenson
Mary Jo Christenson

In memory of Dabney Otis Collins

Denver Rose Society
Harriette W. Johnson
Dee Morgan Kilpatrick
Mr. and Mrs. R. E. Pate, Jr.
Mr. and Mrs. R. E. Pate, III
Bob Vessa and Irma Harrison
Mr. and Mrs. John B. Vessa and Family

In memory of Margaret Owen Dorsey

Mr. and Mrs. John Fleming Kelly

In memory of Marian Howe

Mr. and Mrs. Barkley L. Clanahan

In memory of Katharine McNeeley

Jones

Garden Club of Denver

Mrs. Ruth Porter Waring

In memory of Agnes Meister

Colorado Watercolor Society

In memory of Hudson Moore, Jr.
Boettcher Foundation Trustees
Mr. and Mrs. Edward P. Connors
Mrs. T. D. Cunningham
Mr. Oscar G. Davis
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Frances P. Sargeant

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Warren Daniel Thach

Mr. and Mrs. Alvin R. Unrein

In memory of Pauline A. Morrison

Mr. and Mrs. Benjamin Stapleton

In memory of Mrs. Hazel Thode

Morning Belles Garden Club

In memory of Imogene Von Struve

Mary Jo Christenson

Syd Glick

The Potpourri Workshop and Gift Shop Board members

Donations of cash, goods, or services have been received from the following friends:

Peg Agee

Dick Brady

Les Case

Colorado Native Plant Society

Colorado Potters

Denver Men's Garden Club

Edith Dusek

Mary E. Edwards

Dr. and Mrs. E. W. Gray

Mike Greene

Paul Keisling

Dr. C. William Nixon

Queen of Spades Garden Club

Rocky Mountain African Violet

Council

Santa Barbara Botanic Gardens

Southern Hills Planters

Green Thumb News

Number 84—1 January 1984

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Name _____

Street Address _____

City & State _____ Zip _____

Telephone Number _____

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Annual Report
Denver Botanic Garden
909 York Street
Denver, Colorado 80206

New Beginnings With Plants

Excitement grows at Denver Botanic Gardens as the Morrison Center moves closer to opening its doors to the public. To enable you to better understand Horticultural Therapy, a special treat is being prepared for you.

Judy Carrier, Director of Horticultural Therapy, will be our guest speaker at the Annual Membership Dinners on February 28 and 29. The Dinners will begin at 6 p.m. with an introduction of the Center and a "Look-n-See" social hour in the Morrison Center. We will then go to the John C. Mitchell II Hall for our dinner meeting where Judy will speak on "New Beginnings With Plants."

Due to the popularity of the past annual dinners, we have decided to hold them on two evenings this year; Tuesday, February 28, and Wednesday, February 29. Be sure to watch for reservation details and your invitation, which will be found in the February *Green Thumb News*.

Volunteers Volunteer

RSVP, Retired Senior Volunteer Program of Denver, is actively looking for new volunteers. RSVP, a non-profit organization, specializes in matching senior citizens to volunteer positions with other non-profit agencies all around town, including Denver Botanic Gardens. Eleven volunteers from RSVP serve in a variety of departments: Gift Shop, Library, Information Desk, and *The Green Thumb* magazine.

If you are interested in learning more about RSVP in Denver, write The Volunteers of America, 1555 Xavier Street, Denver, Colorado 80204, or call 623-8052.

A Reminder for Conservatory Guides

Watch for your invitation to the DBG Conservatory Guide Brunch to be held January 18, 1984, in the Botanic Gardens House. Coffee will be served at 9:30 a.m. and a guest speaker will discuss "Commercial Uses of Plants of the Conservatory."



Gayle Weinstein at the Pergola, DBG.

Goodbye-Hello

Winter's wind has blown changes through the *Green Thumb News*, as well as through your gardens. Dr. James Feucht, who generously volunteered his gardening expertise for the past 12 years, will no longer be available to write "Gardening Tips."

Merle Moore, DBG's Executive Director, admits that "thank you seems hardly an adequate expression of gratitude." Dr. Feucht's timely advice on Colorado's soils, unique climate, and general gardening conditions has been appreciated for years by both new and native Colorado gardeners. Dr. Feucht has offered to write occasional guest columns, so he is

not abandoning the advice column, but instead allowing someone else to assume this large responsibility.

Green Thumb News welcomes Gayle Weinstein to "Gardening Tips." She currently provides planting expertise as a DBG staff Botanist Horticulturist, a position she has enjoyed since 1979. Gayle is not new to *Green Thumb News* readers as she has previously contributed to "Around and About the Gardens." She plans to invite staff gardeners and other professional gardeners in the greater Denver community to write guest articles for "Gardening Tips." We look forward to Gayle's contributions and we wish her luck.



Attention You Philanthropic Bookworms

Don't forget that Friday, May 11 and Saturday, May 12 are the days of DBG's Great Used Book Sale, held at the same time as the Annual Plant Sale. Librarian Solange

Gignac wants to remind everyone that book donations are being gratefully accepted at the Helen Fowler Library between now and then.

Kai Kawahara's Certificate

Kai Kawahara in the Japanese Garden entrance.

Japanese Garden Specialist, Kai Kawahara, recently received a certificate for completion of the Japan Gardening Society's course, Home Landscape Gardening. After his year of studying to meet their qualifications for certification, the Society has elevated Kai to a new level of recognition—Garden Manager.

Kai has been with the Gardens since 1980, working exclusively in the Japanese Garden. The harmony of this Garden results in part from a strong pride in his work. His determination to perfect his skills is reflected in his efforts to complete his studies with the Society. The program, a very long distance correspondence course, has not been easy to complete.

We are proud of Kai and honored to have him tending our Japanese Garden, where he can be found daily.

Exotic Holiday Visitors

We hope that everyone had an opportunity to enjoy the "African Greys" that visited the Conservatory in December. Many of our younger school visitors were thrilled to see and hear the Grey Parrots.

These parrots were on loan to the Gardens from the Denver Zoological Gardens for the month of December. If you had an opportunity to enjoy the parrots, you might join us in thanking the zoo for their generosity.



Park Naturalist Training Program

Barr Lake State Park and Roxborough State Park will be sponsoring training programs for those interested in becoming Volunteer Park Naturalists.

Volunteers who participate in the program will lead school and community groups on nature walks through the two parks, serving as interpreters of the special aspects of each area. Prospective volunteers must be 18 years old, have their own transportation, and be able to hike three miles. They must be willing to complete the training program and donate four hours of service each month.

The Barr Lake program is jointly sponsored by the Colorado Division of Parks and Outdoor Recreation and the Nongame Program of the Colorado Division of Wildlife. As well as leading walks, the Barr Lake Volunteers form a vital part of the staff for the Nongame Nature Center located in Barr Lake State Park.

Applications for the Barr Lake training program will be accepted through February 7, 1984. Classes will be held on Wednesdays from 9 a.m. to 1 p.m. beginning on Wednesday, February 15, 1984. The training program consists of eight sessions, covering such topics as

animal tracking, bird and raptor identification, interpretive techniques, and plants, reptiles, and mammals of Barr Lake.

The Roxborough naturalists provide an invaluable service by leading guided field trips through the park until it is opened to the public. Applications for the Roxborough class, which is limited to 15 participants, will be accepted until March 2, 1984. The training program consists of seven sessions held on Thursday mornings between 9 a.m. and 1 p.m. beginning April 5, 1984. In-depth sessions on Roxborough's geology, wildlife, vegetation, and history will prepare the participant to become a park naturalist.

Applications and further information are available from Carol Leasure or Miriam Cook at Barr Lake State Park (659-6005) or from Susie Trumble at Chatfield State Recreation Area (797-3986).

The Art and Science of Light Gardening

Wednesdays, January 18, 25
February 1, 8, 15
(five sessions)
Classroom B 7:30 to 9:30 p.m.

The art and science of successfully growing plants indoors under lights will be explored in this five session course taught by experts in the field.

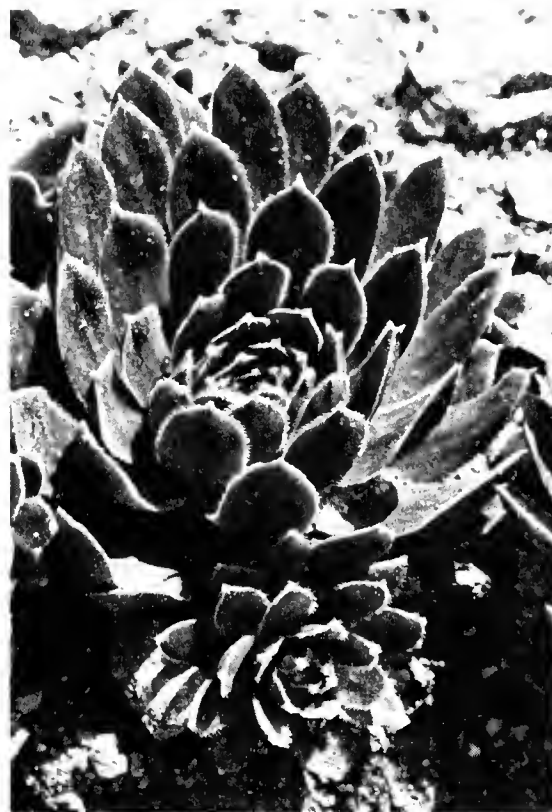
The instructors will focus their presentations on the special requirements which make growing plants under artificial light conditions different from indoor gardening using natural lighting conditions.

Topics will include the choice of lights, watering and fertilizing techniques, the control of temperature

and humidity, plant selection, and propagation methods and techniques. Students will be given some plant material at the last session to take home and propagate.

Instructors: Bill and Peg Agee, Cindy and Ray Schimpf, and Edith "Woody" Trosper are members of the Colorado Chapter, Indoor Light Gardening Society of America and have extensive experience in the successful cultivation of plants under lights.

Fee: \$40 members/\$44 non-members. Students will receive five technical publications of the Indoor Light Gardening Society of America.



Rock Gardening for the Home Landscape

Saturdays, January 28
February 4, 11
(three sessions)
Classroom C 10:00 a.m. to noon

Do you have a steep bank or a problem slope in your garden? A rock garden may be a colorful and interesting solution to such a problem spot. This three part introduction to the art of rock gardening will demonstrate how various people have used naturalistic landscaping to solve difficult garden problems.

In the first session, a short history of the art of rock gardening in China, Japan, and the West will be illustrated with slides, and the aesthetics of rock plant placement will be analyzed.

The second meeting will include a workshop on rock placement where class members will construct miniature replicas of rock gardens with sand and pebbles.

Finally, a review of the most widely available plant materials and a discussion of the proper selection of plant materials for actual garden needs will conclude the course.

Instructor: Panayoti Callas is curator of the award-winning Rock Alpine Garden at Denver Botanic Gardens and is also an enthusiastic teacher.

Fee: \$24 members/\$26.50 non-members



Pinus thunbergii

Deciduous Shade and Ornamental Trees for Denver

Tuesdays, January 24, 31
February 7, 14, 21
(five sessions)
Classroom C 7:15 to 9:15 p.m.

Due to this unique climate, very few trees are actually indigenous to the Denver region. It is not so much cold hardiness, but soil, moisture, humidity, and the extreme fluctuation in temperature that make it so difficult for trees to survive.

However, with the aid of irrigation and proper horticultural practices, many species of trees from different parts of the country and all over the world have been able to survive and do well in this area.

The purpose of this class is to become acquainted with a variety of plant material and establish an

understanding of their characteristics, natural history, culture, problems, and landscape values as an ornamental or shade tree.

Through the use of slides, students will observe each of approximately 80 species in all of the seasons, from afar and close-up, while the instructor discusses, in detail, each of the above categories for each tree.

Instructor: An experienced teacher, Jeffrey Frank studied landscape architecture at Pennsylvania State University and the University of Virginia, and is presently employed as a landscape architect at Donald H. Godi & Associates, Inc. in Denver.

Fee: \$40 members/\$44 non-members

CLASSES

Winter
1984
Denver Botanic Gardens



Just for Kids!

6

Beginning Nature Photography

Saturdays, January 28
February 4, 11
(three sessions)
Classroom A 9 a.m. to noon
For Children of Ages 6-9

For children with little or no background in photography, this class will introduce basic picture-taking techniques. Pictures will be taken of plants and scenes at the Gardens and in the last class, the pictures will be mounted.

Each class member will need a camera of any type and one or two rolls of color print film to be processed between classes.

Instructor: Susan Fry is a Gardener Florist II at DBG. She is an amateur photographer who has considerable experience working with children.

Fee: \$22.50 members/\$25 non-members

Limit: 12



Any camera will do in Beginning Nature Photography.



Jack and the Beanstalk

Saturdays, January 21, 28
February 4

(three sessions)
Classroom B 10 a.m. to noon
For Children in Kindergarten
Through Grade 2 (ages 5-7)

Listen to stories, tales, and rhymes about forests, flowers, and that famous beanstalk. Storytelling will inspire paintings, printmaking, and even creation of a Jumping Jack.

Instructor: Jo Duranceau-Cannon studied art at the University of Washington and the University of Denver and has taught children's art classes at the Denver Museum of Natural History, Denver Art Museum, Colorado Historical Society, and the University for Youth at the University of Denver. She is currently an elementary school art teacher for the Cherry Creek School District.

Fee: \$20 members/\$22.00 non-members

Limit: 12

Dragons and Unicorns

Saturdays, January 21, 28
February 4

(three sessions)
Classroom B 1 to 3 p.m.
For Children in Grades 3 Through 6
(ages 8-11)

Tour the Gardens to discover the magical world of plants in medieval forests and castle courtyards. Find out what plants and herbs were used for sorcerer's brews. Create a hanging tapestry of flowers, unicorns, and dragons.

Instructor: Jo Duranceau-Cannon

Fee: \$20 members, \$22.00 non-members

Limit: 12



Seeds and Flowers

Saturdays, February 18, 25
March 3

(three sessions)
Classroom B 10 a.m. to noon
For Children in Kindergarten
Through Grade 2 (ages 5-7)

Explore the wonderful world of seeds and flowers. Take a detective's tour through the Gardens and see if you can solve some seed riddles and flower mysteries. Create a sunlight flower to fill a window with color. Design seed jewelry and decorate your own paper with real pressed flowers.

Instructor: Jo Duranceau-Cannon

Fee: \$20 members, \$22.00 non-members

Limit: 12

For the Birds

Saturdays, February 18, 25
March 3

(three sessions)
Classroom B 1 to 3 p.m.
For Children in Grades 3 Through 6
(ages 8-11)

Learn surprising ways to make your own bird feeders. Explore the Gardens to see what flowers and trees will attract birds to your backyard. Follow recipes to make a bird feast. Color-in a guidebook to help identify your feathered visitors.

Instructor: Jo Duranceau-Cannon

Fee: \$20 members, \$22.50 non-members

Limit: 12



Annual Dinner

for members of the Denver Botanic Gardens

Tuesday, February 28, 1984

Wednesday, February 29, 1984

John C. Mitchell II Hall, Denver Botanic Gardens

“New Beginnings with Plants”

an illustrated talk by

Judy K. Carrier

DBG Horticultural Therapist



Social Hour 6:00 p.m.

in the Morrison Horticultural Demonstration
Center across York St. from the Conservatory

Dress Informal

Dinner 7:00 p.m.

in John C. Mitchell II Hall

\$15.00 per person

Reservations are limited and are accepted on a space available basis until February 24 only.

Tuesday, February 28 Kindly reserve _____ places for me at the Annual Dinner.

OR

Wednesday, February 29 My check for \$ _____ is enclosed (\$15 per person).

Name _____

Names of those attending (for name tags): _____

Address _____

_____ Telephone _____

This reservation form together with your check must be received by February 24. Please send to:

Denver Botanic Gardens (Attn: Annual Dinner)
909 York Street, Denver, Colorado 80206



Drawing From Nature

Tuesdays, January 17, 24, 31
February 7, 14, 21, 28
March 6

(eight sessions)

Classroom B 9:30 to 11:30 a.m.

From living plants to still life composition, from realism to abstract expressionism, explore art in nature! Students will learn to see, sketch, and draw natural forms and designs and will then translate black and white studies into exciting color. Instruction and demonstrations in assorted media and subject matter will be provided. Bring a large sketch pad, soft charcoal, and drawing pencils to the first class.

Instructor: Oksana Ross, Ph.D., studied at New York University and Columbia University and has 32 years of teaching experience. She was formerly on the faculty of University of Colorado at Denver, Metropolitan State College, and Colorado Women's College. Dr. Ross is a life member of the Art Students League of New York where she studied under Hans Hofmann, Will Barnett, Marion Cooper, and Edgar Whitney.

Fee: \$64 members/\$70 non-members

Limit: 20

Advanced Botanical Illustration

Mondays, January 16, 23, 30
February 6

(four sessions)

Classroom B 9:30 a.m. to 3 p.m.

Intended for students with previous experience in botanical illustration, this course will stress the techniques of accurate drawing of botanical specimens. Students will work with pencils, pen and ink,

crayons, and watercolors and can expect to complete a drawing during each all-day class session. Please bring a sack lunch and drawing pencils.

Instructor: Angela Overy studied graphic arts and has extensive teaching experience. Her enthusiasm results in very popular courses at DBG.

Fee: \$72 members/\$80 non-members

Watercolor Painting

Wednesdays, January 18, 25
February 1, 8, 15, 22, 29
March 7

(eight sessions)

Classroom B 9:30 to 11:30 a.m.

Translate your vision of nature into exciting color! Wet-in-wet technique as well as painting on dry paper will be demonstrated. From quick gesture to slow contemplative studies, students will explore the rich world of nature at Denver Botanic Gardens.

The works of master painters such as Monet, Nolde, and Sargent will be shown in a slide presentation and visits to art galleries will be offered. No experience is necessary, only your interest in painting.

Instructor: Oksana Ross, Ph.D.

Fee: \$64 members/\$70 non-members

Limit: 20

Herbarium Highlights

Saturday, January 28

(one session)

Kathryn Kalmbach Herbarium,
Education Building, DBG
10 to 11 a.m.

A herbarium is a collection of dried plants systematically arranged so that it can be easily used for

reference and study. In addition to a tour of our 20,000 specimen collection, students will learn how to prepare a personal herbarium including proper mounting and classification techniques.

Instructor: Dr. Helen Zeiner taught botany at University of Denver and is now Honorary Curator of Kathryn Kalmbach Herbarium.

Fee: \$4 members/\$4.50 non-members

Limit: 15

Tree Walk at Washington Park

Sunday, January 29

(one session) 2 to 4 p.m.

Because of their fruits, distinctive bark patterns, and bud and twig characteristics, many trees become very easy to identify in their winter form. Join an expert and learn some of these traits on a walk at Washington Park. Huge cottonwoods, golden rain trees, ginkgoes, eastern wild black cherries, yellowwood, and five species of oaks are some of the specimens to be observed.

Leader: Dr. William G. Gambill, Jr., Director Emeritus of DBG, is a former botany and biology professor.

Meet: At 2 p.m. at Washington Parks' Marion Parkway entrance on the north end. Cars will be used for travel within the park. Please dress appropriately including boots or other warm footwear.

Fee: \$2.50 members/\$3 non-members

Tree Walk at South High Campus

Saturday, February 11

(one session) 2 to 4 p.m.

Here is another opportunity to learn plant identification with an expert using winter characteristics. On a walk at South High campus, numerous species such as catalpa, black walnut, hackberry, European larch, Russian olive, and ginkgo will all be observed and discussed.

Leader: Frederick W. Lenhart is author of *117 Trees and Shrubs Identified* and has conducted tree walks for the Denver Museum of Natural History as well as CSU Extension Service.

Meet: At 2 p.m. near the north door of South High at South Williams and Louisiana Streets. Please dress appropriately including boots or other warm footwear.

Fee: \$2.50 members/\$3 non-members

New DBG member, Virginia Anderson, enjoying the wonderful Indian summer weather earlier this fall and Oksana Ross' Watercolor Painting class.

French Intensive Gardening

Thursdays, January 26
February 2, 9, 16
(four sessions)
Classroom C 7:30 to 9:30 p.m.

This class is an introduction to Alan Chadwick's approach to the garden which weds the personal richness of observation to the practical success of good technique.

Students will learn the origins of biodynamic and French intensive horticulture and will study specific garden practices for the Denver area as well as view the film, "Garden Song, Alan Chadwick's vision of Abundance." In addition, soil preparation, crop rotation, plant associations, garden layout, and compost making will all be covered. How to get the most out of a small space, make it beautiful, and above all, invite nature into our gardens are the aims.

Instructor: Bob Howard is a horticulturist who apprenticed with Alan Chadwick at the University of California, Santa Cruz, in 1971. He is presently director of the Naropa Institute Garden Project in Boulder.

Fee: \$32 members/\$35 non-members

Developing Your Home Landscape

Saturday, February 18
(one session)
Classroom B 8 a.m. to 5 p.m.

In this all-day workshop students will learn how to plan a landscape for a new or existing home. Four hours of instruction by slide lecture and discussion will be followed by four hours of students designing their own master landscape plans with the guidance of the instructors.

The following topics will be covered: design procedures and principles for developing and building a landscape that suits your needs, site analysis and circulation

Registration Form for Classes and Field Trips

Fees for courses should be paid in advance by check or money order made out to Denver Botanic Gardens. Fees should be sent in with the completed registration blank not later than one week prior to the first meeting of the course so that materials may be ordered as needed. Since the space is limited in many courses, registration should be mailed in promptly. Your registration will NOT be acknowledged. Your name will be placed on the class list on the day your money is received. No enrollments for fee class by phone please. All courses are given subject to a minimum enrollment of ten students. For further information, please call 575-3751.

planning, micro-climates, grading and drainage, paving and patios, irrigation systems, ecology of the home landscape including trees, shrubs, ground covers, lawns, native grasses, and flowers such as roses, perennials, and wild flowers.

An illustrated 96-page text and printed materials will be furnished. Each student will need to bring an accurate drawing of your site, floor plans of your house, a photo survey of your property (registrants will be furnished with directions for this), and a list of family needs.

A box lunch will be provided. A group discussion and short tour of the DBG demonstration areas are planned for the lunch hour.

Instructors: Thomas L. Stephens has been a practicing landscape architect for over 20 years and has taught home landscaping classes for 14 years. Janet Caniglia has worked in Colorado for three years on environmental planning, visual management, subdivision planning, and community design.

Fee: \$60 members/\$66 non-members (includes all materials and a box lunch)

Limit: 25

Chinese Cooking: Mongolian Hot Pot

Saturday, February 11
(one session)
Classroom A 10 a.m. to 2 p.m.

Also known as Chinese Fire Pot, the Mongolian Hot Pot was introduced to China in the 12th century by the invading Mongol hordes. Similar to a fondue, it is a group participation dish in which the diners cook various food combinations in boiling stock. The food is then dipped into various sauces before eating. Eventually, even the flavored stock is enjoyed as a soup.

Although the cook does not do the actual cooking, advance preparations are essential to the success of

this dish. Learn them as chicken, pork, seafood, noodles, and vegetables are prepared and then participate in the cooking and feasting. Bring an appetite—lunch is provided!

Instructor: Josephine Fung was born and raised in China and has been teaching Chinese cooking for over ten years. Her class in our "Asian Festival of Arts and Culture" last August was a delicious success.

Fee: \$21 members/\$23 non-members (includes \$5 for lunch)

Chinese Cooking: Fundamentals

Saturday, February 4
(one session)
Classroom A 10 a.m. to 2 p.m.

Chinese cuisine is well-known as both an efficient and economical approach to cooking. In this class, the important techniques of slicing and chopping, stir-frying, and steaming will be demonstrated as Moo-Shu pork and Chinese pancakes, spicy chicken, mixed vegetables, and a fish dish are prepared. Learn flexible methods of preparing Chinese dishes in your own kitchen. Bring an appetite—lunch is provided!

Instructor: Josephine Fung

Fee: \$21 members/\$23 non-members (includes \$5 for lunch)

Limit: 16



The enclosed check, in the amount of _____, is to cover the registration fees for the following classes:

Name and section of classes _____

Name _____

Address _____

City _____ State _____ Zip _____

Home Tel. No. _____ Business Tel. No. _____

Member of Denver Botanic Gardens? Yes No

L I B R A R Y L I N E S

Helen Fowler Library
Volume 6, No. 6
January 1984
Edited by
Jean Williams

Librarian:
Solange Gignac

PINES

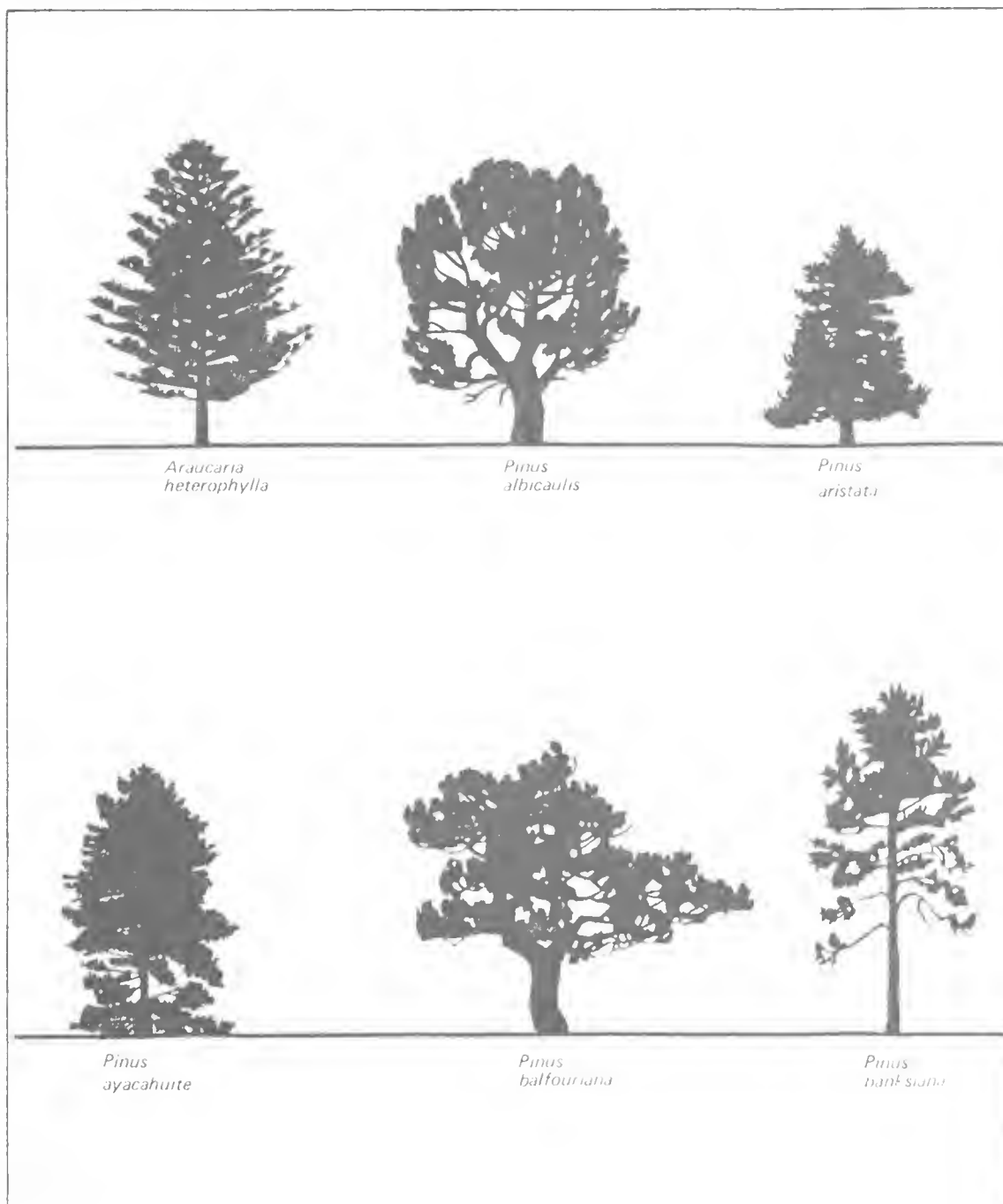
Evergreen Form Studies.

By Gary O. Robinette, drawings by Susan Van Gieson. Van Nostrand Reinhold Company, New York, 1983. \$25.00. NC 810 Rg 1983

"What you see is what you get" has never been true of landscape planting. Too often when we plant trees, investing in a landscape far into the future, our choices are by guesswork at best. In 25-year old landscapes, or even in 10-year old plantings, we all live with shrubs and trees that are too large, too wide, out of proportion, or in the wrong place. What a waste to have to take them out, and how costly!

Many plants, especially evergreens, vary dramatically in their mature form. Knowing the ultimate form of the plant is essential to designing a landscape to last fifty or more years. This book provides the answers in drawings to these questions about mature size and form. Homeowners, developers, architects, landscape architects, planning consultants, nursery professionals, and engineers will find it a well used resource in any plant design library.

The authors illustrate the most commonly used conifers twice, once in outline form, and again showing texture and character. A special section includes species groupings to show relative size, shape, and



character. The simplicity of the book is deceptive; there are a few pages of simple, clear text. The drawings, enlarged or reduced to appropriate scale, can be placed in accurate sizes in elevation and perspective drawings to show clients and customers the ultimate form of the landscape. The drawings are an excellent source for reproduction by digital plotters. If buildings and

facilities are being placed in an existing landscape, the drawings will help visualize future changes.

For those who design, draw, and specify plants for those who build in existing landscapes, these drawings are "worth a thousand words," and probably many hours and dollars as well!

Jan Caniglia, ASLA

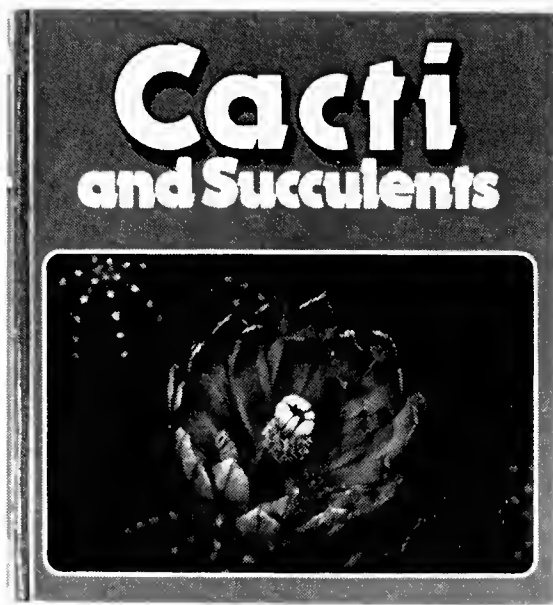
THE REVIEWERS

Jan Caniglia—
Landscape
Architect,
ASLA.

Olin Webb—
Member,
Colorado
Cactus and
Succulent
Society.

Gayle
Weinstein—
Botanist
Horticulturist,
Denver Botanic
Gardens.

Jean Williams—
Helen Fowler
Library
volunteer,
Denver Botanic
Gardens.



Cacti and Succulents.

By Gunter Andersohn. E.P. Publishing Ltd., Wakefield, England, 1983. \$15.00. SB 438 A5335.

Improvements in graphics and printing technologies during the past 20 years have aggravated the tendency to publish for the sake of profit rather than for knowledge. Only a few redeeming features save this book from the just-another-pretty-picture-book category. It is relatively well organized, and it is informative.

Nevertheless, the reader is left with the feeling that much has been lost in the translation. The book was originally published in German in 1982 by Falken-Verlag in West Germany. The author is identified only as having "spent over 35 years studying approximately 3000 species of succulents, many in their native habitats of Mexico, Arizona and California, and South Africa." No bibliography is included, so much of the content presumably has been freely borrowed from other published literature. Indeed, a diagram of the rooting habits of cacti resembles a drawing in Gordon D. Rowley's *Illustrated Encyclopedia of Succulents... and Cacti* published in 1978.

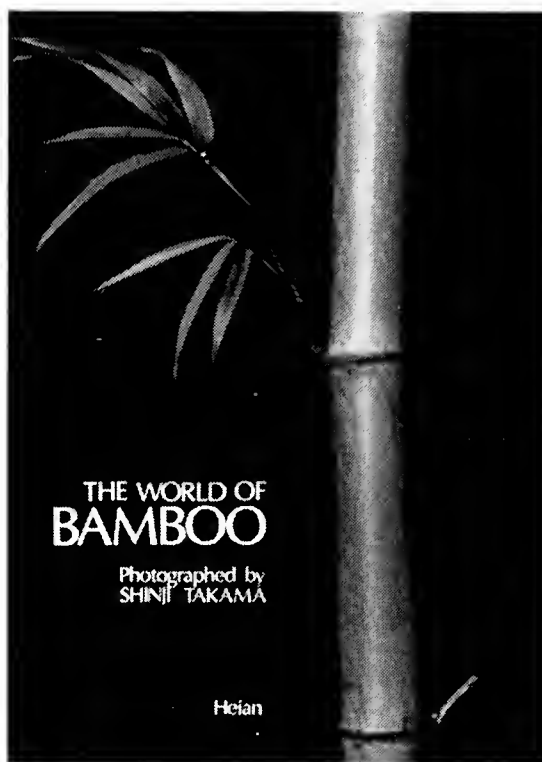
Picture captions are lacking in detail, e.g.: "*Opuntia basilaris*, in its native habitat," or even inaccurate "*Fouquieria splendens*, the Ocotillo Bush, produces occotillo wax." A picture of *Jatropha berlandieri* is mislabeled *Euphorbia berlandieri*. A caption reads *Crassula arborea* instead of *C. arborensens*.

The use of scientific names is sometimes erratic and confusing. For the cacti, the author uses a combination of the nomenclature of Backeberg and other continental authors. Except for a passing mention of Britton and Rose in the United States and David Hunt of

the United Kingdom, one is left with the impression that the only students of the Cactaceae are German. So much for nationalism!

Much of the information on cultivation and propagation is helpful here even though it is directed toward the European climate, a milder temperate climate than exists in most of the United States. For all its flaws, this attractive book can be considered a reference of mediocre value.

Olin Webb



The World of Bamboo.

Photographed by Shinji Takama. Heian International, Inc., South San Francisco, Calif., 1983. \$75.00. SB 317 B2 T3 1983.

This is a large, impressive, beautifully bound and boxed book of photographs—magnificent photographs made by a man who has dedicated himself for over 30 years to a life-work of photographing bamboo in all its aspects.

No one with more than a passing interest in bamboo (as a plant, a landscaping element, or as material for handicrafts) will want to miss examining a library copy at least. Anyone with an eye for beauty will enjoy browsing through it.

An eight-page section at the end of the book picturing and describing 46 different varieties of bamboo will be useful, as will a table which correlates Japanese names with their Roman equivalents and the scientific names of 103 varieties.

For my part as a reviewer with no special knowledge of bamboo, however, the book tells me both more and less than I want to know about the world of bamboo. The

written text is almost nonexistent, offering little more than captions for the photographs, and even these are spare. They identify subject matter but give no further explanations. The endless variations on a theme become less than fascinating before completing the task of matching photographs in one part of the book to the less than satisfying captions in a separate section.

I remain in awe of what photographer Sinji Takama has accomplished. The aesthetic quality of the work is superb and the existence of the photographs as record shots of the all-pervasive role of bamboo in the life of the Japanese people is invaluable. The personal dedication and commitment required to produce such a body of work is impressive.

My regret is that such excellent photographs did not receive better historical and artistic commentary and analysis. This is a book of photographs in search of an author.

Jean Williams

Landscape Plants for Eastern North America

By Harrison L. Flint. John Wiley & Sons, New York, 1983. \$59.95. SB435.5 F6472 1982.

At first glance, this book seems to be like many other references on woody ornamentals written for professionals in landscape horticulture. Like the others, it discusses plant species, size groups, geographic ranges, adaptability, and plant functions. Of the numerous reference books on these topics already available, it is the format that makes this book a valuable addition. It is a comprehensive compilation of over 1500 plant species, including varietal selections, organized in such a way that information is readily located.

Although it is written primarily for northeastern North America, the book has a wider range of application. One issue in question is the author's hardiness designations. If they were accurate, many of the plants growing in Denver would not be here! Because it is a regional reference book, such discrepancies can be expected. Unless we readers use our own discretion, many interesting plants will be confined to their natural range rather than their useful one.

I consider this book a valuable aid from which plants can be selected for our area.

Gayle Weinstein

Gardening Tips for January

Gardening is a year-round process, and although temperatures are cold and plant growth has slowed down, it is often at this time of year when plant problems begin. Unfortunately, symptoms are not apparent until the plant resumes active growth or until the heat of summer when the plant becomes stressed. This lengthy gap between causes in winter and symptoms in spring or summer makes it difficult to relate the distress to the actual cause.

January is one of the months in which heaving becomes a problem. Fluctuations in temperature cause the ground to freeze and thaw. Newly planted and shallow rooted plants will be pushed upward. Roots dry out and freeze and, if they are not pushed back down and watered, young plants will die. To moderate temperatures and protect the plants, mulches or cut up Christmas tree boughs can be placed over vulnerable plants.

Another potential problem this time of year is heavy, wet snow or ice collecting on branches. To avoid breakage and deformation of the plants, snow should be carefully brushed off before it becomes soggy and later refrozen. It is easy to recall the December, 1982, snow-storm and the broken branches that occurred on many ornamentals, especially evergreens.

The most deceptive problem of winter is the lack of moisture available to the plant roots. Plants lose moisture all year; it is just less apparent in winter. If the roots cannot replace lost water, branches and/or foliage will desiccate. Often the problem shows up in July when plants are under the greatest stress. The parts farthest from the roots or veins (water sources) will show symptoms first. As unlikely as it may seem, to avoid problems later, the hose must be brought out in winter for deep watering. Gardening is an ongoing, year-long process.

Another aspect of gardening is planning, and this is an appropriate time of year to do just that. Two new gardens at Denver Botanic Gardens, the Bird Watch Berm and the Cutting Garden, might interest some of you to incorporate a few ideas found there into your own back yards.

To attract birds three components are necessary: food, shelter, and water. Winter is the most difficult time to provide food. This is a good time of year to be aware of plants that still bear fruits. As an example, hawthorns are considered highly desirable plants for birds, and yet, many of them are bare of fruit by January. *Crataegus viridis* and *Crataegus x Lavalleyi* are two exceptions; Waxwings and Townsend Solitaires are two types of birds that will feed on them.

Now is also a good time to be aware of plant parts such as fruits, stems, and buds that have potential for fresh bouquets or dried arrangements. Blue stem willow (*Salix irrorata*) coupled with red or yellow stem dogwood (*Cornus sericea* and *Cornus sericea* 'Flaviramea') are very effective. Iris seed heads, milkweed and alder fruits are all interesting this time of year.

Winter is an excellent time for plant awareness and identification. Rocky Mountain maple (*Acer glabrum*) with its gray stems and brilliant red buds, along with the various branch colors of shrub willows, can strike up some exciting ideas for winter landscapes. The differences in spruce (*Picea*), fir

(*Abies*), and Douglas fir (*Pseudotsuga*) challenge the identification intellect. Spruce cones are at the top of the trees, fir cones are at the top with only the stalk remaining, and Douglas fir cones are all over.

One more gardening tip for now follows before closing. Are all of those guest holiday plants, such as poinsettias, kalanchoes, and amaryllis, possible permanent residents of your household?

Poinsettia (*Euphorbia pulcherrima*) may have lasting color if it is kept near a sunny window with day temperatures of 65-70°F and night temperatures of 60-65°F. Keep it well watered, because dryness as well as cold and hot drafts will cause premature leaf drop.

Kalanchoes (*Kalanchoe blossfeldiana*) have a great advantage. They are moisture retentive and survive in the average home having good light and 10-20% relative humidity.

Amaryllis (*Amaryllis belladonna*) should be kept in a sunny area where night temperatures are 50-60°F. Water continuously until spring; they can be placed outside in late May in partial shade.

After caring for the plants indoors and out, evening is a good time to relax and read through catalogues, plan the vegetable garden, write and send out orders for seeds, and dream of spring.

Gayle Weinstein
Botanist Horticulturist at
Denver Botanic Gardens



Catalogues to dream with in the Helen Fowler Library.

C A L E N D A R

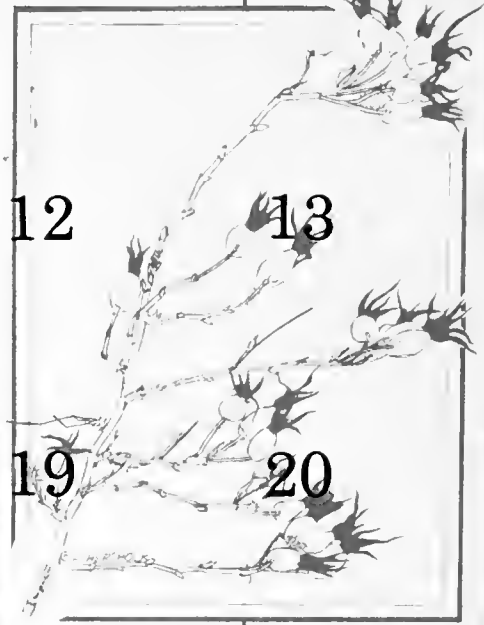
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Regular Meetings of Plant Societies

A number of plant and horticultural groups meet fairly regularly at the Denver Botanic Gardens. Here is a listing of those groups and a general indication of when they usually meet. For more specific meeting times and locations as well as for information on how to contact a representative of the group, please call the Botanic Gardens switchboard during business hours at 575-3751.

African Violet Society, 4th Thurs. of 7 months; Bonsai Society, 1st & 3rd Tues.; Botany Club, 3rd Fri.; Cactus & Succulent Society, 2nd Tues.; Civic Garden Club, 1st Fri.; Dahlia Society, 2nd Fri.; Gladiolus Society, call for info.; Gloxinia Gesneriad Growers, 1st Sat.; Hemerocallis Society, 3rd Sun. of 4 months; Ikebana International, 4th Fri.; Indoor Light Gardening Society, 3rd Thurs.; Iris Society, spring & fall dates; Men's Garden Club, 4th Thurs.; Mycological Society, 2nd Mon.; Native Plant Society, call for info.; Orchid Society, 1st Thurs.; Rock Garden Society, 3rd Wed.; Rose Society, 2nd Thurs.; Ultra Violet Club, 4th Mon.

S	M	T	W	T	F	S
1 DENVER BOTANIC GARDENS CLOSED	2 DBG Gardens Open, Offices Closed	3	4	5	6	7 Jan. 7-Feb. 5 A FLOWERING OF SCIENCE
8	9	10	11	12	13	14
15	16 Advanced Botanical Illustration	17 Drawing From Nature	18 Light Gardening & Watercolor Painting Classes Conservatory Guides Brunch	19	20	21 Dragons and Unicorns & Jack and the Beanstalk Classes
22	23	24 Deciduous Shade and Ornamental Trees for Denver	25	26 French Intensive Gardening	27	28 Nature Photography, Herbarium Highlights, & Rock Gardening
29 Tree Walk	30	31				
	Coming Next Month	Feb. 4 Chinese Cooking: Fundamentals	Feb. 11 Mongolian Hot Pot & Tree Walk	Feb. 18 Developing Your Home Landscape, Seeds and Flowers, and For the Birds courses	Feb. 28 & 29 Annual Membership Dinner	



Denver Botanic Gardens, Inc.
909 York Street
Denver, Colorado 80206
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Denver Botanic Gardens

March 1984

Number 84-3



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Dutch Floral Design Show March 17 and 18

Brinkmann Wholesale Florists, Inc., in cooperation with Denver Botanic Gardens will present the third annual Dutch Floral Design Show on Saturday and Sunday, March 17 and 18 in John C. Mitchell II Hall. Lilacs, lilies, freesias, tulips, daffodils, and roses are just a few of the many kinds of flowers that will be imported from Holland specifically for this show. In all, over 5,000 cut flowers will be used! When questioned concerning the use of Dutch flowers, George Brinkmann, president of Brinkmann Wholesale Florists, Inc., explained, "The Dutch market has produced an outstanding variety of flowers never before available in the United States."

The program includes three floral design demonstrations by noted Colorado designers, E. Frank Dowling III, Renee DuVall, and Albert Feeger, which will highlight arranging techniques and the proper care of cut flowers. The 1½ hour demonstrations are scheduled for 10:30 a.m. and 1:30 p.m. on Saturday, March 17 and 1:30 p.m. only on Sunday, March 18. Although there is no charge for the design demonstrations, the regular gate admission fee will be in effect for non-members. Don't miss this outstanding opportunity to see experts arrange a fantastic assortment of Dutch spring flowers.



*Inside:
Classes Galore
(Page 5)*

*Els Tuennessee
at last year's
Dutch Floral
Design Show.*

Pat Pachuta, Education Director, talks with Mayor Federico Peña and Martha Guevara, Manager of Parks and Recreation, on the Mayor's recent visit to DBG to meet the staff.



Botany Club's March Program

Albert E. Daraghy's topic for discussion at the March Botany Club meeting will be "Visiting Eastern Botanic Gardens." The March meeting is scheduled for March 16 at 7:30 p.m. in Classroom C.

This slide presentation and discussion is free and open to the public.



Spring Crocus

Annual African Violet Show and Sale

The Rocky Mountain African Violet Council will present its 22nd Annual Show and Sale on Saturday, March 24 from 1:00 p.m. to 4:30 p.m. and on Sunday, March 25, from 10:00 a.m. to 4:30 p.m. Denver Botanic Gardens will host the show in John C. Mitchell II Hall. "Violets 'Round the Clock" will be this year's theme.

Award-winning violets will be shown in the Hall, while the sale will take place in the classrooms. Photographers are invited to take pictures from 9 to 10 a.m. on Sunday. Council members will be available to answer questions pertaining to African violets and other gesneriads.

Although admission to the Show and Sale is without charge, the regular gate fees for non-members will be in effect.

Tributes

In memory of Dabney Otis Collins
Constance Jackson

In memory of L. "Jack" Holland
The Ted Breed family

In memory of Julius Jacobson
Mr. and Mrs. David Weinstein

In memory of Elly Mauthner
Ikebana International

In memory of Hudson Moore, Jr.
Fritz Knoebel

In memory of George and Pauline Morrison

Harlan H. Holben

In memory of Kim Sterne
Mr. and Mrs. Bruce C. Sterne

In memory of Edmond and Helen Thwaits

Genevieve Nelson Ellis

In memory of Israel Tolz
Mr. and Mrs. David Weinstein

Guild of Natural Science Illustrators Exhibit

The Colorado Chapter, Guild of Natural Science Illustrators is pleased to announce their annual art show, "Art-Science Interface." It will be exhibited in John C. Mitchell II Hall on April 12 through 15 and will include work by regional artists and ten nationally recognized illustrators.

This exciting new show will present a wide range of subject matter and techniques encompassed by the fields of scientific and medical illustration. Selections for the show will be made with these ideas in mind.

Denver Rose Society

March 8, at 7:30 p.m., the Denver Rose Society will meet in the Denver Botanic Gardens House. Dr. James Feucht will discuss "How Plants Grow and their Cultural Management."

The Rose Society meets the second Thursday of each month, in the DBG House. Guests are always welcome.

Plant Sale Volunteers

Denver Botanic Gardens' Annual Plant Sale relies upon volunteers. This year in particular we need people who have experience operating cash registers. Volunteers are also needed for pricing plants, setting up, and selling at each station. Please call Lydia Toll, 333-1655, if you can help, in any way, at the 1984 Plant Sale!

Green Thumb News Number 84—3 March 1984

Published monthly by the Denver Botanic Gardens Education Department, 909 York Street, Denver, Colorado 80206, and edited by Carolyn Knepp and Patricia A. Pachuta. Subscriptions to this newsletter are a benefit of membership in the Botanic Gardens. For membership information, please write the Membership Department at the above address or call 575-3751.

Deadlines for this newsletter are: Major news stories and feature material (including photographs or artwork) for the April issue—February 20, for May—March 20, for June—April 20. Short news notes are due not later than March 1 for April, April 1 for May, and May 1 for June.

Please plan in advance and meet deadlines. Late material cannot be used. Stories must be typed, double-spaced, preferably on copy paper provided by the editor. Please call the Education Department at 575-3751 for details.

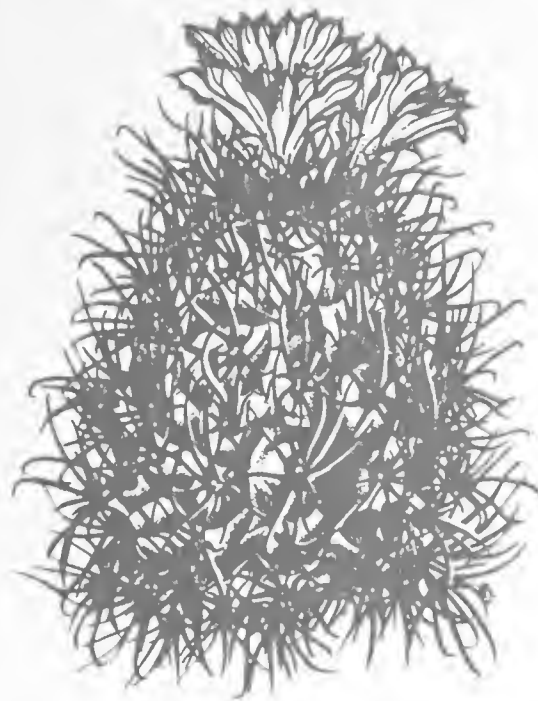
Cactus and Succulent Show and Sale

The Colorado Cactus and Succulent Society will host its Annual Show and Sale again this year at Denver Botanic Gardens. The event will take place in John C. Mitchell II Hall on Saturday, March 31 and Sunday, April 1 between the hours of 9:00 a.m. and 4:45 p.m.

The Show will consist of several educational features, which will attract both the novice and the serious collector. There will be plants representative of families and genera from around the world. In addition, the displays will incorporate information on culture, habitats, nomenclature, and morphology. The majority of the cacti and succulents are brought in from Society members' private collections, and are indicative of the many interests pursued throughout the group. Many of the larger specimens are borrowed from the Botanic Gardens' greenhouses.

Instructional mini-programs, each 15 to 30 minutes long, will be held hourly this year. They will cover a variety of pertinent subjects, including cultural techniques, methods of propagation, and pest control. Several will offer the audience actual hands-on experience.

The Sale will provide each visitor ample opportunity to choose from an outstanding selection of labeled



Sclerocactus parviflorus var. *intermedius*.

A Colorado Native.

cacti and succulents, including many rare species. There will be a variety of sizes and prices, as well as a good selection of plants for indoor gardens, greenhouses, and outdoor hardy gardens. Potting mixtures, reference materials, and T-shirts (bearing a Colorado native species) will also be available for purchase. Society members will be found throughout the sale area to answer questions, assist visitors with their selections, and pass on valuable cultural tips.

The Helen Fowler Library will display a selection of its cactus and succulent reference materials and periodicals. Many of these were donated by the Colorado Cactus and Succulent Society in their continuing effort to develop an appreciation for this interesting group of plants.

During the Show and Sale, Society members will welcome those who might wish to join and participate in the monthly meetings, which feature information on cactus and succulent culture, both indoors and outdoors. The Society also sponsors field trips to many parts of Colorado and adjacent areas, and they host many well-known authorities who travel to Denver to lecture on topics concerning succulent plants.

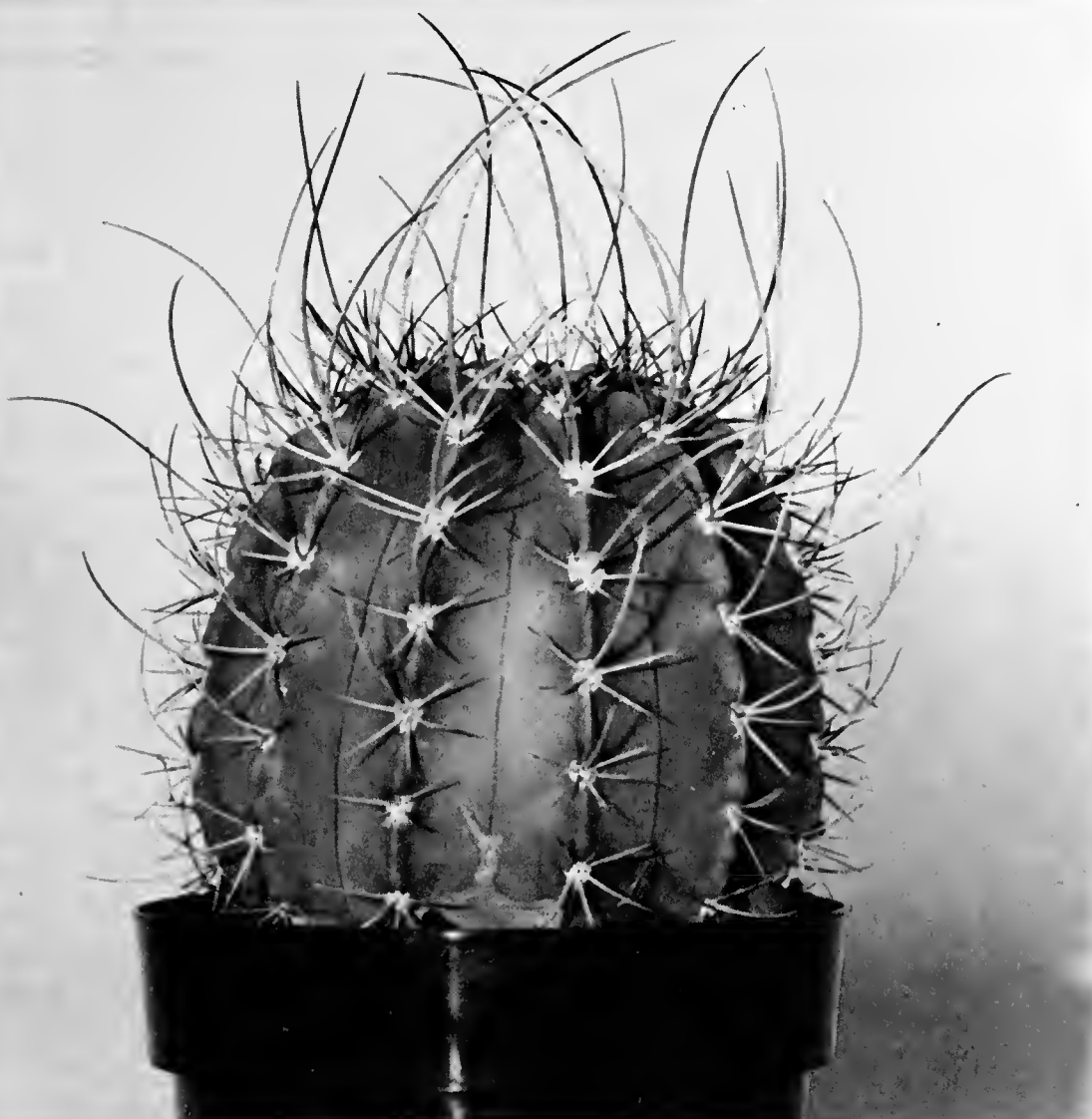
Patrons are reminded that a portion of the proceeds from this Annual Show and Sale is given to Denver Botanic Gardens.

Volunteers Needed with Special Skills

Is foreign language your forte? Can you speak Spanish, French, German, or any other language? Please consider using these skills to lead foreign visitors on Garden or Conservatory tours.

Or, do you enjoy constructing shelves at home, working with your hands, and making small repairs? Perhaps you have recently moved into an apartment, leaving your workshop behind, and you now miss the smell of sawdust.

Denver Botanic Gardens' Associates are looking for volunteers matching either description. If this type of work appeals to you, please call Evelyn Murrow, Volunteer Coordinator, at 575-3751 between 10 a.m. and 2 p.m. on Mondays and Wednesdays, for details. DBG volunteers enjoy a variety of programs and benefits; call and ask for details.



4 Outdoor Guides

Denver Botanic Gardens' dedicated corps of Outdoor Guides is offering its annual Training Course to anyone interested in guiding visitors through the grounds. The eight-week course begins Wednesday, April 4, and runs through May 30 from 9 a.m. to noon. Classes will not be held on May 9 when DBG staff and volunteers will be involved in preparations for the Plant Sale.

Our Outdoor Guides provide a valuable service for the Gardens. Well-trained guides assist visitors in learning more about the Gardens. After having served 40 hours, all guides can enroll in a free class. Continuing education will also be provided to the Guides each month. Guides at DBG have frequent opportunities to make new friends and become involved in the many exciting activities occurring at the Gardens.

Classes will begin in Classroom A, but will move outside as soon as weather permits. All areas will be covered in the course, from the new Morrison Horticultural Demonstration Center to the Rock Alpine Garden. Participants will learn about the Gardens, including the Japanese, Herb, Perennial, and Rose Gardens; the Plains Garden; and the Home Demonstration area, plus much more. All the information you will need to guide a group can be obtained from the class, and with a little practice you will find that you have much to offer our visitors.

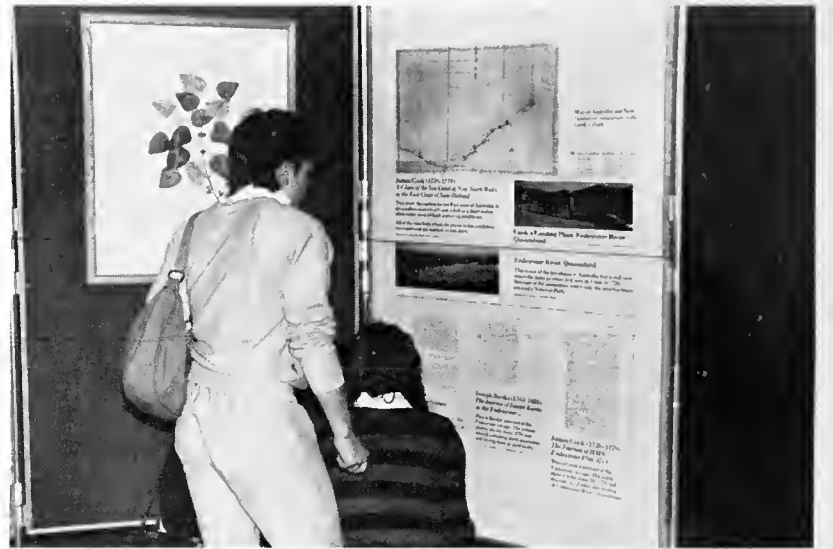
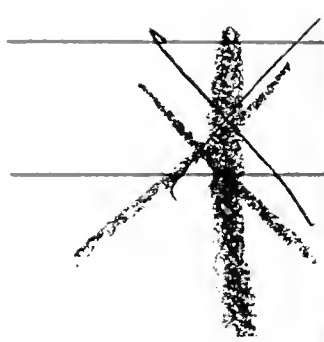
The course costs only \$25, which is refundable after 40 hours of guiding. Included in this fee is a notebook, filled with historical and botanical information.

Previously-trained Outdoor Guides are also invited to attend the classes, at no charge, to refresh their information, learn about the new areas, and share previous experiences with novice guides.

If you are interested in attending this class, fill out the registration form on page eight. For additional information, call the Education Office. Class size is limited to 25, so plan to reserve a place as soon as possible.

Students from St. Mary's Academy enjoying botanical prints from the Captain Cook exhibit.

Dear Lady Thank you
for taking us around
I liked the White
and purple flowers
and the red and blue
flowers to gether
Jason



Call for Outside Garden Volunteers

Do you want to turn your purple thumb green and feel appreciated at the same time? If so, you will want to "Meet the Gardeners" on Friday, March 30 at 2 p.m. in Denver Botanic Gardens' House, 909 York Street.

The Outside Gardening Volunteer Program will provide opportunities to gain horticultural knowledge through training sessions and to enjoy the fresh air while obtaining exercise with other enthusiastic gardeners. If you have a few hours to spare on weekdays, between 7:30 a.m. to 5:00 p.m., call Tom Walters, chairman of the Outdoor Gardening Volunteer Program. Plan to meet him and the gardeners on March 30 and register to help polish the Gardens' landscape.

After a brief introduction to the Gardens by Merle Moore, Executive Director of DBG, volunteers will tour the garden areas. Refreshments will be available following the tour. The benefits of working as a DBG volunteer will also be explained. Interested volunteers can then set up a work schedule and work area.

Evelyn Murrow, Volunteer Coordinator, will be happy to talk to you if you are unable to attend the March 30 meeting. Call her between 10 a.m. and 2 p.m., Mondays and Wednesdays, at 575-3751, if you want to green your thumb as well as the Gardens.

Rare Plants and Ecosystems of Colorado

Mondays, March 19 and 26

(two sessions)

Classroom C 7:30 to 9:00 p.m.

Have you ever seen Graham's penstemon, Knowlton's miniature cactus, or the habitat of the sun-loving meadow rue? Did you know that Colorado has endangered ecosystems as well as endangered plants and animals? Through slide presentations, this series of two lectures will acquaint the viewer with some of Colorado's rare and threatened plants and vegetation types and explain why they are important. In addition, students will learn what can be done to assist in the conservation of Colorado's rare plants and plant associations. Long live the Arkansas River feverfew!

Instructors: William L. Baker and J. Scott Peterson are botanists employed by the Colorado Natural Heritage Inventory. Both have extensive teaching experience.

Fee: \$12 members/\$13 non-members.

Please Pre-register!

Many classes, particularly field trips and tree walks, fill quickly. To ensure your place, please sign up by using the registration form provided.

Unfortunately, on a recent tree walk, some students who failed to pre-register had to be turned away. Class limits vary, and are set to guarantee an appropriate student/teacher relationship. We can occasionally accommodate unregistered students at the last minute; a phone call to the Education Department will confirm this.

Arranging Techniques with Carnations

Wednesday, April 4

(one session)

Classroom B 9:30 to 11:30 a.m.

Learn the many ways of creatively using a dozen carnations! Instruction will be given for using the flowers in arrangements, corsages, and even hairpieces. Please bring a knife, wire cutters, and a shallow container; all other material will be provided.

Instructor: M. Nerys Hammond is a professional floral designer with several years of teaching experience.

Fee: \$14 members/\$15.50 non-members (includes \$6 materials fee).



Dorothy Tegtmeyer in Angela Overy's Advanced Botanical Illustration class.

Beginning Botanical Illustration

Mondays, April 2, 9, 16, 23, 30
May 7

(six sessions)

Classroom B 9:30 to 11:30 a.m.

This introductory course will stress accurate drawing of flowers, roots, stems, and leaves. Fresh spring plant materials will be used for each class and will be dissected when necessary to draw individual plant parts. Students work with pencils, pen and ink, and finally progress to watercolors. Please bring several sharp drawing pencils and an eraser to the first meeting.

Instructor: Angela Overy studied graphic arts and has extensive teaching experience. Her enthusiasm results in very popular courses at DBG.

Fee: \$48 members/\$53 non-members.

Limit: 20.

Starting and Maintaining A Healthy Lawn

Tuesdays, April 3, 10

(two sessions)

Classroom C 7 to 9 p.m.

This course will cover all aspects of installing a new lawn, including complete renovation of a "tired old lawn," seeding, and sodding. Proper maintenance of an established lawn will be discussed as well as grass types, mowing, watering, fertilizing, and pest identification and control.

Instructor: Dorothy F. Borland is a turfgrass consultant in Denver. Her masters degree thesis from Colorado State University dealt with turfgrass.

Fee: \$16 members/\$17.50 non-members.

Here Come the Water Lilies

Saturday, April 7
(one session)

Classroom C 9:30 to 11:30 a.m.

Learn the excitement of aquatic gardening through an illustrated presentation covering the display and cultivation of hardy and tropical water lilies, bog plants, and floating plants in pools and barrels. These amazing plants are surprisingly easy to grow! Topics include choice of varieties, proper cultivation, display techniques, and sources of plant material.



Tropical water lilies.

Instructor: A Gardener Florist II at DBG, Joseph V. Tomocik maintains the turf demonstration plots, vegetable garden, annual trial garden, and the water garden display.

Fee: \$8 members/\$9 non-members.

CLASSES

Spring
1984
Denver Botanic Gardens



Drawing From Nature

Tuesdays, March 27

April 3, 10, 17, 24

May 1, 8, 15

(eight sessions)

Classroom B 9:30 to 11:30 a.m.

From living plants to still life composition, from realism to abstract expressionism, explore art in nature! Students will learn to see, sketch, and draw natural forms and designs and will then translate black and white studies into exciting color. Instruction and demonstrations in assorted media and subject matter will be provided. Bring a large sketch pad, soft charcoal, and drawing pencils to the first class.

Oksana Ross demonstrating watercolor techniques.



Cold frames can add valuable growing days to the gardening season.

Instructor: Oksana Ross, Ph.D., studied at New York University and Columbia University and has 32 years of teaching experience. She was formerly on the faculty of University of Colorado at Denver, Metropolitan State College, and Colorado Women's College. Dr. Ross is a life member of the Art Students League of New York where she studied under Hans Hofmann, Will Barnett, Marion Cooper, and Edgar Whitney.

Fee: \$64 members/\$70 non-members.

Limit: 20.

Watercolor Painting

Wednesdays, March 28

April 4, 11, 18, 25

May 2, 9, 16

(eight sessions)

Classroom B 9:30 to 11:30 a.m.

Translate your vision of nature into exciting color! Wet-in-wet technique as well as painting on dry paper will be demonstrated. From quick gesture to slow contemplative studies, students will explore the rich world of nature at Denver Botanic Gardens.

The works of master painters such as Monet, Nolde, and Sargent will be shown in a slide presentation and visits to art galleries will be offered. No experience is necessary, only your interest in painting.

Instructor: Oksana Ross, Ph.D.

Fee: \$64 members/\$70 non-members.

Limit: 20.

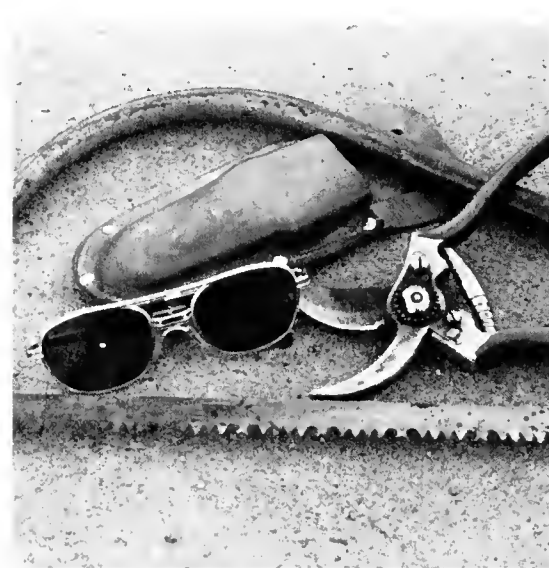
Pruning Techniques

Saturday, March 31

(one session)

Classroom C 9 to 11:30 a.m.

Proper pruning can correct faulty growth, rejuvenate unhealthy



plants, stimulate blossoms, and create interesting branch formations. Yearly maintenance of trees, shrubs, fruit trees, grapes, and berries will all be covered in this class through slide lecture and demonstrations.

Instructors: Susan Fry is a Gardener Florist II at DBG whose responsibilities include the perennial border and the lily and mum collections. Larry Schlichenmayer is a horticulturist with extensive pruning experience who maintains his own nursery business and Sandy Snyder is employed in DBG's Rock Alpine Garden.

Fee: \$10 members/\$11 non-members.

Using Microclimates to Increase Food Production

Saturday, April 14

(one session)

Classroom C 1 to 2:30 p.m.

Whether you garden in the mountains or in the city, you can greatly increase your yield by extending the normal growing season. Understanding the way cold air settles, the heat-holding capacity of brick walls, or the blast of warmth that water gives off prior to freezing can help you plan more productive gardens than you ever imagined.

Topics will include new developments and ideas, such as cold frames, to better utilize gardening environments. Older European practices such as espaliered fruit trees will also be discussed.

Instructor: A specialist in season-stretching gardening, Tom Throgmorton has nine years experience in commercial greenhouse operation and has taught numerous horticultural workshops.

Fee: \$6 members/\$7 non-members.

Vegetables in the Home Greenhouse

Saturday, April 14

(one session)

Classroom C 9 to 11:30 a.m.

Consider the year-round food garden. Students will learn how to select and grow greenhouse vegetables in this morning lecture. Other topics include fertilizing, biological pest control, and special tricks. Although emphasis will be on home solar greenhouses, traditionally heated greenhouse food production will also be covered.

Instructor: Shane Smith, a national consultant on greenhouse and community gardens, has been director of Cheyenne Community Solar Greenhouse since 1977. He is the author of *The Bountiful Solar Greenhouse*.

Fee: \$10 members/\$11 non-members.



Ukrainian Easter Eggs

Saturday, April 14

(one session)

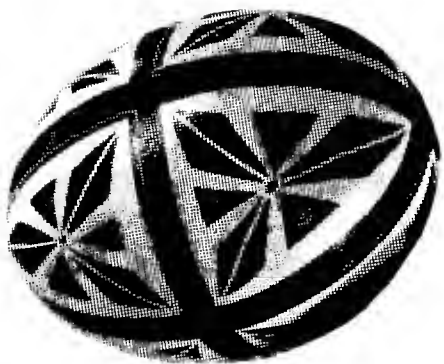
Classroom B 9 a.m. to noon

Ukrainian Easter egg decorating, or *pysanky*, is a centuries-old technique of creating intricate and brilliantly colored patterns on eggs. The process is similar to that used in batik: designs are drawn with molten wax and are over-dyed. Please bring a candle and three or more uncooked eggs to class; all other materials will be provided.

Instructor: Myroslaw Kalba is a native Ukrainian who has lived in the Denver area for the last 20 years. A master at *pysanky*, he has taught numerous workshops and occasionally exhibits his work.

Fee: \$12 members/\$13 non-members.

Limit: 20.



Ukrainian Easter eggs from the collection of Oksana Ross

Classic Egg Feature

Saturday, April 21

(one session)

Classroom B 10 a.m. to noon

For children in Kindergarten

Through Grade 2 (ages 5-7)

or

Classroom B 1 to 3 p.m.

For Children in Grades 3 Through 6

(ages 8-11)

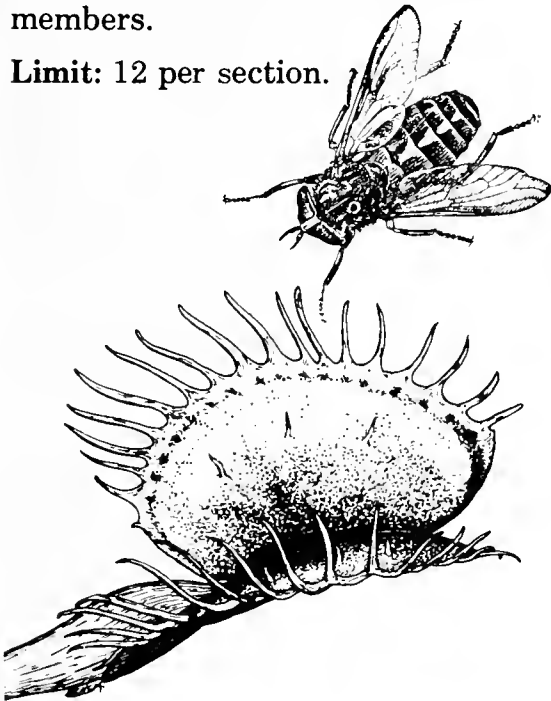
Please indicate the time of your choice on the registration form.

Join this egg-decorating party for kids. Create an egg with eyes that move or colors that glow and glitter. Use flowers, sequins, and beads to create a classic egg treasure. Hunt for an Easter prize in the Gardens. Please bring three hard-boiled eggs to class.

Instructor: Jo Duranceau-Cannon.

Fee: \$6.50 members/\$7 non-members.

Limit: 12 per section.



Munch, Crunch

Saturday, March 31

(one session)

Classroom A 10 a.m. to noon

For Children in Kindergarten

Through Grade 2 (ages 5-7)

or

Classroom A 1 to 3 p.m.

For Children in Grades 3 Through 6

(ages 8-11)

Please indicate the time of your choice on the registration form.

Take a journey into the world of carnivorous plants. Learn how a Venus fly trap "counts" to catch an ant, how the pitcher plant creates a deadly pond, and how the sundew tricks a bug. Each child who ventures into this garden will receive his own Venus fly trap.

Instructor: Jo Duranceau-Cannon studied art at the University of Washington and the University of Denver and has taught children's art classes at the Denver Museum of Natural History, Denver Art Museum, Colorado Historical Society, and the University for Youth at the University of Denver. She is currently an elementary school art teacher for the Cherry Creek School District.

Fee: \$8 members/\$9 non-members.

Limit: 12 per section.



The Mysterious Plant Trek

Saturdays, April 28 and May 5

(two sessions)

Classroom C 10 a.m. to noon

For Children in Kindergarten

Through Grade 2 (ages 5-7)

or

Classroom C 1 to 3 p.m.

For Children in Grades 3 Through 6

(ages 8-11)

Please indicate the time of your choice on the registratin form.

Be a plant explorer and search out mysterious flowers and trees that trap, glow, explode, jump, and even walk. Use paintings, printmaking and animation to solve these plant riddles and garden mazes.

Instructor: Jo Duranceau-Cannon.

Fee: \$13 members/\$14 non-members.

Limit: 12 per section.

Best for Kids!

Tree Walk II at Washington Park

Sunday, March 25
(one session) 2 to 4 p.m. or
Saturday, April 7
(one session) 10 a.m. to noon
Please indicate the date of your
choice on the registration form.

Because of their fruits, distinctive bark patterns, and bud and twig characteristics, many trees become very easy to identify in their winter condition. Join an expert and learn some of these traits on a walk at Washington Park. This is an opportunity to learn different plant material from what was taught on an earlier walk at this location. With luck, the Cornelian cherries may be in bloom!

Leader: Dr. William G. Gambill, Jr., Director Emeritus and Taxonomist at DBG, is a former botany and biology professor.

Meet: At 2 p.m. outside the Denver County Cooperative Extension Office (green building) at the north end of Washington Park. Cars will be used for travel within the park. Please dress appropriately, including boots or other warm footwear.

Fee: \$2.50 members/\$3 non-members. **Limit:** 20.

Dr. William G. Gambill, Jr. on an enjoyable Washington Park tree walk.



Denver Botanic Gardens
909 York Street
Denver, Colorado 80206

Fees for courses should be paid in advance by check or money order made out to Denver Botanic Gardens. Since the space is limited in many courses, registration should be mailed in promptly. Your registration will NOT be acknowledged. Your name will be placed on the class list on the day your money is received. No enrollments for class by phone please. All courses are given subject to a minimum enrollment of ten students. For further information, please call 575-3751.

Mushroom Enthusiasts— Save These Dates!

Denver Botanic Gardens and Colorado Mycological Society will each co-sponsor a Mushroom Identification class on Saturday and Sunday, July 7 and 8, 1984.

Kit Scates, the program instructor, is chairman of the Education Committee of the North American Mycological Association and is well-known throughout the country for her outstanding teaching ability.

She will teach identification skills to beginning mycologists on Saturday, July 7, and to more advanced students on Sunday, July 8. Each session lasts six hours and students may register for one or both days. Fees for members of DBG or Colorado Mycological Society are \$25 a day; non-members of either group will be charged \$30 a day. Watch for a complete program description in future issues of *Green Thumb News*.

Developing Your Home Landscape

Saturday, April 28
(one session)
Classroom B 8 a.m. to 5 p.m.

In this all-day workshop students will learn how to plan a landscape for a new or existing home. Four hours of instruction by slide lecture and discussion will be followed by four hours of students designing their own master landscape plans with the guidance of the instructors.

The following topics will be covered: design procedures and principles for developing and building a landscape that suits your needs, site analysis and circulation planning, micro-climates, grading and drainage, paving and patios, irrigation systems, ecology of the home landscape including trees, shrubs, ground covers, lawns, native grasses, and flowers such as roses, perennials, and wild flowers.

An illustrated 96-page text and printed materials will be furnished. Each student will need to bring an accurate drawing of your site, floor plans of your house, a photo survey of your property (registrants will be furnished with directions for this), and a list of family needs.

A box lunch will be provided. A group discussion and short tour of the DBG demonstration areas are planned for the lunch hour.

Instructors: Thomas L. Stephens has been a practicing landscape architect for over 20 years and has taught home landscaping classes for 14 years. Janet Caniglia has worked in Colorado for three years on environmental planning, visual management, subdivision planning, and community design.

Fee: \$60 members/\$66 non-members (includes all materials and a box lunch).

Limit: 25.

Registration Form for Classes and Field Trips

The enclosed check, in the amount of _____, is to cover the registration fees for the following classes:

Name and section of classes _____

Name _____

Address _____

City _____ State _____ Zip _____

Home Tel. No. _____ Business Tel. No. _____

Member of Denver Botanic Gardens? Yes No

L I B R A R Y
L I N E S

Helen Fowler Library
Volume 7, No. 1
March 1984
Edited by
Jean Williams

Librarian:
Solange Gignac

Gardens of France

By Anita Pereiere and Gabrielle van Zuylen. Harmony Books, New York, 1983. \$40.00.
SB 466 F7 P46 1983.

An interesting vogue for identifying the best of everything is abroad in the land, and a recent review has labeled *Gardens of France* the best in "garden voyeurism"!

Be that as it may, the book is also much more, and I recommend it without reserve. It richly depicts 32 of the finest private gardens in France today. The variety alone is impressive, ranging from elegant chateaux of Ile de France to lush gardens in Normandy, from the hardy wind-swept gardens of the Brittany coast to those of the "sweet south" in Haute-Provence and on Cap d'Antibes. No other English language book covers such a range of French gardens.

It is a welcome addition to garden literature, especially for those whose main concern is garden design. Detailed descriptions by the authors, two devoted gardener/journalists, and excellent photographs by a distinguished French photographer, Robert Cesar, give us a fascinating overview of garden design in France. Neither is the plantsman neglected: many gardeners' favorite plants are identified by their scientific names.

But the main question is: "What is happening today in French gardens?" Do they trend to orderliness or reckless abandon? Are they classic or romantic, random or geometric? Does Le Notre hold his own against unruly emotionalism from across the channel?



In matters of this kind, of course, much can be said for both sides. For the most part, the authors' presentation of raw data leaves us to draw our own conclusions. They seek a balance, they tell us, between "the French classical garden and those gardens whose inspiration derives from the work of English gardeners in the last two centuries." They do offer a clue, however, in the form of the decision to include Monet's garden at Giverny "although it is not really a privately owned garden anymore," it is "a possible signpost to the future of garden design in France."

The significance of Giverny, they tell us, is its synthesis of two great garden traditions. "Here you find lush profusion, organized anarchy, riotous colour and a celebration of simple cottage plants, but all displayed within a symmetrical framework." The great formal axis is, in other words, overrun by a riot

of nasturtiums! Or, with more decorum: "it is a truly Impressionist garden, illustrating the words of Claudel: 'L'ordre est le plaisir de la raison, mais le desordre est le delire de l'imagination': order is the pleasure of reason, but disorder is the frenzy of the imagination."

One point must be mentioned: the purpose of the book as expressed by its authors. Mindful of the loss of so many of France's great gardens of the past, their aim, as stated in the introduction, is "to record some of the fine gardens of France at a time of rebirth in French horticulture, with a revival of interest in the theory and practice of gardening." This they have done, and future scholars may well find more of value here than in more formal works.

(continued on page 10)

THE REVIEWER

Jean Williams—
Helen Fowler
Library
volunteer,
Denver Botanic
Gardens.

(continued)

Moreover, "behind the small arts of the little domestic garden must always lie a country's great gardens."

These writers have also, intentionally or not, written the ultimate in English-language travel guides to French gardens. The gardens are organized geographically, and the first illustration is a map of France that indicates the location of each of the featured gardens. This is a delight both to those who are planning an upcoming tour and to those who read now and go later.

In any case, a minimal tour should include:

Vaux-le-Vicomte. The *sine qua non* of French gardens, Andre Le Notre's magnificent first garden, whose brilliant water effects "echoed in gardens throughout Europe for the next century." It is beautifully photographed here in both color and black and white.

La Mormaire. The quiet dignity of the topiary and the striking architectural hornbeam and yew hedges, planted only 30 years ago, can now be seen in full glory. The tall, dramatic hedges with long narrow openings frame the views beyond with remarkable charm. Here, there are no misshapen animals, only pure stark geometry. This garden incorporates three great European garden styles: "English, French, and Italian—romantic, geometrical, and ornate." My favorite of all these gardens is illustrated here in black and white, the medium most appropriate for portraying the play of light and shadow on the beautiful shapes and forms of the garden.

Parc Floral des Moutiers. The look here is that of a vine-covered cottage. It owes its charm to three people: English architect Sir Edwin Lutyens, Gertrude Jekyll, and the owner, Guillaume Mallet, who by reshaping the terrain, contrived that every vista in the garden should reconstruct one of a collection of drawings by Claude Lorrain.

Kerdalo. A modern garden, begun in 1962 by Peter Walkonsky, the prototypic "insatiable gardener." With no formal plan, only inspiration and a "supreme concern with the form and habits of growth of plants," he is still at work on his masterpiece.

Le Vasterival. Begun in 1957 by gardener extraordinaire, Princess Greta Sturdza, the charm of this garden is its luxuriant growth and the notable absence of architectural folly or artifice. Climbers are trained on trees instead of pergolas, and ground covers are an element of every design. Many plants, including primulas and hellebores, are massed together for the purpose of design.

Chateau de Villandry. A quintessential French garden, this ornamental kitchen garden was begun in 1906 by Dr. Joachim Carvalho, who believed that the ideal

garden should resemble a medieval monastic garden of culinary and medicinal herbs; vegetables; and occasionally, flowers for the altar. The inspiration for Villandry was *Les Plus Excellents Bastiments de France*, a set of 16th century engravings by Jacques Androuet de Cerceau.

But how can we choose? This "guide for the garden voyeur" is full of essential gardens: Chateau d'Anet (from the 16th century), Les Grandes Bruyeres (the great heathers), La Petite Rochelle, Chateau de Touffou, Chateau de Hautefort and in the south—Le Pigeonnier Saint-Jean, La Chevre d'Or, and Villa Noailles . . .

Jean Williams

Help Us Locate These Books

The recent return to the Library of Mary Vaux Walcott's *Illustrations of North American Pitcher Plants*, which had been missing for seven years, has renewed in us a belief that the goodness of man is possible in spite of the daily media barrage to the contrary. In that spirit, we are listing 23 titles of books which have been checked out of our Library by DBG members over the past two years but have not been returned.

Please check your book shelves and help us locate these missing volumes so they may be returned to the Library for others to enjoy. No fines will be imposed and you will have our gratitude. Seeing them turn up again on the Library shelves will help ease the pain and frustration of the additional 67 books that were lost from our collection over the past two years in spite of the security system installed in 1981.

Shade Gardens, by Oliver S. Allen.

Bonsai, Saikei, and Bonkei: Japanese Dwarf Trees, by Robert Lee Behme.

Kamuti: A New Way in Bonsai, by Willi E. Bollman.

Where the Buffaloes Begin, by Olaf Baker. This book was given to the Library by a staff member in memory of Michael Manning.

Elements of Soil Conservation, by Hugh H. Bennett.

Wild Alaska, by Dale Brown.

Bonsai: Miniature Trees, by Claude Chidamian.

Landscape Gardening, by James U. Crockett.

How to Enjoy Your Weeds, by Audrey W. Hatfield.

Key to Some Colorado Grasses, by Harold D. Harrington.

Grow Native, by Sam Huddleston.

Propagation of Alpine Plants, by J. K. Hulme.

Garden Birds, by John Leigh-Pemberton.

Dahlias for Everyone, by T. B. LeBar.

The Medical Garden, by Geoffrey Marks.

You Can Grow Orchids, by Mary Noble.

Home Solar Gardening, by John H. Pierce.

Growing Orchids, by J. N. Rentoul.

Orchids, by Alice F. Skelsey.

Orchids and How to Grow Them, by Gloria J. Sessler.

Herbs: The Magic Healers, by Helen V. P. Wilson.

Wood Handbook, by U. S. Forest Products Lab.

Gardening Tips for March

After this exceptionally cold winter, the term "hardiness" may be used loosely and many plants will receive the stamp of approval because they survived. Hardiness is a general term that alludes to the plant's ability to persist through the winter and this persistence is related to minimum temperature. However, temperature is the principal, but not exclusive environmental factor that induces cold hardiness in plants.

During spring and summer plants put on their maximum growth, with vegetative features dominating May through July and trunk and stem caliper development more apparent in August. Throughout this period plants have no frost resistance. As fall approaches, temperatures become cooler, days become shorter, and there are changes in hormone activity as well as concentrations within plants. These factors trigger the first stages of dormancy and cold hardiness. Insect defoliation or a summer drought followed by a wet fall may force a plant to overcome this initial stage of dormancy, as may fertilizing, pruning, or premature transplanting.

The second and third stages of dormancy are reached when cold temperatures persist and natural defoliation occurs. If there are too many warm days during this time, the hardiness threshold lowers. This

will also occur if there is a rapid, rather than gradual, decline in temperature. During January and February, cold requirements will have been met and plants can be forced out of dormancy. Once buds open, cold resistance is lost.

Hardiness of plants is further influenced by soil drainage, snow cover, and precipitation. Until a plant has been subjected to these varying conditions, its hardiness is questionable. According to George Kelly and Harry Swift, experienced Denver nurserymen, a plant should be grown at least ten years before it can be considered hardy.

Some symptoms of cold injury, other than necrosis, or death, are shrinking of tissues, cracks in the bark and/or crotches, sunken or discolored areas, and separation of sapwood from heartwood.

March is a month for caution in the garden. Because of almost daily fluctuations from winter to spring, we are tempted to act hastily. Mulches and other winter protection should remain on the plants. Upright evergreens with weak crotches should be tied to prevent damage from heavy spring snows.

Dormant oils may be applied to control soft-bodied insects such as scale. The temperature needs to be above 40 F without danger of evening frosts.

If the ground is workable, beds can be prepared and trees, shrubs, groundcovers, and some herbaceous plants can be planted. Some plants that flower now are Cornelian cherry dogwood, *Cornus mas*; Chinese witch hazel, *Hamamelis mollis*; and winter hazel, *Corylopsis sinensis*. For early flower displays, pansies will do well, as will other herbaceous plants such as rock cress.

As the season passes from winter to spring, activity in the garden increases rapidly. How easy it is to fall behind if we are not prepared for both the dangers and opportunities that present themselves during this hectic month.

Gayle Weinstein
Botanist Horticulturist at
Denver Botanic Gardens



A spring display of iris and tulips

C M A R C H

Regular Meetings of Plant Societies

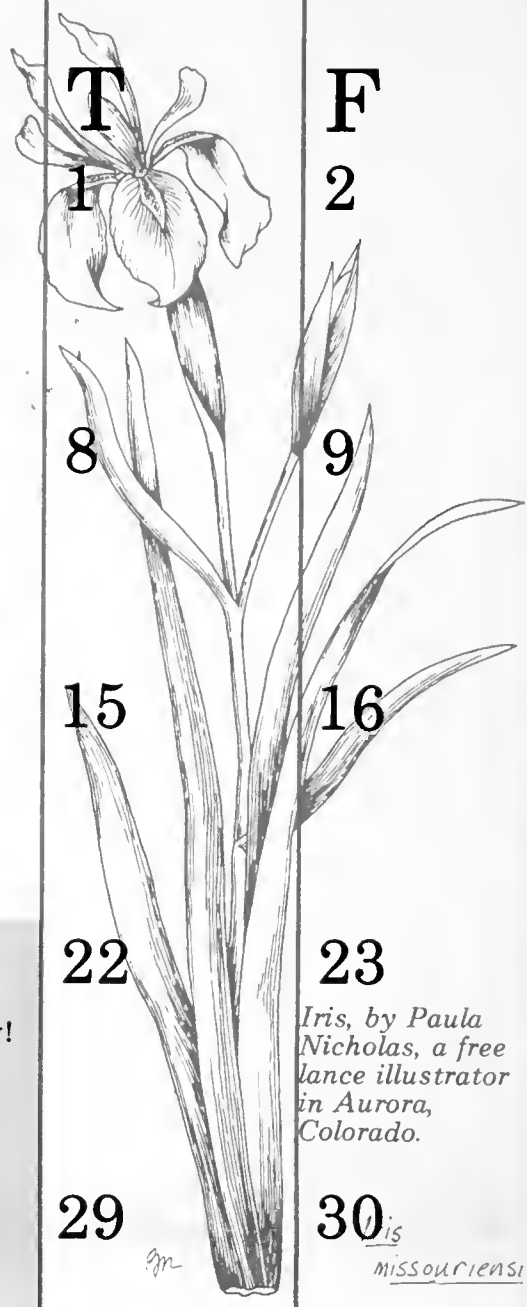
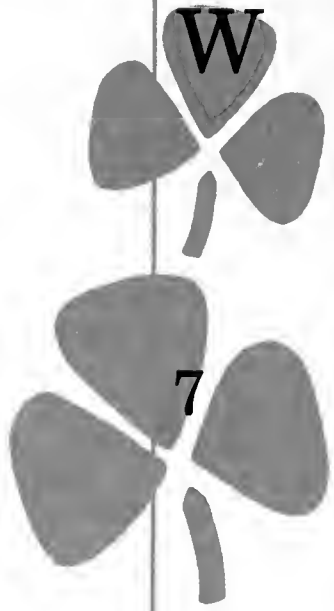
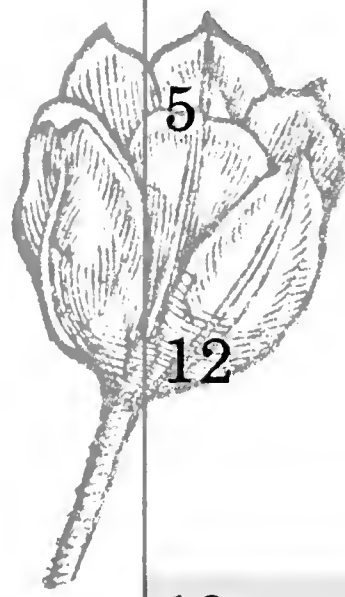
A number of plant and horticultural groups meet fairly regularly at the Denver Botanic Gardens. Here is a listing of those groups and a general indication of when they usually meet. For more specific meeting times and locations as well as for information on how to contact a representative of the group, please call the Botanic Gardens switchboard during business hours at 575-3751.

African Violet Society, 4th Thurs. of 7 months; **Bonsai Society**, 1st & 3rd Tues.; **Botany Club**, 3rd Fri.; **Cactus & Succulent Society**, 2nd Tues.; **Civic Garden Club**, 1st Fri.; **Dahlia Society**, 2nd Fri.; **Gladiolus Society**, call for info.; **Gloxinia Gesneriad Growers**, 1st Sat.; **Hemerocallis Society**, 3rd Sun. of 4 months; **Ikebana International**, 4th Fri.; **Indoor Light Gardening Society**, 3rd Thurs.; **Iris Society**, spring & fall dates; **Men's Garden Club**, 4th Thurs.; **Mycological Society**, 2nd Mon.; **Native Plant Society**, call for info.; **Orchid Society**, 1st Thurs.; **Rock Garden Society**, 3rd Wed.; **Rose Society**, 2nd Thurs.; **Ultra Violet Club**, 4th Mon.

C A L E N D A R

S M T W T F S

4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31



Coming Next Month

March 31 & April 1 Colorado Cactus and Succulent Society Show and Sale
 April 2 Beginning Botanical Illustration

April 3 Starting and Maintaining A Healthy Lawn
 April 4 Outdoor Guides Training course

April 7 Tree Walk II
 Dahlia Society Tuber Sale
 April 12-15 Guild of Natural Science Illustrators Art Show

April 14 Microclimates in Food Production, Vegetables in Home Greenhouses, Ukranian Easter Eggs

April 21 Classic Egg Feature

Denver Botanic Gardens, Inc.
 909 York Street
 Denver, Colorado 80206
 303-575-3751

TIME VALUE

March 1984

Address correction requested



10 A Horticultural Workshop

17 March 17 & 18 Dutch Floral Design Show
 St. Patrick's Day

24 March 24 & 25 African Violet Show and Sale

31 Pruning Techniques workshop
 Munch, Crunch

April 28 Developing Your Home Landscape workshop
 April 28-29 Ikebana International Show and Demonstration

Non Profit Org.
 U.S. Postage PAID
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Green

Thumb

Denver Botanic Gardens

April 1984

Number 84-4



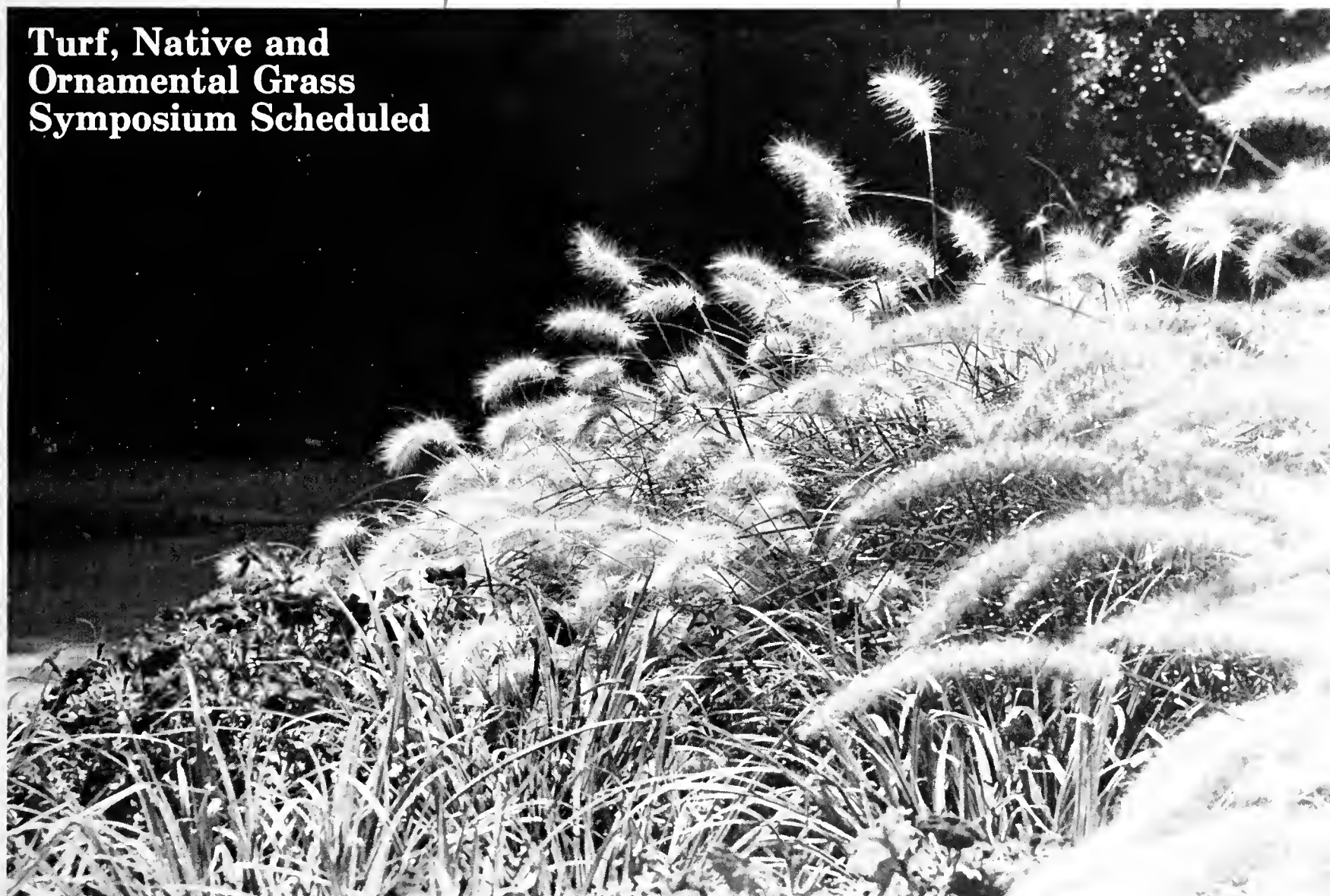
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Turf, Native and Ornamental Grass Symposium Scheduled



*Inside:
Education Offerings
page 5*

Ornamental grasses at Denver Botanic Gardens.

A half-day seminar entitled, "Turf, Native and Ornamental Grasses for Colorado," will be presented on Thursday, April 19 in John C. Mitchell II Hall. Sponsored by the Colorado Native Plant Society and Denver Botanic Gardens, the program is in response to an increased public interest in native plants and water-saving techniques according to Gayle Weinstein, botanist-horticulturist at DBG and chairman of the Horticulture and Rehabilitation Committee of the Colorado Native Plant Society.

The program will be divided into two sections: one on turfgrasses

and one on ornamental grasses. The turfgrass segment will cover traditional lawn grasses such as Kentucky bluegrass as well as native dryland grasses suitable for lawns. Speakers for this portion of the program are Dr. Jack Butler, turfgrass management specialist for the Cooperative Extension Service, Colorado State University, and Dorothy Borland, turfgrass consultant.

The ornamental grass section will cover traditional ornamental grasses such as plume grass and fountain grass. Kurt Bluemel, owner of Kurt Bluemel, Inc., an ornamental grass

nursery in Maryland, and Jim Chilvers, a horticulturist employed by High Plains Stone Company in Parker, Colorado, will address this topic.

The Colorado Native Plant Society and Denver Botanic Gardens will host two other one-day symposia this summer. A program on penstemons will be presented on Thursday, June 14 and one on dryland perennials is scheduled for August 18.

(continued on page 3)

A journey to England and a winter escape to Florida are among Ruth Hawkins' plans after her February 29 retirement from Denver Botanic Gardens. Ruth joined DBG in 1973 as secretary to former director Dr. William G. Gambill, Jr., but retired prematurely in 1978 to take care of her mother. In 1980 she was tempted from retirement by the position of DBG's membership secretary. After three years she has chosen to return to an active retirement. Besides her travels, she promises to remain an eager, involved supporter of the Gardens.



Lee Tilton completing one of her more enjoyable tasks, recording new members.

Tributes

In memory of Mildred Edwards

Edward and Ann Levy

In memory of Jack Holland

Belinda Shannon

In memory of Gladys Nicholson Kirk

Arthur Andersen & Co.

Arthur Young and Company

David E. Bailey

Gerald M. Berenstein

Mrs. Charles Boettcher II

Mrs. Sidney L. Brock, Jr.

Frank and Joy Burns

Randolph S. Carey

Mr. and Mrs. Barkley L. Clanahan

Mrs. Mackintosh Brown

Mr. and Mrs. Edward P. Connors

Frederic K. Conover II

Mr. and Mrs. Richard Downing, Jr.

Mr. and Mrs. Raymond Duncan

Robert P. Hackstaff

Mr. and Mrs. N. Berne Hart

Mr. and Mrs. John Falkenberg

Gerald D. Hines Interests

Denver Office

Charles E. Husted

The Kiowa State Bank

Mr. and Mrs. William H. Kistler

Ruth and Walter Koch

Walter A. Koelbel

Mr. and Mrs. Lawrence A. Long

On February 13 Lee Tilton began training with Ruth. She has proven to be a rapid learner and intends to continue providing the good service our members expect to receive. Lee brings a wealth of experience to this position from various agencies, including National Jewish Hospital. She is a member of DBG and a participant in the Community Vegetable Gardening Program. She enthusiastically says, "I am glad to be here!" and we are happy to welcome her to the staff.

Merle M. Moore
Executive Director

Free Days at DBG

Residents of the City and County of Denver will once again have an opportunity to visit Denver Botanic Gardens free of charge. The following are the dates:

Tuesday, April 17

Thursday, May 17

Tuesday, July 17

Friday, August 17

Monday, September 17

Wednesday, October 17

Monday, December 17

April Botany Club Meeting

William E. Jennings will show "Seldom Seen Flowers of the West" at the April 20 Botany Club meeting. This session, which will meet at 7:30 p.m. in Classroom C, is free and open to the public.

Mr. and Mrs. John A. Love

Gerald E. McNally, Jr.

W. H. McNichols, Jr.

Officers, Directors and Staffs of

Metropolitan United Banks of

Arapahoe

Arvada

Aurora

Broomfield

Cherry Creek

Lakewood

Littleton

Monaco

Skyline

SouthPark

Southwest Plaza

Louann and Micky Miller

Jane Silverstein Ries

Rohrer, Hibler & Replogle, Inc.

Mrs. Raymond E. Sargeant and

Polly S. Flobeck

Mr. and Mrs. Jerome R. Strickland

Mr. and Mrs. Thomas W. Swanson

Staff of United Bank of Boulder

Loren A. Vance

Ted and Mary Washburne

Richard G. Weigel

Mr. and Mrs. Earl G. Wiebold

Mrs. William F. Wilbur

In memory of Mrs. Jeanne Thompson

Mr. and Mrs. Earl R. Rinker

A Rose Symposium



Members of Denver's Rose Society will hold a Rose Symposium in John C. Mitchell II Hall on Saturday, April 21. Between 9:00 a.m. and 12:30 p.m. knowledgeable rosarians brought together by the society plan to share important pointers on miniature roses; spraying and planting, watering techniques, and methods of conditioning roses for longer lasting arrangements.

The morning's agenda also allows time for question and answer sessions and an educational slide program. Refreshment breaks provide additional opportunities for participants to ask specific questions of the society's members. This timely symposium should be attended by anyone interested in rose gardening.

There is no charge for the symposium other than the regular gate admission fee required of non-member visitors of DBG.

Green Thumb News

Number 84—4 April 1984

Published monthly by the Denver Botanic Gardens Education Department, 909 York Street, Denver, Colorado 80206, and edited by Carolyn Knepp and Patricia A. Pachuta. Subscriptions to this newsletter are a benefit of membership in the Botanic Gardens. For membership information, please write the Membership Department at the above address or call 575-3751.

Deadlines for this newsletter are: Major news stories and feature material (including photographs or artwork) for the May issue—March 20, for June—April 20, For July—May 18. Short news notes are due not later than April 1 for May, May 1 for June, and June 1 for July.

Please plan in advance and meet deadlines. Late material cannot be used. Stories must be typed, double-spaced, preferably on copy paper provided by the editor. Please call the Education Department at 575-3751 for details.

The Four Seasons

On Saturday, April 28, in Denver Botanic Gardens' John C. Mitchell II Hall, the Denver Chapter of Ikebana International will host their spring flower show, "The Four Seasons." One of the four seasons will be represented in each corner of the Hall with special arrangements denoting spring, summer, winter, and fall. On stage a replica of a traditional tea house prepared for a tea ceremony will complete the show's ambience. Visitors can observe the intricate, yet simple art of arranging twice a day, 11 a.m. and 2 p.m., with each demonstration lasting a half hour.

"The Four Seasons" is open to the public at a cost of \$1 in addition to the gate fee that applies to non-members of DBG. Ikebana members will be available to answer questions and help interpret the arrangements—make it a point to see this elegant display of Japanese flower arranging.

Grass Symposium (cont.)

Pre-registration for "Turf, Native and Ornamental Grasses of Colorado" is advised as the number of participants is limited. **Pre-registration can be accepted only if received by April 9.** Cancellations must be requested before April 13 and a \$2 service fee will be deducted from each refund. Registration will be accepted at the door if space is available. **Pre-registration forms must be mailed to:**

CONPS—Grasses Workshop
P.O. Box 200
Ft. Collins, CO 80522

Please make checks payable to CONPS. Registrations will not be acknowledged; your cancelled check serves as your receipt.

Registration Form for Grasses Workshop Only

Please do *not* send registration form to Denver Botanic Gardens.

Name _____

Address _____

City _____

Phone _____

(daytime between 8 a.m. - 4 p.m.)

CONPS member _____	\$15	Send To: CONPS—Grasses Workshop P.O. Box 200 Ft. Collins, CO 80522
DBG member _____	\$15	
Non-member _____	\$18	
Student _____	\$10	
Total _____		

An Art-Science Interface

Natural science illustrators are a growing group of dedicated artists who work diligently at bringing together the worlds of art and science. From Thursday, April 12 through Sunday, April 15, Denver Botanic Gardens visitors will have an opportunity to see a major exhibition of this interface.

Botanical, zoological, and medical illustrations selected from the work of regional artists and ten nationally recognized illustrators will be displayed. The basis of this show is to present the wide range of subject matter and techniques that encompass these fields of illustration.



Susan Strawn's pencil drawing of hooded rats. Susan, a freelance illustrator from Ft. Collins, will exhibit at the Guild of Natural Science Illustrators Art Show.

Bookworms and Philatelists Take Note

With a month left until our Annual Plant and Used Book Sale, the library is still accepting books—new and used. The librarian, Solange Gignac, has also asked for contributions of cancelled foreign stamps which will be sold at the book sale. If you have any questions, call the librarian at 575-3751.



Arbor Day is set aside by gubernatorial proclamation each year, in every state, as a time to reflect upon the value of trees. This appreciation may take many forms, some of which include "Adopt-a-Tree" programs in schools, educational activities provided by foresters and extension agents, community-wide recovery programs that involve massive plantings after natural disasters, and Tree City USA.

Arbor Day began in 1872 in the Nebraska Territory with more than a million trees planted the first day. In 1984 all states will observe the holiday. Each year governors sign proclamations declaring legal holidays, but due to climatic variances, the event occurs at different times across the country. Colorado celebrates Arbor Day on

the third Friday of April; Texas on the third Friday of January; and Maine, the entire third week of May.

The Tree City USA program was established in 1976 to provide technical guidance to communities attempting to develop comprehensive tree maintenance plans. The National Arbor Day Foundation awards each winning city a plaque, a Tree City USA flag, signs for city entrances, and national recognition as a town that conscientiously manages its tree resources. Tree City USA is an ongoing program that must be applied for each year. Some Colorado communities receiving Tree City USA designations this year include Boulder, Englewood, Lakewood, Longmont, Wiggins, and Wheat Ridge (recipient of a five-year recognition in 1983). Communities desiring information on the Tree City USA program should contact local or state foresters.

J. Sterling Morton's dream for a national awareness and appreciation of trees has come a long way from the simple plantings in 1872. Arbor Day may only be a commitment of one day for some; but it is a step in recognizing the needs and importance of our trees and their natural environment. For many communities, this first step has led to many more—and all have led to the future.

Dahlia Tuber Sale

Dahlia tubers will be on sale in Denver Botanic Gardens' John C. Mitchell II Hall Saturday, April 7. Denver Dahlia Society members will sell tubers from their private collections from 9 a.m. to 4 p.m. to raise funds for their annual Dahlia Show in the fall. Although there is no additional entrance charge for the sale, the regular DBG admission fee will be in effect for non-members.

Don't forget Denver Botanic Gardens' Annual Plant and Used Book Sale, May 11 and 12!

Outstanding Rock Gardener, Dr. T. Paul Maslin, Dies

With a feeling of sorrow and a sense of deep loss, we report to our members that Dr. T. Paul Maslin recently passed away. Dr. Maslin, a former professor of Herpetology at the University of Colorado, was known to Denver Botanic Gardens' staff and members for his outstanding work in rock gardening.

As a founding member of the Rocky Mountain Chapter of the American Rock Gardening Society (ARGS), his memory will endure through his accomplishments. Dr. Maslin served on DBG's first subcommittee to select plant material for our Rock Alpine Garden. A recipient of many awards, he is well known for his work in Mexico with the genus, *Phlox*. Dr. Maslin recently received the Award of Merit from the Rocky Mountain Chapter of ARGS for his services to rock gardening. He introduced and tested numerous rock garden plants new to the Colorado region and even to the horticultural trade. A committee has been established by the society to preserve his private rock garden in Boulder, which consists of more than 3000 plants.

The Rocky Mountain Chapter of the ARGS recognized Dr. Maslin not only for his contributions to rock gardening, but for being a gracious gentleman who provided enduring inspiration. Those who are following in his tracks will never forget him.



Here Come the Water Lilies

Saturday, April 7
(one session)

Classroom C 9:30 to 11:30 a.m.

Learn the excitement of aquatic gardening through an illustrated presentation covering the display and cultivation of hardy and tropical water lilies, bog plants, and floating plants in pools and barrels. These amazing plants are surprisingly easy to grow! Topics include choice of varieties, proper cultivation, display techniques, and sources of plant material.

Instructor: A Gardener Florist II at DBG, Joseph V. Tomocik maintains the turf demonstration plots, vegetable garden, annual trial garden, and the water garden display.

Fee: \$8 members/\$9 non-members.

Field Trip to Roxborough State Park

Sunday, May 6
1:30 to 4 p.m.

Learn spring wildflower identification at this spectacular park. An easy trail winds through striking geological formations where a wide variety of habitats including sunny, open hillsides, hogback ridges, and a moist stream valley will be explored.

Leader: Bob Heapes is an experienced field trip leader and nature photographer, and is also an amateur naturalist at Roxborough State Park.

Fee: \$2.50 members/\$3 non-members.

Meet: at 1:30 p.m. at the intersection of Roxborough and Rampart Roads. Each car entering the Park must purchase a daily user pass in addition to the field trip fee.

Limit: 20.



Plant Life Field Trip: Red Rocks Park

Wednesday, April 18
9 a.m. to 4 p.m.

This is an opportunity to observe some of the delightful early spring wildflowers of Red Rocks Park. Easter daisies, pasqueflowers, and some of the mustards should all be in flower. Bring a lunch.

Leader: Berta Anderson is an amateur botanist who volunteers in the Kathryn Kalmbach Herbarium at DBG.

Fee: \$2 per person.

Meet: at 9 a.m. at Denver Botanic Gardens House to carpool and share gasoline expenses.

Limit: 20.

Deciduous Flowering Shrub and Ornamental Trees for Colorado

Mondays, April 30 May 7, 14, 21
(four sessions)

Main Room at Denver Botanic Gardens House 7:15 to 9:15 p.m.

The emphasis of this course will be on identifying and examining the landscape value of over 75 species of deciduous flowering shrubs and ornamental trees which are hardy in the Denver area. Through the use of slides, students will observe the plant material while the instructor discusses their cultural requirements.

Instructor: An experienced teacher, Jeffrey Frank studied landscape architecture at Pennsylvania State University and the University of Virginia, and is presently employed as a landscape architect at Donald H. Godi & Associates, Inc., in Denver.

Fee: \$32 members/\$35 non-members.



Beginning Bonsai

Thursdays, April 26
May 3, 10

(three sessions)

Classroom B 7:30 to 10 p.m.

This introductory course will cover historical and cultural techniques of bonsai, the art of creating dwarf trees and shrubs. Instruction on styling, training, potting, and general care of bonsai in Colorado will be included.

Each student will take a completed bonsai home. All materials including a book are provided.

Instructors: Keith Jeppson, past president of Rocky Mountain Bonsai Society, is an experienced bonsai hobbyist of 12 years. Harold Sasaki is a commercial bonsai grower and an experienced bonsai hobbyist of 14 years.

Fee: \$47 members/\$52 non-members (includes a \$17 materials fee).

Limit: 20.

CLASSES

Spring
1984
Denver Botanic Gardens



Classic Egg Feature

Saturday, April 21
(one session)

Classroom B 1 to 3 p.m.
For Children in Grades 3 Through 6
(ages 8-11)

Please indicate the time of your choice on the registration form.

Join this egg-decorating party for kids. Create an egg with eyes that move or colors that glow and glitter. Use flowers, sequins, and beads to create a classic egg treasure. Hunt for an Easter prize in the Gardens. Please bring three hard-boiled eggs to class.

Instructor: Jo Duranceau-Cannon studied art at the University of Washington and the University of Denver and has taught children's art classes at the Denver Museum of Natural History, Denver Art Museum, Colorado Historical Society, and the University for Youth at the University of Denver. She is currently an elementary school art teacher for the Cherry Creek School District.

Fee: \$8 members/\$9 non-members.

Limit: 12 per section.

The Mysterious Plant Trek

Saturdays, April 28 and May 5
(two sessions)

Classroom C 1 to 3 p.m.
For Children in Grades 3 Through 6
(ages 8-11)

Please indicate the time of your choice on the registration form.

Be a plant explorer and search out mysterious flowers and trees that trap, glow, explode, jump, and even walk. Use paintings, printmaking, and animation to solve these plant riddles and garden mazes.

Instructor: Jo Duranceau-Cannon.

Fee: \$13 members/\$14 non-members.

Limit: 12 per section.



Seamus Sullivan, five years old, putting his best efforts on paper in one of Jo Duranceau-Cannon's classes.

Using Microclimates to Increase Food Production

Saturday, April 14
(one session)

Classroom C 1 to 2:30 p.m.

Whether you garden in the mountains or in the city, you can greatly increase your yield by extending the normal growing season. Understanding the way cold air settles, the heat-holding capacity of brick walls, or the blast of warmth that water gives off prior to freezing can help you plan more productive gardens than you ever imagined.

Topics will include new developments and ideas, such as cold frames, to better utilize gardening environments. Older European practices such as espaliered fruit trees will also be discussed.

Instructor: A specialist in season-stretching gardening, Tom Throgmorton has nine years experience in commercial greenhouse operation and has taught numerous horticultural workshops.

Fee: \$6 members/\$7 non-members.

Vegetables in the Home Greenhouse

Saturday, April 14
(one session)

Classroom C 9 to 11:30 a.m.

Consider the year-round food garden. Students will learn how to select and grow greenhouse vegetables in this morning lecture. Other topics include fertilizing, biological pest control, and special tricks. Although emphasis will be on home solar greenhouses, traditionally heated greenhouse food production will also be covered.

Instructor: Shane Smith, a national consultant on greenhouse and community gardens, has been director of Cheyenne Community Solar Greenhouse since 1977. He is the author of *The Bountiful Solar Greenhouse*.

Fee: \$10 members/\$11 non-members.

Denver Botanic Gardens
909 York Street
Denver, Colorado 80206

Fees for courses should be paid in advance by check or money order made out to Denver Botanic Gardens. Since the space is limited in many courses, registration should be mailed in promptly. Your registration will NOT be acknowledged. Your name will be placed on the class list on the day your money is received. No enrollments for class by phone please. All courses are given subject to a minimum enrollment of ten students. For further information, please call 575-3751.

Registration Form for Classes and Field Trips

The enclosed check, in the amount of _____, is to cover the registration fees for the following classes:

Name and section of classes _____

Name _____

Address _____

City _____ State _____ Zip _____

Home Tel. No. _____ Business Tel. No. _____

Member of Denver Botanic Gardens? Yes No

Gardening Tips for April

From January through March, we have been planning, ordering materials, pruning, preparing beds, and doing some planting. But in April, the rush is on and the real thrust of gardening begins. Everything left undone or incomplete the past few months becomes a job to accomplish now, in addition to the tasks planned for April. Along with this, the gardener must dodge the fickleness of nature and the erratic conditions of rain, snow, wind, and sunshine.

If March did not allow for the application of dormant oils, early April can, as long as the buds are still tight. However, as the month progresses, water will begin to move through the plant and buds will swell. Lilacs, crabapples, and pears will break bud and many will come into bloom. Using dormant oils at this time may damage new spring growth.

April is the favorite time for planting whether it is trees, shrubs, groundcovers, or the direct sowing of seeds. Temperatures are increasing, there is more moisture, and the days are getting longer. It is very relaxing to be outside.

As we are all aware, there are certain temperatures that make it easier for people to function. Plants also function best within a certain temperature range. Those plants considered "cool season" have an optimum growing range of 70-85 F. Those considered "warm season" have an optimum growing range of 85-98 F. This optimum range is determined by what stage of development the plant is in (seedling or fruiting stage, for example).

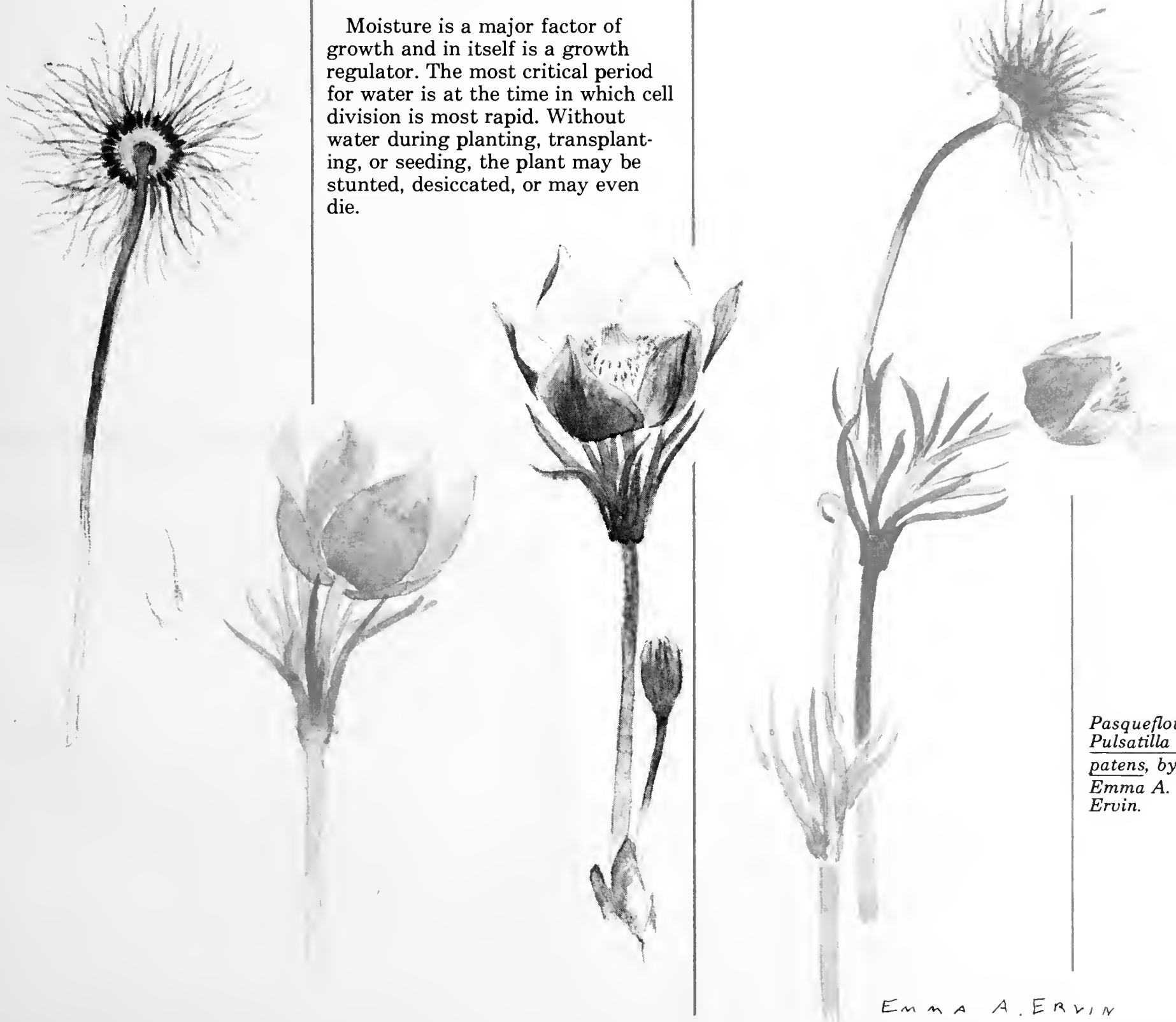
Because gardeners grow plants beyond their natural temperature range, cold or heat injury is often a hazard to plant performance, consequently, forsythia may not bloom in April and lettuce may be limp in June.

Moisture is a major factor of growth and in itself is a growth regulator. The most critical period for water is at the time in which cell division is most rapid. Without water during planting, transplanting, or seeding, the plant may be stunted, desiccated, or may even die.

Light is also a factor in plant growth. It affects germination in some plants, flowering time in others, and stem sturdiness in still others. As important as it is to plant in April, planting too early may be harmful. This is true for many warm season crops planted too hastily. The stems become stunted, do not branch, and the plants often die, usually in July, leaving large empty spaces in your garden at a time when replacement crops are not likely to succeed.

As we become more aware of climate and its effect on plant growth, we appreciate the germination of seeds, the greening of herbaceous plants, and the breaking of buds. Through this process, inconspicuous stages of development become conspicuous ones.

Gayle Weinstein
Botanist Horticulturist at
Denver Botanic Gardens



*Pasqueflower,
Pulsatilla
patens, by
Emma A.
Ervin.*

EMMA A. ERVIN

C A P R A P R

Regular Meetings of Plant Societies

A number of plant and horticultural groups meet fairly regularly at the Denver Botanic Gardens. Here is a listing of those groups and a general indication of when they usually meet. For more specific meeting times and locations as well as for information on how to contact a representative of the group, please call the Botanic Gardens switchboard during business hours at 575-3751.

African Violet Society, 4th Thurs. of 7 months; *Bonsai Society*, 1st & 3rd Tues.; *Botany Club*, 3rd Fri.; *Cactus & Succulent Society*, 2nd Tues.; *Civic Garden Club*, 1st Fri.; *Dahlia Society*, 2nd Fri.; *Gladiolus Society*, call for info.; *Gloxinia Gesneriad Growers*, 1st Sat.; *Hemerocallis Society*, 3rd Sun. of 4 months; *Ikebana International*, 4th Fri.; *Indoor Light Gardening Society*, 3rd Thurs.; *Iris Society*, spring & fall dates; *Men's Garden Club*, 4th Thurs.; *Mycological Society*, 2nd Mon.; *Native Plant Society*, call for info.; *Orchid Society*, 1st Thurs.; *Rock Garden Society*, 3rd Wed.; *Rose Society*, 2nd Thurs.; *Ultra Violet Club*, 4th Mon.

C	A	L	E	N	D	A	R
S 1 Colorado Cactus and Succulent Society Show and Sale	M 2 Beginning Botanical Illustration	T 3 Starting and Maintaining a Healthy Lawn	W 4 Outdoor Guides Training course	T 5 April 12-15 Guild of Natural Science Illustrators Art Show	F 6 Arbor Day	S 7 Tree Walk II Dahlia Society Tuber Sale	
8	9	10	11	12	13	14 Microclimates in Food Production, Vegetables in Home Greenhouses,	
15	16	17 Free Day for Denver City/County Residents	18 Plant Life Field Trip: Red Rocks Park	19 Turf, Native and Ornamental Grass Symposium	20	21 Classic Egg Feature, Rose Symposium	
22 Easter	23	24	25	26 Beginning Bonsai	27	28 Developing Your Home Landscape workshop	
29 April 28 & 29 Ikebana Show "The Four Seasons"	30 Deciduous Flowering Shrubs and Ornamental Trees for Colorado						
Coming Next Month			May 6 Field Trip to Roxborough State Park	May 11-12 Annual Plant and Used Book Sale	May 17 Free Day	May 19 Norwegian Constitution Day	May 26-June 3 Denver Artists Guild Show and Sale

Denver Botanic Gardens, Inc.
909 York Street
Denver, Colorado 80206
303-575-3751

TIME VALUE

April 1984

Address correction requested



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Plant Sale May 11 and 12

On May 11 and 12 Denver Botanic Gardens is once again hosting the great Annual Plant and Used Book Sale. Whether you're looking for a special Mother's Day present or plants for your collection, we will have something for you.

The gates will be open to all and there will be no admission fees on May 11 and 12. From 9:30 a.m. to 5:30 p.m. on both days you can select from the largest and most diversified display of plants offered in Colorado at any one time.

We will have knowledgeable volunteers and staff to answer your questions, plants for your shady and sunny gardens, books with gardening tips and more! The 1984 Plant Sale poster, the second in a series done for the Gardens by local artist, Gayle Crites, will be for sale. It features water lilies, a resident duck, and our new sculpture. Ms. Crites will be available both days to sign your copy. She has arranged for the original oil painting, priced at \$1000, to be shown in the Helen Fowler Library April 28 through May 12. Anyone interested in purchasing the painting may complete the available form and place it in the box for the drawing which will be held Saturday, May 12 at 2 p.m. A percentage of the retail price will benefit the Gardens.

Denver consists of gardeners of many interests, and we can satisfy their needs with about 20 areas from which to purchase. We have booths that specialize in water lilies, vegetables and herbs, house plants, perennials, trees and shrubs, rock garden plants, and much more. Your children can enjoy a stop at the Children's Booth. Dr. Green will be at the Information Booth and unusual gifts can be found at the Gift Shop Annex. Special items and treasures can be discovered at each booth.

Water Lily Booth

With the development of the Water Lily Pool at the Gardens, a

newly awakened interest in these enchanting lilies provide an addition to the sale. Hardy water lilies will be among the aquatic plant offerings. Members of the Water Garden Society will provide advice on the culture of these plants.

Vegetable and Herb Booths

Companion gardening frequently involves growing basil with tomatoes and the Vegetable and Herb booths have been strategically placed next to each other. Nine varieties of tomato plants featured

(continued on page 5)

Inside:

Admission fee changes page 3

Educational Events page 7

Summer Classes for Kids page 9

Membership fee changes page 12

"Water Lily Pond," the 1984 fine art Plant Sale Poster



Get your plant-care questions answered by DBG's professional horticultural staff at the Plant Sale.

Many friends of Denver Botanic Gardens are finding rewarding satisfaction in making memorial tributes and remembrance gifts to the Gardens. These gifts not only express deep regard for loved ones and friends but help in the future growth of the Gardens.

Memorial contributions suggested by the family to Denver Botanic Gardens or your personal thoughtful contribution shall become, unless designated for a specific use, a part of the Endowment Fund.

Tributes

In Memory of Leroy Grim

Nellie M. Lutz
Mr. & Mrs. Bruce Musgrave
Marjorie Robinson

In Memory of L. "Jack" Holland

Solange Gignac

In Memory of Gladys Nicholson Kirk

Allied Bank International
Mrs. F.V. Altvater
Ambank at Orchard Valley
Mr. & Mrs. Andrew Anderson III
Mrs. C. O. Arnold
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Edith Cromwell
Jarvis Cromwell
Dallas Times Herald
Board of Trustees, Denver Botanic Gardens
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Garden Club of Denver
Mr. & Mrs. Jerry Gardenswartz
Mr. & Mrs. Robert S. Gast, Jr.
Gensler & Associates/Architects
Solange Gignac
E. Atwell Gilman
E. Sydney Glick

To make such a gift, send your check to Denver Botanic Gardens, letting us know who the gift is in memory of, or in honor of, and whom we should notify of the gift.

When your gift is received, an appropriate notification card is sent to the person you indicated. The card will bear the name of the person remembered in this special way and will indicate that you made the gift to the Gardens in his or her name. The specific amount of the gift will not be mentioned. You, as the donor, will receive a personal acknowledgment of your contribution.

Richard and Nancy Gooding
Mr. Gordon Greer
Mrs. Schuyler E. Grey
Mr. & Mrs. Richard W. Hanselman
Ruth Hawkins
Mr. & Mrs. Charles Hazelrigg
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Mrs. Paulene G. Heyer
Hill & Knowlton, Inc.
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Mr. & Mrs. Davis W. Moore
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Mr. & Mrs. Charles Paxton
Peat, Marwick, Mitchell & Co.
Mr. & Mrs. Paul Potter
Mr. & Mrs. John Regner
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Larry and Sue Ricketts
Lee and Neil Roberts
Marie and Dan Robotham
Mrs. Arthur G. Rydstrom
Gene and Joyce Schillen
Mr. & Mrs. C. William Schlosser
Mary Secret

In addition to memorials, gifts may be designated for appreciation or for a variety of occasions—birthdays, anniversaries, graduations, and holidays. All contributions are deductible for income tax purposes.

As Denver Botanic Gardens continues to grow in accordance with the guidelines set forth in its master plan, the generosity of members and public-spirited citizens is vital to our financial well-being. Every gift, every bequest, and every contribution "does make a difference" in helping the Gardens to achieve these goals—"to Fulfill a Promise."

Dr. & Mrs. Moras Shubert
Mr. & Mrs. Doyle Smith
The Don Snapp Family
Mr. & Mrs. John M. Sommer
Mr. & Mrs. Carroll D. Speckman
Mrs. John W. Stewart
Mr. & Mrs. John T. Stoddart
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Ms. Ellen K. Waterman
Gayle and David Weinstein
Mr. & Mrs. Richard Burton Wheeler
Mr. & Mrs. George M. Wilfley
Mr. & Mrs. James E. Wilson

In memory of Katharine McNeeley Jones

Mrs. Thomas Taplin

In Memory of Catherine C. McWilliams

Mr. & Mrs. Henry Ries
Mr. & Mrs. William Wilbur

In Memory of T. Paul Maslin

Mr. & Mrs. William Collister
Solange Gignac
John C. Mitchell

Mr. & Mrs. Roger Rhodes

Josephine Robertson

Mr. & Mrs. James M. Smith, Jr.

In Memory of Ann Tagget

Mr. & Mrs. Robert Rich

In Memory of Mrs. R. G. Trospen

Mr. & Mrs. Dennis Pinkerton

Admission Fees Increase April 1

In an effort to bring our 1984 City budget into balance it was necessary to raise the admission fees charged to non-member visitors to the Botanic Gardens. On April 1, the new fees became \$3 for persons 16 years and over (an increase of \$1) and \$1 for young people 7 years through 15 years (an increase of 50 cents). Senior citizens (65 years and older) are now charged \$1.50 (an increase of 50 cents), while children under 7 years old (and accompanied by a paid adult) and Botanic Gardens' members continue to be admitted free. Executive Director, Merle M. Moore, in commenting on the fee increase, stated: "It is with reluctance and regret that I have had to recommend to the Botanic Gardens' Board of Trustees and Denver City Council an increase in admission fees. However, without

Income Projections

—Basic Budget Appropriation	\$719,700	\$719,700
—Gate Admission Income	200,000	237,400
—Facility Rental Income	16,000	19,350
Total Income Projected	\$935,700	\$976,450

Expenditure Projections

—Salaries & Benefits	\$ 891,700*	\$852,800*
—Internal Transfers	29,000	29,000
—General Operating	93,200	93,200
Total Expense Projected	\$1,013,900	\$975,000
Balance [negative]	\$ [78,200]	\$ 1,450

such an increase, and a simultaneous increase in rental fees charged for use of the Gardens' facilities by outside organizations, we would fall more than \$78,000 short of meeting our City budget operating expenses in 1984."



WITHOUT AN ADMISSION FEE INCREASE	WITH AN ADMISSION FEE INCREASE
---	--------------------------------------

\$719,700	\$719,700
200,000	237,400
16,000	19,350
\$935,700	\$976,450

\$ 891,700*	\$852,800*
29,000	29,000
93,200	93,200
\$1,013,900	\$975,000
\$ [78,200]	\$ 1,450

Director Moore presented the following figures which show the projected income and expenses for the City portion of the Gardens' 1984 operating budget.

*The difference between these two salary and benefit figures is caused by the decision to leave unfilled one Gardener Florist II and one Utility Worker IV position which became vacant (due to promotions) during 1983. It is only by doing so that the City budget can be balanced in 1984.

It is our expectation that this increase in admission fees to the Gardens will enable us to meet all 1984 City-funded operating costs without any additional reduction in staff. We will continue to strive to provide the kind of programs and services to our members and to the general public which have made Denver Botanic Gardens the world-class botanical and horticultural institution it is today.

Green Thumb News Number 84—5 May 1984

Published monthly by the Denver Botanic Gardens Education Department, 909 York Street, Denver, Colorado 80206, and edited by Patricia A. Pachuta and Carolyn Knepp. Subscriptions to this newsletter are a benefit of membership in the Botanic Gardens. For membership information, please write the Membership Department at the above address or call 575-3751.

Deadlines for this newsletter are: Major news stories and feature material (including photographs or artwork) for the June issue—April 20, for July—May 18, for August—June 20. Short news notes are due not later than May 1 for June, June 1 for July, and June 29 for August.

Please plan in advance and meet deadlines. Late material cannot be used. Stories must be typed, double-spaced, preferably on copy paper provided by the editor. Please call the Education Department at 575-3751 for details.

Autumn in the Canadian Rockies

What do Banff, Butchart, and the stunning beauty of the Canadian Rockies have in common? They are but a few of the highlights of the Botanic Gardens' tour to the exciting and lush Pacific Northwest. The tour has been designed especially for our members and includes a number of private gardens in Portland, Seattle, and Vancouver, as well as the world-famous Butchart Gardens on Vancouver Island. Travel there by ferry from Anacortes, Washington, through the San Juan Islands and then continue across to lively Vancouver on the mainland. From Vancouver travel by train on the famous "Canadian" to the picturesque village of Banff where we will visit the Columbia Ice Fields and Lake Louise while admiring the glorious fall color of the Canadian Rockies.

Panayoti Callas, Curator of the Gardens' Rock Alpine Garden and a most knowledgeable plantsman, will be your guide on this colorful and fun-filled autumn tour. Having guided a similar trip to the Pacific Northwest for the American Horticultural Society last year, Panayoti is well prepared to share the grandeur and magnificent natural beauty of the region with you.

If you would like to see the complete itinerary for the Pacific Northwest tour, please contact the Gardens by letter or phone (575-3751) and a copy will be sent to you. Space on the tour is limited to the first 25 people who send in their deposit, so write today if you are interested in joining other Botanic Gardens' members for this memorable event.

Second Annual Rock Gardening Symposium Set for June 29-30

Denver Botanic Gardens and the Rocky Mountain Chapter of the American Rock Garden Society take great pleasure in announcing their second annual symposium, "Alpines Around the World: the Asian Influence," to be held June 29-30 in John C. Mitchell II Hall.

With improved Sino-American relations, a new era of plant exploration has begun. Each year more and more plant expeditions are penetrating the fastness of Asia, resulting in a new spate of trees, shrubs, and herbaceous plants for our gardens.

"Alpines Around the World: the Asian Influence" will explore some of the riches of our gardens which have emanated in Asia. Professor Koichi Kawana, well-known designer of DBG's Japanese Garden, *Shofu-en*, will begin the symposium with a slide lecture.

Entitled, "Asian Garden Design—Man in Harmony with Nature," the presentation will focus on how rocks, plants, and other features such as water and pathways can be brought together in a harmonious and naturalistic design.

A Birthday Celebration for Denver Botanic Gardens

In recognition of Denver Botanic Gardens' 25 years at its present 1005 York Street site, a fantastic festival of flowers, the *Fete des Fleurs*, is slated for September 1984. Special lectures and exhibits, a dinner dance, and a members-only event are all being planned! Scheduled for September 5 through 16, the festivities will include a variety of events at two locations—the new United Bank building as well as Denver Botanic Gardens.

John C. Mitchell II Hall will prominently feature a display of hand-painted floral design china from Tiffany & Co. of New York City. In addition, a variety of contemporary Tiffany china patterns will be incorporated into six "Tables by Tiffany's" and will be accompanied by the firm's crystal and silver. The tables will be composed under the watchful eye of Mr. John Loring, senior vice-president of Tiffany & Co. and premier artistic china designer, who will also deliver a special lecture. Entitled, "Porcelain in Flower," the program will describe the design process of botanical china from start to finish and will be presented on Thursday, September 6 and Friday, September 7.

Pierre Lahaussais (left), Assistant to John Loring, Mrs. Thomas E. Taplan, Anniversary Chairman, and John Loring, senior vice-president of Tiffany & Co. discussing the Fete des Fleurs.

The founder of Siskiyou Rare Plant Nursery, Boyd Kline will then take us to the summits of the Himalayas to show us many of the remarkable alpines that grow there. The queen of Asia, *Paraquilegia grandiflora* was firmly established in cultivation as a result of Kline's expedition to Kashmir. Kline was also the first recipient of the American Rock Garden Society's Marcel LePiniec Award for Plant Exploration.

Gerry Cobb Colley is one of the two present proprietors of this same nursery. He will show slides of some of Asia's showier alpines that can be grown in rock gardens. Siskiyou Rare Plant Nursery in Medford, Oregon, is acknowledged as the finest source of rare, hardy plant material in this country. Having heard his presentation, you'll see why.

Lee Raden has been vice-president for both the American Rock Garden Society and the Pennsylvania Horticultural Society. His garden, "Alpineflora" on the outskirts of Philadelphia is one of the most

outstanding collections of alpines in the United States. It is all the more remarkable for it possesses not a single rock! Raden will discuss how to grow alpines and will show his techniques for their successful cultivation in pots that have earned him dozens of blue ribbons at the Philadelphia Flower Show.

The symposium will also include a variety of workshops and demonstrations that will permit the participants to work in small groups and meet the speakers on a one-to-one basis. Rock gardening exhibits and a Plant Show and Sale will be open to the public in the afternoons.

Join other gardening enthusiasts and meet the many plants of Asian origin that can be adapted to successful cultivation in Colorado as well as how to exhibit them in the best manner possible. Watch for a complete schedule and registration form in the June *Green Thumb News*.



In honor of Denver Botanic Gardens, Tiffany & Co. will issue a commemorative china depicting the lovely Colorado alpine columbine. Assorted pieces including cups and saucers and dessert plates will all be for sale.

The special exhibits include 20 rare Aubrey botanical prints from the Tiffany archives as well as a historical exhibit depicting the remarkable growth and development of Denver Botanic Gardens.

The atrium entry of the new United Bank of Denver at Lincoln and 17th Streets will be the site of a gala dinner dance on Saturday, September 8 and a "Founders' Tea" will be held for DBG members only on Wednesday, September 12 from four to six p.m.

Your invitation to all of these events and a detailed schedule of the *Fete des Fleurs* will be included in the June issue of the *Green Thumb News*.

this year include yellow plum, Italian paste, 'Supersteak,' and 'Golden Boy.' All vegetables have been selected for our growing season and climate providing kitchen gardeners with an impressive array from which to choose. The avid cook can also purchase at the Herb Booth special herbs for those Mexican dishes. Approximately 30 varieties of herbs will be offered this year including lemon and green basil as well as scented geraniums.

Bonsai Booth

For the most patient and sophisticated, the art of miniaturization found at the Bonsai Booth will be demonstrated by gardeners wearing the traditional Happi coats. A beginner can learn how to pot and prune a blooming specimen or a spruce, pine, or juniper.

Patio Booth

Is color your style? Well, proceed to the Patio Booth which brightens the Gardens' entrance with beautiful hanging baskets and gorgeous potted plants. The very popular 'Sugar Baby' geraniums, as well as a new variety of a tri-color geranium called 'Dolly Vardon' will be available for apartment terrace, condo-balcony, or sheltered courtyard gardens.

House Plants Booth

In John C. Mitchell II Hall a terrific new item from the House Plant collection will be found—a little tillandsia in a seashell mounted on a magnet for your refrigerator. A larger variety, available in a conch shell, can grace your table top. Ti logs, resurrection plants, and Venus fly traps, as well as African violets, orchids, and hibiscus will all be found in Mitchell Hall.

Perennial Booth

Outdoor gardeners should definitely head to the Perennial Booth where almost 90 varieties provide incredible color choices and nonstop bloom for summer months. Many old favorites, such as gypsophila, daisies, delphinium, day lilies, phlox, and peonies, can be the basis for a perennial border. Cover a trellis with a clematis or trumpet vine or select some grasses, yuccas, and succulents for hot, dry areas.

Rock Alpine Booth

Mat-forming penstemons and creeping phlox and leadwort ground covers are among the selections found in the Rock Alpine Booth. With over 100 varieties of ground covers a large range of landscaping conditions can be met. Colorado alpine columbine, Easter daisies, coneflowers, mahonia, and kinnikin-

ick will be featured as well as the blue-flowered *Penstemon caespitosus* and the red firecracker *P. pinifolius*. For hot, arid, sunny gardens, the ice plant, *Delosperma nubigenum*, is a good choice. An exciting new introduction this year is *Phlox 'Arroyo'*, a long-blooming, deep pink colored Mexican phlox.

Tree and Shrub Booth

Trees and shrubs for a variety of landscaping requirements will be available at this booth. A particularly pretty thornless buckthorn, the cutleaf buckthorn, will attract birds to your yard, as will the chokeberry and the native serviceberry. The 'Winter King' hawthorn found around our parking area is now a possibility for your own designs. New this year are the 'Blue Prince' and 'Blue Princess' holly.

Miniature Rose Booth

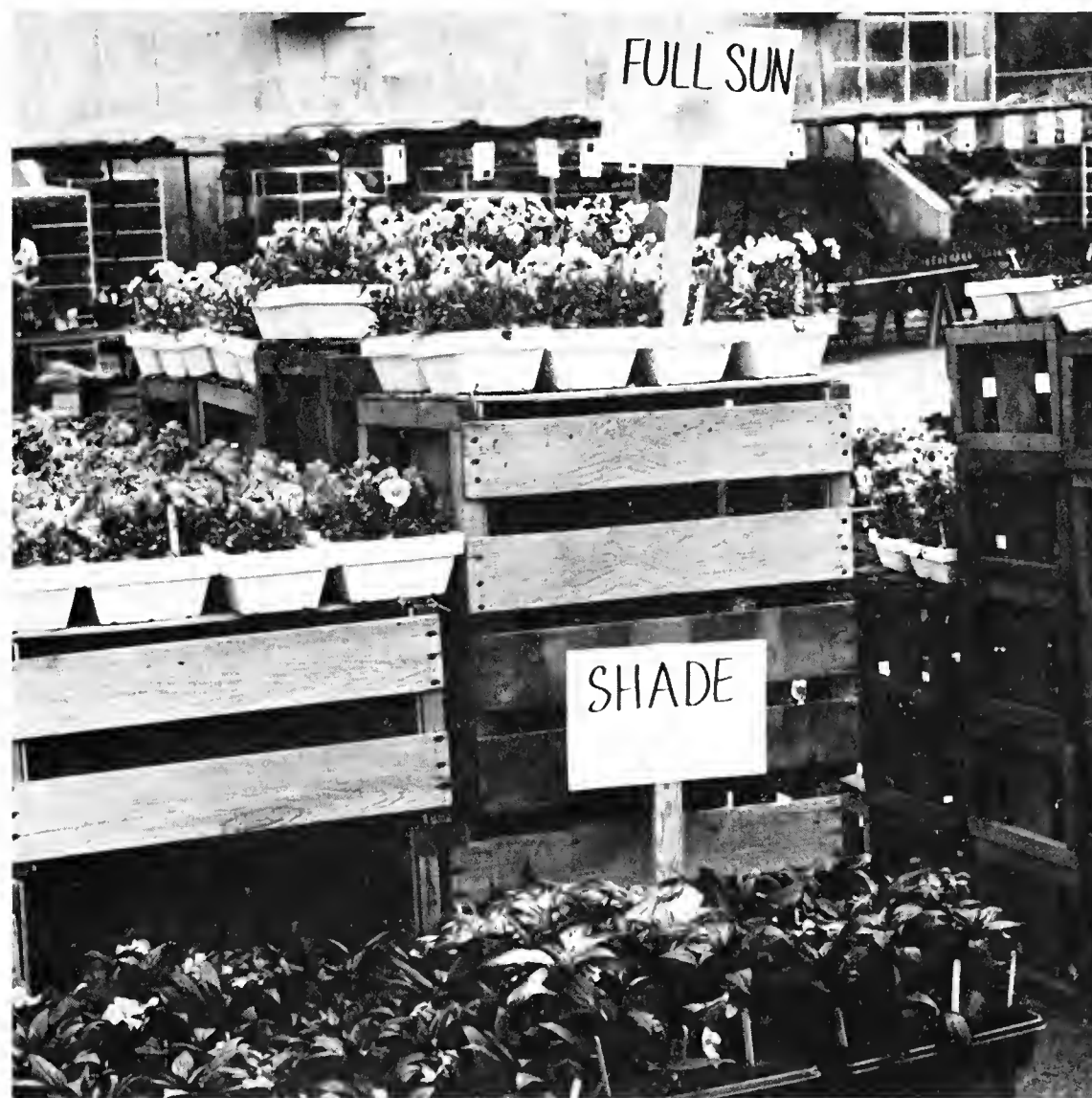
The hardiness of miniature roses

Berry Basket

A large selection of fruiting shrubs and plants offering months of mouth-watering harvests can be discovered at this booth. The strawberries, raspberries, blueberries, and yes, even grapes, found here should appeal to all gardeners. Try a European dessert gooseberry, such as the thornless 'Captivator,' and experience a rare treat. They are sweet, delicious in compotes, fruit salads, and right off the bush. This hard-to-find gooseberry will be an exclusive feature at the Gardens this year.

Annuals and Gladiolus Booths

For splashy color in bedding and container plants, go directly to the Annuals Booth. The latest varieties of petunias, marigolds, verbenas, begonias, impatiens, and pansies will create a riot of color. Or you can choose corms from the Gladiolus Booth and have armloads of lovely



attracts more gardeners each year to this booth. A broad selection of old favorites and newer varieties offered this year insures the rose fancier of locating a special new addition for his collection. A stunning bi-color rose, 'Magic Carousel,' and a dark red charmer, 'Beauty Secret,' add possibilities to your landscaping plans. Rose Society members at this booth hope to increase your knowledge so ask questions!

flowers for arrangements in late summer.

Plant Donations Booth

Check this booth where little treasures from local gardens are found. Hardy perennials, proven in our climate, can be picked up for very reasonable prices.

(continued on page 11)

6 | Norwegian Constitution Day Celebration Planned for May 19



The Sons of Norway, an international fraternal organization dedicated to the continuation and preservation of the Norwegian heritage, cordially invites you to attend an afternoon of Constitution Day festivities on Saturday, May 19 at Denver Botanic Gardens. *Syttende Mai*, or Constitution Day, celebrates Norway's independence from Sweden in 1905.

Activities will begin at 1:30 p.m. with an opening address followed by numerous crafts demonstrations. Included are *rosemaling* (floral design painting on wood), wood carving, weaving, knitting, *hardanger* (Norwegian counted thread embroidery), and baking of *lefse* (potato bread) and *krumkaker* (Norwegian cookies). Norwegian refreshments will be sold.

The Boulder Scandinavian Dancers accompanied by Spelman-slag, a Norwegian folk ensemble, will perform in the afternoon. Pat Morren, fashion coordinator for Joslin's, will emcee the Parade of National Costumes from throughout Norway. Even children will be delighted by fishing for goldfish and the antics of trolls!

Proceeds from a donation drawing will support the Sons of Norway Foundation which provides assistance to the handicapped.

Members of Denver Botanic Gardens will be admitted to the Constitution Day Celebration without charge and the regular gate fee will be in effect for non-members.



Sempervivum Expert, C. William Nixon, to Speak

As a part of the Heacock Lecture Series, the Colorado Cactus and Succulent Society and the Rocky Mountain Chapter of the American Rock Garden Society will bring Mr. C. William Nixon to speak to Denver Botanic Gardens' members and visitors on May 18. Mr. Nixon is respected world-wide for his work on the sempervivums, or houseleeks.

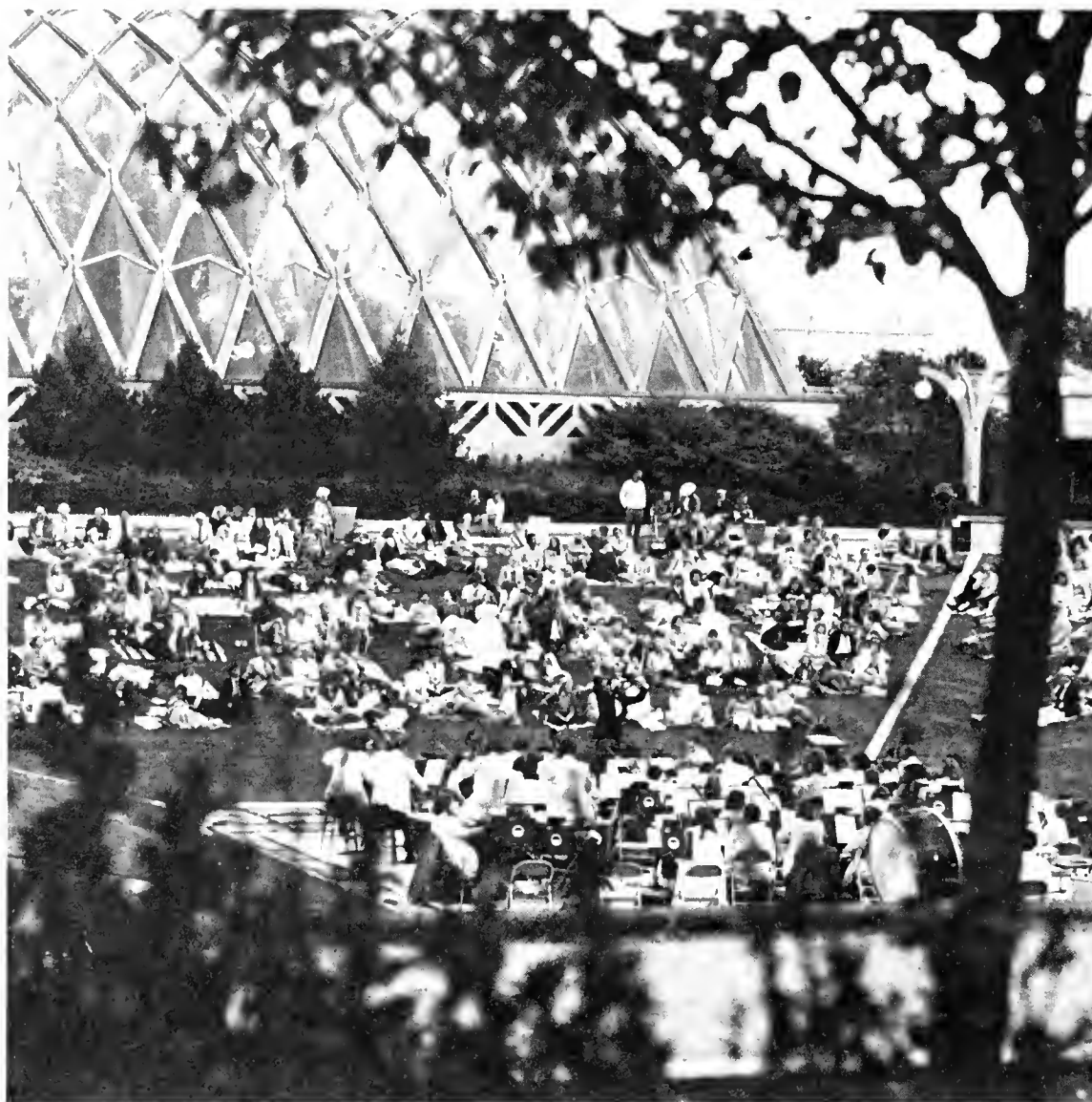
Many of the sempervivums are commonly grown throughout Colorado and their adaptability to adverse conditions makes them superior additions to rock and alpine gardens.

The lecture will be presented on Friday, May 18 at 7:30 p.m. in John C. Mitchell II Hall. The public is cordially invited to attend; no admission fee will be charged.

Summer Housing Needed for DBG Interns

Finding adequate housing for students who are earning a minimal wage and are only going to be in Denver for 10 to 12 weeks can be quite a challenge. This summer, from June 11 to August 17, we look forward to having ten students in our Intern Program of applied horticulture. If you have a spare room or two, or are perhaps in need of a "housesitter" for an extended period this summer, won't you consider housing one of our interns? If you can help, please call the Education Director, Pat Pachuta, at 575-3751.

This year's Garden Party, "An Evening in Vienna," is scheduled for June 19. JoAnn Falletta, music conductor and director of the Denver Chamber Orchestra will conduct the Orchestra's musicians in this annual event. A gourmet picnic supper in the beautiful outdoor setting of the Gardens combined with an evening of classical music under the stars provide for an evening to be remembered. Ticket reservation information will be provided in the June Green Thumb News.



Mushroom Identification Workshop

Saturday, July 7

and/or

Sunday, July 8

John C. Mitchell II Hall

9 a.m. to 4 p.m.

Denver Botanic Gardens and Colorado Mycological Society present this two day workshop to teach identification skills to beginning and advanced mycologists. Using slides, keys, and charts, the class will learn both edible and poisonous fungi. Introductory skills will be taught in the Saturday session and intermediate to advanced students will find the Sunday session beneficial. Register for one or both days of class; the session on Saturday will provide an adequate background for the session on Sunday.

PROGRAM

Saturday, July 7

9 to 10 a.m.

—The Basics

This is an introduction especially for beginners who are just starting to look at mushrooms. Learn what fungi are, their principal forms and see examples of edible and poisonous mushrooms in each group. Common mushroom myths and folklore will be discussed.

11 to 12

—The EZ Key to Common Mushrooms. Written by

the instructor, this large picture chart will show spore colors, forms, and habitats to give students a basic idea of how to identify a fungus to genus. Slides of each type will be shown. Class participation in these areas will get you "over the hump" in identification.

Noon to 1 p.m.

—Lunch in John C. Mitchell II Hall.

Box lunches are available or bring your own.

1 to 4

—Continue to work on the EZ Key to Common

Mushrooms.

Sunday, July 8

9 to 11 a.m.

—The EZ Guide to Mushroom Description. Use an illustrated glossary and slides to



Oyster mushrooms, *Pleurotus ostreatus*

learn over 250 terms and the role they play in mushroom identification. Dichotomous keys are introduced.

11 to 12

—Practice: use the EZ Key and Guide to actually identify

fresh and photographed mushrooms.

Noon to 1 p.m.

—Lunch in John C. Mitchell II Hall.

Box lunches are available or bring your own.

1 to 4

—Additional practice. The instructor's successful teaching techniques of participation and review will reinforce the information gained during the morning session.

Instructor: Kit Scates is chairman of the Education Committee of the North American Mycological Association and is the founder of the Pacific Northwest Key Council, a group that makes professional documents on mycology available in a usable form to amateurs. She is also founder of the Northern Idaho Mycological Association, and vice-president of the North American Mycological Association. She has received that group's most valued award for contributions to amateur mycology. Most important, Kit is an excellent teacher who will pack an incredible amount of information into this short weekend.

Fee: \$25 per day for members of either DBG or Colorado Mycological Association. Non-members of either group will be charged \$30 per day. Box lunches are available at an additional cost of \$6 per day.

Japanese Tea Ceremony

Section I: Sunday, May 13

2 to 3 p.m.

or

Section II: Sunday, May 27

2 to 3 p.m.

(one session)

Tea House in DBG's Japanese Garden

Nowhere else in the world is tea drunk with as great a sense of austerity and aesthetic refinement as in the Japanese tea ceremony or *Chanoyu*. Because of its emphasis on such concepts as harmony, respect, purity, tranquility, and elegant simplicity, the tea ceremony has for centuries been considered the epitome of Japanese life. This is an opportunity to experience an authentic tea ceremony in the quiet splendor of our Japanese Garden.

Instructor: Kathryn Kawakami has done much to inform Denver area residents and students about the culture of Japan.

Fee: \$4.50 members/\$5 non-members.

Limit: 15.

Tree Walk at Fairmount Cemetery, Denver

Saturday, May 26

10 a.m. to noon

During the summers of 1890 and 1891 over 4,000 trees including seven species of oak, sycamores, silver maples, Kentucky coffee trees, buckeyes, and several pines were all planted at Fairmount Cemetery. This is an opportunity to observe these as well as some more unusual trees such as scarlet oak and yellow buckeye. A walk through these mature, historic specimens will sharpen your identification skills.

Leader: Dr. William G. Gambill, Jr., Director Emeritus and Taxonomist at DBG, is a former botany and biology professor. His field trips and tree walks are very popular among our students.

Meet: at 10 a.m. just inside the entrance. Fairmount Cemetery is located at East Alameda and Quebec Streets in Denver.

Fee: \$5.50 members/\$6 non-members (includes \$3 for *Trail of Trees*, a 64-page illustrated tree guide to Fairmount Cemetery)

Limit: 20.

CITIZENS

Spring
1984

Denver Botanic Gardens



Plant Life Field Trip: Highlands Ranch

Wednesday, May 16
9 a.m. to 4 p.m.

This is an opportunity to observe the delightful early summer wildflowers of the lower foothills. Spiderworts, black-eyed Susans, pink plumes, harebells, and penstemons should all be in bloom.

In addition, the Arapahoe Hunt Club will show their hounds to the group. Bring a lunch.

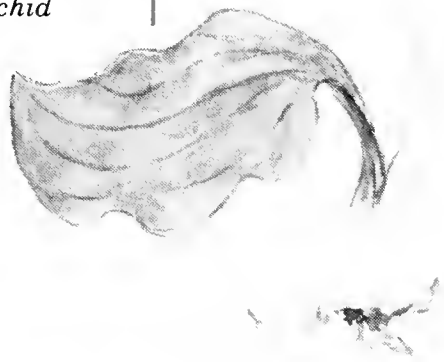
Leader: Mary Edwards, an herbarium volunteer, has been leading field trips for six years.

Meet: at 9 a.m. at the DBG House parking lot to carpool and share gasoline expenses.

Fee: \$2 per person.



*Calypso
bulbosa, the
fairy-slipper
orchid*



EMMA A. ERVIN

Denver Botanic Gardens
909 York Street
Denver, Colorado 80206

Fees for courses should be paid in advance by check or money order made out to Denver Botanic Gardens. Since the space is limited in many courses, registration should be mailed in promptly. Your registration will NOT be acknowledged. Your name will be placed on the class list on the day your money is received. No enrollments for class by phone please. All courses are given subject to a minimum enrollment of ten students. For further information, please call 575-3751.

Field Trip to Bear Creek Nature Center, Colorado Springs

Sunday, May 27
1 to 3:30 p.m.

Tucked against the mountains in the western end of Bear Creek Regional Park is Bear Creek Nature Center, 150 acres of such varied habitats as a stream area with a wooded glen and a short grass prairie. A wide diversity of species inhabit this lower foothills and upper plains area including impressive groves of native oaks.

Consider bringing lunch to enjoy beforehand at the picnic area.

Leader: Richard Schwendinger has been botanizing and leading field trips throughout North America and Alaska for over 25 years.

Meet: at 1 p.m. at the parking lot near the park entrance. Take I-25 south to the Colorado Springs area and exit onto Highway 24 west (toward Manitou Springs). In approximately two miles, turn left on 26th Street. Travel for about 1.5 miles and you will find the Nature Center on the left.

Fee: \$2.50 members/\$3 non-members.

Field Trip to Calypso Cascades, Rocky Mountain National Park

Saturday, June 16
10 a.m. to 2 p.m.

Travel to Rocky Mountain National Park in search of the lovely fairy-slipper orchid, *Calypso bulbosa*, a tiny but dazzling denizen of our sub-alpine forests. Our locale, Calypso Cascades at Wild Basin, is an unspoiled valley of pristine beauty. The mixed conifer and aspen forest is an excellent habitat to observe these and other early wildflowers.

A total of approximately four miles will be covered on this moderately strenuous walk. Don't forget to bring your lunch and your camera.

Registration Form for Classes and Field Trips

The enclosed check, in the amount of _____, is to cover the registration fees for the following classes:

Name and section of classes _____

Name _____

Address _____

City _____ State _____ Zip _____

Home Tel. No. _____ Business Tel. No. _____

Member of Denver Botanic Gardens? Yes No

Leader: Panayoti Callas is curator of the Rock Alpine Garden at DBG and is an enthusiastic and capable field botanist.

Meet: at 10 a.m. at the Wild Basin parking lot within Rocky Mountain National Park. Take Route 7 out of Allenspark and follow for about two miles and then turn left at the Wild Basin sign.

Fee: \$2.50 members/\$3 non-members.

Limit: 20.

Cloud Invaders: Kites for Kids

Saturday, May 26

(one session)

Classroom B 10 a.m. to noon

For children in Kindergarten

Through Grade 2 (ages 5-7)

or

Classroom B 1 to 3 p.m.

For Children in Grades 3 Through 6

(ages 8-11)

Please indicate the time of your choice on the registration form.

Be a sky explorer and create your own kite to fly in the gentlest of breezes. Create a rainbow, dragon, or butterfly to dance with the clouds and soar into the blue. Test flights will be held at the Gardens.

Instructor: Jo Duranceau-Cannon studied art at the University of Washington and the University of Denver and has taught children's art classes at the Denver Museum of Natural History, Denver Art Museum, Colorado Historical Society, and the University for Youth at the University of Denver. She is currently an elementary school art teacher for the Cherry Creek School District.

Fee: \$6.50 members/\$7 non-members.

Limit: 12.

For Children of Ages 4 to 5 and a Parent Bean Sprouts

Monday through Thursday
(4 sessions)

Section I: June 18-21, 10 a.m. to noon

Section II: June 18-21, 1 to 3 p.m.

Section III: July 30-August 2,
10 a.m. to noon

Classroom A

Pre-schoolers and parents can discover the magic of the Gardens together. Listen to fairy tales and plant legends and tour the Gardens' forests and jungles. Create seed necklaces, print a magical forest, and make a flower crown.

Instructor: Jo Duranceau-Cannon.

Fee: \$20 members/\$22 non-members.

Limit: 15.



Eight year-old Andy Feinstein completing his conception of a carnivorous plant in "Munch Crunch."

For Children of Ages 5 to 7

Jack and the Beanstalk

Monday through Thursday
(4 sessions)

June 25-28 10 a.m. to noon

Classroom A

Listen to stories, tales, and rhymes about forests, flowers, and that famous beanstalk. Storytelling will inspire paintings, printmaking, and even the creation of a jumping Jack.

Instructor: Jo Duranceau-Cannon.

Fee: \$20 members/\$22 non-members.

Limit: 15.

Dinosaur Salads

Monday through Thursday
(4 sessions)

Section I: July 9-12, 10 a.m. to noon

Section II: August 20-23, 10 a.m. to noon

Classroom A

What did a dinosaur have for lunch? Learn about "dinosaur salads" as well as the living fossil plants such as ferns, horsetails, and cycads that grew in swamps and bogs. Create a clay dinosaur, make rubbings, and print living fossil plant leaves with sunlight.

Instructor: Jo Duranceau-Cannon.

Fee: \$20 members/\$22 non-members.

Limit: 15.

Good Guys and Bad Guys

Monday through Thursday
(4 sessions)

Section I: July 16-19, 10 a.m. to noon

Classroom A

Learn about the many creatures that fly, roam, and crawl through a garden. Learn about their roles as garden good guys and bad guys. Find out why every garden should have ladybugs and which garden good guy "prays" to catch his dinner. Make a bumblebee that actually buzzes, construct a creature catcher, see the ant's underground city, and take home a garden good guy (with your parents' permission) to protect your garden.

Instructor: Jo Duranceau-Cannon.

Fee: \$20 members/\$22 non-members.

Limit: 15.

Seeds and Flowers

Monday through Thursday
(4 sessions)

July 23-26 10 a.m. to noon

Classroom A

Explore the wonderful world of seeds and flowers. Take a detective's tour through the Gardens and see if you can solve some seed riddles and flower mysteries. Create a sunlight flower to fill a window with color. Design seed jewelry and decorate your own paper with real pressed flowers.

Instructor: Jo Duranceau-Cannon

Fee: \$20 members/\$22 non-members.

Limit: 15.

Amazing Maize

Monday through Thursday
(4 sessions)

Section I: August 6-9, 10 a.m. to noon

Classroom A

Learn all about the ancient corn plant which was discovered by the Indians who shared their secret with the pilgrims and settlers. See how the corn plant grows and watch the husks appear. Grind corn for a tortilla, make an Indian harvest mask, and a corn husk doll or wreath.

Instructor: Jo Duranceau-Cannon.

Fee: \$20 members/\$22 non-members.

Limit: 15.

Samurais and Plum Blossoms

Monday through Thursday
(4 sessions)

Section I: August 13-16, 10 a.m. to noon

Classroom A

Tour the ponds, bridges, and tea house of the Japanese Garden. See the bonsai trees that are 30 years old and only 12 inches high. Create a samurai kite, origami paper princesses, and a paper dragon. Use a bamboo brush and rice paper to make your own scroll.

Instructor: Jo Duranceau-Cannon.

Fee: \$20 members/\$22 non-members.

Limit: 15.

Just for Kids!
SUMMER

For Children of Ages 8 to 11

Dinosaur Salads

Monday through Thursday
(4 sessions)
Section III: July 9-12, 1 to 3 p.m.
Section IV: August 20-23, 1 to 3 p.m.
Classroom A

Please see class description on previous page.

Instructor: Jo Duranceau-Cannon.
Fee: \$20 members/\$22 non-members.
Limit: 15.

Good Guys and Bad Guys

Monday through Thursday
(4 sessions)
Section II: July 16-19, 1 to 3 p.m.

Please see class description on previous page.

Instructor: Jo Duranceau-Cannon.
Fee: \$20 members/\$22 non-members.
Limit: 15.

Dandelions on the Wind

Monday through Thursday
(4 sessions)
July 23-26 1 to 3 p.m.
Classroom A

Explore the power of the wind. See how the designs of seeds help them float and soar on the breeze. Make your own flying creations such as kites, boomerangs, and windmills. Test flight will be held at the Gardens.

Instructor: Jo Duranceau-Cannon.
Fee: \$20 members/\$22 non-members.
Limit: 15.

Denver Botanic Gardens
909 York Street
Denver, Colorado 80206
Fees for courses should be paid in advance by check or money order made out to Denver Botanic Gardens. Since the space is limited in many courses, registration should be mailed in promptly. Your registration will NOT be acknowledged. Your name will be placed on the class list on the day your money is received. No enrollments for class by phone please. All courses are given subject to a minimum enrollment of ten students. For further information, please call 575-3751.

The Four Seasons: Summer

Monday through Thursday
(4 sessions)
June 25-28 1 to 3 p.m.
Classroom A

Be a plant detective at the Gardens. Take a magnifying glass and explore the gardens for all the signs of summer. Record your observations with a pinhole camera and create your own garden tour book. Adopt a plant or tree and return in the fall, winter, and spring to see nature's changes. Color in your own Garden's T-shirt.

Instructor: Jo Duranceau-Cannon.
Fee: \$20 members/\$22 non-members.
Limit: 15.

Amazing Maize

Monday through Thursday
(4 sessions)
Section II: August 6-9, 1 to 3 p.m.
Classroom A

Please see class description on previous page.

Instructor: Jo Duranceau-Cannon.
Fee: \$20 members/\$22 non-members.
Limit: 15.

Samurais and Plum Blossoms

Monday through Thursday
(4 sessions)
Section II: August 13-16, 1 to 3 p.m.
Classroom A

Please see class description on previous page.

Instructor: Jo Duranceau-Cannon.
Fee: \$20 members/\$22 non-members.
Limit: 15.

Dragons and Unicorns

Monday through Thursday
(4 sessions)
July 30-August 2 1 to 3 p.m.
Classroom A

Enter the world of knights and dragons. Make your own armor and shields and tour the Gardens to discover the magical world of plants in enchanted forests and castle courtyards. Find out what plants and herbs were used by sorcerers. Create a moveable dragon and a tapestry of flowers and unicorns.

Instructor: Jo Duranceau-Cannon.
Fee: \$20 members/\$22 non-members.
Limit: 15.

Registration Form for Children's Summer Classes

The enclosed check, in the amount of _____, is to cover the registration fees for the following classes:

Name and section of classes _____

Parent's Name _____

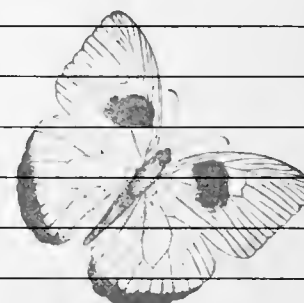
Child's Name _____ Age _____

Address _____

City _____ State _____ Zip _____

Home Tel. No. _____ Business Tel. No. _____

Member of Denver Botanic Gardens? Yes No



Children's Booth

Smaller visitors looking for small plants at small prices will find them at this booth conveniently located next to the refreshment area. This is a great place to find a plant to please Mom on Mother's Day. Look for clowns and bright mylar balloons.

Cacti Booth

In Mitchell Hall you will find a terrific selection of indoor succulents for warm windowsills or greenhouses. Fifteen varieties of hardy outdoor cacti will also be available.

Gift Shop Annex

No trip to the Gardens is ever complete without a visit to the Gift Shop. The Annex, in the Boettcher Center lobby, features baskets, decorative door mats, decoy ducks, appealing clay animals, and stylish decorative straw hats and visors. A wide selection of horticultural books are available for all, from the child with a developing interest in the world of nature to the serious gardener. Also to be found are antique Venetian glass jewelry; bonsai pots, Ikebana vases, and

brass planters to accompany your special purchases.

Used Book Sale

The Helen Fowler Library Used Book Sale will be held in the basement of the library where this year one can find an unusually large collection of mysteries, science fiction, biographies, classics, and Americana. In Classroom A, botany, gardening, art, travel, and foreign language titles will be for sale as well as magazines and paperback fiction. We have resumed the collection of the National Geographic Magazines so that all of you who were looking for particular issues last year and did not find them, may try us this year. Some stamps, posters and records will also be found in the basement sale areas.

Information Booth

The Information Booth is where to ask the location of any one of the booths staffed and stocked to meet your gardening needs. Dr. Green also staffs this booth, offering solutions to turn your thumb green.

Membership Booth

Membership applications to Denver Botanic Gardens will be available at this booth for those interested in receiving more benefits year-round. Learn how the Gardens can serve your horticultural and educational curiosity.

An umbrella table and chairs to enhance the garden or patio area will be raffled. Tickets will be \$2, with a drawing on Saturday, May 12 at 3 p.m. You need not be present to win.

Plan to spend a long morning or afternoon searching through the maze of booths at the great Denver Botanic Gardens' Annual Plant and Used Book Sale. Enjoy the spirited excitement of May's merry madness!

Discover Penstemons at June 14 Symposium

No flower provides more color in the mountains and plains of our state than the beard-tongues or penstemons. Related to paintbrushes and snapdragons, the genus *Penstemon* consists of 260 species and over 25% of them can be found in Colorado. Horticulturists are now discovering that penstemons can serve a variety of purposes in the western garden.

On Thursday, June 14, at 8:30 a.m., a seminar entitled, "Penstemons: Versatile Perennials for Western Gardens," will be presented in John C. Mitchell II Hall. Sponsored by Denver Botanic Gardens, the Colorado Native Plant Society, and the Midwest Chapter of the American Penstemon Society, the symposium will explore the many landscape possibilities of this diverse plant group. Homeowners and nature-loving gardeners are invited to attend and learn from experienced botanists and advanced gardeners.

Speakers include Kenneth and Robin Lodewick, authors of the *Penstemon Field Identifier*, who will present an overview of this genus in the wild. Elizabeth Neese, assistant curator of the Brigham Young University Herbarium, will describe her field research which has led to

the discovery of several new species in the southern Rockies and the Great Basin. Cultural techniques will be described by Erma Pilz, board member of the American Penstemon Society and well-known Albuquerque gardener and Dr. Dale T. Lindgren, horticulturist at the University of Nebraska North Platte Experiment Station, will explain his work in his presentation, "Garden Penstemons: Breeding and Culture."

In the afternoon, over 60 species of penstemons will be available at the Plant Sale and guided tours of the DBG penstemon plantings will be offered. The program will conclude at 2 p.m.

Pre-registration is advised as the number of participants is limited; it

can be accepted only if received by **June 4**. Cancellations must be requested before June 8 and a \$2 service fee will be deducted from each refund. If space is available, participants are welcome to register at the door. **Please mail your pre-registration forms to:**

Penstemon Workshop
P.O. Box 200
Ft. Collins, CO 80522

Checks should be made payable to CONPS. Registrations will not be acknowledged; your cancelled check serves as your receipt. Box lunches will be available for an additional charge of \$5.

Registration Form for Penstemon Workshop Only

Please do *not* send registration form to Denver Botanic Gardens.

Name _____

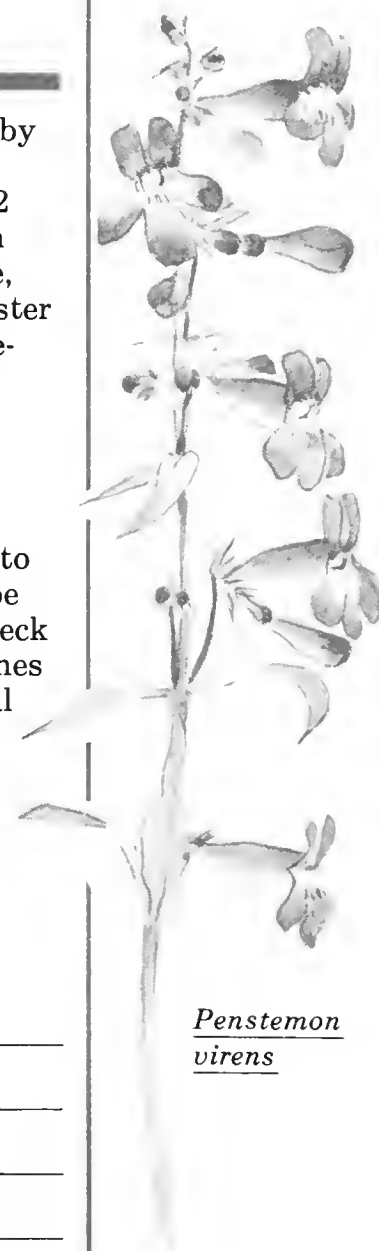
Address _____

City _____

Phone _____

(daytime between 8 a.m. - 4 p.m.)

CONPS member	_____	\$18	Send To: CONPS—Penstemon Workshop P.O. Box 200 Ft. Collins, CO 80522
DBG member	_____	\$18	
Non-member	_____	\$20	
Student	_____	\$12	
Box lunch	_____	\$ 5	
Total	_____		



Penstemon virens

EMMA A. ERVIN



Virginia Raymond and Ross Lahr, volunteers at DBG, have both helped many become members of the Gardens.

During their March meeting, the Board of Trustees of Denver Botanic Gardens acted upon the recommendation of the Membership Committee and approved changes of fees for some membership categories and additional benefits for others. They also approved one new membership category and modified existing ones. The Gardens' previous fee structure was established in 1979 and had remained unchanged during the past five years.

A recently compiled survey of Botanic Gardens' members, rating both current and potential benefits, combined with a thorough assessment of the direct costs to the Gardens in serving members, led to the Membership Committee's recommendation to the Trustees. The results of the Committee's investigation indicated that fees for certain categories of membership were less than the cost of services those members were receiving. On the other hand, of the 37% of our members who completed and returned the survey questionnaire, the overwhelming majority indicated satisfaction with the present benefits of membership.

New fees which take effect May 1, 1984, were recommended and approved for the following categories of membership.

Student	\$15.00
Senior	\$15.00
Senior Couple	\$20.00
(for two Seniors 65 years and older living at the same mailing address)	
Individual	\$20.00
Family/Dual	\$30.00
(for families, couples living at the same address, or individuals who wish to bring one guest when they visit the Gardens)	

Fees for Contributing (\$50), Supporting (\$100), Patron (\$500), and Benefactor (\$1000) members remain the same.

For all membership categories in the fee range of \$15-30, the benefits remain the same. As a member in one of these categories you receive:

- Free admission to the Gardens throughout the year upon presentation of your membership card.
- Participation in the annual members' plant giveaway, an opportunity to select a choice plant from a collection suitable for home or garden.
- Advance notice of classes, lectures, field trips, and workshops before they are announced to the general public; discounted fees for most of these programs.
- Subscription to the monthly *Green Thumb News* with gardening tips for the front range metro area plus a complete schedule of current and upcoming activities at the Gardens.
- Subscription to quarterly issues of *The Green Thumb* magazine with a wide variety of articles of lasting interest for those who grow or study plants in the Rocky Mountain region.
- Use of the Helen Fowler Library with check-out privileges.
- Invitations to special events open only to members.
- Opportunities to travel in the U.S. and abroad on tours planned especially for those with horticultural or botanical interests.
- Unlimited enjoyment of the Gardens and its facilities in every season of the year and a sense of participation in its growth and development.

For the following membership categories, all of the above-mentioned benefits plus the addition of **GUEST PRIVILEGES** (free admission), as specified below were approved by the Trustees:

- **Supporting**—Up to *two* guests with each visit to the Gardens.
- **Supporting**—Up to *four* guests with each visit to the Gardens.
- **Patron**—Up to *six* guests with each visit to the Gardens.
- **Benefactor**—Unlimited guest privileges when visiting the Gardens.

The same guest privilege allowances apply for these members when attending special events. When a separate fee is charged for the event it must be paid for both the member(s) and guest(s).

A new category of **GARDEN CLUB MEMBERSHIP** was recommended by the Membership Committee and approved by the Trustees. The two fee levels of Garden Club Membership are:

- \$50 for clubs with up to 20 members.
- \$100 for clubs with 21 or more members.

Benefits are the same for all Garden Club Members and include:

- Free use of Botanic Gardens House for one garden club meeting each year.
- Lecture or program presented to the garden club by a Botanic Gardens' staff member OR one free guided group tour of the Gardens each year.
- Free admission to the Gardens for all club members on a pre-scheduled tour once each year.

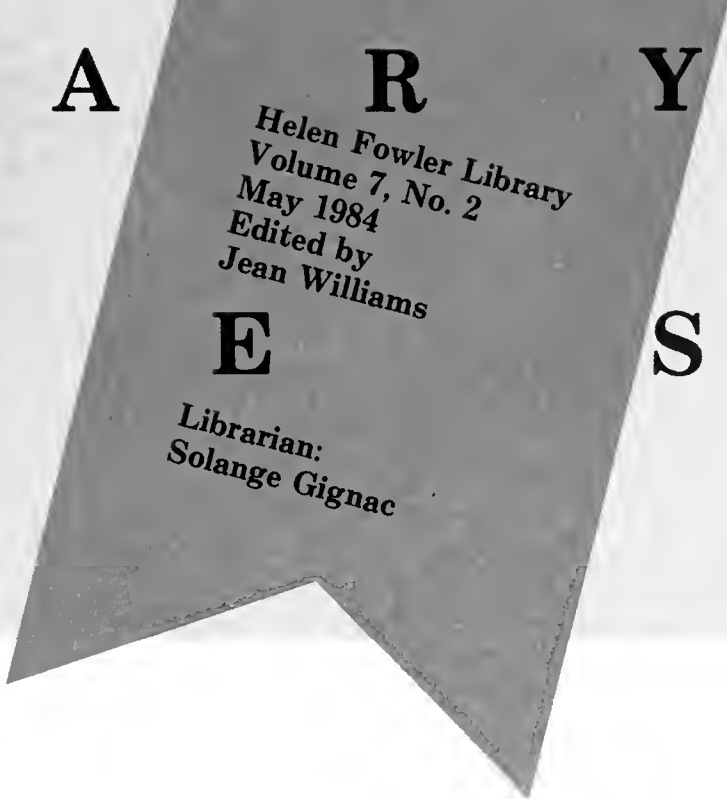
In another article in this issue, it is pointed out that in order to balance our 1984 City operating budget, admission fees for non-member visitors to the Gardens are being raised to generate an additional \$78,000 in revenues this year. The total City operating budget of \$975,000 in 1984 must be further supplemented by an additional \$754,000 raised by the Denver Botanic Gardens' Foundation to enable the Gardens to operate at its current level of service to you, our valued members, and the community.

Your support through membership is **one vital component** of this fund-raising effort! Additional funds are raised from corporate, foundation, and private sources as a result of the fine work being done by our Development Office staff. Timely and effectual investment of endowment funds comprises yet another source of critically-needed operating revenue.

Your continuing support of the Botanic Gardens and its programs, through your membership, is encouraged, welcomed, and deeply appreciated. With your support we can uphold the traditions that have made our Gardens great, and insure its rightful place in our future and the future of generations to come.

Merle M. Moore
Executive Director

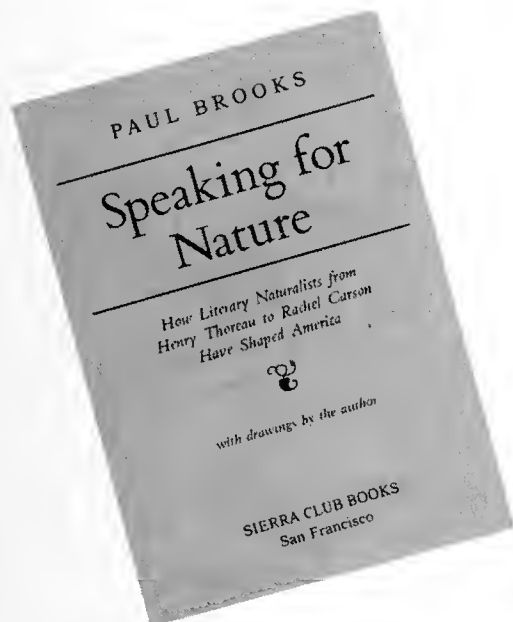
L I B R A R Y
L I N E S



***Speaking For Nature:
How Literary
Naturalists from Henry
Thoreau to Rachel
Carson Have Shaped
America.***

By Paul Brooks. Sierra Club Books, San Francisco, 1983. \$8.95 QH 26 B76 1980.

Paul Brooks' *Speaking for Nature*, published in hard cover in 1980, is now available as a Sierra Club paperback. If you missed it the first time around, you shouldn't miss this edition. Information is seldom as enjoyable and easy to come by as it is here. This relatively small book (300 pages) surveys a century of American nature literature, from Henry Thoreau to Rachel Carson.



Brooks presents, in the scientific/philosophical tradition of the literary naturalist, portraits of 75 major and minor figures. He gives us vivid insights into character and personality, historical vignettes, as well as a record of the evolution of our philosophical and scientific views of the natural world.

We learn that even the giants among these nature writers were greatly influenced by their contemporaries and by the political climate of their time. Henry Thoreau "was not begotten of the northwest wind, as he may have supposed," nor did Rachel Carson "burst forth fully armed, like Athena from the head of Zeus." From the book we develop a sense of the long process of change, and we learn that the work of many was required for the formation of our familiar scientific concepts and moral sensibilities known today as "conservation," "wilderness preservation," "ecology," and "the environment."

We find convincing sketches of the likes of Ralph Waldo Emerson, John A. Audubon, "the two Johns"—Burroughs and Muir, Frederick Law Olmstead, Theodore Roosevelt, Loren Eiseley, and Roger Tory Peterson, as well as lesser-known but equally fascinating figures like Starr King, Edwin Way Teale, Sidney Lanier, Mary Austin, William Brewster, and Joseph Wood Krutch.

We are treated to backstage moments when "whirlpools occasionally form in the professional circles (and) currents come into conflict." We see sparks fly when an old-fashioned naturalist meets a specialist or laboratory scientist of a later day: "The taxonomy of birds, Roger Tory Peterson once remarked, with a touch of hyperbole, can now be studied by analysis of the albumen in the egg, without the researcher ever having seen a bird in flight."

(continued on page 14)

***The Low Maintenance
Garden.***

By Graham Rose. The Viking Press, New York, 1983. \$12.95. SB 473 R665 1983.

Warning! The title of this book can be misleading. A dedicated gardener in search of well-deserved respite could find himself with more chores, not fewer, if he decides to implement these suggestions. Although this book purports to offer an easy way out, it paradoxically illustrates creative gardens for the serious do-it-yourself gardener who isn't looking for the easy way out.



If we set the title aside and review the book as a guideline for home landscaping, it has merit. There are sound ideas, creative designs, and clear illustrations. It is compact and full of useful information. The initial chapters set out basic principles of landscape design and present a minimal-care plant list. The final chapters discuss maintenance and care of the plants.

However, instead of focusing on sound, low-maintenance techniques and gardens, the author has, for the most part, written a book on general landscape design.

Gayle Weinstein

**THE
REVIEWERS**

Susan Praetz Fry—Gardener Florist II, Denver Botanic Gardens

Anne Murdock—Volunteer, Helen Fowler Library, Denver Botanic Gardens

Olie Webb—Member, Colorado Cactus and Succulent Society

Gayle Weinstein—Botanist Horticulturist, Denver Botanic Gardens

Jean Williams—Editor and Volunteer, Helen Fowler Library, Denver Botanic Gardens

The Lore of Flowers.

By Neil Ewart, illustrated by Nina O'Connell. Blanford Press; Poole, Dorset, 1982. \$19.95. QK 85.5 E8 1982.



This book reads like a walk through a garden with a delightful and knowledgeable, but rather garrulous, companion. Flower lore is a broad topic. It encompasses poetry, legend, historical associations, and symbolic meanings, as well as the various traditional uses of plants for food, medicine, or cosmetics. Neil Ewart has attempted to cover all of these. The result is a meandering discussion of individual flowers, sprinkled with random bits of poetry, legend, and history. Organization of the material consists only of focusing on a flower and sharing what comes to mind.

Published in England, the book has a strong British orientation with emphasis placed on the common flowers of the English garden and countryside, with references to English history filling the book. For example, Shakespeare, Queen Victoria, and the War of the Roses are assumed to be well-known and treated like familiar contemporary phenomena. The author also relates anecdotes from the lives of great British gardeners and plant explorers.

The book is generously illustrated in both black and white and color. Fine examples of stippling are found in the black and white illustrations. The color pages are less appealing, perhaps, because of a mismatch between printing technique and paper quality. Text and illustrations are not always coordinated; an illustration may follow the discussion of the flower by several pages. No attempt was made to use scientific nomenclature.

An interesting list identifies flowers with the sentiments they represent in folklore while another lists each state flower found in the United States. The general index efficiently distinguishes between text and illustration references.

This book has a useful place on the coffee table where it can be picked up and perused at leisure. In the library it can be used as a complement to other books on flower lore.

Anne Murdock

Constructing Outdoor Furniture, with 99 Projects.

By Percy W. Blanford. TAB Books, Inc., Blue Ridge Summit, Pa., 1983. \$13.95. TT 197.5 09 B5369 1983.

Percy Blanford has to be the dean of do-it-yourselfers. He has 20 books to his credit covering how-to titles ranging from children's furniture to wooden toys. I've often wondered if he builds everything in his books, and if so, where he puts it all!

In this, his latest effort, he frequently draws upon his previously published work. He covers tools, materials, and basic techniques. He then continues to focus on specific designs for just about anything you might want to build and much you would not.



The book gives me a strong sense of *deja vu*. I remember seeing most of these designs in the twenties and thirties. It's a style you might call homegrown mission mixed with carpenter art deco. Frankly, most of the designs are dull and without appeal. Let's just say they lack distinction.

Somewhere there must be a book that shows how to build those wonderfully comfortable old park benches that one still sees in English parks or occasionally finds in American gardens. That's the plan I'm still looking for.

Olie Webb

Ortho's Complete Guide to Successful Gardening.

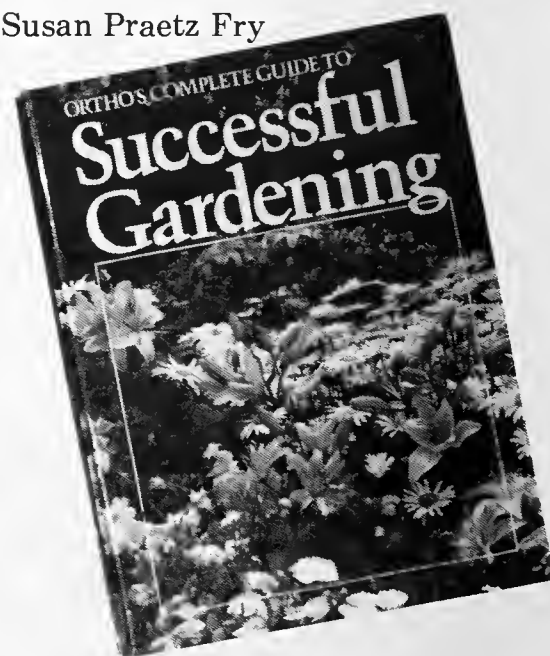
Ortho Books, Chevron Chemical Co., San Francisco, 1983. \$29.95. SB 453 078 1983.

Among the hundreds of gardening books available today, it is often hard to know just which one to buy as a general reference. Ortho has published many useful books on an array of horticultural subjects, and they consistently present well-researched information along with excellent inspiration and idea-filled photographs. This guide follows that pattern. It is a large-format volume carrying many colorful pictures and the work of many experts in the field.

The first half of the book covers color, design, trees, shrubs, flowering plants, herbs, garden care, and much more basic information. The second half is an encyclopedia of charts giving the habit, adaptation, and culture of hundreds of individual plants. An extensive list of plants by common names is useful for locating old favorites.

If you are looking for a garden book that includes both indoor and outdoor plants, this guide would be a good choice. It is well-organized, and it has the accuracy one expects of a reference manual.

Susan Praetz Fry



Speaking For Nature: (cont.)

Finally, we are left with a sense of significance of these literary figures as indispensable allies of the conservation movement. "For it is obvious," Brooks tells us, "that we fight to preserve only what we have come to love and understand."

A generous index and a list (by chapter) of the writers discussed, their important works, and standard biographies make this an invaluable reference.

Jean Williams

Gardening Tips for May

Many gardening practices are initiated in May which continue throughout the growing season. Regrettably, many have become routine over the years, and do not make sense given today's increased understanding of horticultural practices.

People automatically water, routinely apply pesticides, unquestionably fertilize, unknowledgeably purchase garden products, and undoubtedly have great, but too often unrealistic expectations for plant performances. Consider the following:

Watering

Although trees, shrubs, grasses, and annuals have different depths for their root zones, they are put on identical watering systems with the same flow rate for the same length of time. Irrigation water should be applied to the soil to replenish water lost by evaporation or removed by growing plants—transpiration. One must have an objective when watering and every application of water should be justifiable. The amount of water used and its frequency of application should be determined by the plants' varying water needs at each stage of development. Automatic watering systems are convenient, but need to be adjusted according to weather conditions and other environmental factors.

Application of Pesticides

The application of pesticides is the use of chemicals to control what man defines as "pests." Unfortunately, there has been a tendency for some people to regard pesticides as "cure-alls" with the belief that for every pest there exists a protective chemical. Some annual

preventative pest programs are necessary and early detection of certain pests, such as tussock moth, can ward off irreparable damage. In other instances, however, the decision should be made on a case by case basis with a thorough understanding of what you are trying to control. Routine applications of pesticides for preventative purposes should no longer be the vogue. In most cases, pesticides are not so specific as to solely affect a particular pest and some danger to humans, pets, and wildlife is inevitable. Furthermore, rarely is the pest population completely eliminated, and in fact, strains of the pest may develop, over time, a resistance to routinely-applied pesticides.

Fertilization

Fertilizers are only one source of plant nutrients. Soils serve as a storehouse for nutrients and normally provide a substantial amount of the plants' nutritional requirements. Under most conditions, plant performance can be enhanced by proper application of supplemental nutrients. However, fertilizers might present potential hazards to the plants if various growth factors are not considered.

The greatest absorption of fertilizers occurs at the site of the most active cell division—the meristematic tissues of the root tips. If the roots receive excessive amounts of water or are growing in heavy, oxygen-depleted clay soils, they are most likely performing their vital nutrient water uptake functions poorly. What may be suggested as an appropriate amount of fertilizer can prove to be more harmful than if the fertilizer were not applied at all. Routine spring

applications of fertilizers will probably enhance healthy plants, but may not enhance unhealthy ones.

Garden Products

Many gardening materials on the market are useful, although what may be helpful one year might not be the next. For example, weed and feed products for turfgrasses combine fertilizers with herbicides. Applying this product where there is no significant weed problem is both costly and risky. Woody ornamentals may accumulate herbicides over several seasons eventually reaching harmful levels of toxicity, yet, the harm caused by such applications could be avoided or reduced by cautious and justifiable use of these herbicides.

Plant Performance

Good plant performance is a result of the conscientious, sensitive, common sense decisions we make regarding the health and care of our plants. What better month is there than May to enjoy the feeling of satisfaction our efforts have yielded.

The bold displays of Darwin hybrid tulips on York Street, the special selections of tall, bearded irises west of the amphitheater, and the more unusual tulips and irises in the Rock Alpine Garden, these and the lilacs, peonies, viburnums, and other plants blooming or in bud throughout the Gardens are all an indication that good judgement and proper care will be rewarded. Please visit in May and share with us the fruits of our labor.

Gayle Weinstein
Botanist Horticulturist at
Denver Botanic Gardens



C MAY

Regular Meetings of Plant Societies

A number of plant and horticultural groups meet fairly regularly at the Denver Botanic Gardens. Here is a listing of those groups and a general indication of when they usually meet. For more specific meeting times and locations as well as for information on how to contact a representative of the group, please call the Botanic Gardens switchboard during business hours at 575-3751.

African Violet Society, 4th Thurs. of 7 months; **Bonsai Society**, 1st & 3rd Tues.; **Botany Club**, 3rd Fri.; **Cactus & Succulent Society**, 2nd Tues.; **Civic Garden Club**, 1st Fri.; **Dahlia Society**, 2nd Fri.; **Gladiolus Society**, call for info.; **Gloxinia Gesneriad Growers**, 1st Sat.; **Hemerocallis Society**, 3rd Sun. of 4 months; **Ikebana International**, 4th Fri.; **Indoor Light Gardening Society**, 3rd Thurs.; **Iris Society**, spring & fall dates; **Men's Garden Club**, 4th Thurs.; **Mycological Society**, 2nd Mon.; **Native Plant Society**, call for info.; **Orchid Society**, 1st Thurs.; **Rock Garden Society**, 3rd Wed.; **Rose Society**, 2nd Thurs.; **Ultra Violet Club**, 4th Mon.

C	A	L	E	N	D	A	R
	S	M	T	W	T	F	S
			1	2	3	4	5
6	7	8	9	10	11	12	
Field Trip to Roxborough State Park					May 11-12 Annual Plant and Used Book Sale		
13	14	15	16	17	18	19	
Japanese Tea Ceremony			Plant Life Field Trip: Highlands Ranch	Free Day for Denver City/County Residents		Norwegian Constitution Day	
20	21	22	23	24	25	26	
						May 26-June 3 Denver Artists Guild Show and Sale	
27	28	29	30	31			
Field Trip to Bear Creek Nature Center						Tree Walk: Fairmount Cemetery in Denver	
Japanese Tea Ceremony						Cloud Invaders: Kites for Kids	
	Coming Next Month	June 14 Penstemon Seminar	June 16-17 Rocky Mountain Bonsai Show	June 23-24 Gloxinia Gesneriad Growers Sale	June 25-28 The Four Seasons: Summer	June 29-30 Rock Gardening Symposium	
	June 9-10 American Iris Society Show and Sale	June 16 Field Trip to Calypso Cascades, Rocky Mountain National Park	June 18-21 Bean Sprouts	June 25-28 Jack and the Beanstalk	June 28 KCFR Radio Concert		

Denver Botanic Gardens, Inc.
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NEWS



Inside:

"Garden
Concerts
1984" page 3

Classes
page 5

DBG's
Japanese
Garden by its
designer,
Koichi
Kawana.

Second Annual Rock Gardening Symposium: Alpines Around the World, The Asian Influence June 29-30

Denver Botanic Gardens and the Rocky Mountain Chapter of the American Rock Garden Society proudly announce their second annual symposium, "Alpines Around the World: the Asian Influence," which will be held on Friday and Saturday, June 29 and 30, in John C. Mitchell II Hall.

China and Japan are fountain-heads of naturalistic garden design and east Asia is internationally known as the source of many of the important plant materials used in Western gardens. The purpose of this symposium is to explore ways that both Asian plants and art can be used in traditional American rock gardens.

Just as the Asian influence has always affected Western naturalistic gardens, so has rock gardening

played an important role in the scientific discovery of Asia. Many of the great explorers of western China and the Himalayas, such as Reginald Farrer, George Forrest, Francis Kingdon-Ward, and E.H. Wilson, were sent to east Asia by syndicates sponsored by wealthy rock gardeners and botanical gardens specifically to gather alpine plants.

Plants from east Asia serve many gardening purposes. Manchuria, Mongolia, and the Tian Shan mountains provide plants which are drought-tolerant and very cold hardy. Plants from much of Japan and eastern China, such as hostas, are among the best woodland plants that we can use in shady, inner-city gardens. Western China and the Himalayas offer high alpine plants that constitute the greatest reservoir of choice rock garden plants on earth!

With the gradual improvement of Sino-American relations, some of

these treasures are beginning to trickle into Western cultivation. "Alpines Around the World: the Asian Influence" will explore the development of a harmonious and naturalistic garden design combining rocks, plants, water, and other features. J. Cobb Colley, of Siskiyou Rare Plant Nursery in Medford, Oregon, will show a selection of choice Asian plants that can be grown in Western gardens. Panayoti Callas and Sandra Snyder, from Denver Botanic Gardens' Rock Alpine Garden, will present a program on how to utilize dwarf shrubs and conifers in your gardens.

Demonstrations and a variety of workshops from which to select will be available on both days. Participants will be encouraged to work in small groups and meet speakers on a one-to-one basis. Rock gardening exhibits and a plant show and sale will be open to the public in the afternoons.

(continued on page 9)

2 American Iris Society Show and Sale, June 9 and 10

The American Iris Society Annual Show and Sale occurs this year on June 9 and 10 in Denver Botanic Gardens' John C. Mitchell II Hall. The theme, "Colorado's Beauties,"



Iris "Spring," a hybrid of B. Roe

June Denver Rose Society Meeting

A demonstration on "Flower Arrangements for Home and Show" by Joan Franson and Avalonne Kosanke is the program to be presented at the June 14 7:30 p.m. meeting of the Denver Rose Society in DBG House.

will be exemplified by representatives of the many iris grown and hybridized in Colorado. Specimen and artistic displays featuring irises will be judged on the morning of Saturday, June 9. The public is invited to view the prize winners from 1:00 to 4:45 p.m. on June 9 and from 10:00 a.m. to 4:45 p.m. on Sunday, June 10. On display will be many top national winners of the leading iris varieties. A sale of iris plants and rhizomes will be conducted during the show. Please ask questions on the specific culture of your new irises; society members will be present to answer them.

Artistic arrangement entries will be accepted until June 8; call Joan James, 279-5103, for additional information. Although there is no charge for the show and sale, the regular admission fee will be in effect for non-members.

Fall Tour Preview Set for June 24

Come and enjoy a stunning presentation on the scenic beauty of the Pacific Northwest, the destination of the next DBG tour. Departing September 21, Panayoti Callas, curator of our Rock Alpine Garden, will be your guide for this preview as well as the autumn adventure.

On June 24 at 3 p.m. in Denver Botanic Gardens' House, Panayoti Callas will bring the Canadian Rockies to life. Members and friends are welcome to attend this travelogue. If you are interested in

Penstemon Seminar on June 14

Homeowners and nature-loving gardeners can still sign up for the Penstemon Workshop to be held at Denver Botanic Gardens on Thursday, June 14. This seminar entitled, "Penstemons: Versatile Perennials for Western Gardens," begins at 8:30 a.m. in John C. Mitchell II Hall and concludes at 2 p.m.

Although the pre-registration deadline is June 4, participants are welcome to register at the door on a space-available basis. Checks should be made to the Colorado Native Plant Society (CONPS). Registration fees for this workshop are: CONPS and DBG members—\$18, non-members—\$20, and students—\$12.

This one-day seminar promises to be a very informative workshop where you can expand your knowledge of gardening using these native plants.

visiting the Columbia Ice Fields and Lake Louise when the fall color is at its peak, attend this program. Further information, including a complete itinerary, is available by calling 575-3751. Space is limited to the first 25 people who send in their deposit, so call today for details.

Tributes

In memory of Mrs. Belle Beck

Mr. and Mrs. Spies D. Whitaker

In memory of Leroy (Roy) Grim

Chapter CX P.E.O.

In memory of Margaret Mary Kalmbach

Mr. & Mrs. J. Loren Adams

Pauline E. Carter

Mr. & Mrs. Charles O. Eggert

Mr. & Mrs. Joseph W. Fountain

Catherine Howell

Mrs. H. Gilmore Walker

In memory of Gladys N. Kirk

Mr. & Mrs. Caleb F. Gates, Jr.

Mr. & Mrs. John Fleming Kelly

In memory of Dr. T. Paul Maslin

Margaret Betchart

Fay S. Carter

Mr. & Mrs. John Coe

William G. Gambill, Jr.

Ada T. Gorman

Ms. M. M. Maslin

Dr. & Mrs. Carl McGuire

Mr. and Mrs. Andrew Pierce

Mrs. Replinger

Rocky Mountain Chapter American

Rock Garden Society

Marion D. Sheppard

Dr. & Mrs. Allan Taylor

In memory of Catherine C. McWilliams

Mr. & Mrs. Willett S. Moore

Perennial Garden Club

In memory of Dr. Marshall Nims

Ellen Waterman

In memory of Richard Ross

Margaret G. Altvater

Mr. & Mrs. Joseph S. Epstein

In memory of Mrs. Mae L. Thompson

Dolores T. Harrison

In memory of Ricky Weaver

Mr. and Mrs. Christopher Weaver

Green Thumb News Number 84—6 June 1984

Published monthly by the Denver Botanic Gardens Education Department, 909 York Street, Denver, Colorado 80206, and edited by Patricia A. Pachuta and Carolyn Knepp. Subscriptions to this newsletter are a benefit of membership in the Botanic Gardens. For membership information, please write the Membership Department at the above address or call 575-3751.

Deadlines for this newsletter are: Major news stories and feature material (including photographs or artwork) for the July issue—May 18, for August—June 20, for September—July 20. Short news notes are due not later than June 1 for July, and June 29 for August, and August 1 for September.

Please plan in advance and meet deadlines. Late material cannot be used. Stories must be typed, double-spaced, preferably on copy paper provided by the editor. Please call the Education Department at 575-3751 for details.

1984 Garden Concert Series

The United Bank of Cherry Creek, Denver Botanic Gardens, KCFR Radio, and the United Bank of Denver proudly announce "Garden Concerts—1984," a series of six outdoor concerts to be presented in the amphitheater of Denver Botanic Gardens. This summer's program is as follows:

Thursday, June 28 at 7 p.m. (rain date—Sunday, July 1 at 10 a.m.)
The Aries Brass Quintet
Tickets on sale starting Friday, June 15.

The area's most highly acclaimed chamber ensemble is now a tradition at Denver Botanic Gardens, and will soon record their first commercially available album.

Thursday, July 12 at 7 p.m. (rain date—Sunday, July 15 at 10 a.m.)
The Meliora Quintet: Music from the Aspen Music Festival
Tickets on sale starting Friday, June 29.

Newly formed last year at the Eastman School of Music, this quartet recently won the prestigious Cleveland Quartet Competition and will return this summer by popular demand.

Thursday, July 26 at 7 p.m. (rain date—Sunday, July 29 at 10 a.m.)
The Colorado Philharmonic
Tickets on sale starting Friday, July 13.

Carl Tipilow conducts this full symphonic orchestra of 75 positions whose alumni are currently performing with major orchestras all across the United States, as well as Canada, Mexico, South America, Europe, the Middle East, and Asia.

Thursday, August 9 at 7 p.m. (rain date—Sunday, August 12 at 10 a.m.)
The American Brass Quintet: Music from the Aspen Music Festival.
Tickets on sale starting Friday, July 27.

Considered one of the finest brass ensembles in North America, the American Brass Quintet has been in residence at the Aspen Music Festival since 1971.

Thursday, August 23 at 6:30 p.m. (rain date—Sunday, August 26 at 10 a.m.)
Hot Rize
Tickets on sale starting Friday, August 10.



The Aries Brass Quintet will perform in the amphitheater on Thursday, June 28.

Hot Rize is a bluegrass music tradition at Denver Botanic Gardens. As noted in the Houston Post, "From their first set on, the crowds continued to build, the orations grew, individual solos were greeted with cheers and whistles... They made believers out of us."

Thursday, September 6 at 6:30 p.m. (rain date—Sunday, September 9 at 10 a.m.)
The Denver Chamber Orchestra
Tickets on sale starting Friday, August 24.

Conducted by JoAnn Falletta and consisting of 33 chamber musicians, a concert by the Denver Chamber Orchestra is a perfect way to finish off the summer.

Non-refundable tickets for each performance are \$2 each and will be sold on a first come, first served basis with a limit of six tickets sold per person. Although babes in arms will be admitted free, all others will require a ticket. Children are welcome to attend the concerts and are encouraged to sit quietly with their parents so that all can enjoy the music. Denver Botanic Gardens regrets that we are not able to hold tickets for late arrivals or keep lists of names at our gate. Please note the starting date of ticket sales for each concert since tickets cannot be sold earlier. Our concerts are very popular and all tickets are generally sold by 10 a.m. The lack of season tickets encourages a different audience for each concert, so plan early.

Thanks to the United Banks, we have expanded our list of ticket sales locations to include:

- Denver Botanic Gardens' House at 909 York Street will be open weekdays from 8 a.m. to 5 p.m.
- KCFR Radio at 2056 South York Street will be open weekdays from 8 a.m. to 5 p.m. and on Saturdays from 10 a.m. to 5 p.m.
- The United Bank of Cherry Creek in the Ptarmigan Center on Cherry Creek Drive North will be open weekdays from 8 a.m. to 5 p.m.
- The United Bank of Denver at 1740 Broadway will be open weekdays from 8 a.m. to 5 p.m.
- The United Bank of Lakewood at 7200 West Alameda Avenue in Lakewood will be open on weekdays from 9 a.m. to 5 p.m.
- The United Bank of Monaco at 1001 South Monaco Parkway will be open weekdays from 9 a.m. to 5 p.m.

(continued on page 4)

4 Rocky Mountain Bonsai Show

Rocky Mountain Bonsai Society invites you to attend their Annual Bonsai Show on Father's Day weekend, June 16 and 17. This show will be held in John C. Mitchell II Hall from 9:00 a.m. to 4:30 p.m. Saturday and Sunday.



For the novice bonsai gardeners or the experienced gardeners wanting to expand their knowledge, educational materials and programs will be available throughout the day. Special programs will be run at 11 a.m., 1 and 3 p.m. with each lasting 45 minutes to 1½ hours and providing an introduction to the art of bonsai and materials used.

In addition to the show, assorted supplies and plant materials will be offered for purchase at a special sale booth. Society members will be present to provide their expert advice for buyers and to help solve your cultural problems. Members can also give membership details to those interested in joining.

Admission to the exhibition in Mitchell Hall is \$.50 for visitors 16 years and over and those under 16 will be admitted to the show at no charge. The regular gate fee for non-members will be in effect.

Gesneriad Gloxinia Show and Sale

"A Victorian Romance" is the theme for the Gesneriad Gloxinia Grower's Show and Sale to be held in John C. Mitchell II Hall on Saturday and Sunday, June 23 and 24. Experienced gesneriad and gloxinia growers will enjoy this opportunity to add to their collections, while novice growers can take advantage of the education table.

On Saturday morning, before the Show is open to the public, the plants will undergo some critical judging by the members. From 1:00 to 4:45 p.m. on Sunday, visitors can observe the prize winners. A plant sale will also be in progress during the show and cultural folders will be provided with each sale.

There is no admission charge for this show other than the non-member gate fee. Gesneriads and gloxinias, all members of the African violet family, Gesneriaceae, are very interesting plants that have been favorites of collectors for many years—visit this show and see the colorful reason why.

Concert Series (cont.)

Bring a picnic supper (Denver Botanic Gardens' gates open at 5:30 p.m.) and a blanket and savor a delightful evening of music in our colorful summer surroundings. All concerts will be broadcast live by KCFR at 90.1 FM. In case of threatening weather, listen to KCFR for an announcement on the status of the Thursday evening concerts. Details will be broadcast shortly before the 4:30 p.m. start of "All Things Considered" and will be repeated at 4:55 p.m., 5:30 p.m., and 6:30 p.m.

The six concerts planned for 1984 are a large, complex, and expensive project and we gratefully acknowledge the support of the United Bank of Cherry Creek, KCFR Radio, and the United Bank of Denver.

Outdoor Gardening Volunteers

Beginning Wednesday and Thursday, June 13 and 14, volunteers interested in gardening can join our outdoor gardening teams. This introductory session lasts for six weeks, meeting twice each week in the mornings from

8:30 to 11:30. If you want to be a member of these teams and help beautify the Gardens, please call Ginny Faxon at 377-0235 for additional information.



Volunteer Robert Legoski, helping to maintain our outside gardens.

Mushroom Identification Workshop

Saturday, July 7 and/or
Sunday, July 8
John C. Mitchell II Hall
9 a.m. to 4 p.m.

Denver Botanic Gardens and Colorado Mycological Society present this two-day workshop to teach identification skills to beginning and advanced mycologists. Using slides, keys, and charts, the class will learn both edible and poisonous fungi. Introductory skills will be taught in the Saturday session and intermediate to advanced students will find the Sunday session beneficial. Register for one or both days of class; the session on Saturday will provide an adequate background for the session on Sunday.

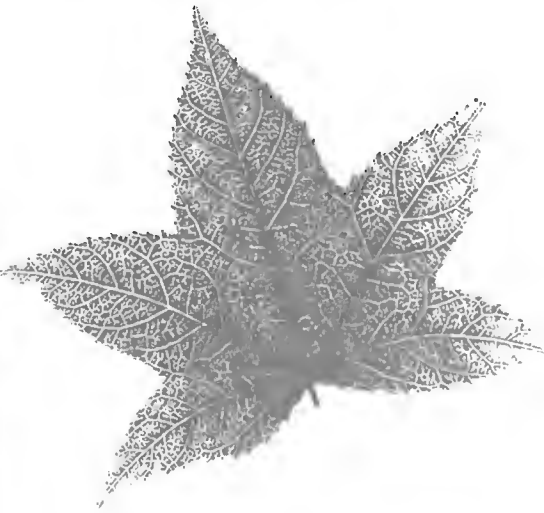


Please see the May issue of the *Green Thumb* for a complete program description.

Instructor: Kit Scates is chairman of the Education Committee of the North American Mycological Association and is the founder of the Pacific Northwest Key Council, a group that makes professional documents on mycology available in a usable form to amateurs. She is also founder of the Northern Idaho Mycological Association, and vice-president of the North American Mycological Association. She has received that group's most valued

award for contributions to amateur mycology. Most important, Kit is an excellent teacher who will pack an incredible amount of information into this short weekend.

Fee: \$25 per day for members of either DBG or Colorado Mycological Association. Non-members of either group will be charged \$30 per day. Box lunches are available at an additional cost of \$6 per day.



Deciduous Shade and Ornamental Trees for Denver

Tuesdays, June 26
July 3, 10, 17, 24
Classroom C 7:15 to 9:15 p.m.
and
Field Trip on Saturday, July 21
from 10 a.m. to noon
(six sessions)

Due to this unique climate, very few trees are actually indigenous to the Denver area. It is not so much cold hardiness, but soil, moisture, humidity, and the extreme fluctuation in temperature that make it so difficult for trees to survive.

The purpose of this class is to acquaint students with a variety of plant material and establish an understanding of their characteristics, natural history, culture, problems, and landscape value as an ornamental or shade tree.

Through the use of slides, students will observe each of approximately 100 species in all seasons, with an emphasis on summer characteristics. In addition, a field trip will be included for a first-hand look at some of the species discussed in class.

Instructor: An experienced teacher, Jeffrey Frank studied horticulture at Pennsylvania State University and earned a masters degree in landscape architecture from the University of Virginia. He is presently in private practice in Denver.

Fee: \$42.50 members/\$46.50 non-members.

Growing and Using Culinary Herbs

Mondays, July 16, 23, 30
August 6
(four sessions)
Classroom B 7:30 to 9 p.m.

The attractive forms, colors, and textures of herbs make them ideal garden subjects and nothing can compare with their freshly harvested flavor. Learn the propagation, cultivation, and harvesting of the major culinary herbs as well as how to utilize them to add variety to your cooking. Lots of tasting included!

Instructor: Pat Pachuta is a horticulturist and is education director of DBG. She has taught horticultural subjects, including herb gardening, for ten years.

Fee: \$24 members/\$26.50 non-members.

Japanese Cooking

Section I: Wednesdays, June 27
(skip July 4)
July 11, 18, 25

or

Section II: Saturdays, June 30
July 7, 14, 21

(four sessions)

DBG's Morrison Horticultural Demonstration Center at 2320 11th Avenue; entrance is on 11th Avenue 10 a.m. to 12:30 p.m.

While the Japanese have borrowed from the foods and cookery techniques of Korea and China, there is no other cuisine in the world that can match the delicate artistry of the Japanese table. Learn traditional methods of using familiar ingredients as well as such exotics as *mirin*, *daikon*, *shingiku*, *kobu*, and *dashi*. In each session, a main dish, soup, and salad or rice dish, will be prepared. Bring an appetite—lunch is included!

Instructor: Kyoko Kita studied Japanese cooking in Japan and has taught this subject for a total of 28 years, both in Japan and the United States.

Fee: \$48 members/\$52 non-members (includes a \$16 materials fee).

Limit: 15.

Please indicate your section on the registration form.

CLASSES

Summer
1984
Denver Botanic Gardens



Columbine Field Trip

Saturday, July 7
9 a.m. to 4 p.m.

Our state flower should be blooming in profusion on this traditional field trip to a site near Bailey.

Located at the edge of the montane zone, habitats visited will include a damp gulch and a ponderosa pine forest.

If the group is lucky, wood lilies may be found. Bring a sack lunch.

Leader: Marjorie Shepherd, an enthusiastic amateur botanist, has over 30 years of field experience.

Meet: 9 a.m. at the DBG House parking lot to carpool and share gasoline expenses.

Fee: \$2 per person.

Columbine Field Trip

Wednesday, July 11
9 a.m. to 4 p.m.

This is an additional chance to visit the same area described in the field trip of July 7.

Leader: Richard Schwendinger has been botanizing and leading field trips throughout North America and Alaska for 25 years.

Meet: 9 a.m. at the DBG House parking lot to carpool and share gasoline expenses.

Fee: \$2 per person.

Colorado columbine, Aquilegia caerulea

EMMA A. ERVIN

Field Trip to Roxborough State Park

Section I: Wednesday, July 11

or

Section II: Tuesday, July 17
6 to 8 p.m.

Learn summer wildflower identification at this spectacular park. An easy trail winds through striking geological formations where a wide variety of habitats including sunny, open hillsides, hogback ridges, and a moist stream valley will be explored. Evening hours will allow a cooler, more enjoyable hike.

Leader: Bob Heapes is an experienced field trip leader and nature photographer, and is also an amateur naturalist at Roxborough State Park.

Meet: at 6 p.m. at the intersection of Roxborough and Rampart Roads. Each car entering the park must purchase a daily park user pass in addition to the field trip fee.

Fee: \$2.50 members/\$3 non-members.

Limit: 15.

Please indicate your section on the registration form.

Field Trip to Golden Gate Park

Sunday, June 24
10 a.m. to noon

This park probably contains the best array of foothills wildflowers in the Denver vicinity. A profusion of shooting stars, anemones, and larkspurs is expected. Join us for a half-day of botanizing and brush up on your identification skills. Don't forget your picnic lunch. If members of the group are interested, additional hiking will take place after lunch.

Leader: Richard Schwendinger has been leading field trips throughout North America and Alaska for 25 years.

Meet: at 10 a.m. at the park Nature Center.

Fee: \$2.50 members/\$3 non-members (state park day fee of \$2 not included).

Plant Life Field Trip: Mount Falcon Park, Jefferson County

Wednesday, June 20
9 a.m. to 4 p.m.

Mount Falcon Park is located just outside of Morrison, Colorado, on Indian Hills Road (Parmalee Gulch Road). Numerous trails lead to scenic vistas and the early summer wildflowers found here are especially plentiful. Larkspurs, blue mist penstemons, and orange meadow arnicas are expected to be blooming in profusion. Bring a sack lunch.

Leader: Mary Edwards is an herbarium volunteer who has been leading botanical field trips for over six years.

Meet: at 9 a.m. at the DBG House parking lot to carpool and share gasoline expenses.

Fee: \$2.00 per person.

Wildflower Walk at the Walter S. Reed Botanical Garden

Wednesday, July 11
1 to 4 p.m.

The meadows, rock outcroppings, and Douglas fir and ponderosa pine forests of the 20-acre Reed Property are an especially enjoyable site to botanize. Join an experienced naturalist and learn field identification of our early summer wildflowers; special emphasis will be given to family characteristics.

Please bring a hand lens and field guides, if you have them.

Leader: Velma Richards is a botanist with considerable teaching and field trip experience; she conducted a field study of the flora at the Walter S. Reed Botanical Garden.

Meet: at the site at 1 p.m.

To reach the Reed Property: Take Route 74 from El Rancho to Evergreen. At Evergreen Lake, turn right on Upper Bear Creek Road and travel 6.2 miles to the Mt. Evans Wildlife Natural Area Road and turn right. Meet .3 mile down the road at the stone gates on the left.

Fee: \$2.50 members/\$3 non-members.

Limit: 15.

Participants may also register for the morning Bird Walk. Please bring a sack lunch and drinking water to enjoy between classes.

The Garden Party

A gourmet picnic supper and concert of lively classical music to benefit the Denver Botanic Gardens.

Tuesday evening, June 19.

5:30 p.m. gates open, cash bar

6:00 p.m. picnic supper served

7:00 p.m. program begins:

“Festive Music at The Gardens”

JoAnn Falletta

conducting The Denver Chamber Orchestra

Bring a blanket and sit on the lush lawn of the Botanic Gardens outdoor amphitheater for the concert. Enjoy your picnic supper in any of the many specialty gardens which will be filled with early summer blooms.

A delightful evening • A worthy cause • Join us • Help the Gardens grow!

Number of reservations requested at \$40.00 each _____

Name _____

Address _____

_____ Zip _____

Telephone _____

Reservations must BE RECEIVED not later than June 15. Please make your check payable to The Garden Party, and send to Denver Botanic Gardens, 909 York Street, Denver, Colorado 80206 For further information please call (303) 575-3751.



Denver
Botanic
Gardens

Tuesday June 19, 1984

By Bell

84



Field Trip to Mount Goliath

Saturday, July 14
8 a.m. to 3 p.m.

Tundra wildflowers hold a special fascination for both amateur and professional botanists and Mount Goliath is an exceptional place to observe them. Carpets of dainty wildflowers are complemented with grand mountain vistas and the sculptured, grizzled beauty of bristlecone pines.



Join two experienced field trip leaders and walk the M. Walter Pesman Trail, a winding 1½ mile path at 12,100 feet. Please bring your lunch and drinking water and dress appropriately.

Leaders: Panayoti Callas is curator of the Rock Alpine Garden at DBG and is an enthusiastic and capable field botanist. Bob Heapes, an experienced hiker and nature photographer, is also an amateur naturalist at Roxborough State Park.

Meet: at 8 a.m. in the DBG parking lot. Bus transportation will be provided. Please be prompt.

Fee: \$12 members/\$13 non-members (includes Janet L. Wingate's brochure, *Alpine Wildflowers of Mount Goliath* as well as bus transportation).

Limit: 45.

Bird Walk at the Walter S. Reed Botanical Garden

Wednesday, July 11
9 a.m. to noon

Located in the montane zone, the 20-acre Reed Property has an unusual abundance of micro-habitats, each with its own unique plant communities and avian

residents. On this walk you will learn how to find nesting sites.

Along the road participants will look for the nests of black-capped chickadees, pygmy nuthatches, house wrens, robins, and chipping sparrows. In the streamside habitat, both adults and young of Lincoln's sparrows, dippers, McGillivray's warblers, and song sparrows are expected. The "hope-to-sees" include black-headed grosbeaks, band-tailed pigeons, western tanager, and ruby-crowned kinglets.

Please bring binoculars and field guides, if you have them.

Leader: Diana Mullineaux is a member of Denver Field Ornithologists and the Denver Audubon Society and has lead other bird walks.

Meet: at the site at 9 a.m.

To reach the Reed Property: Take Route 74 from El Rancho to Evergreen. At Evergreen Lake, turn right on Upper Bear Creek Road and travel 6.2 miles to the Mt. Evans Wildlife Natural Area Road and turn right. Meet .3 mile down the road at the stone gates on the left.

Fee: \$2.50 members/\$3 non-members.

Limit: 15.

Participants may also register for the afternoon Wildflower Identification walk. Please bring a sack lunch and drinking water to enjoy between classes.

Ikebana: Sogetsu Style

Thursdays, June 28
July 5, 12, 19, 26
August 2

(six sessions)
Classroom B 10 a.m. to noon

The art of Japanese flower arranging has become synonymous with elegance and good taste in the Western world. The Sogetsu style of arranging symbolizes the relationship between heaven, earth, and man, and students will learn to work with the harmony of color and form inherent in nature. For the first class, students should bring a low dish or container and a pin holder, or *kenzan*. Flowers will be provided (class members will learn how to cut and provide their own branches from home) and students will take home their arrangements.

Instructor: Kyoko Kita has taught ikebana for ten years.

Fee: \$48 members/\$52 non-members.

Limit: 12.

Watercolor and Mixed Media Painting

Section I: Tuesdays, June 26,
July 3, 10, 17, 24, 31
August 7, 14

or

Section II: Saturdays, June 30
July 7, 14, 21, 28
August 4, 11, 18

(eight sessions)

Classroom B 9:30 to 11:30 a.m.

Translate your vision of nature into exciting color! Wet-in-wet technique as well as painting on dry paper will be demonstrated. From quick gesture to slow contemplative studies, students will explore the rich world of nature at Denver Botanic Gardens. Instruction and demonstrations in assorted media, including pastels, will be provided.

The work of master painters such as Monet, Nolde, and Sargent will be shown in a slide presentation and visits to art galleries will be offered. No experience is necessary, only your interest in painting.

Instructor: Oksana Ross, PhD., studied at New York University and Columbia University and has 32 years of teaching experience. She was formerly on the faculty of University of Colorado at Denver, Metropolitan State College, and Colorado Women's College. Dr. Ross is a life member of the Arts Studies League of New York where she studied under Hans Hofman, Will Barnett, Marion Cooper, and Edgar Whitney.

Fee: \$64 members/\$70 non-members.

Limit: 20.

Please indicate your section on the registration form.



An Ikebana arrangement by Karen Hayward.



M. Nerys Hammond, instructor of various flower arranging classes at DBG, at work.

Arranging Lessons with Fresh Flowers

**Mondays, July 16, 23, 30
August 6**
(four sessions)
Classroom B 9:30 a.m. to noon

Summer is the perfect time to learn how to make floral arrangements that will complement a favorite spot in your home. Students will learn how to select and cut fresh flowers for arrangements that will be prepared in class.

Please bring two containers (no glass or silver), two needle-point holders for flowers, clippers, scissors or knife, and one large bucket for gathering flowers. All other materials, including flowers, will be provided.

Instructor: Avalonne Kosanke is a master flower show judge for the National Council of State Garden Clubs with over 25 years of teaching experience.

Fee: \$44 members/\$48 non-members (includes a \$4 materials fee).

Limit: 15.

Papermaking Workshop: From Plants to Paper

Saturday, July 21
(one session)
Classroom B 10 a.m. to 3 p.m.

Experience the art of paper-making in this one-day class. Make flat sheets from cotton rag pulp and experiment with the additions of plant material such as flower petals. Demonstrations and discussion of other suitable plant fibers such as papyrus and cattails will also be provided and a slide presentation on papermaking techniques throughout the world will be given. Please bring a sack lunch.

Instructor: Ray Tomosso received a masters degree in fine arts from the University of Colorado and has extensive teaching experience. His work is exhibited widely and is included in the permanent collections of such places as the University of Arizona Museum of Art, Emory University in Atlanta, Georgia, and the Denver offices of Mountain Bell.

Fee: \$20 members/\$22 non-members (includes all materials).

Limit: 12.

Introduction to Natural Dyeing

Section I: Thursday, June 21
or
Section II: Saturday, June 23
(one session)
Classroom B 9 a.m. to 3 p.m.

Naturally dyed fibers have a richness and subtlety that cannot be achieved with synthetic dyes. This all-day, intensive workshop will enable participants to learn and enjoy the ancient art of dyeing wool with naturally found materials. The complete process, from choosing and gathering dyestuffs, through the mordanting process, to preparation of the dyebath, and fastness testing, will all be covered.

Safety precautions and conservation will be stressed as will the taking of thorough notes and good procedure. After working all day, students can expect to produce at least 50 colors! Please wear work clothes and bring a notebook, pencil, water-proof marker, masking tape, plastic bread or vegetable bag, rubber gloves, and scissors as well as a sack lunch. All other materials including wool will be provided.

Instructor: Anne Bliss has written and taught extensively about fiber crafts, and contributes a regular column on dyes to *Handwoven* magazine as well as serving as editor of *Spin Off*, a journal for handspinners. She has written several books on natural dyes: *North American Dye Plants*, *A Handbook of Dyes from Natural Materials*, and *Weeds: A Guide for Dyers and Herbalists*. Her handwoven and hand dyed textiles have been shown in numerous juried and invitational exhibits.

Fee: \$29 members/\$32 non-members (includes a \$7 materials fee).

Limit: 10.

Please indicate your section on the registration form.

Denver Botanic Gardens
909 York Street
Denver, Colorado 80206

Fees for courses should be paid in advance by check or money order made out to Denver Botanic Gardens. Since the space is limited in many courses, registration should be mailed in promptly. Your registration will NOT be acknowledged. Your name will be placed on the class list on the day your money is received. No enrollments for class by phone please. All courses are given subject to a minimum enrollment of ten students. For further information, please call 575-3751.

Registration Form for Classes and Field Trips

The enclosed check, in the amount of _____, is to cover the registration fees for the following classes:

Name and section of classes _____

Name _____
Address _____
City _____ State _____ Zip _____
Home Tel. No. _____ Business Tel. No. _____
Member of Denver Botanic Gardens? Yes No

Alpines Around the World: PROGRAM

(continued from page 1)

Friday, June 29, 1984

8:30—Registration

Exhibits open for viewing

9:00—Opening remarks

Merle M. Moore, Executive Director of Denver Botanic Gardens

9:15—"Asian Garden Design: Man in Harmony with Nature."

Koichi Kawana, the designer of DBG's Japanese Garden, *Shofu-en*, will show how rocks, plants, and other features such as water and pathways can be brought together in a harmonious and naturalistic design.

10:00—"Between Earth and Sky."

Travel to the alpine heights in the Himalayas of Kashmir with Boyd Kline, original owner of Siskiyou Rare Plant Nursery in Medford, Oregon. Boyd photographed and brought back many choice alpines from these mystical mountains.

10:45—Coffee break

11:00—"Asian Plants for your Garden." J. Cobb Colley, one of the two current proprietors of Siskiyou Rare Plant Nursery, will show some of the many choice Asian plants you can grow in your garden, and will show you how to grow them successfully.

Noon—Lunch break: Lunch will be provided in John C. Mitchell II Hall

1:00 p.m.—Demonstrations and Workshops: Session I. Choose from one of the following: (1) Planting A Trough (2) Nurseryman's Choice of Wildflowers (3) Shade Gardening and Woodland Plants (4) Mountain Glory (slides) (5) Ferns for Your Garden (6) Tours of Japanese Garden with Koichi Kawana.

2:00—Break

2:20—Demonstrations and Workshops: Session II. Choose another of the subjects from Session I

3:20—Adjournment

Saturday, June 30, 1984

9:00 a.m.—Second day registration
Exhibits open for viewing

9:30—Demonstrations and Workshops: Session III. Choose from one of the following: (1) Planting a Trough (2) Nurseryman's Choice of Alpines (3) Shade Gardening and Woodland Plants (4) Mountain Glory (slides) (5) Ferns for your Garden (6) Tours of Rock Alpine Garden with Panayoti Callas

10:30—Coffee Break

10:50—Demonstrations and Workshops: Session IV. Choose another of the subjects from Session III.

Noon—Lunch break: Lunch provided in John C. Mitchell II Hall

1:00 p.m.—"Plant Hunting Adventures in Land of the Rising Sun." Ray Radebaugh, President of the Rocky Mountain Chapter of the American Rock Garden Society, will describe the delightful surprises that await a plant hunter in contemporary Japan. Few Westerners have travelled as widely as Ray has through Japan on his five trips there.

1:45—"Alpines at Alpineflora." Lee Raden's garden, on the outskirts of Philadelphia, is called Alpineflora, situated at 1 Alpine Way. It houses one of the richest collections of alpines in America. In this presentation, Lee will share with us his expertise garnered from decades of experience growing alpines in a lowland garden. He will highlight how he grows his many blue ribbon alpines in pots.

2:30—Break

2:45—"Timberline Outside Your Door." Panayoti Callas and Sandra Snyder are responsible for the Rock Alpine Garden at DBG. They will present a program on how to utilize dwarf shrubs and conifers in your garden to create the illusion of high mountains.

3:45—Adjournment

We invite you to attend this symposium where you can hear leading experts on east Asian plants and garden designs, and learn how to successfully adapt these new plant materials to Western rock gardens. A plant show, exhibits, and plant sale are open to the public at no additional charge other than the non-member gate admission fee. Lecture and demonstrations require registration, which includes the entry fee, coffee, and a choice of box lunches for each day. Please return completed pre-registration form by June 15, 1984 to:

Alpines Around the World
Denver Botanic Gardens
909 York Street
Denver, Colorado 80206

(continued on page 10)



Guest Benefits Now Included As Membership Benefit

Members are reminded that guest privileges (free admission) as specified below were approved by the Trustees:

- **Contributing Membership (\$50)**—Up to *two* guests with each visit to the Gardens.
- **Supporting Membership (\$100)**—Up to *four* guests with each visit to the Gardens.
- **Patron Membership (\$500)**—Up

to *six* guests with each visit to the Gardens.

- **Benefactor Membership (\$1000)**—Unlimited guest privileges when visiting the Gardens.

The same guest privilege allowances apply for these members when attending special events. When a separate fee is charged for the event it must be paid for both the member(s) and guest(s).

10 Request to Rose Growers

Would you be willing to have others enjoy your rose petals? The potpourri workers of Denver Botanic Gardens need them to make sachets, tranquilizer pillows, and to fill small glass vases, all of which are for sale in the DBG Gift Shop. In addition, the potpourri items are popular at the Annual Holiday Gift Sale in November.

Just pull the petals off the stems and dry them anywhere on newspaper. This can be done throughout the summer. If you have no place to dry them, or need additional information, please call Peg Altvater at 377-2818.

Proceeds from the sale of these projects help to keep your Denver Botanic Gardens beautiful.

Rose petals collected in the summer are ingredients in our potpourri mixtures.



Dryland Perennials and the Perennial Border Symposium

Denver Botanic Gardens, the Department of Horticulture at Colorado State University, and Colorado Native Plant Society are sponsoring, "Dryland Perennials and the Perennial Border." This symposium will be held on Saturday, August 18 at the Lory Student Center on the CSU campus in Ft. Collins. This indepth look at dryland perennial gardening will explore the use of native plants in perennial borders. The program includes talks and demonstrations by well-known horticulturists from the front range region. A tour of the perennial research trial gardens at the W. D. Holley Plant Environmental Research Center (PERC) at CSU is planned for the afternoon session.

Registration information, as well as program details for this all-day symposium, will be provided in the July *Green Thumb News*.



Alpines Around the World (cont.)

Friday, June 29 Workshop and Demonstrations (Please check two choices [X] and an alternate [A])

- Planting a Trough—Stan Metsker
- Nurseryman's Choice of Wildflowers—Larry Schlichenmayer
- Mountain Glory (Slides by Loraine Yeatts)
- Shade Gathering and Woodland Plants—Andrew Pierce
- Ferns for your Garden—Ray Radebaugh, Mary Ellen Tonsing
- Tour Japanese Garden with Koichi Kawana

Saturday, June 30 Workshops and Demonstrations (Please make two choices [X] and mark an alternate [A])

- Planting a Trough—Stan Metsker
- Nurseryman's Choice of Alpines—J. Cobb Colley
- Shade Gathering and Woodland Plants—Andrew Pierce
- Mountain Glory (Slides by Loraine Yeatts)
- Ferns for your Garden—Ray Radebaugh, Mary Ellen Tonsing
- Tour Rock Alpine Garden with Panayoti Callas

Make checks payable to Denver Botanic Gardens. Registrations will not be acknowledged; your cancelled check serves as your receipt. Pre-registration is advised, however, and if space is available, participants are

welcome to register at the door. Please note that space in the workshops and demonstrations is limited and late registrants may not be accommodated in their first choices.

Registration Form for Alpines Around the World Only

Please send registration form to Denver Botanic Gardens.

Name _____ Print name as you want it to appear on badge

Address _____

City _____ State _____ Zip _____

Phone _____ DBG Member: Yes No

Additional registrants:

I have enclosed \$ _____ for _____ people on the following days:

Both Days	\$32.00 per person _____
Friday, June 29	18.00 per person _____
Saturday, June 30	18.00 per person _____

Send to: The Asian Influence; Denver Botanic Gardens; 909 York Street; Denver, Colorado 80206.

This has been an interesting spring with cool temperatures and adequate moisture when needed, even though it often came on week-ends. The heavy wet storm in April brought 12-20 inches of snow with actual moisture of at least 1.35 inches. Although many evergreens were damaged, especially large spruce trees, the roots of all the established plants benefited. In fact, every spring during the initial stages of growth, this deep, slow penetration of moisture benefits these plants as well as provides a reservoir in the deeper parts of the soil.

However, in June, natural precipitation is less than reliable. It comes either as light showers with most of it lost through evaporation or as heavy cloudbursts whereby most of it runs off rather than being absorbed into the soil. The temperatures have also increased placing the realization of summer upon us.

Over the years, certain irrigation practices have evolved and for the inexperienced gardener water has become the means to a green landscape. Unfortunately, problems will result. For example, all too often, a variety of plants with diverse cultural requirements are grouped together and receive identical watering, fertilizing, and general care. Instead of irrigation supplementing natural precipitation and being tailored to the specific requirements of the plants, irrigation has been misused, wasted, and ill-understood,

not moisten dry soil to the appropriate depth for the plants growing in it encourages shallow rooting.

Different types of plants have varying depths to their root zones. Annuals and turfgrasses are more shallow rooted than trees and shrubs. When plants begin to grow, enough water should be applied to moisten the entire root zone. Additional irrigation throughout the growing season should be provided to replenish moisture that has been extracted by the plant or by evaporation. Excessive watering is a misuse of water that either encourages run off or unnecessarily deep percolation that is not beneficial except when leaching the soil of undesirable salts that may accumulate. To water conservatively and wisely and at the same time have healthy plants, it is necessary to know the plant and soil characteristics, to understand the depth of the root's penetration, and to determine how long it takes a certain amount of water to infiltrate the soil to the appropriate depth.

The soil should be probed in several spots for different plants. The probe can be a long metal device, one to four feet long, and approximately ¼ inch wide. If the probe easily penetrates eight inches of the soil, then it is considered moist. If it is difficult to push through the first two to three

inches, the soil is dry. Certain soil areas that stay moist longer than similar locations surrounding the plant may not have roots in those areas. The primary advantage to probing is that it allows you to feel moisture level differences.

Once it has been decided that watering is necessary, the color, texture, and turgidity of the plants should be observed. After water has been applied and 24 hours has passed, the same characteristics should be observed. These observations, along with probing, can allow you to develop guidelines for appropriate timing of irrigation and general growing conditions in your landscape.

Watering should be monitored. Rain gauges or some other means of measurement should be placed in various locations around your landscape. Notes should be taken as to the volume and duration of rainfall and the specific depth of soil the rainfall has infiltrated in a given area. Although this may sound tedious, it only takes doing it a few times to make these observations and compare them to the appearance of the plants.

Among other things, June is the time to enjoy much of the efforts you have put into gardening. This is the month of roses, peonies, pinks, and delphiniums. As you enjoy the efforts of your labor, please come and enjoy ours.

Gayle Weinstein
Botanist Horticulturist
at Denver Botanic Gardens



The more porous the soil, the faster water moves through it. Finer soils such as clay, translocate water more slowly than coarser ones such as sand. Therefore, it takes a longer period of time to wet clay soils. They also retain moisture longer than sandy soils. When a limited amount of water is applied to dry soils, the water is distributed unevenly. The surface becomes moist and the subsurface remains dry and in our arid climate, much of the surface moisture evaporates into the atmosphere. Irrigation that does

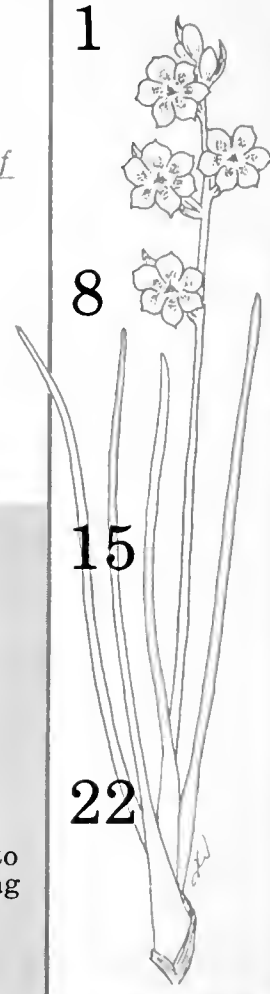
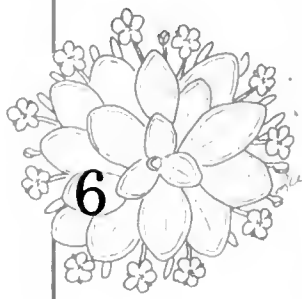
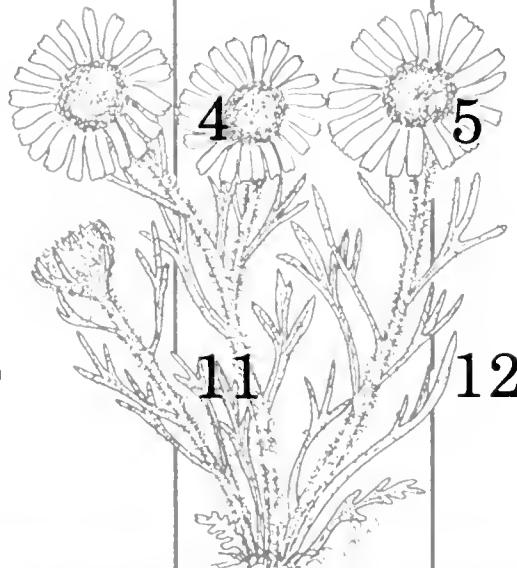
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Regular Meetings of Plant Societies

A number of plant and horticultural groups meet fairly regularly at the Denver Botanic Gardens. Here is a listing of those groups and a general indication of when they usually meet. For more specific meeting times and locations as well as for information on how to contact a representative of the group, please call the Botanic Gardens switchboard during business hours at 575-3751.

African Violet Society, 4th Thurs. of 7 months; *Bonsai Society*, 1st & 3rd Tues.; *Botany Club*, 3rd Fri.; *Cactus & Succulent Society*, 2nd Tues.; *Civic Garden Club*, 1st Fri.; *Dahlia Society*, 2nd Fri.; *Gladiolus Society*, call for info.; *Gloxinia Gesneriad Growers*, 1st Sat.; *Hemerocallis Society*, 3rd Sun. of 4 months; *Ikebana International*, 4th Fri.; *Indoor Light Gardening Society*, 3rd Thurs.; *Iris Society*, spring & fall dates; *Men's Garden Club*, 4th Thurs.; *Mycological Society*, 2nd Mon.; *Native Plant Society*, call for info.; *Orchid Society*, 1st Tues.; *Rock Garden Society*, 3rd Wed.; *Rose Society*, 2nd Thurs.; *Ultra Violet Club*, 4th Mon.

A	L	E	N	D	A	R
S	M	T	W	T	F	S
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
Coming Next Month						
July 7 Columbine Field Trip	July 11 Bird and Wildflower Walks at the Walter S. Reed Botanical Garden	July 12 The Meliora Quartet	July 14 Field Trip to Mount Goliath	July 14-15 Denver Orchid Society Show	July 16 Growing and Using the Culinary Herbs, Arranging Lessons with Fresh Flowers	July 17 Roxborough Field Trip
July 7-8 Mushroom Identification Workshop					July 17 Free Day for Denver City/County Residents	July 17 Roxborough Field Trip
						July 22 American Hemerocallis Society "Daylily Show"
						July 21 Wild Foods Walk and Picnic



Calendar illustrations from Janet L. Wingate's, *Alpine Wildflowers of Mt. Goliath.*

Denver Botanic Gardens, Inc.
909 York Street
Denver, Colorado 80206
303-575-3751

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June 1984

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N E W S

25th Annual Terrace and Garden Tour

The Denver Botanic Gardens' Guild is proud to present its 25th Annual Terrace and Garden Tour on Saturday, July 21 from 9 am. to 5 p.m. This year's tour will provide a special opportunity to view some lovely and thoughtfully planned gardens in the central metropolitan Denver area.

The seven gardens on display were designed to incorporate each owner's specific needs and interests and as a result, they show much individuality. Of special note will be redesigned gardens that were once too shady, overgrown, or time-consuming to maintain well.

You will see a variety of specimen trees, an outstanding collection of dwarf evergreens, espaliered fruit trees, and rose and vegetable gardens. Some specialties to look for include a Japanese pagoda tree, golden-rain tree, tulip tree, paper-bark maple, "the oldest *Acer ginnala* tree in Denver," and even a pink wisteria.

Gardens on this tour are primarily owner-maintained and reflect the ambitions and interests of each family. One particular house has an area designed for entertaining large groups while leaving room for children to kick a ball around. Another is a small city garden composed of organized spaces, providing shade and privacy.

(continued on page 2)



Inside:

Classes
page 4

*A view from
the garden of
Mr. and Mrs.
David Touff.*

2 Daylily Show and Sale July 22

Plan to spend the Sunday afternoon of July 22 enjoying the daylilies of the American Hemerocallis Society. Their Show and Sale will be held in John C. Mitchell II Hall from noon until 4:45 p.m.

These easily grown, dependable, insect-free perennials are rapidly becoming favorites of Denver gardeners. The show will consist of more than 250 judged entries. In conjunction to the show, there will be a sale of daylilies.

For additional details concerning the show, call either the Show Chairman, Charles Baker at 757-8703, or Co-chairman, Harry Kuesel at 795-9718.

Other than the regular gate admission fee for non-members, there will be no charge for this summer show. Plan to attend this event and learn more about the delightful easy-to-grow daylilies.



The Meliora Quartet will perform in the amphitheater on July 12.

1984 Garden Concert Series Ticket Information

Tickets for the summer Garden Concert Series will not be available at the United Bank of Monoco or the United Bank of Lakewood. They will, however, be available at the United Bank of Cherry Creek and the United Bank of Denver, KCFR Radio Station, and of course, Denver Botanic Gardens. Refer to your June *Green Thumb News* for concert information and dates to purchase your tickets.

A Special Members Only Concert: The Otsu Children's Choir of Japan

A very special concert is planned for members of Denver Botanic Gardens and KCFR-FM Radio. On Tuesday, August 14, at 6:30 p.m., the Otsu Children's Choir of Otsu, Japan, will perform in our amphitheater. Considered one of Japan's ten best, the choir consists of 41 singers of ages 12 through 14.

Their 1984 U.S. tour is sponsored by the Blue Lake Fine Arts Camp in Twin Lake, Michigan, and local arrangements are being handled by Mr. and Mrs. Dale Nesbary.

Enjoy one of Japan's finest choirs in the incomparable setting of the DBG amphitheater. Bring your picnic dinner, yourself, your family, and, for those members whose level of membership includes guest privileges, your friends. Join us and the members of KCFR for a delightful evening.

Seating for the concert is limited and tickets will be available to DBG members beginning Tuesday, July 31, from 8:00 to 5:00 at KCFR as well as at DBG. Tickets are \$2 per person and must be picked up at the Botanic Gardens' House at 909 York Street or KCFR Radio at 2056 South York Street, prior to August 14. Both children and adults must have a ticket, with the only exception being, "babes in arms."

If you are unable to join us in the amphitheater on August 14, you will still be able to enjoy the concert by listening to KCFR on your radio at 90.1 FM—the concert will be broadcast live from the Gardens. In the event of inclement weather the program will be moved indoors to John C. Mitchell II Hall where seating is limited to 400.

25th Annual Terrace and Garden Tour (cont.)

Gardens chosen to delight you on the 1984 Tour are:

Mr. and Mrs. David Touff
49 South Ash Street

Cathy and Jim O'Connor
655 Forrest Street

Clari and Bob Davis
778 Hudson Street

Dr. and Mrs. Miles Markley
1120 Hudson Street

The Barry Silverstein Compound
1027 and 1041 Pontiac Street

Mr. and Mrs. Eugene Tepper
4255 Montview Boulevard

Purchase your \$6 tax-deductible ticket complete with a map of the route from any DBG Guild member, through our Gift Shop, or at the homes on the day of the tour. The DBG Guild sponsors the tour as a benefit for Denver Botanic Gardens. For any further information call Betty Shaw at 758-2838.

Tributes

In memory of Gladys N. Kirk

Mr. and Mrs. Keith L. Brown
Mr. and Mrs. Donald C. Campbell
Denver Botanic Gardens Maintenance Department

Mr. and Mrs. Harley G. Higbie
Katharine C. Kurtz

Mr. and Mrs. Thomas P. Owen

In memory of Dr. T. Paul Maslin

Harold Koerner
Mr. and Mrs. Merle Moore
Dorothy Stauber
Patricia Thorn

Mr. and Mrs. John Worman

In memory of Catherine McWilliams

Mr. and Mrs. John A. Love.

In memory of Hudson Moore, Jr.

The Board of Trustees of Denver Botanic Gardens

In memory of Helene Mueller

Lucille Downer

In memory of Terujiro (Ted) Okazaki

Dr. and Mrs. Warren Mulford

In memory of Margaret Watson

The Bridge Club
Mrs. F. W. Ethell
Mary Dille
Allyne Lawless
Margaret Snyder

Green Thumb News Number 84—7 July 1984

Published monthly by the Denver Botanic Gardens Education Department, 909 York Street, Denver, Colorado 80206, and edited by Patricia A. Pachuta and Carolyn Knepp. Subscriptions to this newsletter are a benefit of membership in the Botanic Gardens. For membership information, please write the Membership Department at the above address or call 575-3751.

Deadlines for this newsletter are: Major news stories and feature material (including photographs or artwork) for the August issue—June 20, for September—July 20, for October—August 20. Short news notes are due not later than July 1 for August, August 1 for September, and August 31 for October.

Please plan in advance and meet deadlines. Late material cannot be used. Stories must be typed, double-spaced, preferably on copy paper provided by the editor. Please call the Education Department at 575-3751 for details.

Dryland Perennials and the Perennial Border Symposium August 18

Denver Botanic Gardens, the Department of Horticulture at Colorado State University, and Colorado Native Plant Society are sponsoring "Dryland Perennials and the Perennial Border" on Saturday, August 18. This final program of a three-part series on gardening with native plants meets at CSU's Lory Student Center from 9:00 a.m. to 3:30 p.m.

This day-long seminar is divided into two sessions: dryland perennials in the landscape and techniques for growing dryland perennials. The morning session provides information on combining dryland perennials with wildflower mixes in order to create natural landscapes followed by a discussion on their usage in formal perennial borders. Speakers for the morning session are from Denver Botanic Gardens, Colorado Springs' Country Club of Colorado, and Colorado State University's School of Landscape Horticulture.

Following lunch in the Rambouillet Room, the afternoon session on techniques will commence. Speakers will focus on culture and propagation of dryland perennials (one program for commercial gardeners and another for residential gardeners) and water requirements and landscape evaluation of native herbaceous plants. During two concurrent sessions on culture and propagation, Ron Arpin, propagator at Little Valley Wholesale Nursery, will address the commercial growers while Jim Borland, propagator at DBG speaks to residential gardeners. Following the afternoon lectures a tour of the perennial research trial gardens at the W.D.

Holley Plant Environmental Research Center (PERC) at CSU is offered.

Pre-registration for "Dryland Perennials and the Perennial Border" is advised and must be received by August 8. Cancellations must be requested before August 12 and a \$2 service fee will be deducted from each refund. Registration will be accepted at the door if space is available. Pre-registration forms must be mailed to:

CONPS- Dryland Perennial Workshop
P.O. Box 200
Ft. Collins, CO 80522

Please make checks payable to CONPS. Registrations will not be acknowledged; your cancelled check serves as your receipt.



DBG trustee, Mrs. B.K. (Anne) Sweeny, Jr. and Manager of Parks and Recreation, Martha Guevara, assist in planting one of two Yoshino cherry trees, *Prunus yedoensis* 'Akebono', in our Japanese Garden. The trees were donated by Benihana of Tokyo to commemorate its 20th Anniversary in the United States.

Registration Form for Dryland Perennials Workshop Only

Please do *not* send registration form to Denver Botanic Gardens.

Name _____

Address _____

City _____

Phone _____

(daytime between 8 a.m. - 4 p.m.)

CONPS member _____	\$18	Send To: CONPS—Dryland Workshop P.O. Box 200 Ft. Collins, CO 80522
DBG member _____	\$18	
Non-member _____	\$20	
Student _____	\$15	
Total _____		

Orchid Society Show July 14 and 15

Celebrate summer with the Denver Orchid Society Show on July 14 and 15. The society will present a spectacular variety of orchids in John C. Mitchell II Hall from 9:00 a.m. to 4:30 p.m. on Saturday and 9:00 a.m. to 4:00 p.m. on Sunday.

Cultural techniques will be demonstrated at one end of the hall, a variety of orchids will be offered for sale, and a 30-minute film, "The Wonderful World of Orchids," will be shown in Classroom B throughout both days.

Although there will be no charge for the show, the regular gate admission fee will be in effect for non-members. For additional information call Sue Eloe at 798-0735.



Visitors enjoy a summer afternoon at Denver Botanic Gardens.



Field Trip to Moraine Park, Rocky Mountain National Park

Saturday, July 21
1 to 4 p.m.

Rocky Mountain National Park never fails to be an abundant source of wildflowers and this is an opportunity to explore a new locale as we walk toward the Fern Lake Trailhead. Consider bringing a picnic lunch to enjoy beforehand.

Leader: Richard Schwendinger has been leading field trips throughout North America and Alaska for 25 years.

Meet: at 1 p.m. at the Moraine Park Visitor Center in Rocky Mountain National Park. A daily park user pass must be purchased in addition to the field trip fee.

Fee: \$2.50 members/\$3 non-members.

Limit: 15.

Grass Walk at Chatfield Arboretum

Wednesday, July 25
10 a.m. to noon

Grasses are often considered a difficult group, but once one understands their basic floral structure, this plant family becomes fascinating and comprehensible. The 350-acre tract of DBG's developing Chatfield Arboretum is a perfect place to learn to identify this major plant group, using a regular dichotomous key.

Leader: Janet L. Wingate, M.S. and PhD. in botany from the University of Oklahoma, is currently on the DBG staff working in the Kathryn Kalmbach Herbarium.



*Black-eyed Susan,
Rudbeckia
hirta*

Meet: at 10 a.m. at Chatfield Arboretum which is located less than ½ mile to the left on Deer Creek Road just off Highway 75 (County Line Road).

Fee: \$2.50 members/\$3 non-members.

Limit: 15.

Participants may also register for the afternoon Composite Walk. Please bring a sack lunch to enjoy between classes.

The Composites of Chatfield Arboretum

Wednesday, July 25
1 to 3 p.m.

The Compositae, or aster family, is the largest family of flowering plants. Because it has small, specialized floral parts, its members are often identified only as "daisies." Chatfield Arboretum, with its 67 species of this family, is an ideal locale to undertake this study. Now is the time to conquer the composites!

Leader: Janet L. Wingate, M.S. and PhD. in botany from the University of Oklahoma, is currently on the DBG staff working in the Kathryn Kalmbach Herbarium.

Meet: at 1 p.m. at Chatfield Arboretum which is located less than ½ mile to the left on Deer Creek Road just off Highway 75 (County Line Road).

Fee: \$2.50 members/\$3 non-members.

Limit: 15.

Participants may also register for the morning Grass Walk. Please bring a sack lunch to enjoy between classes.



Field Trip to Boreas Pass Near Breckenridge

Sunday, July 29
1 to 4 p.m.

Boreas Pass was once a major stage route leading from Como in South Park to Breckenridge. Later, the narrow-gauge Denver, South Park, and Pacific Railway was extended over the pass and it is now a well-maintained gravel and dirt road on the Breckenridge side. An easy walk will enable you to see both montane and tundra wildflowers and the views are spectacular!

Leader: Richard Schwendinger.

Meet: at 1 p.m. in the parking lot of The Silverthorne Inn at Lake Dillon.

Fee: \$2.50 members/\$3 non-members.

Limit: 15.

Colorado Orchids: The San Juan Mountains

July 8-14

Offered through the White Mesa Institute for Southwestern Studies in Blanding, Utah, this seven-day course is an opportunity to learn to identify and photograph summer wildflowers, particularly orchids. Activities are planned for a leisurely pace and will involve six to eight miles of light hiking per day. Spotted and striped coralroots as well as bog orchids are expected; in addition, a wealth of other wildflowers will be found.

Participants in this camping program will be furnished with tents, transportation during the course, and food, and will meet their leaders in Durango, Colorado, on the evening of Sunday, July 8.

Instructor: A naturalist born and raised in the Four Corners region, Richard (Kip) Stransky is currently employed by the Colorado Division of Wildlife. His teaching and field experience is extensive.

Fee: \$300. For additional information please call Pat Pachuta, DBG Education Director, at 575-3751.

Limit: 15.

Colorado Mushroom Identification

August 21-25

This is an additional camping program offered through the White Mesa Institute for Southwestern Studies in Blanding, Utah. For additional information, please call Pat Pachuta, DBG Education Director, at 575-3751. Watch for a complete program description in the August *Green Thumb News*.



Summer Care of Perennials

Wednesday, July 25

(one session)

Classroom C 7 to 9 p.m.

Learn the art of maintaining an attractive perennial garden during the height of its season. How are delphiniums and asters staked? How can you encourage lupines and shasta daisies to bloom again in late summer? These, along with practical ideas on mulches, weed control, trimming, and irrigation, will all be covered in the classroom as well as outside in the Gardens' perennial borders.

Instructor: Andrew Pierce is assistant director of DBG and an experienced horticulturist who specializes in perennials for the border and rock garden.

Fee: \$8 members/\$9 non-members.

Perennials for Shady Gardens

Wednesday, August 1

Classroom C 7 to 9 p.m.

Most garden perennials require a sunny exposure but a good number need or will tolerate a shady site. Learn which plants are best for your shady conditions. Hostas, astilbes, columbines, and sweet woodruff are among the plants that will be covered in this one-session course.

Instructor: Andrew Pierce is assistant director of DBG and is an experienced horticulturist who specializes in perennials for borders and rock gardens.

Fee: \$8 members/\$9 non-members.

Dry It. You'll Like It.

Monday, August 13 and

Thursday, August 16

(two sessions)

Classroom B 9:30 to 11:30 a.m.

Dahlias, zinnias, roses, and black-eyed Susans are among the flowers whose beauty you will learn to preserve in silica gel in this class. Students will select and dry garden and roadside flowers for use in winter arrangements.

Please bring two plastic shoe boxes with lids, a small plastic bucket with a handle, scissors, clippers, wire cutters, and an empty three pound coffee can with lid. All other materials, including flowers, will be provided.

Instructor: Avalonne Kosanke is a master flower show judge for the National Council of State Garden Clubs with over 25 years of teaching experience.

Fee: \$26 members/\$28 non-members (includes a \$10 materials fee).

Fee: 20.

Register Now for These Classes!

As of this printing, spaces still remain in the following classes:

Growing and Using Culinary Herbs
Mondays, July 16, 23, 30 and
August 6 from 7:30 to
9 p.m.

Arranging Lessons with Fresh Flowers
Mondays, July 16, 23, 30 and
August 6 from 9:30 a.m.
to noon

Papermaking Workshop
Saturday, July 21 from 10 a.m. to
3 p.m.

Basketry Workshop

Saturday, August 11

(one session)

Classroom B 9 a.m. to 4 p.m.

Learn how to make a traditional Appalachian spoke and split basket in this one-day workshop. In it, a series of flat splits radiate outward from the center of the basket's bottom. As it is worked upward, it can take a variety of shapes, all of them round. No previous experience is necessary and students can expect to complete a basket 11 inches across and 12 inches tall (includes handle). Please bring a sack lunch.

Instructor: Robin Taylor Daugherty is a fiber artist with considerable teaching experience; she has taught weaving, spinning, felting, tapestry-

Gas Plants, Dictamnus albus, in the Perennial Border.



Appalachian spoke and split basket by Robin Taylor Daugherty.

making, and basketry throughout Colorado and her work is exhibited widely.

Fee: \$28 members/\$31 non-members (includes \$8 for materials).

Limit: 10.

In our children's program, for children of ages 4 to 5 and a parent, "Bean Sprouts," Section III from July 30 to August 2 is still open. Children of ages 5 to 7 may register for "Jack and the Beanstalk," "Seeds and Flowers," "Amazing Maize," and "Samurais and Plum Blossoms." At the present time, openings still exist in all of the children's classes for ages 8 to 11.

Specific information on any of these classes may be obtained by calling the DBG Education Office at 575-3751, extension 20.

Wild Foods Walk and Picnic

Saturday, July 21
10 a.m. to 12:30 p.m.

Learn to correctly identify, collect, and prepare tasty wild plants such as wild mustard, orache, dock, and cattail shoots. Sharpen these skills on a guided walk and afterward, enjoy such delicacies as weed purses, lamb's quarter quiche, muffin gems with assorted wild jellies, and elderberry and choke-cherry coolers under the shade of a cottonwood tree.

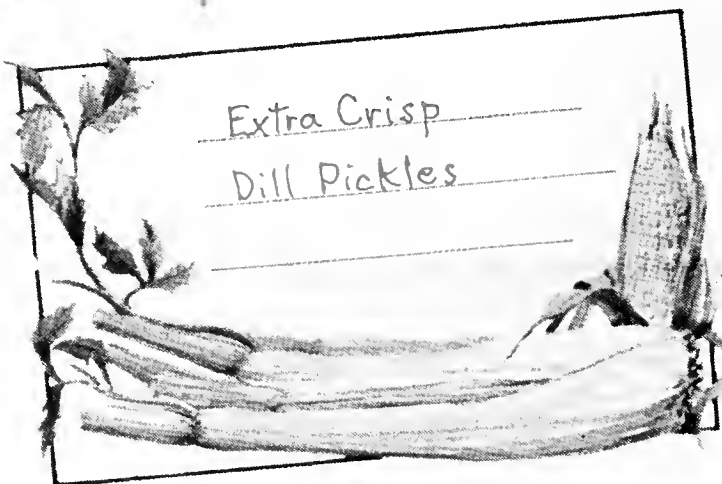
Leader: Sue McPherson has co-authored *Wild Food Plants of Indiana* and *Edible and Useful Wild Plants of the Urban West*, and has been teaching classes on edible wild plants for six years.

Meet: at 10 a.m. at the crossing of Highline Canal and Bellevue and Birch.

Fee: \$8 members/\$9 non-members (includes picnic).

Please bring plastic bags and a pocket knife.

Limit: 18.



Denver Botanic Gardens
909 York Street
Denver, Colorado 80206

Fees for courses should be paid in advance by check or money order made out to Denver Botanic Gardens. Since the space is limited in many courses, registration should be mailed in promptly. Your registration will NOT be acknowledged. Your name will be placed on the class list on the day your money is received. No enrollments for class by phone please. All courses are given subject to a minimum enrollment of ten students. For further information, please call 575-3751.

Extending the Harvest: Pickled Fruits and Vegetables

Saturday, August 25
(one session)

DBG's Morrison Horticultural Demonstration Center at 2320 11th Avenue; entrance is on E. 11th Avenue.

Don't let the wonderful flavors of summer's bounty go to waste. Learn how to "put by" fruits and vegetables for winter enjoyment. How to make pickled peaches or wild plums, spiced pears or crab-apples, and extra crisp dill pickles, green beans, and purslane will all be demonstrated in this morning session.

Instructor: Sue McPherson.

Fee: \$12 members/\$13 non-members.

Herbal Teas

Monday, August 20
(one session)
Classroom B 7 to 9 p.m.

Don't let the heat of summer wear you down. Discover how to prepare delicious herbal beverages such as mint frappes, camomile-ginger spritzers, and iced tea blends using rose, mint, or lemon scented geraniums. Use the wild fruits of the season to create such refreshers as elderberry and chokecherry coolers. Recipes included.

Instructor: Sue McPherson.

Fee: \$8 members/\$9 non-members.

Extending the Harvest: Jams and Preserves

Saturday, August 4
(one session)

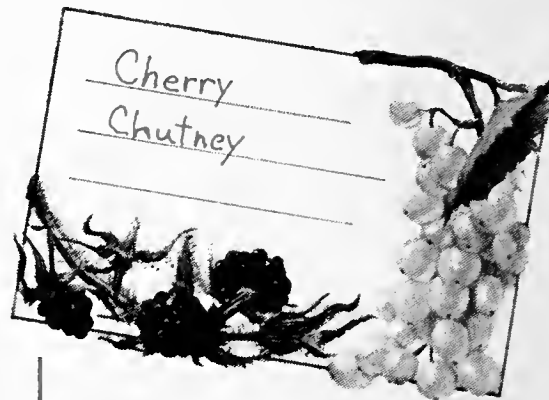
DBG's Morrison Horticultural Demonstration Center at 2320 11th Avenue; entrance is on E. 11th Avenue.

9 a.m. to noon

Savor the fruits of summer all year long by turning them into delicious jams and preserves. In a lecture and demonstration, you will learn how to use both wild and domesticated fruits to make such culinary delights as plum-rum jam, cherry chutney, and spiced peach butter.

Instructor: Sue McPherson.

Fee: \$12 members/\$13 non-members.



Registration Form for Classes and Field Trips

The enclosed check, in the amount of _____, is to cover the registration fees for the following classes:

Name and section of classes _____

Name _____

Address _____

City _____ State _____ Zip _____

Home Tel. No. _____ Business Tel. No. _____

Member of Denver Botanic Gardens? Yes No

Gardening Tips for July

Throughout the summer months, as we try to produce healthy plants, we are often confronted with organisms that compete for our crops.

In our attempt to suppress the competition, we have often relied on chemical controls. In the process, many natural enemies are also eliminated. To replace the loss of control, more chemicals are applied and in time there is further reduction of natural enemies as well as a build up of resistance on the part of the competing pest.

Also, many spray programs are the result of "eyeballing" the damage caused by the pest. Often, these observations are either too late or unreliable.

The goal of managing pests is to understand the populations in order to predict potential damage. Gradually, the significance of various levels of populations is understood in relation to the plants and treatment is applied accordingly. Two problem pests in our area are fireblight and two-spotted spider mite.

Fireblight

Fireblight is one of the most difficult problems to control. It is a disease caused by a bacterium that overwinters in such plants as crabapple, flowering quince, hawthorn, and pyracantha. They may become diseased in the spring and serve as a source for further infection.

All parts of the plant can be affected although the flowers are often the first point of entry. The bacterium spreads from the flowers into small and then large branches. Flowers and leaves wilt and twigs and branches discolor and shrink. During the heat of the summer, many crabapples show blighted, blackened growth.

The bacterium overwinters in the stems and depressed areas (cankers). In the spring, when trees begin to actively grow, the bacteria ooze out. Insects, mites, wind, and rain help to disseminate the inoculum into nearby flowers.

Exact conditions for infection are not known, however, high humidity and warm temperatures are conducive for disease development. Once the plant is less actively growing, the risk is diminished. Fireblight can deform, destroy, or severely damage a plant in one season.

If a plant is susceptible to this disease, control is very difficult. Whenever it is possible, resistant selections should be used. Crabapples at Denver Botanic Gardens are proving to be resistant. *Malus* 'Dorothea', *Malus* 'Liset', and *Malus* x 'Vanguard' are a few examples and June and July are prime times to observe them.

Good cultural practices along with proper sanitation are also important. Where there is visible injury, cuts should be made 8 to 12 inches below the infected area. After each cut, the tools should be wiped with a disinfectant. Cuts should be made when the plant is dry, discarding any plant debris.

There are chemical controls, but their success is based on daily monitoring of environmental conditions as well as precise timing.

Two-spotted Spider Mite

One of the most dominant pests of summer is the two-spotted spider mite. It feeds on the foliage of a

variety of plants, stippling or desiccating leaf tissue. It is characteristic of the mites to produce moderate webbing frequently on the underside of the foliage. If the mite population builds slowly and the foliage has had time to harden, the damage will be less severe, even though there will still be stippling.

Mites overwinter in an inactive state in protected areas of the ground or plant parts. As summer approaches and temperatures rise, populations increase. Characteristically, lower portions of the plants and tree centers are attacked first. As the population builds, they spread to the outside. Many generations are produced during the summer. As the season ends and temperatures drop, feeding decreases and the female seeks out protected sites.

Mites have several natural enemies, but too often pesticides eliminate them. Cultural methods of control include keeping weed populations down as they find residence there. Strong streams of water will wash mites off the plants and insecticidal soaps as well as miticides are also available.

Gayle Weinstein
Botanist Horticulturist at
Denver Botanic Gardens

Scarecrow at
DBG's
Community
Gardens.



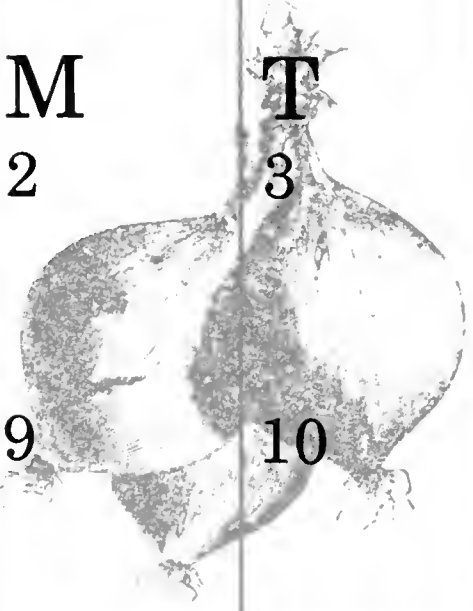
C A L E N D A R

Regular Meetings of Plant Societies

A number of plant and horticultural groups meet fairly regularly at the Denver Botanic Gardens. Here is a listing of those groups and a general indication of when they usually meet. For more specific meeting times and locations as well as for information on how to contact a representative of the group, please call the Botanic Gardens switchboard during business hours at 575-3751.

African Violet Society, 4th Thurs. of 7 months; Bonsai Society, 1st & 3rd Tues.; Botany Club, 3rd Fri.; Cactus & Succulent Society, 2nd Tues.; Civic Garden Club, 1st Fri.; Dahlia Society, 2nd Fri.; Gladiolus Society, call for info.; Gloxinia Gesneriad Growers, 1st Sat.; Hemerocallis Society, 3rd Sun. of 4 months; Ikebana International, 4th Fri.; Indoor Light Gardening Society, 3rd Thurs.; Iris Society, spring & fall dates; Men's Garden Club, 4th Thurs.; Mycological Society, 2nd Mon.; Native Plant Society, call for info.; Orchid Society, 1st Tues.; Rock Garden Society, 3rd Wed.; Rose Society, 2nd Thurs.; Ultra Violet Club, 4th Mon.

C	A	L	E	N	D	A	R
1	2	3	4	5	6	7	8
8	9	10	11	12	13	14	15
15	16	17	18	19	20	21	22
22	23	24	25	26	27	28	29
29	30	31					



Coming Next Month

August 1
Perennials for Shady Gardens

August 4
Jams and Preserves

August 9
The American Brass Quintet

August 11
Basketry Workshop

August 13
Dry It. You'll Like It.

August 14
Otsu Children's Choir

August 18
Dryland Perennials Workshop

August 19
Mushroom Fair

August 20
Herbal Teas
August 21-25
Mushroom Identification
August 23
Hot Rize

August 25
Pickled Fruits and Vegetables

August 26
Denver Rose Society Show

Denver Botanic Gardens, Inc.
909 York Street
Denver, Colorado 80206
303-575-3751

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1984 Summer College Interns

A crew of enthusiastic new faces has graced the grounds and greenhouses of Denver Botanic Gardens this summer. Our ten college interns began work on Monday, June 11, and will be with us until Friday, August 17.

These botany and horticulture students are participating in a ten-week work-learning program that enables them to work side-by-side with our professional staff and volunteers. Their activities include planting, pruning, weeding, and watering on the outside grounds; seeding, transplanting, and propagation in the greenhouses; and plant display maintenance in the Conservatory and Lobby Court. To fully introduce them to the operation of a non-commercial garden, each will

assist in the Library, Herbarium, and Education Department. A variety of classes and field trips is also included in the program.

Participants this summer are: Catherine Abelson (University of Wyoming), Joyce Brandon (Fresno State University), Karin Dafoe (Colorado State University), Heidi Hoeger (University of Colorado), Ann Low (Colorado State University), Deb Reich (Olds College, Alberta, Canada), Lynn Riedel (University of Colorado), Neil Snow (Colorado State University), Steven Swenson (Oregon State University), and Karla Wiesner (Montana State University).

Our intern program encourages a valuable exchange of horticultural and botanical information between students and staff so please join us in our warm welcome.

2nd Annual Designer's House Tour

"See How They Live," the second annual Designer's Tour, sponsored by Denver Botanic Gardens and the American Society of Interior Designers (ASID), takes place Saturday and Sunday, September 8 and 9, from 11 a.m. to 5 p.m.

This fundraiser for Denver Botanic Gardens and the ASID's educational programs includes visits to the homes of five recognized designers:

Don Harris
810 S. Josephine Street

Claus Heppner
455 Westwood Drive

Dennis Leczinski
1050 S. Monaco #56

(continued on page 2)

Inside:

Classes
page 6



Back row, left to right:
D. Reich,
L. Riedel,
K. Dafoe,
H. Hoeger,
N. Snow,
J. Brandon;
front row:
S. Swenson,
K. Wiesner,
A. Low,
C. Abelson.

37th Annual Rose Show

A display of exhibition roses in John C. Mitchell II Hall will greet Denver Botanic Gardens' visitors Sunday, August 26. The 37th Annual Rose Society Show (ARS) features award-winning specimen roses and arrangements.

Climbing hybrid teas, hybrid perpetual teas, grandifloras, and miniature roses will be among the many varieties included in this show. All entries exhibited must be listed in either the current *Modern Roses* or registered with A.R.S., and must be received at the Hall between 7:00 and 9:30 a.m. Judging begins at 10:00 and the show is open to the public from 1:00 to 4:30 p.m. For additional information, please call Joan Franson at 424-3942.

In addition to the horticultural competition, a design competition provides visitors with an opportunity to observe roses as designs. This show is free and open



to the public upon admission to the Gardens. Visit the show and be sure to stroll through DBG's rose gardens before leaving.

House Tour (cont.)

Irene Lougheed
7250 Eastmoor Drive

Jim Lougheed
3244 S. Columbine

Tickets are available at Denver Botanic Garden's Gift Shop and at the designers' homes the day of the tour for only \$7. For ticket information call the ASID office at 830-0095.

A special feature of the tour will be live flowering plant displays provided by Denver Botanic Gardens.

Fete des Fleurs

The trustees, staff, and volunteers of Denver Botanic Gardens extend a special welcome to its members and guests to attend *Fete des Fleurs*, a celebration of 25 years at 1005 York Street. This ten-day festival will be held from Thursday, September 6 through Sunday, September 16. Highlights of the program include a Tiffany & Co. of New York City exhibit of crystal, silver, and floral china from September 8 through September 16. Admission to this exhibit in John C. Mitchell II Hall is \$2 in addition to the regular gate fee for non-members.

John Loring, senior vice-president and design director for Tiffany & Co., will deliver an illustrated presentation on the various stages of creating a china masterpiece. Entitled, "Porcelain in Flower," the lectures will be held on Thursday, September 6 at 2 p.m. and again on September 7 at 7:30 p.m. Tickets are \$10 each.

A *Fete des Fleurs* dinner dance, a benefit for Denver Botanic Gardens, will be held on Saturday, September 8 at 7 p.m. at the United Bank of Denver, One United Bank Center. Tickets are available by advance reservation.

All members are encouraged to attend a tea in honor of DBG's founding trustees on Wednesday, September 12 from 4 to 6 p.m.

Festival displays include 20 rare Aubrey botanical photos from the Tiffany archives as well as a historical exhibit depicting the growth and development of Denver Botanic Gardens during its first 25 years.

A special invitation with details of all *Fete des Fleurs* events has been sent to each member—please mark your calendar and respond accordingly.

Last Call for the Canadian Rockies

There are still a few places left on our tour to see fall in the Rockies. On Friday, September 21 we will depart from Denver to visit Portland, Seattle, Vancouver, and up the majestic Rockies to beautiful Banff and Lake Louise.

Call the Gardens or Travel Associates (759-8666) for information on this inspiring tour, lead by Panayoti Callas, curator of Denver Botanic Gardens' Rock Alpine Garden.

Tributes

In memory of Mrs. Corbin W. (Marjorie) Douglas II

Mr. and Mrs. William J. Burkhardt

In memory of William Gentry Elizabeth Heacock

In memory of Gladys N. Kirk Joanne Sinclair

In memory of T. Paul Maslin Mr. and Mrs. John Hough Anonymous

In memory of Fran Shriver

Mr. and Mrs. Rick Clem

Mr. and Mrs. Bruce Moore

Mr. and Mrs. Duane Moore

Mr. and Mrs. Merle M. Moore

Mr. and Mrs. Irving Noyce

Mr. and Mrs. Richard Oberson

In memory of Helen Siegel Elizabeth Heacock

In memory of Margaret Watson Dr. and Mrs. Horace Brayshaw

Members' Annual Plant Giveaway

Denver Botanic Gardens' members receive a plant annually as a benefit of their membership. This year's giveaway occurs Friday, September 14 from 9 a.m. to 6 p.m. and September 15 from 9 a.m. to noon. Watch your September newsletter for additional details.

Green Thumb News Number 84—8 August 1984

Published monthly by the Denver Botanic Gardens Education Department, 909 York Street, Denver, Colorado 80206, and edited by Patricia A. Pachuta and Carolyn Knepp. Subscription to this newsletter is a benefit of membership in the Botanic Gardens. For membership information, please write the Membership Department at the above address or call 575-3751.

Deadlines for this newsletter are: Major news stories and feature material (including photographs or artwork) for the September issue—July 20, for October—August 20, for November—September 20. Short news notes are due not later than August 1 for September, August 31 for October, and October 1 for November.

Please plan in advance and meet deadlines. Late material cannot be used. Stories must be typed, double-spaced, preferably on copy paper provided by the editor. Please call the Education Department at 575-3751 for details.

An unforgettable evening for members is scheduled Tuesday, August 14, at 6:30 p.m. The Otsu Children's Choir of Otsu, Japan, will perform in our amphitheater.

We have the privilege of being included in their 1984 U.S. tour, sponsored by Blue Lake Fine Arts Camp in Twin Lake, Michigan. Members can purchase their \$2 tickets at the Botanic Gardens' House or KCFR Radio at 2056 South York Street before the August 14 show.

If you are unable to join us in the amphitheater on August 14, you will still be able to enjoy the concert by listening to KCFR on your radio at 90.1 FM—the concert will be broadcast live from the Gardens. In the event of inclement weather the program will be moved indoors to John C. Mitchell II Hall where seating is limited to 400.

Testing Roses at Denver Botanic Gardens

When purchasing roses for your landscaping needs, have you noticed the green and white name tags labeled A.A.R.S.? Have you ever wondered who selected these "All-American Rose Selection" bushes or what the criteria were? Denver Botanic Gardens is one of the 25 sites across the United States which carries the distinction of testing A.A.R.S. roses. The location of our test garden is along the north fence between the Japanese Garden and the greenhouses.

All types of roses are eligible for entry in the competition—hybrid teas, grandifloras, floribundas, climbers, pillars, shrubs, and miniatures. Amateur or commercial breeders can submit their hybridized roses.

The rose varieties grow in the test garden for a two-year trial period. After the first year, the top ten scoring varieties in each class are continued for a second year's testing. A.A.R.S. winners were announced in June, but starting next year, all winners will be announced in September.

During this two-year test period, each variety is evaluated by official test judges on 15 characteristics. These include novelty, bud and flower form and color, aging quality, flowering effect, fragrance, plant habit, vigor, and disease resistance. These roses are tested for the values that you look for when you obtain a new rose for your garden.



From the summer that the hybridizer first puts one rose's pollen on the stigma of another rose, to the year that an A.A.R.S. winning rose is introduced on the market, 10 to 14 years may pass.

While future winners can be observed in the test gardens, previous winners can be enjoyed elsewhere. You might enjoy these proven winners: the butter-yellow hybrid tea, Lowell Thomas (1944); the scarlet-orange floribunda, Sarabande (1960); or the copper-blend grandiflora, Arizona (1975). Denver Botanic Gardens offers more than 35 previous winners in the rose display gardens and summer is the perfect time to view them.

Annual Mushroom Fair

The Annual Mushroom Fair, sponsored by the Colorado Mycological Society, will be held Sunday, August 19 from 11 a.m. to 5 p.m. in John C. Mitchell II Hall at Denver Botanic Gardens. Dr. Harry Thiers, professor of biology at San Francisco State University, will be the chief identifier of the wild mushrooms. On display will be examples of approximately 100 species of wild mushrooms from Colorado, identified and grouped by family. Other exhibits include local and commercial mushrooms, craft items featuring mushroom motifs, and information on mushroom toxins. On sale will be a variety of mushroom guide books and Colorado Mycological Society T-shirts. The fair is free and open to the public upon entry to the Gardens.

Second Festival of Asian Arts and Culture

The Second Festival of Asian Arts and Culture will be held at Denver Botanic Gardens from July 28 through August 5. Sponsored by the Asian Pacific Development Center, DBG, and various Asian organizations in Colorado, the festival offers a unique opportunity to experience the dance, traditions, customs, and foods from over ten different Asian cultures.



Beginning on Friday, August 3 and continuing August 4 and 5, there will be three evenings of performing arts presented by different Asian groups. Performances begin at 6 p.m. Food from four different countries will be sold at that time for picnicking. Tickets for each evening performance are \$3 for adults and \$2 for children and senior citizens. For more information, please call the Asian Pacific Development Center at 399-2120.

L I B R A R Y
L I N E S

Helen Fowler Library
Volume 7, No. 3
August 1984
Edited by
Jean Williams

Librarian:
Solange Gignac

THE
REVIEWERS

Panayoti
Callas—
Curator,
Denver Botanic
Gardens' Rock
Alpine Garden

Elise
Huggins—
Landscape
Architect, De
Leuw Cather in
Anchorage,
Alaska

Lynn
Thompson—
Community
Gardens
Coordinator,
Denver Botanic
Gardens

The Rhododendron
Species, Volume 1,
Lepidotes

By H.H. Davidian. Timber Press in
cooperation with The Rhododendron
Species Foundation, Portland,
Oregon, 1982. \$57.
SB 413 R47 D2942.



The very word rhododendron summons images of the great estates in maritime climates such as Britain or the Pacific Northwest where so many of these dramatic shrubs have found a second home. Few people realize that not one species of rhododendron occurs wild in Britain, and only two rather pedestrian kinds occur in the Pacific Northwest. The great bulk of the 2000 species of rhododendrons known to science are concentrated in the lofty elevations of East Asia where they form a dominant element in the landscape in much of Western China and the Himalayas.

The heyday of exploration for rhododendrons as well as alpine plants occurred in the first five decades of this century when explorers such as Reginald Farrer, George Forrest, Frank Kingdon-Ward, and Ernest Wilson sent back hundreds of kinds of seed every year. The herbaria of the British Natural History Museum, the Arnold Arboretum, and especially the Royal Botanic Gardens at Kew and Edinburgh were filled with hundreds of new species of rhododendrons in a period of only a few years. There was a rush on the part of the great explorers to find as many new species as they could. Indeed, several of the wealthy estate owners who supported the syndicates that paid for these expeditions actually offered cash rewards to explorers who found new species.

As a result, many hasty judgments were made on the basis of rather random explorations over the largest complex of mountains in the world. In order to make some sense of the great influx of new species of rhododendrons, various groups were described on the basis of a number of subjective characteristics. This system of classification was delineated in *The Species of Rhododendron*, published in 1930 by the Royal Botanic Gardens at Edinburgh. This book has formed the basis for naming rhododendrons in horticultural collections throughout the world.

In the last four years, several new treatments of rhododendrons have appeared in print. In 1980 J. Cullen and D. F. Chamberlain published a revision of the genus in *Notes from the Royal Botanic Garden in Edinburgh* with a radical departure from

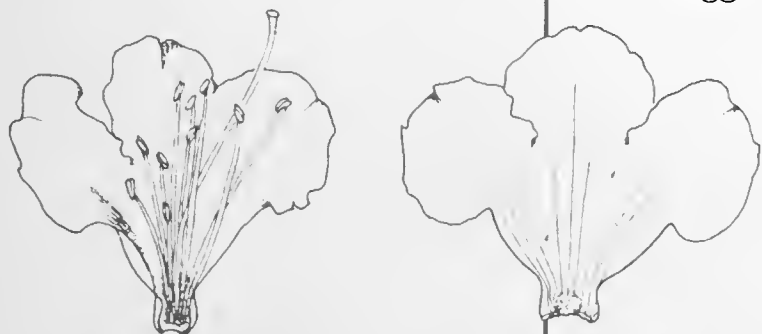
the traditional Balfourian treatment—the term referring to Sir Isaac Bayley Balfour, Regius Keeper of Edinburgh at the time of the publication of the first major monograph. Cullen and Chamberlain's treatment was corroborated by an international conference held at the New York Botanical Garden in May of 1978 and jointly sponsored by the American Rhododendron Society. The proceedings of this conference, *Contributions Toward a Classification of Rhododendron*, were also published in 1980. They support the new classification developed by Cullen and Chamberlain.

In effect, the Balfourian System had been laid to rest—almost to rest. In 1982 Timber Press, in cooperation with the Rhododendron Species Foundation, published *The Rhododendron Species, Volume 1, Lepidotes* by H. H. Davidian. This represents a culmination of decades of research on the genus that Davidian undertook as taxonomist at Edinburgh where he followed very much in the footsteps of Balfour. This sumptuous, lavishly illustrated volume can be described as the summation of the Balfourian tradition of rhododendron nomenclature that has dominated botany and horticulture for the last 50 years. This book will probably make the Cullen and Chamberlain sections less easily acceptable to horticulturists than they might have been otherwise, for it makes the familiar Balfourian terminology very clear, while the new sections and subsections are rather confusing to old-fashioned gardeners.

In short, we now confront two different and incompatible systems for grouping the species of rhododendron. The treatment is not radically different, although Cullen and Chamberlain are more inclined to be "lumpers" than most gardeners might like. Familiar and distinctive plants such as *Rhododendron radicans* and *R. keleticum* have been lumped into the seemingly distinct *R. campylogynum*. This strikes most gardeners as heresy—comparable to telling you that some rather distant cousins are actually your brothers and sisters.

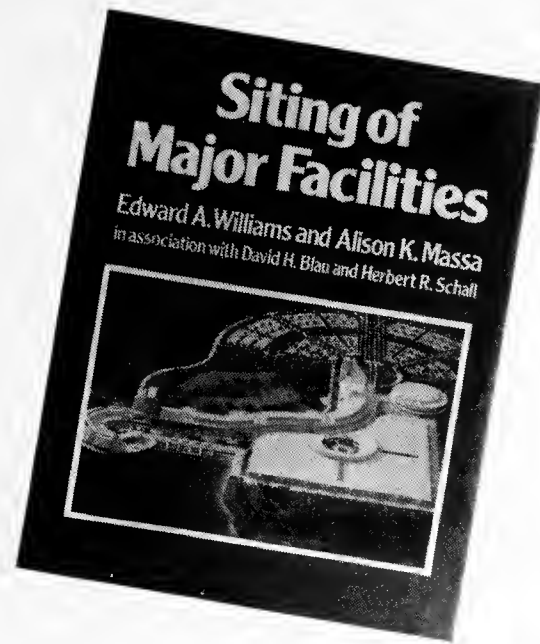
There is no question that Cullen and Chamberlain are now the last word on rhododendrons. There is also no doubt that for decades to come most major collections of rhododendrons in the world will continue to use Balfourian nomenclature for categorizing and labelling their plant collections. The Davidian volume will retain its utility for many years to come, even if one finds oneself using it with a sense of guilt.

Panayoti Callas



Siting of Major Facilities

By Edward A. Williams and Alison K. Massa. McGraw-Hill, New York, 1983. \$42.50. TH375 W5 1983.



Siting of Major Facilities, a recent addition to the Helen Fowler Library collection of books for landscape architects and planners, provides technical information of value not only to these professionals, but also for public officials and citizens concerned with making informed decisions regarding the siting of major public facilities.

The book describes a comprehensive, step-by-step process for the advantageous siting of industrial plants, freeways, colleges, and other public accommodations. The five-part process includes goal identification, project definition, environmental relationships, site screening, and site evaluation. The importance of each part in the process is presented in terms of client and public needs as well as design and environmental concerns. Public participation is discussed separately as a vital part of the process.

Flexibility is built directly into the design process, allowing for all the variables involved in actual facility siting. The book concludes with case studies of the applied process demonstrating a variety of settings for various clients.

Elise Huggins

Modern Home Gardening

By Clyde L. Calvin and Donald M. Knutson. John Wiley & Sons, New York, 1983. \$24.95. SB 321 C3657 1983.

Intended as a college text, *Modern Home Gardening* provides a comprehensive introduction to enlightened home gardening. From an opening discussion on the origins of agriculture to a closing chapter on the preservation and storage of food crops, these authors present the basics—explaining well the complexities of soils, plant morphology, taxonomy, and meteorology to a beginning horticulturist or a discerning home gardener. The latter half of the book covers the manipulation of naturally occurring phenomena through a variety of specific gardening techniques.

Considering the general thoroughness of the book, it is surprising to note the omission of a discussion on alternative methods of pest control. Insect and disease illustrations are also obviously absent, making it difficult to use the book as a reference for interpreting symptoms and diagnosing plant disorders.

Nevertheless, the book provides an excellent framework of basic horticultural information for the entry-level college student for whom it was written or for the serious home gardener.

Lynn Thompson

Book Donations Needed in Helen Fowler Library

Thank you for your participation in another successful used book sale. Almost \$7400 worth of donated books were sold during this year's Annual Used Book Sale. All proceeds from this yearly event are used for the purchase of new library books.

Your contributions are again needed to fill our shelves for next May's sale. Please bring your unwanted books to the library or call 575-3751, extension 33, for additional information.

CLASSES

Summer
1984
Denver Botanic Gardens

Plant Life Field Trip: Golden Gate State Park

Wednesday, August 15
9 a.m. to 4 p.m.

This is an opportunity to observe some of our prettiest summer wildflowers at their peak. Composites such as sunflowers, white asters, and goldenrod will all be blooming as well as lupines, tall blue penstemons, fireweed, and Indian paintbrushes. Don't forget your lunch.

Leader: Berta Anderson is an amateur botanist who volunteers regularly in the Kathryn Kalmbach Herbarium at Denver Botanic Gardens.

Meet: at 9 a.m. at DBG House to carpool and share gasoline expenses.

Fee: \$2 per person

Dry It. You'll Like It.

Monday, August 13 and
Thursday, August 16
(two sessions)
Classroom B 9:30 to 11:30 a.m.

Dahlias, zinnias, roses, and black-eyed Susans are among the flowers whose beauty you will learn to preserve in silica gel in this class. Students will select and dry garden and roadside flowers for use in winter arrangements.

Please bring two plastic shoe boxes with lids, a small plastic bucket with a handle, scissors, clippers, wire cutters, and an empty three-pound coffee can with lid. All other materials, including flowers, will be provided.

Instructor: Avalonne Kosanke is a master flower show judge for the National Council of State Garden Clubs with over 25 years of teaching experience.

Fee: \$26 members/\$28 non-members (includes a \$10 materials fee)

Limit: 20

Denver Botanic Gardens
909 York Street
Denver, Colorado 80206

Fees for courses should be paid in advance by check or money order made out to Denver Botanic Gardens. Since the space is limited in many courses, registration should be mailed in promptly. Your registration will NOT be acknowledged. Your name will be placed on the class list on the day your money is received. No enrollments for class by phone please. All courses are given subject to a minimum enrollment of ten students. For further information, please call 575-3751.

Preserving Foliage with Glycerine

Thursday, August 16 and
Monday, August 20
(two sessions)
Classroom B 1:30 to 3:30 p.m.

Foliage is an important component of any permanent flower arrangement. In fact, many types of leaves can be striking and dramatic even when used alone. Learn how to collect, prepare, and treat leaves with glycerine in this two-session course.

Please bring two one-quart jars with tight, screw-top lids (one must be wide-mouthed), a plastic shoe box with lid, pruning shears, scissors, and a sharp knife. All other materials will be provided.

Instructor: Avalonne Kosanke is a master flower show judge for the National Council of State Garden Clubs with over 25 years of teaching experience.

Fee: \$19 members/\$21 non-members (includes \$3 for materials)

Limit: 18

Gentian Foray at South Park

Saturday, August 18
9 a.m. to 4 p.m.

The Jefferson/South Park area is a spectacular location to observe some of the late summer wildflowers such as gentians. A profusion of other late bloomers is expected at this 9,000-10,000 foot altitude. Bring a picnic lunch.

Leader: Richard Schwendinger has been leading field trips throughout North America and Alaska for 25 years.

Meet: at 9 a.m. at DBG House to carpool.

Fee: \$2.50 members/\$3 non-members

Limit: 15

Herbal Teas

Monday, August 20
(one session)
Classroom B 7 to 9 p.m.

Don't let the heat of summer wear you down. Discover how to prepare delicious herbal beverages such as mint frappes, camomile-ginger spritzers, and iced tea blends using rose, mint, or lemon scented geraniums. Use the wild fruits of the season to create such refreshers as elderberry and chokecherry coolers. Recipes included.

Instructor: Sue McPherson has co-authored *Wild Food Plants of Indiana* and *Edible and Useful Wild Plants of the Urban West*, and has been teaching classes on edible wild plants for six years.

Fee: \$8 members/\$9 non-members

Basketry Workshop

Saturday, August 25
(one session)
Classroom B 9 a.m. to 4 p.m.
This is a repeat of the August 11 class.

Learn how to make a traditional Appalachian spoke and split basket in this one-day workshop. In it, a series of flat splits radiate outward from the center of the basket's bottom. As it is worked upward, it can take a variety of shapes, all of them round. No previous experience is necessary and students can expect to complete a basket 11 inches across and 12 inches tall (includes handle). Please bring a sack lunch.

Instructor: Robin Taylor Daugherty is a fiber artist with considerable teaching experience; she has taught weaving, spinning, felting, tapestry-making, and basketry throughout Colorado and her work is exhibited widely.

Fee: \$28 members/\$31 non-members (includes \$8 for materials)

Limit: 10

Registration Form for Classes and Field Trips

The enclosed check, in the amount of _____, is to cover the registration fees for the following classes:

Name and section of classes _____

Name _____

Address _____

City _____ State _____ Zip _____

Home Tel. No. _____ Business Tel. No. _____

Member of Denver Botanic Gardens? Yes No



Extending the Harvest: Pickled Fruits and Vegetables

Saturday, August 25

(one session)

DBG's Morrison Horticultural
Demonstration Center at 2320 E.
11th Avenue; entrance is on 11th
Avenue.

9 a.m. to noon

Don't let the wonderful flavors of summer's bounty go to waste. Learn how to "put by" fruits and vegetables for winter enjoyment. How to make pickled peaches or wild plums, spiced pears or crab-apples, and extra crisp dill pickles, green beans, and purslane will all be demonstrated in this morning session.

Instructor: Sue McPherson.

Fee: \$12 members/\$13 non-members

Japanese Tea Ceremony

Sunday, August 26

2 to 3 p.m.

(one session)

Tea House in DBG's Japanese
Garden

Nowhere else in the world is tea drunk with as great a sense of austerity and aesthetic refinement as in the Japanese tea ceremony or *Chanoyu*. Because of its emphasis on such concepts as harmony, respect, purity, tranquility, and elegant simplicity, the tea ceremony has for centuries been considered the epitome of Japanese life. This is an opportunity to experience an authentic tea ceremony in the quiet splendor of our Japanese Garden.

Instructor: Kathryn Kawakami has done much to inform Denver area residents and students about the culture of Japan.

Fee: \$4.50 members/\$5 non-members

Limit: 15

Gardening Tips for August

At this time of year annuals are on parade. They are in full bloom, well-branched, and at their peak.

Descriptively, annuals are plants that complete their life cycle from seed to flower, seed production, and death within one growing season. Common examples are zinnias, marigolds, and sweet peas. Many other plants are grown as annuals such as petunias, geraniums, and snapdragons. However, if these were not subjected to frost and if they grew in a favorable environment, they would be considered perennials.

Annuals are primarily used for summer color and displays either in a mixed flower border, planting bed, or specialized container. For the outside garden, annuals give the quickest return for the least investment. Once planted, they develop, flower, mature, and provide beauty, all in a few months.

Plants selected for displays, cut flowers, or drying offer pleasure and the opportunity to be creative. At DBG's trial gardens a variety of plants may be observed for possible uses. Some of the selections in 1984 include amaranthus, asters, and grasses.

Of the 60 known species of amaranthus, only a small number are cultivated for ornamental use. *Amaranthus caudatus*, commonly called love-lies-bleeding, has long, pendulous tassel-like flowers. *Amaranthus tricolor*, referred to as Joseph's coat, has less conspicuous flowers, but spectacular foliage. There are 12 selections of amaranthus to review in the annual trial gardens.

Asters are well-known flowers. Those grown as annuals are the China asters, *Callistephus*. They are excellent cut flowers, lasting a long time in water as well as offering a variety of colors and forms for arrangements. Thirty selections are being observed at the gardens this year.

Grasses are often relegated to the lawn. However, their use in other ornamental contexts is not new, especially in Europe and Asia. For the past seven to ten years, fountain grass has been displayed in the Denver parks.

Throughout Denver Botanic Gardens several ornamental grasses are being displayed, either in mass or in combination with other plants. Ruby, or champagne grass, *Rhynchelytrum roseum*, has pink to purple flowers and is displayed with delphiniums and zinnias. Crimson fountain grass, *Pennisetum setaceum*, and feather top fountain grass, *P. villosum*, have dense spike-like flowers that are purple and white respectively. They are displayed with cannas, delphiniums, and zinnias. In addition, over 20 varieties of ornamental grasses are being observed this year.

In this last full month of summer, the pressure of garden work has decreased. This is a good time to observe plants and their uses in the landscape. How might a favorite fit into your own scheme?

Gayle Weinstein

Botanist Horticulturist at
Denver Botanic Gardens



Lori Ann
Temple, age 5,
in the Cutting
Garden.

C AUG

A L E N D A R

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5

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26

Denver Rose Society Show
Japanese Tea Ceremony

Coming Next Month

Denver Botanic Gardens, Inc.
909 York Street
Denver, Colorado 80206
303-575-3751

August 1984

TIME VALUE

Address correction requested



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27

Dry It. You'll Like It.
Herbal Teas

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14

21

28

The Otsu Children's Choir of Japan
Sept. 6 Denver Chamber Orchestra
September 6-16 Fete des Fleurs

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Perennials for Shady Gardens
Asian Festival of Arts and Culture August 1-5

8

15

22

29

Plant Life Field Trip: Golden Gate State Park
Sept. 8-9 Designers' House Tour

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16

23

30

The American Brass Quintet
Preserving Foliage with Glycerine
Hot Rize
September 14-15 Members' Plant Giveaway

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17

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Free Day for Denver City/County Residents
September 15-16 Dahlia Show

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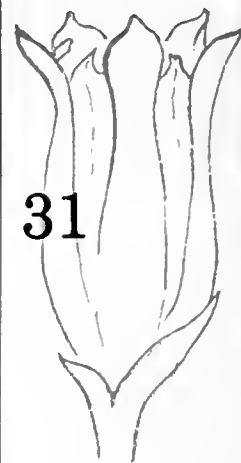
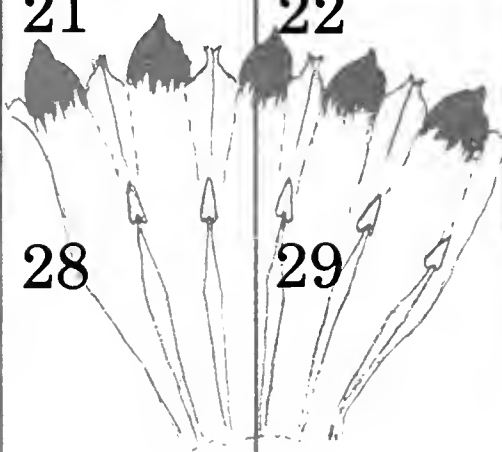
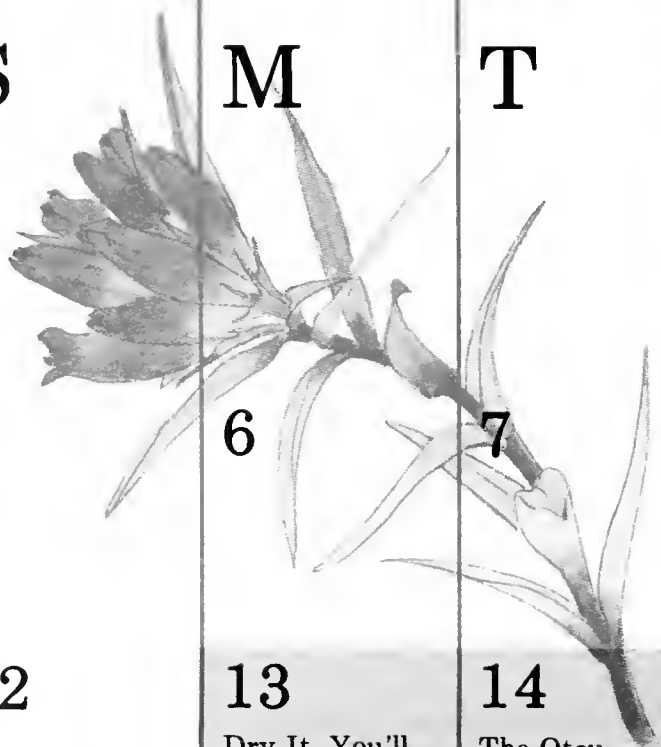
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Jams and Preserves
Basketry Workshop
Dryland Perennials Workshop
Gentian Foray at South Park
Pickled Fruits and Vegetables
Basketry Workshop
September 17 Free Day for Denver City/County Residents

Non Profit Org.
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Denver, CO



Regular Meetings of Plant Societies

A number of plant and horticultural groups meet fairly regularly at the Denver Botanic Gardens. Here is a listing of those groups and a general indication of when they usually meet. For more specific meeting times and locations as well as for information on how to contact a representative of the group, please call the Botanic Gardens switchboard during business hours at 575-3751.

African Violet Society, 4th Thurs. of 7 months; Bonsai Society, 1st & 3rd Tues.; Botany Club, 3rd Fri.; Cactus & Succulent Society, 2nd Tues.; Civic Garden Club, 1st Fri.; Dahlia Society, 2nd Fri.; Gladiolus Society, call for info.; Gloxinia Gesneriad Growers, 1st Sat.; Hemerocallis Society, 3rd Sun. of 4 months; Ikebana International, 4th Fri.; Indoor Light Gardening Society, 3rd Thurs.; Iris Society, spring & fall dates; Men's Garden Club, 4th Thurs.; Mycological Society, 2nd Mon.; Native Plant Society, call for info.; Orchid Society, 1st Tues.; Rock Garden Society, 3rd Wed.; Rose Society, 2nd Thurs.; Ultra Violet Club, 4th Mon.



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Our 25th Anniversary— *Fete des Fleurs*

When Irving Berlin wrote about "Puttin' on the Ritz" back in the '30s, he might almost have had DBG's *Fete des Fleurs* anniversary celebration in mind.

Denver Botanic Gardens will be "Puttin' on the Ritz" for ten days in September, from Thursday, September 6 through Sunday, September 16, to commemorate its 25 years at the present York Street site—25 years that have seen DBG grow from cemetery to conservatory to a world-class botanic gardens.

Kicking off the celebration will be lectures by John Loring, senior vice-president and design director for Tiffany & Co., entitled, "Porcelain in Flower." If you've ever wondered how Tiffany creates its china masterpieces, here's your chance to find out. Mr. Loring's talk will cover every stage of design and creation, from the first pencil sketches to the finished product. His first lecture will be on Thursday, September 6 at 2 p.m. and will repeat on Friday, September 7 at 7 p.m. Lecture tickets are \$10; gate admission will be charged for non-members.

From Saturday, September 8 through Sunday, September 16, Tiffany & Co. will present a special *Fete des Fleurs* exhibit in John C. Mitchell II Hall. Elegant china, silver, and crystalware will be on display as well as the fabulous Tiffany Private Stock—rare, hand-painted porcelain with floral patterns made by the firm for royalty and private individuals. Admission to the exhibit is \$2.

Included in the exhibit are the Charles Aubry flower photographs, a rare collection of some of the



earliest photographs ever made (circa 1860) that have guided and inspired artists and designers for more than a century. Also on display will be the Edward C. Moore floral watercolors, a collection of design studies by the early silver-smithing genius of Tiffany & Co. whose work helped propel the firm to international stature.

A special part of the celebration will be the unveiling of a commemorative earthenware set commissioned by Denver Botanic Gardens and designed and produced by Tiffany especially for the *Fete des Fleurs*. The cup, saucer, dinner and desert plates, and *pot de gelee*

feature a Colorado alpine columbine design. Pieces will be available for sale by special order for pre-Christmas delivery. Proceeds from the sale go to the Gladys Cheesman Evans Memorial Chair in Horticulture which promotes research and educational programs at the Gardens and helps fund the library and intern program.

Members of the Gardens are invited to a special tea on Wednesday, September 12, honoring founding trustees of Denver Botanic Gardens and their families. Advance reservations are necessary and must be received no later than September 7. (continued on page 3)

Inside:

Fete des Fleurs
Program, page 2

Members' Plant
Giveaway,
page 2

Adult Classes,
page 4-7

Classes for
Kids, page 8



Hand-painted
porcelain from
Tiffany Private
Stock.

Tributes

In honor of Vivian Christensen
Civic Garden Club

In memory of Marian R. Beer
Mrs. Gilbert DuCharme
Mr. and Mrs. Robert G. Tone

In memory of Ruby Clements
Beatrice Foods Co.
Mr. and Mrs. George Bruno
Sue and Frank Clements and Family
Jay M. Cohan
Colorado Chemical Company
Hamilton Rental Services
Steppie Harrison
Donald Kaufmann
Donald and Christine Lane
Restaurant Brokerage, Inc.
Mr. Al Rose
Stan Vandre's Mechanical &
Refrigeration Company
Cheryl VanScoyk
Celia Jean Weidemann
Helen Zimmer

In memory of McClland G. Dings
Edwin B. Eckel
Frances E. Williams

In memory of Clorene A. Fuller
Betty Allen
Thomas and Lena Gray
Mrs. Florene E. Huff
Mr. and Mrs. Ray James

In memory of Elsie K. Johnson
Phyllis F. Benson
Sylvia and Jim Bilbrey
Edna Boyd
The John B. Cross Family
Roger and Judy Gershaw
Monty and Kathy Hoyt
Art and Susan Junge
Ed and Peg Kowalski
Omar and Ann Lutfey
Wes and Lois Parker

Fete des Fleurs Special Events

Thursday and Friday, September
6 and 7

"Porcelain in Flower" lecture by
John Loring. Thursday at 2 p.m.
or Friday at 7:30 p.m.

September 8 to 16
Tiffany exhibit in John C.
Mitchell II Hall. Tickets, \$2 in
addition to the admission fee for
non-members.

Saturday, September 8
Dinner Dance at United Bank of
Denver, One United Bank Center.

Wednesday, September 12
Tea honoring founding trustees
from 4 until 6 p.m. at DBG.
Members wishing to attend
should write Founder's Tea, DBG
House, 909 York Street, Denver,
Colorado 80206. Please indicate
your name and the number of
reservations desired by
September 7.

All events, other than the exhibit,
need pre-registration and reserva-
tions are limited. Call the
Development Office, 355-3456, for
ticket information.

Mr. and Mrs. O. Richard Sherwin
Bill and Joan Thomas
Mr. and Mrs. B.E. Turner
Delores and Jack Welshinger

In memory of Stanley Johnson
Mrs. Kenan Weckbaugh

In memory of Gladys N. Kirk
Dr. and Mrs. Robert M. Kosanke

In memory of T. Paul Maslin
Mr. and Mrs. John F. Falkenberg
Dr. and Mrs. Earl Sampson
Margery E. Smith

In memory of Mrs. Remsen McGinnis
Mr. and Mrs. Robert S. Gast, Jr.

In memory of Nancy C. Powell
Mr. and Mrs. Walter C. Emery

In memory of Henry F. Ries
Susan and Steve Berson
Marian W. Elder
Mrs. Hugh M. Kingery
Dorothy D. Schomburg
Mr. and Mrs. Samuel S. Sherman, Jr.
Mr. and Mrs. Dudley Smith
Caroline and Milt Warren
Gayle and David Weinstein

In memory of Dr. Thomas J.M. Schopf
Dr. and Mrs. Robert M. Kosanke

In memory of Stanley T. Wallbank
Mrs. Sidney L. Brock, Jr.
Mr. and Mrs. John Chafee
Mr. and Mrs. Barkley L. Clanahan
Shirley J. Clark
Mr. and Mrs. John F. Falkenberg
Edna F. Jackson
Walter K. Koch

Mr. and Mrs. Lawrence A. Long
Mrs. William E. Phelps
Joyce and Gene Schillen
Avalon A. Simonds
Mrs. Kernan Weckbaugh
Gayle and David Weinstein

In memory of Margaret Watson
Mrs. R.S. MacCullough

Members' Plant Giveaway September 14 and 15

Denver Botanic Gardens' Annual
Plant Giveaway will be September
14 and 15. Presentation of your
membership card will entitle you to
one plant per membership (family,
individual, etc.). Your selection can
be made:

Friday, September 14 between 9
a.m. and 6 p.m. or, Saturday,
September 15 between 9 a.m. and
noon.

Entrance to the giveaway is
through the gate on Gaylord Street,
south of 11th Avenue. Turn right
after entering and walk to the west
end of the work area where the
plants can be found.

Each year we attempt to select
items that are generally unavailable
locally. Among this year's indoor
plants are a variety of begonias,
small bushes of variegated myrtle,
the palm leaf grass, *Setaria*, and a
beautiful gesneriad, *Streptocarpus*
'Concord Blue.' For those who wish
to use a native plant to beautify
their yards, *Amorpha canescens*,
lead plant, will be available. Species
forms of *Mahonia* and *Berberis* may
be more suitable for your smaller
landscaping needs while *Catalpa*, the
Indian bean tree or golden rain tree
can satisfy your larger landscaping
needs. At ground level, *Pachistima*
and *Chrysanthemum* 'Buffalo' will
provide you foliage and flowers
respectively.

As before it is first come, first
served, so the earlier you plan to
arrive the better.

Green Thumb News Number 84-9 September 1984

Published monthly by the Denver
Botanic Gardens Education Depart-
ment, 909 York Street, Denver, Col-
orado 80206, and edited by Patricia
A. Pachuta and Carolyn Knepp.
Subscription to this newsletter is
benefit of membership in the Botanic
Gardens. For membership informa-
tion, please write the Membership
Department at the above address or
call 575-3751.

Deadlines for this newsletter are:
Major news stories, feature material
(including photographs or artwork),
and short notes are all due not later
than August 20 for October,
September 20 for November, and Oc-
tober 19 for December.

Please plan in advance and meet deadlines.
Late material cannot be used. Stories must
be typed, double-spaced, preferably on copy
paper provided by the editor. Please call
the Education Department at 575-3751 for
details.

A breathtaking display of dahlias in DBG's Morrison Horticultural Demonstration Center at 2320 E. 11th Avenue, will greet Denver Dahlia Society Show visitors on September 15 and 16. The society encourages all to come and enjoy the show which includes hundreds of dahlias, including ball, pompon, and single-flowered specimens.

The show's theme, "Dahlias Everywhere," involves judged artistic arrangements depicting seashores, deserts, mountains, as well as the city and country. Other divisions include vase and basket arrangements and a junior division for children under 16. Entries for competition will be received between 7 and 8 p.m. on Friday, September 14 and 7 to 10 a.m., September 15. Judging begins at 10:15 a.m. and the show is open to the public Saturday from 1 to 4:30 p.m. On Sunday the dahlias can be enjoyed from 9 a.m. to 4:30 p.m. Additional information may be obtained by calling the show chairman, Everett Holt at 771-3585.

The show is an opportunity to observe a magnificent array of dahlias that are guaranteed to amaze you.

New Colorado Native Plant Society Chapter

Members of Denver Botanic Gardens might be interested to learn that a new chapter of the Colorado Native Plant Society has been formed for the Denver area. Programs on varied topics concerning native flora and activities such as workshops and field trips are being planned.

Monthly meetings are held on the fourth Wednesday of every month at 7:30 p.m., at the Denver Botanic Gardens House, 909 York Street.

Previous programs have included: J. Scott Peterson, "Rare Plants of Colorado"; Tamara Nauman, "Proposed Land Management of the Piceance Basin's Endangered Plants and Ecosystems"; Dorothy Borland, "Native Lawns for Colorado"; and a field trip on edible plants of Sand Creek led by Dr. Exie White.

For more information on the Colorado Native Plant Society, please write:

CONPS
P.O. Box 200
Fort Collins, CO 80522

or come to the next meeting.



Herb Vinegar in Gift Shop

Are your fresh garden salads in need of a little excitement? The DBG Guild's popular herb vinegar, in tarragon and mixed herb flavors, is available in our gift shop. The 1984 vintage will be on sale during DBG's Annual Holiday Sale, November 16-17.

September Meeting of the Denver Rose Society

Denver Rose Society members meet Thursday, September 13 at 7:30 p.m. at DBG House, 909 York Street. Pat Thorn, president of the Boulder Valley Rose Society, will speak on "Miniature Roses Indoors." A rose trivia and memorabilia contest will follow the presentation. These meetings are open to the public and visitors, as well as members, are encouraged to attend.

Fete des Fleurs (cont.)

A highlight of the *Fete des Fleurs* will be the black tie dinner dance on September 8 at 7 p.m. at the United Bank of Denver, One United Bank Center. Tickets for the dinner dance are \$350 per couple and are by advance reservation only. Seating is limited to ten per table and seating arrangements may be made through Mrs. William F. Wilbur, reservations chairman, 3101 E. Seventh Avenue Parkway, Denver 80206.

Please keep your calendar open and plan to attend the *Fete des Fleurs*.

Index Seminum

An *index seminum* is a list of collected seed material that is offered for exchange among various botanic gardens and related institutions throughout the world. Denver Botanic Gardens participates in this exchange, which enables us to develop specialized areas such as our Rock Alpine Garden. Approximately 60% of these plants were propagated from seeds obtained through the *index seminum* process.



Joan Schwarz, a volunteer at DBG, filling seed packets for exchange.

Late in summer and fall our volunteers collect, identify, and package seeds. Lists of these materials are sent to interested organizations and in return we receive lists of their offerings. We obtain many of the rare plants found throughout the Gardens in this manner; this exchange provides an inexpensive means of developing unusual gardens.

4 Volunteers Assist Joe Tomocik

A familiar face around Denver Botanic Gardens, Joe Tomocik, gardener florist II, is frequently found consulting with volunteers at the Aquatic Plant Display and Demonstration Areas. Joe and his volunteers have done a remarkable job this year, especially with the test gardens. Early in the summer he received a certificate for completion of a 12-week course, Introduction to Supervision, from the Emily Griffith Opportunity School. The course dealt with management problems concerning supervision, planning, evaluation, and motivation. Joe's enthusiastic volunteers and neat gardens appear to be proof of his educational endeavors.



Neil Snow (far left), Joe Tomocik, and Elizabeth Binney at our Demonstration Garden.

September 30 Water Garden Meeting

Rather than meeting on the second Sunday in September, the Colorado Water Garden Society will meet Sunday, September 30 at 2 p.m. in the Denver Botanic Gardens House.

A two-part program includes a discussion of pool insects, featuring the dragonfly, and a slide presentation demonstrating preparations for overwintering your waterlilies.

Current and prospective members are invited to attend this informative program. For additional information about the society and water gardening, please call John Mirgon at 922-9559.

Education Department

Culinary Herb Harvest

Section I: Saturday, September 15
10 a.m. to noon

or

Section II: Wed., September 26
7 to 9 p.m.

(one session)

Classroom B

Please indicate your section on the registration form.

Take advantage of the late summer bounty of your herb garden and learn harvesting and preservation techniques that will enable you to use your culinary herbs throughout the year.

In this session, you will learn when and how to harvest, as well as drying and freezing procedures. Capturing fresh herbal flavors for your pantry (with recipes for herb vinegars, mustards, butters, jellies, and pesto sauce) will be covered in addition to techniques for using fresh herbs. Ample tasting included!

Instructor: Pat Pachuta is a horticulturist and education director at DBG. She has taught horticultural subjects, including herb gardening, for ten years.

Fee: \$8 members/\$9 non-members

Limit: 15

Japanese Tea Ceremony

Section I: Sunday, September 23

Section II: Sunday, October 14

(one session)

2 to 3 p.m.

Tea House in DBG's Japanese Garden

Nowhere else in the world is tea drunk with as great a sense of austerity and aesthetic refinement as in the Japanese tea ceremony or *Chanoyu*. Because of its emphasis on such concepts as harmony, respect, purity, tranquility, and elegant simplicity, the tea ceremony has for centuries been considered the epitome of Japanese life. This is an opportunity to experience an authentic tea ceremony in the quiet splendor of our Japanese Garden.

Instructor: Kathryn Kawakami has done much to inform Denver area residents and students about the culture of Japan.

Fee: \$4.50 members/\$5 non-members

Limit: 15

Watercolor and Mixed Media Painting

Wednesdays, September 26,
October 3,10,17,23,31
November 7,14

(eight sessions)

Classroom B 9:30 to 11:30 a.m.

Translate your vision of nature into exciting color! Wet-in-wet technique as well as painting on dry paper will be demonstrated. From quick gestures to slow contemplative studies, students will explore the rich world of nature at Denver Botanic Gardens. Instruction and demonstrations in assorted media, including pastels, will be provided.

The work of master painters such as Monet, Nolde, and Sargent will be shown in a slide presentation and visits to art galleries will be offered. No experience is necessary, only your interest in painting.

Instructor: Oksana Ross, PhD., studied at New York University and Columbia University and has 32 years of teaching experience. She was formerly on the faculty of University of Colorado at Denver, Metropolitan State College, and Colorado Women's College. Dr. Ross is a life member of the Arts Students League of New York where she studied under Hans Hofman, Will Barnett, Marion Cooper, and Edgar Whitney.

Fee: \$64 members/\$70 non-members.

Limit: 20

Forcing Bulbs

Section I: Saturday, November 10
10 to 11:30 a.m.

or

Section II: Wednesday, November 14
7 to 8:30 p.m.

(one session)

Classroom B

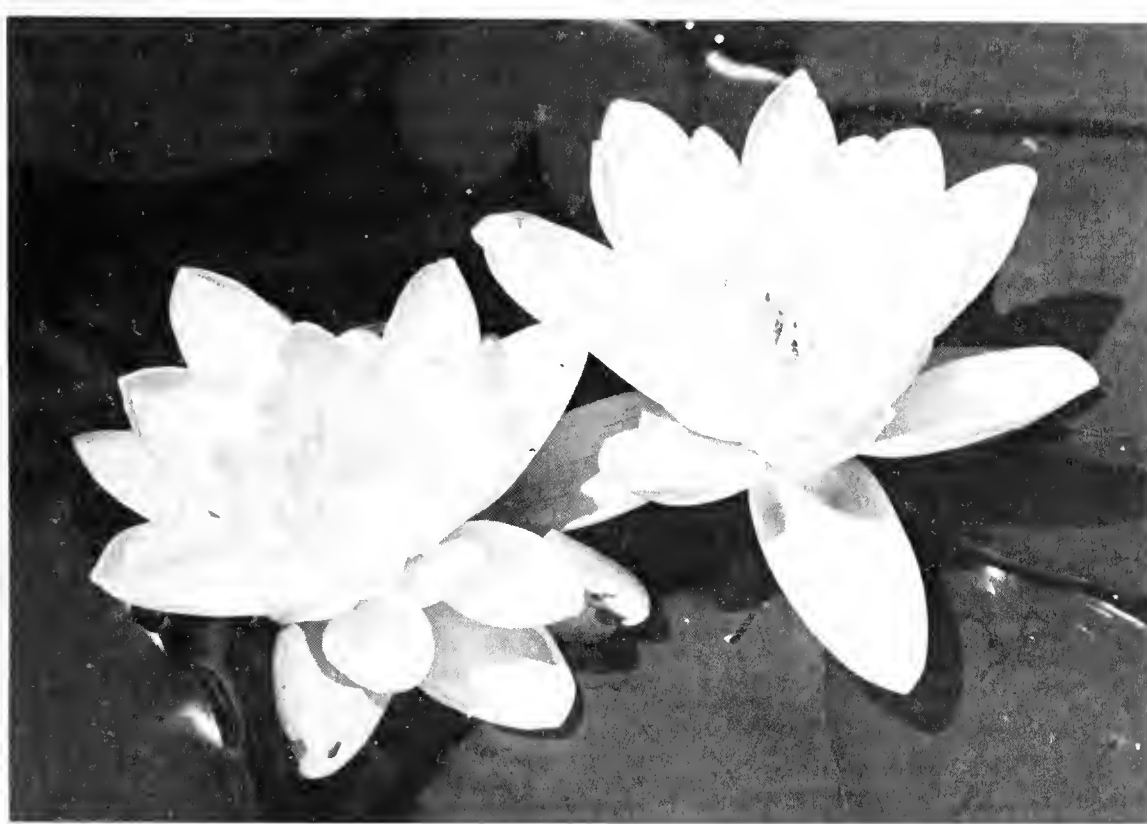
Please indicate your section on the registration form.

The process of causing spring-flowering bulbs to bloom by other than naturally occurring conditions is called *forcing*. Learn this technique so that you can enjoy an assortment of spring blossoms while it is cold and dreary outside. Students will pot up bulbs during class to take home.

Instructor: Pat Pachuta is a horticulturist and education director at DBG. She has taught horticultural classes for ten years.

Fee: \$13 members/\$14 non-members (includes a \$7 materials fee)

Limit: 15



Here Come the Waterlilies

Saturday, September 22
(one session)

Classroom C 1 to 3 p.m.

Learn the excitement of aquatic gardening through an illustrated presentation covering the display and cultivation of hardy and tropical waterlilies, bog plants, and floating plants in pools and barrels. Topics include choice of varieties, proper cultivation, display techniques, and sources of plant material.

Demonstrations and discussions will be followed by a tour of the DBG Aquatic Plants Display area.

Instructor: A gardener florist II at DBG, Joseph V. Tomocik maintains the turf demonstration plots, vegetable garden, annual trial garden, and the Aquatic Plants Display.

Fee: \$8 members/\$9 non-members



Deciduous Shade and Ornamental Trees for Denver

Tuesdays, September 25,
October 2,9,16,23

Classroom C 7:15 to 9:15 p.m.

and

**Field Trip on Saturday, October 27
from 9 a.m. to noon
(six sessions)**

Due to this unique climate, very few trees are actually indigenous to the Denver area. It is not so much cold hardiness, but soil, moisture, humidity, and extreme fluctuations in temperature that make it so difficult for trees to survive.

This class will acquaint students with a variety of plant material and will establish an understanding of their characteristics, natural history, culture, problems, and landscape value as an ornamental or shade tree.

Through the use of slides, students will observe each of approximately 100 species in all seasons, with an emphasis on fall characteristics. A field trip is included for a first-hand look at some of the species discussed in class.

Instructor: An experienced teacher, Jeffrey Frank studied horticulture at Pennsylvania State University and earned a master's degree in landscape architecture from the University of Virginia. He is presently in private practice in Denver.

Fee: \$45 members/\$49.50 non-members

Photography in the Gardens

Saturdays, October 6,13,20,27
(four sessions)

Classroom C 9 a.m. to noon

This four-session course is designed to increase your knowledge and confidence with a camera. Technical as well as aesthetic concerns will be discussed in a hands-on atmosphere.

In the first session, students will become acquainted with basic photographic techniques at the Gardens.

Subsequent sessions will provide picture-taking experience and the instructor will offer advice while the students are working with their cameras.

Finally, class members will learn to edit and will present a finished set of slides or photographs at the last session.

Any camera is appropriate for this class and photographs can be taken in color or black and white.

Instructor: Drex Brooks received a master's degree in fine arts from the Rhode Island School of Design and has extensive teaching experience. His work is exhibited widely and is included in the permanent collections of the Polaroid Corporation, the Rhode Island School of Design Museum of Art, and the Contemporary Oregon Photographers' Permanent Collection in Salem, Oregon.

Fee: \$48 members/\$53 non-members

Limit: 12



*Agaves at DBG
by photography
instructor Drex
Brooks.*

CLASSES

Fall
1984
Denver Botanic Gardens



Field Trip to Fern Canyon

Saturday, September 15
9 a.m. to 3 p.m.

Ferns can be found in Colorado in special microclimates from the plains to the alpine zone. Male fern, giant bracken, and shoulder-high brakes of lady fern will all be seen on this moderately strenuous hike of three miles.

Don't forget your lunch and drinking water.

Leader: Panayoti Kelaidis is curator of the Rock Alpine Garden at DBG and is an enthusiastic and capable field botanist.

Meet: at 9 a.m. in the NCAR (National Center for Atmospheric Research) parking lot at 1850 Table Mesa Drive in Boulder. To get there: take the Boulder Turnpike (Highway 36) from Denver and exit on Table Mesa Drive. The center is approximately five miles from the highway exit.

Fee: \$2.50 members/\$3 non-members

Limit: 15

Field Trip to Roxborough State Park

Saturday, September 22
9 to 11:30 a.m.

This is an opportunity to enjoy fall at this spectacular park. An easy trail winds through striking geological formations where a wide variety of habitats including sunny, open hillsides, hogback ridges, and a moist stream valley will be explored.

Leader: Peter Root is an amateur botanist who volunteers regularly at the Kathryn Kalmbach Herbarium at DBG; he is also a volunteer naturalist at Roxborough State Park.

Meet: at 9 a.m. at the intersection of Roxborough and Rampart Roads. Each car entering the park must purchase a daily park user pass in addition to the field trip fee.

Fee: \$2.50 members/\$3 non-members

Limit: 15

Denver Botanic Gardens
909 York Street
Denver, Colorado 80206

Fees for courses should be paid in advance by check or money order made out to Denver Botanic Gardens. Since the space is limited in many courses, registration should be mailed in promptly. Your registration will NOT be acknowledged. Your name will be placed on the class list on the day your money is received. No enrollments for class by phone please. All courses are given subject to a minimum enrollment of ten students. For further information, please call 575-3751.

Field Trip to Chatfield Arboretum

Friday, September 28
10 to 11:30 a.m.

Come on a guided tour of Denver Botanic Gardens' Chatfield Arboretum and share in the excitement of the development of this site as a living collection of native and introduced woody plants. This 350-acre site lies at the base of hogback ridges and its slightly rolling terrain is typical of the high plains found in a semi-arid area.

The walk will begin at the old schoolhouse and will proceed to the survival garden trail. It will conclude with a heartier off-trail hike through the riparian habitat found along Deer Creek. Along the way, the wildlife, general ecology, and rich pioneer history of the site will all be discussed.

Please bring field guides, hand lenses, and binoculars, if you have them. Long pants and sturdy footwear should be worn. You may also wish to bring a sack lunch for an optional picnic afterward.

Meet: at 10 a.m. at the schoolhouse at Chatfield Arboretum which is located less than 1/2 mile to the left on Deer Creek Road just off Highway 75 (County Line Road).

Leader: Jill Reynolds is a naturalist who is currently completing a master's degree program in Environmental Interpretation at CSU.

Fee: \$2

Limit: 15

Basketry Techniques

Mondays, October 1,8,15,22,29
(five sessions) Classroom B

Section I: 12:30 to 4 p.m. except October 1 when the class meets until 4:30 p.m.

Section II: 6:30 to 10 p.m. except October 1 when the class will begin at 6 p.m.

Please indicate your section on the registration form.



Learn the traditional Appalachian hen basket and some of its variations. These gracefully-shaped baskets originated in Scotland and came to America with the Highland settlers. Students will learn this rib and split technique in a variety of shapes and can expect to complete one basket each session.

Instructor: Robin Taylor Daugherty is a fiber artist with considerable teaching experience; she has taught weaving, spinning, felting, tapestry-making, and basketry throughout Colorado and her work is exhibited widely.

Fee: \$95 members/\$105 non-members (includes a \$35 materials fee for the construction of five baskets).

Limit: 10

Appalachian egg basket by Robin Taylor Daugherty.

Registration Form for Classes and Field Trips

The enclosed check, in the amount of _____, is to cover the registration fees for the following classes:

Name and section of classes _____

Name _____

Address _____

City _____ State _____ Zip _____

Home Tel. No. _____ Business Tel. No. _____

Member of Denver Botanic Gardens? Yes No

Beginning Wheat Weaving

Tuesdays, October 9,16,23,30

(four sessions)

Classroom B 7 to 9 p.m.



*Wheat weaving
by Maureen
McGowan.*

Wheat weaving, also known as corn dolly plaiting or straw decoration work, is a centuries-old craft that is practiced in almost all of the grain-producing countries. In this series of workshops you will learn how to clean and work with wheat. Various weaving techniques will be taught to complete harvest wreaths, mordifords, Welsh fans, and other unique decorations.

Please bring scissors to class.

Instructor: Maureen McGowan is a horticultural instructor and consultant who has taught various craft classes, including wheat weaving at the Chicago Botanic Gardens and DBG.

Fee: \$40 members/\$44 non-members (includes an \$8 materials fee)

Limit: 15

Advanced Wheat Weaving

Thursdays, October 11,18,25 and
November 1

(four sessions)

Classroom B 7 to 9 p.m.

This series of workshops is a continuation of the wheat weaving course held last fall. Advanced techniques for larger, more complicated projects such as house blessings, brides-of-corn, and harvest dolls will be taught. Experience with different grains such as Italian and brown bearded wheat, oats, and barley will be provided.

Either the instructor's consent or previous enrollment in a wheat weaving course is necessary. Please bring scissors to class.

Instructor: Maureen McGowan is a horticultural instructor and consultant who has taught various craft classes, including wheat weaving, at the Chicago Botanic Gardens and DBG.

Fee: \$46 members/\$51 non-members (includes a \$14 materials fee)

Limit: 12

Botanical Illustration—Harvest Time

Tuesdays, October 23,30,
November 6,13,20,27

(six sessions)

Classroom B 9:30 to 11:30 a.m.

In this introductory course, you will learn how to draw fall fruits, flowers, seeds, and berries very accurately in pen and pencil and will finally progress to watercolors. Increase your knowledge, observation, and enjoyment of autumn plants at the Gardens.

Paper, pencils, and erasers will be provided. Please do not purchase additional materials before coming to class.

Instructor: Angela Overy studied graphic arts and has extensive teaching experience. Her enthusiasm results in very popular classes at DBG.

Fee: \$48 members/\$53 non-members

Limit: 20

Strawberry Corn Workshop

Saturday, September 29

(one session)

Classroom B 9 a.m. to noon

Students in this class will construct two projects: a small, hanging cluster of strawberry corn, wheat, and burgundy ribbon as well as a 12-inch sunburst wreath of 12 ears of strawberry corn decorated with a bow. Please bring scissors to class. All other materials will be provided.

Instructor: Judy Sutherland is co-owner of Ristras Unlimited, Littleton, Colorado, and has produced arrangements for sale throughout the western United States. She teaches often and her work is exhibited widely.

Fee: \$24 members/\$26.50 non-members (includes a \$12 materials fee)

Limit: 10

Miniature Corn Workshop

7

Section I: Wednesday, October 3

or

Section II: Saturday, October 6
(one session)

Classroom B 9 a.m. to noon

Please indicate your section on the registration form.

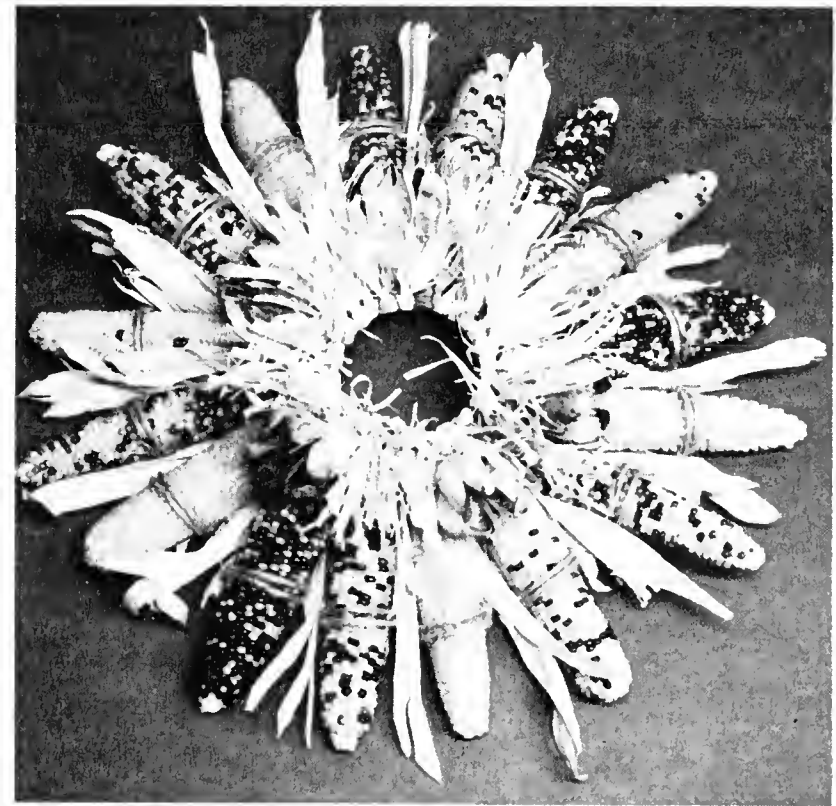
Students in this class will construct two projects: a small, hanging cluster of golden miniature corn decorated with a dried gourd, rice grass, and a tiny ear of strawberry corn as well as a 14-inch wreath of 16 matched ears of miniature corn decorated with fringed corn husks and yucca pods.

Please bring scissors to class. All other materials will be provided.

Instructor: Judy Waite is co-owner of Ristras Unlimited, Littleton, Colorado, and has produced arrangements for sale throughout the western United States. She teaches often and her work is exhibited widely.

Fee: \$26 members/\$28.50 non-members (includes a \$14 materials fee)

Limit: 10



*Miniature corn
wreath by Judy
Waite.*

Spots for Kids

The Chocolate Factory

Saturday, October 6
(one session)

Section I: For children of ages 5-7
10 a.m. to noon

Section II: For children of ages 8-11
1 to 3 p.m.

Classroom A

Please indicate your section on the registration form.

Take a tour of Mother Nature's confectionery and see the garden where sugar, spices, and chocolate grow. Learn how the sweetest candies are made from roots, seeds, and fruits. See how chocolate is made from the cacao seeds and discover which jungle orchid is used to make ice cream. All recipes will be served to immediately satisfy your sweet tooth.

Instructor: Jo Duranceau Cannon studied art at the University of Washington and the University of Denver and has extensive teaching experience with children.

Fee: \$6.50 members/\$7 non-members

Limit: 12

Munch, Crunch

Saturday, October 13
(one session)

Section I: For children of ages 5-7
10 a.m. to noon

or

Section II: For children of ages 8-11
1 to 3 p.m.

Classroom B

Please indicate your section on the registration form.

Take a journey into the world of carnivorous plants. Learn how a Venus fly trap "counts" to catch an ant, how the pitcher pond creates a deadly pond, and how the sundew tricks a bug. Each child who ventures into this garden will receive his own Venus fly trap.

Instructor: Jo Duranceau Cannon

Fee: \$8 members/\$9 non-members

Limit: 12

For the Birds

Saturday, October 20
(one session)

Section I: For children of ages 5-7
10 a.m. to noon

Section II: For children of ages 8-11
1 to 3 p.m.

Classroom A

Please indicate your section on the registration form.

Learn surprising ways to make your own bird feeders. Explore the Gardens to see what flowers and trees will attract birds to your backyard. Follow recipes to make a bird feast. Color-in a guidebook to help identify your feathered visitors.

Instructor: Jo Duranceau Cannon

Fee: \$6.50 members/\$7 non-members

Limit: 12

The Fairy Ring

Saturday, October 27

Section I: For children of ages 5-7
10 a.m. to noon

Section II: For children of ages 8-11
1 to 3 p.m.

(one session)

Classroom B

Please indicate your section on the registration form.

Join the leprechauns and listen to the Halloween tales of the fairy rings. Learn about mushrooms and toadstools which appear at night for elves to sit on. Find out why mushrooms grow in a ring and never

have flowers. Discover flowers that lure bats from belfries. Make ghosts appear on starry nights, create a mask that would scare even a witch, and open the door to your own haunted house.

Instructor: Jo Duranceau Cannon

Fee: \$6.50 members/\$7 non-members

Limit: 12

Pumpkin People

Section I: For children of ages 5-7
Monday, October 29

or

Section II: For children of ages 8-11
Tuesday, October 30

(one session)

Classroom A 3:30 to 5:30 p.m.

Please indicate your section on the registration form.

Visit our pumpkin patch and create a cast of pumpkin people. From the jack-o'-lantern to the pumpkin cat, learn how to carve and paint pumpkins. Use fall's cornucopia to supply the nose for a witch or ears for a clown. See how pumpkins grow and taste the best of pumpkin concoctions.

Instructor: Jo Duranceau Cannon

Fee: \$6.50 members/\$7 non-members

Limit: 12



Jo Duranceau Cannon with "Dinosaur Salads" students.

L I B R A R Y L I N E S

Helen Fowler Library
Volume 7, No. 4
September 1984
Edited by
Jean Williams

Librarian:
Solange Gignac

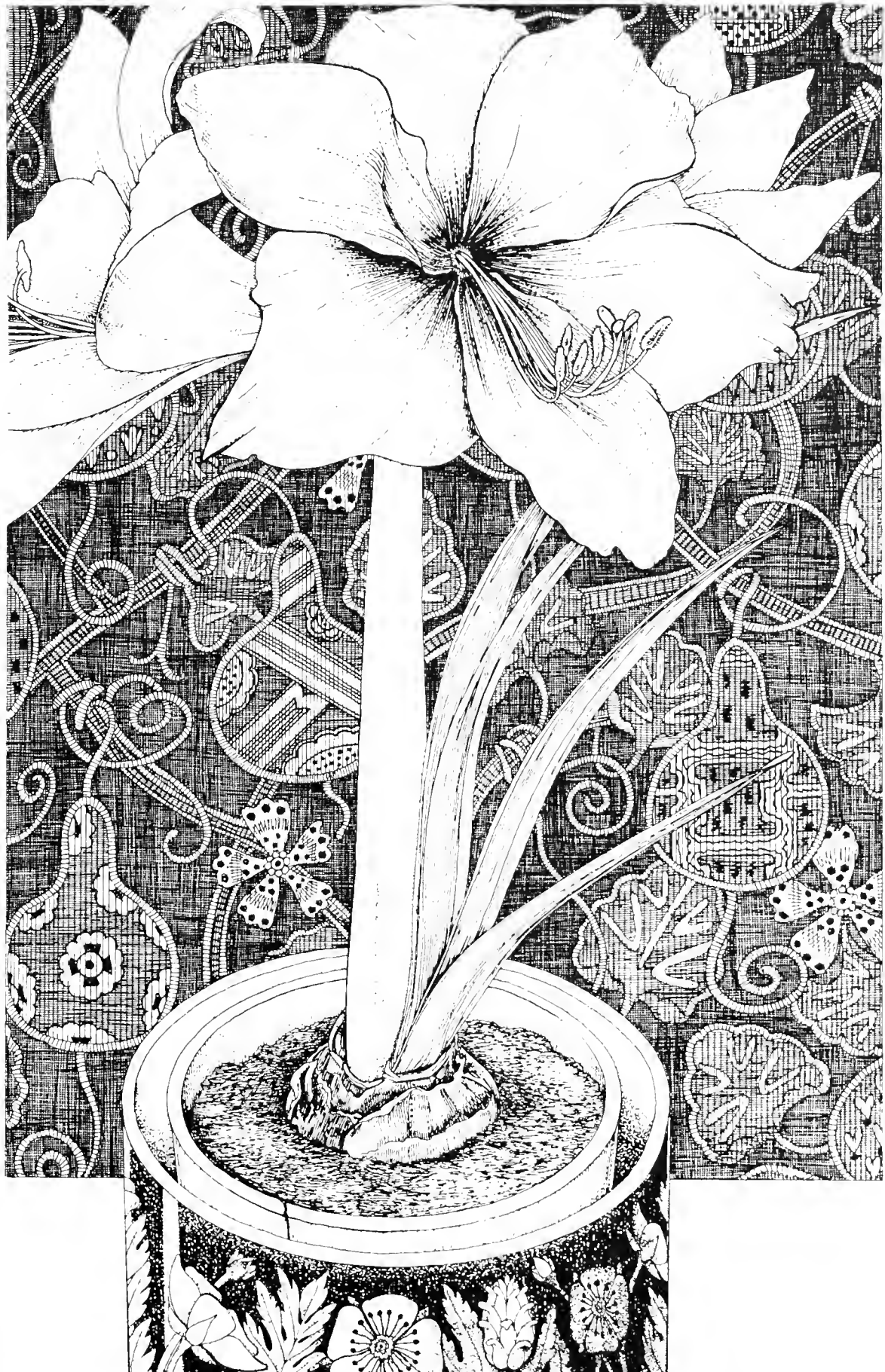
Peter Loewer's Month- by-Month Garden Almanac

Written and Illustrated by Peter
Loewer. A GD/Perigee Book,
Putnam Publishing Group, N.Y.,
1983. \$7.95
SB 453 L62

Peter Loewer has compiled a collection of garden drawings, poems, thoughts, tips, and reminders to inspire any hobby gardener. Unlike traditional almanacs, this one bypasses weather aspects, but the monthly approach makes readers eagerly await coming seasons so that they can force bulbs, make willow wreaths, prepare shrimp soup with lemon grass, build a cold frame, or design a bog garden.

The author's personal approach will seduce the casual reader through an exploration of traditional and exotic plants, garden legends, products, and projects.

Lynn Thompson



THE REVIEWERS

Carolyn Etter—
Urban
Preservationist

William F.
Jennings—
Patron, Denver
Botanic
Gardens

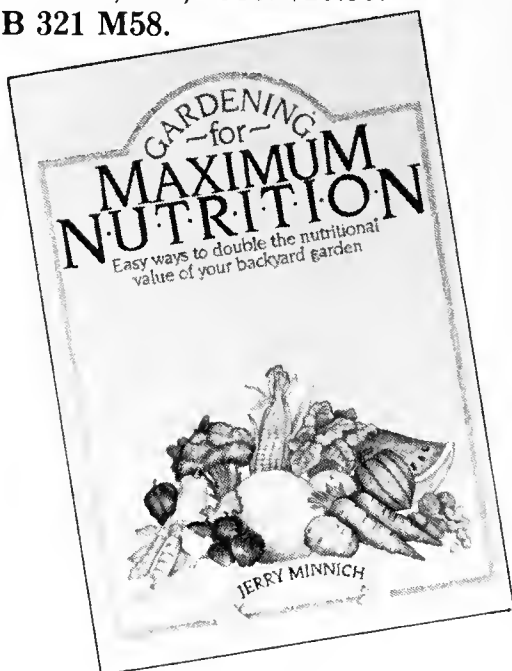
Hazel
Kellogg—
Volunteer in
Helen Fowler
Library,
Denver Botanic
Gardens

Lynn
Thompson—
Community
Gardens
Coordinator,
Denver Botanic
Gardens

Jean
Williams—
Volunteer in
Helen Fowler
Library,
Denver Botanic
Gardens

Gardening for Maximum Nutrition

By Jerry Minnich. Rodale Press, Emmaus, PA, 1983. \$15.95. SB 321 M58.



Most vegetable gardeners could double the nutritional yield of their backyard gardens, author Jerry Minnich tells us, by careful selection of plants, proper preparation of soil, and the use of preferred methods of harvesting, storing, and cooking. It is a mistake, however, to assume that healthy plants contain all the nutrients needed for healthy human growth. Highly concentrated nitrogen fertilizers, for example, can produce lush growth that is deficient in several vital elements.

Included in this book are 28 charts that show comparative nutritional values of different crops. There is advice on choosing plant varieties, detecting and correcting unfavorable soil conditions, as well as other suggestions for improving the nutritional quality of home-grown vegetables.

Jerry Minnich is a long-time contributor to *Organic Gardening* magazine and has written several other books on gardening.
Hazel Kellogg

Earth Ponds

By Tim Matson. Countryman Press, Woodstock, Vt., 1982. \$10.95. TD 927 M3 1982.

Pond-making, it seems, is a gamble no matter how it is done, but the chance of success is greatly improved by patient observation of the land and careful planning. From selection of the site to the care and enjoyment of the finished "earth sculpture," Mr. Matson shares a wealth of practical information derived from many years of personal experience with earth ponds in Vermont. He points out what to

study during all seasons, tells how to judge the water supply, and how to avoid the danger of leakage or damage by flood.

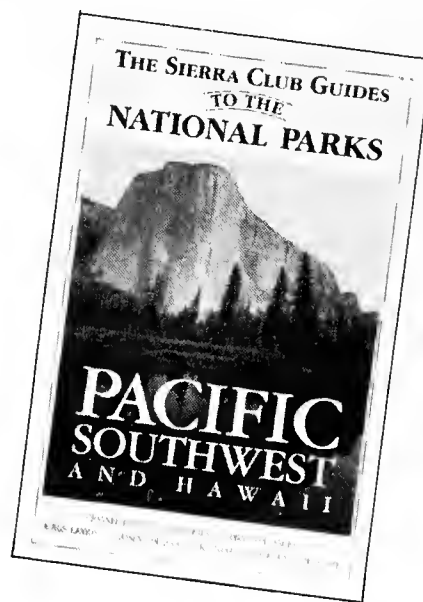
He also shares his own special blend of country philosophies—a folksy whole-earth mixture that includes native New England wisdom as well as quotes and allusions ranging from Thoreau and Louis Bromfield to Chinese poets and philosophers.

The book is full of good advice for a pond-builder, and it nourishes a romantic country soul as well.

Hazel Kellogg

The Sierra Club Guide to the National Parks: Pacific Southwest and Hawaii

A Stewart, Tabori and Chang Book, Random House, N.Y. \$11.95. F859 S56 1984.



The Sierra Club Guide to the National Parks: Desert Southwest

A Stewart, Tabori and Chang Book, Random House, N.Y. \$11.95. F787 S56 1984.

Published information on this country's national parks is not exactly scarce, but these two books manage to offer a new mix of concise practicality and attractive format. They are part of a series distributed by Random House for Stewart, Tabori and Chang, in cooperation with Sierra Club and the National Park Service.

This series covers each of the 48 U.S. national parks in five regional guides—the Desert Southwest, the Pacific Southwest and Hawaii, the Rocky Mountains, the Pacific Northwest, and the Midwest and East.

Within the guidebooks, each park is treated separately, giving adequate, though not exhaustive information, on early exploration, history, natural history, and special features, as well as trails, campgrounds, and other accommodations.

Photographs and maps are excellent. A brief, full-color appendix of the most common plants and animals is included at the end of each book as is a useful index of the contents.

These books are sure to be well used.

Jean Williams.

Plant Speciation, Second Edition

By Verne Grant. Columbia University Press, N.Y., 1981. \$30.00. QH 368.5 G737P1.

This standard of botanical literature was originally written in 1971 by Verne Grant, professor of botany at the University of Texas. Now in its second edition, the highly technical 500-page book covers the many methods plants have of perpetuating a particular line. Not only is natural sexual reproduction discussed, but so are complex genetic systems and hybridization.

The author, unfortunately, does not explain what he is attempting to show. Chapter follows chapter discussing how particular reproductive strategies work and how they can eventually lead to species, species complexes, or complexes of races, populations, or microspecies. While all this evidence of the complexity of the process of speciation is interesting, Dr. Grant does not offer chapter summaries or conclusions often enough; he does not clearly tie the material together. In addition, understanding the book requires familiarity with plant genetics and its specialized terminology, for example: amphiploidy, agamospermy, permanent translocation heterozygosity, and polyploidy.

As a result, due both to the writing style and the technical nature of the material, the book is very slow, heavy reading. I, for one, would have appreciated a better summary of his evidence. On the other hand, Dr. Grant knows what he is talking about, and many chapters could stand on their own as explanations of one facet of the process of speciation.

My suggestion for reading this difficult but important book is to read the preface and the concluding chapter (Chapter 35) first; then read any concluding or summarizing sections at the end of the intervening chapters before finally attempting the body of the material. The book is a good reference on the mechanics of the process of speciation, but of such a technical nature that its audience is probably limited to botanical professionals.

William F. Jennings

The Yearbook of Landscape Architecture Historic Preservation

Edited by Richard L. Austin, et al.
Van Nostrand Reinhold Co., N.Y.,
1983. \$30.45
SB 472.9 Y43.



Readers familiar with the planning and design process of specific Denver landscape preservation projects (such as 9th Street Historic Park and Four Mile House) will find interesting parallels. Coloradans who wrestle with the issue of drought-resistant plantings will find an article on native vegetation restoration. The inventory project described in "Historic Preservation as Applied to Urban Parks" provides a prototype applicable to most park systems in Colorado. Those interested in "Main Street" revitalization will find a brief history of the development of retailing. Finally, both design professionals and community activists will find case studies emphasizing community participation as a key to successful projects.

Gardening Tips for September

In the spring, we anxiously await new growth to see what survived the winter. Now that fall has arrived, we should do the same. We should reflect on the past few months and take note on what survived the summer.

Like winter, summer wreaks havoc with many plants. Temperatures in both seasons are the most critical factor influencing plant establishment, growth, and development. High temperatures increase the rate of respiration (the intercellular process where food is broken down to release energy). Unfortunately, these same high temperatures may slow down the rate of photosynthesis (the combination of light and chemicals with water to manufacture carbohydrates, or food, in green plants). If total daily respiration consistently exceeds photosynthesis, the plant may survive for a while at the expense of previously accumulated foods. Eventually, however, it will literally starve to death.

High temperatures can also have an immediate effect on the plants. The tissues of various plants may genetically tolerate a certain temperature range. When levels exceed this, death occurs. This may happen when moving young plants from the greenhouse to the outside.

Understanding plant problems is difficult. The vexing issue concerns the interpretation of plant/environment relationships in the field. Many times, to understand problems it is necessary to dissect them into a number of smaller ones and to take into account the continual interplay of genetic and environmental factors within the plant itself.

What did not fare well for you? Why did some plants break bud, leaf out, and then die? Why, on some plants, does the new growth yellow in July and August, yet green up in September? Why do some plants appear faded in the summer and return to a richer color in the fall?

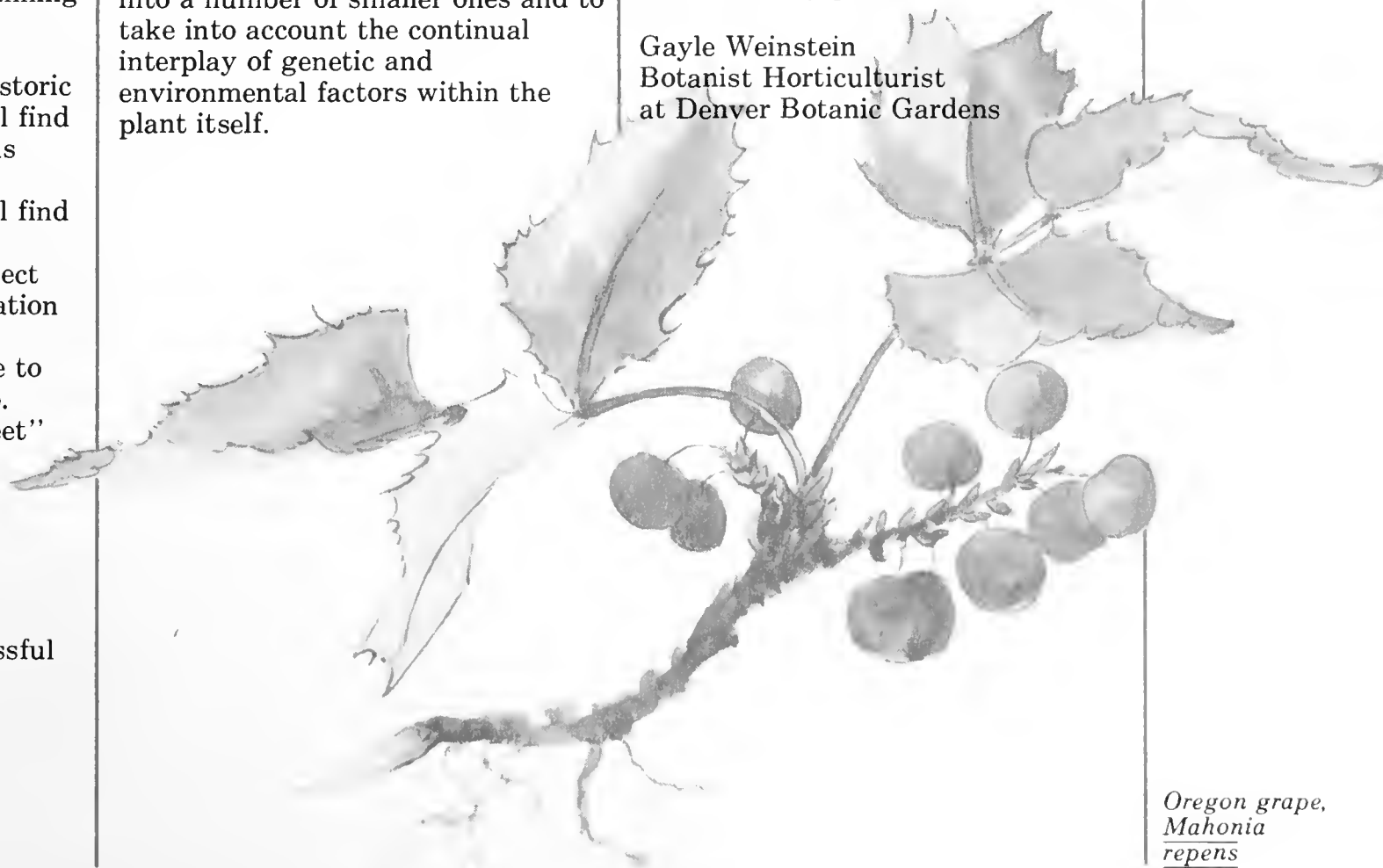
Temperatures affect the chemical reactions of plants. If transpiration increases beyond a temperature threshold, photosynthesis decreases. At the same time, respiration increases. If the top of the plant is losing water more quickly than it can be absorbed, wilting or desiccation will occur. If the plants burn food faster than it can be replenished, the plant may starve. Young transplants with little food reserve may not have enough root system to withstand the heavy water loss or they may not have enough food to develop new growth.

There is a reciprocal relationship among all plant parts. Some new growth is off-yellow in the hottest months. In heavy clay soils, there may be poor movement of nutrients due to heat stress or a poor root system. Therefore, assimilation, or the building of new cells, is hindered.

There are numerous reasons for problems and too many simple answers offered. Make a conscientious effort to be logical and rely on your good sense to evaluate the problems you experienced.

And, by the way, enjoy September with its cooler temperatures and more leisurely pace.

Gayle Weinstein
Botanist Horticulturist
at Denver Botanic Gardens



C SEP

Regular Meetings of Plant Societies

A number of plant and horticultural groups meet fairly regularly at the Denver Botanic Gardens. Here is a listing of those groups and a general indication of when they usually meet. For more specific meeting times and locations as well as for information on how to contact a representative of the group, please call the Botanic Gardens switchboard during business hours at 575-3751.

African Violet Society, 4th Thurs. of 7 months; Bonsai Society, 1st & 3rd Tues.; Botany Club, 3rd Fri.; Cactus & Succulent Society, 2nd Tues.; Civic Garden Club, 1st Fri.; Colorado Native Plant Society, 4th Wed.; Dahlia Society, 2nd Fri.; Gladiolus Society, call for info.; Gloxinia Gesneriad Growers, 1st Sat.; Hemerocallis Society, 3rd Sun. of 4 months; Ikebana International, 4th Fri.; Indoor Light Gardening Society, 3rd Thurs.; Iris Society, spring & fall dates; Men's Garden Club, 4th Thurs.; Mycological Society, 2nd Mon.; Orchid Society, 1st Tues.; Rock Garden Society, 3rd Wed.; Rose Society, 2nd Thurs.; Ultra Violet Club, 4th Mon.

C	A	L	E	N	D	A	R
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2	3	4	5	6	7	8	8
9	10	11	12	13	14	15	15
16	17	18	19	20	21	22	22
23	24	25	26	27	28	29	29
30	Coming Next Month			October 9	October 13	October 20	October 29 and 30
	October 1	October 6	October 9	October 13	October 20	October 29 and 30	October 29 and 30
	Basketry Techniques	The Chocolate Factory	Beginning Wheat Weaving	Munch, Crunch	For the Birds	Pumpkin People	Pumpkin People
	October 3 and 6	Photography in the Gardens	October 11	October 14	October 23	October 27	October 27
	Miniature Corn Workshop		Advanced Wheat Weaving	Japanese Tea Ceremony	Botanical Illustration — Harvest Time	The Fairy Ring	
				October 17-28	Harvest Time		
				Stained Glass Show and Sale			

Denver Botanic Gardens, Inc.
909 York Street
Denver, Colorado 80206
303-575-3751

September 1984

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Glass at the Gardens October 20-28

Attention all stained glass enthusiasts! The fifth annual Glass at the Gardens show begins Saturday, October 20, and runs through Sunday, October 28, from 9 a.m. to 4:45 p.m. in Denver Botanic Gardens' John C. Mitchell II Hall. This annual show, sponsored by the Glass Artist's Fellowship, has grown over the years to reach its present status as a showcase for the most innovative stained glass artists in the Rocky Mountain region. This exhibit consists only of judged and juried art glass works.

Whether you want to enhance your home decor, or spice up your restaurant or office, stained glass is an elegant, powerful, and popular visual medium.

For those wishing to find out more about actual stained glass construction, a demonstration is scheduled Saturday, October 27, to answer your questions. Included will be a videotape on the process of making sheets of colored glass sold in retail stores, and information about classes in the Denver area. Additionally, an automatic slide

show of stained glass works will run the length of the show, pointing out the dramatic differences between before and after stages of installations.

This show runs for nine days, from 9 a.m. to 4:45 p.m., at no charge other than the non-member gate fee. The brilliant color and sparkling light that glass achieves, especially in the setting of Denver Botanic Gardens, should not be missed.

Sixth Annual Carl Tempel Wildflower Lecture to Feature Bill Jennings

Bill Jennings, well-known local botanist and photographer, will present the Sixth Annual Carl Tempel Wildflower Lecture on Thursday, November 1, at 7:30 p.m. in John C. Mitchell II Hall.

Bill Jennings is a consulting engineer by training, but he spends nearly every spare moment in the field, photographing wildflowers. He is especially interested in six plant families: lily (Liliaceae), iris (Iridaceae), orchid (Orchidaceae), cactus (Cactaceae), broomrape (Orobanchaceae), and heath (Ericaceae).

A favorite personal project is his attempt to photograph all 105 of the species from these families that dwell in Colorado. Some occur only in very restricted areas far remote from Denver or have not been seen in decades. Despite these obstacles, however, Bill Jennings is well on his way towards achieving this goal—90 species have been documented so far!

(continued on page 3)

Inside:

Horticultural Therapy Workshop, page 3

DBG Tour to Southeast Asia, page 4

Adult Classes, pages 4-5

Classes for Kids, page 6



"Bird of Paradise," an exciting entry from last year's stained glass show, by Sue Wheeler.

2 Gift Shop Holiday Sale November 16 and 17

The time of year has arrived for you to mark your calendars and reserve some time for a very special event. As usual, Denver Botanic Gardens' Gift Shop volunteers have been working as hard as Santa's elves throughout the year to bring you their grand Holiday Sale.



Harriet McMillan and other members of "Around the Seasons" have been gathering plants this summer for our annual Gift Shop sale.

Tributes

- In memory of Ruby Clements
Kloppenbergs and Company
- In memory of McClelland G. Dings
Charles R. Carr
Mrs. Harold F. Carr
John R. Cooper
Lillie and Henry Fisher
Susan C. Fisher
Dexter K. Griffith
Mrs. Gene Hamby
David C. Hedlund
Mary Klinger
Mr. and Mrs. J.T. Maxwell
- In memory of Clorene Fuller
Mr. and Mrs. Anthony J. Boehm
Pearl McMillen
- In memory of Elsie K. Johnson
Robert D. Johnson
- In memory of Stanley H. Johnson
Mr. and Mrs. Robert M. O'Donnell
- In memory of Gladys N. Kirk
Mrs. Ann Levy
Mr. and Mrs. John D. Turner
- In memory of Caroline Lindsay
Mr. and Mrs. Harlan H. Holben
- In memory of Norma Pennington
John W. Gramelspacher Family

October 31 Associates' Annual Meeting and Luncheon

During this special anniversary year, Denver Botanic Gardens is focusing on the past 25 years in eager anticipation of our future. It is inconceivable, however, to do so without remembering the past 20 years of volunteerism provided by the Associates of Denver Botanic Gardens. Without this group's support and involvement, the Gardens could not have achieved the status of world-class botanic garden. On Wednesday, October 31, at 10:30 a.m., the Associates annual meeting and luncheon will be held in John C. Mitchell II Hall to honor and thank their dedicated members.

October is the time to complete your service record and to renew your membership with the Associates. Your volunteer service records need to be received by Harriet McMillan, 420-4509, no later than October 15.

You are welcome to bring a guest to the luncheon at a cost of \$6.50. Phyllis Dill, 771-4055, is asking that your reservations be placed with her by October 15.

Receiving thanks from the Associates and DBG for your contributions of energy and time is a special honor, but it is also satisfying to congratulate your colleagues for jobs well done. Please attend this meeting and be recognized as a valuable contributor as an Associate of the Gardens.

- In memory of Henry F. Ries
Melvin A. Engeman
Mr. and Mrs. Edward Levy
Jack and Susanne Sommer
Mrs. Roy Wilkinson, Jr.
- In memory of Luther G. Scholl
John L. Buchholz
Mr. and Mrs. Lloyd Charles
Herman and Mabel Feucht
Ruth Jenkins
Lowell P. Leigh
Suzanne Peterson
Mr. and Mrs. Irwin Ruppel
We Bid and How Bridge Club
- In memory of John J. Sheehan
Mary Egleston
- In memory of Stanley T. Wallbank
Mary Ann Robinson
- In memory of Margaret Watson
Bonnie P. Svensson

Botany Club October Program Announced

Dr. and Mrs. John Edwards will provide a slide presentation on spring flowers of Utah National Forests at the monthly meeting of the Botany Club. Members and visitors are invited to attend on Friday, October 19 at 7:30 p.m. in Classroom C.



Pink plumes,
Geum triflorum

Green Thumb News Number 84—10 October 1984

Published monthly by the Denver Botanic Gardens Education Department, 909 York Street, Denver, Colorado 80206, and edited by Patricia A. Pachuta and Carolyn Knepp. Subscription to this newsletter is a benefit of membership in the Botanic Gardens. For membership information, please write the Membership Department at the above address or call 575-3751.

Deadlines for this newsletter are: Major news stories, feature material (including photographs or artwork), and short notes are all due not later than September 20 for November, October 19 for December, and November 20 for January.

Please plan in advance and meet deadlines. Late material cannot be used. Stories must be typed, double-spaced, preferably on copy paper provided by the editor. Please call the Education Department at 575-3751 for details.

"Plant Activities for Therapy"

"Plant Activities for Therapy," a one-day horticultural therapy workshop, will be held at DBG's Pauline A. and George R. Morrison Horticultural Demonstration Center on October 13 from 10 a.m. to 4 p.m. The Morrison Center is located at 2320 East 11th Avenue.

This workshop is aimed primarily at human service providers and features a selection of plant activities that can be integrated into existing programs. Therapists, special education instructors, and other professionals and volunteers involved in therapy and rehabilitation will learn how to assist the handicapped with plant propagation, nature crafts, herb crafts, and herb lore. Additionally, participants will help build a raised planter and learn about its convenient uses in therapy programs.

Workshop details and registration materials can be obtained by calling Julie Dulapa at the Morrison Center, 575-3751. A \$20 registration fee includes materials, lunch, and refreshments. Pre-registration is advised as the number of participants is limited; the deadline for pre-registration is October 5. Walk-in registration will be accepted providing space is available, however, registration at the door is \$23, including lunch.

Conservatory Guides Fall Program

As promised, Conservatory Guides continue to receive opportunities to learn more about Denver Botanic Gardens and our collections. On Wednesday, October 17, at 1 p.m. in Classroom A, the guides can attend a Tree Walk of the Gardens led by DBG botanist horticulturist, Gayle Weinstein. Harriet McMillan has also promised to provide information on the origin of the names of our various buildings.

Diane Ipsen plans to share her knowledge of botanical folklore with the guides on Wednesday, November 7 at 1 p.m., also in Classroom A. All Conservatory Guides are encouraged to attend these educational programs.

Our guides have many opportunities to expand their knowledge of the Gardens through these and other lectures. If you are interested in learning more about becoming a Conservatory Guide, watch the *Green Thumb News*; new guide training classes will begin in January 1985 and registration information will be provided in a later issue.

Annual Fall African Violet Sale

The Rocky Mountain African Violet Council (RMAVC) will hold its annual Fall African Violet Sale on Saturday, October 13, from 9 a.m. to 4:30 p.m. Blooming violets, starter plants, and leaves will be available in profusion in John C. Mitchell II Hall.

As a non-profit organization composed of 16 clubs with more than 200 members, RMAVC endeavors to stimulate interest and appreciation of African violets and other gesneriads. Your questions on pest control, culture, and maintenance of these popular house-

plants will be answered by council members who will be on hand throughout the day of the sale.

This sale is a terrific way to introduce yourself, or a friend, to gardening with African violets. The non-member gate fee will be in effect, but admission to the sale is free. For additional information call Mrs. Doris Hayutin, 758-1861.



Conservatory Guide, Pat Hoffman, introducing a tour of students to the Conservatory.

Wildflower Lecture (cont.)

Readers of our quarterly magazine, *The Green Thumb*, may recall some of Bill Jennings' recent articles: "Predictions of New Wild Flowers in Colorado (Spring 1983), "Nolina Rediscovered in Colorado but Which Species?" (Autumn 1983), and "Pyrolas and Related Plants Native to Colorado" (Summer 1984). His work on our native orchids has been published by the Colorado Native Plant Society in their newsletter.

In his program, "Seldom Seen Plants of the West," Bill Jennings will describe rare or unusual plants found in his travels throughout Colorado, New Mexico, Utah, Arizona, Nevada, California, and Wyoming. Slides from less popular areas such as Hovenweep National Monument in Colorado and Utah, and Bodie Ghost Town State Park in California are prominently featured.

The Carl Tempel Wildflower Lecture Series was inaugurated in 1979 to honor the late Major General Carl W. Tempel of Fitzsimmons Army Medical Center, who was a great lover and photographer of wildflowers.

His wife, Ruth Tempel is a dedicated and valuable volunteer in our gift shop.

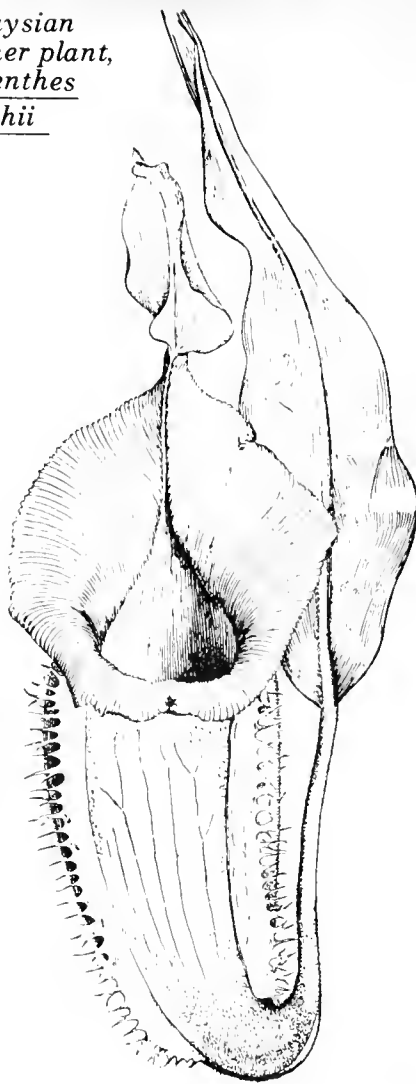
Admission to the lecture is without charge and all are encouraged to attend this enjoyable program.

4 **The Flowering Hills of Southeast Asia**
March 2-26, 1985

A few openings still exist on the roster of adventurers who will be joining their fellow Botanic Gardens' members and our Executive Director, Merle Moore, in an exploration of exotic "hill stations" and cultures of Southeast Asia. Leave behind the chill winter winds of Denver and travel to Taiwan, Borneo, Singapore, Malaysia, Thailand, and Hong Kong, where lush forests abound with orchids, pitcher plants, and numerous other floral treasures and oddities of the tropical jungle. Private garden tours, magnificent hotels and lodges, and numerous opportunities to shop in world renowned Asian markets for the finest silks, batiks, jade, silver, and every imaginable oriental treasure are also included in our itinerary.

If you would like to reserve a place on our tour, or would like more information about it, please contact the Gardens at 575-3751 during normal business hours.

Malaysian pitcher plant, Nepenthes veitchii



Artist, Gary Michael, at the Aquatic Plant Display.

New Gesneriad Club Forming

Gesneriad lovers are receiving another opportunity to gather and discuss the culture of these popular house plants. In addition to the Saturday meeting for Gloxinia Gesneriad Growers, a second gesneriad club is forming to meet on Sunday afternoons. If this interests you, call Emma Lahr at 771-5200 for details.

Denver Rose Society Meeting on October 11

Climbing roses can present some unique growing problems in Denver. Jo Kendzerski will present a program on "Growing and Pruning Climbing Roses" October 11. Denver Rose Society members encourage the public to attend this meeting in the Denver Botanic Gardens' House, 909 York Street. The presentation will begin at 7:30 p.m.

Education Department

Photography in the Gardens

Saturdays, October 6,13,20,27
(four sessions)
Classroom C 9 a.m. to noon

This four-session course is designed to increase your knowledge and confidence with a camera. Technical as well as aesthetic concerns will be discussed in a hands-on atmosphere.

In the first session, students will become acquainted with basic photographic techniques at the Gardens.

Subsequent sessions will provide picture-taking experience and the instructor will offer advice while the students are working with their cameras.

Finally, class members will learn to edit and will present a finished set of slides or photographs at the last session.

Any camera is appropriate for this class and photographs can be taken in color or black and white.

Instructor: Drex Brooks received a master's degree in fine arts from the Rhode Island School of Design and has extensive teaching experience. His work is exhibited widely and is included in the permanent collections of the Polaroid Corporation, the Rhode Island School of Design Museum of Art, and the Contemporary Oregon Photographers' Permanent Collection in Salem, Oregon.

Fee: \$48 members/\$53 non-members

Limit: 12

Beginning Wheat Weaving

Tuesdays, October 9,16,23,30
(four sessions)
Classroom B 7 to 9 p.m.

Wheat weaving, also known as corn dolly plaiting or straw decoration work, is a centuries-old craft that is practiced in almost all of the grain-producing countries. In this series of workshops you will learn how to clean and work with wheat. Various weaving techniques will be taught to complete harvest wreaths, mordifords, Welsh fans, and other unique decorations.

Please bring scissors to class.

Instructor: Maureen McGowan is a horticultural instructor and consultant who has taught various craft classes, including wheat weaving at the Chicago Botanic Gardens and DBG.



Fee: \$40 members/\$44 non-members (includes an \$8 materials fee)

Limit: 15

Advanced Wheat Weaving
Thursdays, October 11,18,25 and November 1

(four sessions)
Classroom B 7 to 9 p.m.

This series of workshops is a continuation of the wheat weaving course held last fall. Advanced techniques for larger, more complicated projects such as house blessings, brides-of-corn, and harvest dolls will be taught. Experience with different grains such as Italian and brown bearded wheat, oats, and barley will be provided.

Either the instructor's consent or previous enrollment in a wheat weaving course is necessary. Please bring scissors to class.

Instructor: Maureen McGowan is a horticultural instructor and consultant who has taught various craft classes, including wheat weaving, at the Chicago Botanic Gardens and DBG.

Fee: \$46 members/\$51 non-members (includes a \$14 materials fee)

Limit: 12

Botanical Illustration—Harvest Time

Tuesdays, October 23,30, November 6,13,20,27

(six sessions)
Classroom B 9:30 to 11:30 a.m.

In this introductory course, you will learn how to draw fall fruits, flowers, seeds, and berries very accurately in pen and pencil and will finally progress to watercolors. Increase your knowledge, observation, and enjoyment of autumn plants at the Gardens.



Paper, pencils, and erasers will be provided. Please do not purchase additional materials before coming to class.

Instructor: Angela Overy studied graphic arts and has extensive teaching experience. Her enthusiasm results in very popular classes at DBG.

Fee: \$48 members/\$53 non-members

Limit: 20

Forcing Bulbs

Section I: Saturday, November 10 10 to 11:30 a.m.

Section II: Wednesday, November 14 7 to 8:30 p.m.

(one session)
Classroom B

Please indicate your section on the registration form.

The process of causing spring-flowering bulbs to bloom by other than naturally occurring conditions is called *forcing*. Learn this technique so that you can enjoy an assortment of spring blossoms while it is cold and dreary outside. Students will pot up bulbs during class to take home.

Instructor: Pat Pachuta is a horticulturist and education director at DBG. She has taught horticultural classes for ten years.

Fee: \$13 members/\$14 non-members (includes a \$7 materials fee)

Limit: 15

Denver Botanic Gardens
909 York Street
Denver, Colorado 80206

Fees for courses should be paid in advance by check or money order made out to Denver Botanic Gardens. Since the space is limited in many courses, registration should be mailed in promptly. Your registration will NOT be acknowledged. Your name will be placed on the class list on the day your money is received. No enrollments for class by phone please. All courses are given subject to a minimum enrollment of ten students. For further information, please call 575-3751.

Registration Form for Classes and Field Trips

The enclosed check, in the amount of _____, is to cover the registration fees for the following classes:

Name and section of classes _____

Name _____

Address _____

City _____ State _____ Zip _____

Home Tel. No. _____ Business Tel. No. _____

Member of Denver Botanic Gardens? Yes No

The Chocolate Factory

Saturday, October 6
(one session)

Section I: For children of ages 5-7
10 a.m. to noon

Section II: For children of ages 8-11
1 to 3 p.m.

Classroom A

Please indicate your section on the registration form.

Take a tour of Mother Nature's confectionery and see the garden where sugar, spices, and chocolate grow. Learn how the sweetest candies are made from roots, seeds, and fruits. See how chocolate is made from the cacao seeds and discover which jungle orchid is used to make ice cream. All recipes will be served to immediately satisfy your sweet tooth.

Instructor: Jo Duranceau Cannon studied art at the University of Washington and the University of Denver and has extensive teaching experience with children.

Fee: \$6.50 members/\$7 non-members

Limit: 12

Munch, Crunch

Saturday, October 13
(one session)

Section I: For children of ages 5-7
10 a.m. to noon

Section II: For children of ages 8-11
1 to 3 p.m.

Classroom B

Please indicate your section on the registration form.

Take a journey into the world of carnivorous plants. Learn how a Venus fly trap "counts" to catch an ant, how the pitcher pond creates a deadly pond, and how the sundew tricks a bug. Each child who ventures into this garden will receive his own Venus fly trap.

Instructor: Jo Duranceau Cannon

Fee: \$8 members/\$9 non-members

Limit: 12

For the Birds

Saturday, October 20
(one session)

Section I: For children of ages 5-7
10 a.m. to noon

Section II: For children of ages 8-11
1 to 3 p.m.

Classroom A

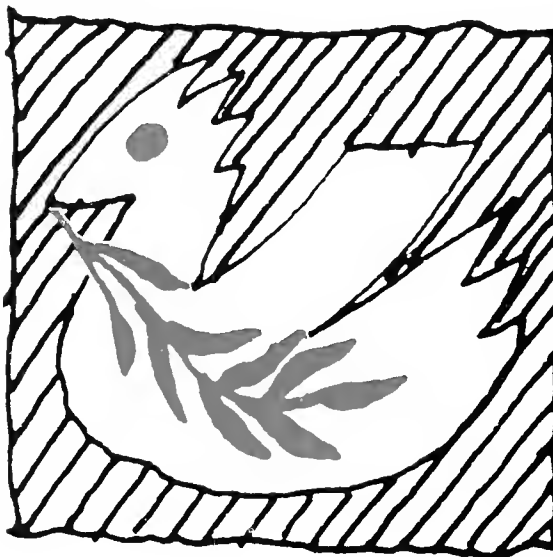
Please indicate your section on the registration form.

Learn surprising ways to make your own bird feeders. Explore the Gardens to see what flowers and trees will attract birds to your backyard. Follow recipes to make a bird feast. Color-in a guidebook to help identify your feathered visitors.

Instructor: Jo Duranceau Cannon

Fee: \$6.50 members/\$7 non-members

Limit: 12



The Fairy Ring

Saturday, October 27

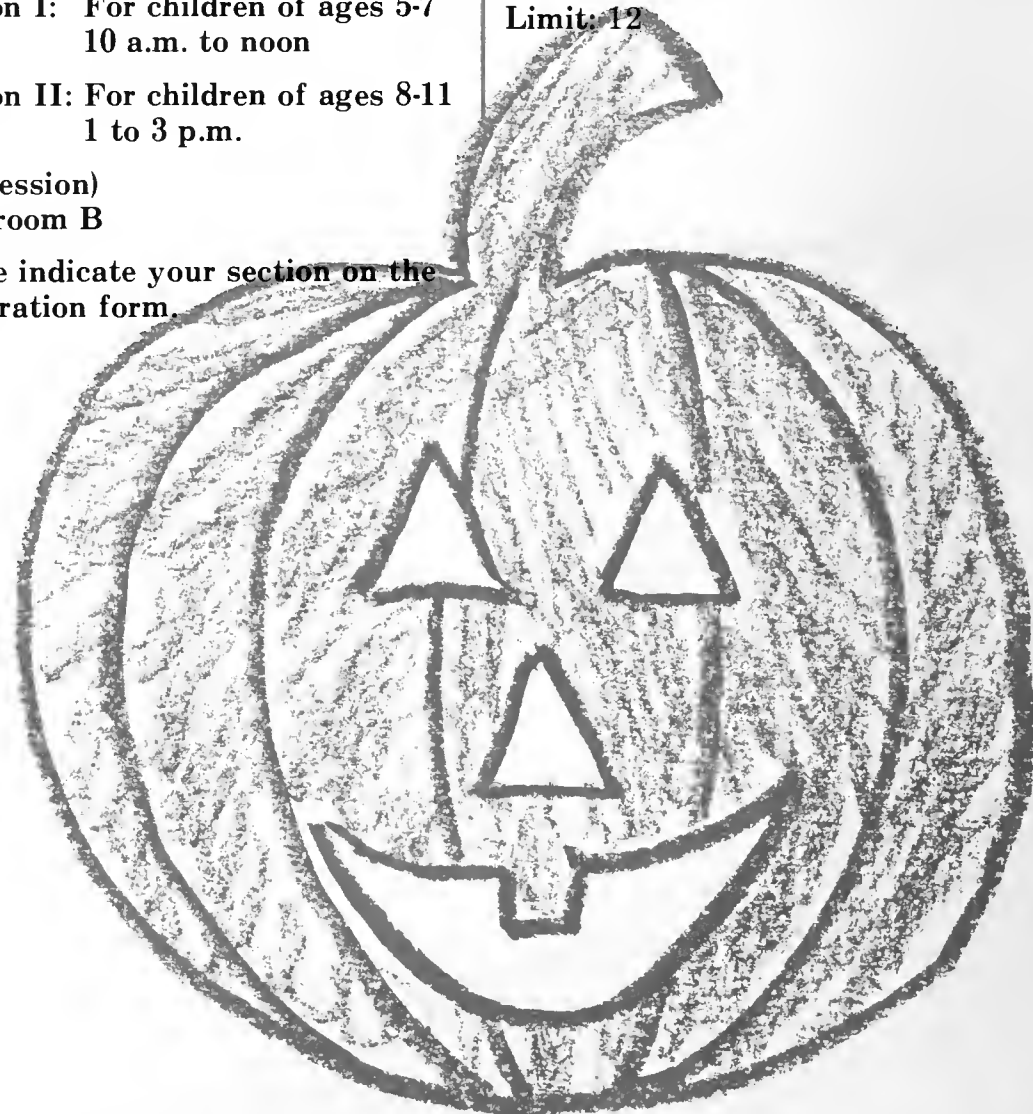
Section I: For children of ages 5-7
10 a.m. to noon

Section II: For children of ages 8-11
1 to 3 p.m.

(one session)

Classroom B

Please indicate your section on the registration form.



Join the leprechauns and listen to the Halloween tales of the fairy rings. Learn about mushrooms and toadstools which appear at night for elves to sit on. Find out why mushrooms grow in a ring and never have flowers. Discover flowers that lure bats from bellfries. Make ghosts appear on starry nights, create a mask that would scare even a witch, and open the door to your own haunted house.

Instructor: Jo Duranceau Cannon

Fee: \$6.50 members/\$7 non-members

Limit: 12

Pumpkin People

Section I: For children of ages 5-7
Monday, October 29

Section II: For children of ages 8-11
Tuesday, October 30

(one session)

Classroom A 3:30 to 5:30 p.m.

Please indicate your section on the registration form.

Visit our pumpkin patch and create a cast of pumpkin people. From the jack-o'-lantern to the pumpkin cat, learn how to carve and paint pumpkins. Use fall's cornucopia to supply the nose for a witch or ears for a clown. See how pumpkins grow and taste the best of pumpkin concoctions.

Instructor: Jo Duranceau Cannon

Fee: \$6.50 members/\$7 non-members

Limit: 12

Gardening Tips for October

Fall is another spectacular season for color. While much color may still be from floral displays, a large portion is due to changes in leaf color. Why leaves turn at this time of year is an interesting phenomenon, and, although the entire process is not fully understood, the general nature of the change is known.

All leaves contain two types of color pigments: chlorophyll, which is green, and carotenoids, which are orange (carotenes) or yellow (xanthophylls). Chlorophyll plays a primary role in the process of photosynthesis. Carotenoids are always present but are normally masked by the more dominant chlorophyll. Red pigments (anthocyanins), which mask both chlorophyll and carotenoids, are present only in some plants under specific weather conditions.

For leaves to remain green, chlorophyll must continually be synthesized. As fall approaches, the plant's metabolism slows, causing a gradual reduction of chlorophyll production in the leaf. Carotenoids are more stable and do not break down as readily, therefore as fall progresses, yellows or oranges are revealed by the lower concentration or absence of chlorophyll. If carotenes predominate, the color will be orange. If xanthophylls predominate, the color will be yellow.

Red coloration is due to water-soluble anthocyanins. In the fall, when conditions are favorable, red pigmentation in the leaves increases at the same time that chlorophyll decreases. Carotenoids are still present, but now are masked by anthocyanins instead of chlorophyll.

Weather directly influences red pigment production. The most brilliant colors occur after sunny days and cold nights. High light intensity increases sugar production, while lower temperatures reduce translocation of sugar to other parts of the plant. Sugar accumulates in the leaves, and the concentration of red pigments increases when there is an excess of sugar. If an early hard frost occurs with rain or high winds, the foliage will be killed prematurely, preventing a vivid autumn display.

Besides colorful foliage, October conjures up a brilliant display with garden chrysanthemums. These herbaceous perennials complete a well-planned garden and extend the growing season enhancing the fall landscape long after tender annuals have succumbed to light frosts.

The best selection of chrysanthemums are those that are cold hardy, early bloomers, and less than two feet tall. These criteria are important in areas where severe freezes, early fall snows, and strong winds occur.

Spring is the usual planting time, however, established clumps can be dug and moved to another area any time, even while the plants are in bloom, providing the soil is not frozen. Chrysanthemums are easy to grow, thriving on soil rich in organic matter, and they respond to moderate fertilization. Occasional waterings in fall after flowering is over and during dry winters will increase their chances for winter survival.

After they have bloomed, pick off the flowers, leaving the foliage through the winter. The dead tops should remain until spring as they

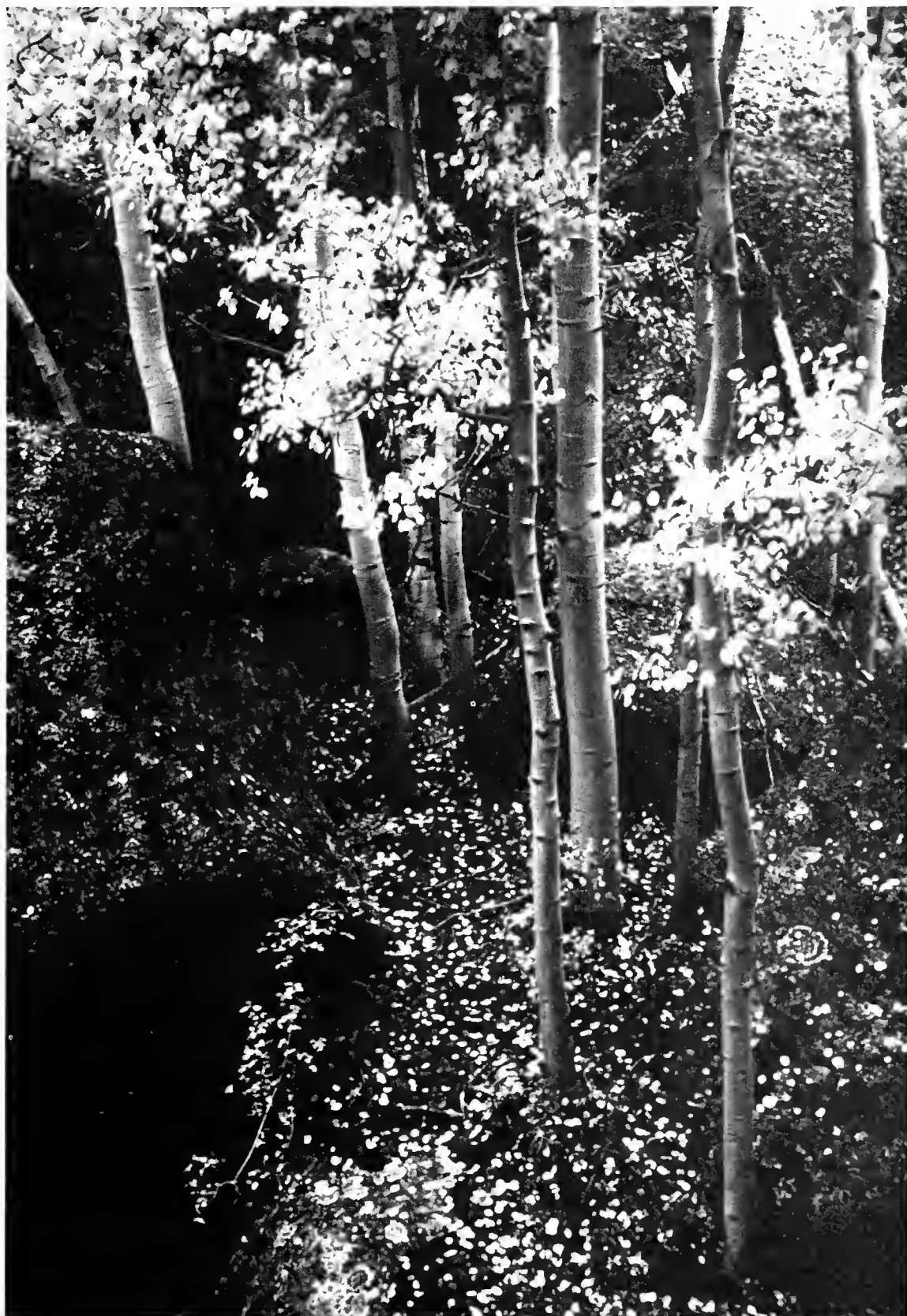
help to hold snow on the plants and protect them in the winter.

Chrysanthemums should be divided every two years, for older clumps are more subject to winter kill. Divide them in spring when the plants are a few inches tall. Discard the older center of the clump and re-plant the surrounding rooted shoots.

For the past five years some of the chrysanthemums that have been most reliable are 'Pilgrim' (deep red), 'Puritan' (clear white), 'Buffalo' (bronze yellow), 'Starlet' (yellow), and 'Centerpiece' (lavender).

These and many more are displayed at the Gardens near the south end of Linden Alle, the Peony Garden, the Hildreth Garden, the Cutting Garden, and the Perennial Borders.

Gayle Weinstein
Botanist Horticulturist at
Denver Botanic Gardens



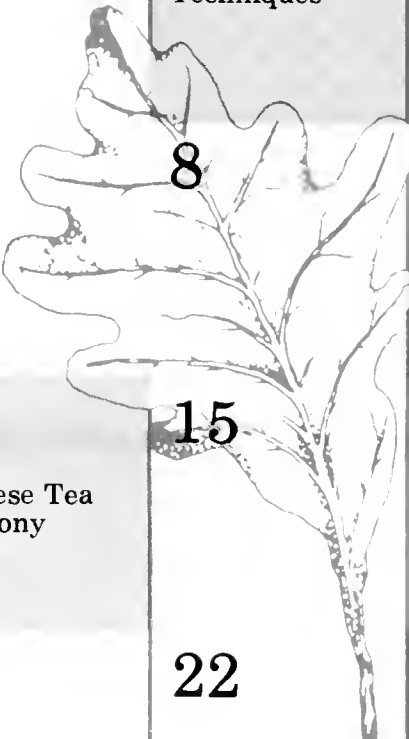
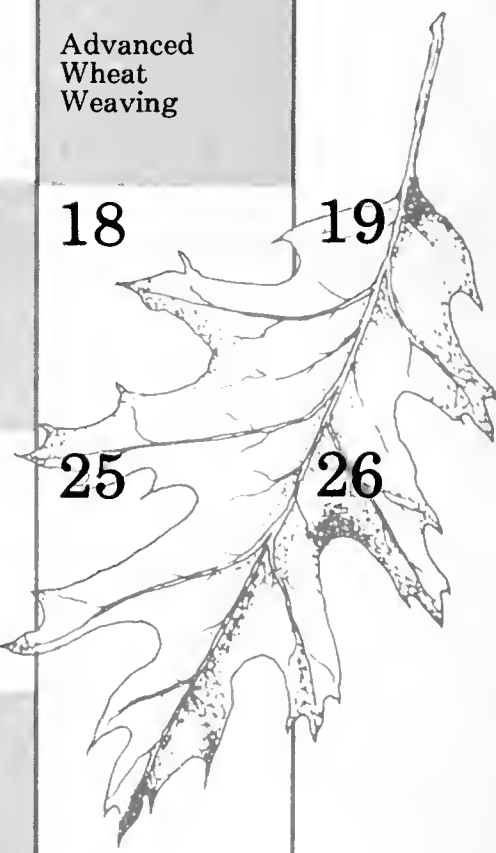
"Aspen Gold"
by Herbarium
volunteer,
Loraine Yeatts.

C T O

Regular Meetings of Plant Societies

A number of plant and horticultural groups meet fairly regularly at the Denver Botanic Gardens. Here is a listing of those groups and a general indication of when they usually meet. For more specific meeting times and locations as well as for information on how to contact a representative of the group, please call the Botanic Gardens switchboard during business hours at 575-3751.

African Violet Society, 4th Thurs. of 7 months; Bonsai Society, 1st & 3rd Tues.; Botany Club, 3rd Fri.; Cactus & Succulent Society, 2nd Tues.; Civic Garden Club, 1st Fri.; Colorado Native Plant Society, 4th Wed.; Dahlia Society, 2nd Fri.; Gladiolus Society, call for info.; Gloxinia Gesneriad Growers, 1st Sat.; Hemerocallis Society, 3rd Sun. of 4 months; Ikebana International, 4th Fri.; Indoor Light Gardening Society, 3rd Thurs.; Iris Society, spring & fall dates; Men's Garden Club, 4th Thurs.; Mycological Society, 2nd Mon.; Orchid Society, 1st Tues.; Rock Garden Society, 3rd Wed.; Rose Society, 2nd Thurs.; Ultra Violet Club, 4th Mon.; Water Garden Society, 2nd Sun. of 5 months

C	A	L	E	N	D	A	R
	S	M	T	W	T	F	S
		1	2	3	4	5	6
		Basketry Techniques		Miniature Corn Workshop			Miniature Corn Workshop The Chocolate Factory Photography in the Gardens
	7	8	9	10	11	12	13
			Beginning Wheat Weaving		Advanced Wheat Weaving		African Violet Sale Munch, Crunch
	14		15	16	17	18	19
	Japanese Tea Ceremony			Free Day for Denver City/County Residents			For the Birds October 20-28 Stained Glass Show and Sale
	21	22	23	24	25		26
			Botanical Illustration—Harvest Time				The Fairy Ring
	28	29	30	31			
		Pumpkin People	Pumpkin People	Associates Annual Luncheon Meeting			

Coming Next Month

November 1
Tempel
Wildflower
Lecture

November 10
or 14
Forcing Bulbs

November
16-17
Gift Shop
Holiday Sale

Denver Botanic Gardens, Inc.
909 York Street
Denver, Colorado 80206
303-575-3751

October 1984

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N

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S

*Inside:**Adult Classes,
pages 4-5**Classes for
Kids, pages 6-7**Fragrant
botanicals
tucked into
sachets and
tranquility
pillows.***November 16 and 17 Gift Shop Annual Holiday Sale**

Tradition (tre dish' en) n. 1. the handing down of statements, beliefs, legends, customs, etc., from generation to generation, esp. by word of mouth or by practice.

—*The Random House Dictionary of the English Language*

Everyone has certain traditions that warm their holiday season. For some, it's listening to Handel's *Messiah*. For others, it's watching a performance of *The Nutcracker*, caroling, or just making grandma's special eggnog recipe each year.

At the Gardens, of course, it's the Annual Holiday Gift Sale.

This year's sale, the 21st, will be held on Friday, November 16 and Saturday, November 17, from 10 a.m. to 4:30 p.m. On sale will be some old favorites as well as some new items sure to become treasures.

Amber jewelry: prized since primitive times, this fossilized resin makes superb jewelry and DBG features the largest collection in Colorado. Necklaces, rings, and bracelets in a broad price range—

most come with botanical inclusions. One-of-a-kind pieces.

Mixed herb and tarragon vinegar: a secret recipe handed down from generation to generation. These pints make charming stocking stuffers and add zest to everything from salad dressings to spaghetti sauces.

Bells: a wide selection to help you ring in the New Year. Lead crystal, *cloisonne*, and ceramic bells.

(continued on page 2)

2 Gift Shop Annual Holiday Sale (cont.)

Music boxes: Old World and modern designs. Gorham ceramic birds, Peter Rabbit characters from Beatrix Potter's charming children's books, and laser-cut designs on walnut music boxes and mini-music boxes give the holiday shopper a wide choice.

Chinaware: Japanese-made bone china with floral designs. Cups, plates, canister sets, and mugs. Special English porcelain demitasse cups are featured.

Tree ornaments: Mount St. Helens tree ornaments, individually made or blown, make lovely additions to your Christmas tree. Delicate but durable, sure to become family heirlooms.

For the kitchen: elegant and practical linen towels in fresh, new designs; wooden spoon racks, card and note holders, napkin holders, towel racks, and canister sets and tiles that look like they came right



off the pages of an elegant kitchen catalog. English table mats and coasters in the newest designs will also be available.

For the office: crystal paperweights with botanic designs, laser-craft carved desk items, cigarette lighters, and stationery. Duck decoys in a variety of styles to bring the outdoors into every office setting.

Fragrances: fragrant botanicals tucked into delicate sachets and tranquility pillows. Ready-made or buy all the ingredients to custom-make your own potpourri.

From the Orient: antique Chinese silk paintings, framed and matted; one-of-a-kind decorator pieces made from antique pottery shards, set in silver and mounted on ornamental rosewood bases; silk embroidery panels taken from tapestries and Chinese silk robes suitable for framing or as wall-hangings; boxes; lipstick holders; jade trees; ginger jars and vases; porcelain figurines; carved cork landscapes; carved soapstone figurines, and design pieces, and embroidered and appliqued fingertip towels, aprons, placemats, and handkerchiefs give the holiday sale a distinctly Oriental air. A best buy recommendation: an extensive variety of *cloisonne* art works. *Cloisonne* is the ancient Chinese art of enamelwork in which colored areas, frequently made of glass, are delicately set apart in designs by precious metal bands. Ikebana vases available in a variety of designs from the classic to the modern.

Garden sculpture: Denver Botanic Gardens is the exclusive distributor of Isabel Bloom garden sculptures. Cast in colored concrete, each piece is hand-finished and made to resemble bronze garden sculptures of the Victorian era. Each sculpture

is finished with a weather-resistant resin. Great for indoor use as well.

For entertaining: lacquerware trays, boxes, tea sets and cups, and vases are on hand.

Everlastings: a tradition at the holiday sale. Dried flowers and grasses, pods and cones, gourds and strawberry popcorn for use in crafts and harvest-time decorations are always popular. Most have been gathered and carefully prepared for you from our Cutting Garden.

For the kids: a wide selection of children's books including the Beatrix Potter series of books featuring childhood favorites like Peter Rabbit and Squirrel Nutkin. Teddy bear magnets, mechanical toys, and fabulous wind-up toys are also included.

For the grown-up kids: the collectors of adult toys will appreciate the wide selection of Artesania Rinconada's hand-crafted ceramics from Montevideo, Uruguay. An ark of these collectibles can be found.

For the armchair gardener: more than 500 book titles will be available on topics as exotic as Japanese gardens to topics nearer to home like Rocky Mountain gardening techniques.

Remember to come early since some items like the mixed herb and tarragon vinegars go fast.

Green Thumb News Number 84—11 November 1984

Published monthly by the Denver Botanic Gardens Education Department, 909 York Street, Denver, Colorado 80206, and edited by Patricia A. Pachuta and Carolyn Knepp. Subscription to this newsletter is a benefit of membership in the Botanic Gardens. For membership information, please write the Membership Department at the above address or call 575-3751.

Deadlines for this newsletter are: Major news stories, feature material (including photographs or artwork), and short notes are all due not later than October 19 for December, November 20 for January, and December 20 for February.

Please plan in advance and meet deadlines. Late material cannot be used. Stories must be typed, double-spaced, preferably on copy paper provided by the editor. Please call the Education Department at 575-3751 for details.

Tributes

In honor of Mr. and Mrs. William Collister

Mr. and Mrs. Patrick Owen

In honor of Mr. Newell M. Grant and Mr. and Mrs. William W. Grant

Mr. and Mrs. Chard P. Smith, Jr.

In memory of Margaret Elizabeth Roman Andrikopoulos

A. G. Andrikopoulos

In memory of Laurene W. Berger

Mr. and Mrs. John T. Stoddart, Jr.

In memory of Mrs. Walter (Betty) Buch

Mr. and Mrs. Jack E. Hanthorn

In memory of McClelland G. Dings

Mr. and Mrs. Fred W. Cater

In memory of Hattie Fears

Joseph A. Araujo

Robert L. Cushing

Stan Vandre's Mechanical and Refrigeration Co.

In memory of Mr. and Mrs. Kenneth Furry

Rhita S. Florey

In memory of Mrs. Rose M. Keohane

Solange Gignac

In memory of Gladys N. Kirk

Mrs. William Temple

In memory of Marjorie Nelson

Mrs. William Temple

In memory of Marjory Parfet

Mrs. Holly Coors

In memory of Henry F. Ries

Mr. and Mrs. Edwin Park

Chris, Sarah, Jennifer, and Wendy Thomas

In memory of Mrs. Mae L. Thompson

Mrs. H. Gene Harrison

In memory of Francis S. VanDerbur

Mr. and Mrs. John Falkenberg

New Conservatory Guides Class

Did you know that both black and white peppercorns come from the same plant? Or that vanilla comes from a climbing vine that is actually an orchid?

DBG's Conservatory Guides not only know and share this information with visitors, but much more. In the new guide training classes beginning January 10 and continuing on Thursdays through March 14 from 9:30 to 11:30 a.m., students will receive an orientation to the resources in the library, an introduction to basic botany and its language, and botanical information on the Conservatory plants. Touring techniques will also be included.

Denver Botanic Gardens offers this opportunity to learn while contributing a valuable service to anyone interested in plants, willing to help others, and able to donate some time. You need not be a member of the Gardens to apply. The \$25 registration fee will be refunded after 40 hours of guiding.

This 10-week training program begins in Classroom A. To register for this class, use the Education Department registration. For additional information, call Carolyn Knepp in the Education Office at 575-3751. Class size is limited, so pre-registration is required. Previously trained guides are encouraged to attend any session as a refresher course. A complete schedule of the guide classes will be available December 5 at the Guides' Christmas Tea in the Denver Botanic Gardens' House.

Greenhouse staff member Karen Trout.



Expanding Horizons—Horticulture and Other Topics

An all-day workshop, sponsored by the Central Rocky Mountain Chapter of the National Council for Therapy and Rehabilitation through Horticulture, will be held November 7 at Craig Rehabilitation Hospital in Englewood.

Regional horticultural therapists are sponsoring a full-day workshop, open to therapy professionals and the interested public, on the concepts supporting the many therapies.

Discussions will focus on the interactions of horticulture and other therapies; networking, and case reviews. Regional horticultural therapy programs, including Denver Botanic Gardens', will be reviewed. For additional information, call Julia Beems, at 789-8225.

A Gift to the Gardens

Did you read your Annual Appeal letter? Have you answered with a Gift to the Gardens?

Every contribution counts—large or small! Most of us give to the Gardens because we believe in its goals, its commitments, and its future!

Your tax-deductible contribution helps, please GIVE—we need your support.

Thank you.

Gloria Falkenberg
Director of Development

Ananas comosus, pineapple, in our Conservatory.



Herald the Season on December 16

On Sunday, December 16, from 4 to 6 p.m., the Colorado Children's Chorale will sing selections from *A Child's Christmas in Wales* for our annual "Herald the Season" Christmas celebration. Join us for caroling, punch, and cookies; and catch an early glimpse of the Gardens' tree. Invitations will be mailed to members after Thanksgiving. Plan to share this festive afternoon with other members of the Gardens.



Botany Club Members Meet November 16

The November Botany Club meeting features a slide presentation of the Florida Everglades provided by Dr. Richard Schwendinger. Members of the Botany Club and visitors are welcome to attend and observe the botany of this distinct plant community on Friday, November 16, at 7:30 p.m. in Classroom C.

DBG Conservatory waterfall

Basketry Workshop: Wall Basket

(one session)

9 a.m. to 4 p.m. Classroom B

Section I: Wednesday, December 12

Section II: Saturday, December 15

Please indicate your section on the registration form.

This basket is a traditional early American design that is useful for holding anything from dried flowers to mail and recipes. Students may choose to make a basket of either letter or magazine size and can expect to complete it in class.

No previous experience is necessary. Please bring a sack lunch and pruning shears or a sharp knife to class.

Instructor: Robin Taylor Daugherty

Fee: \$28 members/\$31 non-members (includes \$8 for materials)

Limit: 10



Sally Scott in Robin Taylor Daugherty's Basketry Workshop.



Market basket (left) and wall basket by Robin Taylor Daugherty.

Basketry Workshop: Market Basket

(one session)

9 a.m. to 4 p.m. Classroom B

Section I: Saturday, November 24

Section II: Tuesday, December 4

Please indicate your section on the registration form.

Learn how to make a traditional New England market basket using the square to round technique. The basket has a slightly open bottom for good ventilation and firmly woven sides in a twill design. The result is an ideal gift that lends itself to a wide variety of uses.

No previous experience is necessary and students can expect to complete a basket approximately 8 inches by 12 inches. Please bring a sack lunch, and pruning shears or a sharp knife to class.

Instructor: Robin Taylor Daugherty

Fee: \$28 members/\$31 non-members (includes \$8 for materials)

Limit: 10

Silkscreen Your Own Stationery or Holiday Cards

(three sessions) Classroom B

Section I: Tuesdays, Nov. 20 - 7 to 9 p.m. and Nov. 27 and Dec. 4 - 6:30 to 9:30 p.m.

Section II: Wednesdays, Nov. 21 - 9 to 11 a.m. and Nov. 28 and Dec. 5 - 9 a.m. to noon

Please indicate your section on the registration form.

Serigraphy, or silkscreen print-making, is a versatile process that allows printing on virtually any surface. No previous art background is necessary and students may even trace their designs.

This course will cover the various methods of stencil preparation, building a screen printing unit, and design considerations for the pulling of successful prints.

Most supplies (except common household items) will be provided and students will receive a basic kit (screen, film, squeegee, inks) so they may continue work at home.

Denver Botanic Gardens
909 York Street
Denver, Colorado 80206

Fees for courses should be paid in advance by check or money order made out to Denver Botanic Gardens. Since the space is limited in many courses, registration should be mailed in promptly. Your registration will NOT be acknowledged. Your name will be placed on the class list on the day your money is received. No enrollments for class by phone please. All courses are given subject to a minimum enrollment of ten students. For further information, please call 575-3751.

Registration Form for Classes and Field Trips

The enclosed check, in the amount of _____, is to cover the registration fees for the following classes:

Name and section of classes _____

Name _____

Address _____

City _____ State _____ Zip _____

Home Tel. No. _____ Business Tel. No. _____

Member of Denver Botanic Gardens? Yes No



Instructor: Peggy Johnston studied art education at the University of Wyoming and Western Wyoming Community College. She has extensive teaching experience and her work is shown throughout Colorado and Wyoming.

Fee: \$50 members/\$55 non-members (includes an \$18 materials fee that covers paper and envelopes for 40 cards as well as all other materials)

Limit: 12

Harvest Grapevine Wreath Workshop

Monday, November 12
(one session) Classroom B

Section I: 1 to 4 p.m.

Section II: 6:30 to 9:30 p.m.

Please indicate your section on the registration form.

Create a unique wreath of all natural materials from the wild or your garden. Students will receive an 18-inch grapevine wreath and assorted dried flowers and ribbon to decorate it.

Please bring wire cutters, scissors, and any special materials (cones, artificial and dried fruits, silk flowers, ribbons) you might wish to include.

Instructor: Robin Taylor Daugherty is a fiber artist with considerable teaching experience: she has taught weaving, spinning, felting, tapestry-making, and basketry throughout Colorado and her work is exhibited widely.

Fee: \$27 members/\$30 non-members (includes a \$15 materials fee)

Limit: 12



Holiday Grapevine Wreath Workshop

Thursday, December 6
(one session) Classroom B

Section I: 1 to 4 p.m.

Section II: 6:30 to 9:30 p.m.

Please indicate your section on the registration form.

Create a wreath for Christmas of all natural materials from the wild or your garden. Students will receive an 18-inch grapevine wreath and assorted dried flowers and ribbon to decorate it.

Please bring wire cutters, scissors, and any special materials (cones, artificial and dried fruits, silk flowers, ribbons) you might wish to include.

Instructor: Robin Taylor Daugherty

Fee: \$27 members/\$30 non-members (includes \$15 for materials)

Limit: 12

Design Your Own Botanical Cards

Mondays, November 19, 26,
December 3

(three sessions)

Classroom B 9 a.m. to noon

Have you ever longed to design and send handmade holiday or note cards? This is your chance to get organized and do just that.

In this class, students will learn how to make a botanical drawing in pen or pencil, which will be printed in black on a white card. In the last session, the cards will be folded and hand-colored. Please bring pencils and/or technical or other drawing pens.

Students must attend all three sessions.

Instructor: Angela Overy received her National Diploma of Design from London University, England and designed in London, New York, and San Francisco before settling in Denver. Over the years, many DBG students have found a new interest and ability in her enthusiastic classes and lectures.

Fee: \$81 members/\$89 non-members (includes a \$45 materials fee that covers 100 cards, 4¼ by 5½ inches, envelopes, printing, and drawing paper)

Limit: 20

Grapevine wreath by Robin Taylor Daugherty

Christmas Ornaments from Straw and Wheat

(one session)
10 a.m. to 3:30 p.m. Classroom B

Section I: Saturday, November 10

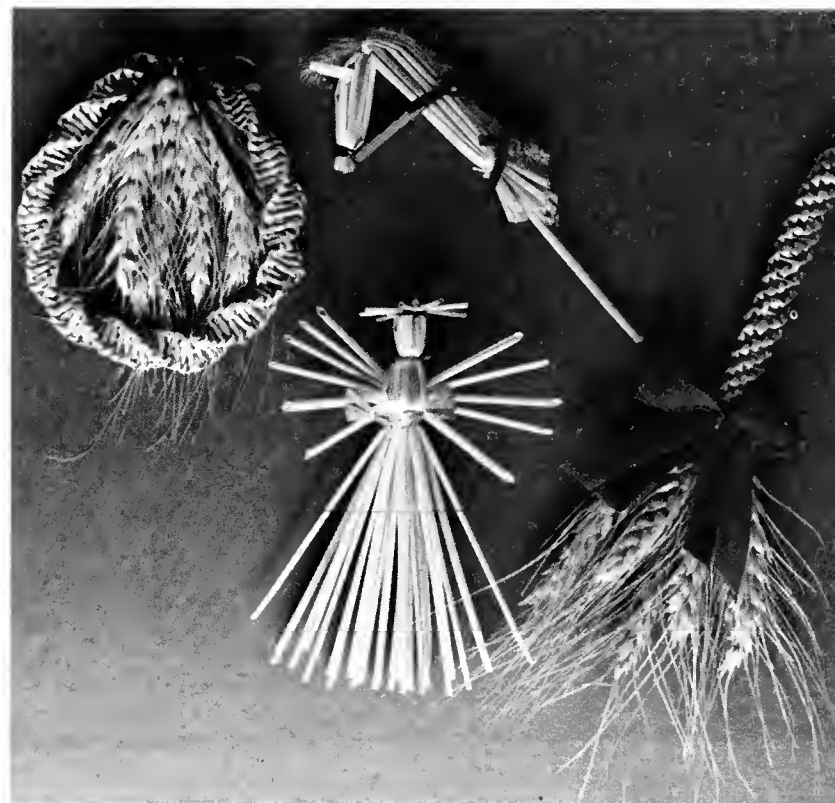
Section II: Saturday, December 1

Section III: Saturday, December 8

Please indicate your section on the registration form.

Come and learn how to make ornaments from straw and wheat, a craft many Scandinavians do each winter for the holiday season. You will make snowflakes, wreaths, horses, angels, and various other unusual tree ornaments. The fee includes wheat for the six or seven ornaments that will be made in the workshop as well as some to take home for others. Please bring a pair of scissors and a sack lunch to class.

Instructor: Maureen McGowan is a horticulture instructor and consultant who has taught various craft



classes, including wheat weaving, at the Chicago Botanic Gardens and DBG.

Fee: \$25.50 members/\$28 non-members (includes a \$5.50 materials fee)

Limit: 15

Christmas straw and wheat ornaments by Maureen McGowan.

Jungle Tigers

Saturday, November 17
(one session) Classroom A

Section I: For children of ages 5-7
10 a.m. to noon

Section II: For children of ages 8-11
1 to 3 p.m.

Please indicate your section on the registration form.

Take a walk through our jungle forest and explore the world where tigers roam. See the vines that monkeys swing on and discover the jungle flowers that perch on trees. Learn about the jungle orchid that "pretends" to be a bee. Design your own jungle mask disguise. Learn many of the jungle's secrets except how to tickle a tiger's chin!

Instructor: Jo Duranceau Cannon studied art at the University of Washington and the University of Denver and has extensive teaching experience with children.

Fee: \$6.50 members/\$7 non-members

Limit: 12

Fruit Punch

Saturday, November 24
(one session) Classroom A

Section I: For children of ages 5-7
10 a.m. to noon

Section II: For children of ages 8-11
1 to 3 p.m.

Please indicate your section on the registration form.

Do you think oranges grow in the supermarket? Visit the Gardens and see how limes, lemons, and papayas grow. Learn how flowers can develop into sweet and delicious fruits. See how pineapples grow. Discover the pink banana flower. Taste our sweet and spicy fruit punch and take home your own miniature orange tree and watch it flower and bear fruit.

Instructor: Jo Duranceau Cannon

Fee: \$6.50 members/\$7 non-members

Limit: 12

The Great Catnip Chase

Saturday, December 1
(one session) Classroom A

Section I: For children of ages 5-7
10 a.m. to noon

Section II: For children of ages 8-11
1 to 3 p.m.

Please indicate your section on the registration form.

Learn about the legends and lore of herbs. Discover how herbs and their flowers are dried, so you can

enjoy their sweet smells all winter long. Create your own catnip mouse to tame the most ferocious feline.

Instructor: Jo Duranceau Cannon

Fee: \$6.50 members/\$7 non-members

Limit: 12

Rainbow Eyes

Saturday, December 8
(one session) Classroom A

Section I: For children of ages 5-7
10 a.m. to noon

Section II: For children of ages 8-11
1 to 3 p.m.

Please indicate your section on the registration form.

See the Gardens through rainbow eyes. Learn how flowers use colors to tempt and tease. Discover how butterflies detect a flower's secret signals. Find out why plants need sunbeams to fuel their green leaf machines. Listen to the tale of the Goblins who plotted to steal the rainbow. Make your own rose-colored glasses or a kaleidoscope of sparkling stars.

Instructor: Jo Duranceau Cannon

Fee: \$6.50 members/\$7 non-members

Limit: 12

The Dance of the Sugar Plum Fairies

Saturday, December 15
(one session) Classroom A

Section I: For children of ages 5-7
10 a.m. to noon

Section II: For children of ages 8-11
1 to 3 p.m.

Please indicate your section on the registration form.

Join the dance of the sugar plum fairies and learn why we decorate with mistletoe and holly for the holidays. Create your own holiday decorations to treasure. Tour the Gardens and enjoy the flowers of winter's light. Taste holiday concoctions from Mother Nature's collection of sugar and spices.

Instructor: Jo Duranceau Cannon

Fee: \$6.50 members/\$7 non-members

Limit: 12

The Sun's Trip

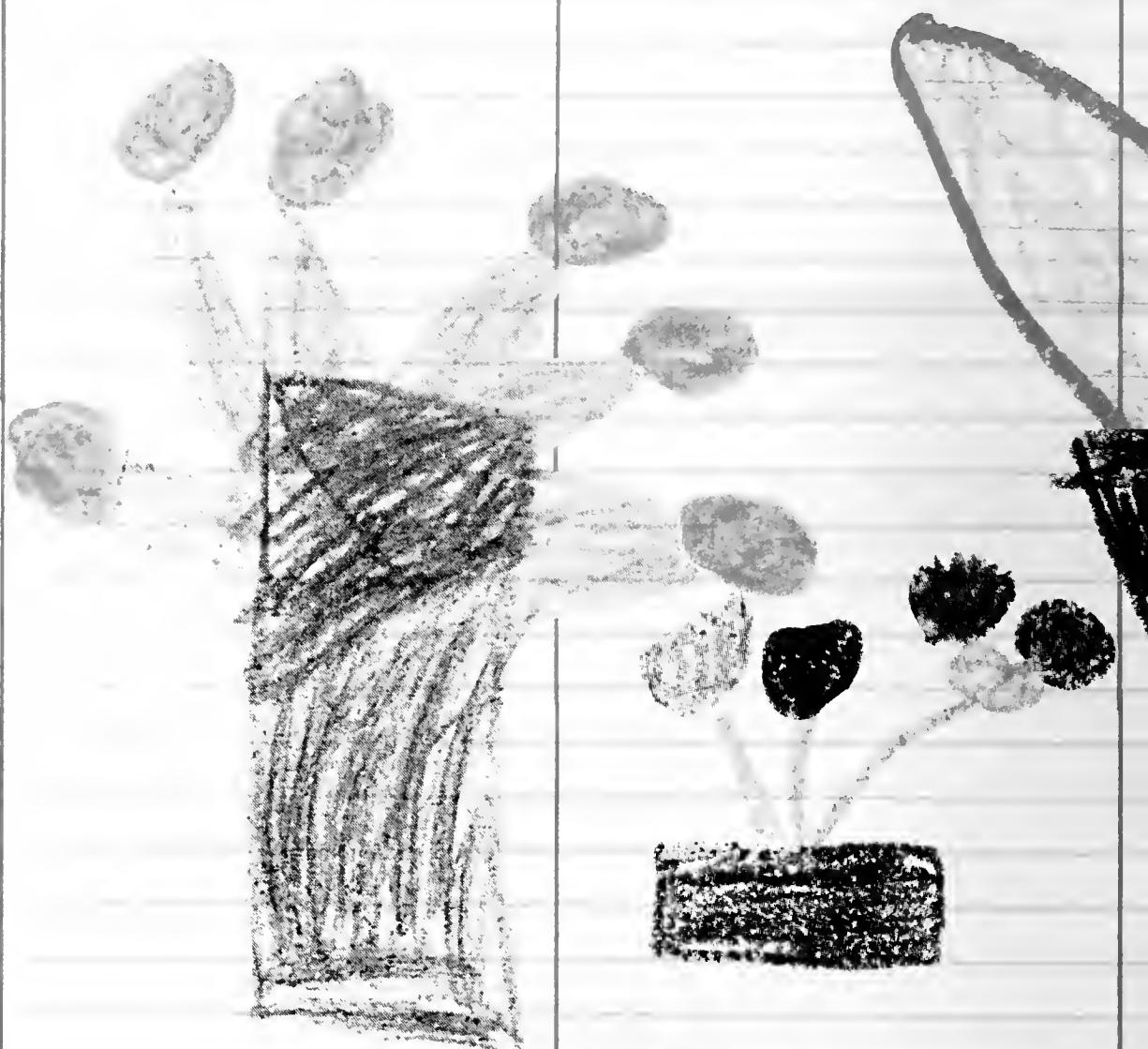
Saturday, December 22—Winter Solstice

(one session) Classroom A

Section I: For children of ages 5-7
10 a.m. to noon

Section II: For children of ages 8-11
1 to 3 p.m.

Please indicate your section on the registration form.



Gardening Tips for November

Visit the Gardens and celebrate the Winter Solstice when the sun appears to stand still at noon. Learn why gardeners and men of ancient times have used the sun to mark the seasons. Tour the Gardens and see how the sun's winter light sends messages to trees and other plants. Make your own sundial to let the sun's shadow tell the day's hours.

Instructor: Jo Duranceau Cannon

Fee: \$6.50 members/\$7 non-members

Limit: 12

The Green Machine

Thursday and Friday, December 27-28

3 to 5 p.m. Classroom A

For children of ages 9-13

Delve into the mysteries of the green machines and increase your plant IQ. See why plants can grow through a maze to catch the sun's light. Try to trick a root to grow upward. Discover how plants can clone new identical plants. Test the power of sprouting seeds and learn how they travel on air and float on oceans.

Instructor: Jo Duranceau Cannon

Fee: \$13 members/\$14 non-members

Limit: 12



During the next few months, many of us will plan for spring and browse through seed catalogs, gardening magazines, and other "wish" books. We continually see new plants and new gardening fashions for the upcoming year. It is this demand for different types of plants and new trends that creates the impetus for fresh material. Marketing expressions like "improved, earliest blooming," and "super" imply that change is for the better.

Where do these plants originate? How are they selected and how do they become a part of the gardening scene?

Generally there are four ways through which new plants enter the market: introduction via direct importation, collections, selection through improvement, and manipulation.

Introduction

Introduction via direct importation involves bringing plant material in from another country. Ads for introduced plants might read:

"RODGERSIA aesculifolia—NEW and RARE. A Chinese species that ranks among the most decorative. . ." (*Wayside Gardens Catalog*, Spring, 1984, p. 9).

"ACTINIDIA kolomikta—Kolo-mikta vine. Native to China, Japan, and Manchuria, this slender deciduous climber. . ." (*Wayside Gardens Catalog*, Spring, 1984, p. 9).

Collections

Collections of new plant material occur on collecting expeditions sponsored by botanic gardens and arboretums, private institutions, or governmental agencies. Exotic plants are brought back, grown, displayed, and tested; and with luck, enter the market place. Various cooperating agencies offer seed exchange programs in which they provide seeds from their cultivated collections or from material gathered in the wild. Denver Botanic Gardens participates in such an exchange. The September 1984 *Green Thumb News* included an article on our *Index Seminum*.

Selection through improvement

This is by far the most extensive method of increasing the gardener's choices. Selection through improvement involves research, testing, and propagation by governmental agencies, private research centers, and amateur gardeners. Many new selections derive from already popular plants and are further

supported by specialized societies such as rose, gladiolus, African violets, and daylily growers. Generally these new developments result from cross breeding (hybridization) or other methods which discriminately identify populations that merit horticultural use and that can be manipulated in cultivation.

Some examples of catalog descriptions of hybridized, special selections are:

"New Darwin Hybrid Tulips are the result of a highly successful cross between Darwin Tulips and *Tulipa fosteriana*. . ." (*P. deJaeger & Sons, Inc.*, 1984, p. 12).

"*Pyracantha 'Teton'*. . . the U.S. National Arboretum has developed a distinct and unique *Pyracantha*. . ." (*Wayside Gardens Catalog*, Spring, 1984, p. 6).

"*Vinca minor 'La Grave'*. . . Spreads less rapidly than the species, but has larger flowers. . ." (*Wayside Gardens Catalog*, Spring, 1984, p. 78).

Manipulation

Many new plants are a result of man's direct manipulation of a plant's genetic, chemical, or physical structure. This involves the use of gene transplants, pollen radiation, colchicine treatment to inhibit cell wall formation, or other methods. Although these methods are esoteric, they play an important role in the future of horticulture by providing disease resistance, improved vigor, or drought tolerance properties to cultivated plants.

DBG's Helen Fowler Library maintains a current selection of catalogs and information on sources for new seed and plant material. Whatever the provenance of new garden plants, most have had a sponsor—the plant collector, taxonomist, nurseryman, explorer, artist, amateur, and possibly you.


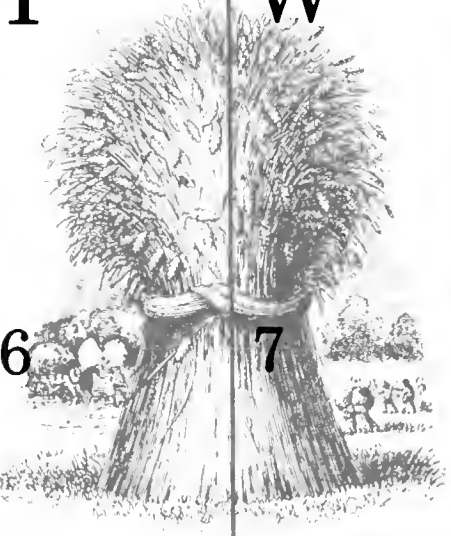
Gayle Weinstein
Botanist Horticulturist
at Denver Botanic Gardens

C N O V

Regular Meetings of Plant Societies

A number of plant and horticultural groups meet fairly regularly at the Denver Botanic Gardens. Here is a listing of those groups and a general indication of when they usually meet. For more specific meeting times and locations as well as for information on how to contact a representative of the group, please call the Botanic Gardens switchboard during business hours at 575-3751.

African Violet Society, 4th Thurs. of 7 months; Bonsai Society, 1st & 3rd Tues.; Botany Club, 3rd Fri.; Cactus & Succulent Society, 2nd Tues.; Civic Garden Club, 1st Fri.; Colorado Native Plant Society, 4th Wed.; Dahlia Society, 2nd Fri.; Gladiolus Society, call for info.; Gloxinia Gesneriad Growers, 1st Sat.; Hemerocallis Society, 3rd Sun. of 4 months; Ikebana International, 4th Fri.; Indoor Light Gardening Society, 3rd Thurs.; Iris Society, spring & fall dates; Men's Garden Club, 4th Thurs.; Mycological Society, 2nd Mon.; Orchid Society, 1st Tues.; Rock Garden Society, 3rd Wed.; Rose Society, 2nd Thurs.; Ultra Violet Club, 4th Mon.; Water Garden Society, 2nd Sun. of 5 months

C	A	L	E	N	D	A	R
	S	M	T	W	T	F	S
	4	5	6	7	1	2	3
					Tempel Wildflower Lecture		
	11	12	13	14	15	16	10
		Harvest Grapevine Wreath Workshop		Forcing Bulbs		November 16-17 Gift Shop Holiday Sale	Forcing Bulbs, Christmas Ornaments from Straw and Wheat
	18	19	20	21	22	23	17
		Design Your Own Botanical Cards	November 20 or 21 Silkscreen Your Own Stationery or Holiday Cards		Thanksgiving DBG open 9-4:45		Jungle Tigers
	25	26	27	28	29	30	24
			December 6 Holiday Grapevine Wreath Workshop December 8 Rainbow Eyes	December 8 Christmas Ornaments from Straw and Wheat December 12 or 15 Basketry Workshop: Wall Basket	December 15 The Dance of the Sugar Plum Fairies December 16 Herald the Season	December 17 Free Day for Denver City/County Residents December 18 DBG-KCFR Luminaria Festival	Basketry Workshop: Market Basket, Fruit Punch December 22 The Sun's Trip December 25 Christmas DBG closed all day. December 27-28 The Green Machine

Coming Next Month

December 1 Christmas Ornaments from Straw and Wheat, The Great Catnip Chase

December 4 Basketry Workshop: Market Basket

Denver Botanic Gardens, Inc.
909 York Street
Denver, Colorado 80206
303-575-3751

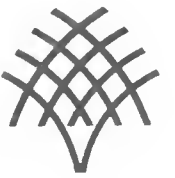
November 1984

TIME VALUE

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N

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On Loan from the Smithsonian—"Native Harvests: Plants in American Indian Life"

When Europeans first reached North America, they were astonished by the variety and abundance of trees and other plant life. Native Americans had been drawing on this wealth of plant resources for centuries; their food, medicine, cosmetics, containers, tools, and music instruments were all provided by the regional plants.

Denver Botanic Gardens visitors will have an opportunity to observe the close relationship native Americans had and have with their surrounding plant communities. "Native Harvests: Plants in American Indian Life," an intriguing exhibit on loan from the Smithsonian Institution, will be at DBG's John C. Mitchell II Hall Saturday, January 19 through Sunday, March 3.

Presented will be 80 examples of ethnobotanical craft work from five regions of North America: Northeast, Southeast, Great Plains, Southwest, and the Far West. The art found in their handiwork demonstrates how their recreational, practical, and spiritual lives revolved around plants of the woodlands, plains, mountains, rain forests, and deserts. Visitors can see authentic black ash splint baskets, birchbark pails, cornhusk masks, gourd ladles, buffalo seed necklaces and more.

*A Zuni
Mudhead
Kachina at the
Smithsonian
Exhibit.*

Once again, Denver Botanic Gardens offers members an exciting educational exhibit. Enjoy the simplicity of the art of the Choctaw, Nez Perce, Hopi, Nakah, Kiowa, and other great nations and study their uses of plant materials.

The exhibit will be open from 9 a.m. to 4:45 p.m. daily. There is no charge for the exhibit; only the standard DBG non-member gate fee. Take advantage of this opportunity to use your guest pass and introduce your friends to special events at the Gardens.

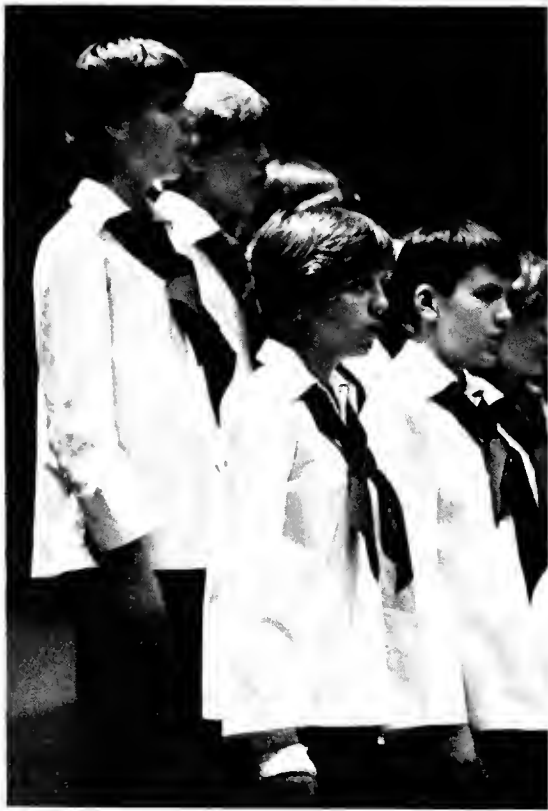


*A contemporary pine
needle basket
from the
"Native
Harvests:
Plants in
American
Indian Life"
exhibit.*

Inside:

*Classes
page 6*





Colorado
Children's
Chorale

Luminaria Festival International at DBG

The Luminaria Festival International will take place at Denver Botanic Gardens Tuesday, December 18.

Luminarias are paper bags containing candles that are lit on Christmas Eve, a Southwest tradition that evolved from early Spanish settlers in New Mexico. The candles were lit to lead the Christ Child to individual homes. Even today, houses throughout the Southwest have luminarias lining their driveways and walkways during the holiday season.

Denver Botanic Gardens will have two candle-lit processions through garden walkways lined with glowing luminarias. At various outdoor gardens you can stop to enjoy music provided by international and ethnic choir groups. Hot cider and cookies will be served in the warmth of John C. Mitchell II Hall. The gates will open at 6 p.m. and 7:30 p.m. with the processions beginning at 6:15 p.m. and 7:45 p.m. respectively.

This special holiday event is being sponsored by Denver Botanic Gardens and KCFR 90.1 FM. Tickets for each procession are \$3 for anyone over two years old. They can be purchased at either Denver Botanic Gardens' Development Office, 909 York Street, between 8 a.m. to 5 p.m. weekdays; or at KCFR Radio, 2249 South Josephine, between 8 a.m. and 5 p.m. weekdays and 10 a.m. to 5 p.m. Saturdays beginning Monday, November 26. Because tickets are available in limited quantity, please plan to pick them up early.

Each procession will last 45 minutes so dress warmly to enjoy the sounds of the season.

Annual Herald the Season Celebration

Glorious traditions of the holidays!

On Sunday, December 16, from 4 to 6 p.m. you can stroll through DBG's Conservatory and Lobby Court or sit in John C. Mitchell II Hall and listen to the Colorado Children's Chorale. They will treat you to selections from *A Child's Christmas in Wales* for the annual "Herald the Season" Christmas celebration. Members can join us for caroling, punch and cookies, and for the unveiling of the Gardens' tree.

Circle this date in red and share a festive afternoon with other DBG members.

Tributes

- In memory of Mrs. George B. Berger, Jr.
Garden Club of Denver
- In memory of Mrs. Ruth Causey
Mrs. J. B. McCloskey
- In memory of John M. Evans
Margie Wortzman
- In memory of Clorene Fuller
Patricia and Michael Vairin
- In memory of Blanche Gillespie
Mr. and Mrs. Sam Weinstein
- In memory of Munro Lyeth
Mrs. Holly Coors
Mr. and Mrs. John C. Mitchell II
- In memory of Mrs. Porter Nelson
Mr. and Mrs. John C. Mitchell II
- In memory of Mary Ann Purcell
Rolbert S. Graham
- In memory of Alex J. Sackett
Bruce Murrow
Evelyn Murrow
- In memory of Mrs. Patrick M. Westfeldt
Mr. and Mrs. John C. Mitchell II



A Year End Reminder

While making lists and checking them twice, have you remembered an Annual Gift to the Gardens?

Contributions given on or before December 31, 1984 are fully deductible on this year's federal income tax return. For a greater convenience, you may now use your MasterCard or Visa credit cards. Please send your name, address (including city and zip code), MasterCard or Visa account number, expiration date, and your signature.

A gift to the Gardens is greatly appreciated, and will be acknowledged with many thanks for your continuing support.

Happy holidays.

Gloria Falkenberg
Director of Development

Green Thumb News Number 84—12 December 1984

Published monthly by the Denver Botanic Gardens Education Department, 909 York Street, Denver, Colorado 80206, and edited by Patricia A. Pachuta and Carolyn Knepp. Subscription to this newsletter is a benefit of membership in the Botanic Gardens. For membership information, please write the Membership Department at the above address or call 575-3751.

Deadlines for this newsletter are: Major news stories, feature material (including photographs or artwork), and short notes are all due not later than November 20 for January, December 20 for February, and January 18 for March.

Please plan in advance and meet deadlines. Late material cannot be used. Stories must be typed, double-spaced, preferably on copy paper provided by the editor. Please call the Education Department at 575-3751 for details.

Poinsettia, the Christmas Flower

Poinsettia, *Euphorbia pulcherrima*, the flashy "flower" of Christmas, provides a few surprises, as well as exclamations of enjoyment.

This popular plant, favored for its pure colors, is a tropical shrub with inconspicuous flowers surrounded by brightly-colored red leaves or bracts.

Joel Robert Poinsett, a botanist and the first United States ambassador to Mexico, found the plant and sent several home to South Carolina in 1825 for cultivation. Increased technology allowed the popularity of this winter-flowering tropical plant to spread throughout the world.

Larry Latta, DBG botanist-horticulturist says that "given good care, a modern poinsettia will decorate your home for months, maintaining its crisp holiday appearance into the spring. Its care during this time is surprisingly easy." He suggests the following:

Place your plant in your home's sunniest location near, but not touching, a bright draft-free window. Temperatures you find comfortable, 70 degrees during the day and 60 degrees at night, will suit your poinsettia.

Water your plant thoroughly whenever the soil's surface feels dry soaking the entire root system. Discard any water which collects in its saucer, otherwise you will deny the roots oxygen necessary to support a healthy plant. Do not fertilize at this time.

If you decide to keep your plant for next year's holidays, you will take on a horticultural challenge with a brilliant winter reward. Larry provides the following guidelines:

February: continue with the earlier watering regime, but begin fertilizing with every third watering using a solution of a well-balanced fertilizer.

April: let the soil become drier than normal. Your plant will lose leaves, but not so severely that its stems wither.

May: repot your plant into a slightly larger pot. Gently loosen the root ball and place in a coarse, rich, rapid-draining soil. Since the boldest bracts occur only on vigorous shoots, cut the plant back severely to within four to six inches of the soil's surface.

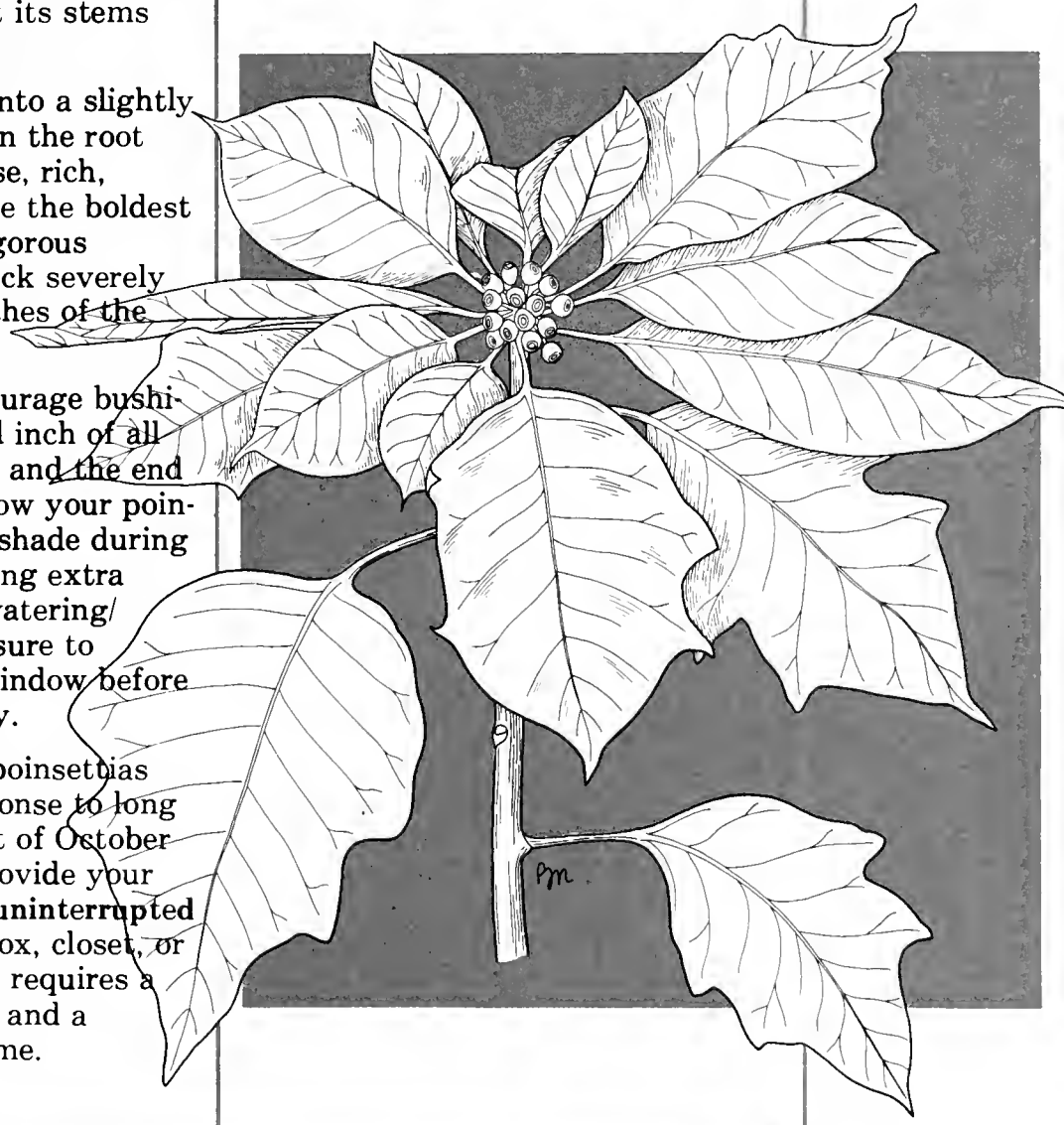
July to August: to encourage bushiness, pinch the terminal inch of all growth the first of July and the end of August. You may grow your poinsettia outdoors in semi-shade during the warmer months, using extra care to maintain your watering/fertilizing schedule; be sure to return it to the warm window before the nights become chilly.

October to November: poinsettias bloom and color in response to long nights, so from the first of October until late November, provide your plant with 15 hours of uninterrupted darkness. Use a large box, closet, or an unused room. It still requires a sunny daytime location and a thorough watering regime.

By the first of December your poinsettia should be showing response to your year-long efforts by renewing its holiday display.

This year ask your favorite florist for a poinsettia, pronounced with the correct "ea" ending, and care for it with confidence.

*Poinsettia by
illustrator,
Paula Nicholas.*



Say Happy Holidays With A DBG Gift Membership

Give a year of enjoyment to friends and loved ones on your holiday list.

A Denver Botanic Gardens' membership is one gift that keeps giving—all year.

A monthly newsletter with lists of plant-related classes, a quarterly magazine containing botanical and horticultural information; a library chock-full of horticultural books, magazines, and more; and special events for all members throughout the year are just a few of the benefits your gift will include.

Remember your friends and loved ones in this special way and they will cherish your generosity all year long.

Give A Special Gift! A Denver Botanic Gardens Membership

Memberships:			
Student	\$15	Senior	\$15
Senior Couple	\$20	Individual	\$20
Family/Dual	\$30		

Donor's Name _____

Donor's Address _____

Donor's Phone _____

Name of Recipient _____

Address _____

Date to Mail Gift Card _____

Gift Card to be Signed _____

Recipients receive a card informing them of your gift, plus a free plant that may be picked up at the Gardens.

Helen Fowler Library
Volume 7, No. 5
December 1984
Edited by
Jean Williams

Librarian:
Solange Gignac

THE
REVIEWERS

Carolyn Etter—
Urban
Preservationist

Panayoti
Kelaidis—
Curator,
Denver Botanic
Gardens Rock
Alpine Garden

Hazel
Kellogg—
Volunteer in
Helen Fowler
Library,
Denver Botanic
Gardens

Patricia A.
Pachuta—
Education
Director,
Denver Botanic
Gardens

*Handbook of Cultivated
Sedums.*

By Ronald L. Evans. Science
Reviews Limited, Dorset, 1983. 345
pages illustrated with drawings and
200 color photographs. \$25.00.
QK 495 C7 E8 1983.

Sedums, those indestructible
stonecrops so common around
Denver, seem to occupy a no man's
land in horticulture. All stonecrops
are succulent, yet they seem to be
shunned by cactus and succulent
enthusiasts. Stonecrops are usually
associated with rock gardens, yet
virtually all rock garden books gloss
over the genus with a few words,
mentioning only a handful of
species.

Nature alone has seemed to favor
these plants, filling the deserts,
mountains, and forests of the
northern hemisphere with hundreds
of species and forms of stonecrops.
It is gratifying to see justice finally
done to this delightful and impor-
tant group of garden plants.

Just as the late Dr. R. Clausen
spent much of his professional
career at Cornell University study-
ing the American sedums, so has

Mr. Ronald Evans dedicated
decades of his leisure time to
researching the genus as a whole. It
is interesting to compare the profes-
sional monographs with Mr. Evans'
far more accessible gardening
monograph.

Both books describe each species
at length, using copious illustra-
tions. Both possess keys, diagnoses,
and discussions of the genus as a
whole. Clausen's book is directed
toward scientists, however, and of
necessity contains pages of the cita-
tions and references required of
scientific monographs. Mr. Evans'
book contains only essentials. Every
page is clearly laid out with each
plant under discussion printed in
bold type, with precise line
drawings, and full-color photographs
nearby for easy reference. Even
novice gardeners can use the book
with confidence. Yet in substance,
these books are quite similar.

This genre of gardening
monograph is well represented in
the Helen Fowler Library. Several
bookcases are filled with examples
which trace their pedigree to
Gerard's *Herball*. In this latest
example, scientific precision is
wedded to clear horticultural advice

and embellished with superb
photographs to encourage us.

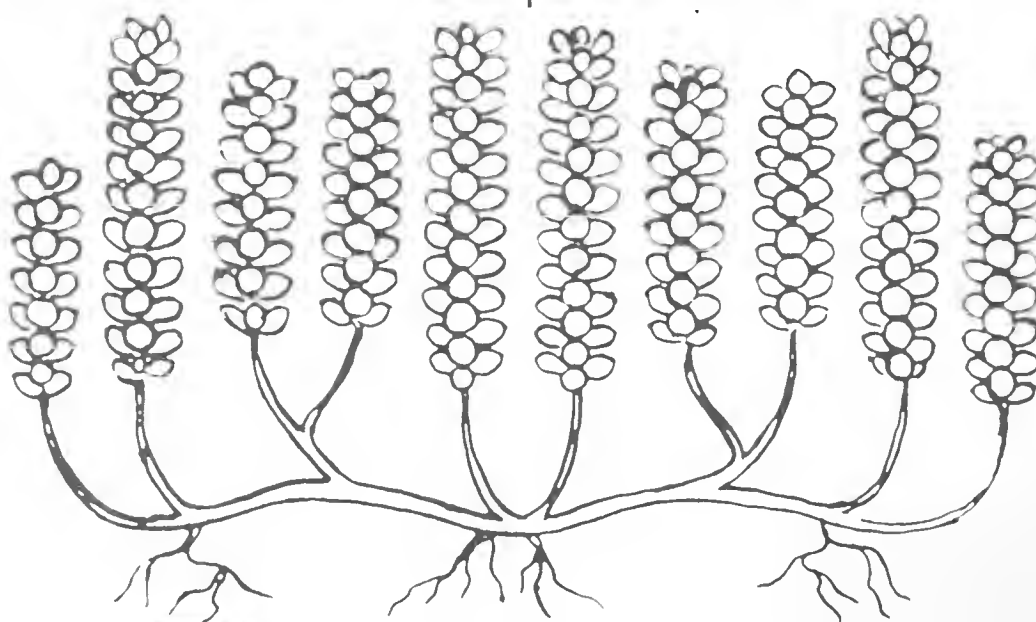
No plants are easier to propagate
and grow than sedums. Dozens of
species are propagated and sold by
local nurseries. This handbook is
sure to serve as an indispensable
guide to local gardeners and horti-
cultural professionals in the coming
years, and it is certain not to be
superceded for many decades to
come.

Panayoti Kelaidis

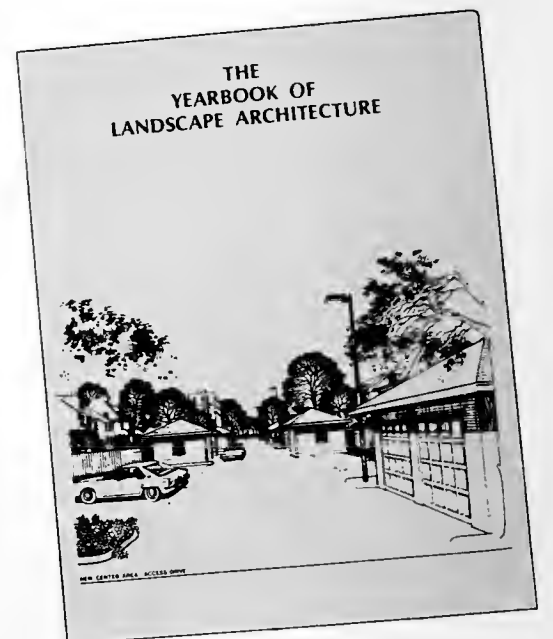
*The Yearbook of
Landscape Architecture
Historic Preservation*

Edited by Richard L. Austin, et al.
Van Nostrand Reinhold Co., N.Y.,
1983. \$30.45
SB 472.9 Y43.

Carolyn Etter's review of *The Year-
book of Landscape Architecture
Historic Preservation* was not
published in its entirety in the
September issue of Library Lines.
Our apologies are extended to both
Carolyn Etter and *Green Thumb
News* readers for this oversight.



*Sedum
brevifolium*



Until recently the preservation movement has focused primarily on urban architecture and the natural environment. Cultural landscapes integrate landscape architecture with historical elements and their significance as a record of our heritage, the need to preserve it, and the ways and means of doing so have received scant attention in print. The *Yearbook* begins to fill this void.

Over half the space in this 192-page collection of articles about cultural landscape preservation is devoted to current theories, philosophies, and issues; the balance consists of nine project case studies. Subjects include: urban parks and riverways; battlefields and other historic landmarks; gardens, farms and agricultural areas; small towns; commercial streetscapes; and residential neighborhoods.

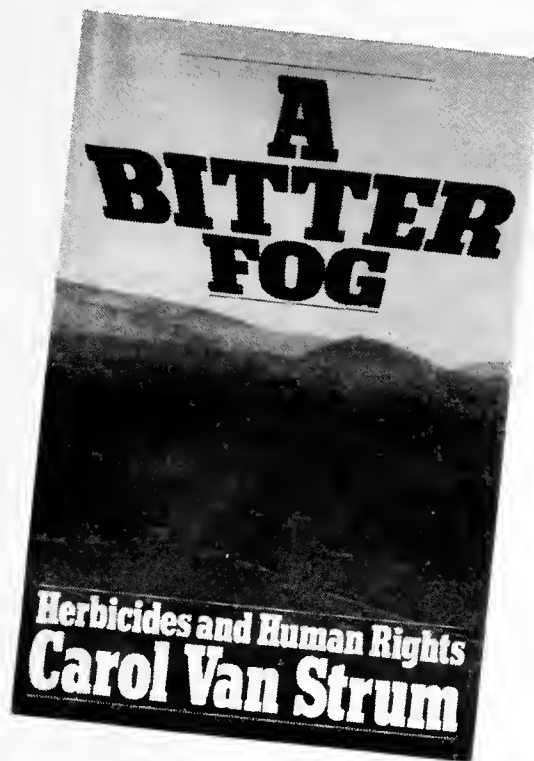
Readers familiar with the planning and design process of specific Denver landscape preservation projects (such as 9th Street Historic Park and Four Mile House) will find interesting parallels. Coloradans who wrestle with the issue of drought-resistant plantings will find an article on native vegetation restoration. The inventory project described in "Historic Preservation as Applied to Urban Parks" provides a prototype applicable to most park systems in Colorado. Those interested in "Main Street" revitalization will find a brief history of the development of retailing. Finally, both design professionals and community activists will find case studies emphasizing community participation as a key to successful projects.

The quality of the texts, like that of the extensive graphic material, is uneven. Despite some limitations, however, the *Yearbook* has considerable value as a sourcebook, and it may be a harbinger of increased attention to a neglected but important subject.

Carolyn Etter

A Bitter Fog: Herbicides and Human Rights.

By Carol Van Strum. Sierra Club Books, San Francisco, 1983. \$14.95. RA 1270 H3 V269 1983.



Alarmed when her four children were accidentally hosed with herbicides from a truck on a routine weed-control operation, Carol Van Strum became a dedicated activist in the environmental fight against the use of phenoxy herbicides for broadcast spraying. This book tells the story of her struggles.

Largely as a result of her work, a vigorous grassroots organization, Citizens Against Toxic Sprays, was formed and, in 1977, won a federal court decision to suspend use of 2,4,5-T and 2,4,5-TP (silvex) in Oregon's Siuslaw National Forest.

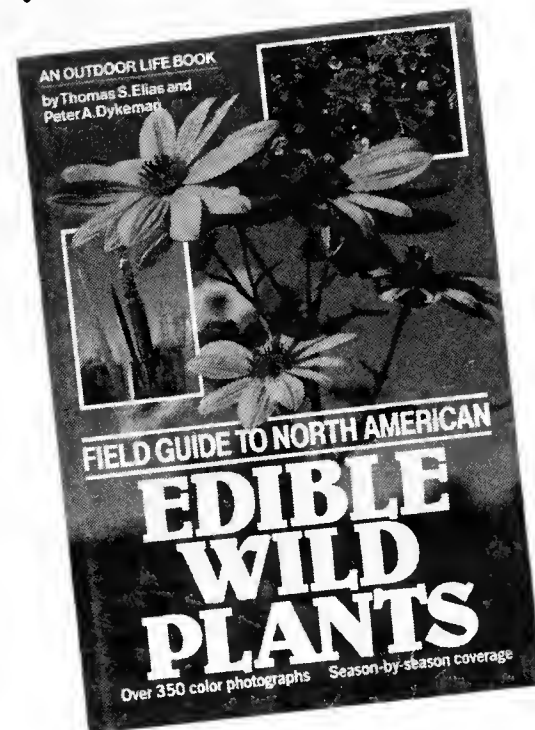
Chemicals with similar properties were unaffected by the ruling, however, and remain in common use. Such compounds make possible the sophisticated, selective methods of killing weeds with an overdose of synthetic growth-regulating hormones originally developed for the purpose of stimulating their growth. The infamous Agent Orange, the defoliant used widely in the Vietnam War, was a 50-50 mixture of 2,4-D and 2,4,5-T. Derived from the synthesis of chlorine and phenol, these compounds are capable of killing a wide variety of broadleaf plants.

Van Strum has pursued her investigations to laboratories charged with responsibility for testing the safety of these herbicides. Here, we are told, she found a record of faked, distorted, or incomplete evidence. "Poisons are innocent until proven guilty," she warns.

Hazel Kellogg

Field Guide to North American Edible Wild Plants.

By Thomas S. Elias and Peter A. Dykeman. Van Nostrand Reinhold Company Outdoor Life Books, New York, 1982. \$22.95. QK 98.5 U6 E432 1982.



Using this seasonally arranged guide, it is possible to identify, harvest, and prepare over 200 common wild edible plants found throughout the United States and Canada. Unlike many field guides, this one is actually meant to be used in the field; it is very well organized. Information on wild edibles can be found in one or more of five ways: by common or scientific name, by distribution or range map, by plant type (fern, herb, shrub, etc.), by habitat, or by preparation method (steamed or boiled, for example).

A substantial introductory section provides a wealth of information including detailed directions on how to use the book, plant nutritional values, preparation techniques, and general recipes. Where and when to look for certain kinds of plants is included in a habitat guide. At the end of the book a separate section discusses 20 poisonous plants. There is even a section on plant uses by the Indians!

More than 350 color photographs and 200 distribution maps accompany the text. If this guide has a weakness, it is the quality of some of the black and white photos—a number of them are out of focus. All in all, however, this is a minor flaw in a delightfully thorough treatment of the edible wild plants found in North America.

Patricia A. Pachuta

CLASSES

Fall
1984

Denver Botanic Gardens



Rainbow Eyes

Saturday, December 8
(one session) Classroom A

Section I: For children of ages 5-7
10 a.m. to noon

Section II: For children of ages 8-11
1 to 3 p.m.

Please indicate your section on the registration form.

See the Gardens through rainbow eyes. Learn how flowers use colors to tempt and tease. Discover how butterflies detect a flower's secret signals. Find out why plants need sunbeams to fuel their green leaf machines. Listen to the tale of the goblins who plotted to steal the rainbow. Make your own rose-colored glasses or a kaleidoscope of sparkling stars.

Instructor: Jo Duranceau Cannon studied art at the University of Washington and the University of Denver and has extensive teaching experience with children.

Fee: \$6.50 members/\$7 non-members

Limit: 12

The Dance of the Sugar Plum Fairies

Saturday, December 15
(one session) Classroom A

Section I: For children of ages 5-7
10 a.m. to noon

Section II: For children of ages 8-11
1 to 3 p.m.

Please indicate your section on the registration form.

Join the dance of the sugar plum fairies and learn why we decorate with mistletoe and holly for the holidays. Create your own holiday decorations to treasure. Tour the Gardens and enjoy the flowers of winter's light. Taste holiday concoctions from Mother Nature's collection of sugar and spices.

Instructor: Jo Duranceau Cannon

Fee: \$6.50 members/\$7 non-members

Limit: 12

Denver Botanic Gardens
909 York Street
Denver, Colorado 80206

Fees for courses should be paid in advance by check or money order made out to Denver Botanic Gardens. Since the space is limited in many courses, registration should be mailed in promptly. Your registration will NOT be acknowledged. Your name will be placed on the class list on the day your money is received. No enrollments for class by phone please. All courses are given subject to a minimum enrollment of ten students. For further information, please call 575-3751.

The Sun's Trip

Saturday, December 22—Winter Solstice

(one session) Classroom A

Section I: For children of ages 5-7
10 a.m. to noon

Section II: For children of ages 8-11
1 to 3 p.m.

Please indicate your section on the registration form.

Visit the Gardens and celebrate the Winter Solstice when the sun appears to stand still at noon. Learn why gardeners and men of ancient times have used the sun to mark the seasons. Tour the Gardens and see how the sun's winter light sends messages to trees and other plants. Make your own sundial to let the sun's shadow tell the day's hours.

Instructor: Jo Duranceau Cannon

Fee: \$6.50 members/\$7 non-members

Limit: 12

The Green Machine

Thursday and Friday, December 27-28

3 to 5 p.m. Classroom A

For children of ages 9-13

Delve into the mysteries of the green machines and increase your plant IQ. See why plants can grow through a maze to catch the sun's light. Try to trick a root to grow upward. Discover how plants can clone new identical plants. Test the power of sprouting seeds and learn how they travel on air and float on oceans.

Instructor: Jo Duranceau Cannon

Fee: \$13 members/\$14 non-members

Limit: 12

©1984
Jo Duranceau Cannon

Adult Classes for December

As of this printing, spaces remain in the following classes:

Holiday Grapevine Wreath Workshop

Thursday, December 6

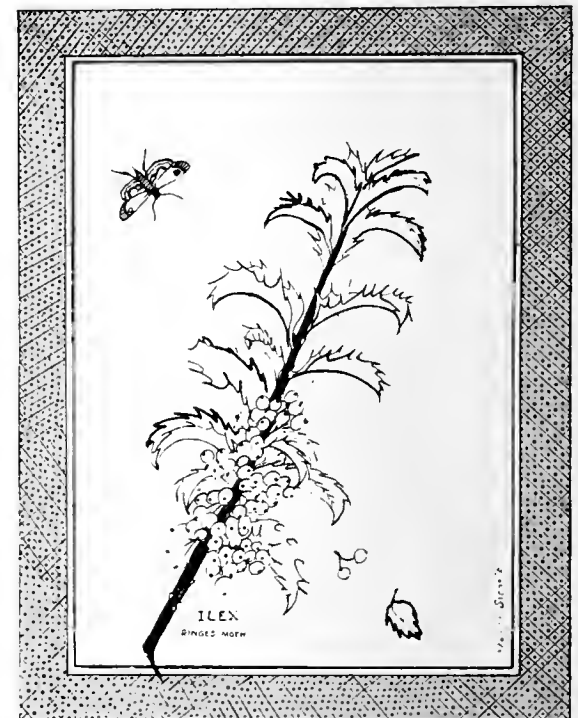
Section I: 1 to 4 p.m.

Section II: 6:30 to 9:30 p.m.

Christmas Ornaments from Straw and Wheat

Section III: Saturday, Dec. 8
10 a.m. to 3:30 p.m.

Please call 575-3751 ext. 20 for class registration information.



Christmas card
by *Elfreda Sacarto*, a
student in
Angela Overy's
1983 Botanical
Card class.

Registration Form for Classes and Field Trips

The enclosed check, in the amount of _____, is to cover the registration fees for the following classes:

Name and section of classes _____

Name _____

Address _____

City _____ State _____ Zip _____

Home Tel. No. _____ Business Tel. No. _____

Member of Denver Botanic Gardens? Yes No

Gardening Tips for December

During the winter we routinely browse through mail order brochures and gardening catalogues. This is also an opportune time to become familiar with plant related books and acquainted with the many reference materials in Denver Botanic Gardens' Helen Fowler Library.

The following is a small sampling for reference and horticultural interest.

Arboriculture: Care of Trees, Shrubs, and Vines in the Landscape. By Dr. Richard D. Harris, Prentice-Hall, Inc.

In horticulture many techniques are practiced, without question, for years and they become very difficult to change. This is especially true for the cultivation of woody plant material. The past 10-15 years of research have indicated that many traditional practices for pruning, fertilizing, staking, and wound dressing are incorrect, harmful, or a waste of material and time. In *Arboriculture* the research is cited along with current, recommended procedures. This is an excellent book for amateurs and professionals.

Landscape Management. By Dr. James R. Feucht, Colorado State University.

One problem that plagues us all in the cultivation of plants is determining the cause of poor plant performance. The author addresses plant growth and development requirements for healthy growth, and the responses to growing conditions under which these plants are subjected.

Insects that Feed on Trees and Shrubs. By Warren T. Johnson and Howard H. Lyon, Cornell University Press.

This book deals with more specific plant problems—those caused by insects. Included are numerous color illustrations depicting plant damage as well as the life cycles of each pest.

Hortus III.
Liberty Hyde Bailey Hortorium

Although this book may sound familiar, many shy away from using it because it appears to be too technical. In reality, it lists and describes cultivated plants of either economic or ornamental values in a dictionary style.

The New York Botanical Garden Illustrated Encyclopedia of Horticulture. By Thomas H. Everett, Garland Publishing, Inc.

This 10-volume set of books gives information on the numerous horticultural branches, offering something for every gardener.

Recommended Plant Names. By Alan A. Beetle, Agricultural Experiment Station, University of Wyoming-Laramie.

This excellent reference provides an extensive listing of recommended common names. Material such as this is especially important for identifying common names of weeds prior to selecting pesticides.

Plant Propagation Principles and Practice. By Hudson T. Hartmann and Dale E. Kester, Prentice-Hall, Inc.

One area of plant cultivation that offers the greatest reward is the reproduction and propagation of new plants. This book consists of an extensive overview of the methods for starting and raising new plants.

Seeds of Woody Plants in the United States. Agriculture Handbook No. 450, Forest Service USDA.

This book contains information on over 800 species of woody plants in the United States. It includes descriptions on habit, range, primary usage, flowering and fruiting dates, methods of collecting fruit; and extraction, cleaning, and storage of seeds.

For more leisurely reading, biographical narratives on individuals who have contributed significantly to horticulture and/or allied fields might be of interest. You may enjoy these suggested titles.

The Life and Adventures of John Muir. By James Mitchell Clarke, Word Shop Publications.

This book portrays John Muir's campaign for nature and his dedication to preserving the natural world. He founded the Sierra Club and through his efforts, Yosemite National Park was the first area to be established as an unspoiled wilderness protected by law.

Frank N. Meyer, Plant Hunter in Asia. By Isabel Shipley Cunningham, Iowa State University Press.

This is an excellent narrative relating Frank Meyer's pioneer expeditions throughout Asia. From his explorations numerous economic and ornamental materials have entered the American marketplace. The callary pear, *Pyrus Calleryana* 'Bradford' and dwarf lilac, *Syringa Meyeri*, are two such examples and are planted extensively at Denver Botanic Gardens.

Gayle Weinstein
Botanist Horticulturist
at Denver Botanic Gardens



Silkscreen Card
by Peggy
Johnston

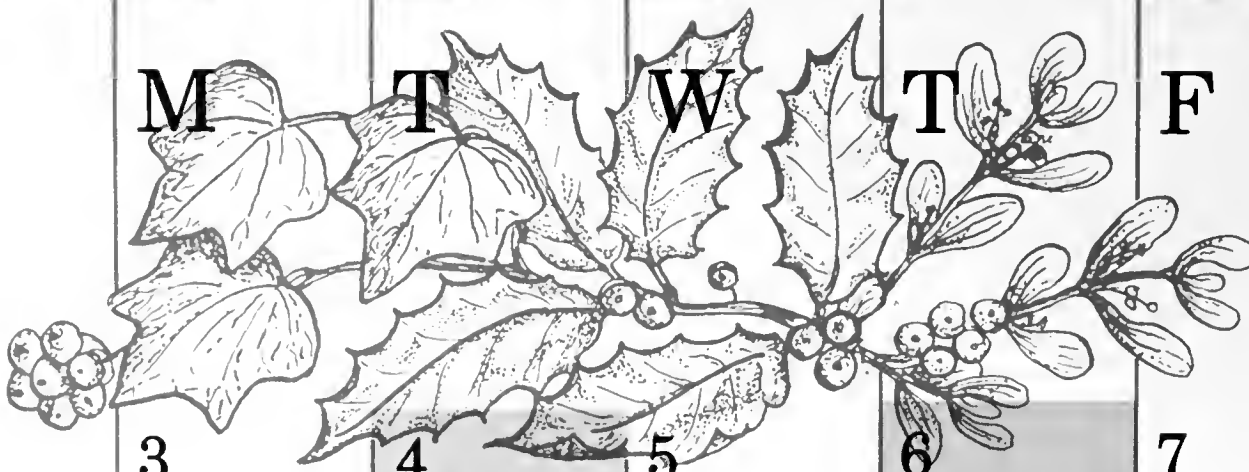
CALENDAR

Regular Meetings of Plant Societies

A number of plant and horticultural groups meet fairly regularly at the Denver Botanic Gardens. Here is a listing of those groups and a general indication of when they usually meet. For more specific meeting times and locations as well as for information on how to contact a representative of the group, please call the Botanic Gardens switchboard during business hours at 575-3751.

African Violet Society, 4th Thurs. of 7 months; Bonsai Society, 1st & 3rd Tues; Botany Club, 3rd Fri.; Cactus & Succulent Society, 2nd Tues.; Civic Garden Club, 1st Fri.; Colorado Native Plant Society, 4th Wed.; Dahlia Society, 2nd Fri.; Gladiolus Society, call for info.; Gloxinia Gesneriad Growers, 1st Sat.; Hemerocallis Society, 3rd Sun. of 4 months; Ikebana International, 4th Fri.; Indoor Light Gardening Society, 3rd Thurs.; Iris Society, spring & fall dates; Men's Garden Club, 4th Thurs.; Mycological Society, 2nd Mon.; Orchid Society, 1st Tues.; Rock Garden Society, 3rd Wed.; Rose Society, 2nd Thurs.; Ultra Violet Club, 4th Mon.; Water Garden Society, 2nd Sun. of 5 months

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December 1984

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