

Botanical Garden Journal

University of California, Berkeley

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PLANTS USED AS CLUES TO ANCIENT TOOL USE

Dr. J. Desmond Clark, Professor of Anthropology on the Berkeley campus has been trying to unravel the mysteries of ancient stone tools from an archaeological site in Ethiopia dating back 15,000 years. Using fiber plants such asand from the Botanical Garden, he tried to determine whether stripping the leaves to extract the tough fibrous veins would produce a polish on the edges of stone tools similar to the wear evident on the ancient Ethiopian tools. He theorized that the resulting fibers may have been used as rope. In a recent letter to the Botanical Garden, Dr. Clark concluded, "While, of course, one cannot be certain as to the precise function it is possible to say that by working silica-secreting plants such as wild grasses, 'sickle gloss' will result. Since the prehistoric population after about 1,500 B.C. was pastoral they must have had much need for ropes."

LANDSCAPE ARCHITECTURE STUDENTS MAKE PLANS

Graduate students in the Department of Landscape Architecture drew up plans for developing a display of California plant communities on the field between Centennial Drive and Mather Redwood Grove. Working under the direction of Mr. Russell A. Beatty and Prof. Robert J. Tetlow, the students submitted 9 plans for incorporating Mixed Evergreen Forest, Oak Woodlands, Chaparral and Valley Grassland, as well as other plant communities in a harmonious display. It is hoped that many of the ideas presented by these students can be used when this project receives funds for development.

CURATOR REPORT: NEW PLANT HIGHLIGHTS

During the past three months, the Botanical Garden has obtained a great number of new and interesting plants which are too numerous to describe in detail, but a few examples might be of particular interest. From the high plateau region (paramo) of the northern Andes, we now have a hearty Espeletia schultzii (Compositae) which is notable for its ability to endure extreme fluctuations between day and nighttime temperatures. Its woolly leaves are clustered together in a tight rosette. (For a discussion of Espeletia, see the January-February issue of Pacific Discovery). Also interesting is the Rhus verniciflua whose sap is used by the Chinese and Japanese to make lacquer. This sap can also produce a skin irritation, however, since the plant is related to poison oak.

A small Allspice tree, Pimenta dioica (Myrtaceae) from the West Indies is an important addition to our economic collection in the tropical house since the berries are commonly used as a seasoning. Our Asian collection will also be enhanced with the spectacular shrub, Enkianthus quinqueflorus (Ericaceae) from Hong Kong. This is the most beautiful member of the genus. And some showy azaleas, Rhododendron occidentale (Ericaceae) from near Big Lagoon in Humboldt County, California will become part of the Agnes Rody Robb Glade in the Mather Redwood Grove. (Some clones of this plant can be seen in the Spring 1977 issue of Pacific Horticulture).

The recently developed Mexican Area near the parking lot has received the largest collection of new plants, however. Dr. Dennis Breedlove of the California Academy of Sciences brought back 200 plants from the mountains of Chiapas in southern Mexico. This collection was made possible by a grant from the Stanley Smith Horticultural Trust. Eventually, some of the plants will be introduced into the nursery trade through the propagation of outstanding specimens by the Saratoga Horticultural Foundation.

DR. ORNDUFF IN MEXICO AND GUATEMALA

Director Robert Ornduff spent about two and one half weeks in December in Guatemala and southern Mexico collecting plants and seeds for the new Mexican area of the Garden. In Guatemala, he collected mainly at 8,000 feet or above in the volcanic uplands north of Guatemala City. In Mexico, he obtained a large number of specimens from the Nevado de Toluca west of Mexico City, from the high ridges east of the city of Oaxaca, and from the slopes of Orizaba. Among the plants he obtained were several specimens of Penstemon, and interesting Bocconia with entire leaves, a 10-foot high horsetail, Equisetum giganteum, and specimens of two aquatic orchids from the genus Habenaria.

CARNIVOROUS PLANT AND FERN DISPLAY TO COME

Plans are now underway to open up the old propagating house to a display of carnivorous plants and ferns. In the near future, visitors to the Botanical Garden will be able to view such fascinating plants as the Dionaea muscipula (Venus Fly Trap), Darlingtonia californica (Cobra Plant) and Utricularia (Bladderwort). Also on display will be a wide variety of ferns. The anticipated opening is

WATER, WATER

We are well into our second dry year with only 8.04 inches of rain falling in the Botanical Garden to date. Season 1975-1976 was one of the driest on record, if not the driest in the history of the weather bureau in San Francisco and this season may well set another record. 13.45 inches of rain were recorded in the Garden last season compared with an annual average of about 26 inches. Right now the Garden requires far more watering than usual so there is concern about the effect of possible water curtailment. For example, the Mather Grove understory plantings were made with the hope of fall and winter rains to get them started, but watering has been necessary.

SCHEDULE A TOUR FOR YOUR SCHOOL OR CLUB

The Botanical Garden offers guided educational tours of the garden for both children and adults. If you are interested in reserving a particular tour for your school or club, simply call 642-3343 at least three weeks in advance, and send in a small non-refundable registration fee of \$5.00.

For Elementary and Junior High School students, the Botanical Garden offers:

Five Sense Tour (Kindergarten-2nd grade): emphasizes the use of the senses

Life in Early California: use of plants for food, medicine, utensils by Indians

Life in the Forest: interaction of forest and environment

Life in the Desert: animals and plants adapting to a harsh environment

Economic Plants: plants as food, drugs, dyes, etc., including herbs, coffee, rubber

For High School students and adults, the Botanical Garden offers:

All of the above except the Five Senses Tour

California Plant Communities: a tour of the variety of plants in California

Plant Kingdom: the different types of higher plants found in the world today

Plant Diversity and Adaptation: how plants manage to survive various environments

Flowering Plants and their Pollen Vectors: plant fertilization (best during warm months when the insects are active)

Grand Tour: a general information walk through the major areas of the Garden

Special tours can be designed for any age group:

If you wish to have a special tour, or want to develop a long-term project involving several visits to the garden, contact the Botanical Garden for special arrangements

SPECIAL VISITORS

Carlton B. Lees, Vice-President of the New York Botanical Garden visited the Garden and was particularly interested in..... Also, from Canada we had R. L. Taylor, Director of the University of British Columbia Botanical Garden.

WANTED: VOLUNTEERS

Jerome E. Carlin, director of issues a call for volunteer help with publicity, the Newsletter, and membership recruitment and mailings. In addition, the Docents could use help on Tuesdays and Thursdays for potting plants for the May Plant Sale. For information, call 642-0849 or 642-3343.

PUBLICITY FOR THE BOTANICAL GARDEN

An attractive brochure designed to attract new members to the Friends of the Botanical Garden will be mailed this spring. Members who also receive a brochure through this general mailing are urged to pass it on to a non-member. More members mean more money will be available for the expansion and renovation of the Gardens' plant collection, as well as the enrichment of the education program.

The University of California Botanical Garden was described in the October 1976 issue of Golden Botanical Gardens, newsletter of the California Garden Clubs association. The Berkeley Garden Club, which belongs to this organization, is a contributing member of the Friends of the Botanical Garden.

A painting of the upper slope of the New World Desert section was featured in a flyer announcing a Tom Fawkes exhibition at the Fountain Gallery in Portland, Oregon. The painting was titled "Strawberry Canyon Site."

SLIDES AND PHOTOGRAPHS WELCOME

Mr. William Anderson of Santa Cruz, California donated to the Garden 100 high quality slides of flowers in bloom in this Garden. Each slide came precisely identified. The slides will be added to the Jepson Herbarium slide collection and will be used in the Garden's education program. Donations of additional slides and photographs of the Garden collections are invited. Such gifts are tax deductible with the value of the gift estimated by the donor.

DOCENT ACTIVITIES

Although the training program for new docents has been postponed until fall 1977 in favor of the enrichment program for current docents, interested applicants who are not already on the docent waiting list should write to Dr. Gertrude Machlis, Education Coordinator, Botanical Garden, University of California, Berkeley, Ca. 94720 asking to be notified about the fall program.

Dr. Machlis has announced the schedule of the spring enrichment program for the 52 current docents. Seven general information sessions will be offered every 3 weeks on Tuesdays from 9.30 to noon. Topics to be covered include plant name pronunciation, tour skills, the plant kingdom and plant diversity, plants of Mexico and South America with a comparison to Australian vegetation, the China Hill plantings, Artic-Alpine vegetation, pond communities, carnivorous plants, edible weeds, new world domestication of food plants, pollination ecology, and poisonous plants of the Garden. Also, a variety of workshops will be arranged between the scheduled general information sessions. The workshops will focus on other areas of interest such as plant propagation, ferns, birds in the Botanical Garden, trees in the Botanical Garden, on campus and in the Blake Garden, plus microorganisms, decomposers and pests. In most cases, docents will act as discussion leaders and guides. For a more detailed schedule and names of the discussants/guides contact Trix Machlis at 642-3352.

PERSONNEL NEWS

Mrs. Pamela Reis is the new Administrative Assistant at the Garden. Mrs. Reis, a UCB graduate in biology was formerly on an assignment with the Health and Medical Sciences Program on campus. Ms. Gloria Gamblin, former Administrative Assistant accepted a position with the University of California Press.

PERSONNEL NEWS

Jonathan Donchin, a horticulturist, joined the Garden staff in October. He replaces Wayne V. Roderick who resigned after 16 years at the Garden to become Supervisor of the Native Plant Botanic Garden, East Bay Regional Park District. Mr. Donchin comes directly to the Garden after three years of training at the Royal Botanic Garden, Kew in England where he earned the Kew Diploma of Horticulture. He was one of the few non-British students in his class. Before Kew, Jonathan worked one year for the Royal Horticultural Society at Wisley, England. All this training tops a B.A. from UC Santa Cruz with majors in anthropology and art. Mr. Donchin is most interested in telling others about his experiences at Kew and so has put together a slide show of the four seasons there. While in England, he appreciated the opportunity to view mature specimens of native English plants since introduced specimens in this country are almost unrecognizable due to their immaturity.

TRUSTEES TO BE ELECTED

At the annual meeting May .., ...p.m., three at-large members of the Board of Trustees will be elected. These vacancies are due to the expiration of the terms of trustees Lincoln Constance, Howell V. Daly, Jr. and Elizabeth W. Hammond on June 30, 1977. Mai Arbegast, Elizabeth McClintock, and Evelyn Ratcliff have been appointed Nominating Committee members to submit nominees for these vacancies.

Still continuing as trustees-at-large are August Frug, Alice Howard, Mary L. Jefferds, Robin Parer, Marvin Schmid and George W. Wasson. Elected officers are President Jerome Carlin, First Vice President Fitzhugh S. Rollins, Second Vice president Marjorie G. Schmidt, Secretary Nancy R. Wilson, and Treasurer Vincent A. Clemens. Their terms of office expire June 30, 1978.

EVENTS

Slide Show: California Plants. Dr. John Robert Haller, Professor of Botany, University of California Santa Barbara will be presenting a multimedia show on California plants February 15, Tuesday, 7:30 p.m. at the Oakland Museum Theatre, 1000 Oak Street, Oakland. The show will open with a 15 minute, two-screen presentation of fall colors in New England and will accelerate with a 30 minute slide and music presentation using three screens, six projectors and 800 slides which demonstrate the overwhelming variety of plants, and plant communities which exist within our state boundaries. To attend, you must be a member of Friends of the Botanical Garden, or a docent of the Oakland museum.

Demonstration: the Art of Flower Arranging. Christopher Designs of San Francisco will demonstrate how to arrange flowers March 1, 9:30-noon, at the University Botanical Garden meeting roomof the parking lot. Coffee and doughnuts will be served. The event is sponsored by the Docents of the Botanical Garden. \$3.00 per person. Advance registration and payment required by mail to Docents, Botanical Garden, University of California, Berkeley, Ca. 94720. Make checks payable to Docents Botanical Garden. Space limited.

Lecture: Rhododendrons. Mr. Hadley Osborn, President of the California Chapter of the American Rhododendron Society, will discuss Rhododendrons growing in the University Botanical Garden March 17, 7:30 p.m. at the Kaiser School auditorium, 25 South Hill Ct, Oakland. This lecture on Thursday is designed as an introduction to a tour of the Botanical Garden Rhododendrons scheduled on Sunday, March 20. Mr. Osborn is also President of the Strybing Arboretum Society and director of the American Horticultural Society. This lecture is sponsored by the Rhododendron Society with the Friends of the Botanical Garden invited guests.

MORE EVENTS

Tour: Rhododendron Dell. Mr. Hadley Osborn will lead a tour of the University Botanical Garden Rhododendron Dell March 20, Sunday, at 2 p.m.. Meet at the Garden parking lot. Sponsored by the Friends of the Botanical Garden (see also Lecture: Rhododendrons described on page 4)

BARGAIN BOOKS FOR FRIENDS OF THE BOTANICAL GARDEN

Membership in Friends of the Botanical Garden entitles you to purchase selected University of California Press books at a remarkable 25% discount. And every book you purchase goes directly to support the University Botanical Garden. Simply choose the books you want and mail your order with payment to the Friends of the Botanical Garden, University of California, Berkeley, California 94720.

ORDER FORM: fill in your name, address, and number of copies of each book

QUANTITY	TITLE/AUTHOR	DISCOUNT PRICE	ISBN	TOTAL
_____	California Desert Wildflowers/Munz	\$ 3.15	00899-5	_____
_____	California Mt. Wildflowers/Munz	3.15	00000-0	_____
_____	California Spring Wildflowers/Munz	3.15	00000-0	_____
_____	Flora of So. Calif./Munz & Keck	13.18	00000-0	_____
_____	Flora of Trinity Alps Ferlatte	8.74	00000-0	_____
_____	Flora of White Mts. Calif. & Nev./Lloyd	7.19	00000-0	_____
_____	Marin Flora/Howell	8.74	00000-0	_____
_____	Shore Wildflowers of Calif./Munz	2.35	00000-0	_____
_____	Sierra Wildflowers/Niehaus	3.15	00000-0	_____
_____	Spring Wildflowers SF Bay Region	2.35	00000-0	_____

SUBTOTAL: _____

NAME _____

ADDRESS _____ ZIP _____

Amount enclosed _____

Membership dues enclosed if necessary _____

MEMBERSHIP BENEFITS

Besides enjoying a book discount on selected University of California Press titles, members will be invited to attend free lectures, garden tours of special interest, and other Garden events which will be announced in this journal. Memberships will support and extend various world-wide living plant collections, displays, reference materials, the education program and facilities of the Garden. Dues are tax deductible.

Student	\$5	Contributing	\$25	Patron	\$250
Individual	\$10	Supporting	\$50	Sustaining	\$500
Family	\$15	Sponsor	\$100	Benefactor	\$1,000