

Arizona Native Plant Society

Newsletter

Vol. 3, Nos. 3 + 4

Winter 1979

ANPS ANNUAL MEETING

The annual business meeting of the Arizona Native Plant Society will be held 19 January 1980 at Central Arizona College.

According to present plans, the program will be:

- 11 a.m. Business meeting
- 12:30 p.m. Lunch in college cafeteria
- 1:30 p.m. Presentation by Bill Kinnison followed by a tour of campus plantings

The Board of Directors will meet after the tour.

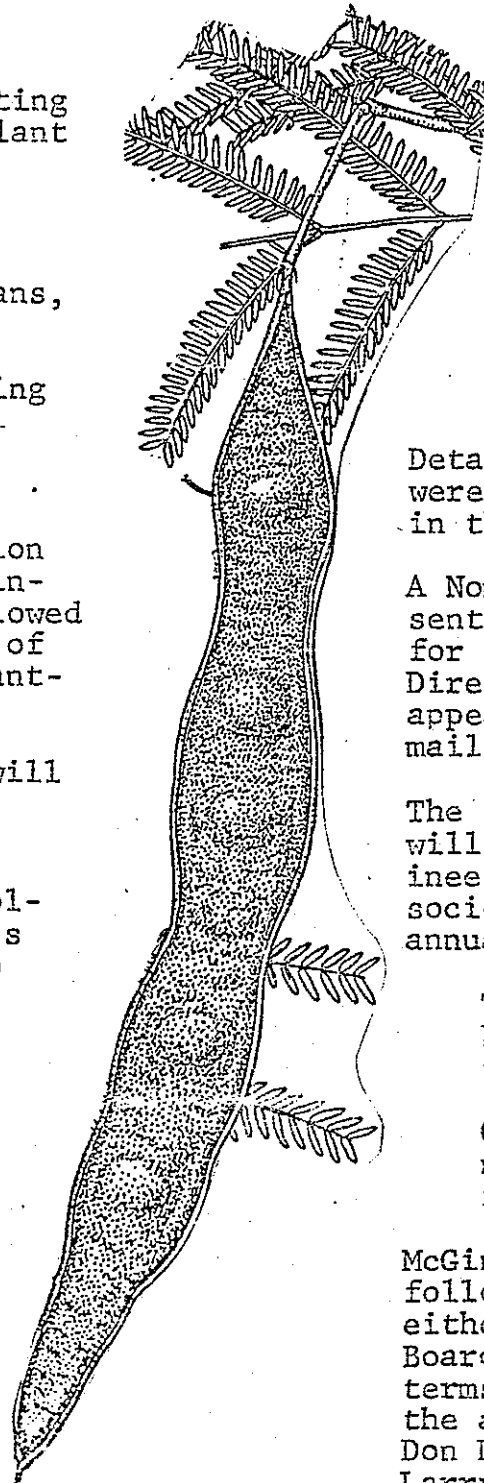
For further information about Central Arizona College, see Bill Kinnison's fine article on page two of this newsletter.

Final details of the meeting will be mailed out late in December.

REPORT FROM THE ANPS BOARD OF DIRECTORS MEETING

The ANPS Board of Directors met in Tucson 17 October. Seven members were present.

The Board voted to honor Lucretia Brezeale Hamilton with a life membership in the society in recogni-



tion of her efforts in designing a logo for the society. She will also receive a distinguished fellow certificate.

A group of members from Phoenix petitioned for chapter status. The request was unanimously accepted by the Board, and the Phoenix Chapter is now officially recognized.

Details of the annual meeting were discussed, as reported in the adjacent column.

A Nominating Committee presented a slate of three names for election to the Board of Directors. These names will appear on the ballot to be mailed at the end of December.

The same Nominating Committee will prepare a slate of nominees for officers of the society to be elected at the annual meeting.

The treasurer reported a balance of somewhat more than \$1,000.

Chapters may sell society notepaper to raise funds for chapter activities.

McGinnies reported that the following individuals are either no longer on the Board of Directors or hold terms that will expire as of the annual meeting in January: Don Ducote, LeMoyne Hogan, Larry Holzworth, Dick Lambert, Duncan Patten, F. Morgan Rayburn, and Penny Stubbs.

Routine business was trans-

acted and several items were tabled for further discussion.

From the minutes by
Recording Secretary
Eileen B. Ferguson

CENTRAL ARIZONA COLLEGE

Central Arizona College, one of fourteen colleges comprising the Arizona Community College System, was opened in the fall of 1969. The Pinal County Community College District, in addition to its main Signal Peak Campus, operates campuses at Sacaton on the Gila River Indian Reservation, and near Mammoth, in the eastern mine-oriented portion of the county. An educational center is located at the Arizona State Prison and numerous off-campus extension courses are held in various communities of the county.

Supporting the multi-campus structure is a full range of course offerings and degree programs. Certificate and degree programs allow the student flexibility of choosing what is best for him--occupational training and employment in a skilled and technical area, or preparation for and transfer to a four-year university.

The Signal Peak Campus is ideally situated midway between the metropolitan centers of Phoenix and Tucson and is located between the communities of Coolidge and Casa Grande. It is accessible from Interstate 10 by travelling east about three miles from exit 190. The campus is located along the eastern lower slopes of Signal Peak, a prominent geological point in the Sacaton Mts. Natural vegetation consists of saguaro, ocotillo, cholla, creosote bush and foothill paloverde.

From the beginning, the landscape concept for the campus has been not only to preserve the existing natural vegetation, but also to supplement it with additional drought tolerant plants from arid regions throughout the world.

This has been achieved through extensive plantings along walks and drives, washes and buildings throughout the campus. Also, footpaths originating near the Administration Building allow visitors and students casually to view the numerous species of arid-land plants grown and maintained under minimum care and irrigation.

Plants from Sonoran and Chihuahuan deserts are undergoing evaluations in terms of drought tolerance, cold and heat hardiness, and also landscape value.

As these plantings begin to mature and the number of species continues to expand, it is hoped that a great deal of information can be obtained and passed on to nurserymen so the public may be made even more aware of the importance and choices of plant material available when it comes time to landscape with desert plants.

Bill Kinnison

PHOENIX CHAPTER

At its meeting 7 November, Ralph Backhaus, Arizona State University professor, talked to members of the new Phoenix Chapter about guayule, a plant which is being studied as a source of rubber substitutes.

Officers were also elected, but a report had not reached the newsletter by press time.

For information about the chapter, call Russ Haughey at 947-2800.

TUMAMOC HILL, TUCSON

A field trip to Tumamoc Hill offers a visit to the site of the oldest desert research area in North America. "Tumamoc" was the Papago name for "horned toad" and was adopted for the name of the hill by the Desert Laboratory staff.

In 1903 the Carnegie Institution of Washington established the Desert Laboratory on Tumamoc Hill. Originally it included a combined laboratory and office building constructed of native rock with a slate roof. The rock walls together with an extended roof to shade the walls were designed to ameliorate high summer temperatures. The slate roof conserved water by appropriate drains to cisterns. A chemistry building and a shop were added later.

The research area of some 800 acres, which includes the hill and some nearby level terrain on the west side, has been more or less protected by a fence originally built in 1906 and rebuilt at various times to repair damage caused by intruders.

Research largely centered on plant life had its beginnings in 1903 with a staff recruited from eastern institutions. They quickly adapted to life in the desert. At first, many of them lived in tent-houses, but later they moved to more substantial homes. Air conditioning was unknown at that time, and as long as the facilities remained under jurisdiction of the Desert Laboratory, endurable temperature was obtained by opening the windows at night and closing them during the heat of the day. The only cooling device was a burlap covered box in one window that was used to keep food cool.

The early scientists devoted their time to the study of plant physiology, climate and soils. One of

these was Herman Augustus Spoehr, father of ANPS member, Hortense Spoehr Miller.

Another scientist, Forrest Shreve, was at the laboratory from 1908 to 1940 when the laboratory was transferred to the U.S. Forest Service because reduced funds were available to the Carnegie Institution and greater interest lay in other areas.

Forrest Shreve made many contributions to desert knowledge. He is best known for his comprehensive study of the Sonoran Desert originally published in 1951 as Vegetation of the Sonoran Desert and later republished by Stanford University Press as Vegetation and Flora of the Sonoran Desert, in two volumes with descriptions of all common plants by Ira L. Wiggins.

Shreve also published an ecological study of the Santa Catalina Mts. in 1915, The Vegetation of a Desert Mountain Range as Conditioned by Climatic Factors.

In 1960 the Desert Laboratory buildings and land were purchased by the University of Arizona and have been used since then to house the Geochronology Laboratories of the UA Department of Geosciences as well as U.S. Forest Service and U.S. Geological Survey personnel, including Dr. Raymond M. Turner, who spoke to the Tucson Chapter in November.

The Tumamoc Hill area has been designated as a National Historic Site and a National Environmental Study Area.

In 1973 an environmental study area plan was developed to make the area more useful for educational purposes. Several trails were outlined and arrangements have been made to show school children, university students, and others various

aspects of conservation. At the same time attempts are being made to protect the area from undesirable uses and vandalism.

W. G. McGinnies

[A Tucson Chapter field trip to Tumamoc Hill was scheduled for 17 November.]



Cross section of Douglas-fir

profile from the article, "Vegetation of the Santa Catalina Mountains," by R. H. Whittaker and W. A. Niering (Ecology, 46:4, 1965) supplemented a three-page report by the same authors in Progressive Agriculture, September-October 1963.

Dr. C. W. Ferguson, UA Professor of Dendrochronology at the Laboratory of Tree-Ring Research, was the tour leader. At major stops he showed polished cross sections of the plant species typical of that vegetation zone.

Here, we could discuss--and guess at--the plant ages. In the pines, the technique of taking an increment core from living trees was demonstrated. Cross sections of a Douglas-fir and a bristlecone pine served as "show-and-tell" items and a brief discussion was presented on the age of the bristlecone pines [which are found in AZ on the San Francisco Peaks near Flagstaff] and on its applications in the fields of climatology and isotopic dating and its effect, through calibration of the C-14 time scale, on the pre-history of Europe.

Lunch was at the Hitchcock picnic area, where we walked to the site of the Hitchcock Tree. Later, at the Palisade Ranger Station, we saw the display section of the tree, a Douglas-fir with a ring sequence going back into the late 1600s.

A brief and brisk hike above the ski area, where a slide had closed the road, and a cup of hot cider at the ski hut topped off the day.

--CWF

MT. LEMMON

The Mt. Lemmon field trip, 20 October, on the theme "How Old Is It?" drew eighteen Tucson Chapter members up through the vegetation zones of the Santa Catalina Mts.

Handouts--some of the best reading--included the seven-page "One hour to Canada" from the Arizona-Sonora Desert Museum Newsletter, No. 20, Winter 1978. A copy of the Catalina

PLAN TO ATTEND

THE ANNUAL MEETING

19 JANUARY 1980

CENTRAL ARIZONA COLLEGE

NATIVE PLANT WORKSHOP A SUCCESS

Over 100 persons, a majority of whom were non-members, attended a free workshop presented by the Tucson Chapter on 22 September at the Porter House, Tucson Botanical Gardens.

A varied program was presented by the following speakers: "Seed germination"--William R. Feldman, UA Dept. of Plant Sciences; "Propagation with cuttings"--Joan Dernberger, City of Tucson Parks and Recreation Horticulturist; "Planting and care"--Dr. Mark Dimmitt, Arizona-Sonora Desert Museum Curator of Plants; "Landscape design with desert plants and promising new desert plants for landscape use"--Warren D. Jones, UA Landscape Architecture Professor; "Availability of desert plants for landscape use and odds and ends"--Ron Gass, Mountain States Wholesale Nursery, Glendale.

The chapter thanks the speakers for their excellent presentations and their kind participation. Thanks also to the following nurseries which assisted in our attractive display of native plants: Desert Flora (retail), 11360 E. Edison; Desert Products Nursery (retail), 2854 E. Grant Rd., Desert Trees (wholesale), 9559 Camino del Plata; Harlow's Landscape Plant Center (retail), 5620 East Pima; and Mountain States Wholesale Nursery, 10020 West Glendale Avenue, Glendale, AZ. And thanks, too, to those members whose help did not go unnoticed. A footnote: without the lemonade stand organized by Anne Rohde and friends, we would not have withstood that mid-day sun!

Tim Clark

NOTED PLANT ILLUSTRATOR SPEAKS

The Tucson Chapter has many very special members and one of its most talented and beloved members, Lucretia Brezeale Hamilton, shared her creativity with the chapter on 10 October.

While a student of botany at the University of Arizona, she was required to draw what she observed about plants. This was the beginning of a profession and the making of a craftsperson and artist. Her excellent line drawings are appreciated, studied and used by many throughout the southwest. She revealed her "simple" tools and techniques, which make some of the following books our plant bibles: An Illustrated Guide to Arizona Weeds, by Kittie F. Parker; The Cacti of Arizona, by Lyman Benson; Grasses of Southwestern United States, by Frank W. Gould; and Plants that Poison: An Illustrated Guide for the American Southwest, by E. M. Schmutz and Lucretia B. Hamilton (see p. 6). The chapter is pleased to sell some of these books to its members.

Our sincere thanks to Lucretia for giving us a wonderful evening.

--TC

TUCSON CHAPTER

For those members who may not have received a copy of the Fall ANPS Newsletter, in which the Tucson Chapter program for the next several months appeared, an up-to-date program will be mailed to chapter members in December.

The Tucson Chapter was invited to participate at the annual plant and flower show of the Tucson Men's Garden Club at Park Mall the week-

end of 17-18 November. Chapter members answered questions about native plants and promoted the goals of the society. A display of native plants was available.

The Tucson Chapter hopes to offer an 8-to-10 week plant taxonomy and identification course early in 1980. The course would be offered through the University of Arizona Division of Continuing Education. The instructor would probably be a university botanist. Classes would be held in a laboratory classroom on the university campus for approximately two hours in the evening and an occasional Saturday morning. The fee would be about \$35. If you are interested in participating as a student, please contact Tim Clark at 326-8527 (evenings) as soon as possible.

Dr. Raymond M. Turner, U.S. Geological Service, and UA Adjunct Professor of Geosciences, spoke at the November meeting on "Recent Vegetation Changes along the Colorado River below Glen Canyon Dam."

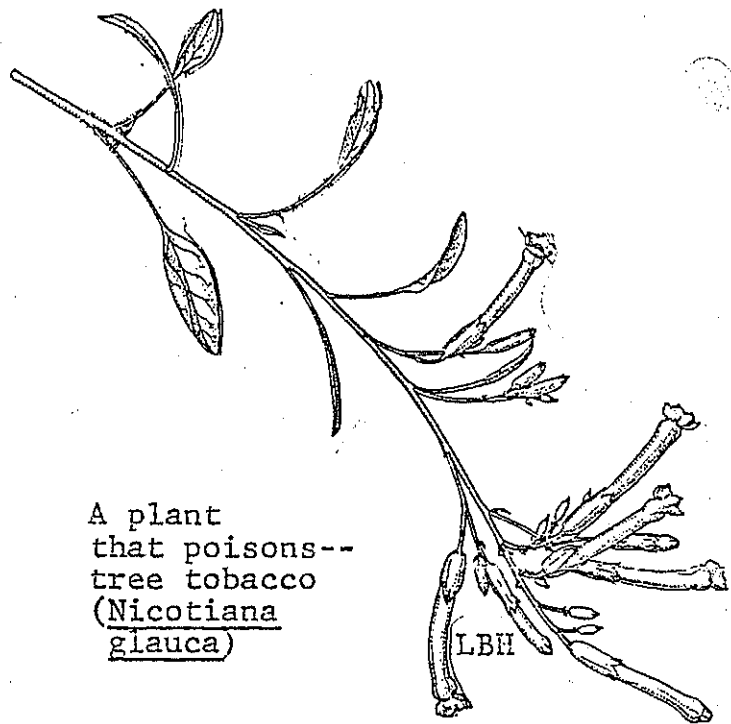
--TC

PLANTS THAT POISON

Plants that Poison: An Illustrated Guide for the American Southwest, a new book by Ervin M. Schmutz and Lucretia Brezeale Hamilton, has just been published.

The book covers over a hundred plants--both native and introduced --of varying toxicity that can cause human poisoning in the southwest.

The volume includes identification made easy for non-botanists with Lucretia Hamilton's clear, sharp line drawings and Schmutz's easily understood descriptions. The list-



A plant that poisons--
tree tobacco
(Nicotiana glauca)

LBH

ings of toxic plant parts, poisoning symptoms, and comments for each plant make the book outstanding. They are brief, clear, to the point, and authentic with scientific references. Taken as a whole, they enable the reader to judge the degree of caution he or she will want to take for each plant. A page on precautions and cautions points out several considerations besides the toxicity of the plant: amounts consumed (often dependent upon disagreeable taste), the parts eaten, the stage of growth, and whether eaten by young children or healthy adults, for example.

The authors have performed a distinct service to parents. None should be without the book. It should also be welcomed by schools, medical offices, hiking clubs, garden clubs, scout headquarters, camps, and wherever a knowledge of potential plant poisoning is needed.

The book is published by Northland Press, P. O. Box N, Flagstaff, AZ 86002, at a price of \$7.50.

NEW DIRECTOR AT DESERT BOTANICAL GARDEN

Dr. Charles A. Huckins has been appointed Director of the Desert Botanical Garden, according to Henry Triesler, President of the DBG Board of Trustees.

Dr. Huckins was formerly Chairman of Indoor Horticulture at the Missouri Botanical Garden, St. Louis. He was responsible for the supervision of the Desert House, the world-famous Climatron and the planning and development of the Mediterranean House as well as coordinating all of the Garden's seasonal floral displays and other interpretive exhibits.

The DBG, Huckins noted, historically has been developed as a specialized institution for the study of desert plants with a rather narrow focus on botanical research.

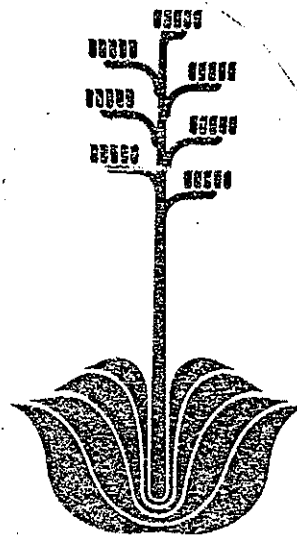
"Over the past several years, however, the Garden has begun to look past its own fences and to acknowledge a responsibility for serving the greater public. This is a trend I expect to encourage," Huckins said.

Born in Hawaii in 1941, Dr. Huckins comes from a distinguished family of public servants. His father, Capt. Thomas Huckins, USN (Ret.) was a member of the intelligence team which broke the Japanese code early in World War II, and his maternal great-great grandfather, Ninian Edwards, was the "Father of Illinois" being its only territorial governor, first U. S. Senator and third state governor.

In 1963 Huckins earned a B.A. in Biology at Brown University. After a tour in the Marine Corps Reserve, Huckins returned to academic life at Cornell University, where he

received an M.S. in Horticulture in 1967 and a Ph.D. in Botany in 1972.

After graduation, Dr. Huckins received the William Frederic Dreer Award from Cornell and a research grant from the University of Oxford, England, for post-doctoral study in Europe and Asia.



"What attracted me to the Desert Botanical Garden," Huckins said, "was its small size, relative to the metropolitan area it serves and its tremendous potential for enlarging the scope of its activities and service to the public.

There's also a thrill in working with a small, talented staff which must be capable of planning as well as doing things."

"I think the emphasis over the next several years needs to be placed on improving the overall attractiveness of the Garden. We need to make it a more pleasing visual experience by arranging living collections in more naturalistic associations and by employing better landscaping techniques. In this way, we will be better able to interpret our plants to the public in a number of ways--ecological, ethnobotanical, geographical and horticultural as well as from the more traditional taxonomic standpoint, as has been done so well here in the past," he said.

Dr. Huckins plans to develop more educational programs of current importance, generate more involvement

with the community and relate our horticultural and botanical knowledge to the needs of desert-living man. "We can't emphasize enough man's utter dependence on green plants and his need to understand the significance of his relationship with plants if he is to survive on this earth much longer," Dr. Huckins said.

--DBG

NOTES AND NEWS

"Irrigation Techniques" is the subject of a class being offered by the Desert Botanical Garden 28 November and 5 December. Gaylon Coates, an internationally known irrigation consultant, is conducting the class on this timely subject.

An Arid-zona Landscaping Contest, cosponsored by the Desert Botanical Garden and Salt River Project, was held in the Valley of the Sun [Phoenix area] earlier this fall. The contest was created to commend residential, commercial, industrial and government sites that best use the natural flora of arid regions for beautiful water-thrifty landscaping ideas. Awards were announced late in October.

EDITORIAL THANKS

Thanks to all of you whose contributions made this newsletter possible. You and your literary efforts are greatly appreciated.

Not until well after the fact did the editor learn that assignments and follow-up postcards were mailed out over her name. She is embarrassed and hopes that such a situation will not again occur.

Please continue to send material voluntarily if you want a newsletter. It is against the current editor's principles to make assignments.

Remember the address is:
Mrs. Eileen B. Ferguson
6602 N. Cibola Av.
Tucson, AZ 85718

NEWSLETTER EXCHANGES

ANPS exchanges newsletters with native plant societies in New Mexico, Nevada (northern), Idaho, and Colorado.

Each of those societies is engaged in similar activities--lectures, workshops, field trips. It would be impossible to report all their activities, but items of special interest will be included here from time to time. If any of you are interested in what may be going on in a neighboring state, ask for additional information.

The Pahove Chapter of the Idaho Native Plant Society derives its name pahove from the Paiute word for sagebrush, Artemisia tridentata Nutt.

The Northern Nevada Native Plant Society, Occasional Paper No. 3, November 1978, is: Impressions of Nevada--the Countryside and Some of the Plants as Seen through the Eyes of an Englishman, H. Dwight Ripley. These impressions were of travels in the late 1930s and 1940s when Ripley and a colleague were searching out plant species primarily for horticultural uses.

"Collecting, Processing, and Germinating Seeds of Western Wildland Plants," by J. Young et al. is free from Science & Education Admin.
Renewable Natural Resource Center
920 Valley Road, Reno NV 89512