

NATIVE PLANT SOCIETY OF NEW MEXICO
October ~~1978~~ Newsletter

1979

October Meetings:

Santa Fe Chapter - Don Lowrie will share his slides of the plants of the Mojave Desert, Wednesday, October 17th, in Room 119 of the Laboratory Building at St. John's College, 7:30 p.m.

Las Cruces Chapter - President Bob Reeves reports that the Las Cruces Chapter has had an active summer taking field trips to such places as the river, Dog Canyon, Bishop's Cap, Jornada (Doña Ana Mountains) and Cloudcroft. Their regular, monthly meetings held on the second Wednesday of each month will resume this fall. Come to Room 156 of the Agriculture and Home Economics Building on the NMSU Campus, 7:30 p.m.

News & Notes:

David Deardorff has found it necessary to resign his position as statewide president of the Native Plant Society of New Mexico due to increasing pressures of his business. The Society is now functioning without any formal leadership. David has also doubled as president of the Santa Fe Chapter; this position will be filled in November.

The Autumn Plant Sale sponsored by the Santa Fe Chapter was a near bust. The weather turned cold and wet and only two vendors showed up. The gates to the Indian School were locked all day and it was also Fiesta weekend. The chapter earned \$58 in contributions from the vendors. Our thanks to Aqua Fria Nursery and Plants of the Southwest for their dedication and support.

At our September business meeting a Board of Directors was selected to serve the Native Plant Society of New Mexico during the calendar year 1980. These positions include:

Melissa Savage, Statewide Coordinator
Carol Dimeff, Editor
Farralee Barnes, Corresponding Secretary
Wendy Dority, Treasurer
Philip Pennington, President, Santa Fe Chapter

Volunteers for various working committees came forward:

- | | |
|------------------------------------|--|
| (1) Program Planning & Field Trips | Beverley Spears
Bob Pennington |
| (2) Membership | Beverley Spears
Dorothy DeWitt |
| (3) Newsletter Mailings | Honora Moore
Joan Ann Hughey
Ruby Mullins |
| (4) Publicity | Phyllis Hughes, Chairman |
| (5) Telephoning | Harriet Pennington, Chairman
Mrs. Grand-Girard
Mrs. Elizabella Goetz |

Approval of this 1980 Board will follow in our November newsletter along with a questionnaire regarding interests in the NPS to help us in planning next year's programs. We need additional volunteers for all the above committees, especially Publicity. You can volunteer for one of these committees at our next meeting or call Carol Dimeff at 471-8158. Please support your NPS in 1980!

Gail Haggard has reported seeing a large, yellow evening primrose (*Oenothera* sp.) in full bloom 12 miles outside of Santa Fe along the highway to Las Vegas, October 10th.

November 3-4 Myra McCormick will lead plant tours to Redrock and the Florida Mountains to see trees, shrubs and cacti. Activity rates vary depending on whether you elect to ride with Myra (\$15/day or take your own vehicle, \$5/day). Reservations should be made in advance by writing Myra at the Bear Mountain Guest Ranch, P. O. Box 1163, Silver City, New Mexico 88061 or by calling her at (505) 538-2538.

MORE ON PETROCULTURE!

The July newsletter featured an article on jojoba and guayule, two perennial shrubs which yield a variety of petrochemical commodities. Neither of these fascinating plants can stand hard freezes, so only very southern New Mexicans could grow them. This short article is about a plant we could all grow: a very hardy native milkweed, *Asclepias speciosa*.

The Agricultural Experiment Station at Alcalde, New Mexico, is growing a test plot of *A. speciosa*. Gregg Simmons from Utah State University brought down some small plants and in mid-June of this year they were put in the ground. The most successful plot has the plants six inches on center, though even closer plantings would perhaps be better. At the Field Day of the Alcalde Station, August 26th, Bill Isaacs talked about the potentials of this milkweed. The milky juice is easily extracted from the plant. It is about 30 percent oil, and the oil can be separated from the other constituents of the juice and used or "cracked" to make gasoline. Perhaps 10 percent of the U. S. annual petroleum use could come from milkweeds. And plants are a "renewable" resource. There are no technological problems regarding the extraction or use of the oil. 15-20 barrels of oil each year could come from an acre of milkweed. The crop can be in production within a year, compared with jojoba, which is a woody shrub grown for its seed, takes 12 years before full productivity. Although there seem to be no growing difficulties, a great deal needs to be learned about the proper time to cut to get the most juice, how many cuts a year to make and so forth. These questions are being looked at here with a Four Corners Regional Commission grant and the coordination of the Plant Resources Institute, the Experiment Station, the Department of Natural Resources (Bill Isaacs is the director of a part of that department, the Heritage Program). But these questions could also be studied by any careful home gardener. The Four Corners Commission will publish a booklet of its findings on *Asclepias speciosa* in about two years.

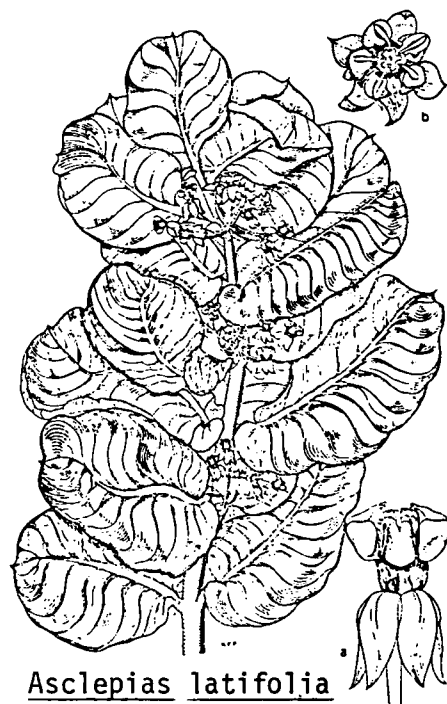


Asclepias speciosa
Milkweed

There are more uses for Asclepias speciosa than oil and gas. As with any plant material, gasahol can be made with fermentation of the cellulose. It contains a protein which can be isolated and sells at present for \$280 a pound. Fiber from the plant can be made into rope and twine. Milkweeds also contain a substance called asclepain that can be used as a meat tenderizer. The Hopi Indians are reported to cook the young shoots and leaves of Asclepias speciosa with meat (Kearney and Peebles, Arizona Flora). The seed hairs that help disperse the seed have fine flotation qualities and can be used as filling in life rafts and jackets. After the milky juice, which is unpalatable and poisonous to livestock, is extracted, the plant material is then good animal feed. It is also of medicinal value (see Michael Moore's excellent book just now available, Medicinal Plants of the Mountain West). Yet another product of the plant is water itself. After the milky juice is extracted, the plant water can be separated and used. This may sound wild but there are places in the world (hopefully ours will not be one of them for some time to come) where anything that will fix water is being looked to for help. Saudi Arabia is one such place. Asclepias speciosa is 87 percent water by mass; about 300 gallons an acre could be reused. The plants act as purifiers or filters, eliminating the salts that might be very strong in the water in the ground.

Of course, many of the uses mentioned here for Asclepias speciosa might be as well or better provided by some other species of milkweed. Just now along the roadways with big oval leaves is Asclepias latifolia, which could be examined, and there are the better known Asclepias tuberosa (landscaping) and Asclepias capricornu (medicinal).

One always wonders if a small farmer could be involved in growing a crop that would be processed in a refinery, presumably by the existing energy companies. Or is such a crop going to be grown only by big agribusiness. It is hard to tell; it may in part depend on how it all starts up. There are co-ops in the collection and marketing of many crops and products. The milk from many dairy farms is trucked to a pooling place and then comes to stores under one label. At present Asclepias speciosa is not commercially grown so there is no marketing system as yet. Anyone interested in it could write the Four Corners Commission and say they look forward to the upcoming publication. Seed is available from Plants of the Southwest, Santa Fe.



Asclepias latifolia

Actually, this crop might well stay on the farm. Firewood and coal are expensive and becoming more so. Milkweed may be a good substitute. Perhaps the small farmer will bundle his milkweed, dry it, and let its hydrocarbons burn in his own stove, furnace or fireplace in winter.

LETTER FROM ALICE Q. HOWARD, California Native Plant Society

We would like to bring to your attention the serious plight of rare plants on the Washington, D. C., political scene. As you may be aware, significant changes were made by Congress in the Endangered Species Act last fall. The California Native Plant Society played an important role in some good things that happened for plants: Federal-state cooperative agreements for protection programs, hitherto restricted to animals, became possible; and acquisition of habitat by the U. S. Fish & Wildlife Service for purposes of protecting rare plants was authorized, something previously possible only if the plant were simultaneously listed under the Convention on International Trade in Endangered Species.

But other changes have slowed the entire listing process and, because plants were late in getting any recognition at all, they are the most seriously affected. The listing process includes two steps: a "proposed rulemaking" wherein the candidate species is formally proposed for "endangered" or "threatened" status through publication of a notice in the Federal Register, and, after a minimum period for public comment, a "final rulemaking", again published in the Federal Register, formally declaring the status of the plant. A so-called "critical habitat" must now be designated at the time of listing, and the economic impact of declaring the critical habitat has to be evaluated. The U. S. Fish & Wildlife Service, a biological agency and not an economic agency, has not yet been able to formulate regulations for considering economic impact. Thus listing since last fall has been limited to species threatened by exploitation of their habitat is revealed, so that a strong case can be made for not designating critical habitat.

Some 1800+ plants have now been proposed for "endangered" status. But a further amendment last fall requires that final rulemakings be concluded by November 10, 1979, or the proposals must be dropped. Reproposal will be possible only with the existence of new information, and legal interpretations that have been made of this requirement suggest complications. Since listing essentially has been halted, most of the proposals likely will be dropped.

This spring and summer, both houses of Congress have been considering "re-authorization" legislation that primarily extends funding for activities under the Endangered Species Act. Further amendments to the act itself are possible during this process. On the Senate side, a bill has already been approved by the full General Accounting Office: that in order to ascertain the likelihood of adverse impact on the species, the consultation requirement between federal agencies having some jurisdiction over rare species and the U. S. Fish & Wildlife Service be extended from only species which have been listed to include also species proposed for listing. The GAO (the investigative arm of Congress) felt that this measure would minimize the chances of conflict at later stages.

Though this would seem to be a very worthwhile step, it apparently has had an undesirable effect. The U. S. Fish & Wildlife Service seems to have decided at some high level that it is unwilling to accept the additional workload and that the best course of action is to jettison as quickly as possible those species merely proposed for listing. Attempts to amend the Senate bill to grant an extension of time in which to complete the listing process were refused because of U. S. Fish & Wildlife Service's opposition. As rare plants have only recently received any attention at all, this is a severe blow to their welfare.

What now seems clear is that plants need far more outspoken and well organized friends in Washington than they have had so far. This is why we appeal to you now. If plants lose ground this time, we must be prepared to fight to regain that ground and to move forward when the next reauthorization legislation comes under consideration. Effective spokesmen for animals abound. Those of us, professionals and laypeople, interested in the welfare of plants must unite and prepare to dip our toes into politics, no matter how distasteful or foreign it may seem to some of us, or plants will continue to be shunted aside. It is not clear at this time whether anything will be possible in the House to alter their bill.

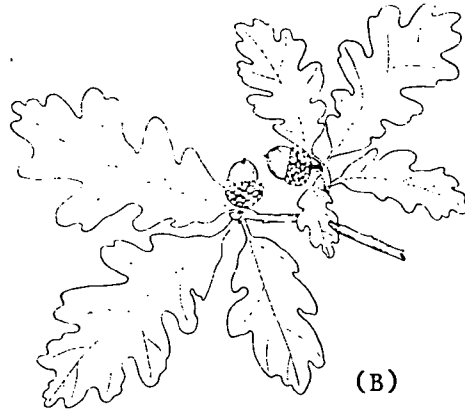
If you would like to be informed about what is taking place in Washington and would be willing to try to influence the course of events by contacting legislators, please send your name, address and phone number to:

Alice Q. Howard
California Native Plant Society
Department of Botany
University of California
Berkeley, California 94720

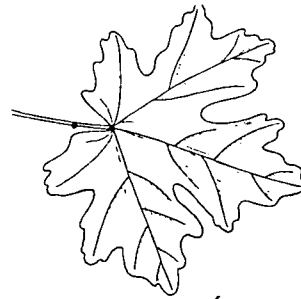
FALL COLOR CHANGES



(A)



(B)



(C)

- (A) Quaking Aspen, Populus tremuloides
- (B) Gambel Oak, Quercus gambelii
- (C) Bigtooth Maple, Acer grandidentatum


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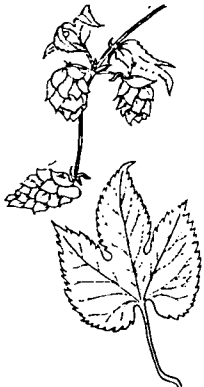
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