

NEWSLETTER
THE NATIVE PLANT SOCIETY OF NEW MEXICO
July, 1979

Calendar of Coming Events

July 18 - The Santa Fe chapter will view two films: "Pruning Practices at the Brooklyn Botanic Garden" and "Nature's Colors," an introduction to the use of plants to produce dyes. Come to room 116 of the Laboratory Building at St. John's College, 7:30 pm.

The following three events are offered by Myra McCormick of Bear Mountain Guest Ranch, Silver City:

July 14, 15 - Wildflower tour of high mountain plants: Signal Peak and McKnight Canyon.

August 4, 5 - Wildflower tour of high mountain plants: Mogollon Mountains and McMillan Nature Trail.

September 8, 9 - Edible Plant Workshop.

For more information write P.O. Box 1163, Silver City, New Mexico 88061, phone 505/538-2538. Rates vary from \$5.00 to \$15.00 per person.



Stanleya pinnata
prince's plume
Flowers yellow
mustard family
(Brassicaceae)

CAN JOJOBA SAVE THE SPERM WHALES?

Jojoba (hoh-HOH-ba) or Simmondsia chinensis has been harvested for a long, long time. Apaches made a coffee from its beans and used the bean oil in medicines.

The present excitement about jojoba is over its potential worth as a petrochemical or oilseed crop. Jojoba oil keeps its viscosity under extreme pressures and temperatures, which is an essential attribute of oil used in high speed machinery. It is the only known oil that can replace sperm oil.

In 1971 sperm whales were declared an endangered species. They are still hunted, however.

"One fully producing acre of jojoba yields the same amount of oil as 30 sperm whales. Since the current annual whale harvest is limited by international treaty to 6,000, a mere 200 acres of jojoba could supposedly save all the sperm whales from death by harpoon. The problem now is getting Russian and Japanese whalers into the jojoba-growing business," says Jay Stuller.

California Governor Jerry Brown has forcefully promoted jojoba because of his concern for the sperm whale. Bumper stickers, too, back the effort: "Grow for money - don't kill for it," "Jojoba Saves Whales."

Jojoba oil is superior to sperm oil in that it does not need cleaning. It is clean and odorless, having been pressed out - a very simple process.

Besides its use in heavy industry, the oil is used in cosmetics, as a food oil, a heating oil, in furniture wax, to coat pills, to cure skin ailments, and to stop balding!

(For more on Jojoba, please turn to page 3)

NEWS & NOTES

Have a Wildlife Habitat in Your Own Back-yard

Even a tiny little garden can provide food and shelter for wildlife, and even in the middle of a city such a refuge is needed by animals and birds.

Six years ago the National Wildlife Foundation began certifying backyards as wildlife habitat to help encourage people to provide shelter and food plants and a constant supply of water for furred and feathered visitors.

Write to the National Wildlife Foundation, 1412 16th Street, NW, Washing, D.C. 20036 for information. It may take a while to hear from them, but it is a rewarding endeavor to make your yard such a habitat and it is fun to have a certificate to testify to your commitment.

Here are a few native plants and the wildlife which they attract:

Penstemon barbatus attracts hummingbirds. Flickers particularly enjoy the berries of Russian olive (especially after they have been frozen and are sweet, though very cottony for our taste). Butterflies like the flat, purple heads of thistles and the column of small, purple flowers of Amorpha canescens and A. fruticosa. Many birds like the red fruits of Rhus trilobata. The beautiful Tassel-eared squirrel (Abert's squirrel) uses the ponderosa pine for its major source of food and shelter.

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Taos/ Tres Piedras Field Trip

If you'd like to take yourself on a field trip to the Taos / Tres Piedras area, here are some plants for which to look. Bill Isaacs took his summer botany class there in late June. In general, now is a good time to see members of the rose and scroph families in bloom (Rosaceae and Scrophulariaceae) as well as grasses.

Rose family

Geum triflorum - avens

Potentilla fruticosa - shrubby cinquefoil

Scroph family

Penstemon - beardtongues

strictus

crandellii

barbatus

angustifolius

Castilleja - paint brush

integra orange / red

sulfurea white

Lily family

Calochortus nuttallii - sego lily

Erythronium grandiflorum - avalanche lily

Buttercup family

Delphinium tenuisectum - larkspur

Ranunculus - buttercup

inamoenus

origens

Pea family

Thermopsis pinetorum - golden banner

Lupinus - lupine, bluebonnet

argenteus

kingii

MORE ON JOJOBA

Jojoba could be an economic crop for the arid Southwest. Here are the good points and the drawbacks.

Jojoba can grow in hot, harsh climates on about a dozen inches of rain a year. It can withstand salty and alkaline soils. It cannot withstand temperatures below 25 degrees F.

The seeds are worth \$2, \$3, \$4 a pound and a mature jojoba plant can yield 10 pounds per year. At 500 plants per acre the yield could be 5,000 pounds per year per acre - up to \$20,000 per acre! However, jojoba is expensive to establish. Growers put in three times the number of plants they expect to mature.

Jojoba takes a long time to mature - about a dozen years, (after four years the yield is approximately a pound of beans per bush). And there are problems with consistent production. Seeds of high yield plants do not necessarily grow into high yield plants, so vegetative reproduction is best.

The Apaches (with Japanese involvement!) are growing jojoba on the San Carlos Reservation in Arizona, and harvesting on the Cabazon Reservation in California is anticipated. There is some back-yard growing of jojoba, and the pollution tolerance of this attractive shrub would allow it to be grown even in median strips. At present about 2,000 acres are in jojoba in the States, but that may increase considerably. Jojoba is certainly under scrutiny by agribusinessmen.

Other crops are also under scrutiny for oil and rubber. There will be articles on these in future newsletter. Here comes petroculture!

Seed of jojoba is available from: Clyde Robin Seed Co., Inc.
P.O. Box 2855
Castro Valley, California 94546

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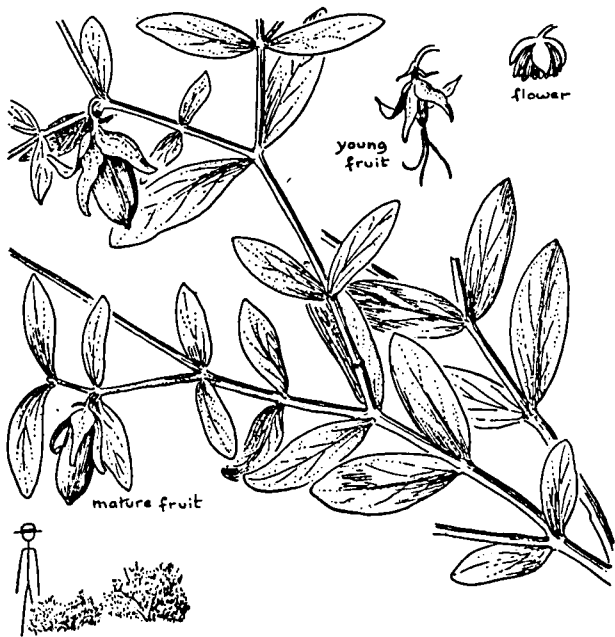
HOW TO JOIN THE NATIVE PLANT SOCIETY

If you would like to receive our newsletter, mail your dues to Carol Dimeff, Route 4, Puerta del Sol, Santa Fe, New Mexico 87501. Send \$6.00 for individual, \$8.00 for families and \$4.00 for students and senior citizens.

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ILLUSTRATION CREDITS

Our illustrations this month were taken from the following publications:
Flowers of the Southwest Deserts, Dodge, Jeanne Janish illus., S.W. Parks and Monuments Assoc.
Trees, Shrubs, and Woody Vines of the Southwest; Vines, Sarah K. Arendale, illus., Univ. of Texas Press.
Rocky Mountain Flora, Weber, Charles Yocum, illus., Univ. of Colorado Press.



Simmondsia chinensis
jojoba Flowers green-yellow
box family (Buxaceae)

GUAYULE FARMING MEANS DOMESTIC RUBBER

Guayule (y-00-lay) or Parthenium argentatum, is a woody, rubber-producing shrub in the sunflower family (Asteraceae) which grows in arid northern Mexico and possibly stretches up to the heel of New Mexico. It is perhaps the most significant of the hydrocarbon crops. The Aztecs made their footballs from the hardened latex.

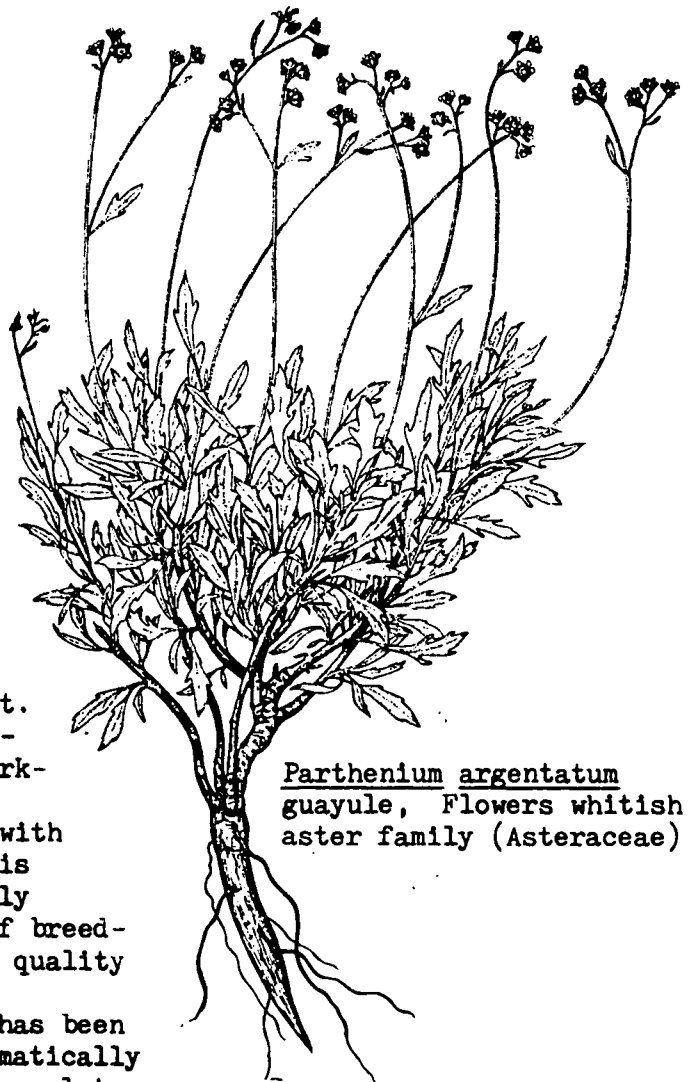
A number of different plants were tested for rubber potential prior to and during World War II with the selection of guayule as the most promising rubber-synthesizing candidate for the Southern California climate, it being an area whose land use is limited by lack of water. At the termination of the guayule research program in the late 1940's, yields of rubber from guayule per acre per year were only slightly less than that from Hevea, the Brazilian rubber tree. The considerable resin content of guayule tissue (which requires extra refining steps to eliminate) plus the necessity of re-planting every two years discouraged the guayule enthusiasts, as did the re-establishment of our Hevea rubber imports which had been curtailed during World War II.

The governments of Mexico, Israel, and the United States have recently instituted programs of guayule exploitation and research. An extraction facility in Saltillo, Mexico, is nearing completion and it is predicted that within a few years the supply of wild plant material will be exhausted. It now appears desirable to continue with a breeding program whose goal is to increase the rubber yield per acre to a point where guayule can be grown as an economically important crop in semi-arid climates under relatively low maintenance agricultural practices. The rubber is extracted by grinding up the entire plant.

The Los Angeles State and County Arboretum and other research institutions are working toward this end. A major complication could be guayule's habit of producing seed without pollination, i.e. it clones itself. This makes deliberate cross-pollinations extremely difficult and severely limits the success of breeding programs designed to increase yield and quality of rubber.

One breakthrough on the yield problem has been the development of a chemical method of dramatically increasing the plant's rubber yield. A bioregulator is sprayed on the flowering plant.

Guayule will be well suited to Southwestern agriculture some day. The most apparent benefit is its low water requirement. It thrives in heat but cannot tolerate temperatures of much below 20 degrees F.



Parthenium argentatum
guayule, Flowers whitish
aster family (Asteraceae)

Additions to Membership Roster, Native Plant Society of New Mexico - July'79

SANTA FE (87501 zip code)

Eger, Stephany A.	1700 Camino dela Vuelta, SF	
Fisher, Andrea	Rt. 5, Box 230, SF	455-7887
Friedman, Fred & Beverly	P.O. Box 4036, SF	471-7090
Gilbert, Bill & Anne M. Nelson	Box 123, Cerrillos, NM 87010	471-3246
Howard, David	129 Solana Dr. SF	988-3669
Kemp, Lynette K.	Box 397 SF	
Jones, Brad & Gabriela	1100 Osage Ave. SF	982-2101
Kupjack, Ray & Florence	R.R. 2, Box 305-25, SF	
Lowrie, Donald C.	Country Club Apts. #34, Airport Road SF	471-7331
Moore, Honora	923 Acequia Madre SF	988-2706
Pennington, Robert and Jeni	1409 Agua Fria SF	
Sweeney, Mr. & Mrs. Philip	(Sangre de Cristo Landscapes) 1038 Camino Santander SF	988-3474
Wolfe, Corinne H.	2509 Avenida de Isidro SF	
Yarborough, Mrs. Keith A.	324 Ea. Marcy #1 SF	988-3922

ALBUQUERQUE

Caudill, Larry T.	1025 A Polomas Dr SE, Alb. 87106	
Couch, Sherry	418 Bryn Mawr SE, Alb. 87106	
Freehling, Mike	1013 Summit NE, Alb. 87106	
Lewis, James V.	Math Dept. UNM, Alb. 87131	277-4903
McNatt, Randy	418 Bryn Mawr SE, Alb. 87106	
Mitchell, Rosemary (Mitchell	Environmental Planning and Design Inc.) 1304 Los Arboles NW, Alb. 87107	344-4991
Sylvester, Donnell	2013 White Cloud NE, Alb. 87112	

LOS ALAMOS (87544 zip code)

Lewis, W. Burton 314 Potrillo Drive

LAS CRUCES

Deare, Joseph H.	4007 Elks St.	
Egbert, John C.	Box 449 Cliff, NM 88028	
Graybill, Dorothy & Howard	2610 Sandigale LC	522-6425
Kobayashi, Herbert K.	805 N 17th St. #218 LC 88001	
Martin, Julianne & Carlos	P.O. Box 235, Dona Ana, NM 88032	526-6751
Woerner, C.A. & Dorothy	1610 La Fonda Drive LC	
Wooten, Tom	R.R. 3, Box 1700, Los Alturas Estates LC	

OTHER NEW MEXICO MEMBERS

Fyfe, L. or Ouida Peters	Box 776, Cedarcrest NM 87008	281-5674
Jenks, Randolph	Box 80, Luna NM 87824	
Morris, Corinne S.	Box 962, Tucumcari NM 88401	
Simon, Elisabeth	Ponderosa Highlands Ranch, Mimbres NM 88049	
Stark, Nancy	Tesuque NM 87574	

OUT-OF-STATE MEMBERS

Arizona Native Plant Society	Box 18519, Tucson AZ 85731	
Black, Claudine	25 Panoramic Way, Berkeley, CA 94704	849-3379
Greene, Marjory	1300 Garfield Ave, Aurora, IL 60506	
Northern Nevada Native Plant Society	Box 8965, Reno, NV 89507	
Richards, James M.	2200 West 53rd St., Minneapolis, MN 55419	
Utah Native Plant Society	1448 No. 500 East, Centerville, UT 84014	

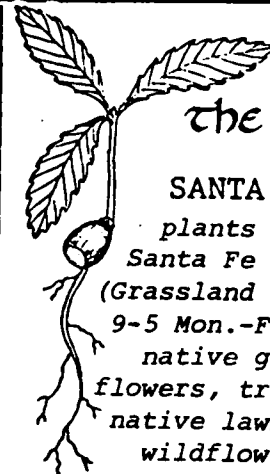
Classified Ads

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Guided wildflower tours.

Myra McCormick
Silver City, N.M. 88061
Phone: (505) 538-2538

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plants of
The southwest

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SANTA FE LOCATION!

plants now available at
Santa Fe Railroad Yards
(Grassland Resources Bldg.)

9-5 Mon.-Fri. 9-12 Sat.
native grasses, wild-

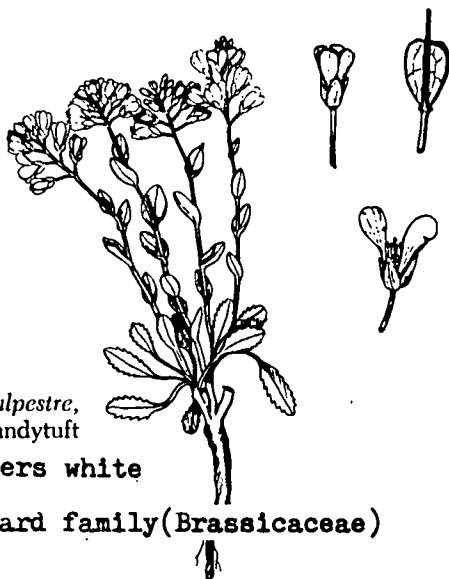
flowers, trees & shrubs

native lawn grasses &

wildflower mixes

the nursery location is also
open, 8-5 Mon.-Sat., in Cerrillos.

THE NATIVE PLANT SOCIETY OF NEW MEXICO
Route 4, Puesta del Sol
Santa Fe, New Mexico 87501



Thlaspi alpestre,
Wild Candytuft

Flowers white

mustard family (Brassicaceae)