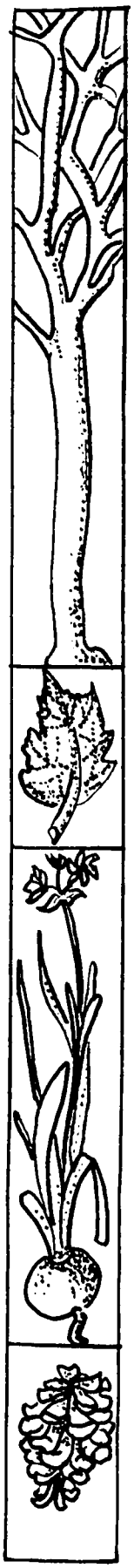


THE NATIVE PLANT SOCIETY OF NEW MEXICO



October, 1976 Newsletter

Melissa Savage, Editor,
983-1113 in Santa Fe, NM

Our October field trip is just outside of Santa Fe. This coming Sunday, October 10th at 9:30 am sharp, we will meet in front of the Masonic Temple (at the foot of Bishops's Lodge Road) to proceed up to the Santa Fe Ski Basin to spend the day with Larry Palmiter. Bring a lunch. The scenery should be spectacular, and we will be concentrating on foliage rather than blooms. Call the editor with questions.

The Tuesday of the following week, October 19th, Larry Palmiter has consented to hold forth on The Plant Geography of the Southern Rocky Mountains, which, if you know the breadth of Larry's knowledge, should prove an exceptional evening. 7:30 pm at the home of Melissa Savage, 1404 Cerro Gordo Road, Santa Fe (one mile off East Palace Ave.)

Bill Isaacs reports: Our trip to the sandias (Sept.19,1976) was most interesting as we found sixty species of plants and saw some really interesting country. Alligator Juniper was in fruit and could easily be compared with One-seed and Rocky Mountain Juniper, all growing in the same location. We also found in fruit a large leafy herb in the campground at Sandia Crest. At the time I identified it as Deer's Ears, but it is something entirely different. On returning to the car I was able to track the plant down to Scrophularia montana, a snapdragon of sorts limited to the central mountains of New Mexico. We found an excellent example of Osha, Ligusticum porteri, on the road up to Sandia Crest. Earlier in the day we were able to see some beautiful examples of Desert Holly, Mahonia haematocarpa, in the Madrid area and the material we saw was in full fruit with bright red, juicy berries. Bush Muhly, Muhlenbergia porteri, grows in profusion in this area, but property owners are more reluctant to allow groups on their land, where some of the best stands in this area are.

Claudia Hubbard reports: Those able to stop by the La Fonda Lobby on Saturday September 18th for the Native Plant Society's First Annual Mushroom Show will agree it was a great success. Two circumstances made the show possible: 1) Lou de Bourbon from the Santa Barbara (Ca.) Mycological Society turned up, suggested the show, and lent his considerable energy and experience to assembling it, and 2) the mushroom season hung around for an unprecedented length of time. Special thanks are also due to Chuck Barrows, Bill Isaacs, Hilda Voetberg, Miriam Fricken, Betty Mulligan, Gail Haggard, and the mushroom class from the College of Santa Fe. There were approx. 110 species of mushrooms from at least 60 genera and 20 families. I am thrilled to realize that there is such a great variety of mushrooms in

our nearby mountains. The specimins were gathered over the previous week from the Pecos, Sangre de Cristo, and Jemez Mountains. If anyone wishes to see a species represented list, please contact me, Claudia Hubbard, at 988-5918.

Claudia Hubbard is also hard at work developing a badly-needed curriculum in natives for the Santa Fe public school system. There is an astonishing gap in this area in our schools, and Claudia is doing several things to remedy it. She is leading a class of sixty fourth, fifth, and sixth graders from Chaparral School on field trips and will now be moving indoors with them to work further with plant materials and other areas, on Tuesday afternoons. She is looking for assistants in this, not experts, of course, but people willing to learn themselves and teach. Claudia is also putting together a collection of slides of native plant materials, for the high school and vo tech, and is soliciting slides or other photographic materials to help fill this crying need in our schools.

The Native Plant Society's participation in developing an Indian ethnobotanical garden at the Navajo Ceremonial Museum is continuing apace. A meeting is planned shortly to discuss the various aspects of design and planting of the garden. Anyone interested in participating please contact Bill Isaacs at 983-4498.

We are presently working with the U.S. Forest Service to obtain the necessary permits to begin a systematic study of the plants in the Santa Fe and Carson National Forests. A letter will be sent to Superintendent Wendell Gore of the Tesuque Ranger Station which will set up the necessary procedures to obtain permission for the Society to begin work. A listing of both vascular plants and higher fungi will be prepared along with herbarium material.

If you would like to continue receiving the newsletter, please let us know; no need to waste . Drop us a line, and enclose dues if you would like to be a member: $5.00 a year for individuals, $8.00 family.

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October, 1976 Newsletter

Melissa Savage, Editor
1404 Cerro Gordo Rd.
Santa Fe/983-1113

Calender

Sunday, November 7 9 a.m.	Bill Issacs will lead a field trip to La Joya State Game Refuge, located just north of Socorro(about 120 miles from Santa Fe) meet 9 a.m. Furr's parking lot, Coronado shopping center, carpooling, will be gone all day, bring lunch
Wednesday, November 17 7:30 p.m.	Tom Ray Riddle will talk on landscaping with native plants Laboratory of Anthropology, Old Santa Fe Trail

News

Our thanks to Larry Palmiter for his talk and field trip!

Encourage people to join the Native Plant Society membership: $5 individual, $8 family; send to Melissa Savage, address above

The League of Women Voters is working to set up a central office for all voluntary efforts in Santa Fe, called Volunteer Information Service. Anyone wishing to volunteer time could learn at such a meeting place about the wide range of things being attempted; and certainly it would be a place where ideas could be shared and plans worked on, coordinated, and streamlined. Gertrude Landmann is in charge of this project(the League will withdraw when the project is underway). They could use help after the middle of November, the office is 225 Cathedral Pl., in the same building as Visiting Nurse Service. The Native Plant Society would like to join in such a service. We would benefit if people learned about us and were interested in volunteering work. And we could be helpful partners to other organizations with aims similar to our own. Many organizations in Santa Fe are committed to the same wish- the wish for a more beautiful environment, more knowledge about it, and enhanced respect and enjoyment of it.

Native Plants for Landscaping

The following list of native shrubs, trees and herbs with landscaping potential is printed in the October Newsletter for two reasons. First, Tom Ray Riddle will speak on landscaping with natives (Nov. 17) and it is hoped this will stoke the fire for that talk. Secondly, the Native Plant Society hopes to put out a booklet this spring on natives for landscaping and we want to elicit additions to this beginning list, and suggestions about how best to grow the plants.

NATIVE PLANTS FOR LANDSCAPING

Abies concolor, White Fir (Pinaceae)
flat sprays; color variants-with bluish strain the most attractive; good under drain spouts

Amorpha fruticosa, Indigo bush (Leguminosae)
somewhat leggy but with attractive flowers; endures dry conditions

Arctostaphylos pungens, Manzanita (Ericaceae)
requires acid soil; evergreen; bees like flowers

Arctostaphylos uva-ursi, Kinnikinnick (Ericaceae)
requires acid soil;"one of the finest ground covers known,esp. for dry banks" Hitchcock

Artemisia arbuscula and frigida, Sage (Compositae)
easy to transplant; useful as a space "filler" where soils are poor

Berberis fendleri, Fendler's barberry (Berberidaceae)
good for erosion control where moisture is adequate; can be weedy

Berberis nervosa, Oregongrape (Berberidaceae)
transplants easily; fruit makes good jelly; good bee plant

Cercocarpus montanus, Mountain-mahogany (Rosaceae)
drought enduring; thrives in rocky soils

Chilopsis linearis, Desert willow (Bignoniaceae)
can be grown from seed; grows below 6,000 ft.; good ornamental in desert and semi-desert localities

Cornus stolonifera, Red osier or Dogwood (Cornaceae)
requires some moisture; grow on north side of house; flowers, leaves and stems attractive; visited by bees will grow from cuttings, and it layers

Elaeagnus angustifolia, Russian-olive (Elaeagnaceae)
introduced but naturalized; flickers like fruit; drought enduring; attractive greyish color

Fallugia paradoxa, Apacheplume (Rosaceae)
flower size proportional to water received; drought enduring

Fendlera rupicola, Fendler's cliffbush (Hydrangeaceae)
very attractive flowers and fruits; grows in sun or partial shade; drought enduring

Forestiera neomexicana, Privet (Oleaceae)
grows from slips; flowers before leafs out-early spring; good bee and butterfly plant

Gilia aggregata, Skyrocket (Polemoniaceae)
hummingbird flower; biennial; attractive flowers; transplants readily and can be grown from seed

Holodiscus dumosus, Rock spiraea (Rosaceae)
beautiful flower heads; grow on north side of house

Lycium pallidum, Wolfberry (Solanaceae)
interesting flower; moth pollinated; transplants; deciduous underground runners; can be aggressive

Mahonia haematocarpa, Desert holly (Berberidaceae)
attractive flowers and bright red fruits; birds like fruits drought enduring

Mirabilis grandiflora, Four o'clock (Nyctaginaceae)
beautiful purple flowers open in the afternoon; sunny locations; perennial; drought resistant

Morus microphyllus, Mulberry (Moraceae)
interesting leaf shapes; attracts birds; relatively drought resistant; frost sensitive

Opuntia imbricata, Tree cholla (Cactaceae)
grows from broken-off pieces, can form a "fence" with it; birds like the fruits, e.g. housefinches

Penstemon barbatus, Scarlet bugler (Scrophulariaceae)
hummingbird flower; propagates well from seed; tall and long bloomer

Philadelphus microphyllus, Mock orange (Hydrangeaceae)
very attractive flowers; sunny warm hillside or open areas takes dry conditions well

Physocarpus capitatus, Ninebark (Rosaceae)
looks like spiraea; grow on north side of house

Prunus virginiana, Chokecherry (Rosaceae)
fruits attract birds; can be weedy, needs careful prunning of suckers

Psilostrophe tagetina, Paperflower (Compositae)
attractive flowers, often used in dry arrangements; seeds used by birds; ordor distinctive; sunny location

Ptelea trifoliata, Waferash (Rutaceae)
attractive fruits; requires prunning otherwise leggy; good for protected areas

Quercus gambelii, Gambel's oak (Fagaceae)
difficult to transplant; slow growing; drought resistant; grown from acorns, water helps seedlings grow faster

Rhus trilobata, Squawbush or Skunkbush (Anacardiaceae)
birds like red fruits; drought resistant; fruits make a good drink; takes prunning well

Robinia neomexicana, New Mexico locust (Leguminosae)
can be weedy; color variants, dark reddish flower most attractive; can be pruned into a small tree

Salix irrorata, Plum-colored willow (Salicaceae)
bush; attractive "bloom" on foliage; white under-leaf; needs some water

Shepherdia argentea, Buffalo-berry (Elaeagnaceae)
birds like fruits; drought enduring

Symphoricarpos oreophilus, albus, etc., Snowberry (Caprifoliaceae) attractive fruits; north side; requires water

Yucca glauca, Soapweed yucca (Liliaceae)
attractive flowers; moth pollinated; very long tap root; drought enduring

Zinnia grandiflora, Zinnia (Compositae)
attractive flowers; perennial; good bedding plant; sunny locations

The Genus Penstemon in New Mexico

Gladys T. Nisbet and R. C. Jackson

The University of Kansas Science Bulletin, Dec. 23, 1960
vol. 41(5): 691-759

TAXONOMIC TREATMENT

Key to the Penstemons of New Mexico

1. Corolla some shade of red; if pink to rose color, the upper stem leaves connate-perfoliate 2
1. Corolla white or some shade of blue or purple; if pink, the upper stem leaves not connate-perfoliate 14
2. Upper stem leaves connate-perfoliate; corolla pink to rose color.... 3
2. Upper stem leaves sessile or subcordate; corolla some shade of red but not pink to rose..... 4
3. Corolla throat expanding gradually; staminode glabrous. 1. *P. pseudospectabilis* ssp. *connatifolius*
3. Corolla throat expanding abruptly; staminode bearded. 2. *P. palmeri* ssp. *palmeri*
4. Leaves 1 mm. wide and 10 to 20 mm. long..... 3. *P. pinifolius*
4. Leaves more than 1 mm. wide and more than 20 mm. long..... 5
5. Corolla constricted at the orifice..... 6
5. Corolla not constricted at the orifice..... 7
6. Stem leaves moderately thin, broadly lanceolate, oblong, or lance-ovate, lower ones 10 to 12 cm. long; calyx 3 mm. long. 4. *P. cardinalis* ssp. *cardinalis*
6. Stem leaves moderately thick, ovate or subcordate, lower ones 5 to 6 cm. long; calyx 4 to 6 mm. long .... 5. *P. cardinalis* ssp. *regalis*
7. Anther sacs dehiscent by a short slit across the connective, the free tips remaining closed ..... 6. *P. bridgesii*
7. Anther sacs completely or partially dehiscent, the free tips open.... 8
8. Anther sacs explanate 9
8. Anther sacs not explanate 10
9. Staminode bearded; stem leaves oblong to broadly ovate. 7. *P. superbus*
9. Staminode glabrous; stem leaves lanceolate ..... 8. *P. alamosensis*
10. Inflorescence glandular-pubescent ..... 9. *P. lanceolatus*
10. Inflorescence glabrous or slightly puberulous 11
11. Corolla not strongly bilabiate, lower lobes short, rounded, usually spreading ..... 10. *P. catonii*
11. Corolla strongly bilabiate, lower lobes long, narrow, reflexed 12
12. Base of lower lobes of corolla bearded with yellow hairs; calyx lobes 6 to 10 mm. long ..... 11. *P. barbatus* ssp. *barbatus*
12. Base of lower lobes of corolla glabrous or bearded with a few white or yellowish hairs; calyx lobes less than 6 mm. long 13
13. Anthers glabrous ..... 12. *P. barbatus* ssp. *torreyi*
13. Anthers bearded ..... 13. *P. barbatus* ssp. *trichander*
14. Foliage glabrous and slightly to heavily glaucous 15
14. Foliage glabrous or puberulous, not glaucous 18

15. Most of the bracts prominent; inflorescence compact, not secund, the very short pedicels and peduncles giving the effect of a spike of flowers 16
15. Only the lower bracts prominent; inflorescence not spike-like, either somewhat compact and secund or open and not secund 17
16. Bracts broadly ovate, subcordate, mucronate, usually obtuse, retuse, or occasionally acute; corolla pale lavender-blue; tip of staminode sparsely bearded with yellowish hairs ..... 14. *P. buckleyi*
16. Bracts lance-ovate or ovate, caudate or rarely acuminate; corolla sky-blue, violet-blue, or pink; staminode bearded with deep yellow hairs for fully half its length ..... 15. *P. angustifolius* ssp. *caudatus*
17. Bracts lanceolate; inflorescence somewhat compact, secund; corolla throat gradually expanded, bearded at base of lower lobes. 16. *P. secundiflorus*
17. Bracts broadly ovate with a short, abruptly pointed tip; inflorescence open and not secund; corolla throat narrow and often somewhat curved, expanded only at the orifice, glabrous at base of lower lobes. 17. *P. fendleri*
18. Leaves mostly linear, less than 35 mm. long 19
18. Leaves lanceolate or wider, or if linear, much more than 35 mm. long 28
19. Staminode glabrous; stems much branched above the base; corolla throat not 2-ridged ventrally 20
19. Staminode bearded; stems not branched except at or near the base; corolla throat 2-ridged ventrally 24
20. Corolla pink externally, white on face of lobes 21
20. Corolla blue, blue-purple, or red-purple 23
21. Corolla 15 to 24 mm. long, throat narrow and curved, upper lobes reflexed, lower lobes projecting 22
21. Corolla 12 to 15 mm. long, throat narrow and somewhat curved or gradually expanded, upper lobes reflexed or spreading, lower lobes projecting or spreading ..... 19. *P. ambiguus* × *thurberi*
22. Stems puberulous ..... 18. *P. ambiguus* ssp. *ambiguus*
22. Stems glabrous ..... 20. *P. ambiguus* ssp. *laevissimus*
23. Corolla 10 to 14 mm. long, throat gradually expanded, all lobes spreading ..... 21. *P. thurberi*
23. Corolla 12 to 15 mm. long, throat narrow and somewhat curved or gradually expanded, upper lobes reflexed or spreading, lower lobes projecting or spreading ..... 19. *P. ambiguus* × *thurberi*
24. Stems and leaves puberulous with flat scalelike hairs; leaves scattered on flowering stems; bracts much reduced in size; calyx lobes acute or very short acuminate, scarious margined almost to the tip 25
24. Stems and leaves puberulous with fine erect or retrorse hairs, or leaves glabrous; leaves numerous on flowering stems; bracts not reduced in size; calyx lobes long acuminate, scarious margined only at the base .. 27
25. Stems mostly erect, several; corolla strongly bearded at base of lower lobes; staminode bearded most of its length with golden hairs 26

25. Stems ascending or decumbent, numerous; corolla lightly bearded at base of lower lobes; staminode strongly bearded at tip with golden hairs and behind the tip with white or yellowish hairs. 24. *P. linarioides* ssp. *coloradoensis*
26. Leaves mostly linear ..... 22. *P. linarioides* ssp. *linarioides*
26. Leaves mostly oblanceolate ..... 23. *P. linarioides* ssp. *maguirei*
27. Leaves glabrous ventrally ..... 25. *P. crandallii* ssp. *glabrescens*
27. Leaves puberulous with fine erect or retrorse hairs. 26. *P. crandallii* ssp. *glabrescens* var. *taosensis*
28. Inflorescence glandular-pubescent 29
28. Inflorescence glabrous or puberulous 38
29. Fascicles of small, obscurely toothed leaves in axils of stem leaves. 28. *P. pulchellus*
29. No fasciculate leaves 30
30. Anther sacs explanate 31
30. Anther sacs not explanate 35
31. Corolla dull purple, lower lobes projecting, 3 to 5 mm. longer than upper lobes ..... 27. *P. whippleanus*
31. Corolla white, pale lavender, violet-blue, blue-purple, lower lobes not projecting, not noticeably longer than upper lobes 32
32. Corolla not bearded at base of lower lobes; staminode sparsely bearded at the tip ..... 32. *P. albidus*
32. Corolla bearded at base of lower lobes; staminode conspicuously bearded 33
33. Corolla 5 to 6 mm. wide, orifice as high or higher than wide; lower lip not glandular within; staminode not or barely exserted. 31. *P. breviculus*
33. Corolla 8 to 15 mm. wide, orifice much wider than high; lower lip glandular within; staminode prominently exserted 34
34. Corolla 25 to 35 mm. long, 10 to 15 mm. wide. 29. *P. jamesii* ssp. *jamesii*
34. Corolla 17 to 22 mm. long, 8 to 10 mm. wide. 30. *P. jamesii* ssp. *ophianthus*
35. Staminode glabrous ..... 33. *P. dasyphyllus*
35. Staminode bearded 36
36. Leaves finely toothed ..... 34. *P. gracilis*
36. Leaves entire or undulate 37
37. Median stem leaves shorter than internodes; bracts much reduced; lower lobes of corolla longer than upper ..... 35. *P. oliganthus*
37. Median stem leaves longer than internodes; bracts not much reduced; upper and lower lobes of corolla subequal ..... 36. *P. auriberbis*
38. Inflorescence not at all secund, corollas in dense fascicles usually separated by long internodes, corolla 10 to 14 mm. long. 37. *P. rydbergii*
38. Inflorescence more or less secund, corollas not in dense fascicles, or if so, the fascicles not separated by long internodes, corolla 15 to 40 mm. long 39
39. Leaves lance-ovate or oblong; inflorescence usually broad and compact; corolla 30 to 40 mm. long ..... 38. *P. alpinus* ssp. *brandegeei*
39. Leaves linear or lanceolate; inflorescence usually narrow and elongated; corolla 15 to 30 mm., occasionally 35 mm. long 40
40. Anthers villous 41
40. Anthers glabrous 42
41. Calyx lobes 3 to 6 mm. long; corolla throat moderately inflated above and below; staminode glabrous or with a few short hairs at the tip. 39. *P. strictus* ssp. *strictus*
41. Calyx lobes 8 to 10 mm. long; corolla throat ventricose below, not inflated above; staminode more or less bearded. 40. *P. strictus* ssp. *strictiformis*
42. Corolla 15 to 24 mm. long, 7 to 10 mm. wide, glabrous or lightly bearded at base of lower lobes; staminode narrow or somewhat dilated; stems puberulous or glabrate ..... 41. *P. virgatus*
42. Corolla 25 to 35 mm. long, 10 to 17 mm. wide, usually strongly bearded at base of lower lobes; staminode much dilated and often notched at the tip; stems glabrous ..... 42. *P. neomexicanus*