

## Next Meeting

March 25 at the Safeco Title Company, 230 West Line Street, Bishop. Enter from the parking lot in the rear. Time 7:30 p.m. Joann Lijek, Laboratory Assistant, and Robin Petersen, Staff Research Associate of the Sierra Nevada Aquatic Research Lab on Convict Creek will offer a slide presentation.

## PRESIDENT'S MESSAGE:

Ever since I've been old enough to be aware of the world around me, I've wanted to know the names of things - a mountain, a star, a plant. Later I found an expression of my feeling in the preface to Mary Elizabeth Parson's book The Wild Flowers of California as follows: "Mr. Burroughs, that devout lover of nature says, 'Most young people find botany a dull study. So it is, as taught from the textbooks in the schools; but study it yourself in the fields and woods, and you will find it a source of perennial delight. Find your flower, and then name it by the aid of the botany. There is so much in a name. To find out what a thing is called is a great help. It is the beginning of knowledge; it is the first step. When we see a new person, who interests us, we wish to know his or her names. A bird, a flower, a place - the first thing we wish to know about it is its name. Its name helps us to classify it; it gives us a handle to grasp it by; it sheds a ray of light where all before was darkness. As soon as we know the name of a thing, we seem to have established some sort of relation with it.'" (Printed in 1897) Isn't this what C.N.P.S. is all about?

. . . . . Doris Fredendall

## FIELD TRIP REPORT - March 7-8.

A soaking rain had recently fallen in Red Rock Canyon State Park when we gathered for an overnight field trip. Clouds still lingered but weather was mild. Mary Ann and Ron Henry, trip leaders, and five other Bristlecone Chapter members were astonished to see car after car pull into our meeting site with C.N.P.S. members from Watsonville, Sacramento, Fresno, Los Angeles, Irvine and Riverside until our numbers totaled twenty.

The very early scattered flowers were perky from the rain. Scale bud (*Anisocoma acaulis*), Arizona popcorn flower (*Plagiobothrys arizonicus*), sweet-scented Nevada cryptantha (*Cryptantha nevadensis*),

large yellow evening primrose (*Oenothera primiveris*), and spectaclepod (*Dithyrea californica*) were a few of the sand lovers. A tarweed (*Hemizonia arida*) endemic to the park, was still only last year's skeleton. Charlotte phacelia (*Phacelia nashiana*) was found in a steep gully atop a loose rocky fan that held small mohavea (*Mohavea breviflora*) and other little ones.

The Henrys chose a site off the Garlock road for our primitive night stop. A deep cut sheltered the campfire from the evening wind. Morning wind was wild and chilly at the Desert Tortoise Preserve and the tortoises, sensibly, were still underground. We walked the trails among the creosote bushes and learned of the barren shrubs from the trail guides. Although we were early for many flowers, our thirty hours together were rich in fellowship.

. . . . Doris Fredendall

## CHAPTER FIELD TRIPS

**APRIL 4-5. NORTHERN DEATH VALLEY.** Leader: Peter Rowlands, Environmental Specialist and Botanist, Death Valley National Monument. Plan to explore west side of the Cottonwood Mountains, between Ubehebe Crater and Hunter Mountain. Other areas in northern Death Valley may be visited instead, depending on the bloom. Be prepared for a primitive, dry camp on Saturday night. Meet 10:00 am at the Grapevine Ranger Station (near Scotty's Castle), Death Valley National Monument. Easy to moderate walking.

**MAY 16. SYMMES CREEK BURN, WEST OF INDEPENDENCE.** Leader: Doris Fredendall. Also called the Independence burn, this area was scorched in July, 1985. Easy driving and walking trip to look at regrowth and recovery of the vegetation. Annual wildflowers were abundant last year, the first season of recovery after the fire. Meet 9:30 am, about 4.5 miles west of Independence along Onion Valley Rd., at its junction with Foothill Rd.

**JUNE 13-14. 4-WD VEHICLE TRIP IN THE INYO MOUNTAINS.** Leaders: Mary & Paul DeDecker. Difficult driving and easy walking trip, entering the Inyo Mountains from Big Pine and returning via Independence. High clearance 4-wd vehicles are absolutely necessary. Dry camp Saturday night at Papoose Flat. Meet at 9:00 am in Big Pine at the Triangle Campground, junction of US 395 and Hwy 168. If planning to participate please contact the leaders at 878-2389.

**JUNE 27. MONO BASIN.** Leaders: Tina & Mead Hargis. Driving and easy walking tour to view rare plants of the pumice flats, a study area on the Sagehen Meadow burn, and, time permitting, the Black Point area. Meet 9:30 am at the Mono Lake Ranger Station, located 1 mile west of US 395 on the Tioga Pass Road.

**JULY 18-19. WHITE MOUNTAINS.** Leaders: Mary & Paul DeDecker and Mark Bagley. A joint trip with the San Diego Chapter to see plants of the Bristlecone Pine Forest and alpine zones. Meet at 9:00 am in Big Pine at the Triangle Campground, junction of US 395 and Hwy 168. Dry camp at group campground on Saturday night.

Bring a lunch and drinks on day trips. Often we are near the vehicles at lunch, but always be prepared to carry your lunch on a hike. Bring plenty of water or other thirst quenching beverages, a hat, dark glasses, sunscreen, and sturdy walking shoes. Don't forget to bring along field guides and a hand lens!

Unless indicated, the average car should do fine on our trips. Trips will LEAVE at the time announced, so please arrive a few minutes early. Family, friends, visitors, and members from other chapters are welcome to come along, but please no pets.

## ADDITIONS TO THE FLORA OF THE WHITE MOUNTAINS. IV.

contributed by

James D. Morefield, Dean W. Taylor, Ann Pinzl and Timothy P. Spira

The White Mountains flora continues to grow steadily and remains substantially incomplete. It promises to become one of the best-known and most diverse of any Great Basin range. The list below is fourth in a continuing series of updates to the Flora of the White Mountains (R.M. Lloyd and R.S. Mitchell, 1973, U. of Calif. Press), hereinafter called the Flora. For previous lists see *Bristlecone Newsletter* 1(4):3-5; 2(6):4-6; 5(2):2-4. For a summary of these first three reports see *White Mountain Research Station Symposium* 1:51-57. The present list adds 141 more taxa (115 species and 26 additional varieties and subspecies) to the flora, including 2 new families and 29 new genera. With nomenclature updated and a few misidentifications corrected, the White Mountains are now known to harbor about 1,100 taxa of vascular plants. A full summary, with a completely updated and synonymized checklist, is in preparation for the second White Mountain Research Station Symposium to be held in May 1987.

Spring of 1986 was extraordinarily wet at desert elevations in the Whites, and some of the species below may only appear in such occasional years. The desert-annual component of the Flora is now fairly well known. Alkaline habitats along the W base of Black Mtn. in Inyo Co. were previously unexplored botanically, and numerous records from there now add a major new dimension to the flora. The N and NE fringes of the range have again been quite productive of typical W Nevada elements; several introduced exotics are also listed below. The canyons and higher elevations from Mono Co. north were also highly productive of new records, and remain the least known. The following genera remain very poorly collected in the Whites and need much further study: *Chenopodium*, *Salix*, *Arabis*, *Draba*, *Potentilla*, *Epilobium*, *Caryophytum*, *Cuscuta*, *Gilia*, *Phacelia*, *Cryptantha*, *Aster*, *Juncus*, *Carex*, *Poa* and *Stipa*.

**FORMAT:** As before, corresponding pages in the Flora are listed. We continue to spell out author names in full except for Linnaeus who is herein designated L. This avoids obscure abbreviations that often save only one or two spaces. Beyond this, much has been compressed to save space. Typical ssp. and vars. are shortened to their first initials. After the locality data, specimen data is given in the following format: Elevation(s)/Number(s)/Date(s). Elevations are based upon all known collections (those in parentheses based upon observations only), and are symbolized with ' for feet. For this list it seemed desirable to cite at least one specific specimen, especially since a few critical specimens were not the authors'. A single representative collection number is usually cited, and is Morefield's unless otherwise noted. Dates refer to the collection(s) cited, and are for the 1986 season unless noted otherwise. Nearly all collections cited are deposited at the Rancho Santa Ana Botanic Garden (RSA) or the New York Botanical Garden (NY).

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- 55 ADIANTUM CAPILLUS-VENERIS L. Maidenhair fern. Mono Co. on W slope, hanging gardens along Pellisier Creek, 6450'/4357/22 AUG.  
 CHEILANTHES COVILLEI Maxon. Coville lipfern. NW Canyons in Mono Co., 6160-7600'/3494/23 APR.  
 PELLAEA MUCRONATA (D.C.Eaton)D.C.Eaton. Birdsfoot cliffbrake. Mono Co. on the W slope below Rock Creek, 5700'/3497/23 APR.  
 PITYROGRAMMA TRIANGULARIS (Kaulfuss)Maxon. Goldback fern. NW canyons in Mono Co., 6160-7600'/3493/23 APR.  
 56 WOODSIA OREGANA D.C. Eaton. Oregon woodsia. Mono Co., NW canyons in wet rocky places, 6600-7600'/3495/23 APR.  
 PINUS ALBICAULIS Englemann. Whitebark pine. Mono Co., forming a krummholtz in the upper Middle Creek drainage, ca. 11200'/Taylor 8849/23 AUG. Perhaps more widespread and passing as the similar *P. flexilis*.  
 57 PINUS JEFFREYI Balfour. Jeffrey pine. Mono Co., W slope in Jeffrey Mine Canyon, 6775-7710'. Elliott-Fisk (1986, *White Mountain Research Station Symposium* 1:64-67) reports about 500 individuals, but no specimens are cited. The identities of these plants and the *P. ponderosa* in Lone Tree Creek canyon remain to be verified.  
 EPHEDRA NEVADENSIS S.Watson cf. var. ASPERA (Engelmann ex S.Watson)L.Benson. Rough ephedra. Throughout, 5270-7000'/3941/17 JUN. Granular-viscid, often yellowish-green plants seem to fit here, but confirmation awaits fruiting material.  
 ANEMOPSIS CALIFORNICA Hooker. Yerba mansa. Inyo Co., Warm Springs at W base of Black Mtn., 3990'/3725/2 JUN.  
 60 ESCHSCHOLZIA MINUTIFLORA S.Watson. little Goldpoppy. Throughout the range, usually avoiding calcareous soils, 5190-5870'/3396/11 APR. The Flora's *E. m.* var. *darwinensis* is now believed to be a separate species, *E. covillei*.  
 64 ARENARIA MACRADENIA S.Watson ssp. FERRISIAE Abrams. Ferris sandwort. Common in granitic & volcanic areas on NW slope, 5900-7120'/3490/23 APR. Seemingly quite distinct from our ssp. *m.* var. *parishiorum*.  
 ARENARIA NUTTALLII Pax ssp. FRAGILIS Maguire & Holmgren. Fragile sandwort. Mineral Co. on sandy clay slopes 6800-6900'/3933/17 JUN.  
 65 CALYPTRIDIDIUM MONANDRUM Nuttall. Sanddress. Common in rocky areas on W & S slopes, 4850-5800'/3354/5 APR.  
 66 CALYPTRIDIDIUM UMBELLATUM (Torrey)E.L.Greene var. U. Pussypaws. Esmeralda Co. near Sugarloaf (Redtop) mtn., 8820'/3980/25 JUN.  
 68 ATRIPLEX PATULA L. ssp. HASTATA (L.)Hall & Clements. Fat hens. Inyo Co., Warm Springs at W base of Black Mtn., 3990'/4372/25 AUG.  
 70 NITROPHILA OCCIDENTALIS (Moquin)S.Watson. Alkali pink. Inyo Co., Warm Springs at W base of Black Mtn., 3990'/4038/2 JUL.  
 SALSOLA PAULSENII Litvinov. Barbwire russian thistle. Inyo Co. in disturbed places, 4240-5310'/3693/28 MAY. All our russian thistle reports may be this species.  
 SUAEDA MOQUINII (Torrey)E.L.Greene (=S. torreyana). Inkweed. Inyo Co., Warm Springs at W base of Black Mtn., 3990'/3726/2 JUN.  
 71 CENTROSTEGIA THURBERII A.Gray ex Benth. Red triangles. Alluvium throughout range, 4000-5800'/3457/19 APR.  
 75 ERIOGONUM CERNUUM Nuttall var. VININALE (S.Stokes)Reveal. Nodding buckwheat. Esmeralda Co. near Davis Creek, 7350'/Pinzl & Miller 7628/19 AUG.  
 76 ERIOGONUM HOOKERI S.Watson. Hooker buckwheat. Esmeralda Co. in wash of Sand Spg. Canyon, 6200'/3095/16 AUG 1985. The Flora's previous report was from outside the White Mountains.

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- 76 **ERIOGONUM LOBBII** Torrey & Gray var. *L. Lobb* buckwheat. Mono Co. on E face of Montgomery Peak, 10800'/Taylor 8859/24 AUG.
- 78 **ERIOGONUM SHOCKLEYI** S.Watson. Limestone buckwheat. E-central part of range near McAfee & Busher Creeks on crumbling dolomite, 5600-5700'/3620/9 MAY. Predicted by Reveal in the *Flora*.  
**ERIOGONUM UMBELLATUM** Torrey var. **COVILLEI** (Small)Munz & Reveal. Alpine sulphurflower. Mono Co., stable granitic gravels in upper Middle Creek drainage, 10800-11000'/Taylor 8860, JDM 4239/JUL-AUG.
- 80 **POLYGONUM LAPATHIFOLIUM** L. Willow weed. Mono Co. on W slope along Pellisier Creek, 6050'/4353/22 AUG.  
**EREMALCHE EXILIS** (A.Gray)E.L.Greene. White mallow. W slope often about packrat middens, 4100-5700'/3368/9 APR.  
**MALVELLA LEPROSA** (Ortega)Krapov. Alkali mallow. Inyo Co., Warm Springs at W base of Black Mtn., 3990'/4189/24 JUL.
- 82 **MENTZELIA REFLEXA** Coville. Pygmy blazingstar. Mono Co., N wall of Coldwater Canyon near its mouth, 5000'/3700/28 MAY.  
**POPULUS ALBA** L. Silver Poplar. Mineral Co. on W slope, Orchard Spgs. at mouth of Buffalo Canyon, 6950'/4290/7 AUG. Persisting long after introduction.
- 83 **POPULUS NIGRA** L. var. **ITALICA** (Moench)DuRoi. Lombardy poplar. Mono Co. on W slope, spring just S of Milner Creek mouth, 5210'/3716/29 MAY. Persisting long after introduction.
- 84 **CLEOMELEA OBTUSIFOLIA** Torrey & Fremont. Bluntleaf stinkweed. Inyo Co., Warm Springs at W base of Black Mtn., 3990'/4036/2 JUL.
- 87 **ARABIS X DIVARICARPA** A.Nelson. Spreading rockcress. Mono Co. NE of Piute Mtn., 11590'/2418/29 JUL.
- 88 **ARABIS PULCHRA** M.E.Jones var. *P. Princes* rockcress. In granite areas, 5700-6650'/3480/22 APR. Our plants usually with pure white petals, but otherwise typical.
- 90 **DESCURAINIA PINNATA** (Walter)Britton var. **FILIPES** (A.Gray)Peck. Tansy mustard. Mono Co., W slope just above the mouth of Marble Creek, 6750'/3763/5 JUN.  
**DESCURAINIA RICHARDSONII** (Sweet)O.E.Schulz ssp. *R. var. MACROSPERMA* O.E.Schulz (=ssp. *procera*). Mountain tansy mustard. Esmeralda Co. in Trail Canyon, 9600'/4323/10 AUG.
- 93 **LEPIDIUM DICTYOTUM** A.Gray. Alkali peppergrass. Inyo Co., abundant around Warm Springs at W base of Black Mtn., 3990'/3327/2 APR.
- 94 **PHOENICAILIS CHEIRANTHOIDES** Nuttall. Swordpod. N end of range in Nevada, (7500-)8890'/3960/24 JUN.
- 95 **THYSANOCARPUS LACINIATUS** Nuttall ex Torrey & Gray. Fringe-pod. Inyo Co. in rocky places on W slope, 5150-5650'/3352/5 APR.  
**PYROLA ASARIFOLIA** Michaux var. *A. Red* wintergreen. Esmeralda Co. along Middle Creek, 8400-8850'/Taylor 8842, JDM 4228/JUL-AUG.
- 97 **RIBES VELUTINUM** E.L.Greene var. **GOODINGII** (M.E.Peck)C.L.Hitchcock. Gooding gooseberry. Mono Co. at the mouth of Pellisier Creek on marble, 5900'/3453/19 APR.
- 100 **MALUS SYLVESTRIS** P.Miller. Apple. Mono Co. at spring just S of Milner Creek mouth, 5210'/3717/29 MAY. Persisting long after introduction.
- 102 **PRUNUS ARMENIACA** L. Apricot. With *Malus* above, #3719.  
**PRUNUS PERSICA** Batsch. Peach. Persisting long after introduction in Mineral Co. on W slope, Orchard Spg. at mouth of Buffalo Canyon, 6950'/4291/7 AUG.
- 103 **PYRUS COMMUNIS** L. Pear. With *Malus* above, #3718.
- 105 **ASTRAGALUS CANADENSIS** L. var. **BREVIDENS** (Gandoger)Barneby. Canada milkvetch. Esmeralda Co. in Trail Canyon, 9170'/4318/10 AUG.  
**ASTRAGALUS GEYERI** A.Gray. Geyer milkvetch. Fine loose sand in surrounding valleys, entering in Esmeralda Co. at NE fringe of range in Fishlake Valley, 5270'/3945/17 JUN.  
**ASTRAGALUS KENTROPHYTA** A.Gray var. **ELATUS** S.Watson. Tall kentrophyta. Schulman Grove area, 10000'/J. & L. Roos 5820 (RSA)/26 JUL 1952. Also cited by Barneby (1964, *Memoirs of the New York Botanical Garden* 13(1):369).
- 106 **ASTRAGALUS PLATYTOPIS** A.Gray. Broadkeel milkvetch. Esmeralda Co. near Tip-top Mine on Sugarloaf mtn., 8770'/3967/25 JUN.
- 107 **LOTUS CORNICULATUS** L. birdsfoot trefoil. Introduced in Inyo Co., Warm Springs at base of Black Mtn., 3990'/3721/2 JUN. Our plants resemble *L. tenuis* of Europe, but may just be local *corniculatus* derivatives.
- 108 **LUPINUS ODORATUS** A.A.Heller. Royal desert lupine. Sandy places along W & S margins, 4000-5050'/3466/20 APR.
- 109 **TRIFOLIUM FRAGIFERUM** L. Strawberry clover. Inyo Co., Warm Springs at W base of Black Mtn., 3990'/4040/2 JUL.
- 111 **CAMISSONIA CLAVIFORMIS** (Torrey & Fremont)Raven ssp. **LANCIFOLIA** (A.A.Heller)Raven. Lanceleaf primrose. W slope on calcareous alluvium, 4670-5100'/3402/12 APR. Flowers rather pale yellow, perhaps intermediate with ssp. *integrifolia*.
- 112 **CAMISSONIA PALMERI** (S.Watson)Raven. Dandelion primrose. Inyo Co. at W base of Black Mtn., 4000'/3579/5 MAY.  
**CAMISSONIA PARVULA** (Nuttall ex Torrey & Gray)Raven. Tiny primrose. Sandy places along W & S margins, 5050-5620'/3454/19 APR.  
**CAMISSONIA PUBENS** (S.Watson)Raven. Furry primrose. Mono Co. on W slope, near mouth of Rock Creek, 5700'/3486/22 APR.
- 113 **EPILOBIUM GLABERRIMUM** Barbey ssp. *G. Smooth* willowherb. Esmeralda Co. at E base of range near Chiatovitch Creek, 5360'/Pinzl 4418/20 JUL 1981.  
**EPILOBIUM OREGONENSE** Haussknecht. Oregon willowherb. Esmeralda Co. in Trail Canyon, 9050'/4316/9 AUG.  
**EPILOBIUM SAXIMONTANUM** Haussknecht. Southern mountain willowherb. Wet subalpine banks throughout, 9900-10000(-11500)'/2331/10 JUL 1984. The *Flora's E. hornemannii* may be this.  
**GAYOPHYTUM RACEMOSUM** Torrey & Gray. Mono Co. in disturbed places, 10200-13010'/Spira 209, JDM 4086/JUL-AUG.
- 117 **APIUM GRAVEOLENS** L. Celery. Persisting long after introduction with *Malus* above, 3955/24 JUN.  
**HYDROCOTYLE VERTICILLATA** Thunberg var. *V. Marsh* pennywort. Inyo Co., Warm Springs at base of Black Mtn., 3990'/3560/4 MAY.
- 119 **GENTIANOPSIS HOLOPETALA** (A.Gray)Iltis. Sierra gentian. Esmeralda Co. in Trail Canyon, 8350-9050'/4314/9 AUG.  
**APOCYNUM SIBIRICUM** Jacquin. Claspig dogbane. W slope in moist drainages, 5100-8430'/3989/26 JUN. This may be the *Flora's A. cannabinum* var. *glaberrimum*.
- 120 **ASCLEPIAS CRYPTOCERAS** S.Watson var. **DAVISII** (Woodson)W.Baker. Cow cabbage. N end mostly in Mineral Co. on steep slopes of sandy clay, 6880-8870'/3932/17 JUN.  
**LYCIUM SHOCKLEYI** A.Gray. Nevada boxthorn. Esmeralda Co. at NE fringe of range in Fishlake Valley, 5270'/1942/17 JUN.

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- 120 **ORYCTES NEVADENSIS** S.Watson. *Oryctes*. Esmeralda Co. at NE fringe of range in Fishlake Valley, 5180'/3939/17 JUN.
- 121 **CUSCUTA PENTAGONA** Engelm. var. **CALYCINA** Engelm. (=C. campestris). Dodder. Inyo Co. at Antelope Spgs., Deep Springs Valley, on *Sonchus* & *Sisymbrium*. 5550'/2349/15 JUL 1984.
- CUSCUTA SALINA** Engelm. var. **APODA** (Yuncker)Yuncker (=C. nevadensis). Nevada dodder. Inyo Co. on several hosts but often *Psoralea arborescens*, 4600-5400'/2119/18 JUN 1984. The Flora's *C. suksdorfii* var. *subpedicellata* is this taxon, as probably is its *C. occidentalis*.
- 122 **ERIASTRUM EREMICUM** (Jepson)H.Mason. Desert woollystar. Throughout, 5850-6980'/3077/14 AUG 1985. Most of what has been passing as *E. wilcoxii* is probably this, but the two may intergrade.
- 124 **GILIA INYOENSIS** I.M.Johnston. *Gilia*. Sandy granitic alluvium along NW margin of range, 5810-6200'/3794/7 JUN. Some of the Flora's *G. campanulata* reports may be this taxon.
- 125 **IPOMOPSIS CONGESTA** (Hooker)V.Grant ssp. **PALMIFRONS** (A.Brand)Day. White globes. Mineral Co. on steep clay slopes near Sugarloaf (Redtop) mtn., 8630'/3986/26 JUN.
- 128 **EUCRYPTA CHRYSANTHEMIFOLIA** (Benth)E.L.Greene var. **BIPINNATIFIDA** (Torrey)L.Constance. Spotted eucrypta. Inyo Co. in protected rocky places on W slope of Black Mtn., 4240-5150'/3323/2 APR.
- NAMA DEPRESSUM** Lemmon ex A.Gray. Narrowleaf nama. Frequent in loose sand throughout, 5050-5620'/3504/24 APR.
- NAMA PUSILLUM** Lemmon ex A.Gray. Little nama. Inyo Co. on SW slope of Black Mtn., 4350(-5000)'/3357/8 APR.
- 130 **PHACELIA AFFINIS** A.Gray var. **PATENS** J.T.Howell. Twin phacelia. Mono Co., W slope near Marble Creek just above its mouth, 6750'/3762/5 JUN.
- PHACELIA CRYPTANTHA** E.L.Greene. Hidden phacelia. Mono Co., protected rocky places at mouth of Coldwater Canyon, 5000'/3698/28 MAY.
- 131 **PHACELIA INYOENSIS** (J.F.Macbride)J.T.Howell. Inyo phacelia. Inyo Co., Warm Springs at W base of Black Mtn., 3990'/3557/3 MAY.
- 133 **CRYPTANTHA ALPICOLA** Cronquist. Alpine oreocarya. Inyo Co. E of Schulman Grove on finely disintegrated dolomite slopes, 9400'/4072/8 JUL. Reported also in Intermountain Flora 4:248; doubtfully distinct from *C. humilis* below.
- CRYPTANTHA AMBIGUA** (A.Gray)E.L.Greene. Ambiguous cryptantha. Occasional throughout, 8120-10000'/4333/11 AUG. Appears to intergrade with *C. echinella* and perhaps others, but nearly typical material is also present.
- 134 **CRYPTANTHA DECIPIENS** (M.E.Jones)A.A.Heller. Gravel cryptantha. Inyo Co., dolomite just NE of Warm Springs on W slope of Black Mtn., 4320'/3328/4 APR.
- CRYPTANTHA DUMETORUM** (E.L.Greene ex A.Gray)E.L.Greene. Scrambling cryptantha. Inyo Co. at W base of Black Mtn., 4000'/3320/1 APR.
- CRYPTANTHA HUMILIS** (E.L.Greene)Payson. Low oreocarya. Throughout, 8700-11300'/3971/25 JUN.
- 135 **CRYPTANTHA RACEMOSA** (S.Watson)E.L.Greene. Bush cryptantha. Mono Co. about 1 mile up Coldwater Canyon on N wall, 5470'/3426/15 APR. Also reported in Intermountain Flora 4:266.
- 136 **PECTOCARYA PENICILLATA** (Hooker & Arnott)A.DC. Slender combeed. Inyo Co., Warm Springs at W base of Black Mtn., 3990'/3328/2 APR. Rare and perhaps temporary.
- PECTOCARYA PENICILLATA** (Hooker & Arnott)A.DC. X *P. HETEROCARPA* (I.M.Johnston)I.M.Johnston. (perhaps soon to be recognized as a species, see Intermountain Flora 4:288) Inyo Co., Warm Springs at W base of Black Mtn., 3990'/3558/3 MAY.
- PECTOCARYA PLATYCARPA** (Munz & Johnston)Munz & Johnston. Broad combeed. Inyo Co. along W base of Black Mtn., 4300'/3344/5 APR.
- PECTOCARYA RECURVATA** I.M.Johnston. Curved combeed. Inyo Co., dolomite just NE of Warm Springs on W slope of Black Mtn., 4270'/3329/3 APR.
- PLAGIOBOTHRYUS ARIZONICUS** (A.Gray)E.L.Greene. Arizona popcornflower. Mono Co. among granite boulders below Rock Creek, 5080-5700'/3472/20 APR.
- 137 **LYCOPUS ASPER** E.L.Greene. Western water-horehound. Inyo Co., Warm Springs at W base of Black Mtn., 3990'/4194/24 JUL.
- 140 **CASTILLEJA DISSITIFLORA** N.Holmgren. Nevada paintbrush. Inyo Co. at head of Wyman Creek, 9600'/2162/24 JUN 1984. Holmgren (1984, Intermountain Flora 4:486) suggests this eastern Nevada species may be a *C. lim-ariaefolia* X *C. applegatei* derivative. Our plants key to *dissitiflora* and occur with both putative parents.
- 141 **CORDYLANTHUS MARITIMUS** Nuttall ex Benth. var. **CANESCENS** (A.Gray)Jepson. Alkali birdsbeak. Inyo Co., Warm Springs at W base of Black Mtn., 3990'/3727/2 JUN.
- 142 **MIMULUS BIGELOVII** (A.Gray)A.Gray var. *B. Bigelow* monkeyflower. Inyo Co. near Antelope Spgs. in Deep Springs Valley, 5680'/1897/21 MAY 1984.
- MIMULUS MONTIOIDES** A.Gray. Montia monkeyflower. Mono Co. about 1 mile up Coldwater Canyon, 5450'/3419/15 APR.
- 144 **PENSTEMON BARNEBYI** N.Holmgren. Barneby Penstemon. Esmeralda Co. near Busher Creek, 5410'/4014/30 JUN.
- 145 **VERBASCUM THAPSUS** L. Woolly mullein. Mono Co. on W Slope along Pellisier Creek, 6050'/4351/22 AUG. The Flora's report was an undocumented observation.
- 146 **VEKONICA ANAGALLIS-AQUATICA** L. Water speedwell. Inyo Co. at spring just S of Silver Canyon mouth, 4240'/3673/27 MAY.
- 153 **WYETHIA MOLLIS** A.Gray. Woolly mule-ears. Esmeralda Co. on E slope of Queen-Trail Canyon saddle, 9720'/4299/7 AUG.
- 154 **CHAENACTIS ALPICENA** C.W.Sharsmith. Sierra pincushion. Mono Co., upper Middle Creek drainage, ca. 11000'/Taylor 8848/23 AUG.
- CHAENACTIS CARPHOCLINIA** A.Gray var. *C. Pebble* pincushion. Occasional with var. *attenuata*, 4240-5000'/3685/27 MAY.
- CHAENACTIS DOUGLASII** (Hooker)Hooker & Arnott var. **ACHILLEAEFOLIA** (Hooker & Arnott)A.Nelson. Douglas pincushion. Throughout, 7000-10000'/Duran 3084 (RSA)/30 JUN 1931. Most of the Flora's var. *rubricaulis* is this instead.
- CHAENACTIS DOUGLASII** (Hooker)Hooker & Arnott var. **MONTANA** M.E.Jones. Mountain pincushion. Mono Co. on Montgomery-Marble Creek divide, 11300'/4099/13 JUL.
- 155 **ERIOPHYLLUM WALLACEI** A.Gray. Easter bonnets. Mono Co. on granitic sands below Pellisier Creek, 5050'/3462/19 APR.
- 156 **ASTER ASCENDENS** Lindley. Alkali aster. Inyo Co., Warm Springs at W base of Black Mtn., 3990'/4370/25 AUG.
- ASTER FRONDOSUS** (Nuttall)Torrey & Gray. Whitehead aster. Occasional in moist meadows throughout, 3990-9300'/4269/3 AUG.
- ASTER INTRICATUS** (A.Gray)S.F.Blake. Broom aster. Inyo Co., Warm Springs at W base of Black Mtn., 3990'/4192/24 JUL. Probably better treated as a *Haplopappus*.

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157 **CHRYSOTHAMNUS NAUSEOSUS** (Pallas) Britton ssp. **BERNARDINUS** (Hall) Hall & Clements. Bernardino rabbitbrush. Inyo Co., 6570-9370'. Replaces the earlier report of ssp. *mojavensis*; also on plateau S of Wyman Creek, 2519/11 AUG 1984.
- 161 **HAPLOPAPPUS LANCEOLATUS** (Hooker) Torrey & Gray (incl. *H. uniflorus*). Intermountain pyrocoma. Esmeralda Co. along Middle Creek, 8190'/4200/26 JUL.  
**LESSINGIA LEMMONII** A. Gray var. **RAMULOSISSIMA** (A. Nelson) Ferris. Vinegarweed. Mono Co. on NW alluvial slopes, 5250-6160'/4360/23 AUG.
- 165 **ARNICA CHAMISSONIS** Lessing ssp. **FOLIOSA** (Nuttall) Maguire var. **INCANA** (A. Gray) Hulten. Silver arnica. Esmeralda Co. in Trail Canyon, 9000'/Pinz 2403/7 JUL 1979.
- 169 **ANTENNARIA DIMORPHA** (Nuttall) Torrey & Gray. Dwarf pussytoes. Mono Co. on Montgomery-Marble Cr. divide, 11200'/4091/13 JUL.  
**FILAGO CALIFORNICA** Nuttall. California filago. Common along W slope throughout, 5080-5700'/3353/5 APR.  
**FILAGO DEPRESSA** A. Gray. Low filago. Inyo Co. at SW base of Black Mtn., 4350'/3360/8 APR.  
**GNAPHALIUM THERMALE** E. Nelson. Slender cudweed. Mono Co. on W slope along Pellissier Creek, 6050'/4348/22 AUG.  
**GNAPHALIUM WRIGHTII** A. Gray (= *G. canescens*?). Desert cudweed. Mono Co. on W slope near base of lower falls in Falls Canyon, 6500'/4362/23 AUG.  
**STYLOCLINE MICROPOIDES** A. Gray. Desert neststraw. Inyo Co., W base of Black Mtn. on dolomite, 4100-4270'/3330/3 APR.
- 170 **CIRSIIUM ARVENSE** (L.) Scopoli. Canada thistle. Moist places in Esmeralda Co., 8080-9800'/4297/7 AUG. Invasive.  
**CIRSIIUM PROTEANUM** J.T. Howell. Venus thistle. Inyo Co. in rocky places, 5150-8500'/3555/2 MAY. This replaces the previous report of *C. ochrocentrum*.  
**AGOSERIS GLAUCA** (Pursh) Rafinesque var. *G. Mountain dandelion*. Esmeralda Co. along Middle Creek, 7500-8190'/4201/26 JUL.
- 172 **MICROSERIS LINEARIFOLIA** (DeCandolle) Schultz-Bip. Silver stars. W. slope of range throughout, 4350-5700 (-7600)'/3350/5 APR.  
**RAFINESQUIA CALIFORNICA** Nuttall. California chicory. Inyo Co., main canyon on W face of Black Mtn., 5150'/3349/5 APR.  
**RAFINESQUIA NEOMEXICANA** A. Gray. White chicory. Inyo Co. on W slope of Black Mtn., 4240'/3322/2 APR. Only a single plant located after extensive search in a wet year; probably a temporary waif from farther south.
- 173 **STEPHANOMERIA PARRYI** A. Gray. Parry rockpink. Common on W & S slopes, 5300-6900'/3714/29 MAY.  
**STEPHANOMERIA TENUIFOLIA** (Torrey) H.M. Hall var. *T. Mountain rockpink*. Esmeralda Co. in sandy places, 9650-10060'/4285/4 AUG.  
**TRAGOPOGON DUBIUS** Scopoli. Yellow salsify. Occasional throughout in disturbed places, 7050(-7200)'/4137/17 JUL.
- 178 **FIMBRISTYLIS SPADICEA** (L.) Vahl (incl. *F. thermalis*). Hot spring sedge. Inyo Co., Warm Springs at W base of Black Mtn., 3990'/Taylor obs., JDM 4033/2 JUL.
- 181 **BROMUS TRINII** Desvoux. Chilean chess. Common along W slope in Inyo Co., 4350-5150'/3351/5 APR.  
**FESTUCA PRATENSIS** Hudson. Meadow fescue. Inyo Co. in alkaline sod, 3990-4240'/3674/27 MAY.
- 184 **VULPIA MICROSTACHYS** (Nuttall) Munro ex Bentham var. *M. Sideoats fescue*. Inyo Co. at SW base of Black Mtn., 4350'/3359/8 APR.  
**VULPIA MICROSTACHYS** (Nuttall) Munro ex Bentham var. **PAUCIFLORA** (Scribner ex Beal) Leonard & Gould. Sideoats fescue. Inyo Co. on W slope of Black Mtn. above Warm Springs, 4350'/3324/2 APR.  
**AGROPYRON ELONGATUM** (Host) Beauvois. Tall wheatgrass. Inyo Co., Warm Springs at W base of Black Mtn., 3990'/4190/24 JUL.
- 185 **HORDEUM JUBATUM** L. Foxtail barley. Inyo Co., Warm Springs at W base of Black Mtn., 3990'/3722/2 JUN.
- 186 **SITANION HYSTRIX** (Nuttall) J.G. Smith var. **BREVIFOLIUM** (J.G. Smith) C.L. Hitchcock. Squirreltail. Ubiquitous, 5350-12700'/3498/24 APR.  
**SITANION HYSTRIX** (Nuttall) J.G. Smith var. *H. Squirreltail*. Throughout, 5500-8820'/3791/7 JUN.  
**PHALARIS ARUNDINACEA** L. Reed canarygrass. Inyo Co. along stream in Silver Canyon, 7200'/4343/21 AUG.  
**SCHISMUS ARABICUS** Nees. Arabian grass. Inyo Co. along W base of Black Mtn., 4100-4300'/3313/1 APR.
- 187 **ARISTIDA PURPUREA** Nuttall var. **LONGISETA** (Steudel) Vasey (incl. *A. fendleriana*). Three-awn. Mono Co., W slope near mouth of Queen Dicks Canyon, 6080'/3769/5 JUN.
- 189 **STIPA NELSONII** Scribner var. *S. columbiana*, misapplied). Columbia needlegrass. Esmeralda Co. about Queen-Trail Canyon saddle, 9720'/4302/8 AUG.
- 190 **X STIPORYZOPSIS BLOOMERI** (Bolander) B.L. Johnson. Needle ricegrass. Occasional throughout, 6380-8500'/3783/7 JUN.  
**SPARTINA GRACILIS** Trinicus. Alkali cordgrass. Inyo Co., Warm Springs at W base of Black Mtn., 3990'/3723/2 JUN. The Flora's previous report was apparently from outside the range.  
**TYPHA DOMINGENSIS** Persoon. Giant cattail. Inyo Co. at Antelope Spgs. in Deep Springs Valley, 5550'/2510/10 AUG 1984.
- 191 **CALOCHORTUS KENNEDYI** T.C. Porter var. **MUNZII** Jepson. Munz mariposa. Inyo Co. near Antelope Springs in Deep Springs Valley, 5650'/3602/7 MAY. Var. *kennedyi* is also definitely in the range in Inyo Co., though omitted by Intermountain Flora 6.  
**DICHELOSTEMMA PULCHELLUM** (Salisbury) A.A. Heller. Bluedicks. Inyo Co. along W base of Black Mtn., 4300-5300'/3347/5 APR.
- 193 **SISYRINCHIUM HALOPHILUM** E.L. Greene. Nevada blue-eyed grass. Occasional in moist sod throughout, 3990-8190'/3559/3 MAY.

The following should be deleted from previous lists (correct identities in parentheses): *Arabis sparsiflora* var. *subvillosa* (*A. inyoensis*), *Chrysothamnus nauseosus* ssp. *mojavensis* (ssp. *bernardinus*), *Cirsium ochrocentrum* (*C. proteanum*), *Langloisia mathewsii* (*L. schottii*).

ACKNOWLEDGMENTS: Arnold Tiehm, Reed C. Rollins, Arthur Cronquist, Mary Barkworth, James L. Reveal and Peter C. Hoch identified or confirmed some of the plants on this list. Arnold Tiehm also provided helpful comments on an earlier draft of this list. Morefield is grateful to the University of California White Mountain Research Station and the Rancho Santa Ana Botanic Garden for support and facilities generously provided during the 1986 field season, to the Deaver Herbarium of Northern Arizona University for facilities provided, and to Douglas H. McCarty, Charlie W. Abbott, Mark Bagley and Oren Pollak for able assistance in the field.

STEWARDSHIP OF PUBLIC LANDS

We, the people, have had the opportunity to influence decisions on the management of our public lands in two extremely important processes. One is the Forest Service Plan. We hope you commented on that before the March 15 deadline. The other is the Cranston Bill.

As to plans for the Inyo National Forest, chief issues seemed to be how much to place in wilderness, whether downhill ski developments should have priority over major deer migration routes, how much logging should be allowed, and the degree of ORV travel to be permitted on vast areas of the Inyo-White Range.

On the Cranston Bill, wilderness, again, is an issue. The main question though is whether people want choice areas of the California Desert managed under BLM's multiple use concept or under the more protective policies of the National Park Service.

Extreme polarization has been evident in public responses to both planning processes. The majority call for environmental protection, some more than others. An almost belligerent reaction has been expressed by those who believe that multiple use means "USE", without restrictions. Much misinformation is being circulated, some of it by public officials.

The Cranston Bill will be debated over a prolonged period. New bills have been and will be introduced. Compromises will be made. We trust that CNPS members will be analytical enough to arrive at wise recommendations, and responsible enough to get them to their legislators.

. . . . . Mary DeDecker

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A CHRISTMAS MESSAGE FROM THE MISSOURI BOTANICAL GARDEN brought the sobering thought:

*"There are an estimated 250,000 species of plants in the world, many of which are unknown to science. Last year, scientists from the Missouri Botanical Garden described more than a hundred new species of plants from the tropics. It is estimated that 25,000 species of plants may disappear permanently from Earth by the end of the century. In 1987, how many species of plants will become extinct before even receiving a name?"*

\* \* \* \* \*

THE FOLLOWING NEW MEMBERS are warmly welcomed to our Bristlecone Chapter:

Jean Searle  
150 Color Cove Road  
Sedona, Arizona 86336

Dorothea B. Susman  
Star Route 2, Box 170  
Lone Pine, CA 93545

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Inquiries have come in concerning back issues of the Bristlecone Chapter newsletters. They are available at 50¢ each to chapter members and 75¢ each to non-members. (No charge for Vol. 1, No. 1) Complete sets through 1986 are 13.50 to members and \$20.25 to non-members, plus \$1.00 for postage if mailing is necessary.

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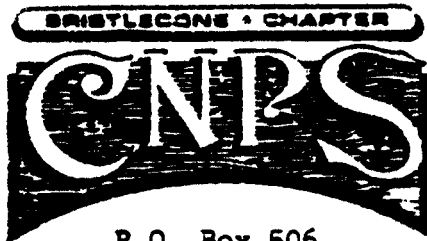
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