

NEVADA NATIVE PLANT SOCIETY
Rare Plant Committee Meeting
NEVADA RARE PLANT WORKSHOP
Thursday, 6 April 2006, Reno

2006 MEETING NOTES

<http://heritage.nv.gov/notes06.htm>

The following notes were compiled by Jim Holland, Michele Lefebvre, and Jim Morefield during the 2006 Nevada Rare Plant Workshop, and edited by Jim Morefield. Please notify the editor (jdmore [at] heritage [dot] nv [dot] gov, 775-684-2902, 901 S Stewart Street, suite 5002, Carson City, NV 89701-5245) of any needed additions or corrections. Except for the proposed M-List additions near the end, each taxon entry begins by repeating the item from the Workshop agenda, followed by notes on the **discussion** that followed, and then any **consensus** that was reached on that taxon. Any changes to the first version are in the same color as this sentence.

WELCOME AND INTRODUCTIONS

The 2006 Nevada Rare Plant Workshop convened in Reno on Thursday, 6 April 2006, at 9:00 am, at 9:00 am, in main conference room of the Bureau of Land Management, Nevada State Office. The meeting was co-sponsored by the Nevada Native Plant Society (NNPS) and the Nevada Natural Heritage Program (NNHP), and was chaired by the NNPS Rare Plant Chair, Jim Morefield. Introductions proceeded around the room.

In attendance during all or part of the day were 26 participants: Dave Anderson (**Bechtel Nevada**); Bob Ashworth and Margie Klein (**Nevada Division of Forestry**); Joanne Baggs, Elizabeth Bergstrom, Shana Gross, Janel Johnson (**U.S. Forest Service**); Lori Bellis (**Nevada Department of Transportation**); Steve Caicco and Fred Edwards (**U.S. Fish and Wildlife Service**); Hermi Hiatt (**Las Vegas**); Jim Holland (**National Park Service**); Sonja Kokos, Randy McNatt, Jim Morefield, and Arnold Tiehm (**Nevada Native Plant Society**); Pat Leary (**Community College of Southern Nevada**); Michele Lefebvre (**Enviroscientists Inc., Reno**); Christina Lund, Elroy Masters, and Dean Tonenna (**Bureau of Land Management**); Zane Marshall (**Southern Nevada Water Authority**); Wes Niles (**University of Nevada, Las Vegas**); Jackee Picciani (**Silver Springs**); Ann Pinzl (**Natural History Collections Services, Carson City**); and Alison Stanton (**BMP Ecosciences**).

The Chair extended special thanks to Steve Caicco for arranging the room for the meeting, Michele Lefebvre and Jim Holland for volunteering to keep meeting notes, and his kids Cameron and Shaelin for assembling the handout packets. Due to a recent database shift, the handouts did not include an updated detailed rare plant list this year. The Chair requested feedback on the usefulness of that list for future Workshops.

Wes Niles graciously volunteered to once again host next year's meeting at UNLV pending availability of facilities, and it was confirmed that this would be on Tuesday, 3 April 2007, with the exact location to be announced.

After discussion of the day's logistics, including tonight's NNPS meeting in Reno, the Chair provided a brief overview of the day's agenda, including items to be taken out of order. Anyone needing to leave early, and wishing to cover a particular agenda item first, should alert the Chair so the item may be moved up. Individual program updates will begin after lunch break, including a longer discussion of Forest Service sensitive species list updates. Please also review the proposed additions to the Marginal List, at the end of the agenda, and be prepared to point out any that are incorrectly listed, prior to finalizing them after lunch.

OLD BUSINESS: OPEN ITEMS FROM PREVIOUS WORKSHOPS (IN ALPHABETICAL ORDER)

Astragalus lentiginosus var. *stramineus* (Straw milkvetch) - recommended for NNPS Watch List by 2002 Workshop, left open for Threatened list by the 2002-2005 Workshops pending surveys in the Mesquite area,

where it may be impacted by development. Locally plentiful over a very restricted range in the lower Virgin River valley of Mohave Co., Arizona, and adjacent Clark Co., Nevada. Heritage ranks T2T3, S1S2, three Nevada occurrences documented by collections at UNLV. Jason Alexander (see his comments) considers the Nevada populations intermediate with the common var. *fremontii*, but still serving as an important conduit and component of the genetic diversity in var. *stramineus*. Any new information? Add to NNPS Threatened List? Recommend for BLM Sensitive list? Is Nevada State listing appropriate? **Discussion:** With last year's moisture was there any survey work completed? Not by Christina Lund. This has been on the agenda for several years. Questions about its rarity in southeast Clark County. There is an ongoing study by Jason Alexander to determine if it was valid taxonomically. Participants asked if there were any records from Lincoln County? Possibly in Toquop Wash where a power plant is proposed. Found on deep sand. Not verified yet. BLM treats it like 3-corner milkvetch because for survey requirements, since we don't have any decisions yet. Jim, how folks should know how to identify this variety? Holland says that development is going to happen in that area. Jim, keep it on the agenda and ask about it next year. No updates from Jason Alexander this year. Brian Knaus is a student working on *Astragalus lentiginosus*, specimens are being sent to him, no word back yet. Keep it on the agenda until we hear back from Knaus and Alexander to make a definitive decision. **Consensus: status quo, leave open for future Workshops to consider as better information develops.**

Astragalus pulsiferae var. *coronensis* (Rams Horn Spring milkvetch) - left open by the 2005 Workshop pending assessment of its status in California. Segregated from var. *suksdorfii* by Welsh et al. (2002), and now considered endemic to eastern Plumas, Lassen, and Modoc counties, California, and northern Washoe County, Nevada. Already on NNPS Watch List (formerly as var. *suksdorfii*). **California has now placed it on List 4.2 (limited distribution watch list, fairly endangered) with ranks of G4T3 S3.2.** Nevada rank is S1. Suggested at the 2003 Workshop for possible transfer to the NNPS M-list. Is NNPS Watch List still appropriate? Agency status recommendations? **Discussion:** Still known in NV from only one collection by Jerry Tiehm. Currently on NNPS Watch list. Could transfer it to the Marginal list, found in NV but more commonly found in CA. Jerry said there it was only in one spot and not a lot of it. No idea of how widespread it would be. Voucher in NV found in Leadville Canyon, just south of where the road takes off, just east of the road. Ann Pinzl votes for Marginal rather than Watch. Jerry suggested if CA puts it on their "watch" list then maybe we should too. Jim Morefield can ask Mike Dolan out of Alturas to look for it. **Consensus: none, status quo, keep on NNPS Watch list, issued closed for now.**

Atriplex argentea var. *longitrichoma* (Pahrump silverscale) - recently described annual, segregated from *Atriplex argentea* complex based on presence of long deciduous hairs and different fruit characters, closest to *Atriplex argentea* var. *hillmanii* as recognized in Flora of North America, vol. 4, distinguished mainly by the abundant deciduous hairs and subtle differences in leaf shape. Restricted to Pahrump and Stewart valleys, most abundant in abandoned disturbances. Based on specimens cited in the original publication, it is known from one occurrence each in Nevada and California. Threatened by habitat conversion in Pahrump Valley. Heritage ranks currently T1T2, S1, added to the NNPS Watch List by the 2003 Workshop. Any new information? Recommend for BLM sensitive list? NNPS Threatened status more appropriate? **Discussion:** Does it fall within the variability of var. *hillmanii*? No collections of it at UNLV or RENO. Frank [Buddy] Smith not here today, but has looked in the Pahrump area and hasn't found the form described as longitrichoma. Is it even real or not? The jury is still out. It was recognized in Flora of North America. Las Vegas BLM said that they would try to look for it. Look for it in the margins around Pahrump - it is later blooming, look for it in early May. **Consensus: status quo, leave open for future Workshops to consider as better information develops.**

Botrychium (moonwort) taxa in Spring Mountains - any new information? **Discussion:** Anything new from Don Farrar since last year? He hasn't resolved the taxonomy of the Spring Mountains moonworts, still looking at their genetics and how they fit in with the rest of the group. Do we have *B. lineare* (the federal candidate for listing) in Nevada? We have a hybrid with *B. lineare* being one of the parents, but no pure *B. lineare* found yet. Will support Farrar's work on these taxa in 2007. **Consensus: status quo, leave open for future Workshops to consider as better information develops.**

Cirsium arizonicum var. *tenuisectum* (Keystone Canyon thistle) - added to the NNPS Watch List and

recommended for HTNF sensitive status by the 2005 Workshop, but left open pending examination of annotated specimens recently returned to UNLV. Spring Mountains vegetation transects note its presence in several plots. Described as new to science by David Keil in *Sida* 21(1): 207-219. 2004. Known only from middle elevations of the New York Mountains of San Bernardino County, California, and from lower and middle elevations of the Spring Mountains of Clark County, Nevada, where it has previously been called *Cirsium nidulum*. A second unnamed variety may be present in the New York Mountains. Provisional Heritage ranks G5T2 S1S2. Any new assessments? Does the variety still merit Watch List and HTNF status?

Discussion: Are the plants in New York Mountains different from the Spring Mountains? All UNVL *Cirsium* sent to Keil, all specimens formerly called *C. nidulum* annotated as **var. tenuisectum** or var. *arizonicum*.

Variety tenuisectum seems to range from the Spring Mountains westward while other var. *arizonicum* ranges eastward into Utah. Not uncommon in the Spring Mountains. Is it common enough to move it from the Watch list? It's widely dispersed. What are threats? None. It probably occurs in the Red Rock Canyon. Not much conservation concern. Remove it from Watch list? It doesn't have very narrow habitat requirements. Found in mid to high elevations, 4500-5000 feet and upwards. Leave it on the Watch list? It is a species of limited distribution with no real threats, we should treat all endemic and rare plants in the Spring Mountains equally. Concern that people will call it a weed and pull it out, thinking they are doing a good thing. That's happened in Red Rock area, which is heavily used for recreation. **Consensus: status quo, keep on NNPS Watch list, issued closed for now.**

Cryptantha insolita (Las Vegas catseye) - Left open by the 2005 Workshop pending possible field work and assessment of historical specimens. Placed on the Nevada list of fully protected plant species in 1979. Known from one extirpated and one historical report in the Las Vegas metro area, in 1905 and 1942. Placed in synonymy under *C. virginensis*, a common species, by *Intermountain Flora* (vol. 4, 1984). Said to differ from *C. virginensis* by its appressed (not spreading) leaf hairs, relatively numerous flowering branches (cymes), crowded flowers, and blunt (not sharp) tubercles on backs of nutlets. Said to differ from *C. tumulosa* by its biennial or short perennial (not strong perennial) habit, stems 1.5-4 dm (not 1-2.5 dm) high, elongate flowering branches, nutlets strongly carinate on back and with definite (not indistinct) tubercles. Sketchy historical habitat information suggests this could be another gypsum soil endemic in need of better searching and documentation. But with no reports since 1942, should this be considered for removal from the Nevada list of fully protect plant species? Or should more intensive searches be initiated on gypsum soil habitats? Arnold Tiehm (see comments) suggests that it may be a good species and that it should be searched for on the deposits in the vicinity of Las Vegas Springs. He also indicated that the existing specimens are good, full collections, and look different from the related species. The historical "Sal Sagev" location is apparently at the intersection of Las Vegas Blvd. and Fremont Street, and is probably completely extirpated. **Discussion:** Jerry Tiehm has examined the specimens and believes it is a good species. Cannot match the characteristics of *C. virginensis* or *C. tumulosa*. Shouldn't worry about it unless someone actually finds it. It is currently on the Nevada State Protected List. When do we declare something actually extinct? Would not be good for it to have no protection. It cannot be keyed out in *Intermountain Flora*; original publications would have to be used. No one is actually managing for it. Wes Niles collects in areas where it could occur and using the references we have in hand, one can not key it to *C. insolita* - all collections in the area go to *C. virginensis* in the area. *C. insolita* is recognized in Dr. Higgins treatment. NYBG has a duplicate they will share with us. Wes Niles will send material to Jerry Tiehm to verify identifications. Associated with *Calochortus striatus* - at Sal Sagev Motel. Known historical sites are gone. Potential habitat at the Big Springs Preserve in the Las Vegas Valley, and a few other localities; few similar habitats left in the Las Vegas Valley. How can you protect a species if you don't know where it is or if it exists? In case it is rediscovered. Division of Forestry says it is hard to ask people to look for it if we don't know where to look for it. NYBG has image on line of the type specimen with good resolution. Jerry Tiehm will follow up upon his next visit to NYBG. This is the only species on the NNPS Possibly Extinct List.

Consensus: status quo, leave open for future Workshops to consider as better information develops.

Eriogonum mensicola (Pinyon Mesa buckwheat) - Left open by the 2004-2005 Workshops pending verification of its rarity in Nevada (and elsewhere) with UNLV botanists and collections. This distinctive taxon has until recently been synonymized with, or treated as a variety of, *Eriogonum panamintense*. On the basis of this synonymy, CNPS considered it too common to warrant conservation concern. As a distinct species, it is known only from infrequent encounters in the Panamint, Inyo, and Coso ranges of California, and disjunctly

from about 3 occurrences in the Sheep Range of Clark County, Nevada. Reported to intergrade with *Eriogonum panamintense* along an elevation gradient in the northern Coso Range of Inyo County, California. How rare or common is this species in California? Add to the NNPS Watch or Marginal List? **Discussion:** Not on any NNPS lists at this time, pending distribution and taxonomic status. Specimens from the Sheep Range are at UNLV. CNPS considers it too common to be on their lists, but this may be an old assessment. May be appropriate for Marginal List. Could it occur in the Spring Mountains? Seems likely since it is in the Sheep Range and CA. If so it should have been found as it is a relative conspicuous species. Need to look at all collections of *E. panamintense* and relatives from the Spring Mountains. **Consensus: status quo, leave open for future Workshops to consider as better information develops.**

Lathyrus grimesii and *Trifolium leibergii* - any new information on status or monitoring of population(s) infested by leafy spurge or other noxious weeds? Information or discussion of increasing mineral exploration activity in North Fork area of the Independence Range? **Discussion:** The Humboldt-Toiyabe National Forest sprayed a lot of leafy spurge last year. Will check how the treatments went this year. Neither species has been impacted. Lewis buckwheat has been impacted by mineral exploration, Jerritt is developing more. Lewis buckwheat was synonymized with *E. desertorum*, but Jim Reveal may do something different with the Intermountain Flora treatment. Leiberg clover also occurs in Oregon and is considered rare there. **Consensus: status quo, no changes recommended, continue evaluating yearly.**

Mentzelia inyoensis (Inyo blazingstar) - left open by the 2005 Workshop because of unverified reports of populations farther south in the Coso and Argus ranges of California. Described as new to science by Thompson and Prigge in Madroño 51(4): 379-383, 2004. Known from about 4 or 5 locations, mainly in the White Mountains of Esmeralda Co., NV, and Mono and Inyo cos., CA, but with one disjunct occurrence in southeastern Churchill Co., NV. Tentative heritage ranks G2 S1. About as rare as *M. tiehmii* and *M. argillicola*, previously added to the NNPS Watch List. Said to differ from *M. candelariae* by its petals 11-18 mm long (vs. 6-10 mm), lower stem leaves more deeply lobed, fruits longer and more narrowly cylindrical on average, and seed coats with 2-6 papillae per cell (vs. 9-15). Said to differ from *M. oreophila* by the absence of petaloid stamens, fruits 12-16(-25) mm long (vs. 5.5-6.5 mm), and leaves linear-lanceolate and lobed (vs. elliptic to ovate and undulately toothed). Have the Coso and Argus populations been collected and verified yet? Add to NNPS Watch List? Recommendations for other agency status? **Discussion:** Have not heard back from Dave Silverman about whether specimens from the Mojave Desert ranges have been verified. Jim Morefield will follow up with Dave. Should we proceed based on the White Mountains and Churchill County locations, or keep a wait and see attitude pending Dave Silverman's feedback? Are there any threats? The White Mountains locations are probably secure. Churchill County habitat is remote and steep, not a threat from OHV use, no significant development nearby. Last June Jerry Tiehm found it a couple canyons over from the original Churchill County collection. Appears to bloom closer to autumn, instead of spring like *M. candelariae*. The species is never very abundant. Jim Morefield says it is in an azonal habitat, upper mixed-shrub zone into pinyon-juniper woodlands, unlike *M. tiehmii* and *M. argillicola*, which are near valley bottoms and more vulnerable to recreational activities. *Mentzelia inyoensis* may only be vulnerable to miners and botanists. Jerry treat all three species the same, on Watch List. A graduate student in Washington is working on this section (*Bartonia*) of *Mentzelia*, we should wait for that information. **Consensus: none, status quo, leave open for future Workshops to consider as better information develops.**

Mimulus "ovatus" sp. or var. - Steamboat monkeyflower. Considered by past Workshops for State listing recommendation, and left open pending better definition of the taxonomy and range. Is an NNPS Threatened species. The population at Steamboat Springs, known to mass-flower in some years, has not been seen for the past three years. Incidental surveys in 2001 and 2003 have documented the continued presence of a very small population just north of Carson Hot Springs in Carson City, but another larger population south of there has been extirpated by residential and freeway construction. A few 2004 surveys found it present in small numbers in altered andesite habitats in the Geiger Grade area. Specimens annotated by Noel Holmgren in the RENO herbarium range from northern Douglas County to the Red Rock area of Washoe County. David Thompson (2005, Syst. Bot. Monogr. 75: 82-87) considers these plants a putative "hybrid" between *M. cusickii* and *M. nanus* var. *mephiticus*. He also re-lectotypified the name to a different Oregon specimen, leaving our plants

without a valid name. A preliminary look at specimens in the RENO herbarium by Arnold Tiehm and Jim Morefield suggests that plants from the Steamboat area are distinctive, and they are considering whether to establish a new name for them. Any need for status change(s) at this point? **Discussion:** Jim and Jerry may pursue a new name for the taxon, but need to see them in the field first, can't separate the flowers once they are pressed. The jury is still way out on this one. Leave it on the agenda. Ann Pinzl suggests making wet collections of the plant to examine in three dimensions later. Colors don't keep well in isopropyl alcohol, so photograph first. **Consensus: status quo, leave open for future Workshops to consider as better information develops.**

Perityle congesta (Grand Canyon rockdaisy) - left open by the 2002-2005 Workshops pending verification of a Nevada specimen. Reported from one Nevada site east of Spirit Mountain in the Newberry Mountains, Clark Co. Any new information? Add to NNPS Watch List? **Discussion:** Keep it on the agenda, and get Jim Holland and Pat Leary to get up Spirit Mountain during the warm months. Holland found it in spring several years ago, but no flowering collection of it yet. **Consensus: status quo, leave open for future Workshops to consider as better information develops.**

Phacelia laxiflora (nodding scorpionflower, =*P. perityloides* var. *laxiflora*) - left open by the 2002-2005 Workshops pending further information on its Nevada range. Known only from sheltered, sometimes moist carbonate rock crevices in the Virgin River gorge, Washington Co., Utah, Emory Falls in the Grand Canyon, Mohave Co., Arizona, and the Virgin Mountains, Clark Co., Nevada. Ranked G2G3, S1? in Nevada. Any new information? Add to NNPS Watch or Marginal List? **Discussion:** Reported from Black Mountains of Arizona, Pat looking for it on the Nevada side. No surveys completed for *P. geraniifolia* this year. Keep open while surveys are active. There is one known Nevada collection from the Virgin Mountains. Rare enough to place on Watch List? Seems primarily an Arizona plant with a few isolated locations in Nevada, maybe better on Marginal List. **Consensus: status quo, leave open for future Workshops to consider as better information develops.**

Sisyrinchium funereum (Death Valley blue-eyed grass) - add to the NNPS Threatened List by the 2003 Workshop, and recommended for the first time for addition to the Nevada state list of fully protected species. Cholewa and Henderson (Flora of North America vol. 26, p. 362) recognize the species as distinct based on predominantly branched stems, hyaline margins of inner spathe broad, long, apically rounded or truncate, and flowers pale blue, and report it as endemic to the Death Valley and Ash Meadows area, in moist grassy areas along streams and springs where the soil is strongly alkaline. See [comments from Anita Cholewa](#). Heritage ranks G2G3, S1S2. On CNPS List 1B.3, rank S2.3. USFWS Surveys in the Ash Meadows area in 2003 found many of the plants there to fit the description of, and to not be reliably distinct from, *Sisyrinchium radicum* (Las Vegas blue-eyed grass, added to the NNPS Watch List in 2003), and specimens from these surveys were sent to Dr. Cholewa in August 2003. As of the 2005 Workshop, 16 of 18 specimens from one area had been determined as *S. funereum*, the other 2 being tentatively assigned to *S. radicum*; 12 specimens from another area had not yet been determined. See [comments from Dana York](#). Wetland habitat of both species highly vulnerable. Has there been any further response from Dr. Cholewa, or any other new information about the problem? Does *Sisyrinchium funereum* yet merit a second recommendation for addition to the Nevada state list of fully protected species? Should either or both be recommended for the BLM sensitive list? **Discussion:** No new data available. Should we just keep the existing designations and remove from the agenda? May occur on BLM lands in the Ash Meadows area, should recommend for BLM Sensitive Species List yet. Should not be threatened by SNWA pumping in southern Nevada. Tall whitetop and other invasive weeds not yet a problem in the wet areas of Ash Meadows. Twelve Ash Meadows collections remain unidentified. **Consensus: status quo, leave open for future Workshops to reconsider as better information develops.**

PROGRAM UPDATES

(To be added to on-line version.)

NEW BUSINESS: REVIEW AND STATUS OF HIGH-PRIORITY TAXA (IN ALPHABETICAL ORDER)

Cryptantha mirabunda (wonderful catseye) - previously synonymized under *Cryptantha utahensis* by Intermountain Flora (1984) and Flora of Nevada (1987), but now recognized as distinct, apparently by Kartesz (1994, 1999). Described from Rhyolite (Nye County), considered endemic to Nevada, but of uncertain distribution and abundance (G1G3). Any information on the validity and/or occurrences of this taxon? Any status appropriate at this point? **Discussion:** Don't know yet how this will be treated in *Flora of North America*. Jerry Tiehm has not seen a specimen of this, nor its publication, doesn't know how it is supposed to differ from *C. utahensis*. Jerry will research and get back to Jim. If this has been passing as *C. utahensis*, no telling how rare or common it is in southern Nevada. If no resolution by next year, drop until *Flora of North America* treatment is available. **Consensus: status quo, no status, leave open for next year.**

Cylindropuntia (*Opuntia whipplei* var.) *multigeniculata* (Blue Diamond cholla) - Marc Baker's final 2005 report confirms several large new populations scattered through Clark County and adjacent Mohave County, Arizona. There are slight differences in fruit spines between the eastern and western populations, with intermediates in the McCullough Range; no further taxonomic subdivisions are being proposed. Blue Diamond cholla as a whole is considered a species distinct from *Cylindropuntia whipplei*. Previously known only from the Blue Diamond Hills. Current Heritage ranks T1 S1, on the State of Nevada list of fully protected species, on the BLM Special Status Species list, and on the NNPS Threatened list. Are either of the two fruit forms (presumably genetic variants) rare enough to warrant continued conservation concern? Does the species still merit full protection by the State of Nevada as a Critically Endangered species? **Discussion:** James Hardy Gypsum mine is now owned by Jim Rhodes and includes habitat for this species. Any conservation agreement with BLM for the species. BLM doesn't know of any. If this area is developed for residential use, there may be a concern and it should be protected. The State stills lists it as *Opuntia* rather than *Cylindropuntia*, but the old name is still a valid name for listing purposes, still a correct name, just a different taxonomic opinion. Does this species still warrant full protection? Geographic correlation of fruit spine variation may indicate significant genetic variation that should be considered. Would be more helpful if these variants were named. There are populations in Sloan Canyon NCA. All new locations are in rocky remote areas in the NCA or wilderness areas. Species is on the State Fully Protected List, and therefore included on BLM Special Status List, but not on Sensitive List. The mine site is the type locality for this species, and the majority of populations of the typical variant is on Red Rock Canyon NCA lands. One-third of population was on James Hardy Gypsum Mine lands. Should not change the status due to threat of housing development. If housing is developed, continued State listing could help promote mitigation and salvage. Christina Lund will have some maps made that show distribution and ownership, and Jim Morefield will send Christina his mapping data. Blue Diamond Hill surveys complete for this species, but unknown if more exists in the La Madre Mountain area. We should also consider the genetic variability, but there is no ongoing genetic research on this species. If the developer asks why this is treated as a rare plant, with the known distribution, how do we answer? Also increasing concern about fire and whether this area could burn. Should leave on State Fully Protected List and NNPS Threatened List. Blue Diamond population may be threatened, but not entire species? Should we protect the type population? Consult Marc Baker's report and discuss further. Jim Morefield will post Baker's 2005 report on the Nevada Natural Heritage Program web site. **Consensus: status quo, leave open for future Workshops to consider as better information develops.**

Draba asterophora var. *asterophora* (Tahoe draba). Nearly endemic to the Carson Range of Washoe and Douglas cos., Nevada, and adjacent Alpine and Eldorado cos., California, with an outlying population in the Mount Dana area of the central Sierra Nevada, Mono and Tuolumne cos., California. Heritage ranks G4T2, S1 in Nevada, S1.3 in California, and on CNPS List 1B.3. Currently a USFS Sensitive Species, and on the NNPS Watch List. The species is again under numerous threats from ski area development and expansion. Is the species yet threatened with extinction? Should its conservation priorities and ranks be elevated? **Discussion:** Four known occurrences within the National Forest, two of which threatened with elimination from ski area development. Have not been able to relocate two occurrences. Mt. Rose and Slide Mountain have large populations, and there are also occurrences at Rose Knob, Heavenly, Jobs Peak, Freel Peak, Mt. Gibbs, and Ralston Peak. Genetics are not well understood, diploids and polyploids exist, may be 3 or more varieties. Heavenly plants grow in mats but on Mt. Rose they are a little more spread out. FS sensitive species do not get full protection, so should we elevate the status of this species? FS sensitive species list is not a very strong conservation tool if developer can assert economic hardship, you are allowed to have impacts, but if the trend is

for Federal listing, that is a powerful tool. Ski runs were originally blasted and created habitat for this plant, now these sites are graded and the habitat is not maintained, soil is graded downhill from the top. Original mitigation was to salvage the topsoil, but very difficult on steep slopes. Plants don't survive being transplanted. The ski areas are seeded with native grasses. Forest Service is looking for feedback on extent of concern. Has there been any discussion with the ski run folks about the work they are doing on these slopes? Yes, this activity will be prohibited on other runs. Tall whitetop has moved into the area on the California side, probably a "C" rated weed and it doesn't matter to California. Forest Service can only make recommendations to Heavenly Ski Area, they will be in construction this year, 40% of population is at risk over next 3-5 years. The species does grow in avalanche chutes and other disturbed areas on the Forest, but maintenance activities are no longer encouraging plant establishment. Test area on Mount Rose has three more years of evaluation, ski area can not expand during this time frame, Forest Supervisor has some discretion in this situation. Genetic research is being funded by Heavenly, Mike Windham is working on treatment for Flora North America. 60-70% of the Nevada population occurs on ski slopes. Maybe too early to initiate State listing process, but level of concern higher than simply a Watch List species. Emailed CNPS, low concern based on lack of threats in wilderness habitat. There clearly are threats now in California. **Consensus: status quo, don't elevate yet, send message to Forest Service that we are concerned with threats to the species, leave open for future Workshops to consider as better information develops.**

Eriogonum corymbosum var. *nilesii* (Las Vegas buckwheat). After a full public hearings process, and in light of ongoing surveys, genetics research, and conservation actions, the Nevada Division of Forestry decided **not** to add Las Vegas buckwheat to the State list of critically endangered, fully protected species. Reports of new populations in more remote areas of eastern Clark and southern Lincoln counties continue to come in, including large patches just south of the Coyote Springs area. Preliminary results of ongoing genetics research suggest that var. *nilesii* is indeed genetically different from other varieties of the species. Plans to conserve habitat in the North Las Vegas area continue to evolve. Review and discussion of recent actions. Is any further action or status change by this Workshop warranted at this time? **Discussion:** Margie Klein distributed Decision Notices. Why was genetic uniqueness questioned? Results show it is a valid, genetically distinct taxon. If that was used as a reason by the Division of Forestry, it should be challenged. This decision could potentially lead to Federal listing. The file is still open with the Legislature, so it can still be petitioned for listing. We don't need to wait another two years. Basis for NDF decision was that new large populations had been identified, genetic studies were ongoing, and conservation actions in upper Las Vegas Wash were ongoing, therefore listing was premature. Large areas on and south of Coyote Springs property, mostly under BLM management. Also found along about a mile of habitat in Toquop Wash, and about 50 acres in the Anniversary Mine drainage along the NPS / BLM boundary, some in BLM (Muddy Mountains) Wilderness, where collected and verified by Jim Holland. It has been known for over a year that there were plants in Coyote Springs Valley and it was political that this information was not released until the public hearings. Mark Ellis collected from the Toquop Wash population and verified it. Listed species *Astragalus geyeri* var. *triquetrus*, *Eriogonum viscidulum*, and *Arctomecon californica* are all known from larger populations than the Las Vegas buckwheat. Appears we are losing a greater percentage of the *Eriogonum* habitat than *Arctomecon* habitat – so there appears to be some inconsistencies. It was suggested we write a letter to the Nevada Division of Forestry recommending listing. Jim Morefield will send a new memorandum if that is what the group recommends. There is still documented loss of habitat, and new projects are proposed on some of the habitat at Coyote Springs. OHV is a major factor to support listing – if Coyote Springs is developed, OHV will be an issue there as well. A new listing recommendation should emphasize (1) comparison of status of *Arctomecon californica*, *Eriogonum viscidulum*, and *Astragalus geyeri* var. *triquetrus*, and other State-listed species, looking at percentage of population being lost; (2) State listing more effective than Federal listing; (3) threats exist to known populations and to some newly discovered populations; (4) genetics are solid, and it is an officially recognized taxon; and (5) State listing has been an effective conservation measure for other species. **Consensus: recommend again for addition to the Nevada list of fully protected species under N.R.S. 527.**

Erigeron multiceps (Kern River daisy) - reported at the 2005 Workshop to have been found on Bridge Mountain in Red Rock Canyon NCA, and also to be present in Mexico(?). Otherwise known only from fewer than 20 occurrences on the Kern Plateau in Tulare County, California. Heritage rank G1. Currently on CNPS List 1B.2, rank S1.2, and considered endemic to California. Closely related to the common species *Erigeron*

divergens. Has the identity of the Bridge Mountain plants been verified? Any further information on the report from Mexico? Add to NNPS Watch List? Recommend for BLM Sensitive Species List? **Discussion:** Occurrence in the Spring Mountains verified by Nesom. High concern in California, but we do not know how widespread it is in Baja California, Mexico. Ann Pinzl will write Nesom to see if we can gain an understanding of its distribution in Mexico. Found in the Spring Mountains on a sandstone outcrop area where water accumulates, but above the mesic zone. Species is at the edge of its geographic range in Nevada. No known threats in Nevada other than rarity. Watch List seems appropriate, could be moved to Marginal List if it turns out to be common in Mexico. BLM Sensitive List probably would not provide much additional benefit to this species. **Consensus: add to NNPS Watch list. No recommendation for BLM Sensitive Species List, pending further information on occurrences in Mexico.**

Helianthus deserticola (desert sunflower) - lumped under *H. anomalus* by Cronquist *Intermountain Flora*, but still considered distinct by current sunflower researchers, and to be recognized in the upcoming *Flora of North America* treatment. Known from Utah, Arizona, southern Nevada, and disjunct in west-central Nevada (mainly Churchill Co.) where it could be genetically distinct. Recent observations suggest increasing prevalence of invasive species in the northern Nevada populations. Has anyone else noticed this? Does anyone have long-term familiarity with the species. Any status changes appropriate at this time? **Discussion:** BLM Carson City office working on this species. Grows in sandy areas throughout Churchill County. Found in Dixie Valley 30 miles east of Fallon. As you move away from the central area, you see fewer plants. At Soda Lake, there are about 200 plants. Dixie Valley had lots of grazing many years ago. Did grazing impact the plant? Were the populations more connected before grazing? More annuals in the areas with the plant, but not more plants in the high precipitation years. Grazing allotment renewal coming up, and they are winter only for one year. Is that a potential threat? There are geothermal test wells in the area, could there be geothermal development in the future? Ann and Jerry do not consider this a rare plant, may have been on early list, but was dropped a long time ago. Jerry has seen it in Lyon County at Schurz along highway 95, tons on 4 Mile Flat near the Rawhide Road. Also found in Mineral County. Any genetic differences between the populations? Wes has not seen it in Clark County. Many southern Nevada specimens may have been identified as *H. anomalus*, need to be reviewed. Found in the sandy dunes off the mesa just inside Lincoln County. Jerry saw it in Toquop Wash in Lincoln County. Populations are disjunct. The plant was first described from Washington County, Utah. Recommend to Drop from Watch List? Even if there are genetic differences between the northern and southern populations; there is still lots of it in the north. If it grows in easily disturbed habitat then maybe we should list it. Jerry has looked on the sand around Lovelock Lake and it is not there. Is its situation similar to other Watch List species? Yes for southern Nevada occurrences, no for northern ones. Wes and Jerry will review specimens against *Flora of North America*. Jerry will contact past NNPS grant recipient who worked on *Helianthus*. **Consensus: status quo, leave open for future Workshops to consider as better information develops, consider dropping next year.**

Physaria (Lesquerella) hitchcockii var. *confluens* (Quinn Canyon Range bladderpod) and var. *hitchcockii* (Hitchcock bladderpod) - in *Intermountain Flora* vol. 2B, Noel Holmgren lumps *Lesquerella* into *Physaria*, and divides *Physaria hitchcockii* into two varieties, var. *confluens* in the Grant, Quinn Canyon, and Schell Creek ranges of Nye and White Pine counties, and var. *hitchcockii* remaining only in the Spring Mountains and Sheep Range of Clark County. Both are endemic to Nevada. *Physaria hitchcockii* as a whole is on the NNPS "D" list (delisted) and Heritage Watch List, with ranks of G3 S3. As split, each variety is considerably rarer, and would rank T2 or T1T2. The NYBG specimen databases document 5 distinct occurrences for var. *confluens*. Do either or both varieties merit addition to the NNPS Watch List? USFS or BLM Sensitive lists? **Discussion:** Pat Leary reported the var. *hitchcockii* is common in the Spring Mountains, but not elsewhere. It is one of many unique plants at this elevation. So many people are using this Mountain Range, maybe it is a good watch list item. Also found in the Sheep Mountains, may be hard to get good information on occurrences there.

Consensus: add both varieties to the NNPS Watch List. Recommend both varieties for addition to the Humboldt-Toiyabe National Forest's Sensitive Species List.

Sclerocactus taxa in Nevada - *Sclerocactus spinosior* ssp. *blainei* (*S. blainei* of *Flora of North America* vol. 4, including *S. blainei* and *S. schlesseri*) is being proposed for elevation from CITES Appendix II to Appendix I,

which would prohibit all international commercial trade of the taxon. This is due to the increasing presence of seeds in international trade, and continued desirability and vulnerability of wild plants to hobby collectors (including seeds) and poachers. The full proposal can be found at <http://www.cites.org/eng/cop/12/prop/E12-P47.pdf>. *Flora of North America* reports *S. blainei* from Utah, but this has been disputed by Utah Natural Heritage. On-line photographs of wild plants in Iron County, Utah, do not appear to be this taxon. The descriptions and circumscriptions of *S. blainei*, *S. nyensis*, and *S. schlesseri* have been confused and inconsistent within and among recent treatments. **Most of the previously mapped populations of *S. schlesseri* are reported to be in areas slated for BLM disposal and/or mine development.** Any new information on the taxonomy or systematics of this group, or on the reported occurrence in Utah? Any recommendations for status changes, best taxonomic treatment, etc.? Do we concur with the CITES proposal? Should *S. schlesseri* be elevated in rank? **Discussion:** Because inconsistencies between original descriptions and later treatments, Heritage continues to recognize separate species for now. Some found at the Panaca town dump. Found in Dry Lake Valley during SNWA surveys. Should be on the Watch List at least, but we need more taxonomic information. CITES proposal initiated by USFWS in Washington DC. Still does not preclude exchange of seeds between hobbyists. The species are (is?) found in an arc from the Warm Springs area east of Tonopah across east central NV down to the Panaca area. BLM doesn't think Appendix I or II would have much impact on the conservation of the species. If there's an identifiable threat then we should support the change to Appendix I. Encourage BLM State Office to contact the Ely District and give them a heads up. Suggestion that a letter of concern be written to the Ely BLM office. **Consensus: concur with proposed changes under CITES. No other status changes recommended.**

NEW BUSINESS: REVIEW AND STATUS OF LOWER-PRIORITY AND OTHER TAXA (IN ALPHABETICAL ORDER)

Boechea (Arabis) fernaldiana (Fernald rockcress) - both varieties currently on the Nevada Natural Heritage Program watch list, *var. stylosa* on Inyo National Forest watch list, neither on any NNPS list. The varieties were not considered very strong by Rollins in 1993, and were lumped by *Intermountain Flora* vol. 2B in 2005. Do we have any reason to disagree with sinking the varieties? Any need for further conservation concern for the species or its varieties? **Discussion:** skipped. **Consensus: no time, to be addressed later.**

Cymopterus ripleyi (Ripley and sanicle biscuitroot) - when discussed at a workshop several years ago, it was decided to continue recognizing the two color forms, *var. ripleyi* and *var. saniculoides*, because most populations were reported to be pure, not mixed, and the forms showed differing geographic and ecologic tendencies. See comments from Jim Morefield. Recent treatments in the Jepson Manual and Intermountain Flora have lumped the two varieties. Do we wish to reconsider recognition of the two varieties? **Discussion:** Jerry saw a single inflorescence with green and black flowers mixed. We still don't know what the overall species variation looks like. Most plants green-flowered in northern Nye County, black in south-central Nye County, with some of the opposite in each area as well. Definite geographic trends in the two forms. Most populations are of one or the other color, but some have both. Jim considers this the classic definition of taxonomic varieties – the segregate geographically for the most part, but can mix sometimes. No genetic information available. Dave Anderson hasn't seem them mix. The green-flowered variety (*ripleyi*) is more abundant. *Penstemon bicolor* and *Glossopetalon pungens* show similar kinds of geographic variation. **Consensus: status quo, no changes recommended, continue recognizing the varieties.**

Eremogone (Arenaria) congesta var. wheelerensis (Mount Wheeler sandwort) - *Flora of North America* vol. 5 (p. 63) considers this to occur in "only a few sites in Elko, Lincoln, and White Pine counties, Nevada," but includes it in synonymy of *var. simulans*, of which it is considered to be an alpine extreme, and which is somewhat more widespread. In the *Jepson Manual*, the same principal author (Ronald L. Hartman) describes *var. simulans* as "uncommon" on open rocky slopes at 1300-1700 m in northeastern California and northwestern Nevada. The geographic ranges of the two forms appear entirely separate. The *var. wheelerensis* is currently on the NNPS Watch List and the NNHP at-risk species list, but has no other conservation status. Do we agree with combining these two taxa? What conservation status is most appropriate for the variety(ies) whether combined or separated? **Discussion:** Natural Heritage won't change until we get more information. Occurs in totally different areas, how can they be the same? Don't like the lumping. Ann will ask the person who did the Jepson

treatment. **Consensus: status quo, continue recognizing both varieties, leave open for future Workshops to consider as better information develops.**

Selaginella leucobryoides (Mojave spikemoss) - endemic to the northeastern Mojave Desert of southeastern Nevada, northwestern Arizona, and adjacent California. Known in Nevada from possibly fewer than 20 occurrences in the Virgin and Spring (and Newberry? McCullough?) Mountains, and the Sheep Range, of Clark County. Otherwise somewhat more widespread in Arizona (S2) and California (S3.2), with a global rank of G3. Tracked in Arizona; on CNPS List 4.3. Habitat is rock crevices and surfaces. Said to be difficult to distinguish from *S. utahensis*. Add to NNPS Watch or Marginal List? **Discussion:** This is the common spikemoss in the Spring Mountains. Differences between this and *S. utahensis* is very slight. Only one occurrence of *S. utahensis* in the Spring Mountains. **Consensus: status quo, drop from further consideration.**

Spiranthes diluvialis (Ute ladies'-tresses) - **Rediscovered at Panaca Spring in Lincoln County, Nevada, in 2005.** The U.S. Fish and Wildlife Service is considering a petition to de-list this threatened species based mainly on the much larger geographic range discovered since it was listed in 1992. On 4 November 2004, USFWS found that the petition provided "substantial biological information to indicate that removal may be warranted," and initiated a formal status review. The species is now known from small populations in Utah, Colorado, Wyoming, Nebraska, Montana, Idaho, Washington, and Nevada. The species is on the State of Nevada's list of fully protected species, and is on the NNPS Threatened list. Any recommendations for status change at this time? **Discussion:** What do we do now that our one NV population has turned up again? Keep it on State list, move it to M list, or wait to see if it is delisted federally? We should wait and hear from the USFWS. Utah water group petitioned to de-list it, expect them to be successful. **Consensus: status quo, leave open for future Workshops to consider pending action by the U.S. Fish & Wildlife Service.**

Taxa recommended for addition or transfer to the NNPS "M" List (Marginal and/or disjunct occurrence in Nevada, more widespread elsewhere):

- **Taxa with 1-5 known occurrences added to the M-List:** *Androsace occidentalis*, *Anelsonia eurycarpa*, *Asplenium trichomanes-ramosum*, *Boechera (Arabis) cusickii*, *Boechera (Arabis) davidsonii*, *Boechera (Arabis) demissa* var. *demissa*, *Dodecatheon conjugens*, *Selaginella selaginoides*, *Tetracoccus hallii*, and *Trisetum projectum*.
- **Taxa with 6-20 known occurrences added to the M-List:** *Bowlesia incana*.
- **Taxa to remain under consideration for the M-List, pending further information:** *Chorizanthe corrugata*, *Eriogonum nudum* var. *oblongifolium*, *Eriogonum panamintense* (excluding *E. mensicola*), *Eriogonum plumatella*, *Eriogonum salicornioides*, *Keckiella antirrhinoides*, *Lycium parishii*, *Mentzelia jonesii*.
- **Reject for M-List:** *Phacelia neglecta*.

Taxa added or transferred to the NNPS "A" list (Absent from Nevada currently and historically, previously reported from Nevada in error): None.

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(last updated 30 March 2007)

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