

NORTHERN NEVADA NATIVE PLANT SOCIETY  
Rare Plant Committee Meeting  
**NEVADA RARE PLANT WORKSHOP**  
3 April 2001, Las Vegas

**2001 MEETING NOTES**

<http://heritage.nv.gov/notes01.htm>

The following notes were compiled by Sylvia Torti, Dean Kinerson, Barbara Rohde, and Jim Morefield during the 2001 Nevada Rare Plant Workshop. Please notify Jim Morefield (775/684-2902, [jdmore \[at\] heritage \[dot\] nv \[dot\] gov](mailto:jdmore@heritage.dot.nv.gov), 901 S Stewart Street, suite 5002, Carson City, NV 89701-5245) of any needed additions or corrections. **Any changes to the original version are in the same color as this sentence.**

**WELCOME AND INTRODUCTIONS**

The 2001 Nevada Rare Plant Workshop convened in Las Vegas on Tuesday, 3 April 2001, just after 9:00 am, in the Auditorium of the Marjorie Barrick Museum of Natural History on the University of Nevada Las Vegas campus. The meeting was co-sponsored by the [Northern Nevada Native Plant Society](#) (NNNPS) and the [Nevada Natural Heritage Program](#) (NVNHP), and was chaired by Jim Morefield. Jim thanked all for their attendance, Wes Niles of the UNLV Herbarium for arranging the facilities, refreshments, and transportation, and Sylvia Torti, Dean Kinerson, and Barbara Rohde for volunteering to keep meeting notes.

It was agreed that next year's meeting would be in Reno on Thursday April 4<sup>th</sup>, and Jim said he would try to obtain the same meeting room as was used for last year's workshop. Jim also remarked that this is the highest attendance for a Nevada Rare Plant Workshop since annual meetings began four years ago.

After hearing from Wes Niles regarding the facilities and lunch plans, introductions proceeded around the room. In attendance during all or part of the day were 41 participants: John Anderson, Dean Kinerson, Gayle Marrs-Smith, Randy McNatt, and Christina Nelson (**Bureau of Land Management**); Jim Andre (**Sweeney Granite Mountains Desert Research Center**); Janet Bair, Debi Johnson, and Jody Sawasaki (**U.S. Fish and Wildlife Service**); Gail Bellenger and Julie Ervin-Holoubek (**Nevada Department of Transportation**); Cheryl Beyer, Debra Couche, Kerwin Dewberry, Cheri Howell, Teresa Prendusi, and Karen Zamudio (**U.S. Forest Service**); Kathryn Birgy, Fred Landau, Wes Niles, and Lloyd Stark (**University of Nevada, Las Vegas**); David Charlet (**Community College of Southern Nevada**); Glenn Clifton (**Eco Systems West**); Jerry Dion (**Tahoe Regional Planning Agency**); Barbara Ertter (**University of California, Berkeley**); Russ Harrison (**Las Vegas Springs Preserve**); Kris Heister, Libby Powell, and Dana York (**National Park Service**); Hermi Hiatt (**Northern Nevada Native Plant Society**); John Jones (**Nevada Division of Forestry**); Bruce Lund (**The Nature Conservancy**); Joyce Maschinski (**The Arboretum at Flagstaff**); Nina Merrill and Holly Williams (**Southern Nevada Water Authority**); Jim Morefield (**Nevada Natural Heritage Program**); Kent Ostler (**Bechtel Nevada**); Barbara Rohde (**Nevada Division of State Parks**); Frank Smith (**Western Ecological Services**); Beth St. George (Pahrump, Nevada); and Sylvia Torti (**Red Butte Garden and Arboretum**).

**PROGRAM UPDATES**

**Bureau of Land Management**: Randy McNatt from Nevada handed out the most recent Nevada sensitive plant list. John Anderson from Arizona announced completion of the Arizona Rare Plant Field Guide and a revised BLM sensitive species list for Arizona.

**Tahoe Regional Planning Agency**: Jerry Dion reported that they are crafting a conservation strategy for the Tahoe yellowcress using an independent consultant. By July, he anticipates they will have something ready to

go (in print), and it will be discussed at next year's Workshop. Old growth (timber) policies and guidelines are being reviewed on their regular 5-year cycle to see if they are meeting goals. The TRPA is planning on hiring a seasonal Technician to inventory rare plants this summer.

**Nevada Test Site:** Kent Ostler of Bechtel Nevada reported that extensive fairly complete surveys of rare plant populations have occurred on the Test Site, and these are currently monitored every 5 years, with all occurrences of those species with 10 or fewer visited and documented. He sought input from participants on the adaptive management plan his agency is currently writing. He wondered how often their team should be going back to monitor plant populations: yearly, every five years, every ten years? Finances and logistics do not permit yearly monitoring, and five year intervals may be too long for some plant species. It was suggested that if it is a "good year" (moisture, temperatures conducive), he should sample the annuals, and in dry years, sample only the perennials. Another suggestion was to take one species and sample it every year as a baseline; whether this was an annual, perennial or a biennial might determine how often it would be monitored after developing baseline information. Or monitor 2 species each year, return in 5 years if no disturbance, otherwise return next year to determine threats and further actions.

Several people pointed out that this is a unique situation in the southwest: the Nevada Test Site is closed to livestock grazing, the wild horse population is low, traffic (foot, off-highway vehicles) is restricted, and above-ground testing has ceased. So plant populations won't be affected by some of the pressures faced in other areas. Kent pointed out that although plants on the Test Site were first identified in the 1970s, the numbers of plants (populations) in each species were not added until after 1995 - so their data on increases or declines is lacking. He has noted increases and declines in *Astragalus beatleyae* in areas only a few miles apart. Another suggested that there be an intensive baseline survey for two-three years, then monitor macro-plots thereafter. Perhaps contact Nina Fog, FWS Botanist, who has a similar question to deal with. What they did was gather baseline data for all species for 3-4 years. After a few years, they could determine which species needed more intense monitoring, which less.

Several thoughts were mentioned: that associated species/invasive species should be examined along with the plant species in general: that is, what plants associate together, perhaps they are dependent upon one another. What invasive species are noted - and will their presence impact the rare/endemic/native species being monitored? In the Ogden, UT, area they are seeing "shifting mosaics" over a twenty-year period - the associated species being displaced by invasives. There was a suggestion to list all species seen in one geographic area at the same time. It was asked whether Kent had seen any species whose habitat is vulnerable to invasive species, particularly red brome or cheatgrass. On the Test Site, even they have seen an influx of red brome; but so far, it didn't seem to be competing with natives. However in other areas, particularly *Coleogyne* habitat, the red brome is moving in after fires have destroyed the native vegetation. Given that some plants grow only on certain soil substrates, this might be something to consider in the monitoring program.

**University of Nevada, Las Vegas:** Lloyd Stark, Botany professor, showed slides of some of the new discoveries in the Bryophyte world, and impressed upon the group that entire populations of some of the rarer forms may be contained within a space the diameter of a coffee cup. A new variety, the Gold Butte moss *Didymodon nevadensis*, grows on gypsum soils as a crust, and is hard to distinguish from nearby lichens. Populations appear to be all female. Another species, *Crossidium seriatum*, has a similar distribution, is found with *Didymodon*, and is one of only 10 populations found world-wide. One moss on the Nevada Test Site, *Entosthodon planoconvexus*, is an annual, is one of four locations known worldwide for that species, and occurs with an undescribed liverwort. *Trichostomum sweetii* found on the north shore of Lake Mead is one of seven known populations in the world, with two or three others in Nevada.

Other items of interest: an endemic liverwort which was previously undescribed has been found in fairly large populations in Red Rock Canyon and Spring Mountains N.R.A.. *Grimmia americana* has one population in the Newberry mountains, another in Texas, one in Arizona, and occurs with a very common moss so may be

easily overlooked. Its leaves are just enough different that a person looking closely may distinguish it from the more common species. A moss in the genus *Tortula* was also previously undescribed, and is very rare. It has been found in the Newberry Mountains and along the north shore (Lake Mead) road. It was noted that there seem to be many rare taxa in the Mojave Desert Does the same potential exist elsewhere in Nevada or is there something interesting about the Mojave? Lloyd suggested the "cold" deserts may not have as many rare mosses, but they have not been as intensively sampled either. The Spring Mountains and Red Rock Canyon are very rich in moss populations. Jim Morefield mentioned that Eric Peterson is the new Ecologist for the Nevada Natural Heritage Program, and is a lichen specialist.

The dispersal powers of mosses are generally greater than those for other plants; spores spread farther on the wind than seeds. He cautioned botanists that if they are collecting, take only a small specimen, dry it rather than press it. There is no good "key" for mosses, though the Bryophyte Project of North America is plugging along at one. Debra Couche, new to Nevada from California and on her second working day with Humboldt-Toiyabe National Forest, offered to be of assistance since she had put together a key for bryophytes in California. (Thanks, Debra!) The Bryophyte Project has a web site and Lloyd will e-mail its URL to Jim Morefield for inclusion and/or links on the Nevada Natural Heritage Program web site.

There was some discussion of the problem faced in general with "so many mosses, so few taxonomists..." Part of the problem is financial: there are few jobs for bryologists, and fewer people study mosses as a hobby. Unless mosses and lichens can be linked to an economic factor, "industry" is not interested in funding people to study them. EPA may be interested in monitoring mosses as environmental indicators, other agencies would be more interested if mosses were linked to critical ecosystem functions. Jim Morefield pointed out that from the rare species angle, agencies may create a demand for gathering more information by including mosses on the sensitive species lists.

**Western Ecological Services:** Frank Smith reported on the progress of surveying the plants of Nellis A.F.B. and bombing ranges. He has been working on this since 1993, and completed the official report in 1998, but there are 3.1 million acres to monitor and he continues to have access for surveys on weekends in the spring and fall (due to scheduled bombing runs). For instance, one plot in the Pintwater Range may not be resurveyed for about ten years due to its distance and inaccessibility. Since 1998, he and Dan Pritchett have been monitoring *Phacelia parishii* and *Arctomecon merriamii* populations. In one area, he had identified a plot where *Arctomecon* was growing, and since then he has not found new plants, but knows there is a seed base there. Have relocated *Asclepias eastwoodiana* populations on the Range, and may have found a new one. Climate and precipitation factors vary so much and sometimes his survey/monitoring trips to one area do not coincide with a good flower/plant year. Long-term funding prospects for continued work on Nellis are uncertain.

**Humboldt-Toiyabe National Forest:** Karen Zamudio from Sparks gave an update on the Sierra Nevada Forest Plan, and mentioned that part of the problem the Agency is facing is that of straddling the California/Nevada state line. Sometimes information about the plants they are tracking does not cross that line. There are some rare plants in tracked California that *may* occur in Nevada, but because they are not tracked there, there is no information. More investigation is needed before many go on the Natural Heritage list. Please see Karen's list and let her know of any sightings or studies in Nevada.

*Meesia* mosses have been worked on recently, likely to turn up on Humboldt-Toiyabe National Forest in Nevada. Might be appropriate for Heritage watch list, depending on species ranking, and would want to limit list to species with high probability of occurring in Nevada. Might be more appropriate on a list of data-gathering and survey priorities. Might be able to rule out *Meesia* from Nevada because of floating fen habitat. *Astragalus lentiformis* is site specific in flat ponderosa forest with volcanic soils. Peavine mountain area is at higher elevation, *lentiformis* stays around 5000 ft. Backside of Peavine has habitat but not exactly right. *Epilobium howellii* could be anywhere, not at high elevation, takes a lot of work to identify. *Mimulus evanescens* will likely be addressed soon in Nevada, since it has a very high likelihood of turning up. It could

show up on BLM land on the Modoc Plateau area. *Mimulus evanescens* does like vernal pool habitat and would be the place to check for that. Anyone with further feedback, please provide to Karen or Jim M. and will disseminate for others to be on the watch for species.

**Nevada Division of Forestry:** Johnny Jones gave an update on the Las Vegas bearpoppy, *Arctomecon californica*. He is part of the Bearpoppy Working Group which just changed its name to the Southern Nevada Rare Plant Working Group, which will work to prevent listings of other rare plants. Their next meeting is scheduled for May 22 at the NDF Office, 4747 W. Vegas Drive. One of their recent accomplishments was to get comments from a geneticist re: whether transplanting salvaged plants from the North Las Vegas Airport expansion into the Las Vegas Springs Preserve area would create cross-pollination and genetic contamination of the strain. The geneticist felt that the plant could handle incorporation of the new material, and if cross pollination started to occur, they could address that problem in the future. Plant populations in the Las Vegas valley have been extirpated through development. Nellis AFB has committed to fencing known populations on the Base, but no longer-term protective commitments. Las Vegas Valley Water District and Las Vegas Spring Preserve have been managing their populations protectively.

Nevada Division of Forestry is hoping to get funding to hire 1 person to handle the permits for issuing tags for relocating plants and monitoring the program. But they are having a problem in transplanting *Arctomecon* - they have to take a larger scoop of the surrounding soil, and even that does not guarantee success in the transplant. Seed does not germinate readily, either. NDF is adding a fee for the permit application process (text is on their web site) for developers who are removing plant materials. NDF is also working on issuing permits to the Nevada Department of Transportation for projects that involve bearpoppies. Uncertain whether Flood Control Districts are included in NDF master permit, which does not include county lands. The Working Group acknowledges that development is unstoppable, and that plant populations will be lost. Three populations have been identified as critical to the species' survival in Las Vegas Valley, and these are high priority for protection.

*Astragalus beatleyae* and *Primula capillaris* have been found in enough places in sufficient quantities that they are going to be removed from the Fully Protected Plant List. Johnny asked about the status of *Ferocactus cylindraceus*, barrel cactus, which was on the agenda for discussion at today's Workshop. There has been collecting, legal and illegal, not only from landscape contractors but also from bio-prospectors for many different plants. The most recent use of barrel cactus, which has become a problem, is the harvest for food products--candied cactus. In one instance, NDF "busted" a pickup truck (driven by Mexican nationals) that had stolen over 2,000 cacti from a location near Nipton. Pharmaceutical companies and contracting herbaria, and seed collectors, have been asking for blanket collecting permits for bioprospecting activities, but NDF hasn't yet addressed this in the permitting process. There may not be enough of the listed species to make collecting them worthwhile. NDF's primary concern is whether an activity will damage a species. When a permit is issued, it should include a list of TES species to avoid, and should require presence of experts capable of identifying those species. Permit requests have been coming to many different agencies from many different directions, and it is difficult to know who is doing what and what the cumulative effects of collection are. As for the fate of *Ferocactus cylindraceus*, it will remain on the Watch list with no status until further changes occur.

**The Arboretum at Flagstaff:** Joyce Maschinski reported on the Southwest Rare Plant Task Force. Interested parties may e-mail her for a copy of the proceedings. She complimented the Nevada Natural Heritage Program on its web site - she says it is the best of the southwest for its photographs of rare plants and links to other sites. The total number of rare plants in our 5 state region is 1,173 species. The Arboretum would like to get a sample of each plant to maintain for the future; ideally, they would like to create a seed bank to have on hand in case the plant populations are actually extirpated. She sees their role as aiding botanists and resource agencies to discover ways that rare plants may be successfully germinated or transplanted (using as an example the earlier-mentioned *Arctomecon*). Loss of genotypes can be minimized by storing seeds and doing future restoration work. Please contact either the Arboretum at Flagstaff or Red Butte if you need to have

seeds stored. She handed out a Rare Plant Chart, and a Draft Action Plan which was discussed at the Southwest Conference. There is some reticence among land managers to have a document like this: either it is too detailed, or not detailed enough for their purposes. Is it better to divide by political boundaries, or by biogeographic regions? Particularly in the case of endemics -- they grow where they grow, regardless of political boundaries. One suggestion was to use local workshops and compile the results for a more regional overview. The next Southwest Rare Plant Workshop will take place April 20 (a Friday) at 10:00 am at the Arboretum in Flagstaff.

Jim Morefield pointed out that the Nevada Natural Heritage Program Scorecard of Highest Priority Conservation Sites is updated every two years, and represents a state-wide analysis of those sites in greatest need of protective action, based on threats and biodiversity significance. Copies are available today, or on their web site. Also on the web site is a list of the highest priority of plant taxa to be inventoried during field or herbarium work. Again, mention was made of the need for more taxonomists; the decline of personnel/expertise should be included in the Draft Action Plan for the Southwest.

**U.S. Forest Service, Intermountain Region:** Teresa Prendusi discussed the status of the Forest Service Sensitive Species List ; no progress has been made since last year, although the plants are close to finished. There are about 800 taxa on the list, fauna as well as flora, and crossing state lines. Other, more pressing issues, such as the Roadless Initiative and the fires and post-fire assessment have put personnel behind in completing the SSL. Individual Forests will consider the species on the draft list to be analyzed, along with species of local biodiversity concern.

**Nevada Natural Heritage Program:** Jim Morefield discussed progress of the Nevada Natural Heritage Program; one of the handouts is on web sites of interest. He especially urged participants to contribute their sightings to the Wildflower Report On-Line, and if you have images, please include those. Many rare species images have been added in the last few months, and more need to be added. Also on-line are habitat statements for rare plants, species distribution maps, and a new Mosses of Nevada page thanks to contributions from Lloyd Stark and his co-workers.

**Northern Nevada Native Plant Society:** Jim Morefield mentioned that the Northern Nevada Native Plant Society has been debating whether to drop the "northern" from their name since the Mojave Native Plant Society "folded." Hermi Hiatt offered to get the membership list from the MNPS to Jim or Jerry by mid-month, so those members could be queried for interest in joining the NNNPS. Jim mentioned that there were been two \$500 Margaret Williams Research Grants awarded this year -- one to a student studying *Opuntia* and another to a student studying *Aquilegia*. Both students are in California, though they are doing their research in Nevada and other states. Jody Sawasaki mentioned that the NNNPS meeting this Thursday night is hosting Ron Lanner (noted author) as featured speaker.

**University of Nevada, Las Vegas:** Wes Niles put in a plug for the UNLV Arboretum Plant Sale, to be held Saturday, April 7 starting at 8 a.m. Come, buy lots of plants and support the Arboretum!

**U.S. Fish and Wildlife Service:** Janet Bair and Jody Sawasaki reported on accomplishments during this past year. A conservation agreement has been signed for the Blue Diamond Cholla. They had a final report by Marc Baker from Prescott College who had been working for them. There are some concerns over the Blue Diamond Cholla since the gypsum mine is closing and it is unknown what the new buyer might do - plans seem to be in the works for subdividing and development of a residential community. They are considering delisting for several Ash Meadows species: 3 plants, 1 fish, and writing a Weed Management Plan. They are working on a conservation agreement with the land owner for *Eriogonum argophyllum*, Sulfur Springs buckwheat. Plans to expand the current conservation agreement for Williams combleaf, *Polycytenium williamsiae* to include *P. fremontii* var. *confertum* and Forest Service occurrences. The Steamboat Buckwheat --they are working with the geothermal power company on a revised management plan, and with NDF on a brochure. They will be holding a public workshop for private landowners. Under the Clark County

Multiple Species Habitat Conservation Plan, impacts to listed species on private lands are mitigated by collecting fees from the developer(s) and funding conservation efforts on public lands. 78 species are covered, 34 of which are plants. Low elevation habitat is harder to assist under their present funding. Adaptive Management programs are the new and coming thing, with threats to species and management needs often at odds. Workshops will evaluate 30-year needs for species, and money will go to those in most need considering range wide threats.

Lincoln County has approached the USFWS regarding a Habitat Conservation Plan for the Desert Tortoise and other species: 12,000 acres of public land is to be turned over to private ownership under the Lincoln County Public Lands Act, and these acres are in prime desert tortoise habitat (Coyote Springs Valley, south of Caliente). Plants have not been identified in this area for the list, as yet.

USFWS funding for listing actions is very limited right now, with a lot going into court-ordered settlement agreements. They are setting up a priority system, with funding going to critical habitat - for instance a butterfly in northern Nevada, the Tahoe yellowcress, and other emergency items. There was a question: to what extent can counties or private sector address concerns of rare plants? Janet had no answer at this time. It was also asked whether USFWS have the ability (legal) to enforce conservation agreements? At this point, the consequence of species listing is about all they have. Kerwin Dewberry from Spring Mountains N.R.A. said they are trying to cost-share with other agencies to get conservation agreements accomplished.

At Ash Meadows, a weed management plan and aggressive spraying has been instituted to reduce knapweed and Johnson grass (the worst offenders), and they are trying to keep on top of the weeds so they can de-list sensitive species. Jodi asked whether the *Centaureum* at Ash Meadows is species *namophilum*, *nevadensis*, or *exaltatum*. She needed input from botanists; the consensus seemed to indicate that *namophilum* was the correct species.

**University of California, Berkeley, Herbaria:** Barbara Ertter reported that the 6th edition of the CNPS Inventory is nearing completion. The Jepson Herbarium received a \$300,000 grant from the William R. Hewlett Revocable Trust to develop the [Jepson On-Line Interchange](#), which will provide the latest information on identification, taxonomy, distribution, ecology, relationships, and diversity of California vascular plants. The necessary scientific data to understand the basis for new plant names and explicit corrections and updates to The Jepson Manual will also be made available. Work on the Jepson Desert Manual is progressing, but nomenclatural changes are slowing things a bit. Proceedings from a recent Jepson Symposium are in the current issue of Madroño, and may be useful to agencies.

**Great Basin National Park:** Kris Heister is working with the five nearby National Parks or Recreation Areas to develop a data base. So far 12,700 species have been added to this. In Death Valley, bryophytes are being collected and inventoried, which has not previously been done. They are trying to get funding for studying the taxa.

**Death Valley National Park:** Dana York noted that they are working on a bryophyte inventory and manual for the Park as part of nationwide efforts, pursuing funding.

Having come to the end of the Program Updates, the Workshop broke for lunch.

#### **OLD BUSINESS: UNRESOLVED TAXA FROM PREVIOUS WORKSHOP**

***Draba incrassata*** - Left open by 2000 Workshop until Steve Rae's report of its presence on the Nevada side of the Sweetwater Mountains can be verified. Any new information? NO CHANGE, no new information, **leave open** for future discussion.

***Eriogonum corymbosum* var. *glutinosum*** - recommended for the first time for addition to the Nevada list of

fully protected flora at the 2000 Workshop, contingent on the results of research into distinctness and overall range of the southern Nevada form. Is there any new information? If so, do we concur with the recommendation for the second time? Jerry Tiehm (April 2000) reports that its range includes Garfield, Wayne, Kane, Washington, and Iron counties in Utah, and Coconino, Navajo, and Apache counties in Arizona. He has concerns about adding this to a list when it may well be a very widespread taxon, thinks we need to pick our battles carefully. May be appropriate for a list of state-rare species. Gayle wants to do morphological and genetic comparisons, but still not done would like more time to conduct comparisons. Some populations were found elsewhere. The plant is a gypsophile and could conceivably be found in areas with similar habitat. Funds can likely be found to continue research on the plant, which was quite abundant formerly. **NO CHANGE, no new information, perpetuate contingent recommendation, leave open pending further data.**

***Eriogonum phoeniceum*** - 2000 Workshop left recommendation for BLM Sensitive status open pending field work to locate more populations. Any new information? Not much new information about extent or threats. Jan Nachlinger, Jerry Tiehm, and Wes Niles found the known populations last year, but no new populations found. Type locality very small. No perceived threats at the known locations. **CONSENSUS: without objection, is recommended for addition to BLM sensitive species list.**

***Eriogonum salicornioides*** - left open at 2000 Workshop pending verification of presence in Nevada. G3 and of concern in Oregon and Idaho. Add to NNNPS Watch List? Jerry Tiehm reports (April 2000) that the Percy Train collection at Penn State labeled from northern Humboldt County may in fact be from southern Oregon instead. Found to be more common in Idaho and downlisted there. Arnold Tiehm thinks Nevada specimen is doubtful, could be from Oregon instead. **CONSENSUS: without objection, drop from further consideration in Nevada.**

***Eustoma exaltatum*** - added to NNNPS Watch list, recommended for BLM sensitive list 2 years ago, extirpation from Nevada appeared imminent. Has there been any action or new information? Arnold Tiehm objects to having such a widespread species on any Nevada list. The Nevada area has been fenced and will be checked by BLM to see if the population is still there. Is managed as a sensitive species by BLM, but there are some trespassing cattle still impacting the habitat. Leaving the species on the Watch list would provide justification for continued protection. Perhaps just leave to BLM to manage without listing anywhere else? Or should we celebrate NV unique species by placing them on a separate list when nothing else is appropriate? The species is not listed in AZ. Forest Service thinks marginal species should be kept on a watch list from a habitat perspective. Maybe this population represents a genetically interesting population. Rare in AZ, also not very common in CA either. Maintaining a separate list might create additional workload and divert resources from more critical species, make existing lists less effective. Workload considerations generally haven't stopped people from creating lists, just acting on them. Having something on a list at least provides a red flag and a 'corporate memory' for there to be work on the species if the opportunity arises in the future. The Northern Nevada Native Plant Society could decide to take on this role, and create a peripheral category such as "M" for marginal and disjunct. No objections from the group. **CONSENSUS: without objection NNNPS hereby creates a new listing category, "M" for Marginal or Disjunct. Move *Eustoma exaltatum* from NNNPS Watch list to the new Marginal (M) list, and recommend for BLM sensitive species status. Also add *Stipa shoshoneana* and similar taxa from previous workshops to the M list. Other requests for additions to this list should be sent to Jim Morefield along with justification.**

***Ivesia webberi*** - the 2000 workshop made the first recommendation to add this species to the Nevada list of fully protected flora, based few known populations in Nevada and California, proximity to urban expansion in the Reno area, and vulnerability of the habitat to disturbance. A range-wide status report recently completed by Carol Witham concurs, and further recommends the species as a candidate for listing as threatened or endangered under the Endangered Species Act. Do we concur for the second time with adding the species to the Nevada list? Do we concur with recommending federal candidate status? Another small population was

found recently by Forest Service staff in Nevada. Not much chance of land exchanges affecting current status, but rights-of-way could. Some invasives were reported in populations, and tall whitetop and yellow starthistle are potential problems in the habitat. Habitat fragmentation may have impacted the species, but no information on how much may have been lost. Grazing doesn't seem to have been a problem. Agreement with Carol Witham's recommendations. **CONSENSUS: without objection, *Ivesia webberi* is recommended for second time for addition to the Nevada list of fully protected plant species, and is recommended for federal Candidate status with Threatened listing more appropriate than Endangered.**

***Lathyrus grimesii* and *Trifolium leibergii*** - any new information on status of population(s) infested by leafy spurge or other noxious weeds? Steve Anderson wrote that plots and photo points were established a few years ago in the Jack Creek area, and should have been re-read in 1999 or 2000. There is a cheatgrass concern for *Lathyrus grimesii*, but not much concern for invasives with *Trifolium leibergii*. Leafy spurge is near one of the sites for both species, herbicide has been applied, and there are plans to monitor this site. Fire missed the site by 1/4 mile last year. Get to know fire people—become a resource advisor to Forest Service and BLM. Incident Commanders. Impacts to meadow species from fire camps can be substantial. The FS has 1.5 billion from Congress for fire (wildfire and planned burns). Botanists need to be involved in planning burns. **NO CHANGE**, no new information.

***Lesquerella goodrichii*** - left open at 2000 Workshop because of insufficient information for a decision. Of concern in Utah, known also from eastern Nevada. How common or rare, threatened or secure, is it? Add to NNNPS Watch List? Sherel Goodrich believes this to be a good taxon. Occurs in the Snake Range, though *L. pendula* is very similar. Recommended G2G3 S2 in Utah. **NO CHANGE**, no new information, **leave open** for next year.

**Mosses:** at the 2000 Workshop, early reports on a Spring Mountain mossing foray indicated some new state records and/or undescribed taxa. What was the disposition of these reports, and are there any new taxa of conservation concern for Nevada? **NO CHANGE**, no new information yet, **leave open**.

***Penstemon sudans*** - added to agenda by 2000 Workshop pending verification of its presence in Nevada. Reported there by Intermountain Flora, habitat open rocky places usually of igneous origin, in sagebrush or open woodland. Otherwise known from roughly 20 sites in Modoc, Lassen, and Plumas counties in northeastern California. Global rank G2G3. Any new information? Add to Watch List? Arnold Tiehm knows of 2 Nevada collections at NYBG. Known from the region between Honey Lake and Susanville. Not in Plumas or Modoc counties, is known from Lassen County, habitat on Nevada side pretty limited. Seems rare on California side and even rarer on Nevada side. **CONSENSUS: without objection, add to the NNNPS Watch List.**

***Senecio pattersonensis*** - 2000 Workshop recommended adding to NNNPS Watch list pending verification of a specimen from Nevada. Any new information on the Wassuk Range or Sweetwater Mountains reports? Frank Smith and Jan Nachlinger could not relocate in the Wassuk Range during recent surveys. Has only been seen on the California side of the Sweetwater Mountains on steep high-elevation talus slopes. Check herbarium collection at Duke. **NO CHANGE**, **leave open**.

***Sphaeromeria argentea*** - left open at 2000 Workshop. Rare and scattered in e.-c. Idaho, sw. Wyoming, nw. Colorado, sw. Montana, and two areas of Nevada in Elko and Nye counties. Currently ranked G3?, S2 in Montana, S1 in Nevada. Widespread in overall range although rare in Nevada. Habitat is low-elevation P-J, in shallow soils over flat volcanic bedrock, similar to *Astragalus beatleyae* habitat. Idaho added it to the special status species lists for BLM and USFS. Looks like *Artemisia arbuscula* when not in flower. Any new information? Add to Watch list? Arnold Tiehm thinks this is too widespread to be on any Nevada list. **CONSENSUS: without objection, add to the new NNNPS Marginal (M) list.**

#### **NEW BUSINESS: REVIEW AND STATUS OF HIGH-PRIORITY SPECIES (IN ALPHABETICAL ORDER)**

*Aspicilia fruticulosa* - rim lichen. First lichen added to Nevada Natural Heritage Program's tracking list! It is a "vagrant" or "tumbleweed" lichen, and is wind-dispersed, completing its entire life cycle unattached to any substrate. The species is sensitive to trampling and other ground disturbances, and is eaten by domestic sheep and other introduced and native animals. It was only recently noted in North America, where it is known from scattered sites in Idaho, Montana, Oregon, Utah, Wyoming, Colorado, and one location on the Sheldon Antelope Range in northern Humboldt County, Nevada. It is also known from Asia, and is probably somewhat more common in North America than current records indicate, but is ranked G3 because of its overall rarity and vulnerability. Add to NNNPS watch list? Was placed on sensitive species list in Idaho. CONSENSUS: without objection, **add to the new NNNPS Marginal (M) list.**

*Astragalus ensiformis* var. *gracilior* - Veyo milkvetch (= *A. minthorniae* var. *gracilior*) The variety is currently ranked T1, known only from Washington County, Utah, north of the Virgin River in the foothills of the Pine Valley, Beaver Dam, and Bull Valley mountains, and from one site in eastern Lincoln County, Nevada, in the Cedar Wash area of the Clover Mountains. Habitat from Intermountain Flora is "gravelly clay hillsides, flats, and gullied bluffs, in pinyon-juniper woodland, commonly on limestone. Add to NNNPS watch list? Ranked T1Q in Utah, where not separated from var. *ensiformis*. Land status needs to be assessed in Nevada. CONSENSUS: without objection, **add to the NNNPS Watch list.**

*Atriplex 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*. Restricted to Pahrump and Stewart valleys, most abundant in abandoned disturbances. Is the taxonomy reasonable? Threatened by habitat conversion in Pahrump Valley? Add to Watch or Threatened List? Wes and Gayle will continue to look when in the area. NO CHANGE, no new information, **leave open.**

*Lotus argyraeus* var. *multicaulis* - scrub lotus. Known from a single site in Clark County, Nevada, west of McCullough Springs in the McCullough Mountains; otherwise endemic to a small area of the New York Mountains of southeastern California, where known from about 4 sites. Global rank T1, ranked S1.3 in California, and on CNPS list 1B. Nevada rank also S1. Not surveyed in Nevada, habitat sandy washes, ledges or clay slopes in canyons. Add to NNNPS watch list? Needs more research, but might warrant federal listing. CONSENSUS: without objection, **add to NNNPS Watch list** pending verification of reports from Nevada.

*Mimulus ovatus* - Steamboat monkeyflower. So far only known from Steamboat Hot springs and nearby Geiger Grade area on private and possibly NDOT rights of way. Taxonomy still uncertain because of apparent hybrid origin, and reports from Carson Valley and other western Nevada valleys need to be checked. But if current knowledge and taxonomy is correct, it could be extremely vulnerable to urban and residential development. Move from NNNPS watch list to threatened list? Recommend for state listing? Or wait for more solid information first? Forms fairly uniform populations around Steamboat Hot Springs, uncertain if restricted to that area. Appears to be stabilized from past hybridization between *M. mephiticus* (including *M. densus*) and *M. cusickii*, not ongoing process. May qualify for same status as Steamboat buckwheat. Populations should be checked for parental taxa, more taxonomic work needed, but recognition in *Intermountain Flora* justifies moving ahead with recommendations and not waiting for more information. CONSENSUS: without objection, **add to NNNPS Threatened list, first recommendation for addition to the Nevada state list of fully protected plant species.**

*Penstemon bicolor* - after recent field studies, are there any new data or opinions regarding the distinction between var. *bicolor* and var. *roseus*? Gina Glenne is studying breeding systems of the two varieties. Andrea Wolfe's genetic work to be done beginning of June. After her results, we can make a decision. *P. palmeri* crosses with *bicolor*, appears to occur at most of the sites where both *bicolor* varieties are present, may end up as hybrid swarm. Swarming is an important problem. *P. palmeri* has been recommended as a restorative plant, but since it crosses with other natives, BLM has taken it out as a recommendation for re-seeding projects. A cautionary note: perhaps subspecies *roseus* arose from hybridization with *P. palmeri*. In general,

though, natives are still preferable for revegetation work. NO CHANGE, no other new information.

*Pinus washoensis* - David Charlet (April 2000) is planning to further investigate the relationship of the Nevada populations to the northern race of *Pinus ponderosa* var. *ponderosa*. He still believes they may be distinct at some level and worthy of continued conservation status. Expedition to look at the Washington populations planned for June to collect material, look at northern end of distribution. NO CHANGE, no new information.

*Ranunculus triternatus* - obscure buttercup (= *R. reconditus*) state-listed as endangered in Oregon and threatened in Washington, where restricted to a small area near the Columbia River in the Columbia Hills and Mill Creek drainage, and where threatened by agricultural conversion, herbicide use, and possibly recreational use. Otherwise known only from one location in Idaho, and one location in Elko County, Nevada, 18 miles northwest of Elko. Global rank G2, ranked S1 in each state. Not surveyed in Nevada, habitat sagebrush slopes, could occur in many more areas. Add to NNNPS watch list? Seems appropriate to put on watch list in Nevada since other states have listed it. CONSENSUS: without objection, **add to NNNPS Watch list**.

#### **NEW BUSINESS: REVIEW AND STATUS OF OTHER SPECIES (IN ALPHABETICAL ORDER)**

*Ferocactus cylindraceus* - barrel cactus, increasing concern over legal and illegal collecting pressure in southern Nevada. Extremely popular for ornamental and landscape use. Are declines serious enough yet to warrant any status recommendations? Desirable for use in landscaping, candy manufacture. Libby Powell from Lake Mead N.R.A. mentioned that the National Park Service has pit-tagged specimens along the roadways throughout the recreation area, so that the individual cacti can be traced to their origin if they are confiscated from a "rustler." Division of Forestry does issue commercial collection permits for non-endangered cacti on non-federal lands. AZ does this as well. In Nevada 5000-6000 permits are issued per year, 40-50% for barrel cactus. Reports of illegal harvest continue, however. The commercial industry prefers basketball size and larger, until they become too heavy to lift. Candy operations prefer large ones. What to do about desirable species for which we don't have good monitoring and enforcement? Perhaps we should recommend that an assessment of our populations be done. How many plants, how much used, how much sold overseas, etc. Would be a good masters thesis. Agencies need to visit collecting areas, see if there are significant declines anywhere. Could find historical photographs to document loss in an area, start taking photos now. We ought to keep an eye on this one. BLM requires salvage of plants for projects. See further discussion under NDF program update above. NO CHANGE, no new information to warrant different status.

*Petalonyx thurberi* ssp. *gilmanii* - Death Valley sandpaper plant. Known from about a dozen sites with some threats in and around Death Valley, Inyo County, California; otherwise reported as rare in adjacent southern Nye County, Nevada. Global rank T2, ranked S2 in California, on CNPS list 1B. Not surveyed in Nevada, habitat low-elevation dry canyons and washes, sandy or rocky areas. Add to NNNPS watch list? Found on dune habitats, 54 records at 12 sites in central and southern Death Valley area, no Nevada records at the UNLV herbarium. Elevation range in Death Valley sea level to 3,000-4,000 feet. Maybe in Amargosa River Basin in Nevada? NO CHANGE pending searches and verification in Nevada.

**ADJOURNED AT 5:00 PM**

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