

## **Notes on 2003 Gunnison Sage-grouse Summit (from an eastern California perspective)**

Beginning in the mid 1990s seven separate working groups developed conservation plans for seven populations of Gunnison Sage-grouse in southwestern Colorado and eastern Utah. The Gunnison Sage-grouse Summit in September 2003 was the first occasion for all to come together and report on their progress. Here are some summary notes from the sole visitor from California.

There are interesting parallels and contrasts between the Gunnison Sage-Grouse (GUSG), recently named a separate species, and our sage grouse here in the Lyons-Mono area which have been found to be genetically distinct. The GUSG is at the southeastern fringe of sage grouse habitat; ours are at the southwestern fringe. Both have habitat elements that are not addressed in rangewide management guidelines. Historical and current range maps show the GUSG occupying an isolated “island” of suitable sagebrush habitat, while ours are shown as currently isolated and historically occupying a long “peninsula” isolated except on the north. Overall population sizes are roughly similar at around 3000-4000. Much GUSG habitat has been lost to habitat conversion in the form of row farming and residential development, while ours is largely intact. GUSG habitat is largely private land and the best habitat is nearly all on private land. Our habitat is mostly public land, but many private parcels are associated with perennial water and provide important habitat. These notes emphasize ideas and concepts that may apply here.

**Opening remarks** by Russell George, director of Colorado Division of Wildlife (CDOW), emphasized the importance of working together: “What brings us here today is absolutely the right way to go.... The Gunnison Sage-grouse will not disappear on our watch. We have committed ourselves.”

**Gunnison Sage-grouse: A New Species and Why** – Dr. Jessica Young: The “biological species” concept – no interbreeding – doesn’t apply well to grouse, which interbreed at the genus level. Young and others in a series of 5 papers documented physical, genetic and behavioral differences. Behaviorally, GUSG females don’t recognize the display of Greater Sage-grouse (GRSG). The lek mating system, whereby as few as 10-15% of males mate, leads to rapid evolution of traits preferred by the females and thus to mating barriers and speciation. It also can lead to low genetic variation and thus to genetic defects, inability to adapt to rapid change, and perhaps extinction. Of ten grouse species in North America, five are lekking and all are declining; one, the heath hen, is extinct, due largely to “the inability of people to pull together and work as one.... Sage grouse lasted a million years; it’s the *recent* changes in habitat to which they can’t adapt.” Young quoted E.O. Wilson: “The one process ongoing ... that will take millions of years to correct is the loss of genetic and species diversity by the destruction of natural habitats. This is the folly that our descendants are least likely to forgive us.”

In response to questions, Young noted that GUSG apparently will move to new lek areas more readily than GRSG; and that limiting habitat factors are nesting/brood-rearing habitat, and winter habitat for severe winters.

**Gunnison Sage-Grouse Population Overview** – Dr. Tony Apa, CDOW: Habitat has been decimated, from 56,000 to 4800 square miles. Of the seven populations, the one nearest Gunnison, CO is by far the largest with 500 males on 47 leks in this year’s census. The others range from 50 males on 8 leks to 6 males on 2 leks. Sagebrush communities include Basin/Wyoming big sage, mountain big/black sage, high elevation black/low sage, and hybrid sages in the Gunnison Basin. Here in eastern California we have bitterbrush contributing to atypical but apparently good nesting habitat; there, they have telemetered hens rearing broods under a canopy of oakbrush (Gambel oak in shrubby form) which apparently provides a

microclimate favorable to forbs. Habitat challenges include heavy fragmentation and conversion to agriculture and to homes and towns, PJ encroachment, poor understory in lower elevation Basin/Wyoming sage, cheatgrass and Russian thistle. Throughout the area sagebrush has been declining in vigor and defoliating in places due to a combination of drought and insects. Currently drought is the greatest threat: "I pray for rain."

In response to a question Apa said winter ranges are known for some populations and unknown for others.

**Conservation Planning Group Reports** – A representative from each of the 7 working groups reported on their history and progress. Groups convened as early as 1995 and took from 1 to 4 years to complete their plans. To summarize challenges and successes:

***Landowner participation*** varied. The Pinyon Mesa group, where 100% of current sage grouse range is on private land, was made up of 9 "very cooperative and caring" ranchers and 8 wildlife agency people. For the San Juan group, 97% of the sage grouse habitat is on private land, but the working group was made up of 90% agency people. Annual "landowner dinners" at San Juan area restaurants have helped increase involvement: "Give 'em a steak and talk about sage grouse." The Dove Creek working group was made up almost entirely of landowners, but interest declined after the plan was finalized; projects are implemented case-by-case by CDOW and meeting participation is low unless there is a pressing issue. However they found that "a good steak helps bring people back." Unfortunately today's catered lunch was not steak but barbecued chicken, an error noted by two of the cattle ranching landowners in a panel discussion the next day.

***Landowner-collaborative habitat conservation/improvement*** has benefited both grouse and landowners in many cases. Thousands of acres have been put into conservation easements (including a 20-mile corridor of ranches in one area), and various programs administered by NRCS, etc. are giving landowners financial and practical help to conserve eligible habitats. Land and grazing leases have been purchased in some areas. One very helpful landowner was recognized for allowing habitat improvement experiments on his land.

***Water projects*** created new watering/wet areas and piped water to ponds; some used solar pumps provided by USFWS.

***Sagebrush and grass and forb seedings*** tended to have low success due to drought.

***Sagebrush control*** including herbicide treatments, small prescribed burns, brush beating, brush mowing and Dixie harrow were used successfully to restore riparian areas and active leks being encroached by sagebrush, create new leks near old inactive ones, and increase use at edges of active use areas. Roller chopping in PJ/sagebrush and seeding with grasses and forbs gave good success when precipitation was good.

***PJ cutting*** was implemented in several places, including all PJ within ½ mile of leks in the Crawford area.

***Public lands grazing*** in the Crawford area was adjusted to leave 50% residual cover in nesting habitat annually. Allotment management plans in the Gunnison area were revised to include sage grouse guidelines, and grazing exclosures were created.

**Two-strand electric fence** for exclosures around lek and nesting areas was successful in excluding cattle without causing grouse avoidance.

**Other habitat improvements** included removing old fencing, closing roads, erosion control.

**Studies** of habitat and movements are making good progress in nearly all areas.

**Special land designations** included an Area of Critical Environmental Concern, a Conservation Priority Area, two wildlife areas purchased by CDOW, and a Watchable Wildlife site (but at the latter, the landowner reports bird numbers are down due to disturbance).

**Reintroduction** has been moderately successful in the one area in which sage grouse were extirpated (in this year's census, 7 males at 1 lek).

**Public education** successes include lek tours conducted by wildlife agencies with landowner permission; a county fair booth; T-shirts and videos sold as fundraisers to fund education projects; brochures; PowerPoint and slide shows.

**Conservation plan review and revision** resulted in listing new projects directed at accomplishing existing goals, prioritizing the most critical actions and areas and trying to make all actions quantifiable.

**Ongoing challenges** include habitat loss and fragmentation by housing, agriculture, reservoirs; noxious weeds; multiple use disturbances; sagebrush die-off due to drought; winter habitats still unknown; lack of sufficient agency time and funding, both to conduct projects and to assess effects; more funding needed for conservation easements. There is strong recognition of the need to preserve traditional ranching which can be compatible with sage grouse needs.

**Current research efforts: *GUSG Nesting Behavior and Genetic Diversity*** – Julie Stiver (San's daughter, currently at U. of Nebraska - Lincoln) gave an excellent summary of her research to date. Small population size, variation in lifetime reproductive success and unequal sex ratios complicate equations to determine genetic diversity, so her initial research goals were to estimate population size and male and female reproductive success. Preliminary results: 2.17 females per male; 10 of 30 marked hens died (4 by avian predator, 1 by mammalian predator, 1 power line collision, 4 unknown); 10 of 20 marked males died (2 by avian predators, 8 unknown); 30% of males were seen copulating (16 never, 1 once, 1 3x, 3 4x, 1 5x, 1 6x); only 3 of 30 hens produced a brood. ***GUSG winter ecology and effects of grazing*** – Sharon Ward gave a brief presentation; none of her results were available yet.

**GUSG Rangewide Planning Effort Update** – Cathleen Neelan of North American Mediation Associates and Dr. Tom Remington of CDOW announced that a rangewide conservation plan was now going to be developed, for these reasons:

- Range-wide issues must be addressed

  - (e.g. genetics, population viability, reintroductions, West Nile virus)

- USFWS PECE standards must be met

- “World-class scientists” will be brought in

- Plan can be used:

  - as basis for Candidate Conservation Agreement with Assurances (CCAA)

  - to get funding

  - to avoid listing, or if GUSG are listed, serve as basis for recovery plan

Neelan spoke first and emphasized that the local plans, most of which were created via stakeholder consensus decision-making, would now be brought together in a process that would include similar public stakeholder involvement plus confidential stakeholder interviews, some of which she had already conducted. She summarized what stakeholders want:

- Show recognition for mutual interests.
- Improve populations numbers and avoid listing.
- Show visible outcomes from agencies.
- Address the needs of the bird.
- Retain local control and private rights.
- Retain the economic stability of communities.
- Retain economic stability of ranching and public land grazing.

Neelan quoted Henry Ford: “Coming together is a beginning; keeping together is progress; working together is success.”

Remington followed with the announcement that the rangewide effort would be led by a science team, for the reasons that:

- The plan must be science-based to work.
- USFWS must have confidence in it.
- The team is made up of impartial experts with no stake in the outcome.

Team members had already been selected, and some stakeholders later expressed concern that they had no knowledge of or input into selection criteria. One person asked, “Where are the social scientists?” Remington said that the science team will create targets but local groups will address how to reach them.

One note of local interest is that Dr. Robert Gibson, who did most of his field work here in the Lyons/Mono area, was recognized as “the top expert on lek behavior” by his inclusion on the science team as the representative for behavioral ecology.

**Field trip** – The first day’s conference was held in cramped quarters at the Norwood Community Center in order to allow a field trip via a short chartered bus ride into high elevation GUSG habitat in the San Miguel Basin. Sagebrush habitat restoration authority Steve Monsen gave an interesting on-site talk in which he acknowledged rethinking much of what he said less than a year ago at the Elko sagebrush restoration workshop. This site showed mixed characteristics of black sage and low sage, and a more robust and varied understory and thus resilience to treatment than he would expect from either. The view from the bus en route showed strikingly the extent of habitat conversion via row crop farming and development.

**Review of first day by outside observer/critic** – Ed Marston, publisher of High Country News, spoke on the importance of finding the sage grouse’s meaning to and place in society, and “selling” it to a broader public. He said he had never seen a sage grouse but went on to say, “Face it, the sage grouse is not a very interesting bird,” and it would be a hard sell compared to fascinating issues such as the decline of whitebark pine. This did not endear him to the audience.

**GUSG and the Endangered Species Act – listing status and what it means to landowners** – Al Pfister, USFWS: GUSG is a Candidate species, Priority 5 (= threat magnitude “high,” immediacy “non-imminent,” taxonomy “species.” Imminent immediacy would move it to Priority 2). “Candidate” gives no legal status, but ensures annual review; a Candidate Notice of Review is published each year including any change of status. The earliest any listing decision could go into effect would be January 2006. Candidate Conservation Agreements with Assurances (CCAAs) are voluntary agreements between USFWS and non-federal partners and landowners, providing conservation measures that reduce the need to list a species as endangered or threatened. CCAAs encourage private involvement by giving regulatory assurance that if the species is listed,

participants will not face greater, involuntary, requirements. The rangewide conservation plan is to be the basis for a CCAA with CDOW taking the lead, “breaking new ground with a CCAA that covers a species’ range” – Utah Division of Wildlife Resources (UDWR) is working on one too. Usually CCAAs are with individual landowners. Habitat Conservation Agreements (HCAs) are for already-listed species but the process is identical.

**Panel discussion – historical perspective by long-time ranchers** – 5 ranchers, from 5 of the 7 local areas, spoke. One located quotes from Captain Gunnison’s journal of early explorations into the area where grouse were extirpated and reintroduced, describing sagebrush and grasses as “luxuriant” and grouse as “abundant and fine.” Common themes: Former sheep ranchers think sheep kept habitat healthier by eating brush more than cattle do, and that predator control in the past also helped grouse. “We need to work together to bring sage grouse back. The ranchers need help to do what needs to be done.” Appreciate cooperative attitudes and good working relationships with agencies and universities. Success and mutual satisfaction with cooperative habitat improvement programs. “Steak is good; less chicken please.”

A question posed to the panel: How and why did you get involved with GUSG conservation?  
Answers, approximately quoted:

“Fear of USFWS! CDOW has a thorough understanding of our interests; we don’t think that in our area the feds understand. No need for steak dinners: the rooms are full whenever we have a planning meeting. People want to know, ‘what can we do and how?’”

“People would rather say ‘Don’t come on my private land’ than get involved. They don’t have time for endless meetings. Once they understand you want to keep them off the T&E list, they get on board.”

“There was money available through the NRCS WHIP program, plus I was able to sell a conservation easement, take that money and put it into another part of my operation. The best I can do now is to talk to my neighbors about the benefits I’ve gained by cooperating. You can no longer say ‘to hell with the bureaucrats’ in today’s world; you need to partner up to stay economically viable. And it’s a privilege to be a landowner and have the opportunity to improve land while it’s under my jurisdiction.”

“Up until a few years ago I didn’t think of wildlife. Now when making management decisions on the ground we think of wildlife and want to work with CDOW when a species is in trouble. There’s a new attitude of ranchers that wildlife is part of the picture, and we want to know what is the right thing to do.”

“All I can add to that is that bureaucrats must be very honest about what could happen under various scenarios.”

Q: What can USFWS do to encourage people to trust them?

“The devil’s in the details. Be up-front, everything above-the-table; don’t drop the hammer later. There’s fear of being told that you can’t graze certain areas, or that your land will be condemned. Maybe USFWS needs to do a better job of getting the word out that you’re not going to drop the hammer on us.”

“We believe some judge elsewhere could make a decision without ever being here.”

“Bring your pickup out in my field and talk with me while I’m working. My dad told me that I couldn’t trust you. I’m not going to trust you until I’ve looked you in the eye and shake your hand and have your promise.”

Q: How can we keep more land from being divided up into 30-acre parcels?

“Conservation easements are good. ‘Real ranchers’ can’t donate land; they have to sell these easements. You’ve got to come up with the funding. Politicians need to know that.”

“Buy more beef!”

**Comments by outside observer/critic** – Bruce Gill, former CDOW wildlife researcher: Be careful with use of the words “we” and “collaboration.” Local working groups don’t represent the community if they’re 80-90% agency people. It’s a big error to exclude anyone vital to the final outcome. We must be willing to acknowledge our commonalities and to discuss our differences or they fester. Public officials need to be willing to relinquish some power. We need to avoid jargon. And remember that what we think we “know” about sage grouse is merely patterns we’ve observed by looking at existing data. This is not knowledge, but hypotheses.

**Roundtable breakout sessions** – an energetic brainstorming session with 9 groups moving from table to table to generate ideas on 9 topics: predation; utilities and oil & gas development; sagebrush treatments; lek viewing; rangewide plan strategies; research needs; livestock/big game grazing/browsing; transplants; conservation easements. A summary of the results will be available later on CD. One idea that was new to me was to use a webcam for remote lek viewing, to raise public interest while minimizing disturbance.

**Funding opportunities** – Speakers from NRCS, CDOW and USFWS described their applicable programs. Handout: a handy chart showing sources (NRCS, USFWS, CDOW, UDWR, and private organizations); programs; which lands are eligible under each; time commitments, cost share, and applicant obligations; and contact information; plus a list of land trusts. Someone (me?) should compile something similar for our area. CDOW also described “landowner workshops”: a landowner decides to sponsor one, and invites neighbors; CDOW presents incentive/partnership programs and opportunities to capitalize on wildlife habitat on your land.

**Research: Upcoming Priorities** – Dr. Mark Phillips, CDOW. In brief: *West Nile virus* – distribution and spread; susceptibility by age and sex; immunity? inherited?; diagnostic techniques; effectiveness of vaccine. *Population estimates* – validity of assumptions for estimates from lek counts, e.g. sex ratios, ratio of males observed vs. unobserved, function of lek size, percent of males that attend, percent of leks known, movement between leks; need to validate and calibrate, via mark-recapture or DNA fingerprinting, e.g. ID and “recapture” fecal samples; determine if declining, and if so, why? *Landscape ecology* – habitat loss and fragmentation; seasonal habitat use; amount and quality of habitat available; spatial arrangement; corridors/connectivity/interchange; extent, severity and impacts of drought; habitat treatments; behavior and population expansion. *Community ecology* – how do altered landscapes influence predation? Avian vs. mammalian? Do predator effects vary by area? Can we influence predator numbers and distribution? Dean Mitchell, UDWR added: chick survival and recruitment (zero in a recent Utah study); PJ barriers to connectivity; gene flow; vegetation composition: does it meet Connelly et al. guidelines, and should it?; effects of different livestock grazing seasons, durations and intensities; minimum winter habitat patch size; effects of wind power generation; army cutworm infestation resulting in sagebrush/grass/forb defoliation and death.