

JANUARY 2006

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Notes From The Chair

Jeremy Maestas

In my final newsletter installment as Chair, I'd like to thank all of you who took the time out of your busy schedules to complete the business of this committee. It's been a pleasure to work with and learn from you. Time did fly by, as usual, but we were able to complete a number of important tasks. I want to give you one last update on a very important and on-going effort that the WHC is spearheading.

As you know in early 2005, SRM was invited by Senator Mike Crapo, R-Idaho, to comment on the role of science in endangered species conservation because of the debate over the reauthorization of the Endangered Species Act (ESA). About the same time, the U.S. House of Representatives passed their version of the ESA reauthorization introduced by Congressman Richard Pombo, R-California, called the "Threatened and Endangered Species Recovery Act of 2005" (TESRA, H.R. 3824). After that, the effort with Senator Crapo's office fizzled out for some unknown reason.

Late in 2005, however, five professional societies decided to resume talks on the issue of science and the ESA. Representatives from SRM (Wildlife Habitat Committee), The Wildlife Society, Ecological Society of America, Society for Conservation Biology, and the American Fisheries Society agreed to work towards the goal of developing a joint statement on the use of science in the proposed ESA reauthorization legislation. We recognized that our societies had an opportunity to use our common positions and experience on the use of science in species conservation and to provide a unique perspective on this issue. Our goal is to finalize the joint statement by the end of February 2006, so that it may be presented to the U.S. Senate Subcommittee (Fisheries, Wildlife, and Water) that will consider the ESA reauthorization in March 2006. We have already sent a letter signed by the leadership of each society (including incoming SRM President Angela Williams) to the ranking members of this committee, Senators

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Chaffee and Clinton, to notify them that we are preparing this document and would like to provide them with our thoughts as they consider this legislation.

Collectively, these five professional societies represent thousands of scientists including most of the people responsible for species conservation. When we have the opportunity to come together on common ground, I think our message will be a powerful one. I am excited by this effort and encouraged by the prospect of future collaboration. This ESA reauthorization discussion is constantly evolving and I am sure we will need further help from the members of the WHC, so please stay engaged and be prepared to comment as needed.

Finally before Roy Roath takes over as WHC Chair in Vancouver, I want to share with you a piece of wisdom I recently read. In my short career, I've realized that my passion for conserving natural resources can often result in great personal frustration and cynicism. Fighting the uphill battle to conserve resources is exhausting, isn't it? It's easy to become cynical and many of our colleagues do. As with many topics in conservation, insight can be found in the words of Aldo Leopold. I found this quote of his to be particularly relevant in the battle against becoming cynical, "We shall never achieve harmony with land, any more than we shall achieve absolute justice or liberty for people. In these higher aspirations the important thing is not to achieve, but to strive." I hope the new year brings many successes for conservation, but let's make a resolution for the year to reject cynicism and take pride in striving to do the things that are right. Thanks for giving me the opportunity to lead this important committee.

Foxes, Hedgehogs, and the Wacky World of Ecosystem Management: What it all means to SRM

Chad S. Boyd

The fox and the hedgehog

In his book "Good to Great" author Jim Collins (2001) recounts the classic tale of a cunning fox and a stoic hedgehog. In this saga, the fox devises increasingly complex plans of attack for making a meal of the spiny hedgehog. In response to these daily attacks the hedgehog simply curls into a ball and waits for the danger to pass. This story forms the basis of a parable that its original author (Isaiah Berlin) used to break the world into 2 divergent groups of people: those with diffuse thought patterns who see and respond to the world in all of its complexity (a.k.a. "foxes") and those who see the world through the prism of a single unifying concept that guides their actions (a.k.a. hedgehogs).

My purpose here is to build on this dichotomy and use it as a backdrop to critically examine our paradigms of ecosystem management, the role that SRM currently plays in those efforts, and to suggest a more productive track for our professional society.

Ecosystem management: Elegant solutions to complex problems

In the preceding parable it is tempting to classify the hedgehog as simple minded. But to do so is to skip past an important underlying moral. Collins makes the case that being a hedgehog doesn't necessarily equate with a lack of intelligence, but instead, can be associated with the "essence of profound simplicity". Such "profound simplicity" being the hallmark of people and notions that have shaped the world as

we know it (e.g., Charles Darwin, $E=MC^2$). This simplicity is often offset by the strong human tendency to see complex problems as additive. However, we as natural resources scientists and managers are charged with doing the opposite: trying to simplify the complex as opposed to making the complex even more hairy; a task that is becoming increasingly difficult, particularly when it comes to ecosystem management.

In today's world, ecosystems have come to be associated with concepts (e.g. biodiversity), regulatory statues (e.g. the Endangered Species Act) and politics in ways that underscore the embedded intricacies of links between system components. Technology, particularly in the form of remote sensing, has re-enforced this tendency by providing enormous quantities of data on all manner of biological and physical properties, at vast spatial scales. At times technology seems to be driving our perceived need for information, rather than the other way around. Meanwhile management of ecosystems seems to center more on "we have to manage everything" as opposed to "manage only what we have to". This collision of politics, policy, management and science has, among other things, gone a long way toward re-defining natural systems in terms of their most imperiled components (and there are many) and has fueled the popularized notion that the sky may indeed be falling upon the Earth's well-intentioned but ill-informed human constituency.

This "focus on the pieces" belies the fact that ecosystems themselves are driven by fundamental biotic and abiotic processes and that individual species don't control the "health" of the overall system, they respond to it. In turn, influencing these fundamental processes may provide an elegant mechanism for affecting the complex overall system (and its constituent species). Consider the U.S. economy, a complex

system if ever there was one. Many try and many fail to predict its trajectory based on a plethora of economic indicators. However, the Federal Reserve Chairman can influence economic direction by uttering but a single sentence suggesting direction for the prime rate. Or consider author Stephen Covey's (1989) take on the options of a person sitting in a room with an unbound 500 page manuscript: when pages begin blowing about the room you can either 1) catch paper, or 2) close the window.

At first glance, management of ecosystems and their species assemblages based on manipulating "fundamental processes" raises some questions. For instance, how do we actually make real world decisions about what constitutes *good* ecosystem management given that our understanding of ecosystem level processes is generally pretty low on the learning curve? In response, I would argue that we don't necessarily have to know how things work in fine detail in order to initiate management designed to create a more functional system. What we need to know is if the system moving in the right direction, and if not, what is the simplest thing(s) we can do to coax it into doing so? For example, we could likely find a diversity of opinions on what exactly a "properly functioning" ecosystem in the Cross Timbers ecoregion of Oklahoma ought to look like over space and time. However, we might all agree that the increasing density of eastern red cedar is disrupting ecological function within the Cross Timbers, leading to decreased habitat diversity generally, and impaired habitat quality for shrub and grassland bird species specifically. Agreement on this general point would suggest simple, but powerful management options for helping move the ecosystem in a more positive direction (e.g. re-introduction of fire to decrease cedar abundance) and benefit bird habitat in the process.

Ecosystem management and the stigma of SRM

At times SRM has been known to act as a fox...e.g., position statements...responding to topical issues, etc. However, I will make the case that SRM is solution oriented and driven by a desire to move beyond identifying complexity. In short, we are a hedgehog organization of a hedgehog profession. And we are this way not because we are simpletons, but by choice, due to our understanding of the paradoxically complex but holistic nature of ecological systems and because we understand, at some level, that complex problems such as ecosystem management often require elegant solutions...it all comes back to the habitat and the formative processes that influence the habitat.

Because of our hedgehog tendencies, we are often considered of lesser consequence by other more fox-like entities (Note: I do not use "fox-like" as a derogatory term...just a description of focus). That in and of itself is not a bad thing, however, consequences do exist and these consequences have translated into a lack of adequate inclusion of range professionals in some important resource management issues. Take, for instance, the continuing saga of sagebrush obligate wildlife species, particularly sage-grouse. In my opinion, current sage-grouse management guidelines (Connelly et al. 2000) provide a first rate synthesis of the biology of the bird, the types of habitat it occupies, and the acute impacts of habitat disturbance (e.g. burning, grazing, herbicides) on habitat use or quality by or for sage-grouse. However, I would argue that the effectiveness of this effort could have been increased further with the inclusion of range ecologists. Many of the problems for sage-grouse, particularly in the western portions of their range, are habitat related and revolve around disruptions in ecosystem function (e.g.

conifer and weed encroachment, disruptions in the fire cycle, grazing issues). Range ecologists could have helped frame management issues within the ecology of sagebrush systems that serve as habitat and suggested tools and practices to help move these systems along desirable trajectories, improving sage-grouse habitat in the process. In reality, the first and foremost habitat requirement for sage-grouse is a properly functioning ecosystem...everything else is secondary.

I believe the last statement is what separates us from many other natural resources professions and makes us a hedgehog. However many would criticize this type of "overarching" management, particularly if espoused by SRM (e.g. the idea that fire-based juniper control is nothing more than an effort to increase forage for cattle). How do we fix this? Well first of all, we need to recognize that the problem is NOT misguided perception on the part of other professions...the problem is that our own profession has done a poor job of showcasing its talents and utility in addressing today's natural resources challenges. Secondly, we don't fix the problem by changing our name or touching up our "image". While image is important, it is not something we run out and change, it's something that changes in conjunction with other, more fundamental aspects of our organization and profession. In my opinion, the most important areas for improvement in SRM can be summed up in one simple word: "trust". Just as an ecosystem management problem can easily be misdiagnosed as a sage-grouse problem, it is all too tempting to confuse a lack of trust, with the perceived benefits of an image change. Without trust, does our image really matter? Trust is the gateway to having impact on the professional world around us from regulatory, management, and science perspectives. Trust from other professions, trust from federal agencies,

trust from level-headed environmental groups. If we want to be the “go to” organization for all things habitat, then that requires a sufficient capital of trust to trigger these entities to ask for our opinion, participation and leadership on topical issues.

Gaining trust is empirically simple and can be summed up in 3 words: repeated positive interactions. How many times have you developed a relationship of implicit trust with someone that you have only briefly met, regardless of their image or stature? If the answer is > 0 then I have some high quality swampland you really need to take a look at. But I would argue that the activities of many if not most members of SRM have resulted in implicit levels of trust with others outside of our own profession through extension activities, participation in resource advisory committee’s, involvement in other professional societies, etc. As individuals, this is an area where the SRM membership excels, however, these individual efforts have not been sufficient to overcome the lack of a parallel development process at the level of the Society or the overall profession.

Developing more trust of our profession and SRM isn’t going to be easy, and will take time. One mechanism for enhancing our status is to establish cross-professional symposia at our national meeting that are repeated at regular intervals. Many of us have experience in this arena, but previous efforts have been largely “point-in-time” projects, and while proximately successful, have so far failed to establish the *tradition* of interaction that predicates meaningful trust. Another avenue might be to assemble regular *ad hoc* expert panels to advise federal resource management and regulatory agencies on topical habitat issues...they could provide the issues and questions, and we could assemble the personnel to field their questions at our annual meetings. If these agencies were willing to par-

ticipate, they would proactively benefit from sound advice from some of the best and brightest habitat specialists without having to jump through the hoops of forming an official federal advisory committee. In turn, the Society would benefit from having a constructive outlet for advising significant players in natural resource management as well as strengthening trust with people and entities that matter. I suggest that this idea of “extramural” outreach needs to be explicitly incorporated into our paradigm of the range profession and made a centerpiece of our Society’s mission statement.

In summary, ecosystem management can be an elegant tool for solving complex natural resource problems and the range profession has displayed a fairly unique talent for influencing the formative elements and habitat processes that impact and control ecological systems and the wildlife species that call them home. But the level of trust necessary to leverage that knowledge and ability to its full potential for influencing the professional and political world around us is currently lacking. Gaining and enhancing that trust does not involve retooling who we are, to the contrary, it involves showcasing our talents through sustained, positive interactions with those groups whose trust we value. And the time for making that happen is now...lest we be caught by the foxes.

Literature Cited

- Collins, J.C. 2001. *Good to Great: Why Some Companies Make the Leap and Others Don't*. Harper Collins, New York. 300 pages.
- Connelly, J. W., M. A. Schroeder, A. R. Sands, and C. E. Braun. 2000. *Guidelines for management of sage-grouse populations and habitat*. *Wildl. Soc. Bull.* 28:967-985.
- Covey, S.R. 1989. *The Seven Habits of Highly Effective People: Powerful Lessons in Personal Change*. Simon & Schuster, New York. 357 pages.

Wildlife Habitat Committee Meeting Agenda

Hyatt Regency Vancouver, Balmoral Room

February 12, 2006

1 – 5 pm

Call to Order

Introductions

Approve Agenda

Confirm Meeting Officers

Review Old & On-going Business

Confirm & Update Membership List

Reports

Chair

Communications Director

Board Rep

Symposia Organizers

New Business

Elect 2006-2007 Officers

Brainstorm Workshops/Symposia for
2007/2008 Meetings

Discuss Outreach & Partnering

Other Business Items

Adjourn

WHC Symposia and Schedules for Vancouver Meeting

Wildlife Habitat Analysis of the Future: Examining Multiple Scales Using Geospatial Technology

Hyatt, Georgia A – Monday, February 13

1:30 PM – 5:00 PM

Co-Organizers: Jeremy Maestas and Steve Petersen; Wildlife Habitat & GIS and Remote Sensing Committees.

1:30 **Introduction** – Jeremy Maestas. USDA-NRCS, UT.

1:35 **Integrating scale and heterogeneity into wildlife habitat research and management** - Sam Fuhlendorf. Oklahoma State University.

1:55 **Characterization of sage grouse nesting and brood-reading habitat at broad spatial scales using remote sensing and GIS** - Steven Petersen¹, Richard Miller¹, Mike Gregg², Mike Pope³ and Douglas Robinson³. ¹Oregon State University; ²U.S. Fish and Wildlife Service; ³Department of Fisheries and Wildlife, Corvallis, OR.

2:15 **Assessment of the impacts of Canada goose grazing on cropland in western Oregon using GIS and remote sensing** - Mounir Louhaichi, Douglas Johnson and Michael Borman. Oregon State University.

2:35 **Evaluating wolf effects on livestock and wild ungulates using the Clark Animal Tracking System** - Patrick Clark. USDA-ARS.

2:55 **Landscape analysis and modeling for wildlife habitat assessment** - X. Ben Wu¹, Paikho Rho², Humberto Perotto-Baldivieso³, Fred Smeins¹, Markus Peterson¹ and Nova Silvy¹. ¹Texas A&M University; ²Korea Environment Institute; ³University of Puerto Rico San Juan

3:15 **Mapping of Thermal Patterns for Determining Landscape Suitability for *Rangifer tarandus* Calving Sites** - Norman Harris¹, Douglas Johnson², Beth Hall¹ and Randy Fulweber¹. ¹University of Alaska; ²Oregon State University.

3:35 **Multi-scale, Multi-temporal Watershed Assessments for Land Management Affecting a Listed Native Trout** - D. Terrance Booth¹, Samuel Cox¹ and Gregg Simonds². ¹USDA-ARS; ²Open Range Consulting, Inc.

3:55 **Wildlife habitat mapping and analyses using satellite imagery** - Ramesh Sivanpillai. WyGIS.

Applications of the Collaborative Resources Stewardship Process

Hyatt, Plaza A– Tuesday, February 14

1:30 PM – 5:00 PM

Co-Organizers: Kent Mcadoo and Roy Roath; Wildlife Habitat Committee

1:30 Application of Roles and Concepts to Collaborative Management - Roy Roath. Colorado State University.

2:10 Saskatchewan's Prairie Conservation Action Plan - Karyn Scalise. Saskatchewan Prairie Conservation Plan.

2:50 Quincy Library Group – Applications to Rangelands? - Holly George. University of California Cooperative Extension.

3:30 Break

3:50 Wildlife Habitat Benefits from Collaborative Resource Stewardship in Northern Nevada - Kent McAdoo, University of Nevada Cooperative Extension.

4:30 Reconfiguring Our Relationship with the Land: Collaboration, Monitoring, and Adaptive Ecosystem Management - Fernandez-Giminez, Colorado State University.

Grazing, Riparian, Cold Water Fish: Is Beneficial Coexistence Possible?

Hyatt, Georgia A – Wednesday, February 15

8:00 AM – 11:30 AM

Organizer: Wendell Gilgert; Wildlife Habitat Committee.

8:00 Introduction – Carolyn Nistler. Montana State University.

8:10 Research on effects of grazing on fisheries: past mistakes and future remedies. – Al Zale. Montana Cooperative Fishery Research Unit, USGS.

8:40 A Ranchers Perspective for balancing fish and grazing interests – John Hyde.

9:10 Effects of grazing management on terrestrial invertebrate subsidies to trout in Wyoming rangeland streams - W. Carl Saunders and Kurt D Fausch. Colorado State University.

9:40 Break

10:00 How topography and land use can influence the distribution of Lahontan cutthroat trout in a desert stream - George Boxall ¹, Guillermo R Giannico ¹, Hiram W Li ¹, Matthew Varner ², ¹Department of Fisheries and Wildlife Corvallis, OR; ²Division of Renewable Resources Winnemucca, NV.

10:30 Characteristics of Successful Livestock Grazing Systems for Streams in Northern Nevada - Carol C Evans. Bureau of Land Management.

11:00 Influence of Riparian Vegetation on Stream Ecosystems and Water Temperature - Wayne Elmore ¹ and Stan Gregory ². ¹Full Stream Consulting Prineville, OR, ²Department of Fish and Wildlife Corvallis, OR.

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