

Technical Program

Tuesday, February 14, 2006

**TECHNICAL SESSION: Plant Ecology
 Hyatt, Georgia A – Tuesday, February
 14, 8:00 AM – 11:30 AM**

Moderators: Steve Sharrow and Gail
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| <p>8:00 Restoration of aspen stands to enhance plant diversity in the Sierra Nevada - Timothy Kuhn¹, Kenneth Tate¹, Hugh Safford², Michael Barbour¹ and Bobette Jones¹. ¹Department of Plant Sciences, University of California Davis, CA, ²US Forest Service, Pacific Southwest Region Vallejo, C</p> <p>8:20 Mixed grass prairie and fescue grassland composition response to liquid hog manure application - Laura Blonski¹ and Edward Bork². ¹British Columbia Ministry of Forests and Range Prince George, British Columbia, Canada, ²University of Alberta Edmonton, Alberta, Canada.</p> <p>8:40 The significance of summer precipitation in the northern Great Plains - Rodney Heitschmidt and Lance Vermeire. USDA Agricultural Research Service Miles City, MT.</p> <p>9:00 Evaluation of various grass-legume forage mixes in Alberta for maximum production efficiency: establishment data – Danielle Gabruck and Edward Bork. Department of Agricultural, Food,</p> | <p>and Nutritional Science, University of Alberta, Edmonton, Alberta, Canada.</p> <p>9:20 From Cows to Tanks; Range Management at Canadian Forces Base Suffield (Methods and Observations) - Brent Smith. G3 Range Control, Canadian Forces Base Suffield Medicine Hat, Alberta, Canada.</p> <p>9:40 Break</p> <p>10:10 Genetic ecology of natural populations of <i>Leymus chinensis</i> in heterogeneous and homogeneous habitats in China - Xiao-Hua Teng¹, Rui-Min Hong¹, Bao-Zhong HU¹, Yu-Sheng Wang¹ and Di Chen². ¹Grassland Research Station, College of Animal Science and Technology, Northeast Agriculture University, Harbin, Heilongjiang Province, P.R. of China, ²Birth Control Bureau of Xiangfang District in Haibin Harbin, Heilongjiang Province, P.R. of China.</p> <p>10:30 Carbon and water flux responses to CO₂ variation in grassland exposed to different CO₂ concentrations - Wayne Polley¹, William Dugas², Patricia C Mielnick² and Hyrum Johnson¹. ¹USDA Agricultural Research Service, Temple, TX, ²Texas Agricultural Experiment Station, Temple, TX.</p> <p>10:50 Distribution of forest gaps and their effects on liana seedling establishment in tropical seasonal evergreen forest, Khao Yai National Park, Thailand - Chanpen</p> |
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- Wongsriphuek^{1,3}, Warren Brockelman^{1,2}, Amnart Boonkongchart² and Saiwaroon Chongko². ¹Center for Conservation Biology, ISTRD Mahidol University Salaya, Nakornpathom, Thailand, ²National Center for Genetic Engineering and Biotechnology (BIOTEC), 113 Paholyothin Road Klongluang, Pathumthani, Thailand, ³ Department of Biology Faculty of Sciences, Mahidol university Payathai, Bangkok, Thailand.
- 11:10 **Impact of shrub regrowth following seasonal fires on herbaceous vegetation** - R J Ansley and M J Castellano. Texas Agricultural Experiment Station, Vernon, TX.
- TECHNICAL SESSION: Technology and Monitoring**
Hyatt, Plaza A – Tuesday, February 14,
8:00 AM – 11:30 AM
- Moderators: Barry Adams and Doug Johnson
- 8:00 **Near infrared reflectance spectroscopy of fresh feces and plant tissue under field conditions** - Doug Tolleson and Jerry Stuth. Texas A&M University, Department of Rangeland Ecology & Management College Station, TX.
- 8:20 **Comparison of canopy cover measurements among four densiometers** - Claudia Kelley and William Krueger. Department of Rangeland Ecology & Management, Oregon State University, Corvallis, OR.
- 8:40 **Vegetation recovery and trend after wildfire on public rangelands** - Ann P Bollinger¹, Barry Perryman¹ and Sherman Swanson². ¹Department of Animal Science Reno, NV, ²Department of Natural Resources and Environmental Science Reno, NV.
- 9:00 **Alberta rangeland health assessment for grassland, forest and seeded pasture** - Barry Adams. Alberta Sustainable Resource Development, Agriculture Centre, #100, 5401-1st Ave South Lethbridge, AB, Canada.
- 9:20 **Historic Trends in Rangeland Health in the Montane Region of Alberta** - Michael Willoughby¹ and Michael Alexander². ¹9920 108th Street. 4th Floor. Edmonton, Alberta, ² Box 1869 Pincher Creek, Alberta.
- 9:40 **Break**
- 9:50 **A case study of participatory monitoring on public lands in northwest Colorado** - Dana Bishop and Maria Fernandez-Gimenez. Colorado State University, Fort Collins, CO.
- 10:10 **Rangeland health modeling with quickbird imagery** - Bhushan Gokhale and Keith Weber. The GIS Training and Research Center, Idaho State University, Pocatello, ID.
- 10:30 **Visual obstruction for ecological site condition and wildlife habitat assessments** - Lakhdar Benkobi¹ and Jack Butler². ¹Rangeland Research Scientist, Fort Collins, CO, ²Research Ecologist, Rapid City, SD.

10:50 **Monitoring streambanks and riparian vegetation--multiple indicators** - Ervin Cowley¹ and Timothy Burton¹. ²Bureau of Land Management Boise, ID.

11:10 **A Comprehensive and Adaptive Residual Dry Matter (RDM) Monitoring Program.** - Keith Guenther¹, Caroline Christian² and Grey Hayes³. ¹Wildland Solutions Brewster, WA, ²The Nature Conservancy San Francisco, CA, ³ Private Consultant Corralitos, CA.

TECHNICAL SESSION: Ecology and Management of Riparian Communities Hyatt, Plaza B – Tuesday, February 14, 8:00 AM – 11:30 AM

Moderators: Clayton Marlow and Tamzen Stringham

8:00 **Soil carbon and nitrogen mineralization as affected by bison and cattle grazing in wetland communities** - Agnieszka Przeszlowska¹, Joe Trlica¹ and Kate Schoenecker². ¹Colorado State University, Fort Collins, CO, ²U.S. Geological Survey, Fort Collins, CO.

8:20 **Initial recovery of riparian vegetation following prescribed fire in the Armells Creek drainage, Missouri River Breaks, Montana** - Clayton Marlow, Travis Miller, Glen Meeks, Ron Tucker and Chris Roberts. Animal and Range Sciences Department, Montana State University, Bozeman, MT.

8:40 **The influence of strategic protein supplementation on late summer cattle distribution, diet**

composition, performance and utilization of riparian vegetation in mountain riparian areas - Angela D J Freeman^{1,3}, Jeffery H Braatne² and Timothy DelCurto³. ¹University of Idaho Moscow, ID, ²University of Idaho Moscow, ID, ³Eastern Oregon Agricultural Research Center Union, OR.

9:00 **Break**

9:30 **Comparison of ground based and image based assessments of riparian zone health in Australian tropical savannas** - Kasper Johansen^{1,2}, Stuart Phinn¹, Michael Douglas² and Ian Dixon². ¹The University of Queensland, School of Geography, Planning & Architecture Brisbane, Queensland, Australia, ²Charles Darwin University Darwin, Northern Territory, Australia.

9:50 **Effects of hydrology and grazing on vegetation succession on wetlands in the Dry Mixedgrass Prairie** - Stephen Asamoah and Edward Bork. Department of Agricultural, Food and Nutritional Science, University of Alberta, Edmonton, Alberta, Canada.

10:10 **Cattle & creeks can be compatible** - Don McLennan¹, Bruce D Cairns² and Tracy A Kupchenko². ¹Agriculture, Agri-Food Canada Medicine Hat, Alberta, Canada, ²Alberta Sustainable Resource Development Medicine Hat, Alberta, Canada.

10:30 **Impact of climate change on forest fires and peatlands in Indonesia** - Volker Hammen. Centre for

Environmental Research, Halle,
Saxsony-Anhalt, Germany.

**TECHNICAL SESSION: Range
Domestic Animals
Hyatt, Plaza C – Tuesday, February 14,
8:00 AM – 11:30 AM**

Moderators: Dave Ganskopp and Mike
McInnis

- 8:00 **Dynamics of nutritional quality of range forage plants of Uzbekistan -** Wolfgang Pittroff¹ and Bakhtiyor Mardonov². ¹Dept. of Animal Science Davis, CA, ²Uzbekistan Academy of Sciences Samarkand, Uzbekistan, Uzbekistan.
- 8:20 **Will a supplement, with or without polyethylene glycol, overcome effects of cnicin in spotted knapweed?** - Melany Cheeseman and Bret Olson. Bozeman, MT.
- 8:40 **Nutritional monitoring cattle diets in the southern Plains -** William Pinchak¹, Ronald Gill², Cody Scott³, Scott Showers¹ and Doug Fulford¹. ¹Texas Agricultural Experiment Station, Vernon, TX, ²Texas Cooperative Extension, Vernon, TX, ³Angelo State University, San Angelo, TX.
- 9:00 **Steers performance grazing a WW-B.Dahl (Bothriochloa bladhi) pasture in summer in the Texas High Plains under different irrigation and supplement levels -** Carlos Ortega-Ochoa and Carlos Villalobos. Texas Tech University, Range, Wildlife and Fisheries, Lubbock, TX.
- 9:20 **Cattle performance grazing a WW-B. Dahl old world bluestem with different sources of protein supplementation -** Carlos Villalobos

- ¹, Miguel Avila ², Gerardo Bezanilla ³ and Carlton Britton ⁴. ¹Department of ¹Range, Wildlife and Fisheries Management Texas Tech University Lubbock, TX, ²INIFAP-CIRNE-Forrajes y Pastizales Aldama, Tamaulipas, Mexico, ³Universidad Autonoma de Chihuahua Chihuahua, Chihuahua, Mexico.
- 9:40 **Break**
- 9:50 **Effects of seasonal temperature patterns on cattle locations in the foothills of California** - Kelly Smith ¹, Mel George ², David Ganskopp ³, Neil McDougald ⁴, David Cao ² and Norman Harris ⁵. ¹Department of Rangeland Ecology and Management, Oregon State University, Corvallis, OR, ²Agronomy and Range Sciences, Davis, CA, ³USDA ARS, Burns, OR, ⁴University of California Cooperative Extension, Madera, CA, ⁵Palmer Research Center Palmer, AK.
- 10:10 **Effects of strategically placed low-moisture block supplement and salt on individual cattle grazing patterns** - Derek Bailey¹, Harv VanWagoner², Robin Weinmeister² and Delyn Jensen². ¹Department of Animal and Range Sciences, Las Cruces, NM, ²Northern Agricultural Research Center, Havre, MT
- 10:30 **Use of strategic supplement placement and herding to extend cattle grazing in mountainous terrain: A demonstration** - Dennis Froeming¹, Derek Bailey², Christina Black², Robert Welling³, Wayne Butts⁴, David Voldseth⁵, Errol Galt⁶ and Craig Hereim⁷. ¹Rangeland Consultant, Bozeman, MT, ²Department of Animal and Range Sciences, Las Cruces, NM, ³Ridley Block Operations, Vaughn, MT, ⁴US Forest Service, Harlowton, MT, ⁵TG Ranch, Martinsdale, MT, ⁶71 Ranch, Martinsdale, MT, ⁷Hereim Ranch, Martinsdale, MT.
- 10:50 **Group associations among gps collared cattle** - Norman Harris ¹, Michael Johnson², Neil McDougald ³, David Ganskopp⁴ and Melvin George ⁵. ¹Palmer Research and Extension Center Palmer, AK, ²Department of Mathematics Los Angeles, CA, ³Cooperative Extension Madera County Madera, CA, ⁴USDA-ARS Burns, OR, ⁵Agronomy and Range Science Davis, CA.
- 11:10 **Effect of ruminant livestock systems on grassland condition in Patagonia, Argentina** - Sebastian Villagra ¹, Gillermo Ssiffredi², Clemens Wollny³ and Celso Giraudo ². ¹INTA Bariloche C.C. 277 Bariloche, Río Negro, Argentina, ²INTA Bariloche C.C. 277 Bariloche, Río Negro, Argentina, ³Institute of Animal Breeding and Production in the Tropics, Kellnerweg 6 Göttingen, Lower Saxony, Germany.

SYMPOSIUM

Grasslands in Northern China: Ecology and Contemporary Issues **Fairmont, Columbia – Tuesday, February 14** **8:15 AM – 11:30 AM**

Co-Organizers: Xingguo Han; Institute of Botany-CAS, X. Ben Wu; Texas A&M University, and Jianguo Wu; Arizona State University

- 8:15 **Grasslands in northern China: past, present, and possible future** - Xingguo Han. Laboratory of Quantitative Vegetation Ecology Beijing, China.
- 8:45 **Biodiversity and ecosystem functioning: Insights from the Inner Mongolia Grassland** - Jianguo Wu¹, Yongfei Bai² and Xingguo Han². ¹School of Life Sciences Tempe, AZ, ²Laboratory of Quantitative Vegetation Ecology, Beijing, China.
- 9:15 **Changes in plant biodiversity and biomass along precipitation and grazing gradients in Inner Mongolia grassland** - Yongfei Bai¹, Qibing Wang¹, Qingmin Pan¹, Xingguo Han¹ and Jianguo Wu². ¹Laboratory of Quantitative Vegetation Ecology Beijing, China, ²Landscape Ecology and Modeling Laboratory Tempe, AZ.
- 9:45 **Break**
- 10:00 **Significance of clonal growth in the sandy grasslands in northern China** - Ming Dong, Fei-Hai Yu and Cheng-Yi Zhang. Laboratory of Quantitative Vegetation Ecology, Beijing, China.

10:30 **Wetland resources in the grasslands of northern China** - X. Ben Wu^{1,2}, Yongfei Bai² and Shaopeng Qu². ¹Rangeland Ecology and Management College Station, TX, ²Laboratory of Quantitative Vegetation Ecology Beijing, China.

11:00 **The Quantitative Assessment of Ecosystem Health on Grazing Land of Leymus chinensis Steppe, Inner Mongolia** - Guodong Han¹, Mengli Zhao¹, Walter Willms², Anshe Gao¹ and Yan Liang. ¹306 Zhaowudalu, Hohhot-010018, Inner Mongolia, PR China Hohhot, Inner Mongolia, P.R. China, ²1 Avenue South, P.O. Box 3000 Lethbridge, Alberta, Canada.

***To be continued in afternoon**

SYMPOSIUM

Rangeland Weed Management **Hyatt, Georgia B – Tuesday, February 14** **8:00 AM – 11:30 AM**

Co-Organizers: Larry Larson and Roger Sheley

- 8:00 **Introduction to successional management: An ecologically-based invasive weed management framework** - Roger Sheley. USDA-ARS, Eastern Oregon Agricultural Research Center, Burns, OR.
- 8:40 **Ecologically-based management of western juniper** - Tony Svejcar. USDA-ARS, Eastern Oregon Agricultural Research Center, Burns, OR

9:20 **Influencing disturbance and colonization to manage Russian knapweed- A Case Study** - Larry Larson. Professor, Eastern Oregon University, LaGrande, OR.

10:00 **Managing invasive weeds by altering soil nutrient availability** - Jane Mangold. USDA-ARS, Eastern Oregon Agricultural Research Center, Burns, OR

10:40 **Augmentative Restoration** - Jeremy James. USDA-ARS, Eastern Oregon Agricultural Research Center, Burns, OR

SYMPOSIUM
Range Management School
Fairmont, Vancouver Island – Tuesday,
February 14
8:00 AM – 11:30 AM

Organizer: Robbie Baird LeValley

8:00 **Range Management School Introduction** - Robbie LeValley.

8:30 **Grass, Forb and Shrub Growth and Environmental Impacts** - John Murray.

10:00 **Break**

10:15 **Time and Timing of Grazing** - Dave Bradford.

11:00 **Rangeland Nutrition and Animal Behavior** – Robbie LeValley.

***To be continued in afternoon**

SYMPOSIUM
Natural Capital - Producer's Right or Onerous Responsibility?
Fairmont, British – Tuesday, February 14
8:00 AM – 11:30 AM

Organizer: Peggy Strankman
Sponsored by: Canadian Cattlemen

8:00 **Policies, programs, guidelines, plans, procedures, standards and strategies – What's a rancher to do?** - Hugh Lynch-Staunton. Vice President, Canadian Cattlemen's Association.

8:30 **Environmental goods and services - Alberta style** - Karen Haugen – Kozyra. Environmental/Land Use Policy Member, Policy Secretary, Alberta Agriculture.

9:00 **Stewardship agreements on the Alberta species at risk landscape** - Richard Quinlan. Species at Risk Biologist, Alberta Fish and Wildlife, Sustainable Resource Development.

9:30 **Break**

10:00 **The process of recovery for a "species at risk" species** - David Cunnington. Species at Risk Biologist, Environment Canada.

10:30 **Producer Perspective of the Safe Harbor Clause in the US Endangered Species Act** - Mike Byrne. Chair, Federal Lands NCBA.

11:00 **The pros and cons of using conservation agreements** - Robert Wenting. Environment Canada.

SYMPOSIUM
Young Professionals Conclave
Hyatt, Cypress – Tuesday, February 14
8:00 AM – 11:30 AM

- 8:00 Welcome and Introductions
- 8:10 (Panel Discussion) Balancing Act: Career vs. Family-Jennifer Pluhar, Lance Vermeire, Chad and Amy Boyd
- 8:50 (Panel Discussion) Balancing Act: Field Work vs. Paper Work-Faith Ryan, Karen Hickman, Scott Fluer, and Jack Alexander
- 9:30 Break
- 9:45 What is SRM? An overview of the Society, its organizational structure, and the benefits of getting involved (national and local section levels)- Bob Budd
- 10:00 (Panel Discussion) What do we do and how to get involved?
- Board or Directors – Dennis Phillippi
 - Advisory Council – Charles Hart
 - Committee Chairs
 - Award Committee
 - Rangeland Assessment & Monitoring Committee
 - Rangeland Invasive Species Committee
 - Remote Sensing & GIS Committee
 - Watershed/Riparian Committee
 - Wildlife Habitat Committee
 - Leadership Development Committee
 - Rangeland Steering Committee
 - Partnerships & Affiliations Committee
 - Government Policies & Programs Committee
- Denver Office Staff – Ann Harris

**POSTER SESSION 2 - Range Plants,
Soils, Hydrology, Technology and
Monitoring**
**Hyatt,Regency E & F- Tuesday,
February 14, 9:00 AM – 11:30 AM**

- 1 **Water distribution in soil horizons beneath *Juniperus monosperma* in central New Mexico** - Sam Fernald¹, Andres Cibils¹, Dawn VanLeeuwen² and Carlos Ochoa¹. ¹Department of Animal & Range Sciences Las Cruces, NM, ²Department of Agriculture Extension Education Las Cruces, NM.
- 2 **Soil organic and inorganic carbon dioxide fluxes** - William E Emmerich¹ and Dean A Martens¹. ¹USDA-ARS Southwest Watershed Research Center Tucson , AZ.
- 3 **Impact of juniper removal on soil enzymes temperature and organic matter** - Douglas Green¹ and Melissa Debnar¹. ¹Department of Applied Biological Sciences, Mesa, AZ.
- 4 **Remote sensing of fire, grazing, and precipitation effects on bare ground in sage brush steppe** - Jed Gregory¹ and Keith Weber². ¹Idaho State University - GIS Pocatello, ID, ²Idaho State University - GIS Pocatello, ID.
- 5 **Distribution of buffalograss ploidy level variation in Mexico** - Juan M Martinez Reyna¹ and Rocio Hernandez Caldera¹. ¹Universidad Autonoma Agraria Antonio Narro, Buenavista Saltillo, Coahuila, Mexico.
- 6 **Mechanisms of defoliation response in *Poa ligularis* in the Patagonian steppe** - Guillermo Becker¹, Cecilia Gittins¹, Cintia Souto², Guillermo Siffredi¹ and Carlos Busso³. ¹INTA EEA Bariloche,

- cc 277 Bariloche, Rio Negro, Argentina,
²Laboratorio Ecotono, Universidad Nacional del Comahue Bariloche, Rio Negro, Argentina, ³Universidad Nacional del Sur, Dpto. de Agronomía Bariloche, Rio Negro, Argentina.
- 7 **Nitrogen capture by native and invasive Great Basin species: the role of root plasticity** - Jeremy James, Jane Mangold, Roger Sheley and Tony Svejcar. USDA-ARS Burns, OR.
- 8 **Responses of Schizachyrium scoparium to water and nitrogen manipulations: photosynthesis and water relations** - Amy Kochsiek¹, Veronica Ciganda¹, Neal Bryan², Lena Hite² and Tala Awada³. ¹School of Biological Sciences Lincoln, NE, ²Department of Agronomy and Horticulture Lincoln, NE, ³School of Natural Resources Lincoln, NE.
- 9 **Large-scale experimentation and long-term monitoring of grazing in Grasslands** - Darcy Henderson¹, Nicola Koper², Patrick Fargey³, John Wilmshurst¹ and Robert Sissons³. ¹Parks Canada, Western Canada Service Center Winnipeg, Manitoba, Canada, ²Natural Resources Institute Winnipeg, Manitoba, Canada, ³Grasslands National Park Val Marie, Saskatchewan, Canada.
- 10 **Vegetation cover change detection in two grazing systems using Landsat TM data in a semiarid ecosystem of Argentina** - Lisandro Blanco¹ and Carlos Ferrando¹. ¹INTA EEA La Rioja Chamental, La Rioja, Argentina.
- 11 **Woodland expansion in grassland affected by its edaphic composition** - Juvenal Gutiérrez-Castillo¹, James Stubbendieck² and Walter Schacht². ¹Dept. de Agronomía e Ing. Agrícola Monterrey, NL, México, ²Dept. of Agronomy and Horticulture, University of Nebraska Lincoln, Lincoln, NE.
- 12 **Sampling species richness in a Wyoming big sagebrush community** - Edward Rhodes¹ and Jonathon Bates². ¹Dept. of Rangeland Ecology & Management, Burns, OR, ²USDA-ARS Burns, OR.
- 13 **State and transition models for California's Sierra Nevada foothill oak-woodlands** - Melvin George¹, Neil McDougald², Dennis Dudley³, Larry Forero², Bill Frost², Jim Sullins², Roger Ingram² and Mike Connor². ¹Department of Plant Sciences, University of California, Davis, CA, ²UC Cooperative Extension, University of California, Davis, CA, ³USDA Natural Resources Conservation Service, Madera, CA.
- 14 **Rangeland health criteria for California's oak woodlands** - Melvin George¹ and Jon Gustafson². ¹Department of Plant Sciences, University of California, Davis, CA, ²Natural Resources Conservation Service, Davis, CA.
- 15 **Powerful GIS visual display of RDM monitoring data helps reach goals in adaptive management conservation program** - Caroline Christian¹, Keith Guenther² and Grey Hayes³. ¹The Nature Conservancy San Francisco, CA, ²Wildland Solutions Brewster, WA, ³Private Consultant Corralitos, CA.
- 16 **State and transition models for California's central coast oak woodlands** - Royce Larsen¹, Shiela Barry¹, Theresa Ward¹, Karl Striby²,

- Ken Oster², Craig Schriefer³, Maximo Alonso³ and Melvin George³. ¹UC Cooperative Extension Davis, CA, ²USDA Natural Resources Conservation Service Templeton, CA, ³Department of Plant Sciences Davis, CA.
- 17 **State and transition models for California's north coast oak woodlands** - John Harper¹, Stephanie Larson¹, Morgan Doran¹, Michael Lennox¹, Maximo Alonso², Craig Thomsen² and Melvin George². UC Cooperative Extension Davis, CA, ²Department of Plant Sciences Davis, CA.
- 18 **Device for rapid assessment of range plant cover** - Douglas Johnson¹, Michael D Johnson², Mounir Louhaichi¹ and Melvin R George³. ¹Dept. of Rangeland Ecology and Management, Oregon State University, Corvallis, OR, ²Dept. of Mathematics, University of Southern California, Los Angeles, CA, ³Department of Agronomy and Range Science, University of California, Davis, CA.
- 19 **Aspen community classification using understory characteristics: implications for national parks in Canada** - Jody Best¹ and Edward Bork². ¹Rangeland Agrologist, PLFD, Alberta Sustainable Resource Development Pincher Creek, Alberta, Canada, ²Associate Professor, Range Management Edmonton, Alberta, Canada.
- 20 **California valley grassland dynamics: preliminary assessment of a long-term monitoring study** - Matthew Stevenson¹, James Bartolome¹, Sasha Gennet¹, Michele Hammond¹, Peter Hopkinson¹, Martin Johnson¹, Devii Rao¹ and Andrew Scavullo¹. ¹Department of Environmental Science, Policy, and Management Berkeley, CA.
- 21 **Effectiveness of photo-pair analysis for detecting change in central great basin riparian attributes** - Ryan Shane¹. ¹ Dept. of Natural Resources and Environmental Science Reno, NV.
- 22 **Interpreting indicators of rangeland health, version 4** - Mike Pellant¹, Pat Shaver², David Pyke³ and Jeffrey Herrick⁴. ¹1387 S. Vinnell Way Boise, ID, ²NRCS, West National Technology Support Center Portland, OR, ³USGS, Forest & Rangeland Ecosystem Science Center Corvallis, OR, ⁴ USDA, ARS Jornada Experimental Range Las Cruces, NM.
- 23 **Using digital photography to measure visual obstruction in grassland habitat** - Ryan Limb¹, David Engle¹, Terrence Bidwell¹, Aaron Alford¹ and Jack Norland². ¹Oklahoma State University Stillwater, OK, ²North Dakota State University Fargo, ND.
- 24 **Spatial and temporal variation for nutritive value on switchgrass fields in the Northern Plains, USA** - Marty Schmer, Rob Mitchell and Kenneth Vogel. USDA-ARS, Lincoln, NE.
- 25 **Comparing conceptual and empirical range vegetation classification systems for the Intermountain West** - William Adair¹, R. Douglas Ramsey¹ and John Lowry¹. ¹Remote Sensing / GIS Laboratories Logan, UT.
- 26 **Employing Unmanned Aerial Vehicles for Monitoring Habitat and Species in Sagebrush-Steppe Ecosystems** - Robert Breckenridge¹, Randy Lee¹, Steve

Bunting² and Maxine Dakins². ¹Idaho National Laboratory Idaho Falls, ID, ²Idaho State University.

- 27 **MULTISAR: Multi-Species Strategy for Species at Risk, a Rangeland Perspective** - Jennifer Carlson¹, Barry Adams¹, Richard Quinlan², Brandy Downey², Paul Jones² and Brad Downey². ¹Alberta Sustainable Resource Development, Public Lands and Forest Division, #100, 5401- 1st Ave South Lethbridge, Alberta, Canada, ²Alberta Sustainable Resource Development, Fish and Wildlife, 2nd Flr, 530 8th St. South Lethbridge , Alberta.
- 28 **An effective method for translocating Greater sage grouse** - Rick Baxter, Jerran Flinders and Jordan Hennefer. Brigham Young University, Provo, UT.
- 29 **The Role of Plant Diversity and Richness in Assessment of Health Condition of Mountain Grassland Ecosystem** - Mohammad Hassan Jouri¹, Mohammad Mahdavi², Nosrat Safaian³ and Behrooz Malakpour⁴. ¹Po.Bo:46915-167, Ramsar, Mazandaran, Iran, ²Po.Bo:47138, Babol, Mazandaran, Iran, ³Po.Bo:717, Sari, Mazandaran, Iran, ⁴Golestan e sheshom, velenjak, Tehran, Iran
- 30 **Shrubs-grass steppes of southern Patagonia Argentina: a technical review to improve grazing systems** - Ariela Cesa, Diego Suárez and Marcelo Aguilar. INTA Santa Cruz, Chacra 45 A Río Gallegos, Santa Cruz, Argentina.
- 31 **Llama Preference for Forage Species on the Bolivian Altiplano** - Rachel Fugal and Val J Anderson. Brigham Young University Provo, UT.

32 **Excellence In Range Management posters**

TECHNICAL SESSION: Landscape Ecology

Hyatt, Georgia A – Tuesday, February 14, 1:30 PM – 5:00 PM

Moderators: Gene Hickman and Steve Petersen

- 1:30 **Deriving fire regime information for contrasting land use in a semi-arid African savanna using Landsat and MODIS satellite time series data** - Bruce Brockett¹, Andrew Hudak², David Roy³, Wilfred Seithlamo⁴ and Steve Bunting¹. ¹Department of Rangeland Ecology and Management Moscow, ID, ²USFS Rocky Mountain Research Station Moscow, ID, ³Geographic Information Science Center of Excellence Brookings, SD, ⁴Protected Area Management Mogwase, NW, South Africa.
- 1:50 **Predicting landscape composition under varying fire regimes in quaking aspen** - Eva Strand¹, Stephen Bunting¹ and Lee Vierling¹. ¹Department of Rangeland Ecology and Management Moscow, ID.
- 2:10 **Influence of landscape structure on the Index of Plant Community Integrity (IPCI) of seasonal and temporary wetlands in the Prairie Pothole Region of North Dakota –** Dath Mita, Don Kirby, Edward DeKeyser and Michael Ell. North Dakota State University, Fargo, ND.

2:30 **Determining presettlement vegetation using the 1850s government land office surveys for the upper Rogue river valley near Medford, Oregon** - O. Eugene Hickman¹. ¹Consulting Range Ecologist Portland, OR.

2:50 **Evaluation of an index of plant community integrity for assessing wetland plant communities** - Christina Hargiss¹, Edward DeKeyser¹, Don Kirby¹ and Michael Ell². ¹Animal and Range Sciences Department, North Dakota State University, Fargo, ND, ²North Dakota Department of Health, Bismarck, ND.

3:10 **Break**

3:20 **Modeling vegetative states of prairie pothole wetland plant communities** - Edward DeKeyser¹, Mario Biondini¹, Donald Kirby¹, Christina Hargiss¹ and Michael Ell². ¹Animal and Range Sciences Department Fargo, ND, ²North Dakota Department of Health Bismarck, ND.

3:40 **Disturbance-dependent threatened and endangered species and biodiversity on U.S. army training lands** - Steven Warren¹, Reiner Buettner², Debra Dale³, Scott Holbrook³ and Nathaniel Whelan⁴. ¹Center for Environmental Management of Military Lands Fort Collins, CO, ²Institut fuer Vegetationskunde und Landschaftoekologie Hemhofen, Germany, ³Installation Management Agency - Europe Heidelberg, Germany, ⁴Grafenwoehr Training Area Grafenwoehr-Lager, Germany.

4:00 **Spatial modeling of fire, grazing, and weed control on public lands** - Louis Provencher¹, Tara Forbis², Leonardo Frid³ and Gary Medlyn⁴. ¹The Nature Conservancy of Nevada Reno, NV, ²The Nature Conservancy of Nevada Ely, NV, ³ESSA Technologies Ltd. Vancouver, BC, Canada, ⁴Bureau of Land Management, Ely, NV.

4:20 **Modeling disturbance effects on mixed-grass prairie** - Leonardo Frid¹, Pat Fargey² and Xulin Guo³. ¹ESSA Technologies Ltd. Vancouver, BC, Canada, ²Grasslands National Park of Canada, Val Marie, SK, Canada, ³Geography Department Saskatoon, SK, Canada.

4:40 **Restoration of the Ponderosa Pine ecosystem and its understory** - Lee E Hughes.

TECHNICAL SESSION: Vegetation Management/Reclamation/Restoration Hyatt, Plaza C – Tuesday, February 14, 1:30 PM – 5:00 PM

Moderators: Val Jo Anderson and Jeremy James

1:30 **Seed islands for rangeland restoration** – John Brock. Department of Applied Biological Sciences, Arizona State University, Mesa, AZ.

1:50 **Landscape restoration programs in the U.S. – A comparative analysis** – Maria Ryan¹. ¹University of Nevada Cooperative Extension Las Vegas, NV.

- 2:10 **Effect of three rates of five different herbicides on seven native forbs at various growth stages** – Joshua Voss¹, Val Jo Anderson¹ and Robert Johnson¹.
¹Dept. of Integrative Biology Provo, UT.
- 2:30 **Fire rehabilitation success on the Henry Mountains, Utah** – Cristina Juran¹, Bruce A Roundy¹ and Jim Davis². ¹Wildlife and Wildland Conservation Program Provo, UT, ² Utah Division Wildlife Resources Provo, UT.
- 2:50 **Shrub stand manipulations to improve seed production in antelope bitterbrush in Idaho, Nevada and Utah** - F. Leland Roberts¹, Val Jo Anderson¹ and Robert Johnson¹. ¹Department of Integrative Biology Provo, UT.
- 3:10 **Break**
- 3:20 **Shrub stand manipulations to improve seed production in Wyoming big sagebrush in Idaho, Nevada and Utah** – Jeremiah Armstrong¹, Val Jo Anderson¹ and Robert Johnson¹. ¹Department of Integrative Biology Provo, UT.
- 3:40 **Reduction in seed yields of forbs in native stands due to seed predation by fruit flies (Diptera: Tephritidae)** – Robert Johnson¹ and Val Jo Anderson¹. ¹Brigham Young University Provo, UT.
- 4:00 **The use of calorimetry as a tool to identify plant accession adaptability to site** – Tina Ward¹ and Bruce Smith¹. ¹Brigham Young University Provo, UT.

- 4:20 **Developing revegetation practices for drastically disturbed military training lands** - William Fox¹, Dennis Hoffman², June Wolfe² and Jason McAlister². ¹1500 Research Parkway, Suite 240, College Station, TX, ²Blackland Research & Extension Center Temple, TX.

SYMPOSIUM
BLM: Managing Public Rangeland Resources in the US
Hyatt, Plaza B – Tuesday, February 14
1:30 PM – 5:00 PM

Organizer: Doug Powell; Bureau of Land Management

- 1:30 **Introduction**
- 1:45 **Monitoring Strategy** - Steve Tryon
- 2:15 **The National Landscape Conservation System: Opportunities for the Next Five Years** - Aimee Betts. Bureau of Land Management Washington, DC.
- 2:45 **Break**
- 3:00 **Sage Grouse Habitat Conservation On Lands Administered by the Bureau of Land Management** - Mark Hilliard and Cal McCluskey Bureau of Land Management Boise, ID.

- 3:30 **Amendments to the Bureau of Land Management Grazing Regulations** - Kenneth Visser and Bud Cribley. USDI - Bureau of Land Management Washington, DC.
- 4:00 **Status of BLM Land Health Standard Evaluations** – Richard Mayberry.
- 4:30 **Wild Horse and Burro Management in the USA** - Don Glenn. Bureau of Land Management Washington, DC.

- 3:25 **Wildlife Habitat Benefits from Collaborative Resource Stewardship in Northern Nevada** - Kent McAdoo, Univ. Nevada Cooperative Extension, Elko, NV.
- 4:00 **Reconfiguring Our Relationship with the Land: Collaboration, Monitoring, and Adaptive Ecosystem Management** - Fernandez-Giminez, Colo State Univ., Fort Collins, CO.
- 4:35 **Discussion and Summary**
- 5:00 **Adjourn**

SYMPOSIUM
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 Univ., Fort Collins, CO.
- 2:05 **Saskatchewan’s Prairie Conservation Action Plan** - Karyn Scalise. Saskatchewan Prairie Conservation Plan, Regina, SK.
- 2:40 **Quincy Library Group – Applications to Rangelands?** - Holly George. Univ. of California Cooperative Extension, Quincy, CA.
- 3:15 **Break**

SYMPOSIUM
Range Management School (continued)
Fairmont, Vancouver Island– Tuesday,
February 14
1:30 PM – 5:00 PM

Organizer: Robbie Baird LeValley

- 1:30 **Grazing Management Strategies** - Dave Bradford.
- 2:15 **Break**
- 2:30 **Rangeland Monitoring** - Harley Metz.
- 3:15 **Break**
- 3:30 **Using Livestock to Manipulate Vegetation** – John Murray.
- 4:00 **Tying It All Together**
- 4:30 **Question and Answer**

SYMPOSIUM
Prescribed Herbivory for Vegetation
Management
Hyatt, Georgia B– Tuesday, February 14
1:30 PM – 5:00 PM

Co-Organizers: Wolfgang Pittroff, Mort Kothman, and Karen Launchbaugh.

- 1:30 **Prescribed Herbivory for Vegetation Management Overview and Implications** - Wolfgang Pittroff¹ and Mort Kothmann².
¹University of California - Davis Davis, CA, ²Texas A&M University College Station, TX.
- 2:00 **Targeted Grazing as a Vegetation Management Tool** - Karen Launchbaugh. Rangeland Ecology and Management Moscow, ID.
- 2:30 **Managing invasive grasses with prescribed grazing** - James Bartolome. Division of Ecosystem Sciences, University of California, Berkeley, CA.
- 3:00 **Prescribed grazing to control herbaceous broadleaf weeds** - Bret Olson. Animal and Range Sciences Dept. Bozeman, MT.
- 3:30 **Brush and Woody Weed Management with Sheep and Goats** - John Walker, Charles Taylor and Erika Campbell. Texas Agricultural Experiment Station San Angelo, TX.
- 4:00 **Planned Herbivory in the Management of Fire Fuels** - Glenn Nader, Roger Ingram, Zelman Henkin and Ed Smith.

- 4:30 **Contract Goat Grazing - Birth of a New Industry for Rejuvenation, Reclamation and Land Cleaning** - An Peischel. Tennessee State University Nashville, TN.

SYMPOSIUM
Grasslands in Northern China: Ecology and Contemporary Issues (continued)
Fairmont, Columbia– Tuesday, February 14
1:30 PM – 5:00 PM

Co-Organizers: Xingguo Han; Institute of Botany-CAS, X. Ben Wu; Texas A&M University, and Jianguo Wu; Arizona State University.

- 1:30 **The potential of C sequestration in semi-arid grassland in northern China** - Xingguo Han. Laboratory of Quantitative Vegetation Ecology Beijing, China.
- 2:00 **Variations of labile soil organic carbon pools along a precipitation gradient in Inner Mongolia steppe** - Qibing Wang, Yongfei Bai, Linghao Li and Hongtao Zhao. Laboratory of Quantitative Vegetation Ecology Beijing, China.
- 2:30 **Methane emissions from freshwater sandy marsh of the Inner Mongolia Plateau** - Zhiping Wang and Xingguo Han. Laboratory of Quantitative Vegetation Ecology Beijing, China.
- 3:00 **Break**
- 3:15 **Patterns of N uptake and allocation by plants in Inner Mongolia steppe** - Qingmin Pan¹, Yongfei Bai¹, Xingguo Han¹ and Jianguo Wu². ¹Laboratory of

Quantitative Vegetation Ecology
Beijing, China, ²School of Life
Sciences, Tempe, AZ.

- 3:45 **Plant responses to N addition in a *Leymus chinensis* steppe ecosystem of Inner Mongolia, China** - Lixia Zhang, Yongfei Bai and Xingguo Han. Laboratory of Quantitative Vegetation Ecology, Institute of botany, the Chinese Academy of Sciences Beijing, China.
- 4:15 **Litter effects on Typical Grassland Steppe of Inner Mongolia** - Mengli Zhao¹, Walter Willms² and Han Guodong¹. ¹College of Ecology and Environmental Science, Inner Mongolia Agricultural University Hohhot, Inner Mongolia, P.R. of China, ²Agriculture and AgriFood Canada, PO Box 3000 Lethbridge, Alberta, Canada.

WORKSHOP

Statistics: Design of Experiments
Hyatt, Cypress– Tuesday, February 14
1:30 PM – 5:00 PM

Co-Organizers: Sara Duke, Susan Durham,
and Tom Popham

This workshop will provide a discussion of issues and criterion which need consideration when preparing for research requiring a designed experiment. The workshop leaders will discuss in detail the statistical issues and common problems observed by applied statistical consultants using examples from their consulting experience in agricultural research. The intention is to provide participants with an understanding of why these issues are important to planning and conducting quality research. Workshop participants are

encouraged to bring specific questions or difficulties from their own work for discussion.

***To be continued tomorrow**

POSTER SESSION 3 - Range Domestic Animals, Wildlife, and Economics **Hyatt, Regency E & F– Tuesday,** **February 14, 2:30 PM – 4:30 PM**

- 1 **Incorporating Adult Education Principles into Range Management Training** - Chris Nykoluk.
- 2 **Use of in vitro gas production techniques to evaluate accociative effects of forages** - E. Grings. USDA-ARS, Miles City, MT.
- 3 **Forage quality of Winterfat (*Ceratoides lanata*) plant communities during the dormant season: correlation to livestock body condition scores** - Mark Estes¹, Tamzen Stringham¹, James Males² and David Bohnert³. ¹Dept. of Range Ecology and Management, Oregon State University, Corvallis, OR, ²Dept. of Animal Sciences, Oregon State University, Corvallis, Oregon, ³Dept. of Animal Sciences, Oregon State University - Eastern Oregon Ag Research Center, Burns, OR.
- 4 **Effect of body condition on consumption of pine needles by beef cattle** - James Pfister and Kip Panter. USDA-ARS, Poisonous Plant Research Laboratory, Logan, UT.
- 5 **Animal Control – What constitutes a reliable cue to stop animal movement?** - Greg J Bishop-Hurley², Dave Swain², Dean Anderson¹ and Peter Corke³.

- ¹USDA-ARS, Jornada Experimental Range Las Cruces, NM, ²CSIRO Livestock Industries, JM Rendel Laboratory, Ibis Avenue North Rockhampton, QLD, Australia, ³CSIRO ICT Centre QCAT, Pullenvale, QLD, Australia.
- 6 **Habitat use by cattle grazing pinyon juniper rangelands during calving in early spring** - Christina Black¹, Andres Cibils¹, Rachel Endecott¹, Michael Rubio², Shad Cox², Mark Petersen¹ and Ken Boykin. ¹New Mexico State University, Department of Animal and Range Sciences, Las Cruces, NM, ²Corona Range and Livestock Research Center Corona, NM.
- 7 **Influence of spatial arrangement of forages on social induction of white locoweed ingestion by cattle** - Kyle Jackson¹, Andres Cibils¹, John Graham², William Gould³ and Chris Allison⁴. ¹Department of Animal and Range Sciences, New Mexico State University, Las Cruces, NM, ²Cooperative Extension Service, Clayton, NM, ³Department of Experimental Statistics, New Mexico State University, Las Cruces, NM, ⁴Animal Resources Department, New Mexico State University, Las Cruces, NM.
- 8 **Effect of ruminant livestock systems on grassland condition in Patagonia, Argentina** - Sebastian Villagra¹, Siffredi Guillermo¹, Clemens Wollny² and Celso Giraudo¹. ¹INTA, Río Negro, Argentina, ²Institute of Animal Breeding and Production in the Tropics, Lower Saxony, Germany.
- 9 **Feedlot and carcass responses of yearling beef cattle from native rangeland and native rangeland-complementary forage systems** - Phillip Sims and Robert Gillen. Southern Plains Range Research Station, Woodward, OK.
- 10 **Sage-grouse winter habitat in Central Montana** - Jennifer Woodward¹, Carl Wambolt¹, Bok Sowell¹ and Jay Newell². ¹Montana State University, Bozeman, MT, ²Roundup, MT.
- 11 **Reptiles as Indicators of Land Restoration Success** - Tina Ward, Val J Anderson and Jack W Sites. Brigham Young University, Provo, UT.
- 12 **Impacts of large-scale wildfire and grazing on rodent populations in a semi-arid grassland** - Zach Jones¹, Linda Kennedy², Carl Bock¹ and Jane Bock¹. ¹Ecology and Evolutionary Biology, University of Colorado, Boulder, CO, ²Appleton-Whittell Research Ranch, National Audubon Society, Elgin, AZ.
- 13 **Leafy spurge removal by sheep - effects on bird and small mammal communities** - Marc Kenyon, James Knight, Carolyn Nistler and Randy Fenster. Montana State University, Extension Wildlife Program, Bozeman, MT.
- 14 **Chemical characteristics of two species of bamboo as determined by near infrared reflectance spectroscopy** - Doug Tolleson¹, Rude Bryan², Ouellette John³, Heidi Bissell³, Nicole Oberle¹, Kris Banik¹, Stephen Prince¹ and Jerry Stuth¹. Texas A&M University, Department of Rangeland Ecology & Management, College Station, TX, ²Mississippi State University, Department of Animal and Dairy Sciences, Starkville, MS,

- ³Memphis Zoo, Research & Conservation Department, Memphis, TN.
- 15 **Sage Grouse Survey of Landowners in Owyhee County, Idaho** - Scott Jensen. University of Idaho, Marsing, ID.
 - 16 **Working with rangeland managers - Agriculture & Species at Risk can Co-exist** - Laura Poppy and Bill Bristol. AAFC-PFRA, Regina, Saskatchewan.
 - 17 **Effects of grazing, timber harvest, and wildfire on big game forage quantity and quality** - Brian Hurd, Jon Boren, Terrell Baker, Douglas Cram and Glenn Mason. New Mexico State University, Las Cruces, NM.
 - 18 **University students' priorities for public land products and perception of livestock impacts** - Matthew Pollock and Thomas Thurow. University of Wyoming, Department of Renewable Resources, Laramie, WY.
 - 19 **A changing range: Taking a closer look at exurban landowners in Wyoming** - Rachel Meador and Paul Meiman. University of Wyoming, Laramie, WY.
 - 20 **Conservation Reserve Program Decision Tree** - Carolyn Blocksom¹ and Kevin Herbel². ¹Dept. of Agronomy, Kansas State University, Manhattan, KS, ²Dept. of Agricultural Economics, Kansas State University, Manhattan, KS.
 - 21 **Rangeland health dynamic in prairie dog colonies in private and ejidal lands** - José Javier Ochoa Espinoza, Gustavo Quintana Martínez, Alberto Lafón Terrazas and Jesús Ricardo Mendoza Fernández. Departamento de Manejo de Recursos Naturales y Ecología, Facultad de Zootecnia, Universidad Autónoma de Chihuahua, Chihuahua, México.
 - 22 **The Edwards Plateau Prescribed Burning Association is neighbor helping neighbor** - Nick Garza and Charles Taylor.
 - 23 **Evaluation of Nevada's state-wide sage grouse planning effort** - Brad Schultz¹, Michael Haverkamp², Maria Ryan³, Steve Lewis⁴, Marlene Rebori², Rodney Davis⁵, Jerry Buk⁵ and Staci Emm⁶. ¹University of Nevada, Cooperative Extension, Winnemucca, NV, ²University of Nevada, Cooperative Extension, Reno, NV, ³University of Nevada, Cooperative Extension, Las Vegas, NV, ⁴University of Nevada, Cooperative Extension, Gardnerville, NV, ⁵University of Nevada, Cooperative Extension, Battle Mountain, NV, ⁶University of Nevada, Cooperative Extension, Fallon, NV.
 - 24 **Socio-ecological Survey of Bedouin Communities in Syria** - James A Tiedeman, Fahim Ghassali, Nabil Battikha, Elias Khoudary, George Arab, Celine Dutilly-Diane and Camille Saint-Macary. International Center for Agricultural Research in Dry Areas Aleppo, Syria.
 - 25 **Evaluation of North Dakota Youth Range Camp** - Joshua Peterson¹, Nels Peterson^{1,2} and Kevin K Sedivec^{1,3}. ¹North Dakota State University, Fargo, ND, ²NDSU Extension Service, Nelson County Lakota, ND, ³NDSU Extension Rangeland Specialist, Fargo, ND.

- 26 **Kansas Grassland Water Quality Program Digital Library** - Larry Huber¹ and Donna Schenck-Hamlin².
¹Department of Agronomy, Kansas State University, Manhattan, KS, ²Information Support Services for Agriculture, Kansas State University, Manhattan, KS.
- 27 **Tehabi: an internship program for the next generation of resource managers** - Ben Baldwin¹, Mark Brunson¹ and Ben Bobowski². ¹Utah State University, Logan, UT, ²Grant-Kohrs Ranch National Historic Site Deer Lodge, MT.
- 28 **The SK PCAP stewardship education programs for elementary school audiences: A fun and games approach to learning** - Karyn Scalise¹ and Krista Connick². ¹Saskatchewan Prairie Conservation Action Plan Regina, SK, Canada, ²Saskatchewan Watershed Authority Swift Current, SK, Canada.
- 29 **Distance MS and Ph D in Rangeland Ecology at Colorado State University and On-Line Course Delivery** - Larry Rittenhouse. Colorado State University, Fort Collins, CO.
- 30 **Factors affecting the market value of New Mexico ranches** - L. Allen Torell¹ and Neil Rimbey². ¹New Mexico State University, Las Cruces, NM, ²University of Idaho, Caldwell, ID.
- 31 **Buffelgrass seeding as an alternative to increase profits in cattle ranches in Sonora, Mexico** - Salomon Moreno¹, Fernando A Ibarra², Martha H Martin², Francisco G Denogean¹ and Luis E Gerlach¹. ¹Economy Professors. Universidad de Sonora. Santa Ana, Sonora, Mexico, ²Range Scientists.CECAR-INIFAP. Hermosillo, Sonora, Mexico.
- 32 **Economic effects of two grazing strategies on cattle system in a semiarid region of Argentina** - Emiliano Quiroga, Lisandro Blanco and Carlos Ferrando. INTA EEA La Rioja Chamental, La Rioja, Argentina.
- 33 **Effects of Range Management Projects Implementation on Rangeland: A Case Study of Amol Region** - Ali Rostam.
- 34 **Economic Impacts of the Endangered Species Act on the Sacramento Grazing Allotment** - Jenny Gomez and John Fowler. New Mexico State University, Las Cruces, NM.
- 35 **Factors Affecting the market value of ranches in the Great Basin** - Neil Rimbey¹ and L. Allen Torell².
¹University of Idaho Caldwell, ID, ²New Mexico State University, Las Cruces, NM.
- 36 **Distribution and Ploidy Levels of Sagebrush Taxa on the Uncompahgre Plateau** - Stephen Monsen¹, E. Durant McArthur², Allan Stevens³ and Stewart Sanderson². ¹Western Ecological Consulting, Mapleton, UT, ²USDA-FS Shrub Sciences Laboratory Provo, UT, ³Snow College, Ephraim, UT.
- 36 **Voluntary Intake and Nutritional Properties of Yellow Starthistle in Sheep** - Pelayo Alvarez and Wolfgang Pittroff. Dept. of Animal Science, University of California, Davis, CA.
- 38 **Excellence In Range Management posters**