

The 2006

COLORADO COLLEGE

STATE OF THE ROCKIES CONFERENCE



Photo by Stephen G. Weaver

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VISION 2010



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MONDAY, TUESDAY, WEDNESDAY, AND THURSDAY
APRIL 10 - 13, 2006

Conference Schedule

M O N D A Y , A P R I L 1 0 , 2 0 0 6

11:45 am – 2 pm, Conference Information Table, Gaylord Hall in Worner Student Center

12 – 1 pm, Worner Student Center

Conference Kickoff Celebration - Lunch and Entertainment

2:15 – 2:45 pm, Armstrong Hall

Unveiling of *The 2006 State of the Rockies Report Card*

- **Walter Hecox**, project director, State of the Rockies Project; professor of environmental science and economics, Colorado College
- **Bryan Hurlbutt**, program coordinator, State of the Rockies Project
- **Caitlin O'Brady**, research manager, State of the Rockies Project

3 – 4:45 pm, Armstrong Hall

Land Conservation - Protecting Unique Landscapes and Habitats

- Moderator: **Tass Kelso**, professor of biology, Colorado College

Results of *2006 Report Card* Student Research: Conservation Easements, Preserving Rockies Private Land

- **Jared Kapela**, student researcher, State of the Rockies Project

New Frontiers in Conservation - An Overview of The Nature Conservancy's Work in the Rockies

- **Bruce Runnels**, vice president, The Rocky Mountain Division, The Nature Conservancy
- **Charles Bedford**, state director, The Nature Conservancy, Colorado

The Natural Rockies - Habitat Loss and Fragmentation: Presentation from the *2006 Report Card*

- **Chris Pague**, senior conservation ecologist, The Nature Conservancy, Colorado

7:30 – 9 pm, Armstrong Hall

Preserving Biodiversity - Addressing Threatened, Endangered, and Invasive Species

- Welcome: **Richard Celeste**, president, Colorado College
- Introductions: **Walter Hecox**, project director, State of the Rockies Project; professor of environmental science and economics, Colorado College

Preserving Rockies' Biodiversity: The Compelling need for Collaboration and Leveraging

- **Joanna Prukop**, cabinet secretary, New Mexico Department of Energy, Minerals, and Natural Resources

Results of *2006 Report Card* Student Research: Preserving Biodiversity

- **Amanda Strauss**, student researcher, State of the Rockies Project

Challenge Essay Talks Based on Written Sections in the *2006 Report Card*

- Endangered Species: **Randy Simmons**, professor of political science, Utah State University; senior fellow, Property and Environment Research Center
- Invasive Species: **Anna Sher**, professor of conservation biology, University of Denver; director of research, Denver Botanic Gardens

T U E S D A Y , A P R I L 1 1 , 2 0 0 6

11 am – 1:30 pm, Conference Information Table, Gaylord Hall in Worner Student Center

3 – 5:30 pm, Armstrong Hall

Ranching in the Rockies - Threats and Signs of Hope

- Moderator: **Jack Wold**, president, Wold Oil and Gas; rancher; trustee, Colorado College

Results of *2006 Report Card* Student Research: Ranching in the Rockies Today

- **Andrew Yarbrough**, student researcher, State of the Rockies Project

The New Ranch: A Means Toward Equal Protection for the Land

- **Dan Dagget**, environmentalist and author

Panel of Respondents

- **Doc and Connie Hatfield**, ranchers, Country Natural Beef, Brothers, Oregon
- **Dale Lasater**, rancher, Lasater Grasslands Beef, Matheson, Colorado
- **Brian Rolter**, chief executive officer, New Seasons Market, Portland, Oregon
- **John Schiffer**, rancher; state senator, Kaycee, Wyoming

5:45 – 7 pm, Armstrong Quad or Bemis Hall (weather dependent)

Barbeque: Connecting Ranchers and Eaters

Have dinner with ranchers from the Rockies and conference speakers (Tickets are \$1 and are available at the information table.)

7:15 – 9 pm, Armstrong Hall

Conservation in Action - Success Stories

- Introductions: **Caitlin O'Brady**, research manager, State of the Rockies Project
- **John Fielder**, nature photographer, publisher, teacher, and preservationist
- **Sydney Macy**, senior vice president, Conservation Fund, Western Regional Office

W E D N E S D A Y , A P R I L 1 2 , 2 0 0 6

11 am – 1:30 pm, [Conference Information Table](#), Gaylord Hall in Worner Student Center

2:15 – 4:45 pm, Packard Hall

Environmental Justice - Equally Protecting All Humans and the Environment

- Moderator: **Wade Roberts**, professor of sociology, Colorado College

Results of *2006 Report Card* Student Research: Environmental Justice Issues in Rockies' Metro Areas

- **Angela Banfill**, student researcher, State of the Rockies Project

Changing Environmental Justice in the Rockies

- **Jean Belille**, environmental protection specialist, U.S. Environmental Protection Agency; member, Winnebago Tribe of Nebraska

The Colorado River and Transboundary Disputes in an Age of Terror

- **William Snape III**, environmental lawyer; former vice president and chief counsel, Defenders of Wildlife; chair of the board, Endangered Species Coalition

Panel: Topics in Environmental Justice

- **Liam Downey**, professor of sociology, University of Colorado
- **Kathryn Mutz**, research associate and coordinator, Environmental Justice in Natural Resources project, Natural Resources Law Center, University of Colorado, Boulder
- **Sally L. Palmer**, professor of religious studies and the environment, University of Wyoming; minister, St. Paul's United Church, Laramie, Wyoming

5 – 6:30 pm, Packard Hall

New Approaches to Governing the Rockies - Can Our Region's Political Voices Be Heard?

- Moderator: **Tom Cronin**, McHugh Distinguished Professor of American Institutions and Leadership, political science department, Colorado College

Results of *2006 Report Card* Student Research: A Common Western Voice

- **Chris Jackson**, student researcher, State of the Rockies Project

A New Vision for Governing the Rockies

- **Daniel Kemmis**, director, Center for the Rocky Mountain West, University of Montana

Panel of Respondents

- **Michael Stratton**, owner of The Stratton Companies and nationally recognized Democratic strategist
- **Sandy Buffett**, executive director, Conservation Voters of New Mexico

Rest of the evening open in observance of the first night of Passover

T H U R S D A Y , A P R I L 1 3 , 2 0 0 6

11 am – 1:30 pm, [Conference Information Table](#), Gaylord Hall in Worner Student Center

2:45 – 4:45 pm, Packard Hall

Climate Change - What Happens in a Warmer Rockies?

- Moderator: **Matthew Reuer**, technical director, environmental science program, Colorado College

Results of *2006 Report Card* Student Research: Climate Change, Modeling a Warmer Rockies and Assessing the Implications

- **Gregory Zimmerman**, student researcher, State of the Rockies Project

Climate Change in the Rockies: In Theory and On the Ground

- **Roger A. Pielke Sr.**, state climatologist, Colorado; professor, department of atmospheric science, Colorado State University
- **Roger Pielke Jr.**, professor of environmental studies and fellow, Cooperative Institute for Research in the Environmental Sciences, University of Colorado, Boulder; former scientist, National Center for Atmospheric Research
- **Auden Schendler**, director of environmental affairs, Aspen Skiing Company

5 – 6:30 pm, Armstrong Hall

Rockies' History Comes Alive - John Wesley Powell Returns

- Introduction: **Anne Hyde**, professor, history department; director, Hulbert Center for Southwest Studies, Colorado College

John Wesley Powell: In-Character Appearance and Contemporary Comments on Powell's Reactions to Today's Rockies Challenges

- **Clay Jenkinson**, cultural commentator, author, first-person impersonator; the scholar behind Thomas Jefferson of The Thomas Jefferson Hour, National Public Radio

Rest of the evening open in observance of the second night of Passover

Conference Speakers



Charles Bedford is the Colorado state director of The Nature Conservancy. A native of Fort Collins, Colorado, Bedford is well known in conservation communities for his leadership, strategic thinking, and ability to build positive coalitions. Joining the Conservancy's Colorado program in 2001 as the associate state director, Bedford played a pivotal role in advancing and securing the \$31.3 million funding package for the Baca Ranch Project leading to the creation of the Great Sand Dunes National Park and Preserve; shaping the ten-year strategic vision of the Colorado program; and reaching across borders to support the Conservancy's work in other countries. Bedford views the state's most pressing conservation issues as healthy rivers, protecting wildlife habitat, and restoring natural areas. Prior to his work at the Conservancy, Bedford served as the director of the Colorado Board of Land Commissioners, where he was responsible for the long-term management of over three million acres of state land. He was also deputy legal advisor for Governor Roy Romer. Bedford holds a bachelor of science degree in foreign service from Georgetown University and a juris doctor from the University of Colorado School of Law.



Jean Belille is an environmental protection specialist in the Environmental Justice Program at the U.S. Environmental Protection Agency, Region 8. Belille is also an enrolled member of the Winnebago Tribe of Nebraska and an attorney. Before moving to Colorado, Belille served as the chief judge of the Winnebago Tribal Court, temporary judge for the Omaha Tribe of Nebraska, mayor of the village of Winnebago, and was a member of the State Indian Commission. Belille joined a private law firm in Omaha, Nebraska, during which time she served as part-time public defender, in-house legal counsel, and chief of tribal operation for the Omaha Tribe. Prior to serving in her present position, Belille worked for the nonprofit, Land and Water Fund of the Rockies, in Boulder as director of Western communities. She served communities of color that were struggling to reduce toxins from existing and future noxious facilities, to improve air quality, to stop mining contamination, and to reduce the effects of pesticides and herbicides. She further served as a member of the National Environmental Justice Advisory Council and the Indian Law Clinic at the University of Colorado School of Law, on several cases protecting sacred sites for native communities.



Sandy Buffett serves as executive director of Conservation Voters New Mexico (CVNM), the political voice of New Mexico's conservation community. At CVNM, Buffett is working to elect a pro-conservation majority to the N.M. state legislature and to hold legislators accountable for their environmental votes. Prior to moving back to her home state of New Mexico, Buffett worked on the 2004 election for the DNC as a fundraiser and grassroots organizer. Previously, she worked at the Nautilus Institute, a Berkeley-based research think tank, publishing numerous articles and activist guides on international, corporate, social, and environmental responsibility. She also worked for the international affairs office of the National Wildlife Federation in Washington, D.C., where she helped to build an international network of activists campaigning on environmentally destructive development projects financed by private-sector financial institutions. Her graduate work focused on the environmental implications of economic restructuring and globalization in Vietnam. She has consulted and published with the U.S. Environmental Protection Agency (EPA), the World Resources Institute (WRI), the UN Environment Program (UNEP), and the Organization for Economic Cooperation and Development (OECD). After graduating, Buffett taught English in Japan and traveled around Asia. Buffett holds a B.A. in political science from Colorado College and an M.A. in international environmental policy from American University in Washington, D.C.



Tom Cronin is a political scientist and business and leadership consultant. He currently serves as the McHugh Professor of American Institutions and Leadership at Colorado College, president of CRC, Inc., director of Cascade Natural Gas Corporation, and on several other civic, educational, and editorial boards. He is former president of Whitman College, where he served from 1993 to 2005, a former president of the Presidency Research Group, a former president of the Western Political Science Association, and a former executive committee member of the American Political Science Association. Cronin has won prizes for his scholarship, teaching, and civic leadership. He is the author or co-author of more than 150 scholarly or public affairs essays and ten books. He has lectured at over 300 colleges and universities in the U.S. and in two dozen nations abroad. He has served as White House fellow scholar-in-residence at the Brookings Institution, the Hoover Institution, the Aspen Institute, and the Center for the Study of Democratic Institutions.



Dan Dagget has been an environmental activist for 32 years. His involvement in a campaign to ban uranium mining in the vicinity of the Grand Canyon included helping to organize some of the first direct actions of Earth First!. In 1992, he was designated as one of the 100 top grassroots activists in the United States by the Sierra Club. Recently, however, Dagget's approach has changed. He has come to realize that humans have played a vital role in sustaining many of the Earth's ecosystems and that removing us from those ecosystems would damage them as much or even more than removing species we think of as "natural" such as wolves, beavers, and bullfrogs. His new book, "Gardeners of Eden, Rediscovering Our Importance to Nature," has been called the most important environmental manifesto since Aldo Leopold's "Land Ethic." Dagget's first book, "Beyond the Rangeland Conflict, Toward a West That Works," has been recognized as one of the most important books recently written about rangeland issues. Dagget founded and serves as CEO of EcoResults!, a not-for-profit organization which finds developmental funding for land managers seeking to turn their operations into a means to restore and sustain environmental values.



Liam Downey (Ph.D. 2000, the University of Arizona) is an assistant professor of sociology at the University of Colorado at Boulder. His primary sociological interests lie at the intersection of environmental sociology, race and class stratification, and urban sociology, which provide a coherent framework for his research into environmental inequality, urban demographic change, residential segregation, and the mental and physical health impacts of residential proximity to industrial activity. In addition to conducting research in these areas, he has devoted considerable energy to demonstrating the potentially important role Geographic Information Systems (GIS), or mapping software, can play in advancing sociological thinking and research.



John Fielder, a nationally renowned photographer, publisher, teacher, and preservationist, hikes and skis hundreds of miles in Colorado alone each year – and drives thousands – in order to record on film its most sublime natural places. Though he started his family and planted his Colorado roots as a department store executive, he ultimately turned his vocation into a career. He is the photographer of more than 30 exhibit-format books and guidebooks, all but four about Colorado. He might be most well known for creating Colorado's best selling book ever, "Colorado 1870-2000," which juxtaposes historic photographer William Henry Jackson's images of the 19th-century landscape with those of today. Fielder has worked tirelessly to promote the protection of Colorado's open space and wild places. His photography has influenced people and legislation, earning him recognition including the University of Denver's Ritchie Award for Corporate Responsibility, the University of Colorado's Distinguished Service Award, and the Sierra Club's Ansel Adams Award. In 1992, Fielder helped found the Board of Great Outdoors Colorado, which uses lottery profits to protect open space and wildlife habitat. He speaks to thousands of people each year to rally support for land-use and environmental issues. Fielder lives with his family near Denver.



Doc and Connie Hatfield's roots have been in agriculture in the West since the mid 1800s. Connie's family was in Colorado and Oklahoma, Doc's in western Oregon. They met at Colorado State University where Doc earned his DVM degree and Connie majored in home economics. After 10 years living in Victor, Montana, they began a rawhide desert ranch near Brothers, Oregon, in 1976. Today, with their son and daughter-in-law, they run 400 mother cows on 30,000 acres of desert rangeland and wild meadows. Since 1980 they have been active in building rancher/environmentalist coalitions to solve problems on the land. Their main passion the past 20 years has been Country Natural Beef, a cooperative that now consists of 70 ranch members and 30 prospective members who together own over 100,000 mother cows and operate on well over four million acres of rangeland. In 2004, Whole Foods Market asked that Country Natural Beef supply their 23 stores in Colorado, New Mexico, Texas, Louisiana, and Kansas. Efforts are underway to build a sister organization east of the Rockies which would be a means to make direct connections between the ranchers in the region and the retail and food service accounts who touch the end customers.



Anne Hyde is professor of history and director of the Hulbert Center for Southwest Studies at Colorado College. She grew up in Reno, Nevada, got a Ph.D. in history from the University of California, Berkeley, and has been at CC for 14 years. She specializes in the history of the American West and regularly teaches courses on western and environmental history, including a new course on the Colorado River. She has published widely on various western issues, including "An American Vision: Far Western Landscape and National Culture, 1820 -1920" (1991) and "The West in the History of the Nation" (2000). At present, she is at work on a project on trade relationships in the Far West in the early 19th century.



Clay Jenkinson is a humanities scholar, author, and social commentator trained in English renaissance literature. But thanks to a series of accidents, he is also a Jefferson scholar, a Lewis and Clark scholar, and a student of the future of rural America. Jenkinson is one of the nation's leading interpreters of Thomas Jefferson. He has lectured about and portrayed Jefferson in 49 states over a period of 15 years. He has performed before Supreme Court justices, presidents, 18 state legislatures, and countless public audiences, as well as appearing on The Today Show, Politically Incorrect, and CNN. Jenkinson was one of the first winners of the nation's highest award in the humanities, the Charles Frankel Prize, and a 2004 winner of the Silver Pen Award from the Nevada Writer's Guild. He is also a senior fellow for the Center for Digital Government, based in Sacramento, and a scholar-in-residence at Lewis & Clark College in Portland, Oregon. Jenkinson is the host of worldwide cultural tours and of the nationally syndicated radio program, The Thomas Jefferson Hour, and the author of such books as "Jefferson, Man of Light," "The Character of Meriwether Lewis," and "Message on the Wind," among others. He lives and writes in Bismarck, North Dakota.

Tass Kelso has been a professor of biology at Colorado College since 1987, after receiving an undergraduate degree from Dartmouth College, and graduate degrees from the University of Colorado and the University of Alaska. She specializes in plant biology and conservation of mountain and plains ecosystems of Colorado and does additional research on issues relating to rare plants and connections between the floras of western North America, the Arctic, and Eurasia. She has been a longtime collaborator with organizations such as The Nature Conservancy, the Palmer Foundation Land Trust, the Colorado Natural Heritage Program, and the U.S. Forest Service on studies about biodiversity in the Pikes Peak region, southeastern Colorado, and the southern Rocky Mountains.



Daniel Kemmis is a senior fellow at the University of Montana's Center for the Rocky Mountain West. Past director of the Center, Kemmis was formerly mayor of Missoula, Montana, and a former speaker and minority leader of the Montana House of Representatives. He is the author of many articles and three books: "Community and The Politics of Place;" "The Good City and the Good Life;" and "This Sovereign Land: A New Vision for Governing the West." In 1995, he was recognized as one of *Utne Reader's* "100 Visionaries." Kemmis is the recipient of the Charles Frankel Prize for outstanding contribution to the field of the humanities; the Society for Conservation Biology's distinguished achievement award for social, economic and political work; the Center of the American West's Wallace Stegner Prize for sustained contribution to the cultural identity of the West; and a fellowship at the Harvard Kennedy School's Institute of Politics. In February 2000, he was invited to Washington, D.C., to deliver the Pinchot Distinguished Lecture. Kemmis serves on the boards of the Northwest Area and Kettering Foundations, and the Missoula Redevelopment Agency. He is a graduate of Harvard University and the University of Montana School of Law.



Dale Lasater has been the managing partner of the Lasater Ranch, a family-owned cattle operation founded in 1882, since 1986. In 1997, he was a founding partner of Lasater Grasslands Beef, a company marketing beef raised and finished on grass. Lasater has lived in Mexico and Colombia, where he worked in a cattle improvement program with the Peace Corps. Following graduation from Princeton University, Lasater spent a year studying as a Fulbright scholar at the University of Buenos Aires, Argentina. In 2002, he was awarded the Slow Food Award for Biodiversity in Turin, Italy. Lasater and his wife, Janine, have two sons, Alex and Tom, who are involved in business in Mexico and the Far East.



Sydney Macy has worked in land conservation since joining The Nature Conservancy in 1975. As the Colorado state director for over 15 years, she was involved in numerous land acquisition projects and fund-raising efforts. She launched the first major capital campaign in Colorado-Rivers of the Rockies, which raised \$15 million and protected lands on 20 separate rivers and tributaries across the state. She also played a key leadership role in the Great Outdoors Colorado ballot initiative. In 1994, she joined the Conservation Fund, and is currently a senior vice president. Macy spearheaded the I-25 Conservation Corridor project in southern Douglas County, has managed several water rights projects and strategic acquisitions along the Front Range Mountain Backdrop. Macy currently is vice chairman and a founding member of the board of the Colorado Cattlemen's Agricultural Land Trust. She was a founding board member of the Wilderness Land Trust, and has served on various public committees, including the Governor's Task Force on Wildlife, and the Land Trust Alliance's Policy Advisory Council. She is an avid skier, backcountry hiker, swimmer, bicyclist, cook, and gardener, and is a fourth-generation Colorado native. She has a B.A. in urban and environmental studies from Stanford University.



Kathryn Mutz is a part-time research associate with the Natural Resources Law Center (NRLC) at the University of Colorado School of Law. Mutz joined the NRLC in 1996, after receiving her law degree from the University of Colorado School of Law. Prior to the study of law, she worked throughout the West on scientific and public policy issues related to natural resources development. As an ecologist, with a B.A. from the University of Chicago (1974), and an M.S. from Utah State University (1976), she specialized in wetlands, endangered species, and reclamation of disturbed lands. Mutz served as the NRLC's interim director in 1998-99 and 2001. She coordinated the Center's research in wilderness, forest policy, and minerals, and its Environmental Justice in Natural Resources Project, including the book "Justice and Natural Resources," in which the Center explored the distribution of benefits and burdens of water developments, timber programs, endangered species, wilderness and parks protection, and a variety of Native American issues. Mutz received the Environmental Protection Agency's Environmental Achievement Award. She serves on the board of the Colorado Riparian Association, the Communities Committee of the Seventh American Forest Congress, and the Tribal Lands Program Advisory Board of the National Wildlife Federation.



Chris Pague brings 27 years of experience in the study of natural history, conservation planning, and conservation biology to his position as senior conservation ecologist at The Nature Conservancy of Colorado. B.S. and M.S. degrees in biology and zoology and advanced training in ecosystem ecology and evolutionary biology, combined with 24 years of field experience, provided him with a strong background for conservation inventory and planning efforts. After working as the zoology team leader in the Virginia Natural Heritage Program, Pague arrived in Colorado in 1992 to revitalize the Colorado Natural Heritage Program, first at the University of Colorado and now a sponsored program at Colorado State University. Pague moved to The Nature Conservancy's Colorado Program in 1997. Pague is the lead for the Colorado Nature Conservancy's Measures of Success Initiative and he provides science guidance on global, regional, state, and local conservation efforts for the Colorado chapter and its partner organizations. Other foci include regional conservation and planning as well as strategies for conservation of Colorado's eastern plains and public lands.



Sally Lentz Palmer has taught at the University of Wyoming since 1993, specializing in global religion and the environment. Her work as a pastor in the United Church of Christ (U.C.C.) and her teaching have led her to the National Council of Churches Interfaith Conference on the Environment and to workshops at Berkeley and Harvard. For 24 years, Palmer has worked with the Wyoming Association of Churches on needs of the poor and, most recently, worked with leaders from nine denominations to draft an ecumenical statement on environmental ethics. As lecturer in religious studies, and as a pastor in the U.C.C., Palmer has drawn on the Judeo-Christian commitment to justice and concern for "the integrity of creation."



Roger A. Pielke, Jr. has been on the faculty of the University of Colorado since 2001 and is a professor in the environmental studies program and a fellow of the Cooperative Institute for Research in the Environmental Sciences (CIRES). At CIRES, Pielke serves as the director of the Center for Science and Technology Policy Research. His current areas of interest include understanding the politicization of science, decisionmaking under uncertainty, and policy education for scientists. He serves on the advisory panel of the NSF Program on Societal Dimensions of Engineering among other advisory committees. In 2000, Pielke received the Sigma Xi Distinguished Lectureship Award and in 2001, he received the Outstanding Graduate Advisor Award by students in the University of Colorado's department of political science. Before joining the University of Colorado, from 1993-2001 Pielke was a scientist at the National Center for Atmospheric Research. Pielke sits on the editorial boards of *Policy Sciences*, *Bulletin of the American Meteorological Society*, *Environmental Science and Policy*, *Darwin*, *Water Resources Research*, and *Natural Hazards Review*. He is author of numerous articles and essays and is also co-author or co-editor of three books.



Roger A. Pielke, Sr. is the state climatologist and professor in the department of atmospheric science at Colorado State University, Fort Collins, Colorado. He has a B.A. in mathematics from Towson State College (1968), an M.S. (1969) and Ph.D. (1973) in meteorology from Pennsylvania State University. Pielke has worked for NOAA's Experimental Meteorology Lab (1971-1974) and the University of Virginia (1974-1981). His research interests are mesoscale meteorology, meteorological modeling, climate change, and air pollution meteorology. He has chaired various committees and served as chief editor for refereed journal publications in his field. Pielke has received numerous awards including AMS Leroy Meisinger Award, Abell New Faculty Research and Graduate Program Award, Abell Research Faculty Award, Engineering Dean's Council Award, and elected AMS Fellow and American Geophysical Union Fellow. He has published over 300 articles in peer-reviewed journals, 50 chapters in books, and co-edited nine books, including "Mesoscale Meteorological Modeling," "The Hurricane," "Human Impacts on Weather and Climate," "Hurricanes: Their Nature and Impacts on Society," and "Storms."



Joanna Prukop is cabinet secretary for the New Mexico Energy, Minerals, and Natural Resources Department. She previously worked for the NM Department of Game and Fish for 26 years, where she served as a commissioned wildlife conservation officer, a public affairs specialist, and as the division chief for NE field operations. Just prior to becoming secretary she worked for the International Association of Fish and Wildlife Agencies as a project leader on the Management Assistance Team.



Conference Speakers



Wade Roberts is an assistant professor of sociology at Colorado College. His areas of teaching and research include environmental and political sociology, research methods, and comparative international development.



Brian Rohter is the co-founder and CEO of New Seasons Market. Rohter has operated retail food markets in Eugene, Oregon, and Maui, Hawaii, has owned a farm raising organic produce and natural beef and has been a mechanic, logger, and heavy equipment operator. Rohter's community involvement includes volunteer driving for Meals on Wheels. He has also served as a board member for Loaves and Fishes, on the advisory committee for the Portland Public Market, and as the co-chair of the Portland/Multnomah Food Policy Council. Rohter is the recipient of the 2004 Urban League Equal Opportunity Award and the 2004 St. Andrew's Church Martin Luther King, Jr. Medal of Honor for Social and Economic Justice. New Seasons Market has been awarded the Oregon Governor's Gold Award and the Portland Rotary Environmental Achievement Award. Rohter lives in Portland, Oregon, with his wife, Eileen Brady. They are the parents of four children.



Bruce Runnels is vice president and Rocky Mountain Division director of The Nature Conservancy. A 20-year veteran of The Nature Conservancy, Runnels has worked for nearly a decade with Conservancy staff, volunteers, and partners in eight Rocky Mountain and Great Basin states to accomplish large-scale landscape conservation. Under his leadership, the region's talented staff has advanced a number of conservation tools and techniques, including community-based conservation, greater prescribed burning capacity and learning, innovative water management and policy, and he has increased exchanges with colleagues from other countries. During his earlier years at the Conservancy he was selected (1991) as The Nature Conservancy's chief conservation officer, a new position created to oversee and give focus to the Conservancy's domestic and international conservation operations. He has also held positions as both eastern region director and midwest region director. Prior to his career with the Conservancy, Runnels worked for ten years as an attorney with Cline, King, Beck, Harrison & Runnels, specializing in real estate and civil trial work while doing pro bono work for the Conservancy.



Auden Schendler is director of environmental affairs at Aspen Skiing Company (ASC), where he is responsible for improving the company's environmental performance. ASC, which has won over 30 national and international awards for its environmental work, is widely considered to be the environmental leader in the ski industry, and has pioneered such programs as the U.S. Green Building Council LEED system, use of biodiesel in snowcats, and sustainability reporting. ASC is the only ISO 14001 certified ski resort in the U.S., and the only resort to have joined the Chicago Climate Exchange to voluntarily cap and trade its carbon emissions. (www.aspensnowmass.com/environment). Schendler was previously research associate in corporate sustainability at Rocky Mountain Institute, a resource policy think tank, where he managed an environmental audit of World Bank headquarters and helped research the book "Natural Capitalism." A LEED-certified professional, Schendler serves on Colorado Governor Owens' pollution prevention advisory board. His writing on sustainable business and life in the West has been published in *Harvard Business Review*, *the L.A. Times*, *Salon.com*, *the Journal of Industrial Ecology*, *Rock and Ice*, *Canoe and Kayak*, and many other journals. He received his B.A. in biology and environmental studies from Bowdoin College.



John Schiffer's parents came West during the Second World War because his father was in the Army remount stationed at Fort Robinson, Nebraska. After the war, the family bought a ranch in northeast Wyoming and subsequently moved to Johnson County in 1957 to a ranch west of the town of Kaycee. A graduate of Colorado College (1967), Schiffer joined the Navy for four years, during which time he married his wife, Nancy, also a Colorado College graduate. They returned to Wyoming in 1971 and went into ranching full-time, first in a cow-calf-yearling operation and then moved to their present location east of Kaycee. Schiffer served on the Johnson County school board for nine years and then ran successfully for a seat in the Wyoming Senate in 1993. He has served on various committees and currently is majority floor leader. Nancy is the librarian for the Kaycee public school district K-12 and they are the parents of two children: Ben, a geologist working in coalbed methane development in the Powder River basin and Wynne, also a Colorado College graduate, who has her doctorate in neurobiology and does research at Brookhaven National Laboratory on Long Island.



Anna Sher is a plant ecologist with a particular interest in conservation issues. She holds a joint position as an assistant professor in the department of biological sciences at the University of Denver and as the director of research, herbaria, and records at the Denver Botanic Gardens. Her area of research expertise is invasive species and ecological restoration of riparian zones. Past work has included a Fulbright Award to do desert research in Israel, and she has taught and done research in Kenya. Currently funded research includes development of IPM for tamarisk removal, use of commercial mycorrhiza for re-vegetation after weed control, and development of models for predicting invasion impact and restoration success. At DU, she teaches conservation biology and seminars in specialized topics, including ethics in science. She has published her research in such journals as *Ecological Applications* and *Conservation Biology* and to date has been cited over 70 times in the peer-reviewed literature. She currently enjoys supervising three graduate students and five undergraduates working in her lab and a staff of nine at the Denver Botanic Gardens.



Randy T. Simmons is professor and department head of political science and director of the Institute of Political Economy at Utah State University. He is also senior fellow at the Property and Environment Research Center (PERC). He received his Ph.D. in political economy from the University of Oregon. He was a policy analyst in the Office of Policy Analysis at the U.S. Department of the Interior and is mayor of Providence, Utah. He specializes in applying the assumptions and methods of economics to policy questions, especially to environmental and natural resource policy. Simmons is co-author of "Beyond Politics: Markets, Welfare, and the Failure of Bureaucracy" (2nd edition to be published in 2006), author of "Critical Thinking about Endangered Species" (2003), and co-editor of "Wilderness and Political Ecology" (2002). He contributed chapters to the 2005 edition of the Oxford Companion to the Supreme Court on "City of Monterey v. Del Monte Dunes at Monterey" and the Fifth Amendment. His articles and op-eds have appeared in *American Political Science Review*, *BYU Law Review*, *Contemporary Policy Issues*, *Journal of Contemporary Studies*, *Policy Review*, *Public Choice*, *The Baltimore Sun*, *Desert Morning News*, *The Los Angeles Daily News*, *Salt Lake Tribune*, and *The Washington Post*.



William J. Snape, III is chairman of the board of the Endangered Species Coalition and a lawyer in private practice in Washington, D.C., where his clients include various environmental organizations, private landowners with natural resource issues, and Gallaudet University. He is board secretary of the Institute for Journalism and Natural Resources, a member of the President's Trade and Environment Policy Committee, and a vice chair of the American Bar Association's Animal Law Committee. From 1994-2004, he was vice president and chief counsel for Defenders of Wildlife. He is editor and author of "Biodiversity and the Law" (1996), and has written many other articles on environmental protection and sustainable development. Snape is a *magna cum laude* graduate of the Honors College at the University of California, Los Angeles, where he received his B.A. in history, and a graduate of the George Washington University Law School, where he was president of the environmental law society. He has taught at several law schools including Georgetown, American University, the University of Pennsylvania, and the University of Baltimore, where he served as an advisor for the school's environmental law journal while an adjunct professor. He is married with two children.



Michael J. Stratton is a prominent Colorado civic and business leader. He is one of the nation's most well-known political consultants. He operates the Stratton Companies, principally involved in public affairs, real estate development, and business consulting. A native of Durango and a graduate of Colorado State University, Stratton became active in politics in 1970, having worked in scores of campaigns around the country at every level of the electoral process, in roles varying from press secretary to consultant to manager. Stratton was named one of the co-directors of the 1993 Presidential Inaugural Committee. He served as a senior consultant and assistant to U.S. Secretary of Commerce Ron Brown, chairman of Ken Salazar's successful U.S. Senate campaign in Colorado, and a member of the DNC's Scheduling and Nominating Commission. Stratton has authored articles and editorials and has served on public and private boards and commissions including the Colorado State Board of Agriculture, the governing body for Colorado State University (Fort Collins), the University of Southern Colorado (Pueblo), and Fort Lewis College (Durango). An avid traveler, skier, and golfer, Stratton is married to Sara Crossman Stratton, a senior executive with QWEST. The Strattons and their sons, Mathew and Sam, live in the foothills southwest of Denver.



Jack Wold is president and co-owner of Wold Oil and Gas Company (WOG) located in Denver, Colorado. He holds various positions within the Wold Companies, which include Wold Talc Co., Whirlwind LLC, Ramu International LLC, and Hole-In-The-Wall Ranch. Wold has served as president of the Wyoming Geological Association, president of the Rocky Mountain Section of the American Association of Petroleum Geologists, and serves as chairman of the Crude Oil Committee of the Independent Petroleum Association of Mountain States. He has served on the boards of the First Interstate Banks of Wyoming, the Rotary Club, YMCA, and Central Wyoming Boy Scouts. He was president and co-founder of the Business Advisory Committee on Education, the Classroom Wyoming Foundation, and past chairman of the Natrona County School Board of Trustees. Wold serves on the Board of Trustees of the Taft School and Colorado College. He received a degree from the department of agriculture at Casper College in artificial insemination and is a graduate of Colorado College with a bachelor's degree in geology. Wold received his master's degree in geology from Cornell University. He resides in Denver with his wife, Hildy, and is the father of CC students Court '06 and Allison '10.

Angela Banfill is a 2005-06 student researcher for the Colorado College State of the Rockies Project. She will graduate in May 2006 with a B.A. degree in environmental science. Her interest in environmental policy and environmental justice, combined with a passion for international travel, suggest future education and involvement in international environmental protection. Immediately after graduation she will begin her fourth season as a wildland firefighter in the Rockies region, promoting minimum-impact suppression tactics and the use of wildfire and prescribed fire to restore forest health.



Walter E. Hecox is professor of economics, director of the Slade Sustainable Development Workshop, and project director for the 2005-06 State of the Rockies Project at Colorado College. He received his B.A. degree from Colorado College in 1964 and an M.A. (1967) and Ph.D. (1970) from Syracuse University. He teaches courses in international economics, ecological economics, and sustainable development. He has conducted research and taken leave to work for the World Bank, U.S. Agency for International Development, U.S. Department of Energy, and Colorado Department of Natural Resources. He is author of "Charting the Colorado Plateau: An Economic and Demographic Exploration" (The Grand Canyon Trust, 1996), co-author of "Beyond the Boundaries: The Human and Natural Communities of the Greater Grand Canyon" (Grand Canyon Trust, 1997), and co-editor of the *2004 and 2005 Colorado College State of the Rockies Report Cards*.



Bryan Hurlbutt is 2005-2006 program coordinator of the Colorado College State of the Rockies Project. He was 2004-2005 research manager of the State of the Rockies. He is co-editor of and contributing author to both the *2005 State of the Rockies Report Card* and *2006 State of the Rockies Report Card*. Hurlbutt was born and raised in southern Idaho. He graduated as a trustee scholar from Colorado College with a B.A. degree in May 2004, majoring in physics. During his undergraduate years, he conducted research on supernova luminosity at Colorado College, solar flares at Montana State University, and underwater acoustics for Colorado College in the San Juan Islands, Washington. In his spare time, Hurlbutt enjoys playing classical guitar, recreating in the outdoors, teaching and practicing yoga, and working on Sudoku puzzles. In fall 2006, Hurlbutt will begin law school at Columbia University in New York City.



Chris Jackson is a 2005-06 student researcher for the Colorado College State of the Rockies Project. He will graduate in May 2006 with a major in international political economy. His senior thesis research focuses on the viability of tar sand oil extraction in Canada and the subsequent impacts on relations between the U.S. and Canada. Jackson's interest in international relations stems from his extensive travel through central Europe while studying in the Czech Republic in 2004. Growing up in the mountains of Colorado, he gained a particular interest in exploring ways to maintain the unique character of the region.



Jared Kapela is a 2005-06 student researcher for the Colorado College State of the Rockies Project. Kapela will graduate in May 2006 with a double major in economics and environmental science and has continued his Rockies research into his senior year, working to complete a thesis in economics. Since matriculating to Colorado College from his high school in Hunting Valley, Ohio, Kapela has been an intern with the Environmental Protection Agency in Washington, D.C., and has worked on campus to promote various environmental initiatives with students and faculty. After graduation, he plans to pursue a master's degree in business administration and work in the private sector to promote market approaches for solving environmental problems.



Caitlin O'Brady is 2005-06 research manager for the Colorado College State of the Rockies Project research team after working as a student researcher for the Rockies Project during the 2004-05 school year. She graduated *cum laude* from Colorado College in May 2005 with distinction in environmental science. She has a keen interest in social and environmental issues of different regions which she has explored while studying sustainable development and social change in Central America and working for a bioregional nonprofit in the Pacific Northwest. In her time at CC, O'Brady participated in various projects with campus environmental groups, and was awarded several grants to complete and present her senior thesis research on the effects of an invasive, nitrogen-fixing tree on Hawaiian ecosystems. In her spare time, she enjoys making ice cream, practicing and teaching yoga, and exploring Colorado.



Matthew Reuer serves as the technical liaison for the Colorado College State of the Rockies Project, overseeing tasks including data assimilation, GIS analysis, and logistics management. He received his doctorate from MIT in 2002 and was a Harry Hess post-doctoral research fellow at Princeton University from 2002 to 2004, focusing on global carbon cycle research. Reuer's scientific interests in this region include the environmental chemistry of western rivers and watersheds as well as global change impacts on alpine biogeochemical cycles. He is also highly interested in western development issues and the creation of innovative energy policies in the Rocky Mountain West.



Amanda Strauss is a 2005-06 student researcher for the Colorado College State of the Rockies Project. She will graduate from Colorado College in May 2006 with a major in biology. While studying ecology across Ecuador's diverse terrain, she developed a greater understanding and interest in global and regional environmental issues. As an intern for the State of the Rockies Project, she is pursuing her interest and gaining a greater understanding of the interface between biology and economics at the regional level.



Andrew Yarbrough is a 2005-06 student researcher for the Colorado College State of the Rockies Project. He is from Roxbury, Connecticut, and graduated from Taft High School, Watertown, Connecticut, in 2002. Yarbrough is a senior international political economy major at CC, and recently completed his senior thesis entitled "East Asian Economic Regionalism: A Proposal for Sustained Economic Growth and Stability." After spending his junior year at the London School of Economics and a summer studying at the Universidad de Salamanca in Spain, Yarbrough focused this year on his thesis research and helping to publish the *State of the Rockies Report Card*. He is passionate about environmental protection and land conservation in the Rocky Mountain region.



Gregory Zimmerman is a 2005-06 student researcher for the Colorado College State of the Rockies Project. He is currently a senior environmental science major at Colorado College interested in water management and water law, specifically how water management shapes development in the American West. Zimmerman spent the summer researching the effects of climate change in the Rocky Mountain region. He is working on his senior thesis about the consequences of climate change on the hydrology of the Arkansas Headwaters Watershed. After graduation, he plans to take some time off from academics, after which he expects to return to school and continue his studies in environmental science or environmental law.



The 2006 Colorado College State of the Rockies Report Card Editors' Preface and Executive Summary

By Walter E. Hecox, Bryan Hurlbutt, and Caitlin O'Brady

Editors' Preface

In our third year of the State of the Rockies Project, we still find ourselves working to better understand an incredibly diverse and complicated region facing a variety of unique challenges. Learning from past years, we have refined our research methods and recruited more students. We seek to take a fresh approach to putting together a credible written report and conference on pressing issues of community and environment in Colorado College's backyard—the eight-state Rocky Mountain West.

Thanks to generous funding, we were able to select a team of five exceptional student researchers to launch an early start on this year's research along with the State of the Rockies staff during summer 2005. To supplement their academic work in Colorado Springs, the research team took an extended field trip throughout the northern Rockies to visit ranches, communities, and natural areas, connecting their academic research with on-the-ground experience. Since the summer, the student researchers have met with scientists and community leaders and have continued fine-tuning their research projects with the help of the State of the Rockies staff to produce the *2006 State of the Rockies Report Card* and organize the 2006 State of the Rockies Conference.

This year's research topics take a new perspective on and delve deeper into critical topics we have studied generally in past report cards and conferences. Our aim is to cultivate a new vision of our shared home and to challenge the Mountain West to decide where we are coming from and where we want to go as a region.

We kick off the *Report Card* with the "Rockies Baseline," which examines key, annually updated demographic indicators for the U.S., the Rockies region, and each of the eight Rockies states to lay out basic facts and track trends in this rapidly changing region. Next, "A Common Western Voice" suggests how the region can and must increase its national political influence through a shared, yet diverse vision of what matters in the West.

Population growth is still the main driver of change in the Rockies region, as the influx of people spurs development of once open land and increases the demand for limited water supplies among a variety of other impacts. In "Ranching in the Rockies" and "Conservation Easements," we focus on how private lands, which are so susceptible to development and other impacts of growth these days, are being preserved as agricultural and natural lands. In "New Resource Management" and "Experiments in Managing the Federal Estate: The Case of the Valles Caldera," we document specific cases around the Rockies where innovative, collaborative land management strategies are effectively protecting the landscape while supporting adjacent communities.

In additional reports, we move further into the realm of environmental science to assess human influence on ecosystems and other natural systems in the Rockies region. In "Climate Change," we evaluate potential future climate scenarios for the Rockies region and assess the influence such changes could have on ecosystems, agriculture, tourism, and water supply. In "Preserving Biodiversity," we explore the importance of biodiversity to both ecosystems and humans, measure habitat threat across the region, and highlight creative ways groups are working to support biodiversity. Guest contributors add their thoughts on what biodiversity is, how much it is at risk, and what can and should be done to protect these key natural systems. A

companion guest contribution, "Fragmenting the Western American Landscape," measures the degree and impact of habitat fragmentation in the region.

The final two sections of the *Report Card* bring attention to community in the Rockies. In "Environmental Justice," we document the history of this movement for equal protection of all humans from environmental harm in the U.S., and we uncover the disproportionate burden certain demographic groups bear in the Rockies' metro areas. In "Grading the Rockies: Nurturing the Youth," we continue our tradition of assigning county grades to highlight communities that should serve as positive examples for other cities and towns throughout the region. This year's community assessment uses data on teen involvement, family support, educational opportunity, healthy surroundings, safe neighborhoods, and community engagement to grade all 281 counties in the region on their success at creating supportive environments for their youth—who may be our region's most vital asset in the future.

Central to this year's project activities, as in the past, are the three goals of the Colorado College State of the Rockies Project:

- To produce an annual research book, the *State of the Rockies Report Card*, on critical issues of community and environment in the Rocky Mountain West;
- To host an annual conference at Colorado College, the State of the Rockies Conference, bringing regional experts together with concerned citizens; and
- To involve Colorado College students as the main contributors to the *Report Card* and conference.

Through these goals, the project aims to inspire conference attendees and *Report Card* readers to creatively think about, discuss, and engage in shaping the future of our beloved region—the Rocky Mountain West.

Executive Summary

Rockies Baseline: Vital Signs for a Region in Transition State of the Rockies - Bryan Hurlbutt

Each year, the State of the Rockies updates a set of key demographic indicators—the Vital Signs—to take the pulse of the Rockies region. To track trends in the rapidly changing eight Rockies states, this year's stats are compared to the baseline year 2000. The Vital Signs dispel common myths that the Rocky Mountain West is still a lawless, backward land of rugged cowboys roaming remote locations, fending for themselves, and living off the land. The Vital Signs show that we are diverse, well-educated, and mobile, and for better or worse, most of us work in offices. Perhaps the most critical



indicator of all, the region's population is still growing swiftly—over three times faster than the U.S. population.

A Common Western Voice: Can the Rockies Be Heard in Washington, D.C.?

State of the Rockies - Jared Kapela, Andrew Yarbrough, Caitlin O'Brady, and Bryan Hurlbutt

The Rocky Mountain region's distinctive features—its vast open space, large proportion of federal lands, aridity, small population coupled with rapid population growth, abundance of natural amenities and natural resources, and popularity to vacationers—create a unique set of challenges for the region, which are often ignored in national politics. As a result, critical regional issues do not receive the national attention and support that they need. The State of the Rockies shows that during the 2004 presidential election, little money and time were spent by Bush and Kerry in the region. State of the Rockies urges the region to find a strong political voice and explores hosting a presidential primary and/or presidential debate in the Rocky Mountain West.

Ranching in the Rockies: Threats and Signs of Hope

State of the Rockies - Andrew Yarbrough, Jared Kapela, and Caitlin O'Brady

Changes in the agriculture industry have made it tougher for traditional ranchers to make a profit in the Rockies region, and rapid population growth has increased the price developers are willing to pay for ranchland. As a result, many ranchers are cashing out, and their productive agriculture land is being converted into “trophy” ranches and subdivisions. Once a mainstay of the opening up of the West and of the rural economy, the role of ranching in the Rockies region has undergone a dramatic change. In the face of sprawl, environmental groups, that once viewed ranching as one of the biggest environmental threats, now see ranching as a protector of open space and wildlife habitat. Here, the State of the Rockies examines the economic challenges to ranching in the Rockies region, showing that more farms and ranches are losing money than in the past and that the amount of farmland and ranchland is declining across much of the region. However, this report highlights innovative ranchers who are diversifying their operations and making ends meet by targeting niche consumer markets with their products or by turning their ranches into destinations for hunters, artists, and vacationers.

Conservation Easements: Preserving Private Land in the Rockies

State of the Rockies - Jared Kapela, Bryan Hurlbutt, and Andrew Yarbrough

Nearly half of the land in the Rockies region is federally owned, and although these public lands still face a variety of environmental threats, private land is being altered at a faster rate. As a result, conservation groups are devoting more time and energy to protecting private land. Land trusts are leading the way through conservation easements. By placing a conservation easement on land, a private property owner sacrifices the right to develop that land in the future in exchange for tax relief. The State of the Rockies finds that conservation easements are successfully protecting private land in the region and their use is on the rise, but depending on the resolution of a few controversies involving easements, the movement's pace could lose steam. County-level analysis shows that although private land is being well protected by easements along the Continental Divide, there is relatively little easement activity elsewhere in the region. Furthermore, the eastern Rockies states (Colorado, Montana, New Mexico, and Wyoming) have a much higher percentage of their private land under easement than do the western Rockies states (Arizona, Idaho, Nevada, and Utah).

New Resource Management: Innovative Approaches in the Rockies

State of the Rockies - Chris Jackson



Resource management in the Rocky Mountain West is often mired in bitter conflict between competing interest groups in the realm of law and politics. Today, however, ground is being broken in managing limited, highly valued resources through cooperative approaches that harness market incentives and, when necessary, implement tools to compensate resource loss. Here, the State of the Rockies highlights several successful examples of creative collaboration in managing land, water, and wildlife around the region.

Experiments in Managing the Federal Estate: The Case of the Valles Caldera National Preserve and Trust

F. Patrick Holmes, guest contributor

Patrick Holmes, former program coordinator of the State of the Rockies, takes an in-depth look at experimental federal land management of the Valles Caldera National Preserve in New Mexico. The preserve is managed by a nine-member board of trustees as a government-owned corporation of the U.S. Forest Service in an attempt at consensus-based public land management. Holmes sees hope in this new type of management but documents some flaws in the program. He notes that conditions specific to the Valles Caldera may make it better suited for this type of management than other federally owned areas.

Biodiversity: A Coat of Many Colors

Tass Kelso, guest contributor

Tass Kelso, Colorado College biology professor, explains the importance of biological diversity to human life. Not only does the variety of life forms in the Rockies region provide food and energy, shield against natural disasters, and support functional ecosystems, but it is a vital component of the Rockies' unique, beloved natural landscape.

Challenge Essay - The Invasion of Our Rockies: Hype or Management Priority?

Anna Sher, guest contributor

Anna Sher, an invasive plant ecologist at the University of Denver and the Denver Botanic Gardens, addresses the issue of invasive species as a threat to biodiversity. Sher argues that simply removing invasive weeds, which she calls the strip malls of nature, is too limited of an approach to solving the problem. The ultimate goal is to restore functioning ecosystems, which will require more research into the mechanisms responsible for the invasion. She challenges residents of the Rockies region to see invasive species not as necessarily “bad” or “good,” but rather to understand their broader ecosystem implications. How are invasives introduced to the Rockies region? How do they spread? How do they affect whole ecosystems? Upon answering these questions, the region can then begin to ask, “How can management strategies best deal with the problem?”

Challenge Essay - Myths Versus Realities Concerning Threatened and Endangered Species in the Rockies

Randy T. Simmons, guest contributor

Randy T. Simmons, senior fellow at the Property and Environment Research Center (PERC) and professor of political science at Utah State University, challenges a number of common beliefs about endangered species and “nature” in the Rocky Mountain West. Simmons questions assumptions, including that nature is highly structured and balanced, that wilderness has always been free from human impacts, and that ecosystems will return to normal if disturbances are removed. He illustrates the ways in which these assumptions have resulted in limited, inadequate approaches to saving species. Simmons challenges the region to look beyond these assumptions and argues for a stronger state role in ecosystem protection.

The Endangered Species Act of 1973: An Overview

Phillip M. Kannan, guest contributor

Phillip M. Kannan, distinguished lecturer and legal scholar-in-residence in the Colorado College environmental science program, introduces the Endangered Species Act (ESA), the federal government’s tool for protecting species and biodiversity. Kannan outlines the workings of the ESA and suggests that, although the individual species protection approach that the Act takes is limited, the ESA can play an important role in a larger plan to protect entire ecosystems.

Preserving Biodiversity: Mapping Habitat Threat in the Rockies

State of the Rockies - Amanda Strauss, Caitlin O’Brady, and Bryan Hurlbutt

Fresh air, productive agricultural land, and clean water are just a few of the many invaluable “services” that the biodiversity, or variety of life on Earth, provides for humans. But biodiversity is being devastated globally, nationally, and within the Rockies region. The State of the Rockies measures human-caused current and future habitat threat in every county in the region. The report finds that habitat destruction is taking place, it is on track to continue throughout the entire region, and the threat is much higher in some counties than in others. The report also outlines groundbreaking ways scientists, communities, nonprofits, and government agencies are working together to take a broader, scientifically sound approach to preserving biodiversity through whole ecosystems management.

Fragmenting the Western American Landscape

Chris Pague, Tyrone Guthrie, and Christina Supples, guest contributors, The Nature Conservancy

Habitat fragmentation—the breaking up of large areas of habitat into isolated parcels—is a leading contributor to the loss of biodiversity nationwide. As humans further develop the Western landscape, roads, subdivisions, fences, and power lines lock plants and animals into isolated pockets, which decreases the resilience of an ecosystem. The Colorado Nature Conservancy maps “natural” and

“not natural” land across the region and uses sophisticated GIS analysis to rank every county in the region on the degree of habitat fragmentation within its boundaries.

Regional Challenges of Future Climate Change: Endless Summer or Business as Usual?

Matthew Reuer, guest contributor

Matthew Reuer, technical director of the Colorado College environmental science program, introduces climate change from a scientific perspective. Reuer presents data documenting the recent rise in global CO₂ concentrations and the corresponding rise in global temperature. Reuer suggests that, although the study of climate change is rife with uncertainty, further study and analysis of historic and projected climate warming are essential, because of the many environmental, social, economic, and political implications of climate change.

Climate Change: Modeling a Warmer Rockies and Assessing the Implications

State of the Rockies - Gregory Zimmerman, Caitlin O’Brady, and Bryan Hurlbutt

Will the Rockies region still be the world’s prime skiing destination? Will the region’s already limited water supply dwindle and further ignite water rights conflicts? Will our ecosystems wither and be overrun by invasive species? Recently, devastating hurricanes and floods, melting ice caps, and species extinctions have made humans aware that global climate is changing, and it is expected to continue changing into the future. The State of the Rockies acquired temperature, precipitation, and snowpack projections from state-of-the-art climate models to understand how the region could be affected by climate change. The analysis both projects changes in temperature, precipitation, and snowpack, and assesses potential impacts on the region’s ecoregions, river basins, and skiing communities. To maintain the current human way of life, people must understand and be prepared to adapt to these changes.

Environmental Justice: Income, Race, Ethnicity, and Toxic Pollution in the Rockies’ Metro Areas

State of the Rockies - Angela Banfill, Bryan Hurlbutt, and Caitlin O’Brady

Environmental justice is hailed as the confluence of the two great movements of the 20th century, the civil rights movement and the environmental movement. Towards the end of the 20th century, it became apparent that certain demographic groups tend to bear a disproportionate share of environmental harm. Although the environmental justice movement has made some headway, there is still a long way to go, especially in the Rockies region where mainstream environmental issues tend to focus on “nature” while overlooking social issues related to environment. The State of the Rockies maps sources of toxic pollution in the 23 largest metro areas in the region and analyzes the income, race, and ethnicity of neighborhoods near these polluters. The study finds that environmental inequity is indeed a reality in the Rockies and environmental justice issues deserve equal attention to mainstream environmental issues.

Grading the Rockies: Nurturing the Youth

State of the Rockies - Caitlin O’Brady and Bryan Hurlbutt

The State of the Rockies continues its tradition of assigning grades to all 281 counties in the region on critical community issues. This year the topic is nurturing the youth. Although data can hardly speak to the most important ways the youth can be supported—like loving, appreciating, and believing in them—the 24 indicators used to grade the counties shed light on community efforts to create a positive environment in which the youth can develop into the future leaders of the region. The indicators are divided into six categories: teen involvement, family support, educational opportunity, healthy surroundings, safe neighborhoods, and engaged communities.



Colorado College, The Rocky Mountain West, and The State of the Rockies Project

By Walter E. Hecox

“At Colorado College our goal is to provide the finest liberal arts education in the country. Drawing upon the adventurous spirit of the Rocky Mountain West, we challenge students, one course at a time, to develop those habits of intellect and imagination that will prepare them for learning and leadership throughout their lives.” (CC Mission Statement)

Colorado College and the Rocky Mountain West

Colorado College (CC) today, as it has been for the past 130 years, is strongly defined by location and events of the 1800s. Pikes Peak abruptly rises out of the high plains that extend from the Mississippi and Missouri Rivers towards the west. This eastern-most sentinel of the Rocky Mountain chain of 14,000 ft. peaks first attracted early explorers and then was the focus of President Jefferson’s call for the southern portion of the Louisiana Purchase to be mapped by Zebulon Pike in 1806. Gold seekers in 1858 spawned the start of the “Pikes Peak or Bust Gold Rush” of prospectors and all manner of suppliers to the mining towns. General William Jackson Palmer, while extending a rail line from Kansas City to Denver in 1869, camped near what is now Colorado City and fell in love with the view of Pikes Peak and red rock formations now called the Garden of the Gods. An entrepreneur and adventurer, he selected that site to found a new town with the dream that it would be a famous resort — complete with a college to bring education and culture to the region. Within five years, both Colorado Springs and Colorado College came into being in Colorado Territory, preceding Colorado statehood in 1876.

Early pictures of present-day Cutler Hall, the first permanent building on campus that was completed in 1882, speak volumes to the magnificent scenery of Pikes Peak and the lonely plains. Katherine Lee Bates added an indelible image of the region. In 1893, she spent a summer teaching in Colorado Springs at a CC summer program and on a trip up Pikes Peak was inspired to write her “America the Beautiful” poem. It helped spread a celebration of the magnificent vistas and grandeur of Pikes Peak and the surrounding region — and provided bragging rights for CC as “The America the Beautiful College.”

The last quarter of the 18th century was challenging both for Colorado Springs and Colorado College. Attempts to locate financial support in the East and ease the travails of a struggling college were grounded on the unique role of Colorado College in then-President Tenney’s “New West” that encompassed the general Rocky Mountain region. His promotion of this small college spoke of Colorado College being on the “very verge of the frontier” with a mission to bring education and culture to a rugged land. Even then, Tenney saw the college as an ideal place to study anthropology and archeology, use the geology of the region as a natural laboratory, and serve the mining industry by teaching the science of mineralogy and metallurgy. In the early 1900s, a school of engineering was established at CC that offered degrees in electrical, mining, and civil engineering. General Palmer gave the college 13,000 acres of forest land at the top of Ute Pass, upon which a forestry school was built, the fifth forestry school created in the U.S. and the only one with a private forest.

Subsequent decades brought expansion of the college, wider recognition as a liberal arts college of regional and national distinction, and creation of innovative courses, majors, and programs. The unique Block Plan, implemented in 1970, consists of one-at-a-time courses that facilitate extended course field study, ranging across the Rockies and throughout the Southwest. Thus, CC has a rich history indelibly linked to the Rockies.

Today is no different. CC has new programs that meet evolving challenges in the Rockies, including environmental science and Southwest studies programs, a sustainable development workshop, and exciting field work offered by a variety of disciplines. Students can thoroughly explore the Rockies through the Block Plan.

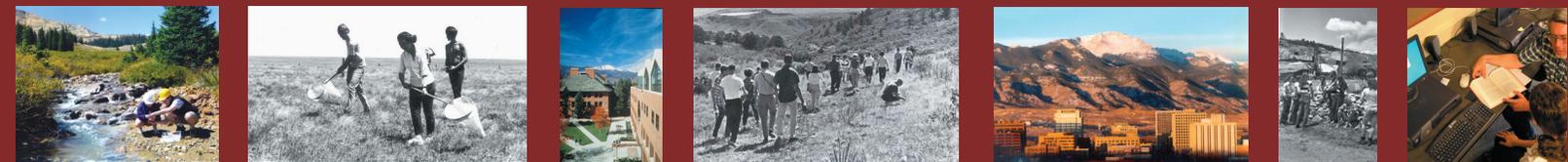
The State of the Rockies Project *Research, Report, Engage!*

The Colorado College State of the Rockies Project is designed to provide a thoughtful, objective voice on regional issues by offering credible research on problems faced by the Rocky Mountain West, and through convening citizens and experts to discuss the future of our region. Each year, the project provides: opportunities for collaborative student-faculty research partnerships, a *State of the Rockies Report Card*, and companion State of the Rockies Conference. Taken together, these three arms of the State of the Rockies Project offer the tools, forum, and accessibility needed for Colorado College to foster a strong sense of citizenship for both our graduates and the broader regional community.





The State of the Rockies Conference once again celebrates Colorado College's eight-state "backyard" by bringing together experts from around the region to discuss the most pressing challenges faced by the Rocky Mountain West. From April 10 - 13, 2006, on the Colorado College campus, this third-annual conference presents fresh perspectives on land conservation, biodiversity, ranching, environmental justice, regional political strength, and climate change from the State of the Rockies Project and esteemed guest speakers. In "Rockies' History Comes Alive," Clay Jenkinson, cultural commentator for National Public Radio, will appear as John Wesley Powell to respond as Powell would to what he sees going on around the region today. Along with the 2006 Colorado College State of the Rockies Report Card, the conference is intended to provide an interactive forum for current and future community leaders to explore these complex issues. We welcome you to a growing network of individuals and institutions linked through common appreciation of the Rockies, to engage in building a better understanding of and stronger support for our beautiful, fragile region.



COLORADO COLLEGE'S ROCKY MOUNTAIN STUDY REGION



The Colorado College State of the Rockies Project would like to thank the following individuals and groups for their generous contributions to this year's summer research, *Report Card*, and Conference:

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2005 - 2006 State of the Rockies Staff



Richard F. Celeste
President, Colorado College

2005 - 2006 State of the Rockies Student Researchers



Research, Report, Engage!

THE COLORADO COLLEGE State of the Rockies Project



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