

Southern Rockies Wildlands Network VISION

A Science-Based Approach to Rewilding the Southern Rockies

July 2003

Lead Authors

Brian Miller • Dave Foreman • Michelle Fink • Doug Shinneman

Jean Smith • Margaret DeMarco • Michael Soulé • Robert Howard



WILDLANDS PROJECT



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For additional information contact:

Southern Rockies Ecosystem Project
Margaret DeMarco, Executive Director
4990 Pearl East Circle, Suite 301
Boulder, CO 80301
303.258.0433

www.RestoreTheRockies.org
Vision@RestoreTheRockies.org

ABOUT THE CONSERVATION GROUPS:

The Southern Rockies Ecosystem Project (SREP) is a non-profit conservation biology organization working to protect and restore large, continuous networks of land in the Southern Rockies ecoregion of Colorado, Wyoming and New Mexico. SREP realizes our vision for a healthy ecoregion by connecting networks of people in order to connect networks of land. By connecting people and landscapes, the rich biological diversity of the Southern Rockies will be maintained and restored.

The Denver Zoo provides a wildlife conservancy which offers high-quality experiences in an urban recreational setting; provides environmental education which inspires public awareness of global conservation; and engages in scientific programs which make meaningful contributions to the conservation of animals and their ecosystems.

The Wildlands Project protects and restores the natural heritage of North America through the establishment of a connected system of wildlands.

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Range after range of mountains

Year after year after year

I am still in love.

-Gary Snyder

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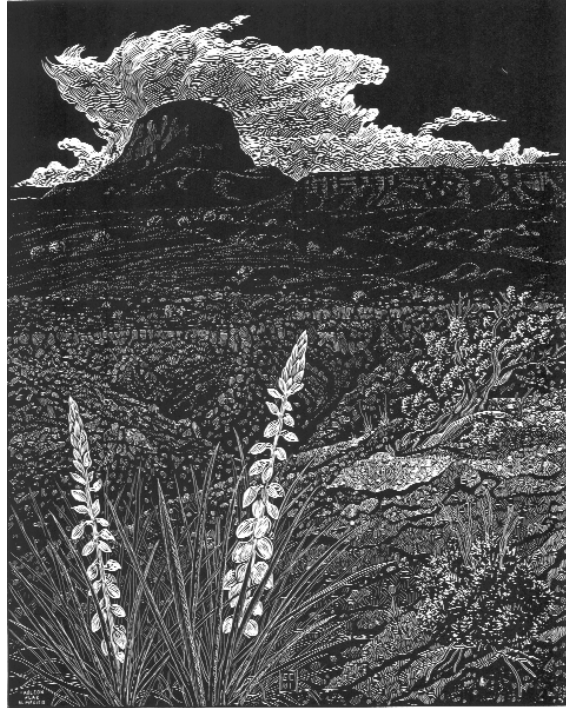
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INTRODUCTION

Brian Miller, Margaret DeMarco

THIS VISION IS BOLD, YET PRACTICAL. AMBITIOUS, YET ACHIEVABLE -- SCIENTIFICALLY CREDIBLE, AND HOPEFUL. TOGETHER, THESE CHARACTERISTICS CREATE AN OUTSTANDING OPPORTUNITY TO PRODUCE REAL CHANGE IN THE SOUTHERN ROCKIES ECOREGION.

WE ENVISION A SOUTHERN ROCKIES ECOREGION THAT IS WHOLE -- A VAST, CONNECTED LANDSCAPE WHERE NATIVE SPECIES THRIVE AND NATURAL ECOLOGICAL PROCESSES MAINTAIN A HEALTHY BALANCE. SUCH A HOLISTIC VISION TRANSCENDS POLITICAL AND HUMAN-MADE BOUNDARIES AND ADDRESSES LARGE LANDSCAPES ON THE ECOSYSTEM AND ECOREGIONAL LEVEL.

World-renowned for their striking beauty and high mountain topography, the Southern Rockies are one of North America's gems. The Southern Rockies ecoregion contains a diversity of life. From alpine tundra to ponderosa pine forests and sagebrush grasslands, over 500 vertebrate species find their home in the Southern Rockies

and a rich variety of plants and invertebrate species can also be found within its borders. Over 270 species of butterflies and 5,200 species of moths make the Southern Rockies the second leading hotspot in North America for the insect order Lepidoptera (Shinneman et al. 2000). The Southern Rockies maintains this abundance partially because of its continuous stretches of wild, remote and undeveloped lands.

And yet, this biodiversity and abundance is threatened, as are many wild places in North America, due to human expansion and development: native species have been extirpated, old-growth forests logged, wild and powerful rivers dammed and polluted, and land degraded and developed. *The State of the Southern Rockies Ecoregion*, a recent report by the Southern Rockies Ecosystem Project (SREP) (Shinneman et al. 2000), provides a detailed ecological assessment of the Southern Rockies. Chapters 2 and 3 of this Vision condense a background of natural history, conservation status, and human demographics from *The State of the Southern Rockies Ecoregion* and a complementary report on reintroducing wolves to the Southern Rockies (Phillips et al. in press). For more discussion on wounds and threats to the Southern Rockies, please see Chapter 5 of this volume.

In order to address the threats to the Southern Rockies, SREP, in conjunction with the Wildlands Project and the Denver Zoo, produced the Southern Rockies Wildlands Network Vision. This Vision calls for ecological restoration that is based on healing ecological wounds: the Vision identifies wounds to the land and then considers the anthropogenic causes for each, addressing not only the symptoms and the disease, but also the root cause(s) of the illness.

A comprehensive approach to healing the wounds of the Southern Rockies requires a full analysis of the current conditions in the ecoregion, as well as an assessment of our goals and approach. Chapter 1 of this document outlines this vision for a Wildlands Network Design and the elements that create it. It is a prescription for the future. We recognize that national parks, wilderness areas, and wildlife refuges have accomplished a great deal for nature. But over time, protected areas have been surrounded by roads and degraded landscapes. Now the protected areas are too isolated to sustain viable populations of large animals, let alone many ecological and evolutionary processes. To overcome this we must address very large landscapes (continental), and heal areas that have been wounded (Soulé and Terborgh 1999). This logic has led to the Southern Rockies Wildlands Network Vision you see before you. This Vision is both a prescription for the ecoregion itself, and an important piece of a larger picture creating contiguous wildlands, known as MegaLinkages, across North America.

Under the guidance of the Wildlands Project, other regional conservation plans are striving toward a north to south MegaLinkage through the Rocky Mountain chain (Figure 1.1). The southern part of the Southern Rockies Wildlands Network overlaps the northern part of the New Mexico Highlands Wildlands Network. The New Mexico Highlands Wildlands Network, in turn, overlaps the Sky Islands Wildlands Network. In the northwestern section of the Southern Rockies Wildlands Network, we overlap slightly with the Heart of the West Wildlands Network. In turn, the Heart of the West overlaps with the Yellowstone to Yukon link. As a visual model, MegaLinkages would allow grizzly bears and wolves to move safely between Mexico and the Arctic.

The Southern Rockies Wildlands Network is a vital piece of the puzzle that connects these reserve designs together. This larger landscape vision is the future of conservation planning and will ultimately protect and restore the Southern Rockies ecoregion within a living, dynamic wildlands network throughout North America.

This Vision is only the first step toward a working, living and changing plan for the Southern Rockies. In short, what you see before you is a hypothesis to test. As knowledge accumulates, methods improve or change, and conservation opportunities arise and fall, successive iterations will modify the conservation plan, and therefore, the Network Vision, of the Southern Rockies. If this Vision stimulates thought and activity toward better methods for conservation, then it has achieved an important outcome.

Throughout this document we refer to the Network Design and the Network Vision for the Southern Rockies.

They are different terms. A Wildlands Network Design is a pro-active, landscape-based conservation *map* that designates areas as core protected, wildlife movement and riparian linkages, or compatible-use areas. The overall Southern Rockies Wildlands Network Vision is an integrated and realistic *approach* to maintaining and restoring viable populations of native species within a healthy ecoregion. We will refer to our conservation map as the Network Design and this document in its entirety, with emphasis on implementation measures to be taken in the Southern Rockies, as our Vision.

The mission of our Vision is to protect and rewild the regional landscape. “Rewilding” recognizes the importance of top-down regulation to healthy ecosystems. It emphasizes large core wild areas, functional connectivity across the landscape, and the vital role of keystone species and processes, especially large carnivores (Noss and Soulé 1998, Soulé and Terborgh 1999). This does not mean that we wish to ignore isolated populations of less-charismatic species facing extinction. The needs of such species are covered by The Nature Conservancy (TNC) in an excellent plan titled *Southern Rocky Mountains: An Ecoregional Assessment and Conservation Blueprint* (Neely et al. 2001). We endorse that plan, and we view our plan (emphasizing large carnivores) as complementary to TNC’s. We look forward to further cooperation integrating both plans on behalf of Nature.

Because of the landscape-scale approach to our Vision, we cannot delve into the same level of detail as a local plan. We hope, however, that this regional plan for the Southern Rockies can complement and aid local groups’ efforts. For example, the Upper Arkansas and South Platte Project applied the regional data produced from SITES, the reserve design optimization computer program used in the Network Design, to a local plan—The Upper Arkansas and South Platte Inventory. The SITES output matched very well with the local inventory that was based on field work and expert opinion. The SITES analysis covered the federally protected Wilderness Areas, the areas proposed for wilderness protection, and potential connections for animal movement. In addition, it also identified several areas of biological importance that were not initially included in the Inventory. Thus, just as local groups can inform the regional plan, so too can the regional plan add to the local effort. The results of these models are found in Chapter 8 and the methods used are described in Chapter 7.

Chapter 4 offers a general philosophical and historical background for conservation strategies and reserve design. In this chapter, we lay the groundwork for our scientific approach. In Chapter 9 our conservation Vision for the Southern Rockies is revealed, with specific areas of importance outlined in a Network Unit Analysis. Chapter 9 is the

centerpiece of the document, and it unites the scientific models with local expert opinion to produce a plan of action. And, finally, Chapter 10 introduces ideas for on-the-ground implementation of this Southern Rockies Wildlands Network Vision – the next steps of action and movement on behalf of this plan.

In addition to the main chapters are appendices on our chosen focal species: American marten, beaver, bighorn sheep, black bear, cutthroat trout, grizzly bear, lynx, pronghorn, and wolf. These chapters discuss the species' demographics and their importance in the Southern Rockies. In many cases, these species act as excellent habitat quality indicators and wilderness quality indicators. Management recommendations for each species are then presented.

Current reintroduction efforts of the Canada lynx into Colorado are an important step toward rewilding. The lynx is thus a focal species in the flagship species category (see Chapter 4, Appendix 1, Miller et al. 1998). This category recognizes the value of lynx for public education and conservation campaigns. For this iteration, we did not use lynx movements to highlight areas of ecological importance because of the tendency for reintroduced animals to explore widely (one lynx released in Colorado wandered to Nebraska). As the reintroduced lynx settle into an ecological routine, future drafts can incorporate their ecological needs.

We propose that the next important step for the Southern Rockies is reintroduction of the gray wolf. We outline some issues of wolf recovery in the focal species

account found in the appendix. For more detail on the potential for gray wolves in the Southern Rockies, see a report titled *Feasibility of Reintroducing the Gray Wolf to the Southern Rockies* by Phillips et al. (in press).

Our Vision is being edited at the same time as this report. Because of the common interests of both documents, parts of the report are included within our Vision. You will find this noted at the beginning of each chapter if that is the case. Duplication is done with author's permission.

As a final introductory word, in this document we use the metric method, a global standard of measurement, instead of the American method. We offer a quick summary table, with conversions rounded off, for reference:

- 1 hectare (ha) = 2.5 acres—in other words, 0.4 ha is the same as an acre. For example, when the Wilderness Act refers to areas of land exceeding 1,000 acres, the metric equivalent is 400 ha.
- 1 meter (m) = 39 inches—thus a 13,000 ft. mountain is 4,000 m.
- 1 kilometer (km) = 0.6 miles—in other words, 1.6 km is the same distance as a mile.
- A change of 1 degree Celsius (C⁰) = a change of 1.9 degrees Fahrenheit—the freezing point of 32 degrees Fahrenheit equals 0 C⁰.