

Colorado Natural Areas Program

The Field Press



Volume 1, Issue 2

November 1998

What's new at CNAP

Colorado Natural Areas preserve some of the finest examples of Colorado's original and unique landscapes for the benefit of present and future generations. Sites qualify as Colorado Natural Areas when they contain at least one unique or high quality feature of statewide significance: **native plant communities, geologic formations or processes, paleontological localities, or habitat for rare plants or animals.** It is the responsibility of the Colorado Natural Areas Program to identify outstanding natural features throughout the state, to recognize landowners for their stewardship of these special places, and to work with interested landowners to maintain important pieces of Colorado's natural heritage. All management agreements are voluntary and non-binding.

CNAP Publishes Guide to Native Plant Revegetation

After several years of work involving many dedicated natural resource professionals, the *Native Plant Revegetation Guide for Colorado* is finally available. The guide provides information on how to select, plant and maintain Colorado native plant species for a wide range of landscaping, revegetation and reclamation needs. This guide is intended to provide a basic understanding of the natural communities in Colorado and the processes involved in establishing native species in those communities. To obtain a copy of the guide, please stop by the offices of Colorado State Parks at 1313 Sherman, Room 618 in Denver, or send \$5.00 postage for first class or \$2.74 book rate (stamps only please!) and a completed mailing label for each copy requested. The *Native Plant Revegetation Guide for Colorado* is also available online at:

<http://elbert.state.co.us/cnap/publications.html>

Field Season in Review

With the arrival of autumn, the Colorado Natural Areas Program ecologists have returned from a summer of long days in the field, exploring the state to identify potential Natural Areas and providing stewardship and management assistance to owners of existing Natural Areas. CNAP field work involves all the exciting and mundane tasks required to establish and sustain a system of natural places that catalog Colorado's natural heritage -- hiking to remote areas, wading through streams and wetlands, braving frequent storms and occasional encounters with large animals, filling out forms, identifying plants, taking photographs, and working with landowners to evaluate properties, put up fences, pull weeds, remove trash, or locate rare species.

All this is done to recognize and protect part of Colorado's abundance of natural resources, resources that contribute to the quality of life of Coloradans, but that are, in many cases, rapidly

(Continued on page 4)

In this issue

Director's Corner	2
Natural Areas Council	3
Council Member Profiles	5
Natural Area Profile	6
CNAP Projects	7



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From the Director . . .



In addition to the busy field season, the Natural Areas Program has been involved with two major projects central to our existence and effectiveness.

- The reauthorization of the Colorado Natural Areas Council
- A strategic plan to focus our efforts in key areas

Reauthorization

The Colorado General Assembly passed the Colorado Natural Areas Act in 1977. The Act included a provision that the General Assembly must periodically review the Natural Areas Council. The first legislative review occurred in 1982, and the second in 1987. The next review is scheduled for the upcoming legislative session. The Natural Areas Program staff has compiled information required by the Department of Regulatory Agencies (DORA) for their report to the legislature. A description of the Council's importance to the Natural Areas Program was included in our report to DORA and is available on our web page under Natural Areas Council News. DORA's report was completed in mid-October, and ***recommends that the General Assembly continue the Colorado Natural Areas Council.***

The Senate Agriculture, Natural Resources and Energy Committee will review DORA's recommendations. The committee will take testimony from interested members of the public as early as November. However, because of the recent elections, the hearing may be postponed until next year, when the new committee members are in office. The recommendations of the Senate committee, usually in the form of a legislative bill, will be heard by the General Assembly sometime after they convene in January.

We will be working with the committee members to provide them information on the Council and its importance to the Natural Areas Program. Please contact me if you would like more information about the reauthorization process. We will also be providing up-to-date information on our web site.

Strategic Planning

The September Natural Areas Council meeting at Golden Gate State Park was dedicated to a facilitated strategic planning session. The Program staff and the Natural Areas Council were joined by

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(Continued from page 2)

representatives from the State Land Board, the Division of Wildlife, The Nature Conservancy, the Colorado Natural Heritage Program and others. Using the legislative intent of the Natural Areas Act as a starting point, we identified three key focus areas, goals and specific objectives for the next three years. We will be presenting these items to the Natural Areas Council at the November meeting. Look for the strategic plan in the next issue of the Field Press. If you would like more information before that time, please call me.

— Mark

Natural Areas Council News

At the June Council meeting in Cañon City, staff and Council visited three nearby designated natural areas. Dan Grenard of the local BLM office led us to Garden Park Fossil Locality, one of Colorado's richest dinosaur sites. BLM has acquired about 100 additional acres at two of the quarries, and CNAP staff is arranging for these acres to be added to the natural area. Extensive research continues at the site by the Denver Museum of Natural History and Canon City's own Dinosaur Depot. At Indian Springs Fossil Locality we were warmly hosted by owner and protector Carly Henry. Carly's parents, Bennie and Sylvia Thorson, were instrumental in bringing this world-class paleontological site to the attention of science. Council chair Lee Shropshire referred to the experience of seeing the half-billion-year-old prints of half-inch-long creatures as

"almost a spiritual experience." We agreed. Tod Zechiel of the BLM took us to the aptly named High Mesa Grassland (see page 6) with its phenomenal view of the Sangre de Cristo Range, where the grazing lessee would like to change the stocking program. CNAP staff members have since returned to the site and established long-term monitoring plots.



"To understand the fashion of any life, one must know the land it is lived in and the procession of the year."

Mary Austin
The Land of Little Rain.

The **Natural Areas Council** is a vital component of the Natural Areas Program. Its duties are manifold. The Council provides an arena for public discussion; serves as policy setter and technical advisor; provides an informal bridge to the public, to legislators, and to other conservation agencies; reviews the natural areas inventory; approves the registry; recommends natural area designations to the Parks Board; reviews scientific research, educational use, and interpretive programs in natural areas; recommends Articles of Designation; and advises the Parks Board on the disbursement of funds. The Council has included, over time, geologists, paleontologists, zoologists, botanists, ecologists, and land managers. The Council has a well-substantiated record of public service, and staff is grateful for their professional support.

(continued from page 1)

disappearing. Some of these resources include scenic geologic features, paleontologic features ranging from large dinosaur bone deposits to concentrations of minute trace fossils, unique areas that support pockets of endemic species (ones confined to a small area), and large natural communities that have remained relatively unaltered since the last century.

1998 Field Season activities

- ◆ **Site evaluations:** Staff evaluated 32 sites for their natural area potential. Nominations of potentially significant sites come from private landowners, university professors, the Colorado Natural Heritage Program, our own staff, and other interested citizens and professionals.
- ◆ **Park Resource Inventories:** Mark Gershman and Kathryn Goldman spent the summer gathering data on wetlands, rare plants and weeds in several state parks. This information, along with extensive information on everything from cultural resources to property ownership, is now being compiled into geographic information systems (GIS) that will be made available to park managers to improve resource based planning. Kathryn has now left the program, but Rob Billerbeck, a recent graduate of the University of Maryland Conservation Biology Program, has joined this project.
- ◆ **Stewardship Trust:** As part of an ongoing survey of the natural and recreational resources on State Land Board properties, staff conducted field visits of 29 sites nominated for the Stewardship Trust. Many of the sites were just outside urban areas and were nominated for their open space and buffer values. Others were nominated for rare plant and animal habitat, scenic or recreational values, or for their pristine natural landscapes. CNAP's report has been forwarded to the Land Board for their use in evaluating nominated sites.
- ◆ **Site Management:** CNAP staff and Council members visited three designated Natural Areas

in the Arkansas River Valley (see page 3). These visits gave staff and Council an opportunity to meet with landowners to discuss management and stewardship needs.

- ◆ Janet Coles and Kathy Carsey worked with volunteers from the Colorado Native Plant Society and federal agency personnel in the Piceance Basin, Grand Junction and Cortez areas and the Arkansas and San Luis valleys to monitor populations of rare plants on six designated Natural Areas.



*Colorado Native Plant Society
volunteer Steve Austin
monitoring rare plants at
Badger Wash.*

Outstanding potential Natural Areas visited

Among the outstanding sites visited this summer are:

- ◆ Two large private ranches whose owners are interested in conserving the natural resources on their properties. Both ranches provide habitat for rare fish and plant species as well as exemplary natural plant communities.
- ◆ Two important potential natural areas with geologic features. One, in northern Colorado, features landscapes formed by glaciers and relict Ice Age plants that grow in very few places in the state. The other, in central Colorado, has excellent examples of ancient deltas formed by prehistoric rivers.

CNAP staff will work with landowners of these sites to determine their interest in designating them as Colorado Natural Areas.



Council Member Profiles

The members of the Natural Areas Council are the folks who regularly ask us the hard questions and put us on the spot. They alternately get us to expand our visions, and keep us on the straight and narrow. We really appreciate their help and would like to introduce them.

Council Chair is **Dr. Lee Shropshire**, recently retired after 33 years as Professor of Geology at the University of Northern Colorado. Lee feels his Council work is "perhaps the best way I can volunteer my time, energies and expertise to benefit future generations of Colorado citizens." Anytime the truck stops on site visits, Lee's first action is to pick up a rock. And if we ask him, he can then tell us a several-million-year history of the place.

Dr. Ruth Willey (we know her as Scottie) is our Western Slope representative. For many years she and her husband Bob migrated between Chicago, where they were faculty members at the University of Illinois, and their second home at the Rocky Mountain Biological Laboratory (RMBL) in Gothic. A cell biologist by training, Scottie is no slacker when it comes to wielding a scanning electron microscope. She also has an esteemed history of field research at RMBL (starting in 1957!) and continues to serve as senior investigator, specializing in aquatic biology.

Lynn Riedel is a plant ecologist/natural resource manager with City of Boulder Open Space, one of the largest and oldest municipal systems in the country. She's been interested in Colorado conservation for the 23 years she's lived here. Boulder Open Space manages the Tallgrass Prairie Natural Area, where the big bluestem has recently cured and colored into stands of russet. Lynn feels that "one of the most urgent and compelling tasks of our time is protection of the remaining natural areas in our country and across the globe."

Jay Kenney is an attorney, so there is little that staff can say in Council meetings that doesn't get examined rather carefully. He spends 75 percent of his time in environmental work, but his "real expertise" is in whitewater kayaking, which provides inspiration for all the rest. "Rivers and watersheds inform my direction and provide the connection I need to land, clean water, and air." Jay also serves Colorado by sitting on the State Board of Land Commissioners, which oversees management on three million acres of state lands.

Late breaking news: CNAP is pleased to announce that Governor Romer has just appointed **Will Murray** as the newest Council member. We offer him a warm welcome. Will is managing partner in Conservation Impact, an impressive company that specializes in enhancing the organizational capacity of conservation groups. Prior to this he had a long history with the Nature Conservancy, including Director of Conservation Programs for the 11-state western region. In addition to pastimes of fly-fishing, mountaineering and birding, his interest in natural areas stems from "the vital importance for youngsters to have a positive outdoor experience to guide their growth and development."



Phil James is our representative from the Colorado Wildlife Commission, which sets policy and regulations for the Division of Wildlife. Among its other duties, the Division manages over 250 state wildlife areas. Phil is Senior Vice President for Sustainable Development at ConAgra, Inc., and lives in Ft. Collins. When these interests don't take all of his time, he also serves on the Nature Conservancy's Board of Trustees -- both at the Colorado and the national levels.

Natural Area Profile: High Mesa Grassland



View of Pikes Peak from High Mesa Grassland

the Arkansas River Valley, high above Cañon City, High Mesa (known locally as Somerville Table or Table Mountain) had good grass but no water. Small numbers of cattle grazed the area sporadically, but the area could never support either large numbers of livestock or for very long without a water source. Therefore, unlike many montane grasslands in Colorado, the species composition at High Mesa has changed little since the late 1800s. Parry oatgrass, mountain muhly, junegrass, western wheatgrass, slender wheatgrass, blue grama, and others form the grassy matrix of the Natural Area. Penstemon, cinquefoil, groundsel, goldenaster and lupine provide splashes of color through the summer. Where the soils are thin and rocky or the volcanic bedrock is exposed, dense shrublands of oak and mountain mahogany form islands in the sea of grass.

The “High Mesa” part of this Natural Area’s name comes from the underlying geology. A cap of dense volcanic rock protects the underlying granite, sedimentary rocks, and volcanic ash flows from the erosion that cut the Arkansas River canyon half a mile deep next door. The cap is part of the Thirtynine-Mile Volcanic Field, which was active periodically between 35 and 27 million years ago and spewed out thousands of feet of ash and lava. A final burst of volcanic activity about 19 million years ago produced the protective cap of andesite that forms Table Mountain.

Some scientists think that High Mesa Grassland is similar to what the floor of South Park, located 30 miles north of the Natural Area at nearly the same elevation, looked like before 1850. Beginning in the late 1860s, South Park became a center for hay and livestock production. Numbers of livestock grazed in South Park peaked at nearly 40,000 sheep and more than 100,000 cows in the late 1920s. This intense, long-term use took its toll on the grasslands of South Park, removing virtually all of the palatable grasses and leaving a relatively sparse plant community consisting primarily of junegrass, blue grama, and fringed sage. If the scientists are correct, then High Mesa Grassland could serve as a model for restoration of the original plant community of South Park.

Table Mountain has been much honored over the years. The Somerville Table Research Natural Area was established by the BLM in 1965 (its

“Good grass”

That comment was made in 1881 by E. B. Soper, the government surveyor who laid out the townships containing High Mesa Grassland. It is still probably the best description of this 1100-acre Natural Area managed by the Bureau of Land Management (BLM).

While most areas in Colorado containing “good grass” simply became “good grazing” for domestic livestock, High Mesa Grassland took a different route. Located on the north rim of



(continued from page 6)

680 acres form the core of the modern High Mesa Grassland Natural Area). Somerville Table was recommended for National Natural Landmark status in 1968, although it was never given that status. The High Mesa Grassland Area of Critical Environmental Concern and Colorado Natural Area was established by the BLM and the Colorado Natural Areas Program in 1987.



McElmo Research Natural Area

Volunteer Stewards Wanted

We'd like to welcome our first, official volunteer stewards – Marian and Peter Rohman of Cortez. The Rohmans volunteer as our eyes-in-the-field for McElmo Research Natural Area in Montezuma County – 400 acres designated for its assemblage of reptiles. In addition to periodic visits to the site and identifying management concerns, the Rohmans are helping us set up the procedures for the volunteer steward program. With 60 designated sites, we're still looking for 59 other stewards. How about you? Please call Ron West (303-866-3203 x326) if you have a favorite natural area and can commit to at least one visit per year.

CNAP Projects

Natural Areas Protection Program

One of the mandates of CNAP is to protect original and unique places in Colorado by designating sites as Natural Areas. But the work shouldn't stop there. Once sites are designated, additional measures must be taken to help assure that the sites are protected and properly managed for the long term.

Prior to 1993, these extra efforts at protection were constrained by a small staff and limited funding. That changed in 1993 with funding from the Great Outdoors Colorado Trust. While the size of the staff hasn't increased by much, the funding available for stewardship (an average of \$17,000 per year) has enabled CNAP to create the Natural Areas Protection Program.

Over the past five years, the Protection Program

has funded 35 projects including protective fencing at High Mesa Grassland, ecology and management studies for the tiger salamander at Mexican Cut, a management plan for Bonny Prairie, interpretive signs at Rabbit Valley and Fruita Paleontological Research Natural Areas, and integrated weed management assistance at Roxborough.

The focus for the 1999 Protection Program funds will be on integrated weed management efforts at Colorado Natural Areas. CNAP staff will be contacting owners and managers of these areas over the next several months to determine existing mapping efforts and to receive input on specific weed management needs. A list of priority projects will be compiled based on this mapping and information gathering process.



CNAP Projects

CNAP works with Forest Service on Research Natural Area establishment

The U.S. Forest Service maintains a system of Research Natural Areas (RNA) in each region of the United States. These sites receive a higher degree of protection than does wilderness. Live-stock grazing is not allowed and recreation is not encouraged in RNAs. Although the RNA program has existed since the 1930s, the Forest Service's Rocky Mountain Region (which includes Colorado) lagged behind in the number and size of established RNAs, as well as in their use in research. That changed in 1993 with the hiring of Tom Andrews as RNA Coordinator for the Rocky Mountain Region. Since then, Tom has worked with every National Forest in the Region to identify, evaluate and establish RNAs. His goal is to provide a wide representation of plant community types and ecosystems characteristic of the southern Rocky Mountains. These areas would be largely free of recreation and manipulation, and thus would stand as a "library" of undisturbed areas against which the effects of management and recreation could be measured.

CNAP has been involved in the RNA program since 1994. Our role has been to provide the Forest Service with ecological evaluations of each area nominated as an RNA, so that the USFS has the information it needs to determine (1) whether a nominated site qualifies for RNA status, and (2) whether a site complements the existing collection

of plant community types in the RNA system. Over the past four field seasons, CNAP staff have visited 70 nominated sites totaling nearly half-a-million acres. Conducting the evaluations has given us an excuse to visit many of the most spectacular mountain areas of Colorado, from the Uncompahgre Plateau to the Sangre de Cristo Mountains to the Park Range to Pike's Peak. Prior to taking on this project, the mountainous part of Colorado had been largely ignored by CNAP, not because it was unimportant, but because low-elevation sites were perceived to be more threatened. We could not pass up the opportunity, however, to get significant protection for large areas of relatively undisturbed, albeit common, montane ecosystems. Furthermore, we consider 23 of these areas to be of potential statewide significance and hope to include them in the system of Colorado Natural Areas.

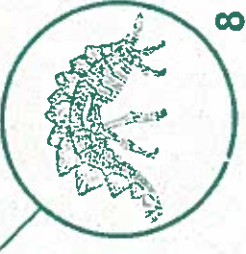
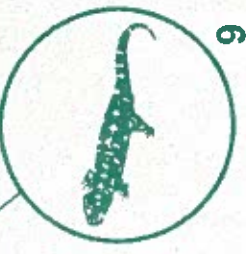
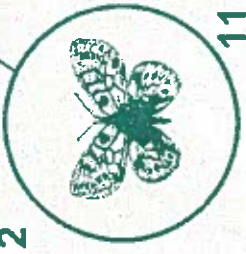
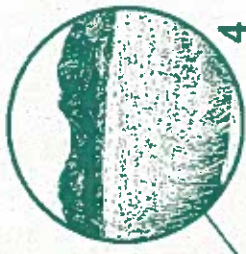
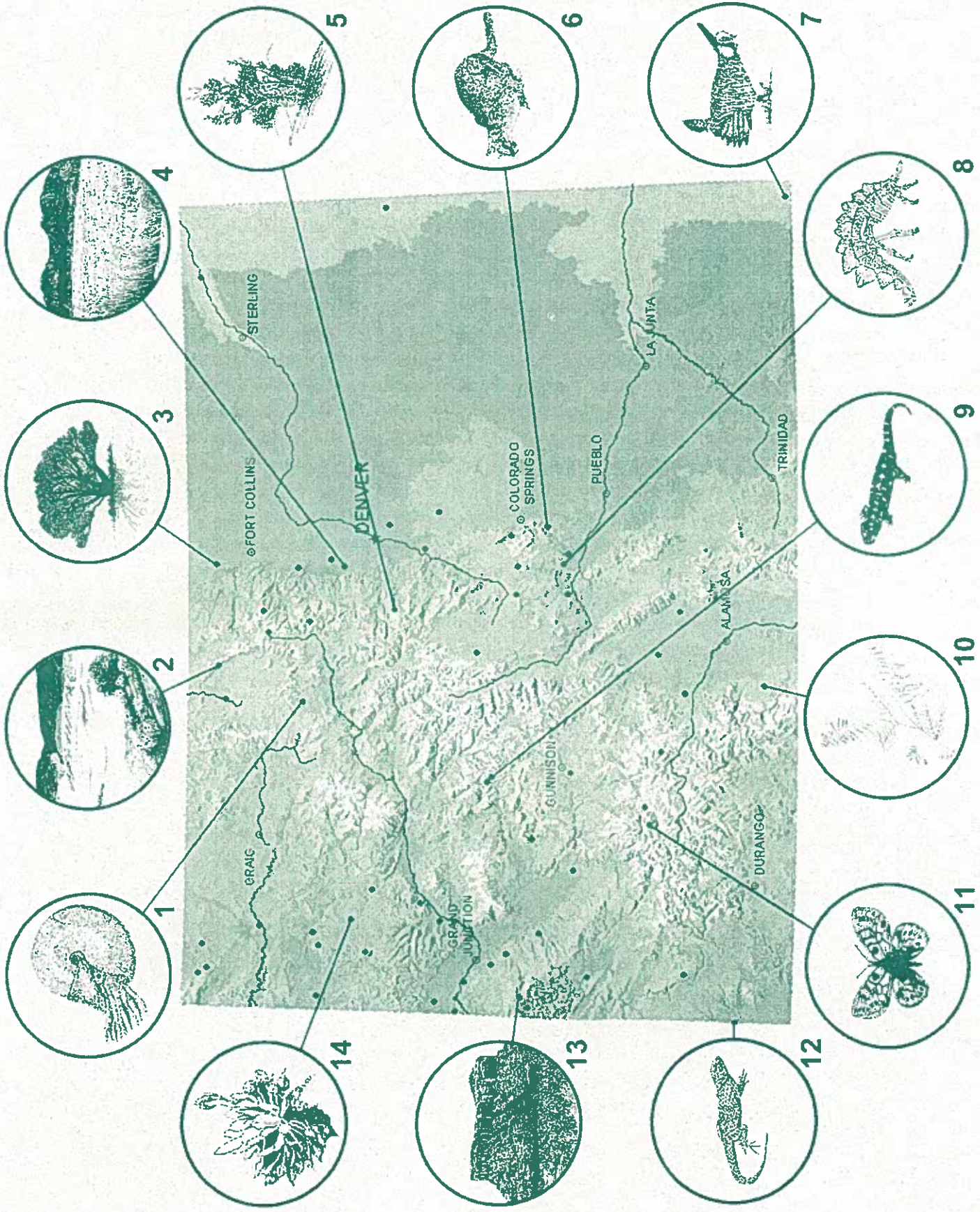
The field work phase of the RNA project is complete. The major remaining task is to assist the USFS with completing the documents needed to establish the areas they select as RNAs. The Rio Grande National Forest has established five of the seven sites nominated on their Forest; the Arapaho-Roosevelt National Forest will establish seven sites on the Forest and three on the Pawnee National Grassland. Ten of these sites are being considered as Colorado Natural Areas.



Colorado's Designated Natural Areas

The map on the next page provides examples of the variety of natural features currently preserved in the Natural Areas system.

1. **Kremmling Cretaceous Ammonite Locality** - *Placenticerus* spp.
2. **East Sand Dunes** - rare dune formations
3. **Owl Canyon Piñon Grove** - disjunct population of piñon pines
4. **Colorado Tallgrass Prairie** - prairie remnant
5. **Mount Goliath** - bristlecone pines
6. **Aiken Canyon** - habitat for mountain lion and other wildlife
7. **Comanche Grassland** - lesser prairie chicken
8. **Garden Park Fossil Locality** - *Stegosaurus* type locality
9. **Mexican Cut** - tiger salamander populations
10. **Rajadero Canyon** - Ripley milkvetch
11. **Redcloud Peak** - Uncompahgre fritillary
12. **McElmo** - reptile habitat
13. **Gateway Pallisade** - cool geology
14. **Dudley Bluffs** - Dudley Bluffs bladderpod





FRIENDS OF COLORADO NATURAL AREAS APPLICATION

*I/We wish to join Friends of Colorado Natural Areas!
(Choose among these annual tax-deductible memberships)*

\$15 Individual \$25 Family \$8 Student or Senior

A larger gift is greatly appreciated and will help protect individual natural areas.

\$50 \$100 \$1000

Name(s) _____

Phone () _____

Address _____

Fax () _____

City _____ State _____ Zip _____

Yes, I would like to be a volunteer.

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