

Colorado Natural Areas Program



The Field Press

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Colorado Natural Areas conserve 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, fossils, 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.

Welcome to New Stewards

Natural Areas is becoming abundantly rich with volunteer stewards! We now have stewards for 41 natural areas. Having just started this program in 1999, we appreciate the wonderful response from all the talented folks who have stepped forward. Your efforts are truly indispensable. We are welcoming 25 new stewards from all across the state.

On the Western Slope, Brenda Bafus-Williams is watching over both Fairview's rare plants and Redcloud Peak's high-altitude fritillary butterflies. Bill and Cheryl Day have taken on the huge Irish Canyon/Limestone Ridge complex, as well as

(Continued on page 5)

Ken-Caryl Ranch Designation Forms Keystone of Dakota Hogback Natural Area

The Colorado Natural Areas Program is proud to announce the designation of 1600 acres of the Ken-Caryl Ranch as Colorado's newest Natural Area. Articles of Designation were signed in June 2000, following the unanimous support and approval of both the Colorado Natural Areas Council and the Jefferson County Board of Commissioners.

Rare plants from the Ken-Caryl Natural Area site include Bell's twinpod, a low-growing mustard with beautiful, bright yellow flowers, and forktip three-awn, a grass which is known from fewer than five places in all of Colorado. The Natural Area also supports a good quality foothills mixed grass

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From the Director . . .

Continuing to work for Colorado

The Natural Areas Program continues to identify, register, and designate new Natural Areas across the state. 2001 will be a banner year for the program with over twenty new areas added to Colorado's system of Natural Areas. CNAP staff are working with a variety of partners in this effort. State, local, and federal land managers have assisted in the designation of new Natural Areas.

Private lands also protect a variety of important landscapes across Colorado. Outreach efforts through local land trusts are envisioned as a way to increase the number of State Natural Areas on private land. A natural area designation is accomplished through a voluntary, non-binding agreement between the landowner and the Natural Areas Program. Designation is recognition of a landowner's commitment to stewardship.

Thanks to all our partners who have made this such a productive year for the Natural Areas Program.

Bob Finch
 Acting Director

Natural Areas Council News

Stewardship Efforts Honored with Natural Area Designations — New Properties Representing Colorado's Natural Heritage

Recent months have seen a flurry of activity by the Natural Areas Council. Twenty-two properties were added to the registry of sites that qualify as Colorado Natural Areas at the Council's May meeting. In addition, thirteen of these sites were then recommended for designation at the June meeting. Six of these properties represent expansions of previously designated Natural Areas.

The sites recommended for designation are state trust lands which are part of the State Land Board's Stewardship Trust of properties with significant natural heritage values. These new natural area designations will honor the stewardship efforts of local lessees and the State Land Board with a Natural Areas designation certificate and the

(continued on next page)

opportunity to receive technical and management assistance. The Natural Areas Designation is also a highly regarded recognition for responsible, local management of natural resources.

Natural Areas recognition of Land Board properties that are part of the Stewardship Trust helps achieve conservation objectives in two ways: 1) it protects local areas that are contiguous to other lands having natural heritage significance, improving our chances for protecting a resource; and 2) the agreement to continue responsible management of these areas helps achieve Natural Area Program goals when limited funding is available for land protection.

In other action at the June meeting, the Council also approved the expansion of Natural Area boundaries at Roxborough and Castlewood Canyon state parks to reflect a recent acquisition by the Division of Parks and Outdoor Recreation, as well as to include significant natural features just outside the existing natural area boundaries. The approval by the Council for these boundary expansions means greater recognition and protection for the Black Forest ecosystem at Castlewood Canyon, protection for spring and winter raptor habitat, and protection for the rich geologic history at Roxborough Natural Area.



Toward a Representative Natural Area System

Colorado currently has 63 designated Natural Areas that contain outstanding examples of native plant communities, geologic formations, paleontological localities, and habitat for rare plants or animals. But how much of Colorado's natural biological and geological diversity is actually represented in Natural Areas? And how much *should* be represented in the system?

Initial analysis of native plant community types and rare flora and fauna on designated Natural Areas reveals that approximately 60 rare animals (40% of Colorado's rare fauna) and 60 rare plants (10% of the rare flora) are currently represented in the system. More than half of Colorado's community types are represented in Colorado Natural Areas. But many questions remain. Some of them are:

- ❖ What size and how secure are the populations and communities that occur on Natural Areas?
- ❖ How much habitat and how many populations are necessary to provide adequate protection for Colorado's rare fauna and flora?
- ❖ Which species and communities are well

represented in other protected areas in the state, and therefore might be lower priority for natural area designation?

- ❖ Where do concentrations of endemic or vulnerable species occur?
- ❖ Which areas of the state have no Natural Areas?
- ❖ And finally, where should the Natural Areas Program focus its limited resources in order to best conserve a representative sample of Colorado's natural biological and geological diversity?

In order to develop a more complete and detailed analysis of the representativeness of the current system, CNAP began a comprehensive review of designated Natural Areas in January 2000. This system review will help us determine which natural features are adequately represented in current Natural Areas or other protected areas, and where the most significant gaps are. We will analyze results by type of natural feature, ecoregion, threats, and conservation potential. We will then use the results of the study to set priorities for identification and designation of future Natural Areas. Please stay tuned.



CNAP Projects

KEN-CARYL NATURAL AREA (continued from page 1)

prairie, a xeric tallgrass prairie remnant, and a Gambel's oak community at the northern extent of its East Slope range.

Wildlife values in the Natural Area are also high. The hogback contains an active nesting site for prairie falcons and is part of an important corridor for a multitude of migrating raptors – up to 10 per hour during peak migration. Mule deer, elk, mountain lions, golden eagles and a host of other indigenous foothill birds, mammals and reptiles are also well represented.

Excellent exposures of Dakota, Lyons and Lykins sandstone are perhaps the most striking feature. These formations date back as far as the Pennsylvanian period and were uplifted and exposed during the Laramide orogeny which built the Rockies.

CNAP would like to thank the Ken-Caryl Ranch Foundation, the Ken-Caryl Ranch Master Association, and other Ken-Caryl land owners for their interest in preserving the natural values of this property for the long-term. We would also like to thank Sean Warren, Ranger Supervisor at Ken-Caryl Ranch, for his hard work and cooperation in the designation process.



Ken-Caryl Hogback

The site is located a few miles southwest of Denver, near the intersection of C-470 and Ken-Caryl Blvd, and includes two large sections of the Dakota and Lyons hogbacks. This Natural Area is a central piece in the proposed Dakota Hogback Natural Area. CNAP hopes to designate Jefferson County Open Space parcels along the hogback in the near future to create a natural area of more than 4000 acres over a 14 mile stretch of this prominent Front Range feature.



Common teasel
Dipsacus fullonum ssp. sylvestris

CNAP's Integrated Weed Management Planning Handbook Gets Nationwide Exposure

Requests for the latest volume in CNAP's Caring for the Land Series have been coming in from all over the US. The book was featured at a recent US Fish & Wildlife Service weed management training course, and was also touted on the Ecological Society of America's ECOLOG listserv. Over 1000 copies have been distributed to date and these have gone to 33 states and 4 Canadian provinces. Two-thirds of the books have gone to Colorado recipients, including Colorado state parks, county extension agents, land trusts, state, local and federal agency weed management personnel, private consultants, ranchers and landowners. CNAP's *Native Plant Revegetation Guide for Colorado* also continues to be in demand and has received similar exposure. Close to 1100 copies have been distributed in the two years since its publication.

CNAP Projects

NEW STEWARDS (continued from page 1)

Cross Mountain Canyon, all in remote Moffat County. Art and Mara Hertel of Delta travel to the East River's subalpine Gothic Natural Area. Nic and Mary Korte have already visited the Grand Valley's Badger Wash site numerous times. Danni Langdon of Grand Junction has agreed to steward South Cathedral Bluffs, one of the many Piceance Basin sites. Barbara Galloway travels from Arvada all the way to Rough Canyon, next to Colorado National Monument. Josh Overcast, with assistance from Don and Laurie Tyre, are checking out Fruita Paleontological Locality with its sphenodontidsquammates (say what?). Just a few miles away, Dr. Eric Rechel signed on for Rabbit Valley. From the North Fork Valley, Andrea Robinsong travels nearly to Utah and the spectacular Gateway Palisade Natural Area. And finally, rounding out the Western Slope contingent, Paul Sullivan has taken on both the tiny Gunnison Gravels and the diverse Unaweep Seep natural areas.

An equally impressive Eastern Slope team includes our ex-colleague Robert Fenwick, who visits Rocky Mountain NP's West Creek. Alix Gadd of Windsor is enjoying the widely divergent sites of Dave's Draw on the Pawnee, East Lost Park in the Tarryalls, and Hoosier Ridge up on the tundra. Dr. Alice Guthrie gets wet at Boston Peak Fen on the Laramie River. Jim Hoyne also visits the Pawnee at the newly established Chalk Bluffs Natural Area. The team of Dr. Andrea Jones and Doug Busch jointly visit both Garden Park and Saddle Mountain. Robert Karges travels from Colorado Springs to the San Luis Valley's

Rajadero Canyon. Larry Kimball and Barbara Magnuson team for both High Mesa Grassland and Mishak Lakes. Monument's Mary Maurer goes over the mountains to Fourmile Creek at Peart in Park County. And our newest stewards (though longtime volunteers) Bernie and Kim Smith are doing rare plant monitoring at Castlewood Canyon.

Back here in the office, ecologist Ron West enjoys trying to keep up with the load of good questions, comments, completed field forms, and great suggestions from this most excellent group of people. A few additional highlights: The whole Audesirk family helped to complete a map of all surface ammonite specimens at Kremmling Cretaceous, and are now using it on return visits. Bernie Smith joined four CNAP staffers in beginning to inventory the State Land Board addition to Castlewood Canyon. Escalante's steward Jeanne Wenger joined Barbara Galloway at Rough Canyon where they were successful in finding canyon tree frogs – one of very few occurrences in Colorado. Meanwhile, Jeanne and Cindy Carlson found elusive desert bighorn sheep in Escalante Canyon. Danni Langdon and Alix Gadd are also getting together for a jointly-enhanced field visit. Wheeler Geologic steward Janet Potter has agreed to add Slumgullion Earthflow Natural Area to her duties, since she lives just next door in Lake City. And the Korte's are pioneering 21st century botany by taking digital photos of plants in the field and mailing prints to our office for long-range identification. It seems to work most of the time!

"Only by going alone in silence, without baggage, can one truly get into the heart of the wilderness. All other travel is mere dust and hotels and baggage and chatter."

John Muir
Letter to wife Louie, July 1888
Life and Letters of John Muir 1924.



RARE COMMUNITIES IN COLORADO NATURAL AREAS

The table below lists the 45 community types tracked by the Colorado Natural Heritage Program which are found on Colorado Natural Areas. This list should be interpreted cautiously. Most community types cannot be considered “protected” unless the areas are large enough to include the natural processes that maintain the communities, such as fire and other natural disturbances. Although many of Colorado’s current Natural Areas are not large enough to provide this level of protection, a wide range of rare types are represented.

Community Type	Dominant Species	Natural Area
Alkaline spring wetland	<i>Eleocharis quinqueflora</i> - <i>Triglochin</i> spp.	High Creek Fen
Cold desert shrubland	<i>Atriplex confertifolia</i> / <i>Oryzopsis hymenoides</i>	Dudley Bluffs
Cold desert shrubland	<i>Atriplex confertifolia</i> / <i>Pseudoroegneria spicata</i>	Dudley Bluffs Lookout Mountain
Coyote willow/mesic graminoid	<i>Salix exigua</i> /mesic graminoid	Unaweep Seep
Emergent wetland	<i>Eleocharis palustris</i>	Mishak Lakes Unaweep Seep
Emergent wetland	<i>Eleocharis rostellata</i>	Escalante Canyon
Extreme rich fen	<i>Kobresia simpliciuscula</i> - <i>Scirpus pumilus</i>	High Creek Fen
Extreme rich fen	<i>Kobresia myosuroides</i> - <i>Thalictrum alpinum</i>	High Creek Fen
Foothills riparian shrubland	<i>Forestiera pubescens</i>	San Miguel River at Tabeguache
Foothills riparian shrubland	<i>Shepherdia argentea</i>	San Miguel River at Tabeguache
Fremont cottonwood riparian forest	<i>Populus deltoides</i> ssp. <i>wislizenii</i> / <i>Salix exigua</i>	San Miguel River at Tabeguache
Gardner's mat saltbush shrubland	<i>Atriplex gardneri</i> / <i>Leymus salinus</i>	Badger Wash
Montane riparian shrubland	<i>Salix geyeriana</i> - <i>Salix monticola</i> /mesic forb	Dome Rock
Great plains marsh	<i>Scirpus tabernaemontani</i> - <i>Scirpus acutus</i>	Unaweep Seep
Hanging garden	<i>Aquilegia micrantha</i> - <i>Mimulus eastwoodiae</i>	Escalante Canyon
Mesic oak thicket	<i>Quercus gambelii</i> - <i>Cercocarpus montanus</i> / <i>Muhlenbergia montana</i>	Aiken Canyon
Mesic Western Slope pinyon-juniper woodland	<i>Juniperus osteosperma</i> / <i>Leymus salinus</i>	Pyramid Rock Rabbit Valley
Mesic Western Slope pinyon-juniper woodland	<i>Pinus edulis</i> / <i>Cercocarpus ledifolius</i>	Irish Canyon
Mesic Western Slope pinyon-juniper woodland	<i>Pinus edulis</i> / <i>Cercocarpus montanus</i>	Needle Rock Yanks Gulch
Mixed foothill shrubland	<i>Cercocarpus montanus</i> / <i>Stipa comata</i>	Aiken Canyon Owl Canyon Piñon Grove
Mixed mountain shrubland	<i>Cercocarpus ledifolius</i> / <i>Pseudoroegneria spicata</i>	Irish Canyon Limestone Ridge
Mixed mountain shrubland	<i>Quercus gambelii</i> - <i>Cercocarpus montanus</i> / <i>Carex geyeri</i>	Deer Gulch

(continued on page 7)

Community Type	Dominant Species	Natural Area
Montane grassland	<i>Danthonia parryi</i>	Saddle Mountain
Plains escarpment prairie	<i>Stipa comata</i> - <i>Bouteloua gracilis</i>	Owl Canyon Piñon Grove
Narrowleaf cottonwood riparian forest	<i>Acer negundo</i> - <i>Populus angustifolia</i> / <i>Celtis reticulata</i>	Unaweep Seep
Narrowleaf cottonwood/skunkbrush	<i>Populus angustifolia</i> / <i>Rhus trilobata</i>	San Miguel River at Tabeguache
Northern sandhill prairie	<i>Artemisia filifolia</i> / <i>Andropogon hallii</i>	Tamarack Ranch
Sagebrush bottomland shrubland	<i>Artemisia tridentata</i> / <i>Elymus cinereus</i> <i>Symphoricarpos oreophilus</i>	Yanks Gulch
Saline bottomland shrubland	<i>Sarcobatus vermiculatus</i> / <i>Suaeda torreyana</i>	Badger Wash
Riparian shrubland	<i>Alnus incana</i> /mesic forb	Unaweep Seep
Pinyon woodland	<i>Pinus edulis</i> / <i>Stipa scribneri</i>	Aiken Canyon
Upper montane woodland	<i>Pinus aristata</i> / <i>Ribes montigenum</i>	Saddle Mountain
Utah juniper woodland	<i>Juniperus osteosperma</i> / <i>Stipa comata</i>	Escalante Canyon
West slope pinyon woodland	<i>Pinus edulis</i> / <i>Colocogyne ramosissima</i>	Rough Canyon
Western Slope Douglas-fir forest	<i>Pseudotsuga menziesii</i> / <i>Symphoricarpos oreophilus</i>	Deer Gulch
Western Slope grassland	<i>Pascopyrum smithii</i>	Irish Canyon
Western Slope grassland	<i>Pseudoroegneria spicata</i>	South Cathedral Bluffs
Western Slope grassland	<i>Pseudoroegneria spicata</i> phase <i>Arenaria hookeri</i>	Limestone Ridge
Western Slope grassland	<i>Pseudoroegneria spicata</i> - <i>Oryzopsis hymenoides</i>	Deer Gulch
Western Slope sagebrush shrubland	<i>Artemisia nova</i> / <i>Pseudoroegneria spicata</i>	Irish Canyon Limestone Ridge
Western Slope sagebrush shrubland	<i>Artemisia nova</i> / <i>Stipa comata</i>	North Park
Western Slope salt meadow	<i>Spartina gracilis</i>	Escalante Canyon
Xeric sagebrush shrubland	<i>Artemisia tridentata</i> ssp. <i>wyomingensis</i> / <i>Pseudoroegneria spicata</i>	Lookout Mountain
Xeric tallgrass prairie	<i>Andropogon gerardii</i> - <i>Schizachyrium scoparium</i>	Ken-Caryl Ranch South Boulder Creek
Xeric Western Slope pinyon-juniper woodland	<i>Pinus edulis</i> / <i>Pseudoroegneria spicata</i>	Dudley Bluffs Irish Canyon Limestone Ridge Lower Greaswood Lookout Mountain

"From their first greening in spring to the golden crescendo that symbolizes autumn in the Rockies, aspen forests occupy a special place in the hearts of most westerners. In a landscape dominated by the somber hues of conifer, the ivory trunks and apple green leaves of the aspen brighten the majestic monotony of the forest palette."

Audrey DeLella Benedict
The Southern Rockies, 1991



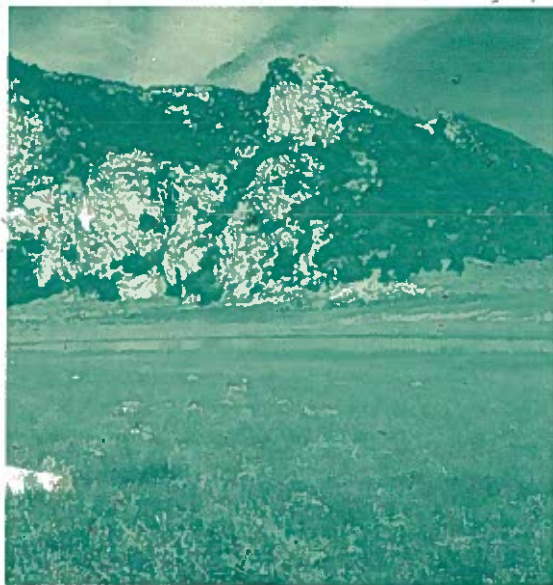
Natural Area Profile: Irish Canyon

IRISH CANYON - A RIVER DOESN'T RUN THROUGH IT

In a remote part of northwestern Colorado, Irish Canyon cuts through Cold Springs Mountain on its way to Browns Park. Like many Colorado canyons, on a June day you experience heat reflecting off the cliffs above, canyon wrens calling, the breeze riffling through the junipers. But something is missing — what is it?

It's the sound of running water. There hasn't been a live stream in Irish Canyon for a very long time. Colorado's largest Natural Area at 13,500 acres, Irish Canyon is an outstanding example of a beheaded stream valley — a canyon cut by a stream that was captured by Vermilion Creek and removed from the canyon hundreds of thousands of years ago in the Pleistocene.

Examples of canyons left high and dry after stream capture occur throughout the western U.S., most are small, some spectacular (as in Unaweep Canyon southwest of Grand Junction). Irish Canyon was selected as a Natural Area because of its moderate size (compared with Unaweep Canyon's 40,000+ acres), outstanding exposures of the structure of the eastern Uinta mountains,



Irish Lakes Playa Wetland



Irish Canyon Natural Area

and significant representation of rare plants and unusual plant communities.

Irish Canyon's rocks are ancient quartzites, limestones and sandstones folded during the formation of the Uinta mountains at the end of the Cretaceous Period, 65-70 million years ago. Uplift and erosion have exposed a continuous chunk of Earth's history in the canyon; great vaulting cliffs of Paleozoic and Mesozoic rocks are exposed in the 800-foot-high canyon walls.

The vegetation is Irish Canyon's other outstanding feature. Northwestern Colorado is dry, owing to its position in the rain shadow of the High Uintas of Utah. The eight and a half inches of precipitation per year that the area gets support pygmy forests of juniper, pinyon, and curleaf mountain mahogany. Low shrublands of black sage occupy high benches on the canyon's flanks. Clinging to the limestone on top of Cold Springs Mountain is an unusual community of cushion plants reminiscent of the tundra — at only 8400 feet. The natural area also contains a large playa wetland known as Irish Lakes — one of very few such wetlands in this part of the state. Although the lakes only hold water for a brief period every few years, they support a robust community dominated by western wheatgrass.

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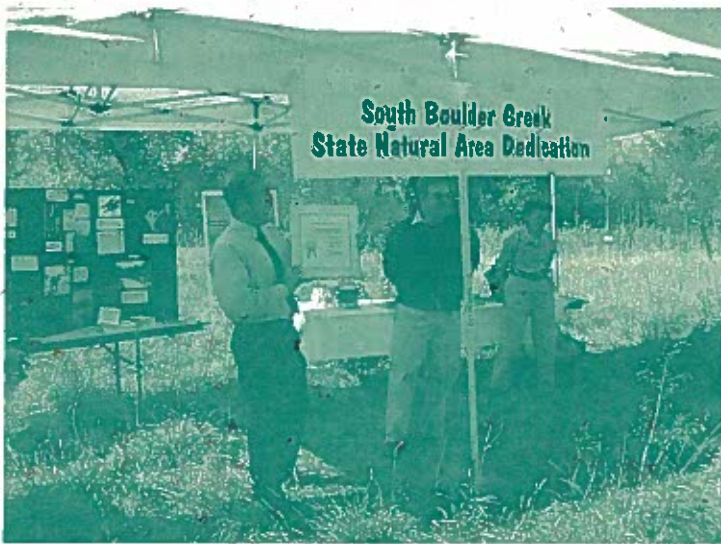
NATURAL AREA PROFILE (continued from page 8)

Although all of Colorado's Natural Areas contain examples of plant communities, few are large enough to support the processes and range of variation needed to claim that they are well-represented. Irish Canyon is one such area; landslides, wind and fire all operate without interference. The result is one of the wildest, most intact and spectacular spots in Colorado.



"...I have faith that through steadfast investigation of the organization and life of the biotic community, we, with painful, slow but not uncertain steps, would draw a little nearer an interpretation of that grand riddle — the geology of the Universe".

John Phillips, 1931
Journal of Ecology

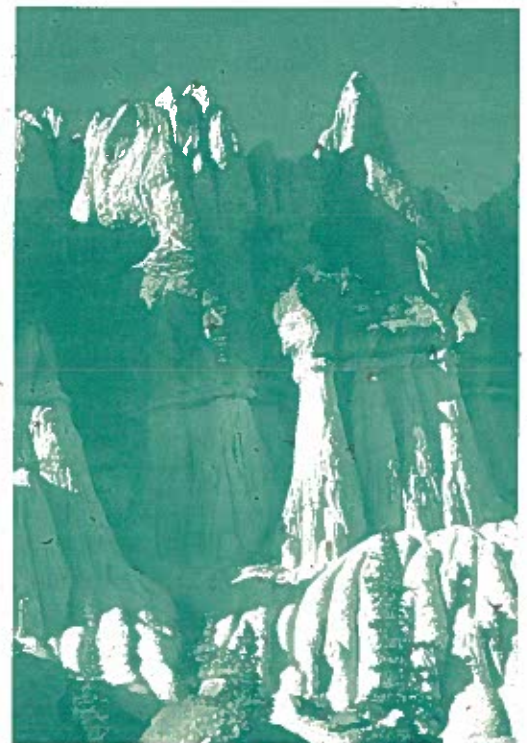


Left to right: Bob Finch (CNAP), Jim Crain (City of Boulder Open Space), and Linda Jøurgensen (former Mayor of Boulder) at the dedication celebration for South Boulder Creek Natural Area, October 17, 2000.

Geologic Advisory Groups – Round II

Many of Colorado's most striking and impressive landscapes are also significant geologic and paleontologic sites. Such features are abundant and varied in Colorado and are an important part of Colorado's Natural Areas Program. Approximately one-third of currently designated sites contain significant geologic or paleontologic features (see the November 1999 newsletter). Many of these were designated as a result of a partnership between the Bureau of Land Management and CNAP during the early 1980's (the original Geologic Advisory Group).

As part of CNAP's Natural Area System Review project, staff have recently met with geologic advisory groups in six regions of the state. Experts from agencies and universities around the state volunteered their time to assist. Geologists and paleontologists participated in discussions of the representativeness of geologic and paleontologic sites, and identified and ranked sites that have statewide, and in many cases, global significance. This information is now being incorporated into CNAP planning.



Wheeler Geologic Natural Area



FRIENDS OF COLORADO NATURAL AREAS APPLICATION

*I/We wish to join or renew our membership in 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

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Yes, I would like to be a volunteer.

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