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1991 Climbing Damage Assessment Report
The Flatirons

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THE FLATIRONS

KARIN NANCE
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For the City of Boulder Mountain Parks in spring semester of 1991 I have assessed various environmental damages, some of which can be attributed to the popular sport of rock climbing. My area of focus is the Flatirons. Some of the problems might be more extensive than what I have reported due to snow coverage of possible damage at this time of year. The purpose of this presentation is to address the growing conflict between the natural environment and its recreational use, specifically rock climbing. Of the areas of Boulder Mountain Park the interns have assessed this spring, my general impressions are that my assigned area, the Flatirons, has received the most human impact due to its popularity and close access to town.

General Access Trails and Erosion

The Chautauqua, Royal Arch, and Bluebell-Baird trails were my main access trails to higher routes. Of course these trails receive more use throughout the year relative to those more remote. These trails are visually obvious, quite easy to follow, rather short, and thus relatively popular. They are used by hikers, joggers, walkers, and even those who rarely move about seem to get up these trails. With the growing population of Boulder as a microcosm of global

growth, the Park should be prepared for these trails to receive more use every season. Many people not accustomed to the problems of environmental destruction easily stray from paths and create new ones which others soon follow. The paved Chautauqua road has a dirt trail just next to it on the left. The Chautauqua field trail has several small trails that lead away from it even though there are closed trail signs. I see these as further cutting up the terrain, encouraging the growth and widening of existing trails, and shrinking of natural habitat areas. I have no solutions to this problem, just hope that with the global environment problems this ignorance will dissipate and awareness will grow.

General Raptor Sightings

Golden eagles, peregrine falcons, and prairie falcons are all shrinking phenomena in the Flatirons. I didn't get the chance to experience very many raptor sightings at all although I occasionally heard them. I found it difficult to identify birds in flight at such a distance with binoculars. I did get the chance to positively identify a prairie falcon sitting atop the W.C. Fields Pinnacle occasionally squawking but refusing to let me see it in flight. All other bird contacts I experienced were too distant for identification.

Maybe the early hour of my outings contributed to my low raptor sightings. Many raptor nests in the past have been located on the same rocks as climbing routes. The problem is that rather, than share the rock, the birds tend to

permanently move from the highly used climbing areas, a growing occurrence. There are places where raptor whitewash is almost indistinguishable from the many chalkmarks from climbers. After repeated nest disturbance from the climbers being in such close proximity, the birds move permanently to other rocks. As the popularity of climbing heightens these "other rocks" grow more scarce.

Third Flatiron and East Ironing Board

Description, Location and Access

Of the Flatirons, the Third Flatiron and one of its adjacent southwest rock slabs, the East Ironing Board, contain among the most bolted routes. Both rock formations can be reached from the south by the Royal Arch Trail up Bluebell Canyon and then taking a right before the first switchback. The trail forks to the far right to get to the Third Flatiron and to the near right for the East Ironing Board. The Third Flatiron can also be reached by traveling south on the Bluebell-Baird Trail and taking a right soon after passing the shelter on the left. The next available right turn will lead up the north side.

Access Trails and Erosion

The north side of the Third Flatiron is a potential erosion area due to the steep grade and a difficult to follow trail on the upper slopes hopefully due to low usage.

The lower south side of the East Ironing Board has high erosional aspects with loose dirt, rocks, and vegetation along the rock base, presumably where climbers would be

walking to view the rock. I postulate that this area of the Flatirons is almost exclusively used by climbers since most hikers tend to hike toward a viewpoint of which there isn't a way of getting to one here. This is a common situation in climbing areas. The access trails that fork off from Royal Arch trail to these sights are extremely difficult to follow with extremely loose soil, vegetation, and rocks. A lot of the loose soil is covered with needles from the ponderosa pines above. The trail next to the south side of the Third Flatiron has rather loose soil too. The topsoil at the top of this trail seems rather rich and extremely loose.

Huge boulders block descent down the East Ironing Board more than half way so reaching the lower routes must be attempted from the east up the south side.

Fixed Protection, Rappel Anchors and Chalk Use

At least seven climbing routes exist on the Third Flatiron's upper north side; only a couple of pitons are known to be placed there. The routes on the south side are too high to be assessed from the rock base; very few are bolted as of 1989.

At Green Thumb, the west side of the East Ironing Board, a new climb is bolted on the northwest corner with about five bolts and an anchor. What I refer to as a "new climb" is a bolted route not acknowledged in Richard Rossiter's manual, Boulder Climbs North (1988) or in the gold route assessment sheets received from Chataouqua Ranger Station, which seems to date up to 1989.

The south side of the East Ironing Board has plenty of new routes added to its already route-abundant area. Two bolts sit just to the left of an old route, Gullwing. Further east on this south side, many climbs within a very small area can be found. Besides the four climbs acknowledged by Rossiter's manual, two of which are of four and eight bolts, there is a new seven bolt route and, as of 1989, a new route of five ring bolts. Two of these climbs had quickdraws (a sling with two carabineers) hanging from many of the bolts. A note next to the climb was dated 11-20 (presumably 1990, before the bolt ban) saying not to steal the quickdraws because someone's bolting was in progress; it was then signed. This area, only from Green Thumb to the unpassable boulders has fifteen routes, not counting those placed after 1988.

Traveling from the bottom south side of the East Ironing Board just before the path-stopping boulders is the popular fifteen bolt Velvet Elvis to which a 1990 three bolt route has been added, Hammer of Thor. Twenty feet to the right is another 1990 new route of eight bolts and a two bolt anchor. Below this route is a chimney formation, within which is four bolts not acknowledged by Rossiter called the Green Room; the climb is actually in a big crack which shows lots of chalk remains. I was surprised at the moderate amount of chalk in rest of the area relative to the amount of climbs. This could be due to the chalk's fading and rock disuse at this time of year. Note that the climbs I refer to are all

bolted; many unbolted climbs also exist here and might someday be bolted. The East Ironing Board should definitely be given a lot of attention from park management due to more bolting potential all over the south side and the increasing climbing use causing erosion in general.

The Third Flatiron has too many rock features for much more bolting but should be monitored for erosion.

Wildlife/Raptor Sightings, Habitat and Concerns

Quite a bit of old and new raptor whitewash streaks the many crevices of the north side of the Third Flatiron, mostly toward the higher regions of the rock on the upper slopes. Firepit use was evident on the upper north slope too.

The south side of the East Ironing Board must be used even in winter; a new sling was evident on 2-8-91 on the route Far Niente that wasn't there on 1-30-91. Many footprints in otherwise untracked snow besides our own decorated the north side of the Third Flatiron too, the access trail to the East Ironing Board. Charred logs at the base of Far Niente also stood out. Brush has been pulled aside in this area along with minor slashing, seemingly done to remove obstacles at climb bases. Lots of untrampled Oregon grape and dried timber lay here too.

On the south side of the East Ironing Board, the furthest east region to be reached before the path-stopping boulders, I have found the most aesthetically displeasing of climbing sights. In general, some climbs are of few bolts or are just a single route and are hard to identify. This

section was truly obnoxious with six routes crossing over each other or only spaced from one to four feet apart. The remaining quickdraws make the bolts very evident. This area is supposedly called "Ring World" now. Lichen growth seems less apparent on this rock relative to the Third Flatiron.

The ledge just west of Velvet Elvis, the climb on the south side of the East Ironing Board just below the unpassable boulders, is a great raptor ledge with lots of whitewash and no chalk marks. The rest of this side of the rock is low on whitewash streaks and only occurred where bolting would never exist due to rock feature abundance. Another charred log was also spotted here. Oregon grape flourished on this lower south side too.

**Queen Ann's Head, W.C. Fields Pinnacle, Woods Quarry
and 1911 Gully**

Description, Location, Access and Erosion

A trail branching sharply to the right up a steep slope just before the Royal Arch trail crosses to the left side of Bluebell Canyon seems to be used as an access trail for Queen Ann's Head, 1911 Gully and to reach the face of the Third Flatiron. The trail itself is extremely steep at the beginning with lots of loose dirt and rock. This path then veers left to about three switchbacks then west through some large boulders until the rock base is reached. The 1911 Gully is also reached this way by just continuing west through the poison ivy-laden, steep slope.

W.C. Fields Pinnacle comes up on the right side of the

Royal Arch trail at the west end of Bluebell Canyon just before the first switchback. The steep gully to the north side of W.C. Fields is very steep with a lot of loose dirt. The climbs happen to be on the east and west sides though.

Heading south, Woods Quarry trail lies west off the Mesa trail, about a three minute walk before Skunk Canyon.

Another two minute walk is time to reach this rock wall that has a fairly wide access trail. By the looks of the rock base it doesn't appear to be highly used though.

Fixed Protection, Rappel Anchors and Chalk Use

Queen Ann's Head has several climbs, one bolted. The angle of the rock prevented me from seeing any route evidence from the rock base. W.C. Fields has two bolted climbs; the west side route, new as of 1989, has five bolts and an anchor with three bright slings. The 1911 Gully is used to reach a lower south slab of the Third Flatiron consisting of two new routes of six bolts and an anchor and three bolts; a third climb is supposedly also bolted here. Woods Quarry Wall has five routes of which three are bolted and look a little rusted.

New Route Potential

Queen Ann's Head isn't steep enough or big enough for more routes to be wanted. W.C. Fields Pinnacle is also too small for more route potential. Woods Quarry Wall also doesn't look steep enough for want of more routes. The Third Flatiron Wall facing the 1911 Gully looks like prime bolting potential, lots of room, steep, low feature rock and

so far only three bolted routes.

Wildlife/Raptor Sightings, Habitat and Concerns

Snowmobile tracks ran along the head of the Woods Quarry trail. The base of the Wall showed charred logs sticking out of the snow. Footprints continued southwest of the climb where no trail existed.

Lots of deer droppings scattered the access trail to Queen Ann's Head. A little whitewash streaked the south sides of W.C. Fields and Queen Ann's but nowhere else on these rocks. A prairie falcon was perched on the top of W.C. Fields for quite some time, ironically right next to the anchor sling. The Queen Ann's access trail off Royal Arch should be immediately attenuated to in able to prevent even more severe erosion in the upcoming warm months.

One area of whitewash was painted somewhat close to a 1911 Gully route. A lot of wild mint grew at the 1911 Gully's base.

First Flatiron and Willy B

Description, Location, Access and Erosion

The First Flatiron may be approached by using the Chautauqua field trail. After reaching the trees, turn left onto Bluebell-Baird trail. It takes about a minute walk to reach the First Flatiron trailhead to the right. Two access trails then run to the south side of the rock. The leftward trail is very stable and displays many big rocks throughout the trail which are great footholders preventing soil impact. The trail to the right, closer to the rock, is labelled

climbing access. This trail is extremely unstable due to loose rocks, vegetation, and dirt.

Willy B is a lone standing pinnacle between the Third and Fourth Flatirons. Access is rather difficult after finishing the switchbacks on Royal Arch trail and heading west along the ridge, Sentinel Pass. Finding any sort of trail is difficult; after passing through a large rock quarry, the most successful idea seems to just keep heading west for the pinnacle. Vegetation or soil erosion seems to be non-existent. This region also seems to have a lot of rocks in places, again convenient for reducing soil erosion potential.

Fixed Protection, Rappel Anchors and Chalk Use

The First Flatiron has three bolted routes. The climbs were blocked by large rock slabs so they could not be seen from the Flatiron's base. About a third of the way up the south side of Willy B were three unrecorded bolts.

New Route Potential

The First Flatiron looks to have too many features to have much bolting potential. Willy B looks like a possible bolt haven.

Wildlife/Raptor Sightings, Habitat and Concerns

Amidst all the Oregon holly, the First Flatiron's climbing access trail seems extremely dangerous due to big loose rocks that easily tumble and pick up speed. This trail needs immediate attention. Three different overhangings jutted out the south side streaked with whitewash.

Although no whitewash, Willy B displayed a lot of rabbit tracks along with an abundance of oregon grape and juniper bushes. If more bolting were to occur here bolters might be tempted to cut some of the trees along the south side since some grow extremely close to, if not cover, potential routes.

The Fin and the Fourth Flatiron

Description, Location, Access and Erosion

The Fin, a rock slab to the southwest of the Ironing Boards is reached the same way as the Ironing Boards, by the Royal Arch trail and then taking a right at the west end of Bluebell Canyon just before the first switchback. Taking the left side of the fork just after the gully will lead to the Fin's base. This rock shows some of the same erosional tendencies as the Third Flatiron and East Ironing Board areas with loose dirt, rocks and vegetation but not as extreme.

The Fourth Flatiron is reached by way of the Royal Arch trail and heading west after the switchbacks to reach the north side, or continuing on the Royal Arch trail and then heading west right before the Royal Arch to get to the south and east sides. The north side seems to have a fair amount of erosion potential possibly due to the trail's steep slope. The south side seemed fairly stable and relatively unused. The soil and vegetation are both pretty loose around the gullies of the three rock slabs.

Fixed Protection, Rappel Anchors and Chalk Use

The Fin has one known bolt route too high to be seen from the rock base. The Fourth Flatiron south face shows a

good amount of chalk. Three unrecorded bolts sit on the northwest side of a thirty foot rock right in front of the south slab of the Fourth Flatiron.

New Route Potential

The Fin is fairly narrow so as not to have much room for more routes. This rock also seems fairly smooth which makes any grips for climbers rare. Plus, since the rock isn't very steep, rated only a 5.8, climbers would probably tend to prefer the more intense climbs in close proximity, i.e. the East Ironing Board.

The Fourth Flatiron could have some new route potential but not extensively since the rock is so featured it doesn't present much of a challenge.

Wildlife/Raptor Sightings, Habitat and Concerns

The Fin's trail off the Royal Arch trail should definitely be monitored for further vegetation and soil erosion.

The north side of the Fourth Flatiron was littered with a fairly large firepit decorated with beer, food and other bottle packaging. A lot of kinnikinic grows at the top. Erosion potential should be watched all around the Fourth Flatiron.

Recommendations

Wildlife

How to minimize the damage to save this ecological oasis is obviously a problem that needs immediate attention. Of the main concerns is preserving this area as one of the most

diverse avifauna habitats in Colorado; this area is essential to the hundred or so breeding birds. Being located in the transitional life zone, this park is a unique habitat for raptors. The raptors seem to be disturbance prone with such restricted, isolated populations; the peregrine falcon has even become a federal and state endangered species. Possible solutions need to be practical, not extreme; closing down the entire park for three years is not only extreme but it won't keep out recreational users like climbers, it will just create more conflict. Designated habitat closure during breeding or seasonally closing nesting cliffs might ensure bird migration. Although nesting sights tend to change with human impact, Rossiter's climbing book does indicate nesting sights, showing they are not ignorant of potential wildlife damage.

Forest management activities also contribute to this montane forest's human impacts and should be minimized. Trail construction, fire prevention, tree thinning and replanting also influence wildlife. The vegetation shouldn't be so manipulated; vegetation change is not necessarily due to damage, it is a dynamic phenomenon that should be minimally altered. Such forest management activities could also contribute to soil erosion. Recreational use definitely influences a habitat but directly altering the area seems to be a potentially destructive habitat threat too.

Patrolling and Monitoring

One of the main problems with the growing sport of

climbing is the huge number of novice climbers relative to those more advanced. Easier routes tend to be bolted instead of the climbers waiting to acquire more skills to climb such a route unbolted. Possibly some sort of committee could be formed of environmentally concise and advanced climbing individuals. They could assess a potential climb and authorize its bolting if someone wished to do so based on environmental safety, the need of bolts due to climbing difficulty and so on. This committee could also authorize replacement of old, rusted, potential dangerous bolts to ensure climbing safety.

Access Trails

Population growth is an inevitable fate of our planet, that means all kinds of populations are growing whether it's according to race, religion, profession, or hobby. Boulder's hikers, joggers, and climber populations are growing and unfortunately threatening the park's survival. Not making trails and roads for these people brings the potential of severe erosion. Yet accommodating this crowd might be a self-fulfilling prophecy and bring more people. Trails and roads create habitat fragmentation; vegetation and wildlife become more restricted within boundaries. According to a study done by Jones in Dec. of 1990, the total area of the park (18 sq. mi.) is smaller than the home range of an eagle pair or one bear. Further dividing the area appears increasingly threatening. But people are going to keep coming no matter what is done so compromise needs to be

addressed, i.e. restricting use in fragile areas yet having easily accessible alternatives, or creating more trail switchbacks in place of vertical, erosion-causing trails.

Other

Aesthetically speaking, chalk has had no effective solutions yet. A dirt-colored chalk is available to replace the common white chalk covering climbing routes yet it isn't popular due to its inability to keep the hands dry, its major purpose. Until an effective substitute is discovered, white chalk marks will still paint the rock. Although I, as a non-climber, find it very difficult to spot bolts on a rock unless some other climbing gadgets are attached to them, rock-colored bolts are now on the market. An alternative to the bright slings decorating the anchor bolts at the top of a climb are two ring bolts. Maybe a rule could be passed to remove all climbing gear from the bolts to minimize aesthetic disturbance.

A last, yet powerful, aide in minimizing environmental disturbance is changing recreational users perspectives in general through education, possibly made available when people buy their jogging shoes, climbing ropes, bird book, trail map or whatever recreational tools. Explaining the advantages of limiting human impact with the damages done in the past (visuals aids are extremely effective) and potential problems makes it easier for people to minimize their own impact on the environment if they know the actual facts, if not details.

CITY OF BOULDER MOUNTAIN PARKS

**CLIMBING ROUTES EVALUATION:
Dinosaur Mountain
Skunk Canyon**

by
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INTRODUCTION:

Both Dinosaur Mountain and Skunk Canyon have in recent years become a focus for sport climbing activity. The introduction of rappel-bolted routes, and the corresponding increase in the numbers of climbers using the area have impacted vegetation, wildlife, and the cliffs themselves quite heavily. For the purposes of this report, Dinosaur Mountain is defined as the area South of Bear Creek extending North up to Skunk Creek, and running West from Square Rock (alongside Mallory Cave Trail) to the Western-most strata of rock known as Fee, Fi, Fo, Fum, Dum, and the North Ridge. Skunk Canyon includes all boulders in and immediately adjacent to Skunk Creek, as well as Ridges One, Two, Three, and Four on the North side of the Canyon.

DESCRIPTION, LOCATION, AND ACCESS:

A large proportion of the climbs on Dinosaur Mountain are accessed by social trails that extend off of Mallory Cave Trail. If one follows Mallory Trail until it takes a sharp turn North just past Der Zerkle and shortly before approaching the cave itself, a well-beaten footpath will be seen running South up into the cirque that runs along the South face of The Hand. This footpath will be referred to as the Cirque Trail throughout the rest of this report. It is a major highway that leads to most of the significant and easily accessible climbs on Dinosaur, and I have noticed a definite worsening of erosion on and around it during the four month course of this study. The Cique Trail runs along the base of many routes

and is thus host to litter in the form of tape balls and rings, which I have frequently collected, as well as other discarded bits of equipment and stick-clipping accessories. I have also observed a significant amount of hikers on this trail, most of whom were wandering about, seeking Mallory Cave. The Cirque Trail receives so much use that in some places it is almost as wide as Mallory Trail, and it deceives ordinary hikers into trying to follow it. A climbing access sign or two would greatly clarify the junction of these two trails. Other forms of access into the Dinosaur/Skunk area consist of social trails that run directly through the riparian alongside both Bear and Skunk Creeks. Extensive usage of these trails to access climbing routes on the extreme North and South sides of Dinosaur Mountain as well as routes in Skunk Canyon has resulted in denudation and erosion along the banks and (I would suspect) increased sedimentation in the creeks themselves. In addition, the gullies running up from the creek between the various strata of rock on Dinosaur are very steep and are eroding quickly as people continue to use them to scramble up and down.

FIXED PROTECTION, RAPPEL ANCHORS, AND CHALK USE:

Many of the crags on Dinosaur Mountain and in Skunk Canyon sport faces bristling with bolts. Certain rocks in particular, such as Der Zerkle, The Hand, The Finger Flatiron, The Box, and The Bubble have a high number of sport routes on them. Altogether, I counted 56 "sport" routes in the Dino-Skunk area, and an approximate total of 309 pieces of fixed gear (bolts, pins, and bashies only) on all climbs, traditional or sport, in my survey.

242 of those pieces are located on Dinosaur Mountain, and 67 of them are in Skunk Canyon. Almost all of the sport routes feature slings or chains at the top which serve as rappel anchors. Often the slings are brightly colored and in sharp contrast to the natural features of the rock and the surrounding vegetation. I could discern no attempt in any case to camouflage fixed protection by using neutral-colored slings or by painting bolts, hangers, and chains to match the rock, nor did I see any of the pre-painted camouflaged bolt hangers now commercially available in use. Most of the modern bolts are 3/8" with SMC, Metolius, Petzl, and (occasionally) ring-bolt hangers. Chalk usage was fairly concentrated in several different parts of the area, particularly on rocks such as The Hand, Der Freischutz, Der Zerkle, The Dwarf, The Finger Flatiron, The Box, and The Bubble on Dinosaur Mountain. I did not discern much chalk in Skunk Canyon in large part due to the fact that raptor-protection related closures of many routes there were in effect at the time of my study. The exception to that in Skunk is the highly noticeable route called The Guardian, which hangs over Skunk Canyon Trail on the South Face of Ridge One and has most of its moves clearly marked by high concentrations of chalk. Extremely chalked-up routes on Dinosaur include Power Bulge, Drugs, Nude Figures in a Hollow Fruit, and all of the climbs on the East Face of Square Rock.

ROUTE DEVELOPMENT POTENTIAL IN AREA:

Both Dinosaur Mountain and Skunk Canyon are comprised of rock that is for the most part of fairly good quality for climbing. Sport climbers have tended to limit most of their development to the shorter West, South, and North-facing cliffs, and have sought out clean, relatively short "face-climbing" lines. The entire area was very active in terms of bolting immediately preceding the ban, and there are attractive faces left unbolted still. I have no doubt that had the ban not occurred, the Dino-Skunk area would have continued to have been steadily bolted.

WILDLIFE/RAPTOR SIGHTINGS, HABITAT, AND CONCERNS:

The closure of most of Skunk Canyon, much of Fern Canyon, and The Sacred Cliffs this Spring sent sport climbers bent on doing routes in the Flatirons to Dinosaur Mountain. Every clear weekend I counted at least a dozen people climbing on a given day. This has had a definite impact on the vegetation wherever these people go, as well as on the wildlife. I saw very little wildlife on Dinosaur short of squirrels, though I did locate what I believe to be a prairie falcon eyrie on the South face of The Hand. I did observe the Golden Eagles who nest in Skunk Canyon circling that area several times, and occasionally I observed them overflying the North side of Dinosaur Mountain. Two separate climbs in Skunk Canyon run directly through eagle nests. Obviously, all of the rocks in the area are potentially excellent raptor habitat, but I did not observe any eagle nest sites other than the ones currently

being monitored in Skunk Canyon. The most predominant organisms in the area were Ponderosa pine and humans.

RECOMMENDATIONS:

The Skunk Canyon/Dinosaur Mountain area would greatly benefit from the placement of climbing access signs at strategic trail junctions, the installation of climbing information trailhead signs at NCAR, and increased raptor closure notice signing. Trail construction that would lift social trails out of the riparian along Bear and Skunk Creeks is badly needed, and erosion-control measures along inter-crag access trails would slow denudation, perhaps help revegetate, and slow expansion of these paths. Trails should be relocated in a manner that channels users onto low-angle rock or stable talus environments, in an effort to prevent further destabilization of the sandy soil in the gullies between rocks. The sandy soil in the gullies on the South side of Dinosaur (which run East-West between the strata) is in particular danger of sliding into Bear Creek.

In addition to these measures, any type of organized chalk clean-up and/or efforts to camouflage hardware and slings would add much to restoring some degree of the natural appearance of the area. I also recommend a policy of removal and closure towards any bolts and routes that are placed in locations which threaten established raptor nest sites, including the three bolts above the eagle's nest on The Inferno (Skunk Canyon; Ridge Two). Patrol of these areas should be increased and sustained to monitor climbers, protect the wildlife and vegetation, and enhance the safety of all

of the users and inhabitants of Dinosaur Mountain and Skunk Canyon
as the area continues to see increased heavy use.

Fern Canyon, Nebel Horn and Bear Canyon

Description, Location and Access

Fern Canyon and Nebel Horn are located just south of Bear Canyon -- in between the huge rock formation called the Slab on the south and the Goose and Goose Eggs to the north. Nebel Horn is the rock horn at the top of Fern Canyon Trail, below the base of Bear Peak (Nebel Horn is sometimes referred to as Turtle Rock, as it resembles a turtle when seen from Boulder). The main climbing areas in Fern Canyon are, from west to east, (on the north side of the canyon) Nebel Horn Ridge, the East Ridge, the Goose and Goose Eggs, and Seal Rock. On the south side of the canyon is the Slab. Fern Canyon Trail is accessed in two ways. One way is to branch Southwest off of the service road where a sign marks the start of Fern Canyon Trail. The other way is to follow the Shanahan North Rim trail to the junction where it becomes the Mesa trail, then instead of following the Mesa trail, head west along an unmarked but obvious trail which leads to the base of the Slab where the trail then turns north and winds through a gully until the Fern Canyon Trail is intersected.

Bear Canyon is south of the Flatirons -- just north of Bear Peak and Nebel Horn and south of Green Mountain. The main climbing areas on the south side of the canyon are, from west to east, the Sanctuary, Poot Ridge, and Overhang Rock. This area is accessed by taking off of the Mesa Trail at the sign for Bear

Canyon Trail or by hiking down from the top of Flagstaff, near Green Mountain.

Access Trails and Erosion

In both Bear and Fern Canyons, and on Nebel Horn between, the slopes which lead to the numerous climbing routes are very steep. The canyon walls which faced north tended to be more densely vegetated than the south-facing slopes of the canyons. Fern Canyon, in general, had denser vegetation cover than did Bear Canyon. The south-facing slopes of Bear and Fern Canyon were the areas most susceptible to erosion due to a combination of the very steep slopes, low degree of vegetation cover, soft or loose, dry soil and skree, and a multitude of trails "spider-webbing" all over the terrain, accessing the abundant climbing routes in these areas. These areas were already seeing a moderately high climber usage at the time of this study -- and the height of the climbing season had yet to arrive. To reduce the risk of snow melt-off and rainwater runoff simply washing massive amounts of soil into Bear Creek, perhaps various access trails could be closed temporarily to allow some revegetation to occur.

The north-facing sides of Bear and Fern Canyons were not so threatened by erosional damage as the drier south-facing slopes of the canyons were, even though these north-facing slopes were equally as steep. The north-facing side of Bear canyon was largely covered with huge chunks of rock -- like giant skree --

or very well vegetated with grasses, shrubs and trees such as pine, spruce and firs. Thus, the climbing route access traffic at its present level does not appear to be impacting the area in a negative manner. The north-facing side of Fern Canyon was vegetated in a similar fashion and accessed relatively few climbing routes, so here again the human impact seemed minimal at the present time. These areas should be monitored to ensure that erosional damage stays at a minimal level.

Fixed Protection, Rappel Anchors and Chalk Use

In the region around Fern and Bear Canyons and Nebel Horn, fixed protection, rappel anchors and chalk use were predominant features. In a great number of rocks and ridges of these canyons, bolts were visible -- some directly from the trails while others were only visible with binoculars or because climbers were using them at the time. Most notably visible were the slings, used as rappel anchors, and the white chalk marks on the rocks. The slings were typically brightly colored nylon or large chains slung between two bolts. These could be spotted from a distance and with the aid of binoculars, the bolts trailing down the route could often be honed in on. The chalk had an eye-catching effect similar to that of the slings and chains. The white chalk when it was heavily used, really stood out against the red rocks of these canyons and made finding the bolts in the routes somewhat easier. Not all of the rocks in these areas had extensive chalk marks, presumably because the

exposure of the rock face allowed the chalk to be washed off, or the routes were less travelled.

To prevent the slings from being so blatant, it could be requested that the climbers, when replacing the worn-out slings, use slings more the color of the rocks and less the radical neons and "unnatural" bright colors.

Except for certain climbs with sheer, blank faces, the banning of the use of bolts and bolt-drills need not be looked at as so much of a limitation by the climbing community. There were numerous areas of pitted rock, cracks and other features which would have been condusive to the use of removable protection on Nebel Horn as well as in both Bear and Fern Canyons. Also, there were a substantial number of climbs already bolted which would be available to whomever so chose to climb the route. If bolting was allowed to continue without some sort of a permit system or some means to control route proliferation, the rocks would run the risk of being over-bolted. This would lead to increased climber traffic as well as a reduction of the aesthetics of the Mountain Parks for its other users.

An alternative to white chalk may be the colored chalks, but the pigment in these chalks may stain the rocks an off color, and climbers find that the colored chalks do not keep their hands as dry as the original white chalk does.

Route Development Potential

There were many rocks and areas of ridges where route development had a high potential if bolting was to be allowed again. Some of these areas were Seal Rock, Overhang Rock, various sections of Poot Ridge, Nebel Horn Ridge and the East Ridge. These were ridges and rocks with seemingly blank faces, so the only way up would be with the use of permanent, fixed protection.

Wildlife/Raptor Sightings, Habitat and Concerns

The area where raptor sightings were most common was on Nebel Horn ridge, where a Golden Eagle pair was nesting (according to a fellow intern who spotted their nest atop the ridge). Other than seeing the Golden Eagles regularly, and occasionally hearing the Prairie Falcons, the raptor activity seemed light. Nebel Horn Ridge and the East Ridge harbored many ledges that were used by nesting birds in the past -- this was evident by the white-wash noticeable in many sections of these ridges. Unfortunately, there were a good number of bolt routes, as well as routes utilizing removable protection, running right through these old nesting sites and all along the ridges where future nest sites could potentially be located.

Seasonal closure of the north side of Fern Canyon and Nebel Horn area should continue. The closed areas should be monitored occasionally -- on a couple of occasions, people were climbing in the areas that were supposed to be closed.

Recommendations

Signing

Signs should be placed along the trails where seasonal closures are to occur. If the signs contained a small, simple plot of the region closed to humans, perhaps people could better figure out just where they aren't supposed to be.

An explanation of the importance of the area closures could be printed and placed in the trail-head, bulletin-housing signs to help folks see a raptor's point of view of human presences in the Mountain Parks.

Wildlife

Monitoring of where the raptors are nesting presently as well as where they have nested in the past should continue. The overall numbers of raptors should be approximated so that general trends of increasing or decreasing species numbers could be correlated with the number of climbers using the area and the effectiveness of the seasonal closure of areas.

Access Trails

These are the cause of one of this observers main concerns in the Boulder Mountain Parks. The way the trails are scattered about presently are inviting soil erosion problems. In some areas of Bear and Fern Canyons, there are

so many climbs, each with its own access trail, that the trails form a mosaic over the ground. People tend to bushwack to wherever they want to go, and over the steep, loose soil in this region, a large number of people going all over the surface have the potential to do severe damage. If people could be encouraged to travel on one main access trail -- to allow some of the random others to revegetate, some of the erosional effects could be curbed. The "encouragement" could either be via signing, or placing branches over excess trails, by printing an informative bulletin, or a combination of these. The bulletin could be put up at the trail heads and contain tips on how to travel in a low-impact manner over the terrain.

Patrol and Monitoring

Some sort of patrol or monitoring of this region should occur regularly to keep an eye on the seasonally closed areas, the conditions of the access trails, and to make sure that no new bolt routes spring up since bolting, at present, is banned.

Markus Nail
C.U. Intern
Spring 1991

BEAR PEAK

THE SLAB SHANAHAN CRAGS / SHANAHAN CANYON THE SPHINX

Description, Location and Access

The Slab, Shanahan Crag, Shanahan Canyon and The Sphinx are all located in the foothills of Boulder and rest on the east face of Bear Peak. All are accessible rather easily by way of the Mesa Trail out of NCAR. The Slab is approachable by heading west off of the Mesa Trail on North Shanahan Trail; Shanahan Crag, Shanahan Canyon and The Sphinx can be found by taking Mesa Trail even further south and turning west on Shanahan Canyon Trail. All trails are well marked and very easy to follow.

Access Trails and Erosion

The access trail from NCAR heading west to Mesa Trail see a lot of traffic. It is very steep in one spot with a series of switchbacks which then level off and meets up with Mesa Trail. Mesa Trail heading south meets with North Shanahan Trail which access The Slab. Continuing south on the Mesa Trail brings one to Shanahan Canyon, which accesses Shanahan Crag, Shanahan Canyon and The Sphinx.

The part of Mesa Trail that is as wide as a road is holding up well to traffic but once it turns to single track the trail is experiencing a bit of erosion. Some real problem spots are a north facing slope a few hundred yards before the Shanahan Canyon Trail and a hundred yard stretch of trail where the single track begins. North Shanahan Trail and Shanahan Canyon Trail see little traffic and are in good shape. There are some small foot paths along the base of The Slab and Shanahan Crag that are very faint and see very little use. Erosion caused by people is not a big problem this time of the year; monitor through summer and fall.

Fixed Protection, Rappel Anchors and Chalk Use

The only fixed protection found were on the southwest face of Shanahan Crag. Most climbs on The Slab, The Sphinx, and Shanahan Crag can be done by top roping or solo. No slings or chalk are visible in the area. No climbers were seen in the area during the semester.

New Route Potential

Degree of difficulty is low in the area and new route potential is probably low.

Wildlife / Raptor Sightings, Habitat and Concerns

None of the formations mentioned thus far have any whitewash or nesting sights to indicate raptor nesting. Ravens have been sighted in the immediate area. A pair of Golden Eagles and Prairie Falcons have also been sighted flying overhead. A herd of deer, approximately 10 to 15, have been spotted in the area of The Sphinx.

SHADOW CANYON

Jamcrack Spire
Devil's Thumb

Description, Location and Access

Shadow Canyon is located just northwest of Eldorado Springs and is accessible by the Mesa Trail out of town. Jamcrack Spire and Devil's Thumb are found on the north side of Shadow Canyon and can be approached by way of Shadow Canyon Trail. The approach to Shadow Canyon is scenic by passage through a meadow on Mesa Trail and then going west on Shadow Canyon Trail. Shadow Canyon itself is moderate in size, with steep talus slopes on the north and south faces. All trails are well marked except for the Mesa Trailhead out of Eldorado Springs which can be difficult to find.

Access Trails and Erosion

Access trails are in very good shape and have seen very little erosion over the course of the semester. Mesa Trail to Shadow Canyon Trail has a great deal of vegetation in surrounding areas which makes soil more resistant to erosion. Shadow Canyon Trail to the saddle between South Boulder Peak and Bear Peak is well protected by a forest canopy and is holding up well to hikers and climbers. The talus slopes on the north face of Shadow Canyon extend from the mouth of the canyon to the back side of The Wings. Most of the talus slopes are access trails to Jamcrack Spire and Devil's Thumb. These trails are very steep, have no vegetation, are very rocky and have loose soil which make them prone to severe erosion. Erosion on the main trails is not a big problem this time of the year; small access trails could become a problem and should be monitored throughout the season.

Fixed Protection, Rappel Anchors and Chalk Use

Devil's Thumb has 5 or 6 pieces of fixed protection on its northwest face. No other protection could be found. There are chalk stains from last season that are barely visible. No climbers were seen on Devil's Thumb during the semester.

Jamcrack Spire has quite a few routes but no fixed protection. The south face of Jamcrack is the home for a pair of Prairie Falcons and it appears that two routes may interfere with their nesting grounds. No chalk marks could be found and no climbers were seen in the area during the semester.

Access to Jamcrack Spire and Devil's Thumb from Shadow Canyon may become a problem during the climbing season. Getting to the climbs does not seem to cause much erosion, but descending will cause a great deal of erosion. One may want to access by way of the talus slope but this may not be safe as it could cause a rock slide into Shadow Canyon.

New Route Potential

Devil's Thumb does not have the potential for anymore routes. Jamcrack Spire does not have any fixed protection but does have some spots where some could be placed. Monitor Jamcrack Spire for future bolting. (Hint!)

Wildlife / Raptor Sightings, Habitat and Concerns

Jamcrack Spire as mentioned is the home for a pair of Prairie Falcons and has the potential for more nests. The falcons have claimed this territory and if they do not return one may expect to see some other raptors nesting here. The Prairie Falcons spend most of their day hunting for food or perched just above the nest keeping watch. On the weekdays, this observer had no problem watching the nest from a distance of 200 yards. On the weekends, traffic and noise increased down in Shadow Canyon and seemed to spook the Prairie Falcons into spending their days in hiding.

Shadow Canyon is passage for many birds and raptors. On any given afternoon Golden Eagles, Prairie Falcons, Ravens and Magpies fill the sky. The Golden Eagles spend quite a bit of time circling over Shadow Canyon and perch quite a bit on South Boulder Peak and the southern rim of the canyon. Ravens can usually be seen in flight over the northern rim of the canyon and this observer suspects quite a bit of nesting in the area but no nests could be found.

Shadow Canyon does not seem to be a prime spot for deer this time of the year but as temperatures warm deer may migrate to the area. In early February, a mountain lion was sighted by some residents in Eldorado Springs.

Special Concerns

Some concerns of the area are the small footpaths along talus slopes leading to climbs on the northern rim. With climbing season beginning, high erosion is likely and should be monitored. With increased traffic and noise, less raptor activity is also likely. Their reactions to increased human activity should be observed through the summer and fall months.

BEAR PEAK

THE WINGS THE FLYING FLATIRON

Description, Location and Access

In this observer's area Bear Peak can be approached in a number of ways. The Fern Canyon Trail heads west off of the Mesa Trail from NCAR and takes one to Bear Peak up North Ridge and then around the backside as one approaches the peak and then back on the North Ridge for the last few hundred yards. Bear Peak can also be reached through Shadow Canyon to the saddle between South Boulder Peak and Bear Peak. Once the saddle is reached one heads north by northeast along the South Ridge of Bear Peak to the top. Another approach which is not recommended since no trail is visible is up the east face which can be accessed by the Shanahan Canyon Trail. The trail ends and one must scramble up a talus slope the entire way.

The Wings can be accessed by the small footpaths up the north side of Shadow Canyon then walking along the ridge just beyond Devil's Thumb and traversing north and down a talus slope to the base of The Wings. One can also take the Mesa Trail from Eldorado Springs or NCAR and a small footpath leads west from Mesa Trail to the base of The Wings.

The Flying Flatiron can be approached from the south on the Mesa Trail. Then head west on a small footpath to the south face of the formation.

Access Trails and Erosion

All access trails to Bear Peak are well used and appear to be holding up well. Vegetation on the Shadow Canyon Trail help keep soil erosion to a minimum. Fern Canyon Trail does not have as much vegetative growth and the soil stays drier. Hence, this trail may be more prone to erosion.

The talus slope up the east face of Bear Peak supports little vegetation. The slope appears to be stable but this observer recommends not attempting it. The talus slope below The Wings and to the southeast have more vegetative growth in areas. The slopes appear to be unstable and dangerous.

The small footpaths leading to the Flying Flatiron and The Wings are faint and do not see much use.

Fixed Protection, Rappel Anchors and Chalk Use

None were found.

New Route Potential

The Wings are not very steep and can be climbed without any protection. The Flying Flatiron has a very irregular rock face to it; new route potential on both formations is not foreseeable.

Wildlife / Raptor Sightings, Habitat and Concerns

From Bear Peak raptor sightings can be seen to the south in the Shadow Canyon area and to the north in the Nebel Horn and Green Mountain areas. Some meadows along the southern part of Mesa Trail are refuge for some deer.

Synopsis

Bear Peak and its surrounding areas do not see much impact by humans in winter months. As temperatures warmed one could see more and more impact made on the main trails. As the summer approaches more people will be getting out and will invariably have an effect on all trails, wildlife and vegetation. The observations made were useful in getting a feel for what is happening in our parks. To truly understand what kind of impact is being made, the study of the Bear Peak area should be continued through the summer and into the fall. Emphasis should be placed on Shadow Canyon and in particular, Jamcrack Spire. Raptor's reactions to humans might be better understood if these areas are monitored as much as possible.

A way to enhance raptor activity in Boulder's Parks would be to set up a chart with existing nest sights and to check them on a regular basis for activity. If a nest is active the public could be told with a small sign on major trails at the closest point to a particular nesting area.

After talking with climbers and their "egos", it is apparent that there are some differences on the issue of bolting. There are no immediate solutions to the problem and a bolting ban does not seem to be solving the problem at the moment. Some areas around the country have addressed the issue of bolting in a different manner; some work and some do not. As Boulder grows and becomes more populated with sports enthusiasts, the problem of trail erosion and bolting by these enthusiasts is going to grow. Hopefully everyone's "egos" will not get in the way, causing our environmental problems to take a back seat to the issue of bolting.