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August - September

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QUOTES FROM THE MOUNTAIN

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"The bike that Joe Murray won the NORBA Championship on is the bike he rides to work every day."

Gary Fisher

Joe races on Sunday, and on Monday he's in the shop working, assembling bikes. He'll take one out for a ride, fine tune it and trouble shoot away any unforeseen problems.



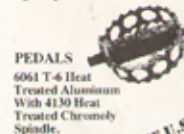
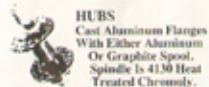
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Paul Gallaher

Front cover photo by Paul Gallaher
Carol Bauer on the Double Top Trail near Crested Butte

Back cover photo by Paul Gallaher
Riders on the Upper Loop, Crested Butte

Editor's Note

by Hank Barlow

vationists and town residents have worked hard for. Or at least I was until reading the Sierra Club's latest recommendation concerning mountain bikes. No more. Why should I support the Sierra Club's efforts to ban mountain bikes from this unique area while at the same time, they're working hard to ban us from even more Forest Service lands? The Oh-Be-Joyful trails provide some of the very best mountain biking in a wilderness environment I have ever seen. We've already lost too much land to conservationists. Oh-Be-Joyful is a fine place to draw the line.

The Sierra Club's recommendation clearly states they are one group that has forfeited its right to any consideration as an intelligent organization with whom mountain bikers can work. Their completely stupid assessment of mountain bikes is so far off the wall that it is difficult to take seriously. But it is serious and even worse, it is dangerous.

The Sierra Club has tremendous clout in Washington D.C. Since the Forest Service isn't open to mountain bikes in the first place, the Club's opposition falls on fertile ground. If the Sierra Club exerts pressure to close more areas to bikes (and this latest Club decision does precisely that), the Forest Service will probably acquiesce. The banning of mountain bikes is a convenient bone to throw to environmentalists.

What makes this controversy so dumb is that it has been completely blown out of perspective. The controversy was created not by bikers nor by an existing situation but by the Forest Service and conservation groups overreacting to a perceived threat.

Most wilderness trails are inappropriate for mountain bikes. Without any bureaucratic interference, bikes in the wilderness would have been a self-governing situation. The reality of having to push and carry bikes over most wilderness trails would have stopped ninety-nine percent of the bikers. A few no doubt would have forced a passage despite or perhaps because of the obstacles. But those riders would have been the exception and would not have posed a threat to the wilderness. (An excellent example is a recent mountain biking expedition around the Annapurna massif in Nepal. The "riders" ended up carrying their bikes some sixty-five percent of the time!) Any conflicts that did arise between biker, hiker, and horseman could have been dealt with through simple regulations; not wholesale banning of mountain bikes.

Claims that bikes break down trail edges on steep hills have no basis in fact. Claims

that bikes turn marshy areas into mud holes are equally false. There is not one claim made by conservation groups concerning mountain bikes' environmental damage that is based on fact. I have watched trails around Crested Butte for years now. The bike traffic they receive is far heavier than probably any other trails in the country. Seemingly every person in town has a mountain bike and all at one time or another use the trails. One in particular, the Lower Loop, is ridden by every local rider. As soon as the snow melts enough to permit passage, locals are on the trail, even when the ground is soaked with melt water. Not only is the trail undamaged, it's been improved. The bikes have smoothed the surface to such a point that it is now a superb running path. Or at least it is until motorcyclists decided to start using it.

The only wilderness conflict with mountain bikes is social. That usually refers to bikers' perceived excessive speed and the danger that presents to hikers. Certainly the possibility of biker/hiker collisions exists. But in fact, it rarely happens. Crested Butte bikers hammer the surrounding trails yet I have heard of no collisions. The reason is simple: no cyclist wants to hit a person or crash into rocks, boulders, or trees.

Yet arguments are presented as if mountain bikers are caroming around the hills like runaway cannon balls on the decks of old warships. Why, I don't know. Maybe because mountain bikers are so obviously having fun. The lightning rod attracting conservationists' ire is the bike's mechanical nature; conveniently ignoring the high-tech nature of modern camping, climbing, and cross-country ski equipment.

There are simply no valid environmental reasons for the banning of mountain bikes from Wilderness Areas. The Sierra Club and others have decided they prefer seeing no mountain bikes in the wilderness because mountain bikes do not fit into their perception of a wilderness experience. Their sophistic arguments against bikes are nothing but a smoke screen attempting to hide their two-legged syllogism.

Mountain bikers been condemned without a trial despite overwhelming evidence we have no more negative impact on trails than hikers. And now those jerks on that Sierra Club committee are attempting to enlarge the mountain bike ban. They're no longer talking about bikes in Wilderness Areas; they're talking about banning us from whole sections of the Forest Service empire!

Look, I can live with bikes banned from

parts of most Wilderness Areas. I am not demanding total access to the wilderness. If bikers prefer not being confronted with bikers, fine, designate certain trails for mountain bikes. But such decisions should be based on the appropriateness of trails to cycling, the concentration of hikers, etc., not on personal opinion.

Enough is enough, this nonsense has to come to a stop. If that means fighting conservation efforts, efforts the majority of mountain bikers philosophically support, so be it. If we don't, too soon we will find our favorite rides closed to bikes.

What can we do? Join NORBA. So far, it's the only organization representing mountain bikers' interests. If you belong to the Sierra Club, turn in your card with a letter explaining why you're resigning. Join an environmental group that does not oppose mountain bikes in the wilderness then actively participate in their decisions. Write your government representatives. Subscribe to *Mountain Bike Magazine* or any other magazine representing mountain biking. The larger our subscription, the more influence we'll have on legislation. In all government decisions, numbers of bodies, i.e. votes, is the bottom line. Act now to preserve your right to backcountry cycling. ★★

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Understanding Off Road Frame Geometry

by Richard Cunningham

The following is one man's opinion on what makes a mountain bike perform. Hopefully this will be the first in an ongoing dialog from frame builders, racers, shop mechanics, etc. on the inner workings of mountain bikes. Richard will be the first to admit none of this is cast in stone; it's simply what he has arrived at after much thought.

Although the bicycle is a simple device, its design and construction is often considered a magical process. Nowhere is the hocus pocus more abundant than in mountain bike design. Without pretending to be the grand poobah of two wheels, I will attempt to explain what causes the mountain bike to perform within its element.

Three distinct types of mountain bikes have emerged: those designed for touring on paved and unpaved roads and some rough riding, those designed for dirt roads and trail use, and those designed for trails and technically difficult terrain. Although the categories overlap, no single design performs all three tasks equally well. The reasons are grounded in basic frame geometry.

Frame design can be divided into two parts: positioning and handling. Over a century of cycling on relatively smooth surfaces has provided a solid understanding of what geometry places a cyclist in the most efficient pedaling position. Positioning is a compromise between comfort and efficiency. Handling is a balance between stability and positioning. The best bicycle is the one that meets these demands with the least compromise.

The greatest area of compromise in mountain bike design has been between stability and positioning with the latter the loser. The reason for this is behind the bottom bracket. The crankarms, chainstays, tire, and three chainrings are all trying to pass by each other in the same space. In order to do so, the chainstays must be lengthened.

Why all this fuss over the chainstay? Tractor! The shorter the chainstay, the more weight over the rear tire. A good chainstay length for production mountain bikes with fender clearance is 18 inches, 17.5 without. Custom builders can often shave off another quarter inch. Any shorter and tire clearance is seriously reduced and its no mud riding for you. Some bikes specify a smaller rear tire (1.75) while others use a 24-inch rear wheel to achieve a short chainstay but these limit terrain and tire choices.

Short chainstays provide adequate trac-

tion in or out of the saddle without requiring excessive body english. Long chainstay cyclists climbing a steep grade can be spotted at a great distance with their elbows down, butt hanging over the seat, "constipated cyclist" look. To move weight rearward, some bicycles have relaxed (68/69) seat tube angles. This places the rider's knee in an inefficient pedaling position, far behind the forward pedal spindle when the crank is level. The power stroke's force occurs behind center, pushing the rider back on the saddle. The weight of the rider cannot be used to counter the force of his legs without constant tension between the small of the back and the hands, an uncomfortable and inefficient position when climbing in the saddle.

"So stand up" you say, "climb out of the saddle!" No way, the crank is too far ahead of the seat and traction is lost when you shift your weight forward. The only solution is butt out, elbows down.

Shorten the chainstays half an inch and everything changes. The rider is now properly positioned over the cranks because of a steeper seat tube angle. Climbing in or out of the saddle is possible without contortions. A good seat angle to look for is 72 degrees with 70 and 73 degrees as the extremes.

The second aspect of positioning deals with the handlebar/seat relationship. The arms should be bent slightly while the back slants approximately 30 degrees so the arms support only 30 to 35 percent of the rider's weight. And the back and arms should not be extended so far that riding over bumps strains the lower back. These guidelines are independent of top tube length and vary according to body build.

Top tube length and stem length are directly related. This relationship to a surprising degree determines how a bicycle will handle. A longer, lower stem combined with a shorter top tube is found on true all-terrain bicycles and some racing bicycles designed for dirt roads. This combination allows the rider to more easily oppose the lower body with the upper body. Side forces generated by the twisting effort on the handlebars are less apt to cause the bicycle to steer from side to side because the front axle is closer to a point beneath a vertical line of force between the rider's shoulders and hands. The long stem/short top tube is great for climbing and dirt roads but it also causes the front wheel to wash out in slippery turns and unless the rider's weight has been shifted way back on the downhills, can create some real excitement when the

going gets rough.

Less head angle (68/69 degrees) counteracts this problem by moving the axle forward, thus slowing the steering down, but it also increases head sway during climbing. A combination of longer top tube and shorter higher stem is more suitable for the true off-road bicycle. The rider's weight is further behind the front axle and front wheel wash out in turns is minimized. When used with the proper head angle, this design can provide a neutral handling bicycle. A 23/23.5 inch top tube is about right for a 21" frame utilizing this design concept.

Neutral handling is important for fast turning on tricky surfaces. If the rider's weight is distributed correctly, both wheels will slide or grip evenly unless the rider changes his or her weight distribution. This neutral condition allows the rider to steer while sliding, controlling the turning forces like a skier uses the ski's edges. If one wheel breaks loose first, the cyclist must slow well below the maximum cornering speed to square off the slide before beginning to turn again. Neutral handling can be accomplished with both relaxed and upright head angles but it is easiest to achieve between 70 and 71 degrees.

The grand poobah of hocus pocus in mountain bike design is the head angle. The head angle combined with the fork offset or rake provides a balance between forces working to stabilize the bicycle and keep it upright and steering that responds precisely to rider input. Changing the rake and head angle relationship affects the amount of trail, the distance from the tire/ground contact point to the point where an imaginary line down the center of the head tube contacts the ground. Rake determines a bicycle's ability to stabilize itself. Too little and the rider has to work to keep the bike upright; too much and the steering becomes unbearably difficult to maneuver.

The most popular head angle has been 68 or 69 degrees. This relaxed geometry slows down the steering, provides a good deal of trail, and gives a rock solid feel because it emphasizes the bike's self-stabilizing forces, a comfort on fast downhills. Unfortunately this type of steering geometry also transmits the smallest side forces into steering forces. This caster effect is more pronounced at slower speeds and on rougher terrain for an excellent upper torso workout. A longer stem provides extra leverage to reduce the effort.

A steeper head angle reduces the self-correcting forces so the steering is much more responsive to rider input. The castering effect is also reduced, resulting in light and agile steering. Rough terrain and trail riding become a joy. Too steep a head angle and the lack of trail, lack of stability, and quick steering will provide a deeply religious experience on fast, rough downhills. A shorter stem can help tame this situation by moving the rider further behind the wandering front wheel. A good number of an

Mark Slate

Brakes: Roller Cams vs Cantilevers

Virtually all mountain bikes are equipped with cantilever or roller cam brakes or a combination of the two. These are the best braking systems currently available. Yet despite their universal use, most riders do not fully understand how the brakes work, how to adjust them (especially roller cams), and how to use them for maximum efficiency.

Efficient braking has a number of ingredients. Two of the most important are lever sensitivity and rider awareness. In a fast stop, a skidding tire travels further than a rolling tire. Consequently, stopping distances are dependent upon a rider's anti-lock system. The ability to sense the tires' traction (avoiding a loss of traction) is the key to optimal braking performance in even the slipperiest of conditions.

(That's why the automobile and truck industries are working so hard to produce computer operated, anti-skid braking devices. Automobile power brakes make "tire lock" almost non-existent.)

Cantilever and roller cam brakes are effective because of leverage and minimal power loss. Leverage translates hand pressure into pad force against the rim's surface. The greater the mechanical advantage, the less hand pressure needed for full braking power. That mechanical advantage is simply the distance the brake pads move relative to the brake lever's travel. If squeezing the brake lever pulls the brake cable a half inch with a resulting quarter inch of pad movement, the system has twice the leverage compared to a half inch of wire movement resulting in a half inch of pad movement.

Sensitivity is the result of a brake system's fidelity, enabling the hand to feel the brake pad/rim contact response as if the rider's finger tips were gripping the rims. Any cable stretch, cable/housing friction, and flexing of stays, forks, housing stops, or mounting bosses distorts this perception.

Additional factors affecting braking action are pad to rim friction and the pad's wear characteristics. Soft pad compounds often seem preferable because of their lack of any abrupt braking action. The softer rubber flexes under pressure and wears rapidly so over-braking is difficult. But the resulting lack of feel, a sponginess, reduces sensitivity while the pad's rapid wear requires frequent adjustments and replacements. The greater the pad's resistance to wear, the more precise the braking action will be. And while it is possible to over-brake by applying too much pressure, it's also much easier to modulate the braking re-

sponse with subtle lever movements. In short, you'll have precision control over your braking.

The rim's surface is equally crucial and often overlooked. It should be properly trued and free of any anodizing and irregularities. If pads and rim are "lapped" (worn in for total pad contact) and react consistently through the wheel's revolution, the braking action will be smooth with a resulting increase in the rider's control of the bike.

The finest brakes in the world won't work if they're adjusted incorrectly. A brake system's effectiveness is directly dependent upon how it's set up. Of the two systems, cantilevers are much the easier to adjust.

After removing then reinstalling the brakes on well greased pivot bosses, adjust the pad post length and pad angle without the saddle wire in position. The pad post should be perpendicular to the rim when the pad contacts the rim. Set the tow-in so the leading edge of the pad relative to the tire's forward motion touches the rim first. Adjust the saddle wire length so the wire is perpendicular to the pivot arms when the brake pads contact the rim. Also align the pads with the outside edge of the rim, just short of touching the tire. If your brake levers have reach adjustment mechanisms, set them so you can comfortably grab the levers. With the pads pressed against the rim, adjust the saddle clamp on the brake cable so there's some slack between the lever's relaxed position and the point where the pads contact the rim. If the lever is too close to the handlebar, you'll be unable to apply maximum power. If too far away, your fingers will be too stretched out to squeeze effectively.

The most common source of any cantilever brake system distortion is found in stretching stirrup wires and cables; partially solved by replacing with heavier gauge wire. Additional distortion can be found in flexing pivot bosses and even in the seat stays when made out of extremely light tubing.

Roller cams are quite a bit more sophisticated than cantilevers and require more care in adjusting for optimal performance. Understanding the principles of roller cam operation is necessary for proper set-up. Tremendously simplified, a roller cam brake consists of two arms that pivot around mounting bosses on forks and stays. The cam, basically a triangular piece of metal, is pulled between the long end of the brake bars, forcing them apart. That results in the brake pads mounted on the bars' short ends being pressed against the wheel rims.



Mush Emmons

Picture a teeter-totter with the balance point about a third of the way in from one end. If you stand at the long end and lift it up, the short end will drop down onto the ground. Lift harder and the short end will press against the ground. That's one half of a roller cam brake with you being the cam and the ground the wheel rim. The pivot boss is the fulcrum, the cam the applied force, and the pad the resulting pressure.

The idea isn't new. The basic arm design was first introduced in the 1920's with linkage bars pushing the arms away from each other. This was the system used by Charlie Cunningham on his original roller cam brakes. Marty Poole was the first to use a roller cam brake for brake actuation. Scott Nicol (Bis Cycles) and Charlie then experimented with arm and cam shape to arrive at the current design. Steve Potts and I also became involved in the design work with the consequent formation of Wilderness Trail Bikes (WTB). The resource pooling of WTB and Scott Nicol led to increased distribution and use of this old/new design.

After Charlie patented the design, he licensed the manufacturing rights to Sun tour. They in turn introduced production changes consisting of forged arms, steel cams, single roller position, bushing/brake spring holder hidden behind arms, and ball joint type pad adjuster securing mechanism. WTB's version has machined aluminum brake arms and cams, optional roller position, replaceable main pivot and roller bushings, and a unique brake spring and holder that alleviates any potential stresses.

Roller cam adjustments are all relative to

Mt Bikes & Haute Cuisine

by Gary Sprung



Gnurps

Standing high above timberline on Fossil Ridge in the late afternoon sun, my mountain bike parked nearby on the trail, I can see four mountain ranges surrounding the Gunnison country of Colorado. To the east and south, the Collegates and San Juans form the Continental Divide. West and north are the West Elks and Elks near Crested Butte. Four Wilderness Areas and over twenty fourteen thousand foot peaks highlight this vast landscape.

These great views are but one of the assets that may lead this 50,000 acre roadless area to official wilderness designation. I've worked for that Congressional action for over four years, often using a mountain bike in my "investigations".

Tough work, this wilderness preservation. I've got to take long trips into the study area, fish the streams and lakes, watch for raptors and big game animals, learn the ecology and geology, and generally have a wonderful time. For our wedding anniversary in early October of 1984, Anne and I decided to combine my "work" - a weekend ride across the heart of this alpine wild-

ness - with a stay at an elegant country inn near the southern boundary.

Access to the northern edge of the study area is via paved highways. From there, the Summerville Trail provides a velvet path of pine needles south into the wild, leaving the sights and sounds of the Taylor Canyon Road quickly behind. The morning sun gradually warmed the autumn air, illuminating beaver ponds and lodgepole pines in its soft light as we slipped by, gears quietly clicking.

The trail soon leaves Summerville Creek via steep switchbacks climbing to the upper slopes of Crystal Creek, the remotest, least visited portion of Fossil Ridge. The reward for pushing up this section is a fine view of bighorn sheep territory back across Taylor Canyon and a smooth trail gradually climbing to 10,000 feet where the lodgepoles give way to an old-growth, spruce/fir forest. Several miles later, a break in the trees opens on a classic Colorado vista: a two mile wide bowl of coniferous forest topped by a huge expanse of green and orange boulders on a rounded ridge. On an earlier trip, I

climbed above timberline here and spotted one of Fossil Ridge's two dozen resident mountain goats.

We followed the trail down into the bowl to a brook and our first tank up. There's no need to carry more than a pint bottle and a filter in water-plentiful Fossil Ridge. The trail traverses southward around the bowl where the fine riding is soon interrupted by another switchback push. Fossil Ridge isn't easy for mountain bikers but it always enriches those who persevere through the tough spots.

Sure enough, the next section is a perfect downhill: a long, brakeless descent on a smooth trail into another bowl with a tiny tarn and a lunch spot overlooking the Crystal Creek drainage. Below are the tops of cliffs dropping to the creek. The cliffs insure the drainage will remain wild with only this upper trail encroaching. A large herd of elk use this country for spring calving and fall migrations.

With Henry Mountain, at 13,254 feet the highest peak in the area, providing inspiration, we reached the Crystal Creek head-

waters by mid-afternoon, eight miles from the trailhead. With only two more to Soapstone Pass, Annie wanted to press on.

"No way! Why do you think I brought this fishing pole?"

She agreed it was time for a side excursion so we bushwhacked through dense false helibore to Crystal Lake, the most beautiful of Fossil Ridge's subalpine lakes. Rainbow trout were rising and a few surface casts soon netted a beautiful twelve-incher. After carefully releasing it, our thoughts turned to the ridge ahead and the Gold Creek Inn beyond.

The trail tops out on 11,900 foot Soapstone Pass on the crest of Fossil Ridge where rich views extend in all directions. The longer we looked, the more there was to see. We could spend days staring into the distance and still not have our fill of looking. Nearby are found fossils deposited in Paleozoic oceans 600 to 275 million years ago, now exposed 12,000 feet above sea level. Twenty miles of unbroken, alpine tundra hiking cross these gently rolling highlands, creating a unique, above timberline park.

Before leaving the pass, I glanced back where we'd come from and realized we'd just had the rare experience of riding ten miles without encountering a single Hereford. The land is too rugged for domestic grazers.

Beyond the pass is the east-west Fossil Ridge Trail and two joyfully flat miles of tundra. The trail parallels Fossil Ridge for 11 miles and can be used to link three north-south routes, creating a variety of one-day loops.

We then turned onto the Willow Creek Trail for the descent to Ohio City and the Gold Creek Inn. A mile down the trail is the semi permanent camp of Rudy Rudibaugh,

a local rancher who has guided hunters and boy scouts through the area for fifteen years. Here we left the wilderness and the trail became a road, a road Rudibaugh hopes will never be extended to the top. Further down are the remnants of the Carbonate King, a gold mine carved beneath fossil-bearing limestone.

The Willow Creek Road is the most thrilling descent I've ever found. In ten miles, the road drops 3000 feet with not one uphill or rocky section. One stretch is hard, smooth clay interrupted by small water bars perfect for jumping. We whizzed past brilliant red and yellow aspens until near the bottom, Anne came to a screeching halt.

She jumped off her bike and dove into a luscious patch of raspberry bushes heavy with bright red berries begging to be eaten. The treat soon had us giddy with euphoria.

Twenty minutes later, with dusk closing in, we were back in civilization at the tiny hamlet of Ohio City where the Gold Creek Inn offers a splendid culinary experience. French cuisine is served in a cozy fireside dining room inside a log building constructed in 1890. We felt conspicuously out of place in our grubby cycling outfits but owner Joe Bengel's warm hospitality quickly put us at ease. He invited us to the bar for a couple of welcome Whatneys then led us upstairs to a room furnished with his family's antique heirlooms.

Dinner was a feast of delectable tastes. Stuffed artichokes and sauteed mushrooms were followed by fresh seafood bisque and a complimentary bottle of champagne. Our main courses were broiled halibut steak and scallops in a puffed pastry. Cheesecake with fresh strawberries, Mexican coffee and Grand Marnier completed the meal.

Nine blissful hours later, Anne and I returned to the dining room for a continen-

tal breakfast (included with the room). Another full day of tough riding lay before us so we also ordered eggs sonora and french toast stuffed with cream cheese, honey, walnuts, and herbs. While lingering over breakfast and talking about the ride to come, Joe invited us to return for the Gold Creek Inn Klunker Classic the following summer.

Benge is a mountain bike fan and each year organizes the race. In 1985, this NORBA sanctioned event was held on July 14th as day two of the Colorado Governor's Cup weekend of bike racing. The 15 mile course varies each year with a touring category for non-competitive riders, cash prizes of up to \$100 for top racers, plus categories for the over 30 crowd and the "ironmen" on one-speeds.

Our return trip started with nine miles of mellow uphill on the dirt road along Gold Creek, passing through an 1890's mining district along the way. As we rode by the old Carter Mine boarding house and the ramshackle remains of the Raymond Mill, I wondered what those nineteenth century miners would think about our mountain bikes. The bicycles themselves probably wouldn't have drawn too much attention since bikes were the rage in those days but the idea of riding through the mountains purely for the pleasure of doing so would no doubt have been thought strange.

The road ends at the Gold Creek campground and the edge of the proposed Wilderness. From there, three trails lead to four fishing lakes. We chose a fourth route, a trail leading to a small pass named Shaw Ridge. The ascent was gradual until the last mile and a half, a 1,000 vertical foot push to elevation 11,600.

Shaw Ridge is a shoulder of Fossil Ridge's other thirteener, Fairview Peak, and



Gnurps

SPOTLIGHT ON COLORADO

The Great Places To Ride And Why

Snow capped peaks, wildflowers, free flowing sparkling streams, and flashing trout are what most people imagine when they think of Colorado. In truth, the eastern third of the state consists mostly of vast plains of waving grass and endless stretches of wheat while the western third is dominated by striking mesas and dramatic desert canyons. Only the central third is mountainous.

But within that central third are more 14,000 foot peaks than in the rest of the contiguous United States combined. Broad valleys of ranch land wind along the base of rugged peaks, a sea of green lapping at the mountains' feet. Forests of mixed conifers and deciduous aspens cling to the rocky slopes while towering cottonwoods line every stream bank. In short, Colorado is an outdoor photographer's dream, a giant, living, 3-D beer ad.

It's even better for mountain bikers. Thanks to the prodigious efforts of miners long dead, jeep roads and trails penetrate every valley, every alpine fastness. Despite the depressing closing of wilderness areas to bikes, there's still hundreds, no tens of thousands of square miles of backcountry for adventure cycling on the grandest scale.

But mountain bikers live on more than just knobby tires and there's where Colorado as a cycling paradise stands out. Those magnificent mountains have spawned a proliferation of ex-mining town resorts. You can spend all day exploring the backcountry by bike and the evenings reminiscing over margaritas, chips, and salsa or fine French cuisine or whatever your taste demands.

Following are descriptions of a few of those grand mountain towns and just the lightest taste of some of the rides. Next time you look at a map of Colorado, consider it a menu, a menu offering you every mountain biking experience you've ever dreamed of.



Hacksack, an ancient game, is alive and well in mountain bike circles Richard Compton

Cable/housing friction is often the cause of sluggish brakes. Securely clamp the cam to the wire and test the results. Be sure the cam's surface is parallel to the rollers when disengaged. This prevents wire wind up that can cause a spongy feel. Set brake spring tensions evenly and as lightly as possible. You only need enough spring pressure to move the pads away from the rim when the lever is released while maintaining the rollers' contact with the cam. Less spring pressure means less arm and hand fatigue.

Make sure you can readily remove the cam from the rollers by squeezing them against the rim. This way you'll have no problem extracting the cam to open the brakes for wheel removal. Also be sure both pads come into contact with the rim simultaneously.

Roller cam brakes generally need little or no tow-in. The cam/roller relationship should be checked periodically. If the tips of the cam touch the rollers during heavy lever pressure, the pads need to be moved closer to the rim to regain the correct relationship. Properly set-up, roller cam brakes are trouble-free and require only infrequent adjustment.

How do the two systems compare? Cantilevers are light, easy to adjust, easy to release for wheel removal, and provide plenty of mud clearance in wet conditions. They're also relatively inexpensive. Roller cams are heavier, harder to adjust, difficult to release for wheel removal, and can become mud dams in wet conditions. They're also fairly expensive and require mounting bosses located just for them. Roller cams and cantilevers cannot be interchanged on a bike.

Are roller cams' performance worth the extra cost? If you're after precision braking control, absolutely. Most of the time, the performance difference between the two systems is minimal. They both work smoothly and powerfully. But in any extreme conditions—mud, water, snow, steep descents, or when heavily laden, the roller cams stand out. Their powerful action enables you to use only a finger or two for maximum braking, resulting in less hand fatigue during sustained descents. If you're going to mix cantilevers and roller cams, put the roller cam on the front. Seventy percent or more of your weight is transferred to the front wheel during hard, downhill braking. That's when the increased sensitivity and power of a roller cam break is needed.

When properly set-up, roller cam brakes are simply "the state of the art" in braking performance. This is something some people don't believe or will qualify. I state it unconditionally. I didn't believe it initially but have become convinced with experience. It's true I have a vested interest in roller cam brakes because I'm a partner in Wilderness Trail Bikes. We manufacture and sell roller cam brakes as well as having sold the licensing rights to Suntour. Cantilevers are excellent brakes. They were the best for off-road riding until the advent of roller cams. Now roller cams provide the highest level of performance available when properly set-up. *

Mark Slate

continued from page 12

the cam, the system's actuating device. The cam has a curved section followed by a straight edge. That edge's angle, the ramp angle, is predetermined for neutral braking. By grinding or filing, the brakes can be made more or less powerful and sensitive according to your needs. Narrowing the included angle (the angle between the ramps) provides more leverage and consequent power.

When the pads contact the rim, the cam should have moved through the rollers so the rollers are at the start of the constant ramp angle, the cam's straight edge. If the rollers are on the curve before the constant ramp, braking sensitivity is decreased. Predictable braking requires a constant rate of movement from the moment the pads contact the rim. The purpose of the curves before the straight ramp is rapid movement of pads to the rim, allowing greater wheel clearance when the brake is not in use.

There are two roller cam adjustments, each with distinct results. The easiest and most commonly done is shortening the brake cable by moving the cam closer to the brake lever. But that only changes the point at which the pads come into contact with the rim during the lever's movement and has little effect on the braking action.

The more important adjustment is the roller and cam relationship. This is best done in steps. First install the brake arms on well lubricated main pivots. Don't worry about correctly locating the return springs yet. Next align pads to the rim while holding the arms by hand. Place the cam in the rollers so the rollers are at the start of the constant ramp. The cam is not yet attached to the brake cable. Simply hold it in your fingers. With the rollers held in the correct position on the cam, adjust the pad post lengths. The objective is having the pads come into contact with the rim when the rollers are at the beginning of the cam's straight section. Recheck the pad's alignment with the rim.

Now establish where you want the brake lever when the pads contact the rim according to your hand's needs. Before clamping the cam to the wire, pull the wire out of the housing and grease it before reinserting it.

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Gnuprs



a good place for another departure from the trail. A quick scramble over scree ends at an odd concrete building on the summit, an abandoned fire lookout. Frequent lightning strikes put an end to its use.

The route then descends into a northern drainage, Lottis Creek, via a series of switchbacks leading to an extensive beaver pond wetlands. Geese and ducks floated on the pond's glassy surface in the afternoon sun. They either didn't notice our approach or didn't react. But when we dismounted to walk closer, they were gone. I suspect animals don't recognize bicyclists as a threat since we appear so different from hunters on foot.

Cows in the neighborhood contributed their gifts to the trail, making a clean passage of the well-trodden but rough trail a formidable challenge. Lottis Creek eventually widens into a spacious grassland at 10,000 feet called Union Park beyond which a four-wheel-drive road plunges through a canyon of Precambrian granite. Those three rocky miles are rough but downhill and mostly rideable.

The loop is closed via the paved highway in Taylor Canyon where it's time to shift into high gear and enjoy the easy pedaling back to the car, five miles downstream. We were home back in Crested Butte before sunset, all the more in love from the combination of exercise, fine food, and encounters with nature. * *

TELLURIDE

by Richard Compton

Telluride ("to hell you ride!") is one of those towns that clutches at your soul. Infolded on three sides by the San Juan Mountains and graced by well kept Victorians and refugees from stardom, Telluride still retains the dusty charm of a lost and forgotten Western town, its lode played out and its gamblers gone elsewhere. Urbanization has barely set in. Turn off main street and the town seems to beg for a little care and attention. The further you get from the Sheridan Hotel, the more neglected things become until a half dozen blocks to either side of main street, you're abruptly in serious mountain bike country.

If there's a haven for dropped-out hippies from the late sixties, Telluride is in the leading echelon of such hold outs. Only today those hippies are semi respectable, business-owning families whose upper middle class roots are beginning to show. Thankfully they're not too domesticated. There's still a strong streak of general rowdiness and let's-get-down-and-get-crazy running through the general population that maintains a certain perspective on the relevance of life. It's a town main stream America has to an extent passed by despite the proliferation of condos and uptown eateries and all the other trappings of a nascent yuppie society. Telluridians have carefully picked off the conveyor belt of modern society's ingredients that which they like and ignored the balance as best they can. The result is a town that immediately feels comfortable to any visitors seeking a retreat from the world's realities.

Helping dispel those realities are a constant string of summer festivals: a world renowned film festival, a jazz festival, a bluegrass festival, a wine tasting festival, and any number of other festivals locals dream up to attract tourists and to entertain themselves with. All seem to achieve

success adequate for their continued existence each year but without attracting the huge crowds that so often kill any sense of the community soul they started with. In a word, Telluride and its goings-on are refreshing.

A hundred years ago, incredible energies were expended on Telluride ("Tellurium: ...non-metallic element...usually combined with metals, as telluride of gold.") by miners, men who differed little from their twentieth century counterparts. They blasted roads into the most unlikely and inaccessible places for the sole purpose of getting rich and getting out. Their dream was hitting the mother lode then returning to the cities wealthy beyond their wildest imaginations. Some even succeeded. The mines are now dead, their delapidated ruins littering the mountainsides, their miners long gone. The roads are still there though, some maintained for a handful of operating mines and four-wheel drive tourist traffic while the rest gradually return to nature.

Mountain bikes are creating a minor renaissance for those crumbling miners' roads. More and more Telluridians are hopping on fat-tired mountain cruisers to explore almost forgotten trails winding up to played out mines. The Black Bear Pass Road, zigzagging up the valley wall beside Bridal Veil Falls immediately east of town, is the most visible of the old mining roads. So narrow, rocky, and steep that four-wheel traffic is restricted to one way travel (from east to west), the road has failed to become a popular bike route. Rather it stands as a tire-crunching test piece - too tough to ride up and so rough coming down that once is usually enough.

Bear Creek (no relation to Black Bear Pass) is a three mile jaunt up a moderate dirt road beginning literally three blocks from the heart of town. The city beat is out of

sight and out of mind within minutes of heading up the trail. To either side of Bear Creek, the valley walls rise steeply through volcanic cliff bands and rock towers to the 13,000 foot summits of La Junta, Wasatch, and Palmyra. There's barely enough room on the valley floor for the creek, road, and a few meadows among the spruce and aspen groves. A magnificent hunk of conglomerate at the end of the road invites the attention of rock climbers while more sedentary types enjoy a waterfall pouring over a ledge 200 yards up the valley.

Bear Creek is understandably Telluride's most popular ride. Even flatlanders give it a go. But it is not utterly innocuous riding; the last pitch will get anyone's legs and lungs pumping. I even managed to endo into an innocent looking runoff stream. On my way back, two locals, John Sir Jesse and Don Pepper, led me down an obscure foot/bike path they call the Black Diamond that is guaranteed to test your down climbing skills.

The Tomboy Road jumps off from the top of Oak Street on the north side of town, climbing 1,600 feet without a breather before packing in another 2,700 feet to the 13,359 foot summit of Imogene Pass. Most of it is good, solid, rideable dirt with only a few stretches of loose rock. The scenery is spectacularly colorful with rich reds and yellows streaking through the dominant grays. From the summit, you can return to Telluride or continue on through Imogene Basin to the Camp Bird mine and six miles of pavement into Ouray. County crews maintain the road for recreational traffic, clearing the snow off it by the Fourth of July, one of the state's first high alpine rides to open.

The mountains above Telluride are the westernmost bastion of the San Juans. A few miles down the San Miguel River, they give way to mesa country stretching west.



ASPEN

by Lou Dawson

feeling less ambitious, just up to the pass is an excellent ride with great views.

Directly below the Wilsons, on the south side of the San Miguel River, is Wilson Mesa with even more superb riding. The best access is up the Silver Pick Road nine miles west of Telluride. At the far end of the Wilson Mesa Trail is the postcard photographers' mecca of Woods Lake, also accessible by an improved dirt road up Fall Creek. And beyond that...the possibilities extend as far as you're willing to explore until you're no longer near Telluride but in the sphere of lesser known settlements.

Telluriders like to stick a little closer to home and a favorite mountain bike staging area is the village of Ophir, seven miles south of Society Turn then two miles up the Ophir valley. Ophir is a thousand feet higher than Telluride and sits in the middle of a meadow fully exposed to the magnificence and climate of the surrounding peaks. From the village to Highway 550 between Ouray and Durango is only eight miles over 12,000 foot Ophir Pass. From there to Silverton is another five miles of downhill pavement. Over and back for a day tour is a popular ride. Like Imogene Pass, Ophir Pass is cleared of snow for the Fourth of July.

Boomerang Road was once a popular route back to Telluride from Ophir but the Telluride Ski Area recently closed a section of it near town, effectively ending the route at the Alta Lakes and Gold King Basin, worthwhile destinations in themselves. From Highway 145 to the lakes consists of moderate climbing up switchbacks through aspen and spruce groves almost in the shadow of the Ophir Needles, a dramatically castellated ridge abutting Silver Mountain.

Local riders are working to increase the number of rides around town by grooming footpaths and removing deadfall from abandoned mine roads. Their favorite pipe dream is to resurrect the railroad grade contouring along mountainsides and cliff faces from Telluride to Ophir and transform it into a foot and bike trail. Though perhaps impractical, it is a sign of another side of mountain biking - the search for elegance and beauty in sport and living. They want to take the best of technology and blend it with the environment, man-made and natural, to create simplicity and harmony. That as much as anything is what Telluriding is all about. ★

How much you're willing to walk your mountain bike is a question that ought to be answered by every adventure cyclist before heading out on a route. It's a rare backcountry cycling excursion that doesn't entail some bike hauling, the "grunt" as it's fondly called. The grunt is a Neanderthalian emotion that gets you and your bicycle from point A to point B, no matter how much misery that may entail. Almost every ride has some grunt. The secret to enjoyable riding is knowing your own grunt limit and how much a given ride will entail. Of course, in order to know the latter, some poor fool has to first find out. Not everyone is qualified for such a role. Evidently, I am.

Though the excitement and exhilaration of learning a new sport can't be denied, the promise of adventure was what prompted this former road biker to drop seven bills on a second generation Stumpjumper. Ostensi-

sibly the bike was for a mellow summer of physical therapy. Mountain biking would replace the trail running I no longer could do because of accumulated ski injuries. But after studying a map of the White River National Forest surrounding my home in Aspen, several friends and I immediately realized there were literally hundreds of possible rides in the area. All we had to do was close our eyes and jab fingers at the map to choose a route. The only hitch was that few of them had been explored. It was up to us to discover if they would go. A trail over Midway Pass to Hunter Creek seemed as good a place to start as any.

The route begins at 11,000 feet with a series of long, twisting switchbacks. Our style of attack for the marginally rideable switchbacks lacked elegance. In fact, it was downright slovenly. We'd begin with a wobbly hill start, hammer like madmen,

then wheelie out or fall over. Gasping for breath, we pushed our heart rates way past maximum by repeating this insane exercise over and over.

After totally exhausting ourselves trying to ride, we gave up and began pushing and carrying our bikes up the narrow switchbacks. Though saner, this method was every bit as strenuous as trying to ride. I kept thinking of Sisyphus rolling his boulders to the top of the mountain as we struggled up the seemingly endless incline.

This was our first hard backcountry ride and although we weren't in great shape, we were fit enough to know where our limits were. The trick was knowing when to ride and when to walk, thus avoiding the exhaustion we initially subjected ourselves to. A certain amount of hauling was all right though taking my bike for a long walk wasn't my intention. When the trail was rideable, the

Ascending Pearl Pass near Crested Butte

Paul Gallaher



The South San Juans near Telluride

Richard Compton

ward to the Utah canyonlands and south through Mesa Verde into New Mexico and Arizona. The mesas are well watered because of the mountains and about evenly divided between lush forest and open ranchland. They're laced with dirt and gravel roads providing equally enjoyable but much less strenuous riding than the mountain roads. Getting up on the mesas usually requires some humping but once there, the land rolls gently along with every hill and turn offering fresh views of the 14,000 foot Wilsons to the south and the Sneffels range to the north.

Three miles west of town at Society Turn, where Highway 145 turns south to Ophir and Lizard Head Pass, the Last Dollar Road angles to the northwest to contour its way up the side of the valley to Last Dollar Mountain where it drops down onto Hastings Mesa. From highway to pass is ten miles and 1,500 feet. On the mesa are a number of options. South leads to the town of Sawpit on Highway 145 and an eleven mile ride back to Telluride. West is Alder Creek and a road to the town of Placerville, also on Highway 145. Straight north leads to Dallas Divide on Highway 62. If you're

bikes were a joy to have.

Finally the trail leveled somewhat and wandered upwards through pine groves with ridable sections alternating with more portages. Then, like the opening of a door, the cold, fresh air of timberline, smelling of summer snow, rock, and tundra, hit our faces. We broke out of the trees onto a small knoll and there before us lay the Elk Mountains. Pyramid Peak, the Maroon Bells, and Mount Sopris majestically shimmered in the distance with a light of their own.

Packed gravel and hardpan dirt made the trail more ridable as we approached Midway Pass. The last section to the summit was a long, almost flat traverse through tundra abloom with assorted bistort, lupin, and alpine forget-me-nots.

We stopped for a sip from our bottles and a bite of food. Sitting on that high mountain pass with bikes lying at our feet seemed strange and wonderful at the same time. There we were, thinly clad humans with thousands of years of technical evolution behind us, having alternately ridden and pushed one of the most beautiful, innovative, and elegant tools ever conceived, the bicycle, into the midst of a wilderness environment. I breathed that bracing mountain air and gazed over a choice panorama and knew my bike and I belonged there. But I was also slightly uncomfortable because, to tell the truth, up to that point a trail runner could have moved more efficiently. That depressed me. But then I remembered how much pure old-fashioned fun we'd had while riding our way to this point.

We laughed at how rough that climb had been and wondered about the remainder of our journey, hoping things would improve. We'd already been out for quite awhile and if we had to walk the bikes much more, our afternoon ride would quickly become a mega trek, a retreat from Moscow.

Down the other side, we attacked a steep, barely ridable, trail twisting through the trees. We hung off the back of the saddle, clamped the grabbers, and skied the bikes in total gonzo descender style. What particularly stamped the descent into our minds were several ends into snowbanks—scary but refreshing.

Truly ridable terrain was hard to come by. But once the initial downhill was over, we found some nice riding along a spur trail into the Hunter Creek Valley. Our goal was Thimble Rock, an outcrop near the beginning of a trail the U.S.G.S. Thimble Rock quadrangle showed heading down Hunter Creek Valley. The map also showed our spur trail petering out several miles before Thimble Rock. We arrogantly figured connecting these trails would be no problem.

The spur trail was mostly ridable to Thimble Rock then, much to our consternation, disappeared at a boulder field, a real one with automobile sized boulders. But none of us doubted we'd find the trail again on the other side. Have you ever tried climbing over huge boulders with a 30 pound bike on one shoulder? Adventure

bikes carrying, yeah.

There was no trail on the far side and the brush got progressively thicker. We began to grunt as our humor wore thin. Sweat poured down our faces while biting flies hovered around our heads and the occasional mosquito dug in for a drink. We dragged our bikes under fallen trees and tried our best to ride them through shin deep mud bogs. Thorny bushes snagged our clothing and it took more and more effort to drag ourselves and the bikes through the tangled willows. Soon we were off the ground using a springy willow lattice for passage. Occasionally we'd fall through to the ground, three or four feet below. While making a particularly difficult passage I heard a guttural cry behind me, silence, then hysterical laughter from Mike.

In his words: "Oh yes! I remember that ride. I fell a bunch. We had to ride and walk the creek to avoid the willows, and most of the water was three to four feet deep. God—that was awful—but not as awful as that ride when our patch kit had 11 patches and we had 12 flats! I remember my derailleur looked like it had vines growing from it. The willows had grown in over what little ridable trail there was so that it was like riding in ground fog. I hit a hole because of that, ended and looked up to see my bike hanging above me in the willows. All I could do was lie there and laugh. I recall we were out about 12 hours. That was quite a trip!"

The willows drove us into the creek—half riding and half pushing the bicycles. With no warning, I rode into a hole with water up to the top tube and had to swim off my bike. A few minutes later, Mike did the same thing.

We were still laughing, but it wasn't funny anymore. We knew the trail would eventually become ridable sooner or later and that alone kept us inching down the valley.

Then, without fanfare and as abruptly as it had disappeared into the boulders, the trail was before us. The transition was so sudden that while I stood in a clearing and looked down the trail, the others were still thrashing around in the jungle behind me, forcing a passage through the relentless willows.

We scrambled to the top of a large boulder overlooking the valley. Horses grazed in fields green with spring growth. The creek sparkled in the sun as it meandered by the deserted cabins in an old ghost town. The Elk Mountains loomed in the distance. Two runners wearing bright, clean singlets slowly ran down the trail away from us. I felt like some sort of stone age aborigine stumbling into a lawn party.

We were a motley, exhausted crew. All of us had fallen several times. Mike's grip trip into the willow hole had left him worn a bit thin and my high-side onto a rock pile had left me with mushy spots on elbows and knees. We were soaked to the skin from the creek and covered with mud and insect bites. All our food and water was long gone and we couldn't drink from the creek because of Giardia. Our bicycles, coated with mud and sprouting countless twigs and leaves, looked like an army camouflage test. My free wheel had so much vegetation wound up in it that it wouldn't shift.

The trip had been a bear yet we felt great. It had been an elemental struggle and we'd had our share of disappointment and

Conundrum Hot Springs, a welcome interlude

pain. Yet we rested with feelings of elevation, satisfaction, and well-being. I didn't have a sense of accomplishment since it hadn't been a landmark venture like a climber's first ascent, though it was just as explorative. Yet, the very vagueness of the route and the ethereal value of that kind of bike ride filled me with a mellow sense of success. Okay, we did it, over Midway Pass then down Hunter Creek; it had been hard, painful, and wonderful.

The Lower Hunter Creek trail is a cruise. You can fly down hard pan tracks through dips requiring nimble gear handling and occasional mud holes that enlighten the unwary, all the time surrounded by fields of wildflowers waving in the wind. Rising trout dimple the surface of beaver ponds stretching along the upper section until the river narrows, dives under an old bridge, and surges down to its meeting with the Roaring Fork. Numerous bicycle tracks give testimony to the valley's popularity. After several miles, the trail passes through a gate above a large tipi where hold outs from the 60's live. The last mile of riding adds a final dollop of spice: a short, technical section where riding without foot dabs is a challenge. Then comes the paved road down Red Mountain and an exhilarating downhill into Aspen.

Hunter Creek made a fine finish to a superb ride. Sweeping down the trail made the bikes, which had admittedly been albatrosses at times, worth their weight in gold. In town, we made a fast track to the



Lou Dawson

local Baskin Robbins, leaving maddy footprints to the service counter. Battle weary and half starved, we indulged in banana splits and huge milk shakes, thoroughly amazing a group of sedentary tourists.

"How can you eat like that and stay so skinny?" one of them asked me.

"I get a lot of exercise," Mike smiled and rolled his eyes.

"This is great," I thought to myself. "This is the funniest, most challenging, most interesting, and just plain most wonderful sport man has dreamed up yet." Then my mind began to wander: "What about Lake Creek Pass? I wonder if that could connect for a long ride to Leadville...and then there's the Flattops, oh yeah—Haggenman Pass, and right, there's that jeep road up the south fork of Lake Creek, and then...man, this is too much."

The Roaring Fork Valley is the major drainage for central Colorado's Elk Mountains. At the upper end of the valley is the ski town of Aspen. The lower end is anchored by the city of Glenwood Springs where the Roaring Fork River flows into the Colorado. Denver is 200 miles east while Crested Butte is 30 miles south over the Elk Mountains.

This beautiful mountain valley and its surrounding lands provide endless miles of dirt roads and trails for mountain bikers. Most are county maintained gravel roads and unmaintained jeep trails. Access is generally from paved highways. Many of the best trails are within Wilderness Areas where bicycles are illegal so single track rides are limited. One of the very best is the Government Trail between the Buttermilk and Snowmass ski areas. Most of the other trails that are legal tend to be rough since they haven't had the frequent use that defines and enhances them as the trails have been in areas like Crested Butte.

Roaring Fork mountain bikers tend to

Colorado, land of lakes, tundra, and mountains



Lou Dawson

use lighter weight equipment such as 1.75 tires or cyclo-cross bikes because of the amount of road riding required to get to the trails. But once beyond the pavement, most of the routes are too rough for all but the best cyclo-cross riders.

Low gears are a must in the upper valley. Much of the best riding is after long, steep climbs from the valley floors. The Richmond Hill jeep road from the top of Aspen Mountain back to Taylor Pass is an excellent example of this. Once the top of the ridge is attained, the track rolls along for mile after mile with little overall elevation gain/loss. Big gears can be used with riders really flying. Views are spectacular with rugged peaks filling the horizon. But to experience this superb ride, you have to grind up about 3,000 vertical feet on a relatively smooth jeep road, an imposing task whose rewards are well worth the effort.

Although the number of Aspen back-country cyclists is increasing, the area's trail riding potential has barely been tapped. In addition to what exists in the upper valley are the hundreds of miles of trails and jeep tracks waiting to be explored near Glenwood Springs in Routt National Forest and on BLM land.

The best source of information on the trail riding are local riders. They're exploring more and more trails every season and with that increased traffic has come noticeable improvements in trail conditions.

Aspen is a justifiably famous year round resort. The Aspen Music School produces superb outdoor concerts throughout the summer. Ballet performances and jazz concerts compete regularly with nightly entertainment at clubs in both Aspen and Snowmass. With well over a hundred restaurants, the spectrum of tastes is amply covered. In addition, Aspen has excellent rock climbing, fly fishing, mountaineering, hang gliding, wind surfing, hiking, and road riding all with easy access from town.

CRESTED BUTTE

Hank Barlow

Right away I have to admit Crested Butte is my home and has been for the past fifteen years. I love living here. If there is a better place for mountain biking, I haven't seen it. I'd like to, though. Because if it's really better, then it must be something beyond special and I'm always willing to try that out! But don't misunderstand me. I didn't say Crested Butte is the best; I only said I don't know of a better place.

What makes Crested Butte unique is that it's a full service, destination resort. There's no need to rough it. Motels, lodges, condos, and private homes are readily

available. Plus, for unknown reasons, Crested Butte has developed into quite an epicurean delight. The food ranges from Mexican at Donita's Cantina (Marquarita Night is Thursday), seafood steaks-hamburgers at the Wooden Nickle, French at Le Bosquet, Soupcon, and Penelope's, and Italian at the Gourmet Noodle, to name only a few. A bad meal in town is an anomaly.

A mountain biking vacation in Crested Butte is like a ski vacation with town one big base lodge. For most locals, backcountry cycling is their summer replacement for

skiing. Finding a local guide is easy. There's a large and active resident population of mountain bikers heading into the surrounding mountains every day.

Crested Butte is at the end of the pavement. Beyond the town limits are rugged mountains and glacier carved alpine valleys. Three Wilderness Areas form a sprawling arc north and west of town: the West Elk, the Raggeds, and the Snowmass-Maroon Bells. The balance of the land is Forest Service except for the valley floors where ranchers run cattle and raise hay. Despite the closing of Wilderness Areas to

bikes, the variety of rideable trails and jeep roads radiating out from town is astounding. There are more than enough to keep backcountry cyclists exploring new routes for years.

One of town's best attractions is the accessibility of the rides. All are within easy cycling distance with at most seven miles of paved riding. Most require less than that. If a change of scenery is desired, thirty miles away is Gunnison and south of Gunnison is a vast land of gently rolling, sage covered hills criss-crossed with jeep roads, cattle trails, and game trails. Routes can extend as far as Lake City from where it's a mere hop, skip, and a jump over to Ouray or Silverton then on to Telluride and Durango in southwestern Colorado.

And if that's not enough, there are more rides in and around the proposed Fossil Ridge Wilderness Area between Taylor Canyon and Ohio City. Upstream from Taylor Canyon is Taylor Park with still more jeep roads and trails open to mountain bikers. One is especially fine, the Timberline Trail with 13 miles of timberline cruising on a single track. From Taylor Park to Aspen via Taylor Pass and the Richmond Hill road is



The push up may be hard,.....

Paul Gallaher

an excellent day's pedal over one of the state's most enjoyable routes.

But there's more to backcountry cycling than just riding bikes and in this Crested Butte stands out. The fly fishing is superb; not as good as southwestern Montana but still excellent. Six fourteen thousand foot peaks are within easy striking distance of town for those willing to camp out to bag a high peak. Even closer are over twenty twelve and thirteen thousand foot peaks, all easily climbed. No technical gear is required. Twenty miles away is Taylor Canyon with excellent fishing, rock climbing, and white water boating. For those with a more sedate state of mind, the Skyland golf course is one of the country's finest. Tennis players have a variety of courts to choose from while windsurfers head down to Blue Mesa reservoir and hang glider pilots head up the slopes of Crested Butte Mountain. But for most mountain bikers, those attractions are like the ubiquitous *persley* served on dinner plates; a decorative addition of passing interest. The rides are what mountain bikers come to CB for.

Great routes are far too numerous to even begin to describe but two in particular I return to time after time: the Teocals Ridge Loop and Trail 409. Access to both is via the



.....but the downhill is worth the effort

Paul Gallaher



We were planning to buy some before she emptied the pitcher

Lou Dawson

Brush Creek Road a mile south of town.

The first time I rode the Teocali Ridge trail was during a Pearl Pass Tour. I'd ridden the normal route up Middle Brush enough times that I was ready for a change. I'd run the West Brush Creek/Teocali Ridge trail in years past and was confident it was rideable. I'd also heard of others successfully riding the trail.

While everyone else slowly moved up the normal route, I turned off alone for West Brush, one of the prettiest valleys in the Rockies. Beavers have created a string of pearl like ponds along the valley floor, their mud and stick dams a marvel of engineering. Golden Aspen leaves floated on the silky surface while trout periodically dimpled the surface. A lone fly fisher lurked behind the willows, his green line gracefully cutting arcs through the autumn air. I was alone on the trail and feeling higher by the moment.

High above, towering into the crystalline sky, was the Great Pyramid like mass of Teocali, a light coating of fresh snow emphasizing the nearness of winter. The further I rode, the more it all seemed like a dream. I'd started off wearing a wool sweater and tights but by the time I reached the base of Teocali, the sweater, t-shirt, and tights had been rolled up and jammed into my fanny pack. The hot sun burning down on my back was luxurious, no doubt partially the result of living in a climate where winter is the dominant season.

The further up the valley I rode, the more primitive the double track became until finally it was a single track angling up and across the base of the mountain. The trail was smooth, packed dirt and except for a couple of spots where it had been eroded into a sidehill too steep to ride across, one hundred percent rideable. The route led me up and across the head of the West Brush Creek valley. I could look right back down the route I'd just pedaled up, the ponds sparkling in the sunlight, a sea of golden Aspens on either side of the valley gently quaking in a light breeze. The view was so magnificent I had to constantly stop to stare at this incredible panorama spread out at my feet. My body vacillated between a lassitude brought on by the Indian summer heat and an energy buzz caused by the super trail leading me higher and higher up the mountain. The latter won out more often than not and the miles quickly passed.

The summit was the ride's climax. The

sustained pedal suddenly relaxed and the trail took off weaving through a forest of conifers, following the ridge to the southeast. One moment I'd be flying along, exulting in the exuberance of a smooth, twisting trail and a taut bike beneath me reacting to my every movement as if we were one. The next, I'd come to a sudden halt, stopped by a dramatic view through the trees of mountain ranges stacked up one behind another for as far as I could see.

I didn't want the trail to ever end. I could have stayed on it forever, a permanent high deep in the mountains. But it did, eventually. But only after following along the ridge crest for a mile or more then down and down and down a gentle descent to the intersection with the main route up Middle Brush. From above, I could see streams of

a rancher's jeep track leading to a breaking down reservoir dam and a single track leading away on the far side. The trail quickly climbs through Aspens into dark conifers where it angles back across the hill, traversing upwards at a gentle angle. A long swing back to the left and you burst out into the bright light flooding more Aspens.

Beyond the top of this first climb, the trail drops down a small hill, cuts across a flat, then swings right to a sudden plunge through the trees. A groove has been worn by bikers descending in a controlled slide and that's generally the best line. The hill ends in a small bowl where the trail bends left and climbs a short hill. The next fifty feet consists of a trials course through and over protruding rocks. Getting through clearly isn't easy, especially with a low bottom

My body vacillated between a lassitude brought on by the Indian Summer heat and an energy buzz caused by the super trail leading me higher & higher up the mountain.

mountain bikers slowly worming their way up the valley like a stream of ants heading for a picnic. By the time I joined the procession, most everyone had already passed and I silently pedaled up the valley, soaking up the day's heat and the buzz I'd built up riding over Teocali Ridge.

No doubt there are rides equal to the Teocali Ridge in certain respects, but I have yet to find one that has the same fine combination of trail, views, remoteness, and rideability that makes this loop so wonderfully unique.

Trail 409 is one of Crested Butte's best training rides. It's a sustained single track for about five miles, alternating between a bike handler's dream course, a hill climber's nemesis, and a fast cruiser's delight. Five miles doesn't seem long but you can count on taking roughly an hour and a half from the start along Ferris Creek to the end in Walrod Gulch! The Ferris Creek road takes off from the Brush Creek road a mile past the East River bridge.

The trail's start is marked by no sign, just

road below. A left turn leads to Walrod Gulch via a single track clinging to the hillside. This is one of my favorite sections. The trail is smooth but narrow and the steep hillside requires careful attention to what you're doing. But the views are grand and in the height of summer, the trail at times is barely visible for all the wildflowers.

Still more options exist from Walrod Gulch. Down is the Cement Creek road and the return to town. Heading up leads to still more single tracks winding deeper into the backcountry. One contours just below Double Top Mountain to Block and Tackle Pass and the trail to East Brush Creek for an exceptional all day loop, roughly thirty miles round trip from town.

Returning via Trail 409 from Walrod Gulch rather than via the roads is my favorite option. It's like riding a completely different trail. Where previously the hills were a sustained, slow speed grind, now they're wildly exhilarating downhill requiring dexterous bike handling. The views are equally different and by the time you've returned to Ferris Creek, you'll feel like you made a loop rather than yo-yo'd the same trail. For an even better finish, turn right upon hitting the Ferris Creek road and do the Ferris Creek loop. Or else...well, you get the idea; the options pile up one upon another until there is seemingly no end to a day's ride. Return to town for beer and chips at Donita's and by the time you roll into bed,

you'll probably have heard about another dozen rides you absolutely have to do the next day.

Backcountry activity is pretty heavy all summer but it reaches its peak during Fat Tire Bike Week in September. Though the Paradise Divide Stage Race and the Pearl Pass Tour are the highlights of the week, it's really a time for old friends from across the country to gather, catch up on news and what's been happening, and mostly ride together. Fat Tire Bike Week is a folk gathering of mountain bikers in the midst of what many consider the finest trail riding in the country. It's a magical time that attracts people year after year, like a good movie or book.



Serenity fills an aspen forest after a rain

DURANGO

Ernst Peddlar

Just the single track, a deer path widened just enough to allow passage of mountain bikes, wound up the ridge through scrub oak and sage and meadows of wild flowers. Because of my dawdling, looking at the flowers and the Needle Mountains to the north, I arrived on the ridge top after everyone else had already left. The trail disappeared beyond the saddle. There was nothing but a shallow stream bed dropping down through the scrub oak. Without the tire tracks, I never would have guessed that was the route.

But it was. This was the descent I'd been told about before leaving town for the Suicide Hill Loop. I lowered my seat in preparation for what had been promised to be exciting. The reality far exceeded what I had assumed to be exaggerations told by the local riders to make visitors nervous. The descent was in a league by itself. That the rider who pioneered this route, Jeff Norman, can ride its length without dabbling a foot much less dismounting seemed impossible. The route followed a stream bed carved out of the sandstone. Unforgiving, relentlessly grasping branches of scrub oak formed a narrow canopy over the path like a tunnel of swords at a military wedding. Rocks eroded during thunderstorms, the only time there is enough water to do so, littered the bed.

The first part wasn't too bad, challenging but nothing exceptional. I even wondered for a moment why I bothered lowering my seat. Then I arrived at the first of a series of ledges with one to two-foot drops. They wouldn't have been too bad except most landed in accumulations of loose rocks. The descent rapidly turned into a sustained series of mind riveting challenges.

How many I was able to negotiate were definitely in the minority. Discretion and lack of a hard hat won out on most.

The downhill wasn't long, maybe a quarter mile at most but every bit of it was a bear. Was it worth it? Absolutely. Why? Because the challenge itself was exhilarating, the route's existence expanded what is considered rideable, and without that section, the Suicide Hill Loop wouldn't exist. The trail connects two excellent rides that combined, make a superlative loop.

Beyond the wild descent, the track follows deer paths, old railroad grades, then a jeep road up an especially steep climb to another saddle. That climb is the source of

the loop's name. It's about the same steepness as the Coors Classic Suicide Hill in Snowmass, Colorado, hence the name. From the saddle, the route drops down then quickly climbs to yet another saddle and a long, fun, single-track descent back into Horse Gulch. The final part rolls across the sage covered valley floor and is just smooth enough and just downhill enough to let riders fly with no brakes, dodging around banked turns and through dips and over slight rises. From there the route rejoins the Horse Gulch road for the return to town.

If you're with locals, they'll probably show you an alternate to town. The route turns off the road, climbs a short hill, then contours around the hill past an old wrecked car to a single track twisting down a steep hillside right into town. One moment you're hanging onto your bike down through steep hairpins; the next you're on one of Durango's tree shaded residential streets five blocks from downtown. It's an instantaneous, black/white transition from a quasi-wilderness experience to total civilization, like passing through a time machine into another dimension, back to reality, back to everyday Durango.

Durango, it rolls off the tongue like a hand rolled cigarette, conjuring up images of dusty riders, hats drawn low over the eyes, rifles slapping against saddles, six shooters resting in well-worn holsters, riding into town out of a hot, rising sun. They turn onto Main Street and ride up in a line from boardwalk to boardwalk, past the stables, past the railroad station where steam hisses from the waiting engine, past the two story hotel and the brick bank, to the hitching rail in front of the town's main saloon. You can almost hear the silence descend like a cold fog while the townsfolk slip in the nearest doors to watch from behind shuttered windows.

Only today, the riders will be mounted on lightweight mountain bikes with fat knobby tires or fragile looking road bikes with pencil thin tires. Instead of pulling up to the nearest bar, their target will be the Stoneyhollow Bakery or New York Deli for fresh croissants and coffee. So much for the macho cowboy image! But the two story hotel, the brick bank, and the railroad station with hissing steam engine are all there. Durango is heart and soul a classic western town right out of the 1900's.

The city sits on the banks of the Animas

River in Southwestern Colorado. Fifty miles north over US Highway 550, beyond two mountain passes, is the gold mining town of Silverton, also on the Animas River. East of the highway is the Weminuche Wilderness Area and the Needle Mountains. West are the lightly visited La Plata Mountains. The spectacular Animas River Gorge slices between the two mountain ranges. Clinging to the river's banks, at times so literally it overhangs the rushing waters, with peaks towering almost six thousand feet overhead, is the Durango and Silverton Narrow Gauge Railroad, Colorado's most popular tourist attraction.

The picturesque trains run throughout the summer from early morning to evening, hauling passengers through the spectacular river gorge to colorful Silverton. Stops are also made at Needleton for backpackers heading into the Wilderness Area.

On Memorial Day Weekend, departure of the 8:30 AM train signals the start of a unique race, the Iron Horse Classic. A pack of bike racers restlessly await the sound of the train's whistle. Their objective is beating the train to Silverton. But before you start imagining a pack of brightly dressed cyclists madly sprinting into Silverton while the train, black coal smoke pouring from its stack, whistle blowing, each straining to beat the other, I have to tell you it's no race. The cyclists win easily.

The Iron Horse Classic is a race amongst bike racers, attracting top Category racers each year. The 1984 winner and record setter was Alexi Grewal. For 1985, a new twist was added to this racing classic, a King of the Mountain prize to the rider with the best combined time in the Durango/Silverton road race and a 25 mile, NORBA sanctioned, mountain bike race. Pre-race speculation built rapidly with rumors of the Fisher and Specialized racing teams' imminent arrival. Everyone was looking forward to watching Schwinn rider Ned Overend go head to head with Joe Murray, his hot riding teammates, and the powerful team racing for Specialized. Unfortunately, such was not the case. Neither team showed.

The King of the Mountain prize was created: "to introduce road racers to mountain bike racing by offering a substantial cash prize for the combined winner and to help bring NORBA and USCF race organizations into a closer working relationship," according to John Glover, owner of

Durango's Outdoorsman Bike Shop and race organizer. Did it succeed? Partially. In fact, it seemed more mountain bike racers entered the road race than the reverse. The road race had some 400 entries while the mountain bike race had well under a quarter of that number. That was too bad for the mountain bike race was superb, three laps over an exciting track.

Ned Overend, with a close second in the Category One road race and a first in the mountain bike race, won the King of the Mountain competition. After the '84 season saw Ned win the Pacific Coast Series, win the Paradise Divide Stage Race in Crested Butte, and place second in the NORBA Nationals, Ned was heavily favored and lived up to the billing. His closest competition was the highly regarded Steve Cook from Crested Butte who placed fourth in Category Three and second in the mountain bike race for a hard earned second in the King of the Mountain competition. The Men's Open was won by Robert Conner with Jason Strauch second while the Women's Open was won by Mary Lee Atkins with Kimberly Schappert second.

The Iron Horse Classic is more than just bike racing though; it's a full weekend of events. A ten-mile running race winds through the city, a BMX race is one afternoon, while a kayaking contest takes place on the Animas River, one of the state's best rivers for boaters. There is also a supported century tour for road riders and a 40 mile tour for mountain bikers.

Town sports a full array of excellent restaurants, bars, and entertainment to satisfy any taste. In the spirit of the Iron Horse weekend, Pronto's provided excellent homemade pasta dinners for racers and tourists alike for the amazingly low price of \$2.95, including salad and bread. In short, Durango is a great base camp from which to explore the surrounding country.

It's especially good for mountain bikers. There's a solid base of backcountry cyclists to provide information and guides to the vast network of nearby trails plus three, full-service bike shops in town. Riders from the Outdoorsman go out on one trail or another almost every evening and are more than willing to include any visitors in their pack. But be forewarned: these are excellent riders, always on the lookout for another challenge. They're the ones who took me on the Suicide Loop in the morning.



Uphill carry in the Ironhorse Classic

Paul Gallahe

In the afternoon, they took me on the Perins Peak loop, a sustained climb up an old railroad grade to near the summit then down the back side via a fantastic single track.

Railroad grades always provide super cycling. The gradient is never steep so you can hammer up in fairly high gears if you want a hard workout. The one up Perins Peak was no exception. Without hardly noticing the climb, we were soon high above the valley floor where a demanding single

track took off. The climbing was steep over a loose, gravelly surface. The effort to get up was sustained but the views of the San Juan Mountains from the top were well worth the effort. Then the fun began, an at-times steep but mostly fun and fast single track descent down a narrow valley, across meadows of wild flowers, back and forth over a stream, through stands of cottonwoods, then finally across broad meadows to the outskirts of town.

Those who want a longer ride with a

night spent on the trail can head up Hermosa Creek for an excellent ride over the La Plata Mountains into the Dolores River drainage then on to Telluride. A loop can then be formed by again heading over the mountains to Silverton and the ride back to Durango. Or head over still another pass to Lake City and more trails and jeep roads that connect to Gunnison and Crested Butte. Southwestern Colorado is a paradise for mountain biking and there is really no end to the possibilities for mountain bikers.



Nearing the end of the Ironhorse Mountain Bike Classic



Durango's famous and spectacular road riding

Paul Gallaher

The Ironhorse Classic

The Iron Horse Classic has been for years one of the premier events of Colorado bike racing. Eventually, the effort of organizing and running it got to be too much for the few who took on the task and has recently been scaled back in size. No longer is it a weekend of USCF racing for all classes. Only one road race is held, the race from Durango over Coal Bank and Molas Divide Passes to Silverton, seventy miles to the north.

Replacing the balance of the USCF schedule is one of the state's better mountain bike events with in 1984 a special category introduced, the King of the Mountain award. The King of the Mountain was based on combined times in the road race and mountain bike race. The intent was to increase the number of USCF Category racers participating in the off-road event. In fact what happened is more off-road riders jumped into the road race while few roadies competed in the off road. That was their loss for the mountain bike race was a good one.

The first part of the dirt course followed a gravel Forest Service road up a steep, washboard hill through three turns before turning off onto an old logging road. The pace off the line in the pro/am category was intense, far faster than the 24-mile course seemed to warrant. While most of the racers enthusiastically joined in the mad fray up the hill, Dale Stetina displayed his experience by letting them go and pacing himself accordingly to his condition, no doubt a result of his retirement from racing and introduction into the coaching ranks. But it wasn't long

before his strategy paid off and he was steadily working his way up through the ranks to an eventual eighth place finish.

The fast start became evident on the first steep hill where everyone had to carry or push their bikes. No one was moving too fast including first place finisher Ned Overend. After the long climb up the gravel road, the logging track gave everyone a breather but the pace was so fast with everyone hammering in big gears that no one was really able to relax. Then before they knew it, they were at the sharp left turn and the first climb, about a quarter mile long. The grade let up enough for everyone to jump back on their bikes but it was still steep enough and technical enough that a lapse in attention meant an immediate halt in progress. Beyond a slight flat was the "wall", an extremely steep but thankfully short hill where just walking up without a bike could be a challenge.

After that, the course relaxed its relentless grind and the racers could swoop over the logging roads and single tracks with abandon. A short hill led to the eventual finish line and the high point of the race. The descent beyond the crest led to a slow, challenging, and fun single track twisting through the trees and back to the gravel road for a really fast descent back to the start of the logging road. Flying down the road was kind of like riding over a bed of marbles on a concrete slab. Exactly where the bikes were going was never known with any precision but that obviously didn't deter any of the racers in their mad dash to catch up with whoever was in front of them.

By the time the second lap started, the race had pretty well settled down. The early pace had seen to that. Firmly in control of the lead was Ned Overend, the second place finisher in the road race and eventual King of the Mountain winner, while Steve Cook controlled second. Steve was pushing hard to gain time on Bob Gregorio in order to come out on top in the combined results where he finished second after a good race.

The Men's and Women's Open races followed the lead of the Experts with fast starts rapidly depleting everyone's strength. Except they only raced one lap instead of three. The winner of the Men's Open, Robert Conner, hammered the course and led most of the way but was pressed throughout by second place finisher Jason Strauch, nine seconds down at the end. Only forty-one seconds separated the first five finishers with fourth place finisher Keith Austin out sprinting Jeff VanDiver by only four seconds at the end.

The women's field started out impressively with more competitors than are usually seen but by the end of the course, the numbers had been thinned. Kimberly Schappert took a quick lead up the long first climb and onto the rolling downhill where she was passed by local favorite Mary Lee Atkins. Mary Lee stayed in the lead from there to the finish with Kimberly two minutes down.

Despite the obvious lack of race organizers' enthusiasm for the women's event, the turnout was encouraging and hopefully portends a stronger future for women's mountain bike racing.

STEAMBOAT

by Hank Barlow

Steamboat Springs is not what most expect from a Colorado ski town. No massive, rugged peaks form an inspiring backdrop to a quaint semi-Victorian mining town huddled at their base. Steamboat is ranch land, sprawling out over rolling fields for as far as the eye can see to the west. East of town is Mt. Warner, Steamboat's world renowned ski area, but even that is deceiving. It looks more like a New England ski hill than a Colorado mountain. Though they rise almost four thousand vertical feet above town, the slopes of Mt. Warner and its adjoining ridges and peaks are gently rounded and covered with forests of aspens and conifers. There's nothing imposing about them.

Town, not the ski resort village but Steamboat Springs itself, is probably as typ-

ical a Colorado town as you'll ever find, despite the impression usually promulgated that the Aspens and Tellurides are what Colorado mountain towns are all about. US Highway 40 drops off Rabbit Ears Pass then heads right through town on its way to California. It's Steamboat's main street, four lanes wide with expansive parking shoulders on either side. Businesses are grouped along this main street from one end of town to the other. Those few businesses that aren't on the highway are usually no more than a block or so away. Despite a patina of ski resort modern chic rearing its barnwood-sided, fern covered head here and there around town, Steamboat is still a rancher's town.

The dominant vehicle is a four-wheel drive, mud splattered pickup, rifle toting gun

racks in the rear window, and more than likely a bale or two of hay in the back. It's not an act. That weather worn, tobacco chewing cowboy leaning on the front fender talking to another cowboy is the real thing. At least most of the time. Amongst this macho society of horse riding men, the sight of a mountain biker can seem slightly incongruous. Especially if the cyclist is wearing skin tight shorts and cycling jersey. But that's a sight that is becoming more and more common with Moots Cycles having firmly established itself in town. And for good reason. The cycling is superb.

That rolling, gently eroded landscape lends itself to mountain biking far better than the more spectacular Colorado valleys

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Bikes Aluminum is no longer exclusively for the wealthy

Aluminum is the current glamour material of bicycling. The US Cycling Team's dramatic success at the Olympics focused American cyclists' attention on aluminum frames. Each season recently has seen more and more aluminum bikes on the market. While most of the action has been on the road biking end of the sport, mountain biking hasn't been immune.

Charlie Cunningham's oversized aluminum mountain bikes have been spoken of in almost legendary terms and hushed voices. Probably with justification since there are few bikes in the world that sell for the \$3,000 or more that Charlie gets for his, especially mountain bikes. Adding to their sense of lore has been Charlie's penchant for doing things his way. His way has been whatever works and damn the cosmetics. His bikes are famous for the glaring, almost primitive welds and gussets that hold them together. The finish is usually unadorned with any paint, just the bare aluminum looking like something out of an airplane factory though more and more buyers have been having their Cunningham's painted. Even the one Charlie so successfully races on is painted.

What really made Charlie's bikes spoken of in awe was their weight, somewhere in the vicinity of 25 to 26 pounds with his personal bike reputed to be about 23 pounds. This was at a time when a mountain bike that broke the 30 pound barrier was something to be placed on a pedestal. While others claimed weights under 30 pounds that more often than not turned out to be closer to 32 pounds, and a few particularly bold builders claimed weights of less than 27 pounds that turned out to be 30 pounds, Charlie was producing honest to goodness, in the raw, real mountain bikes weighing less than 26 pounds and sometimes even less than 25 pounds!

That kind of weight combined with the prohibitively expensive price guaranteed their place in mountain bikers' lexicon. Aluminum was perceived as the magic carpet ride to faster, easier riding. Then along came Cannondale with the first production, affordable, aluminum mountain bike. Even with an oversized saddle that was hated or loved with equal passion; heavy, dual-purpose tires that performed equally poorly on dirt or pavement; heavy rims, spokes, and hubs; a rear brake straight off a BMX kid's bike, and a 24 inch rear wheel, the Cannondale weighed in at 27.5 pounds! The aura of aluminum's exclusiveness began to erode.

Then came the Kettler Safari, a competition version of the Cannondale, a Mantis XCR Composite, a Crotch Rocket out of California, the Monteus out of Wisconsin, and from one of America's most famous builders, the Mountain Klein out of Chelalis, Washington. Suddenly Cunningham's

unique creations were no longer alone. Success bred competition and prices rapidly dropped. There is even a Japanese entry into the aluminum mountain bike field, the Yamakuni.

Does aluminum work, is it really better than steel? Yes and maybe, depending upon who you talk to. It really does work, superbly as a matter of fact. But whether it's better than steel is moot and will probably remain so for as long as steel and aluminum bikes are built. Aluminum has its advantages as does steel. Which to buy is strictly up to you. Some thoroughly dislike the appearance of the oversized aluminum tubulars. Others, myself included, love those fat tubes. It's just a matter of personal choice.

The most often asked questions concerning aluminum bikes are what kind of guarantee do they have, how long will they last, and how does its performance compare to steel. Guarantees vary but are generally competitive with those that accompany steel bikes. How long they'll last depends on what kind of aluminum they were built with and what they've been used for. For example, Richard Cunningham's objective with the XCR Composite was to build an aluminum racing bike comparable in weight with the lightest steel racing bikes but whose strength would surpass that of the relatively fragile steel frames. But, and this is an important but, a full race steel bike may only last three years if it's raced regularly. The Mantis XCR is designed to last somewhat longer than that but nothing overly dramatic.

In short, all racing bikes, regardless of the material they're built from, have short life expectancies. If what you're looking for is a competition bike you can ride hard for the next fifteen years, you're out of luck. If performance is what you covet and damn the longevity, competition mountain bikes, steel or aluminum, will give you all that and more. But don't expect a lifetime guarantee with it any more than the person who buys a Ferrari can expect a five-year, 50,000 mile, no maintenance, no problem guarantee.

So how aluminum stands up against steel can't be answered. There are simply too many variations to consider. Where you ride, how you ride, and how often you ride will probably have more influence on your bike's longevity than the material it's made out of.

Kettler Safari

Unlike road bikes where racing, criterium, and touring designs are uniformly accepted, mountain bike geometry is wide open to innovation. And the more mountain

bikes, we ride, the more we realize there is no "right" way to do things, just different points of view. The Kettler Safari is graphic evidence of this.

Its seat and head angles are opposite to what almost every other builder uses: 69 degrees and 71 degrees respectively. The chain stays are relatively long at 18.5 inches while the wheelbase measures a shorter than average 42.75 inches. How that reversed geometry felt to riders varied. Those who like to spin found the seat too far back. Those who like to hang onto the handlebars and grind up hills powering out slower revolutions liked the position. The long chain stays pretty much required in-the-saddle ascents because of a loss of traction when standing while the 71 degree head and shorter wheelbase made for excellent slow speed handling, necessary for seated climbing.

During descents, the laid back seat tube was popular with everyone though the front end was deemed a bit too harsh and quick by some while others appreciated its nimbleness. Trail riding brought the bike's positive and negative qualities to the fore. The Safari was a willing, quick handling bike, smooth and fast over rough terrain. The front wheel was easily lifted over small logs with the rest of the bike following like a tender behind the engine. Where the design didn't work was in the transition from sitting to standing. The shallow seat tube angle places the rider so far back that everyone found coming out of the saddle smoothly very awkward.

Aluminum is always touted by its advocates as the material for smoothness. If so, that must be the source of the Kettler's silky ride since a 71 degree head is generally a mite harsh on rough ground. Aluminum seems to absorb much of the shock normally transmitted by steel. The Kettler's frame looks just like any other bike's frame; none of those oversized tubes normally associated with aluminum frames. Whether the fat tubes are in fact necessary we'll leave to the engineers to argue about.

The only complaint heard about the frame was it's being a touch soft but that wasn't universal. While heavy or strong riders may want a stiffer frame, it's also easy to over-emphasize the perceived need for stiffness. A stiff frame more efficiently transmits pedal power into forward motion but in off road riding, the trail surface itself is usually loose. Consequently that efficient forward thrust can be lost in wheel spin. The ride of a stiff frame is also noticeably harsher with more of the road shock transmitted into the rider's hands and butt. So while a softer frame may not be as efficient, trail speed may be faster because the frame is acting like a suspension system, absorbing road shock and maintaining tire contact

with the ground. And if the ride is smoother, the rider will probably let the bike run faster. So don't buy into the stiffer is better theory without finding out for yourself what suits your needs.

Components are top of the line: Shimano Deore XT gruppo with Tournay AD triple chain ring cranks and a 6-speed Shimano freewheel. The chrome-moly forks are Kettler's own design along with their own headset. The headset was easy to adjust but tended to loosen up on rough terrain. The saddle, a nondescript KHS affair, was one of the most uncomfortable saddles anyone had ever ridden. It alone was almost enough to turn off many a rider. Replacing it enabled everyone to concentrate on the bike's qualities. The second major complaint was the tires, more of those ubiquitous combination designs for road and street that does neither well. In fact, the Safari's tires were much worse on dirt than on the pavement.

For a \$600 suggested retail price, the Kettler provides good value, especially for those interested in an aluminum bike. The only other aluminum bike in its price range is the Cannondale SM 500, another unique design with its own pluses and minuses. The Safari's light weight, fine components, and smooth ride should make it of interest to anyone in the market for a medium priced, performance mountain bike. Whether the geometry suits your style is something you'll just have to find out for yourself by riding it.

Mountain Klein

No bike has been looked forward to with as much excitement as the Klein. And once it was assembled and on the track, no bike has attracted as much interest. Imagine the reaction an Enzo Ferrari built Jeep would receive and you'll have an idea how mountain bikers react to the Klein. Invariably, the first thing everyone did was pick it up, then, almost as a double take, pick it up again. The bike is light! Ours came out of the box weighing 25.5 pounds, including water bottle cages and bottles! Despite manufacturers' claims of bikes weighing anywhere from 24 to 27 pounds, the Klein was the first bike we've weighed that broke the 27 pound barrier.

After lifting it, riders exclaimed about the shifter and brake cables disappearing into the down tube, the massive, square chain stays, a beautiful aero fork, and the radial wheels. Gary Klein's aluminum road bikes are justifiably famous and those qualities that made them so have been passed on to the Mountain Klein.

This is the first mountain bike we've seen with brazed-on front derailleur mount and cables inside the down tube. The derailleur mount looks sharp but can be a problem if you want to change the large chain ring. The reason for it is simple: the seat tube is too large for derailleur clamps. More unfortunate than the relatively fixed large chain ring size is the limited front derailleur selection



KETTLER SAFARI, about \$600

Paul Gallaher

The best wide range, triple ring derailleurs can't be used with the mudguard. Gary is currently using the Suntour Cyclone II. While the shifting is excellent between the middle and large chain rings and middle to granny, it's terrible from the granny to middle.

There aren't any particular performance advantages in hidden cables and there may be some disadvantages. But they look great and they sure make cleaning the bike easy. Unlike road bikes, mountain bikes invariably return from a ride splattered with mud. Cleaning is a never ending exercise and those hidden cables can't be best for that. Their disadvantage becomes apparent when replacing a worn cable. Klein has been searching for the right line tube to facilitate running cables through so this potential hassle should be taken care of in the future. There's also no way to glance at the cables to see if they've stretched and need adjusting. But everyone agreed the cleanliness of the design more than offsets the minor hassles of hidden cables.

The Suntour XC roller cam brake mounted under the chain stays is also appreciated, especially with the chain stays forming a mud umbrella over the brakes. It's remarkable how clean the brakes remain in even the worst conditions. The front brake on the prototype Gary sent is a Shimano Deore cantilever. Whether that will remain the choice on production versions has yet to be decided. Both brake types work fine and which is superior is a matter of personal choice. The cantilevers are lighter and easier to release for wheel removal while the roller cams have a more positive feel but can be tricky to adjust properly, sometimes true for cantilevers also. With experience, neither type should be a problem. Effective braking action is subjective and roller cams

and cantilevers each have their adherents but more importantly, both types stop a bike.

The radial-spoked wheels were the source of endless opinions. Some riders look at them and immediately state they'll never last; they're not strong enough for trail riding. Others question the wheels' strength only because they've never seen radials on mountain bikes before. In answering why radial-spoking, Gary replies: "The real question is why not radial-spoking, not why? The only problem with radial-spoking is finding a hub flange strong enough to handle the increased pressure. The Hi-E hubs are. Take care of that and there's no reason not to radial spoke."

The wheels have faithfully maintained their trueness after a month of hard riding. They look great and, like the rest of the bike, are easy to clean. We like them.

As can be expected, the rest of the components are first drawer: US Tubular seatpost, Cinelli saddle, Suntour XC stem, Specialized handlebars, Shimano 600 headset, Araya RM 20 rims, Avocet/Ritchey tires, Shimano 600 rear derailleur, Shimano 6-speed freewheel, Shimano cranks, etc. The bike is tricked out.

Frame angles are middle of the road: 69 degree head, 71 degree seat. Where Klein threw in a curve was with the 17.25 inch chainstays and 42.25 inch wheelbase. The fork is a prototype aero uncrown design with 2 inches of rake. It's hands down the best looking fork we've seen and its performance matches its looks. The resulting geometry makes for an exceptionally smooth riding, stable bike. It climbs like a Dahl Sheep with hardly ever a loss of traction even when standing. In fact, the bike eats up out-of-the-saddle climbing. The 69 degree head and 2 inch rake gives it the



smoothness required for fast riding over rough ground while the short wheelbase makes it nimble than a rabbit chasing fox. It's a bike that encourages speed.

Aluminum seems smoother than steel and according to engineers, it should be. Whether it is in fact smoother we'll leave to the scientists to decide. Of the aluminum bikes we've ridden, the Klein is the smoothest. The oversized tubing provides plenty of stiffness required for efficient energy transfer but the ride isn't what we expect from a super stiff frame. It's light and lively, almost springy. Jump on the pedals and the Mountain Klein takes off like a road bike.

Three days after receiving the bike, we were in Durango for the Iron Horse Classic mountain bike race, a perfect opportunity for testing it. The course was a combination of a sustained climb up a gravel, washboard road; high speed cruising on a dirt double track; steep, rocky climbs; slow technical sections; muddy creek crossings; and lots of quick transitions from flying along to sudden dips with steep but short climbs out of them. The bike was fantastic! Without it, no way would I have finished seventh in the Men's Open. Throughout the race I had to laugh because I'd be flying along, scaring the heck out of myself, then I'd realize the bike was capable of going much faster than I was willing to go. I wasn't even close to pushing the bike's performance limit. That was a great feeling. I could relax secure in the knowledge that I'd have to do something really stupid to get the bike in over its head.

The key to all this was the way the Klein fit me. Weight distribution is all important on a mountain bike. The frame size, top tube length, stem rise and length, and handlebar rise and curve fit my dimensions perfectly. It was as if the bike had been custom built for me. It wasn't but that was the effect. Had I been two inches taller or my arms shorter or my legs shorter or whatever, I might not have been quite so ecstatic over the bike. But I'm not and so for me, the bike is perfect.

The Mountain Klein continues to amaze me after a month of riding it steadily. I find myself riding through sections that previously always forced me off the bike. Or I'll stick the front wheel in a rut or hole or behind a large rock and I'll muscle it out and continue on without dabbling a foot. The bike has expanded my cycling limits and there's not much more that can be asked of a bike than that.

When the approximately \$950 price tag is considered (depending upon how the bike is equipped), the Mountain Klein really stands out. For less than a thousand bucks, you can own a 25 pound, totally tricked out, aluminum racing bike! If you already have components, you can buy a frame set for about \$500. With that price, Gary Klein has dramatically upped the ante in the mountain racing bike category.

Mantis XCR Composite

Richard Cunningham has been building Mantis mountain bikes in relative obscurity

for over five years. But within the world of enthusiast backcountry cyclists, his bikes are famous for innovative designs and high performance. Richard's never been afraid to experiment and the XCR Composite is striking evidence of that. The main triangle is oversized aluminum tubing while the rear triangle is chromoly steel. Mating these two incompatible materials required a lot of thought and work. Richard's solution is unique enough that he has a patent pending on the design.

Why did he bother? Why didn't he just build the whole bike out of steel like the rest of his bikes or else out of aluminum like Charlie Cunningham (no relation) and Gary Klein? I suspect the reason lies as much in Richard's enjoyment of solving complex problems as it does in a logical evaluation of how to achieve a light weight yet stiff mountain bike with short chain stays and at a reasonably expensive price. Nevertheless, his reasoning for the composite design are persuasive.

Years of building steel mountain bikes convinced him a light steel bike can be built. But doing so requires compromising the bike's strength. Using aluminum for the main triangle enabled Richard to achieve both light weight and durability. Again for durability, Richard uses heavier gauge aluminum tubing rather than lighter but weaker thin walled tubing. The result is a bullet-proof bike weighing 26 to 27 pounds, depending upon how it's equipped.

The rear triangle is made out of chromoly steel in order to build short chain stays with ample clearance for 2.125 tires. The steel also simplifies brazing on mounts for brakes, derailleur, etc. An additional advantage, though minor, is that if the main frame

is ever broken, it can be replaced simply by removing the rear triangle from the old frame and bolting it to the new.

Why he chose a shotgun marriage of aluminum and steel to achieve his performance objectives is ultimately irrelevant. The bottom line is, did he succeed? Absolutely! The bike is light, strong, and wonderful to ride. The test model was beautiful: the main triangle a striking pink, the fork and rear triangle chromed. Its 27.5 pound weight included two water bottle cages, two bottles, a pump, and carrying strap.

Most bikes, including many in the \$1,000 and up price range, are weighed when stripped: no water bottle cages, no bottles, no pump, etc. Two water bottle cages with bottles can add half a pound! I stripped the Mantis of the cages, bottles, portage strap, and pump, replaced the Suntour XC seatpost and Selle Royal saddle with a Wilderness Trail Bikes fixed angle seatpost with Avocet Touring II saddle and replaced the Suntour XC pedals with Suntour MP 1000 pedals. The bike weighed 26 pounds!

The Composite has 17.25 inch chainstays, a 42.25 inch wheelbase, and 71 degree parallel angles. Fork rake is a short 1.75 inches. The top tube is relatively long for a 21 inch frame, 23.75 inches. Richard sizes his frames so people can ride a slightly smaller than usual frame. The longer top tube creates the space a person who normally rides a 22 inch bike needs on a 21 inch XCR. He then equips the bike with a custom, short reach, high rise stem to maintain the proper handlebar/saddle relationship.

That long top tube, despite the short reach stem, put the handlebars a tad too far away from me even with the saddle all the



Mantis composite/aluminum main triangle with steel rear triangle

way forward on the rails. Exchanging the Suntour XC seatpost with a Wilderness Trail Bikes' fixed angle seatpost let me move the saddle an inch further forward. The reach was almost perfect after that. Less forward projection of the stem also would have shortened the reach but I prefer moving the saddle. That inch of saddle movement in effect steepened the seat tube angle one degree, placing me in a more powerful position relative to the bottom bracket but without the harsher ride of a steep seat tube. A 20-inch frame with its half inch shorter top tube probably would have been just right for me with no changes required.

The key to discovering any bike's full performance is fitting it to you rather than you to the bike. Rarely does a bike fit a rider perfectly without adjustments and changes. Changing seatposts altered my experience of the XCR. Previously I wasn't getting all the performance Richard had built into the bike. After the switch, everything started falling into place.

The bike is a goer. Stand on the pedals and it fairly shoots forward. Even on the steepest hills, the rear wheel's traction is tenacious during out-of-the-saddle pedaling. The long top tube provides plenty of space for knees during steep, tricky climbing where bruised knees from collisions with the handlebars are common. On the flats, the bike fairly begs for stand up hammering. The XCR is so well balanced that coming out of the saddle causes hardly a murmur in its passage, just more speed. That's the key to Richard's designs, weight distribution.

"Take care of the rider's weight distribution and the geometry almost becomes irrelevant. That's why bikes with 68/73 angles and bikes with 71/71 angles both work. It's not the angles that are so important but where the weight is." His objective is a neutral balanced bike, one where weight adjustments to match terrain changes require only subtle movements.

I'd expected the front end with its 71 degree head and 1.75 inch rake to be quick, possibly even too quick on rough ground. That wasn't the case. In fact, if anything, it was a touch slower than the Klein with its 69 degree head and 2 inch rake though their wheelbases and chainstays were identical. The XCR's longer top tube keeps the rider's weight from bearing on the front wheel too much and causing skittish steering. The XCR's stability was much appreciated during high speed descents. Steering effort was light but the response was never twitchy even when hammering out-of-the-saddle in big gears. The ride was always smooth and stable, regardless of the surface.

The silky ride is no doubt due as much to the aluminum tubing as to the XCR's geometry since all the aluminum bikes tested were outstanding in this regard. Whether the chrome-moly rear triangle offsets the aluminum's qualities was impossible to tell. The XCR's top, head, and down tubes are huge and beautifully finished. The welds have had nothing done to them

cosmetically except for paint. But despite that, they add to the bike's looks. The XCR is clearly designed for hard, fast, backcountry riding and the large welds accent its rugged nature. There's something about the bike that engenders a sense of strength and speed. And the bike delivers. Once a rider becomes used to the XCR's feel, its performance is superb. Then it's time to let the bike roll, hammering up hills, diving through turns, weaving around obstacles, generally challenging trails with a verve you may



Specialized unicorn fork.

Paul Gullagher

never have experienced previously.

Components are as expected top of the line, carefully selected for the job they're designed for. Front and rear derailleurs are Suntour XC as are the brakes. These were the best braking units we've ever used. They were like power brakes, smooth and light to the touch. Full braking action could be brought to bear with only one finger pressing the lever. The only difference we could find between these and previously tested XC brakes were the brake pads. The arms, cam, cables, and levers were identical yet

the difference between braking actions was dramatic. These brakes worked the way roller cams ought to.

Hubs are Shimano Dura-Ace with Araya RM 20 rims; tires are Avocet/Ritchey. Cranks and chainrings are triple Specialized (26/36/46) with a Shimano 6-speed free-wheel (12-28). Pedals are the Suntour XC bear claws that are rapidly becoming the industry standard for high performance mountain bikes, unfortunately. If you ride without toe clips and straps, the pedals are fine. But if you ride with toe clips and straps, the XC's don't make it. And in the opinion of most experienced mountain bikers, toe clips and straps are strongly recommended. That means changing over to Suntour MP 1000's or some other appropriate pedal.

The stem is a Mantis design with a Mantis, aluminum handlebar. The headset is Specialized, the fork a Richard Cunningham Unicrown, the seatpost Suntour XC, and the saddle Selle Royal. Two Specialized water bottle cages with bottles come with the bike as does a pump carefully fit behind the seatpost plus a carrying strap mounted between the seat tube and top tube. The workmanship is exceptional, no detail overlooked. The pink paint job was a real eye catcher with almost universal approval of this decidedly unmocho color.

At about \$1,600, the Mantis XCR Composite is expensive and the competition it's up against in that price range is stiff. But despite that, it's a great value. Unsurpassed performance, exquisite craftsmanship, half inch increments in frame sizes, top of the line components, plus all the little things a backcountry bike needs like multiple water bottle cages, bottles, carrying strap, and pump make the XCR Composite one bike that anyone interested in a racing bike ought to try out.

Team Stumpjumper

I don't know what's happening to the mountain biking world. Finally, cycling gets a macho image. No more wimpy riders walking around with shaved legs and silly looking skin tight shorts and even sillier looking shirts with bananas and who knows what else bulging out of pockets hanging over their butts. The bikes, with knobby tires and oversized tubing, are solid enough to please the most macho of athletes. So what does Specialized do? What does the company who spread across the country the idea of gonzo riding, the company who called their first mountain bike a Stumpjumper of all things, what do they do?

They introduce a brand new, top of the line, state-of-the-art competition mountain bike and paint it pink! There's goes the carefully nurtured image right out the window. You better have a few black belts to your name if you've any intention of maintaining a macho image with this bike. Unless all you're interested in is going fast. If that's

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Mountain Bike Profile

Kent Eriksen

by Richard Compton

Mr. Moots is a true performer. Neither his diminutive size (2 inches without his top hat) nor his orange complexion and eraser-rubber composition prevent him from leaning back on his tail, lifting up his long alligator snout, and, with arms spread wide, crooning his heart out. He has nothing to fear. His evening clothes are impeccable and since he makes not a sound, only his feelings emerge. These days he struts his stuff atop a Macintosh in the neat little office shared by Moots Cycles and Sore Saddle Cyclery, a reminder to whoever is chained to the computer that funk and frolic have not entirely disappeared from the world.

The computer is a new addition to the family while Mr. Moots ("kind of a Mr. Bill figure") has been following Kent Eriksen ("Mr. Moots' best friend") around since Kent was three years old. It hasn't been an easy journey. Mr. Moots is well into his second incarnation while Kent is still very much on his first.

After finishing high school in his native Wisconsin ("I was a real environmentally conscious type; I rode bikes and didn't have a car"), Kent set out on a two year bicycle odyssey through Canada, the U.S., and Mexico. He spent a grand total of \$156 during the first six months. "Then winter came and I had to spend a little more for clothes and gear. There weren't many people running around on bikes back then and I looked even younger than I was. So I got into a lot of conversations with people who ended up inviting me over to their camp for dinner. I kind of mooched my way around the country."

Kent would stop and work in a bike shop for a couple of days or weeks whenever he was broke. "That was during the first bike boom and shops were desperate. All I had to do was tell them I knew how to build a wheel and I had a job." Christmas '73 found Kent cross-country skiing in Aspen. He heard of a



Richard Compton

photo lab job in Steamboat Springs, Colorado, 150 miles away. He hitched up three New Year's Eve, camped out in minus 40 degree weather, and got the job.

He moved into a tree house eight miles north of town in March. The "tree house" was nothing but a platform lashed to a stand of Aspen to begin with but it soon evolved into a two-story dwelling with a deck on each level. Winters Kent worked two days a week in a ski shop, skiing into town or riding his bike with his skis on a rack. The rest of the time he skied in the other direction - totally backcountry and only on woodies. Summers he had to spend more time in town managing a bike shop he operated out of Inside Edge Sports.

The tree house is now tumbling into ruin, spilling its walls and guts down the hillside. ("We'll have a party up here this summer, get a keg and a come-along and a couple of trucks and tear this thing down," he decided as we surveyed the wreckage one spring morning.) Commuting on his ten-speed started Kent thinking about mountain bikes. The road from Steamboat deteriorates from pavement to gravel to jeep track to footpath as it approaches the tree house. The closer Kent got to home, the more he wanted a bike appropriate for the terrain. He didn't get his wish until 1980 when the bike shop was finally established and he had time to build his first frame, a mountain bike frame naturally.

In the meantime, an incredible structure entered his life: the abandoned Kaibab Lumber Company sawdust incinerator. It had sat on the edge of town for years, a thirty-foot, blunt steel cone that looked like the nose of a massive homemade rocket, intriguing passers-by with its unearthly shape. One day the idea popped up in Kent's mind to use it for a bike shop. The idea was considered fantastic, farfetched, and unrealistic; an appraisal Bruce Allston, Kent's partner at Inside Edge, agreed with. He and Kent bought it for a dollar from the city anyway.

Together they struggled to turn Kent's dream into some semblance of reality. They purchased a lot across the street from the river at 1136 Yampa Avenue and moved the cone there piece by piece. Engineers questioned its structural soundness so in went an eighteen inch pipe for a center column. Second and third floors were supported by angle iron joists radiating out from the column. Sufficiently bomb-proofed, the outside was then covered with six inches of styrofoam and a layer of beige ferrocrete that flows out into side walls and the frame shop behind. On the street side are floor to ceiling plexiglass panels, fronted on each floor by a narrow balcony supported by wooden columns of vaguely Polynesian inspiration. For the final flourish, the top opens hydraulically "like a giant beer mug." There is no adequately descriptive term for this structure: "cone," "dome," and "cement tip" totally fail to grasp its utter whimsy and idiosyncrasy.

It's the perfect home for Mr. Moots and his friends: funky, leaky, slightly impractical,

and wholly inspired. Among them, Eriksen is unquestionably the leader though hardly the Boss. Only lately has he accepted being a businessman as a worthy challenge for his attention. The new computer, the neat little office and Nina Powell (wife of John the Brazer) who keeps it that way, are signs of the times. Kent's running commentary on frame geometries, rack rides, and dream schemes is laced with references to his banker, cash flow, and expansion, all spoken with the same enthusiasm and faith in a happy resolution.

While the vision is particularly his, the Moots bike itself belongs to everyone who works on it and Eriksen is quick to give credit to his associates. "Building bikes is a community effort so it's a little egotistic to put your own name on it." Over the last five years he has collected a solid crew of similarly minded bike friends who take as much pride in their work as they do pleasure in their riding. In fact they indulge themselves in it, using aero tubing in the stem and fork and carefully filleted gussets to strengthen the head tube. It is a safe bet that no two Moots have exactly the same paint job; custom colors (any DuPont Imron) and fanciful paint schemes are a specialty of the shop.

Comfort is one of Eriksen's priority performance goals and the Moots Mountaineer (with Mr. Moots twining himself through the top tube decal) delivers a surprisingly soft yet responsive ride. "We want a bike that you can ride all day, every day," Eriksen states flatly. The temptation to do just that is strong; so is the desire to expand the business and keep the shop running year round.

Sales of the "Moots Mounts", studs that allow cantilever brakes to be mounted anywhere on the fork or seat stays, are hot while orders for bikes are steadily moving closer to the goal of 400 units a year. Three quarters of the orders are for mountain bikes, the rest for road machines and a handful of tandems. Maintaining this output while getting in enough riding to be competitive (he smoked a lot of pros to take fourth at the 1984 NORBA Nationals) is clearly straining his time. But one senses that this is not the real source of the strain. Nor is it maintaining some kind of a personal life; Kent has a natural charm and ease that make his society a pleasure.

"I tend to bite off more than I can chew," he admits a little sheepishly. Sheepishly because it's clear he's dying to do just that, to take a flying leap at some new idea that will eclipse everything that has come before. "We've got all these miles of old lift cable, see, and...well, maybe I'd better not talk about this one."

His current dwelling is an earth shelter, half below ground, half above. Whether this is symbolic of a new rootedness in his life or just a stopping place on the way to another dream, only Mr. Moots knows for sure. And he's not saying anything. ★ ★

Moots Mountaineer

The first truth of visiting a custom frame builder is this: he will not have my size built up. There may be a dozen 21" frames hanging from the wall or ceiling, all sleek and virginal in their fresh Imron, but not one on the floor ready to get dirty. The second truth is like unto it: the first thing the builder says about testing one of his babies is "you know, every bike is different and it takes a while to learn how it handles and really see it perform."

In the end we go riding on whatever machines we can scrounge and he's right, his bike is a little different from anything else I've been on but that's really quite all right. Otherwise I would have nothing to write about and he would have no good reason to be in the custom bike business. By the end of the ride, he has discovered, much to his relief, that I am not totally incompetent and that I have somehow caught on to the points he was trying to make about his creation.

Mountain bike builders know their own bikes and usually ride them pretty well. Just keeping up with them tells me all I want to know and by the time our "test" ride is over, we're having too much fun to be worried about what I'm going to say about the bike. Either of us. The real quest, after all, is not to determine which bike is the best but how much fun you can have on the one you're riding. After that it's time to down a few brews and get acquainted. Now that you understand the fine points of seat-of-the-pants field testing, it's time to file my report.

Steamboat Springs, Colorado, Monday, May 20, 1985 - eight am. Kent Eriksen, creator of the Moots, has just put brewer's yeast into the oatmeal instead of wheat germ. Otherwise he seems to have recovered from Saturday night (his thirtieth birthday). Surprisingly, the oatmeal still tastes good. "Two Tracks" and "Elk Park" are the agenda for the morning and I suspect I'll need as much fortification as I can muster. John, Steve, and Dave are on hand to assure a proper quorum of riders. John and Dave work in the Moots shop; Steve is wearing a noxious green t-shirt and riding a Diamondback so he gets to be in back for the photos. He will make up for it by blowing us all away on the downhill.

The oversized machine I'm riding feels a bit like a truck plus I'm accustomed to road pedals with toe clips, not bearclaws. Otherwise everything is fine. As in too good to be true. Can a bike really be this comfortable and easy to ride and still perform?

Kent told me: "One of the most important things in riding is comfort. I think that this stiffness thing is really overdone in mountain bikes. If you're not comfortable, you're not going to ride. We want our bikes rideable all day, every day." Such common sense, combined with years of empirical study, has produced a unique machine.

Almost since he learned how to pedal, Kent has been studying frame geometries.

When he first designed a mountain bike, he had definite ideas about what worked. That was 1980 and the "California Geometry" (68 degree head, 70 degree seat) based on the old Schwinn Excelsior reigned supreme. Kent built the first Mountaineer with 70 degree seat and head angles with a beefy bottom bracket and chainstays for the kind of performance expected from today's custom bikes. Then he added his comfort modifications: raked seat stays and lots of fork rake. The long rake offset the quicker handling of the steep head tube for a neutral steering bike.

I discovered exactly how neutral the steering is after cruising out to the end of the pavement: I could sit back with folded arms without the slightest tremor from the front wheel. The frame felt pleasantly solid during the long climb up a smooth dirt road to the beginning of the action.

"Two Tracks" is just that - a pair of wheel tracks leading from a meadow to the summit of a rocky ridge. Here I encountered some problems though mostly of my own manufacture. The front wheel wanted to rise faster than the trail. On the Moots, you have to lean the upper body forward to keep that wheel tracking.

If the front wheel doesn't quite bite going up, neither does it dig in going down. Rather it floats over obstacles and out of ruts. You can sit solidly on the seat without feeling an endo impending. Coming down a steep hill through the worst horse waffles (fossilized

hoofprints) I've ever ridden, I appreciated that. Going through the mud made me appreciate Kent's obsession with fenders.

The road eventually smoothed out and as our speed increased, I discovered another disconcerting feature of my bike - the rear wheel likes to get airborne. Not all of the time, but coming over sharp rolls, the springiness in the frame gave me an extra little kick in the butt. Once I got used to it, it was fun.

The Mountaineer's design has changed little since it was introduced. The seat and head tubes have been laid back a half degree to 69.5 degrees and that's about it. Structural changes have been numerous while Eriksen and his crew searched for optimum tube weights and joint designs. Now those are set and they've turned their attention to increasing production. The Moots is a sophisticated machine with investment cast lugs and custom designed Tange 4130 tubing with extra long double butts on key pieces. Some of the tubes are heat treated as well. Fork, stem, and bars are Moots designed and built. The Moots Aero Plate Fork is particularly strong and attractive.

Versatility is as much a goal as comfort and the Mountaineer has braze ons for fenders, rack, water bottle cages, portage pad, and pump plus any custom options you care to order. The "Moots Mounts" are adjustable clamp-on mounts for cantilever or roller cam brakes that enable changing the Moots from a 26" mountain bike to a

700c touring bike in less than an hour. Taking it to the limit, Moots is experimenting with a new "Antler" stem that will have both straight and drop bars for real go-getters.

Two models of the Mountaineer are available, the Mountain Touring and the Mountain Racing. The competition model has half-inch shorter chainstays and half-a-degree steeper seat tube for a tighter, more agile response. It's also a touch closer to the ground (1 cm) and has a flatter stem. Both bikes list at \$1,250 and come in frame sizes from 16 to 24.5 inches in half inch increments. Moots also builds a few dozen road frames and a handful of tandems each year. (Plus whatever else Kent has time to dream up.)

Eriksen swears by Shimano components and uses them almost exclusively with the exception of the optional Suntour XC rear brake. Brake levers are Magura shorties with covers and Terry motorcycle cables.

The Mountain Touring is unexcelled as a backcountry cruiser, delivering a very pleasant combination of luxury and performance. Though the racing model faces stiff competition in its class, it's favored by a number of well known riders including Alexi Grewal. Eriksen himself is a pretty hot promoter of his own product with a "disappointing" 11th in the 1984 Crested Butte Paradise Divide Stage Race and an impressive 4th at the '84 NORBA Nationals. ★ ★

Richard Cunningham

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upright head angle is around 71 degrees.

It is important to note that the proper combination of head angle, fork offset, and stem length is more important to a good handling bicycle than any specific head angle between 68 and 72 degrees.

Getting to the bottom of things, we now turn to the bottom bracket height/wheelbase relationship. The higher the bottom bracket, the more one will avoid bashing the crankset on immovable obstacles, an important advantage in observed trails where two-foot diameter log traverses are common. Less obvious is the effect the bottom bracket height has on the bicycle's ability to soften the ride.

Imagine a triangle with two points the tires' ground contact and the third point the rider's shoulders. The higher the bottom bracket, the higher the rider will be and the greater the amplitude of the pounding he will receive as the wheels rock over bumps. A longer wheelbase reduces the shock while a shorter one makes out-of-the-saddle riding a must on rough terrain. A good number for a bottom bracket height is 11.75 inches for a 21-inch bike with a 42-inch wheelbase.

I have been vague by design. The purpose of this information is simply to provide an understanding of what I believe causes a mountain bike to perform its task. Armed with this information, you should be better able to choose the correct bicycle for your needs from the variety of bikes available. ★

the Moots team out on a testride

--photo by Richard Compton



Frontier Pick Up

by Reanne Douglass

When your eyes are puffy from a bad night's sleep in a tent in the pouring rain, your mouth has crow's feet around it from the wind-pummeling it gets during the day as you cycle, your hair stands straight up because it got caught in the opening of your Skid-Lid, and your shape is hidden under five layers of clothing, seeing yourself as a sex object is the last thing on your mind.

Add to this sight, our dust-covered wind suits, grease-speckled cycling gloves, mud-encrusted, knobby-tired bikes laden with forty pounds of gear and who's going to think you have a gender? octogenarians maybe. Certainly not males under thirty. Now when you're twenty years older than they are.

My friend Katherine Dienes and I had flown to Punta Arenas, Chile to test mountain bikes, mountain panniers, and our middle-aged bodies and psyches against the wind, weather, and unpaved roads of the "Uttermost South." Tierra del Fuego, divided between Chile and Argentina, is an archipelago south of the Straits of Magellan: islands of fjords, glaciers, streams and waterfalls, dense beech forests and wind-sculpted cypress. The big island of Tierra del Fuego, known locally as Isla Grande, is a continuation of the Continental Pampa and the Andes. In the southern portion are lush green snow-capped mountains; to the north are the mud flats of the Atlantic Coast and brown, rolling hills -- treeless, rocky, monotonous.

Kathy and I were on the return leg of our six hundred kilometer cycling trip across the big island when we approached the Chilean border one evening about 7:00. We'd spent twelve hours battling forty knot head winds, rain showers, and dust devils and were hungry and exhausted, our joints crying for rest. We decided to pitch camp.

The ground at the border is covered with clumps of "coillon," stiff, sharp grass which even sheep avoid. The thought of a night's sleep on top of that stuff would have kept us cycling under different circumstances, but by then we didn't care; we just wanted to have a quick cup of soup and crawl into our sleeping bags.

We cleared Customs, International Police, and Passport Control, got permission to camp behind the police station and were unloading our gear when a voice asked in Spanish: "What are you doing?"

We looked up simultaneously. A young police captain astride a chestnut stallion smiled at us. He was dressed in an immaculately trimmed uniform and polished black riding boots; the antithesis of our dirty Plumline cycling outfits. Following him on another horse was a young civilian.

"We're getting ready to camp," Kathy said.

"Oh, don't do that. I have room at my house. You can sleep there. There's hot running water for a shower too."

"Oh really?" Kathy said. "Your family won't mind?"

"No problem. Just come to the yellow house over there," he said pointing, and the two of them trotted away.

"Damn it, Kathy, you were awfully quick to accept."

"Yeah, I surprised myself. The offer of a shower got me, I guess. We could tell him we prefer to camp."

"I suppose it's okay. A shower sounds awfully good to me, too."

We wheeled our bikes across the road. The sky blackened and dumped on us as we dismantled our bags and walked up the front steps. The door was open, giving a glimpse of living-room. Porcelain dinnerware, wine goblets, and demi tasse cups gleamed behind the sliding glass doors of a highly polished buffet. Crocheted runners decorated the tops of the buffet and dining table. "Touches of the feminine," I thought.



Reanne Douglass

"Hola," Kathy called, expecting to be greeted by the captain's wife. Instead, the young civilian greeted us. "My name is Mario," he said. "Please come in."

He led us down a hall, opened the door to a bedroom and told us to put our gear on the floor. "The bathroom's over here. You can shower when you like."

The "extra" bedroom was empty. No bed, no chair, no rug. Just polished hardwood floor and a lace curtain at the window. "Well, it's coillon or this," I said. "And I guess we've committed ourselves." We unpacked our Thermarest mattresses and laid out our sleeping bags.

I went to take my shower while Kathy visited with Mario in the living-room. The bathroom was as immaculate as the captain's uniform. Soap, cleanser, scrub brushes, deodorant, toothpaste, everything neatly placed. Too neatly. No ring in the tub, no hair jammed at the drain, no urine stains around the rim of the toilet. Curious, I opened the medicine cabinet. The same: everything in place.

"This guy's too tidy to be married," I thought. Besides, there was no lipstick, no eye shadow, no mascara, no nail polish, no perfume, no hair spray, accoutrements that follow any self-respecting South American female. Obviously we'd hit upon bachelors.

I recalled an incident thirty years ago when, as a student in France, I'd let a friend talk me into taking a week-end tour to Yugoslavia with two Italian men. "We've got separate rooms, and they've promised to behave," she assured me. And of course they did. Like any Italian male would on a trip with two young women. We spent the entire Saturday night fighting them off, causing such a commotion in the hotel that at 3:00 am, the manager asked us all to leave.

"You were twenty then," I told myself. "What on earth makes you think there could be any similarity. These guys are probably just curious about two middle-aged Gringos."

I hopped into the tub, turned on the shower. The water trickled out like a tired hose. No matter; it was warm. I shampooed, lathered and stood under the trickle until my skin broiled. Pure luxury. I put on my one going-to-town outfit, a dirty turtleneck and damp, wrinkled jeans, dabbed some lipstick on my lips, and returned to the living room.

"You look different," Kathy said.

"Yeah, I feel human now. Your turn."

She and Mario had just finished a checkers game. They'd polished off two glasses of Tang with brandy, our emergency health rations, and were discussing urban crime problems in the States. Mario was an officer with InterPol and had spent four weeks training in Washington, D.C. I noticed he'd switched to the informal "tu" when he talked to Kathy.

She glanced at me with a smile that translated, "Here we go..." and excused herself to take a shower.

Mario continued the discussion, questioning me about politics under the Reagan Administration, problems of American youth, US opinion on the Falklands War. He was well-informed and a good conversationalist, but I was irritated. It was nine o'clock and we hadn't eaten a real meal since morning.

"Look," I said, "suppose Kathy and I go ahead and prepare our dinner?"

"Oh no, don't do that. We'll prepare dinner when Roberto returns." No explanation about where he was or when he'd return. I stewed.

Kathy rejoined us. Her blond, shoulder-length hair, braided since our last shower three days earlier, hung shining, full and sexy around her face. If the "before" interested Mario, he was sure to light up now.

The Captain appeared suddenly, perspiring and out of breath. He'd been jumping his horse, a rightly two-hour regimen. He smiled: "We'll prepare dinner after I shower."

Kathy and I fixed ourselves some instant



soup and were getting ready to try a retreat to our sleeping bags when Roberto came into the kitchen carrying two bottles of wine. He was wearing a white polo shirt - Christian Dior - and tan Levi's, and had slicked his black hair with oil. He reeked of shaving lotion.

"Now, a toast to our guests," he said, opening the wine and quoting a love poem of Pablo Neruda.

Ignoring the reference to love, I said, "Kathy is a poet."

"Ah? I write poetry, also. Later I will show it to you."

I took a sip of the wine; it was excellent Chilean Cabernet. The guy had good taste.

"Now, Mario and I will prepare dinner for you: a leg of mutton from the ranch across the road, fresh tomatoes and lettuce from the garden. You and Katherine relax and listen to music in the living room."

Leg of mutton? I could see the program. Another three hours. It was 10:00 pm. "I'm sorry, but we must go to bed early when we're cycling," my irritation obvious.

"Just thirty minutes. We will hurry. Mario can cook mutton steaks and I will make the salad. Come," he said, pulling Kathy and me into the living room.

"Do you like typical Chilean music?" I start with music of Tierra del Fuego."

Dinner was served at 10:45. Roberto kept up a commentary as he lead us, musically, from the Ultimate South up the Chilean Coast. His appreciation of his own country impressed me. I'd never met an American Army officer who could talk about anything other than football, pop music, and beer.

We finished dinner at 11:45. Kathy rolled her eyes. I yawned. "That was delicious, but now we must go to bed." The two of us stood up, grabbed our dishes, and started toward the kitchen.

"Oh, don't bother; Mario and I will do the dishes in the morning. Besides, you haven't heard the music of the North yet," he said jumping up to change the cassette.

Roberto and Mario sat on the sofa. Kathy and I took easy chairs facing them. "Are you single or married?" Mario asked.

"Married," I said quickly. Kathy had recently divorced and I hoped she wouldn't mention it. "Me too," she nodded.

"How do your husbands allow you to come on a trip like this?"

"They don't allow." We're equals," Kathy said. "We just planned the trip and came."

I explained that my husband had wanted to come with us, but that he had to work. Actually I had "uninvited" him. We'd been in the Straits of Magellan nine years earlier on our sailboat and had both wanted to return to tour the land. But after years of being his first mate in sailing, running, and cycling events, I was determined to do my own thing, at my own pace, on my own terms; not his. It had taken him weeks to understand my resolve. Being equal hadn't been as easy as Kathy pretended.

Music of the North clicked off. "Just a little romantic music for dancing," Roberto

said as he jumped up to change cassettes. "Oh damn," I thought, "here comes the test."

"No!" Kathy said abruptly. "We're too tired for dancing. Besides, we're old enough to be your mothers."

They both laughed. "How old do you think we are?"

"About 25," I said.

"On no, we're both 32 and you can't be more than 35."

"Oh yes we are," Kathy said raising her voice. "She's even a grandmother," pointing at me.

Stunned, they slumped back on the sofa. "You're lying," Roberto said.

I shook my head.

"How old are you?"

Conditioned by our youth-worshipping culture in the States where forty's okay but fifty's the downhill run, I didn't want to admit I'd just begun the run. I knew Kathy wasn't about to reveal her age; she was always reminding me that she's the younger by three and a half years.

"We're over forty," I said.

"Impossible! How do you stay in such good shape? South American grandmothers don't look like you."

"We can look at the Customs records tomorrow if you won't tell us your ages," Mario said.

"Fine," I thought. By the time they knew our ages we'd be twenty kilometers down the road and the joke would be on them. I could see the other officers laughing. "Tried to pick up some grannies, did you?"

"We slept poorly. Hard floor, stuffy room. Coils and fresh air forsaken for love of a shower. Our alarm clock rang at 6:00. Let's get the hell out of here," I said.

We packed our panniers and tiptoed down the hall. Roberto called goodbye from his bedroom. Mario was nowhere to be seen.

We loaded our bikes and cycled away on the muddy road. "If I ever come back to South America," Kathy said, "I'll dye my hair dull gray and wrap it in a granny bun."

Weeks later, back in the States, we recounted this episode to a mutual friend, a Spanish professor. "Good God! You must have been crazy. South American men love older women." He went on and on, upbraiding us for our carelessness and stupidity.

"You've both been to South America before. You ought to know... And Kathy, especially you, you lived there!"

Yes, in retrospect, I suppose it was stupid. We should have been more cautious. Yet at no time did I feel unable to control the situation. Bandits, muggers, and rapists haven't hit the Ultimate South, it's still a frontier society where courtesy, mutual support, and humor pervade, and I feel safer there than I do any day in the city here! * *

"I'm going to bed," Kathy said heading down the hall. "Come on, Reanne."

"Just one dance, please," Roberto begged, wrapping his arms around my shoulders. "Does the difference in our ages bother you?"

"Of course."

"It doesn't bother me."

"Look, we wouldn't have stayed if we'd thought you were confused about our ages. I struggled not to giggle - this had all the elements of a Spanish melodrama. But I'd be asking for trouble if I laughed at him. Latin machismo is notorious."

"Reanne! Help!" Kathy's voice was guttural.

"Good night, Roberto." I pushed his arms away. "I'm just not interested."

I ran down the hall. Mario had Kathy pinned to the wall.

"What the hell were you doing! I need help. This guy's drunk!"

"Come on Kathy," I said in Spanish, shouting Mario aside. "Time for bed."

We shut the door. There was no way to lock it. No bolt or key. Not even a chair to jam against it. I switched off the light. We slid into our bags, jeans and shirts still on.

The door opened. "You okay?" Mario shouted. He turned on the light. We lay still, pretending to be asleep. He slammed the door, re-opened it, turned the light on again, slammed the door a second time.

"God, they must be hard up," Kathy said. "Just us and the sheep."

The door opened a third time and we heard Roberto say, "Leave them alone Mario."

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Thomas Prehn

Learning the Hard Way

The sweat rolled off my forehead as I lay on my back looking up at the billowing clouds in the Florida sky. The fire engine red, Steve Potts mountain bike rested awkwardly on the ground next to me, its rear wheel spinning slowly, dust settling around it. I was getting an idea of how this racy mountain bike handled but at the humbling expense of also becoming familiar with the sandy Florida soil.

Five days before, I had competed in my first mountain bike race and I was hooked. I'd ridden the citizens event of the Gant Challenge in Miami on a whim and a borrowed Schwinn High Sierra. I'd won the novice race then sat in the shade of a palm tree to watch the experts race. Lawrence Malone and the rest of the Specialized team battled it out with Raleigh racer Steve Tilford and my Schwinn teammate Jeff Pierce. By the time the race was over, I wanted a piece of the action in the following weekend's race. Extending my stay in Florida another week and avoiding the Colorado weather would be no problem. Finding someone to loan me a mountain bike might be. I had to find a bike and race the expert class in Tampa the following weekend.

The phone rang three times before a good friend deeply into mountain biking in Colorado answered. He had invited me several times to come up to the mountains for some backcountry riding but my race schedule always interfered.

"Hey! I just did one of those Gant Challenges...won the novice...next week in Tampa..."

Any sort of bike would do but if he had something fast, all the better.

There was no hesitation and by his voice, he sounded more excited than I about my start in this "new" sport.

"Let me see what I can do..."

The contents of the boxes that arrived two days later assembled into the beautifully worked Steve Potts. THIS WASN'T JUST SOME LOANER. THIS WAS A BRAND NEW BIKE! I wanted to take the mountain bike world by storm and this magnificently crafted machine was more than I could have hoped for.

I had less than a week to prepare. I was fit from my road season; I just needed to learn how to ride this bike that was so unfamiliar to me! The bike was stiff yet rode

smoothly over bumps and holes and the tires gripped the terrain more than I was accustomed to. Here I was, a veteran road racer, once again learning how to ride a bike!

I'd ridden the Miami race in Nike running shoes and had had trouble getting in and out of the toe clips because of the waffle sole. Now I had a special bike for the Tampa race and I wasn't going to race the Expert Class in running shoes. I couldn't chance having the same trouble getting in and out of my toe clips in a 15 mile race. I needed something special for my feet.

It was a big decision. I guess that's why it took nearly 20 minutes to pick the black canvas laced tennis shoes over the more expensive white shoes with velcro at \$4.89. If I had waited around K-Mart any longer, there might have been a "blue light special" on them but I wanted to make tracks. After more than 20,000 miles on a bike and being tethered to the pavement during the past racing season, the thought of riding across fields was exciting.

I was a kid with a new toy for the next five days. I rode through orange groves and across wide grass fields, preparing and learning the handling of the little red Ferrari of a mountain bike. A construction site was a playground and test site for my skill and the bike. I learned how steep a grade I was able to ride up and what I was daring enough to race down. A baseball field was perfect for my test track and around in a tight circle to ride around and avoid in a tight circle to learn when the tires would slide out. I kept circling faster and faster, leaning into the turn until suddenly, it was too far. The pedal dug into the soil, lifting the rear wheel off the ground. In an instant there I was, looking up at the puffy white clouds.

I had a good idea what to expect of the race. I had done my share of cyclo-cross races (off-road races with a more conventional ten-speed type bike) as training during the winter at the Olympic Training Center in Colorado Springs and this was...somewhat similar. The heavy hitters at the previous Gant Challenges were also experts at cyclo-cross: Lawrence Malone, Steve Tilford, and Gavin Chilcott. These guys had the toughness needed to make it through a mountain bike race. In Miami, Tilford had forced Malone, even taking over the lead, until the

relentless punishment of the course took its toll on Steve's modified road machine. One lap Tilford was leading and the next, he was racing without a rear derailleur, his chain sagging dangerously close to the rutted and sandy ground. (And to think I'd be best bikes two weekends in a row!) Steve didn't come around the next lap. Lawrence won the race and now in Tampa, I wanted to challenge him.

I guess it was a matter of pride. Malone was an off-road specialist and I was a National Team road racer. I wanted to show him up.

Steve Tilford, also a National Team member, and I talked a bit as we warmed up on the course. The circuit was longer and more tame than the week before.

"So I guess Malone is the guy to watch," I said stating the obvious as we rode along side by side. Tilford smiled back and, eager for the challenge but looking to better his chances, said, "We should try and make Malone do a lot of the work."

Nothing more needed to be said. I understood exactly what he meant and added, "This is more like a grass criterium course. That should favor us," Tilford agreed, "yeah...Malone has got the technique but we should have the fitness."

The alliance was loosely knit but could be helpful in overcoming Malone. On weekends, Tilford and I might have been rivals on the road but this would be a different story in Tampa; our respective cycling teams were far from this Gant Challenge. The game plan was simple and nothing needed to be said between us. If I attacked, he would let Malone and his Specialized racers chase me down and if Tilford made an aggressive move, again Malone would have to do the work to close the gap. When the distance was made up, the other racer would then counter-attack. The plan was great in theory and worked very well in road races; this was a little different though.

These alliances are funny things though. They're loosely knit and can quickly dissolve. That was another part that Steve and I didn't need to talk about. If things worked out, if we got away from Malone and the rest of the Specialized boys, we would go in-



with their precipitous slopes and steep, rocky mining roads and rugged single tracks. The variety of biking available is enormous, from long, fast rides on double tracks through the sage to single tracks twisting past aspens and up the surrounding slopes. Many of the rides require quite a bit of paved pedaling so tires like the Avocet/Ritchey designed to operate with 45 to 80 pounds of pressure are ideal. Pump them up hard for the highways then let the air out for the dirt. The best source of riding information is Sore Saddle Cyclery. Not only will you hear about the best rides, you may well end up with a guide if you arrive when some of the locals are heading out.

One of the favorite local rides is the Hot Springs Trail, approximately 18 miles long with a one and a half to two and a half hour time. The best part of the route starts after arriving at the hot springs via a graded, dirt road. A single track starts behind the hot spring's bath house. It's a narrow, frequently used horse path that follows Hot Springs Creek down for four miles before intersecting the Elk River Road and the six to seven mile return to town. The trail is smooth but challenging with only a few very short portages required.

Another favorite ride is the Spring Creek route via the hard way. The distance is about 12 miles with a riding time of one to two hours. Like the Hot Springs ride, this one is a combination of graded dirt road and track. Most ride up the road and down the double track. But the real challenge is riding up the track with no foot dabs! It starts out moderately enough but soon steepens to 12 to 15% then 18% on a rough track. The first pitch after a cabin is one of the steepest and enough to make most riders dab. An easy section follows then more challenges that bring tears to the eyes of the strongest riders before the trail finally spills out onto an open meadow with superb views. Buffalo Pass looms ahead, the object of the ride, but what is seen is a false summit. The real summit lies beyond with a final 200 foot difficult climb between you and the top.

From there, the riding is easy, a rolling, curvy descent through aspen forests to the Buffalo Pass road and three miles of descending back to town. Coming up via the road is definitely easier but not nearly as challenging. The best combination of all is coming up and returning via the trail. Once back in town, there's nothing quite so relaxing as swimming in the hot springs pool with an occasional wild ride down the water slide. Typical of most resort communities, a fine array of restaurants awaits the appetites built up cycling. ★ ★

Skinsuits

Flash is Functional



L-R: Hind, Dale Rea rights and Alitta one piece net top suit.

Paul Gallahe



L-R: Pearl Izumi, Vigorelli and Vigorelli.

Paul Gallahe

There is absolutely no reason why you should rush out and buy a skinsuit. Oh, there are a number of arguments that could be presented in favor of skinsuits but really, they'd only be rationalizations supporting a non-rational decision.

The various staff members, magazine groupies, and assorted and sundry mountain biking friends circulating around corporate headquarters all like skinsuits. With one important qualification. Not every body looks good in a skinsuit. But those that do look great.

The suits are fast, colorful, feel good, and just generally infect the wearer with a sense of power and speed. Whether you'll actually slice through the air any faster with a skinsuit on is questionable. Aerodynamic tests have pretty much proven the superiority of skinsuits but that's always related to road racing and ideal conditions. Mountain biking conditions don't fall into that category. Straight bars, knobby tires, fat tubing, pumps, tool kits, and multiple water bottles are anything but aerodynamic.

Prices vary considerably. The determining factor for price is the material the suit is made out of. For example, the Descente suit is made out of fabric dyed specifically for that suit. Rather than sew together pieces of different colored fabric, the suit's colors were dyed according to the design. That ends up being expensive. Sewing together different colored pieces is less expensive but then the labor involved is increased.

The suits we've featured were arbitrarily chosen from extensive lines of skinsuits. All of these companies plus all the companies not included have almost uncountable styles and colors to choose from. Somewhere, there's little doubt that a skinsuit is waiting

comfortable fit.

The Hind one-piece suit is a triathlon suit. The only real difference from a cycling skinsuit is the lack of a chamois or polypropylene crotch. This might be somewhat heretical but the lack of the leather wasn't noticed. The suit was as comfortable as those with crotches.

We also included tights, those exceptionally flashy, skin clinging pants that used to only be worn by dancers. Once athletes discovered what dancers had known all along, their popularity rapidly spread. Climbers wear them, runners wear them, gymnasts wear them, and cyclists wear them. They're great on a cool morning, but not a cold morning. They don't insulate at all but they do keep the wind from directly hitting your skin. Consequently they're exceptionally comfortable on early morning rides. Oddly enough, they're not overly hot either. Once the sun comes up and the temperature starts climbing, you won't find yourself desperately trying to claw them off as you overheat. Your legs will simply stay comfortably warm. They're really great for your knees. You'll probably even go a little faster with them on.

But don't buy a skinsuit or tights for their aerodynamic advantage. Buy one because you feel great with it on. Buy one because the colors are so beautifully striking when you see them flashing through the woods. Buy one because your mate will be an absolute knockout with it on and you can't wait to see her or she racing like the wind over a mountain. Buy one because no matter what your actual time may be, it makes you feel like a potential world beater.

In short, buy one; you'll love it. Except when nature calls. Ah well, we're all flawed in some respect. ★ ★

just for you.

Two of the featured suits, the Descente and the Pearl Izumi, are made with a built-in bend to them. Look at them on a hanger and they'll look like the legs are held out in front. That's to make them as comfortable as possible for cycling. The disadvantage becomes apparent when you walk around wearing one. They're tight in the front. Some even think uncomfortably so but that's strictly a matter of personal taste. Once you're on the bike, you'll have a hard time finding a more



L-R: Descente, Alitta, Hind, & Andrea Heller tights.

Paul Gallahe

Editor,

Your "article" by John Kirkpatrick on the invention of mountain bike racing by none other than Randy Ross is an insult to the reader's intelligence and your own credibility. It reads just like a Ross press release, and surprise, John Kirkpatrick is the ad man for Ross! The suggestion that off-road racing began when someone decided to finance a team is like saying that bicycle racing only started when people got paid to ride. Where was Randy Ross when the Repack races were going on in 1976? Must have been taking arrogance lessons.

Stephen Wilde, CA

That John is part of the Ross organization was made clear in the story. He made no claim to having started the mountain bike race business, only that Ross was the first national company to field a team, a decision that did much to encourage more racing. His article was an honest account of how the Ross Indians came to be and according to those who know them, very accurately portrayed both Randy and John.

Editor,

Congratulations! The premier issue is a winner. I really loved hearing about new places to ride. And the reviews of bikes and tents were as complete and as helpful as any I've read anywhere. Your pictures are icing on the cake! I look forward to the future issues - good work.

Claudette Dorsey, CA

Editor,

The issue of wilderness impact is a deep and far reaching subject for all true outdoor enthusiasts. Most uninformed people believe that mountain bikers are a nuisance as well as destructive to the fragile ecosystems in the Colorado Rockies.

But I have witnessed more destructive behavior (cutting switchbacks, leaving trash behind) by backpackers and more erosion by equestrians than any other group of outdoorers.

For instance, on a wet, rainy day in a National Forest in Colorado, a single horseback rider could do more damage to a trail than 15 or 20 mountain bike riders!

Mountain bicycle riders everywhere should band together to preserve their right to use National and State Parks and Recreation Areas, before some special interest group beats us out of it.

Norris Schleeter, CO

We agree. See Editor's Note.

New Products Review

KANGAROO E.Z. RIDER MINI PANNIER

Another member of the Wilderness Group is Kangaroo Bags. Their newest pannier is designed for those who only need one small bag to put odds and ends in. It features the same tough construction of Kangaroo's regular panniers but its volume is only 225 cubic inches. It mounts quickly and easily on a rear rack.



LEADING EDGE STRETCH GORE TEX CYCLING SUIT

The clothing was designed with help from the US Cycling Team for cyclists who have to train no matter what the weather. It's pretty much intended for road riders but could be perfect for backcountry cycling where getting caught by storms when you're hours away from the nearest shelter isn't unusual. The clothing, all made out of

stretch Gore-Tex, consists of bib overalls or pants, jacket, and vest. Stretch Gore-Tex is combined with Polypropylene/Lycra for a breathable yet weatherproof shell system. The Gore-Tex is in front with the breathable polypropylene on the back. You won't stay totally dry on the back but you also won't sweat to death inside a waterproof shell. So far, the clothing seems to be very well received by riders. We'll have a full report on bad weather clothing later this fall.

PLUMLINE MOUNTAIN BIKE CLOTHING

Clothing specifically designed for mountain biking has been introduced by Plumline, part of the Wilderness Group, Inc. The pull-on jersey is polypropylene with 3/4 length sleeves, padded shoulders and elbows, plus sleeve pockets. The knicker is 85% polypropylene, 15% Lycra with padded knees and a polypropylene crotch.

COOK BROTHERS HUBS

This latest design in mountain bike hubs from Cook Brothers Racing are built with 130 mm rear drop-out spacing and feature sealed cassette bearings. Sealed cassette bearings withstand greater loads due to increased ball bearing contact area. Conventional cone and cup bearings are adjustable and rebuildable but the nature of their design does not provide the needed durability for off-road conditions. Lesser ball contact surface area against cone and cups is one notable weakness as are threaded axles.

Sealed cassette bearings and quick release axles are easily removed for bearing replacement. Simply remove one axle retainer cap by loosening the set screw and slide it off, then press or tap the same axle end to push the fitted bearing out of the opposite flange. Use the axle to do the same on the other bearing.

The Cook Brothers axles look beefy enough for the toughest of testers. The flanges are beautifully machined cast pieces pressed onto a carbon fiber tube giving them their distinctive black and silver appearance. The stepped axles are fitted

between the bearings and retained with a sleeve and set screw also acting as drop-out contact points. They are serrated and will not slip forward in horizontal rear drop-outs.

The axle retainers, should they lose their set screw, could be troublesome in a time priority wheel removal/tire change. The outside diameter of both front and rear axles of the pre-production hubs we tested had some play when fitted to the inside of the bearing. A tighter tolerance fit would eliminate an irritating rattling that also hammers the axle surface. Another disconcerting discovery was the mis-alignment of flanges, hopefully something that will be corrected in production versions. The flanges must be properly located radially before being pressed onto the distance tube or flange spacer. If they're not properly offset, the building of the wheel requires special attention. Alternating spokes will be somewhat longer, causing potential spoke/nipple engagement problems.

But in summary, while an honest evaluation takes quite a bit of time, it's safe to say these Cook Brothers Racing hubs are over-engineered and should afford continued good service in the roughest of conditions.

How About A Trailer?

A bike trailer is a must for anyone who has recently become a parent and likes to cycle tour. Bicycle kid's seats are fine for short trips around town, but beyond that, a trailer is the only way to go. Trailers will safely and comfortably transport your kid (or kids) and all the paraphernalia that clings to them like burrs to a dog's fur: diapers, extra clothes, toys, food, drink, etc. Plus, and this may be the most important point of all, a trailer provides weather protection.

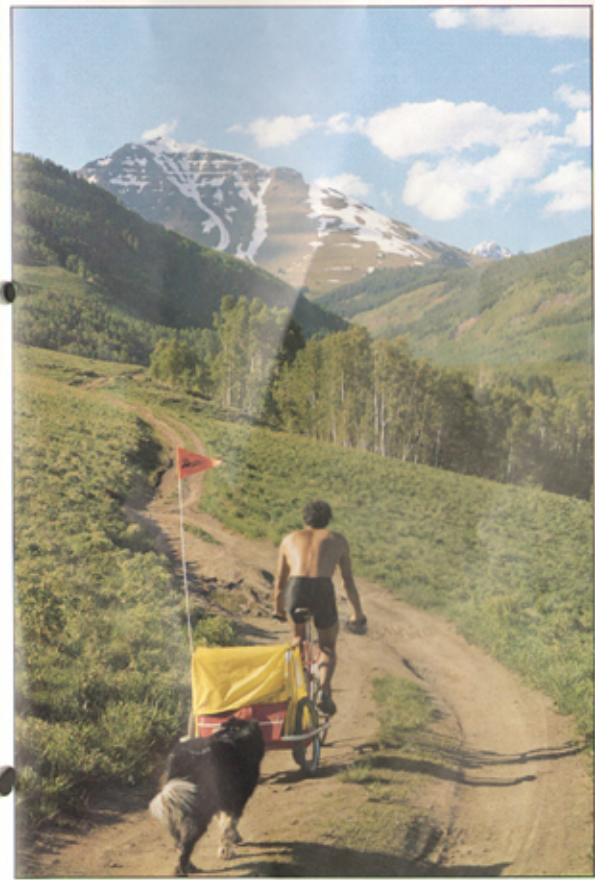
Staying warm when pedaling is easy; work harder and your temperature goes up. But conditions that are comfortable for a cycling parent can be cool or even cold for someone sitting quietly in a bike seat, even if partially protected from the wind by the parent's bulk. A trailer with a hood solves that.

A properly loaded and hooked on trailer is a surprisingly stable device. Even if the rider lays his or her bike down, chances are the trailer will remain upright. Trailers with frameworks that act as roll bars will even protect passengers in the event of the trailer's tipping over - but only if the seat belt is fastened. Most trailers are made in bright colors. Those colors combined with the trailer's size make for a highly visible object on the road that motorists appear to give slightly wider berth than they do single riders.

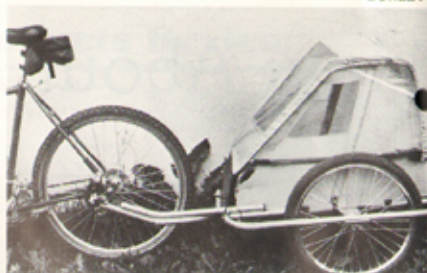
Trailers come in two basic versions: a molded plastic shell on wheels and a metal framework with a fabric body suspended from the framework. Each has its advantages though the suspended style is preferable on rough terrain. Trailer to bike hook-ups also have two versions: those that clamp onto the seatpost and those that clamp onto the chain stay/seat stay.

Price will probably have more influence on which trailer you buy than anything else since prices vary by as much as two hundred dollars, depending upon how the trailer is equipped. But remember, the trailer will outlast those years that your child will ride in it. You'll either then sell it or, better yet, use it for touring. If the latter is a possibility, be sure the trailer you buy will fulfill your touring needs.

Touring with trailers is great, especially in the desert where water is at a premium. My wife and I have cycled over Utah jeep roads with our son and gear in one trailer and a giant water bag and the balance of our gear in another. Without the trailers, the tours would have been impossible for there was no way we could carry all the water needed plus the gear plus him. Even without him, trailers are the only way we could do the route. It's a toss-up as to whether to use panniers or a trailer when cycling on the



Kimberly Schappert



road and without a child. I feel I can go just as fast with a trailer as with panniers but with a trailer I have the option of carrying more gear if necessary.

The second most important criteria in trailer selection is performance. Those that like to ride fast will probably be more interested in a small, lightweight trailer. Those who are more interested in safety and ample room will have different concerns. That's definitely not to say that performance, safety, and roominess are incompatible. It's simply a question of where you place your emphasis.

When it comes time to go trailer shopping, have a firm idea what you plan to do with the trailer and what you expect from the trailer. Ignore price until after you have settled on trailers that fulfill those needs. Then let price decide which one you buy. Availability could well end up being the deciding factor since few bike shops carry trailers and those that do usually only carry one model.

THE BURLEY AND EQUINOX

These are two totally separate companies from Cottage Grove, Oregon whose designs are so similar that they can be covered together. The reason for the similarity is their common background. The designer of the Equinox helped design the Burley before splitting off and starting his own company.

Both trailers are built out of light weight aluminum tubing bolted together with nylon stretched over the framework. Both hook onto the left chain stay/seat stay just in front of the dropout. Both are light and fast, the sports sedans of the trailer industry. Each has enough relatively minor distinguishing features to separate them but other than that, which to buy is strictly a matter of personal preference, availability, and price.

Trailer weights when set up for carrying children are approximately 20 to 22 pounds. Touring versions for gear alone weigh about 2 to 4 pounds less. Twenty-inch wheels come equipped with either the standard steel rims or alloy rims. Assembly is easy. Nylon panels snap into place on the frame work while the seat is a suspended affair made out of nylon. An aluminum bar with a threaded bolt protruding through carries most of the seat's weight while serving as a roll bar. The rain cover stretches over the frame work creating a small luggage space behind the seat. The design is such that the back can be covered while the front is rolled back. Both trailers also can be equipped with a second cover with mosquito netting replacing the clear vinyl window. The netting provides protection from bees and flying debris while allowing plenty of air to blow through.

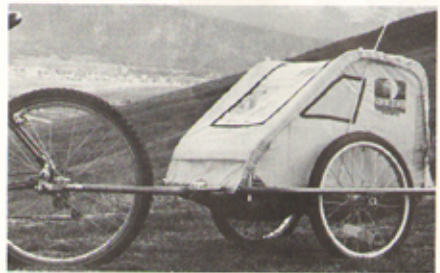
The rain cover works. The only water we've had get inside the trailer was up through the nylon floor when fording streams. We've also had the trailers on the roof of our van during hard rain storms

when driving cross-country and nothing we stored inside ever got wet. One of the most attractive options with either trailer are straps that convert the trailer into a roof-top luggage carrier. Just remove the wheels then put the trailer on the car's roof. The gutter straps securely hold it on even at speeds as high as seventy miles per hour. But be sure to fill the trailer with enough stuff to support the rain cover so it doesn't flop in the wind excessively.

In terms of performance, the chain stay hook-up is great. The trailer has minimal effect upon the bike's handling except for a barely noticeable tendency to veer left. In fact, it's easy to forget the trailer's even hooked on until you hit an uphill. The only problem with the hook-up is that there is no guarantee it will remain attached. The trailer won't go anywhere as long as you have the safety strap hooked but it can be disconcerting.

The reason for the potential unhooking is the flexing of the bike's frame and the sideways movement of the bike relative to the trailer during hill climbing, especially if you stand. That movement causes the locking attachment to gradually work loose. The remedy is simple. Cut some short sections of fuel line, slice down the length on one side, then put one on the chain stay and one on the seat stay where the clamp attaches. The rubber protects your paint job while absorbing some of the movement. Crank the lock device down as tight as you can then periodically check it during the ride.

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EQUINOX

CANNONDALE BUGGER

Shoes



The increasing popularity of mountain biking is producing still more and more shoes designed specifically for the sport. Last month we reported on a variety of

designs, both regular touring and the sport-specific Nike Discovery. Following are reports on two more shoes for mountain bikes.

*Rivat cyclocross right
Polytour from Power Sports left*

POWER SPORTS FOOTWEAR "POLY TOUR"

The Poly Tour wasn't specifically designed for mountain bikes but it certainly works well in that capacity. It's a lightweight shoe made with polypropylene for fast drying and no rotting. The toe area and back along the sides are reinforced with a split leather outer covering for better wear. Its last is wider than many cycling shoes, a real boon to those of us with wide feet.

The shoe's best feature is the sole, a

rubber affair with a diamond pattern. For some unknown reason, the sole clings to pedals. With the toe strap pulled moderately tight, there is little of that disconcerting tendency to pull out when traversing slightly rough terrain that drives many an enthusiast mountain biker nuts. Yet when necessary, the shoe yanks right out of the clips for an emergency foot brace. The diamond sole pattern is also appreciated by anyone with a

turned in or out foot. Too often shoes are designed with the foot perpendicular to the pedal, an especially uncomfortable position if your foot doesn't meet that design criteria. The Power Sports' (a division of Bata Shoe) approach makes sense and it works.

The Poly Tour is available in both men's and women's sizes. The women's model has a terry/foam lining evidently on the theory that men's feet are tougher.

RIVAT CYCLOCROSS

The Rivat is often considered a great shoe for serious mountain bike racing only. And there's certainly plenty of justification for that idea. But it's not true.

The Rivat Cyclocross shoe, as its name plainly states, was designed for cyclocross racing, an offshoot of road racing where riders with modified road bikes ride and run (oftentimes more of the latter) over dirt trails. Since non-competitive cyclocross is rare, it's understandable that cyclists have

assumed the Rivat Cyclocross shoe is for racing only. The shoe's popularity with top mountain bike racers has only added to that image.

Reasons for that popularity are numerous. The shoe is light yet has excellent stiffness for efficient power transfer. Foolproof clip entry is insured by the bump under the toe, something greatly appreciated by anyone who's been frustrated trying to get into the clips on a rough hill. The ridged sole, angled back for easy entry, keeps your foot

on the pedal almost as well as cleats. That also means they're more difficult to extract when the shoe is pulled tight but they do come out, especially with a slight twisting action of the foot. If the straps are slightly loose, pulling them out is a snap. The high ankles provide plenty of support for walking and running. The total effect is a very high degree of pedaling efficiency. You can actually "spin" on a mountain bike and you never have to worry about suddenly slipping off the pedal and smacking your shin.

especially after a long climb. This is probably less of a problem during pavement tours than off-road due to the smoother surface. The rubber sleeves are standard with the Equinox.

Only two other problems have surfaced with either the Burley or the Equinox. Holes on the Burley's rain cover were slightly off of position and made snapping it into place a strength test unless it was wet. But that was a factory defect they were only too willing to remedy. The Equinox had a more serious problem. If the kids swayed to one side or the other, the nylon fabric immediately came into contact with the wheel, resulting in an ugly, black scar and eventually a hole melted through by the generated heat.

The only other problem with the trailers isn't the fault of the designers. The trailers are so light and fast that they're easy to forget. Cut a turn too sharp and hit the curb or just take a turn too fast with a bit of bump in the middle and you might find yourself with an upside down trailer. Off road, it's even more important to be aware of where the trailer's wheels are so you don't tip it over by hitting a large rock or hole in the trail. Of course offsetting this is the ease of pulling the trailer and the speed with which you can cycle. I tipped the Burley over the first day with it empty but haven't again in over a year of use so it's not anything to stay up nights worrying about.

THE BLUE SKY

If the Burley/Equinox are the sports sedans of bicycle trailers, the Blue Sky is the nine passenger station wagon. Its framework is made from welded-together steel tubing for maximum strength and longevity. Nylon panels are then laced into place over the framework. The result is a solid and heavy trailer that will carry everything from kids to firewood. Wheels are 27-inch with steel rims for what is claimed to be a smoother ride. While the larger diameter wheels in theory are smoother, we were unable to note any difference over the 20-inch wheels.

The lacing system for putting the nylon panels on is laborious and definitely dis-

suades anyone from altering the setup once it's together. Consequently, hauling the trailer in or on a car during trips can be a nuisance. The best solution we've seen is simply mounting it on a roof bike rack along with the bikes. That works well along as you don't mind the substantial wind drag created. Its over thirty-pound weight also makes putting it on the roof more effort so chances of opting to leave it behind may be the easier course of action.

But those are the only drawbacks to what is essentially a fine trailer. There's plenty of room for two kids and lots of gear. In fact, Blue Sky has one version that will seat four kids! Another big plus is the roof/awning system. Rain covers drop down over the sides from the semi-permanent roof. Without the sides on, the roof acts like a large sun umbrella offering ample shade for the occupants, something the Burley/Equinox lack. Air circulation is as good as if there were no roof on. Consequently the Blue Sky is hands down the best design for hot weather travel for kids.

The seat can be set up so kids look forward or backwards. The ideal position is with them looking backwards as far as weight distribution is concerned. The Burley/Equinox seat faces forward with no adjustment possible. Whether kids like to face forward or back is strictly a matter of what they get used to. Looking backwards does provide excellent protection from bugs and road debris while facing forward can be cooler due to the increase in air washing over the occupants.

The Blue Sky has a long, curving nose-neck that attaches to the seatpost. Since most mountain bikes have quick releases for the seatpost, attaching the trailer is a snap. Hooking onto a road bike is almost as easy, though, since the trailer coupling is designed to come apart to wrap around the post. The attachment can then be left on the bike if you'll be hooking and unhooking the trailer regularly. A safety chain completes the hook up. The advantage of such an attachment is that there is no way the coupling is going to come loose. The disadvantage is that the weight of the trailer definitely affects the bike's handling. And during hill climbing, if you come out of the saddle, the bike's swaying is telegraphed directly back to the

trailer for a somewhat unpleasant ride. The Burley/Equinox attachment, being lower on the bike, doesn't transfer as much of the bike's swaying. The Blue Sky's swaying ends up causing a small amount of swaying that can be annoying. Consequently, seated position ends up being preferred.

The Blue Sky comes in a variety of configurations for touring, hauling kids, or hauling wood. It's by far and away the most versatile of the trailers, kind of a combination pick-up truck and station wagon. That's why it's always been so popular with families and no doubt will remain so. Its sturdy construction and roominess particularly lend themselves to off-road touring.

THE CANNONDALE BUGGER

Cannondale's first trailer was along the same lines as the Burley/Equinox/Blue Sky: a framework with a nylon body suspended from the tubing. They then elected to go with a molded plastic body and have stayed with that design ever since. The body is one piece with an axle passing beneath the seat. Twenty-inch wheels are partially hidden beneath the body precluding the possibility of a passenger sticking inquisitive fingers into the spokes.

The trailer attaches to the bike on the seatpost like the Blue Sky but the coupling is quite different. The Blue Sky's is a thick, flexible piece of rubber wrapping around the seatpost that interferes minimally with the bike except for the trailer's weight. The Bugger's is a mechanical clamp that grips tightly enough to actually hold the bike upright when parked. That's handy when running around doing errands but it also has a noticeable effect on the bike's handling. Lean into a turn and the trailer resists the movement. It's not dangerous or anything like that at all. But it does detract from sporty riding, something that many a parent would frown on anyway.

The seat is the most comfortable of the lot. Unlike the suspended fabric seats that tend to sag to the middle with two kids on board, the rigid Cannondale seat maintains its form no matter how much weight is sitting on it. The firm, relatively upright back also provides far more support than the fabric backs. The drawback is the vibrations that the rigid material also transmits. Over rough terrain, even with the optional Insulite pad installed, it's not too long before loud complaints are being expressed.

Room is also severely limited. With two kids on board, there's really no room for anything else. Even with one up, there's little room for much gear. Cannondale has recently introduced a rain cover for the trailer that no doubt is welcomed by the numerous existing Bugger owners. That was a serious drawback in the past. The rear facing attitude of the seat helped keep the occupants dry from road spray but in a rain storm, it's a nuisance.

For around town, the Bugger is great. Even if part of the commute is on dirt roads. But for anything longer, it's kids are along, the Cannondale Bugger doesn't quite muster up to the other's performance. ★ ★

Tom Prehn continued from p. 39

tantly from allies to adversaries. Tilford needed the win for his points total and I just wanted the win for my record.

There were plenty of people on the infield admiring "my" designer bike with its fancy brakes, superb lug work and frightening lightness but what really blew them away was the tire pump stowed inside the seat post and seat tube! I was having a great time showing off that feature when I heard the bad news. It appeared some of the organizing staff heard from the hard core mountain bikers that the track was too easy. Two railroad ties were just being placed 50 meters past the first corner water tap.

"BANG!" I had enough adrenaline flowing at the start to get me into the first corner in good shape. Of the thirty starters, I slid around the water tap in about fifth. On the approach to the railroad ties, with snow fencing pinning us in on both sides, I moved by

...Bikes continued from page 32

what you want and the color of the machine that gets you there is unimportant, you'll love this latest creation from Specialized.

Personally, I like pink. I like purple even better. I think they're great colors for bikes. And oddly enough, though absolutely no design by anyone, two of this month's test bikes are pink, the Mantis XCR Composite and the Team Stumpjumper. Of the two colors, I lean towards the Mantis pink but not by much. Both bikes were real attention grabbers.

The color was definitely the Team Stumpjumper's hook that caught cyclists' attention. Anybody who's spent any time at all around mountain biking has to know that a hot pink bike is more than likely an elusive Team Stumpjumper, made famous last summer by Specialized's race team. When word got out that the summer of '85 would see the arrival of production versions of the 84 race bikes, excitement started to mount. And orders. The result has been a long wait for a bike.

What have people been waiting for? A full blown, no compromise, competition mountain bike for less than a thousand dollars. Make no mistake about it; this is a race bike, not a detuned version of a race bike made to appear like a race bike. If you're only familiar with the original Stumpjumper and Stumpjumper Sports, you're in for a surprise if you hop on this bike. Specialized has completely revamped their bikes from the ground up.

Most early mountain bikes, including the

one more. The wood blocks were strategically placed but not for my benefit. I could bunny-hop one of them but the second followed in quick succession and demanded too much technique for me. Speed and endurance favored us roaches. Technique favored "them".

There was that crystal moment of panic as I approached the railroad ties. "What to do? Try and jump or dismount and run across?" The racers in front of me dismounted. I kept on coming. The guy next to me jumped off his bike but landed on the side of my rear wheel. I pulled up on my front wheel an instant too late. Boom. I bounced across the two obstacles leaving a large pile of mountain bikes and riders in my wake. I made a mental note to dismount next time.

Within half a lap, it was a three way race between Tilford, Malone and me. Things looked good for the "roadies". Aside from a giant mound of loose dirt and having to snake through some trees in deep sand, the railroad ties were the toughest part of the course. Steve attacked hard after a few laps, opening up a gap on Malone and I. As expected even by Lawrence, I made no effort to chase. I applied some pressure next time around and to my delight, my dismount and jump remount at the railroad ties weren't much slower than Malone's.

Steve attacked again and Malone was

starting to tire but so was I. But then something happened I didn't expect. Tilford got dropped. It was just Malone and me now. Each lap, I attacked him near the start/finish line, opening up a few seconds gap he would have to close. It turned into a battle. He would attack me just before the snake turns in the deep sand, dismount, run through the trees and remount with a few seconds lead. I was forced to ride through the sand or loose more time trying to run.

I don't remember much after that. If I like my mind goes on auto-pilot. All memory functions are shut down so the mental race tacticians can shut without interruption. All I remember is the moment of truth. We were approaching the railroad ties at the same time as we had for several laps. I left off my bike at just the right moment but Malone didn't. He just sailed through the air...over one of the blocks...and then the next! At that moment, the race was over.

As I tired, what little technique I had escaped me. As Lawrence tired, he lost nothing. And then he pulled that graceful jump on me.

Hmmm...perhaps some other time we will meet again.

Thomas Prehn is a long time member of the U.S. National Cycling Team, and has been a regular contributor in a variety of cycling magazines.



Radial spokes as well as internally housed cables on the Mountain Klein.

As is expected from a bike with 17 inch chainstays, the Team Stumpjumper is a climber. Combined with a 73 degree seat tube that puts the rider in a powerful pedaling position relative to the bottom bracket, you can stay in the saddle and grind up amazingly steep hills with no loss of traction. Or come up out of the saddle with minimal traction loss on loose surfaces. If you've been frustrated trying to pedal a long wheel-base/long chainstay mountain bike up hills, you'll be astounded at the grades you'll suddenly be able to fly up, hills that used to

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continued from page 37
mean getting off and pushing. The short wheelbase and steep head angle also translate into more slow speed control than you've ever had before.

Ah, but how does that short wheelbase and steep head handle on the downhill? Beautifully but demanding. The bike is not for novices. It's a bike handler's machine, a race bike. But once a person learns to use the bike's quickness, a more relaxed geometry will seem sluggish in comparison. Where previously you might have just hung on and bounced through rough sections, with the Team Stumpjumper you'll find yourself making lightning quick moves around obstacles for a smoother, faster descent. But that quickness can also get an inexperienced rider in trouble. It's somewhat similar to putting a novice driver behind the wheel of a Porsche. It's easy enough to drive but even easier to get in over your head with.

Components are top-of-the-line. Like almost every frame builder, Specialized has selected components from Suntour, Shimano, and themselves. Derailleurs are Shimano Deore in front, Shimano Super Plate in back. Also from Shimano are the front brake, 5-speed freewheel, shifters, and chainrings. The latter are 26/36/46 Shimano Biopace with Specialized cranks and Suntour MP 1000 pedals. How's that for variety in the drive line. Toe clips with straps were a particularly welcome feature, something too rarely found on mountain bikes. Suntour also supplies the XC seatpost and XC rear brake. The fork is a Unicorn with 2 inches of rake, the rims Satare HX 22 with Specialized quick release hubs and 1.5 Tricross tires. Specialized handlebars are mounted on their own stem, the best looking stem on the market in many a rider's opinion. The saddle is also Specialized's, the highly regarded Lambda S. If there is anything on the bike that seems out of balance with the entire design, it's the Tomesell brake levers. Not that there's anything wrong with them. They work fine and stand up to all kinds of abuse but they're quite clunky looking compared to everything else. Strictly from an aesthetic point of view, either Shimano or Suntour XC levers seem more appropriate. They're also lighter.

The only real gripe that surfaced with the bike was the choice of tires, certainly something that is easily remedied. The 1.5's are fine on smooth terrain but when things get rocky, they're squarer than a politician around election time. No doubt the tire choice has much to do with the fact that Specialized makes the tire but it was almost universal that the Avocet/Ritchiey tires would be a better choice unless most of your riding will be on relatively smooth terrain.

Everybody thought the bars were too wide also but all that takes is a pipe cutter. Without meaning to downplay the role of components, complaining about a bike's component selection is nit picking. Component choice is based on a variety of criteria according to the manufacturer's needs, one of which is cost. Any experienced rider will always be able to find at least one compo-

...Bikes

nent on any given bike he or she doesn't like. That's why bike shops exist. Any shop will be more than willing to exchange or sell you the components you'd prefer. What you're really buying is the frame set and the overall feel of the bike.

If the feel you want is race oriented, this might be the best buy on the market. But there aren't many around and they don't seem to stay on the floor very long so act quickly if you find one and like it. Just remember, the Team Stumpjumper is meant for racing. It's not a touring bike. Nor is it a for novice riders. It was designed for racing by racers.

Crotch Rocket AL2

Ok, the name is unusual, perhaps even weird depending upon your perspective. But it's also descriptive. That's what any hot mountain bike is, a crotch rocket, a wild ride through the backcountry. You either like



Square chainstays in Suntour XC brakes on Mountain Klein.

the name or you don't. If you don't, think of it as CR Mountain Bikes or just the AL 2. If you do, you've no problem. For the most part, I'll call it the AL 2 for simplicity's sake. No editorial statement is intended by calling it that. In fact, I rather like the name Crotch Rocket; it's an attention grabber and in a field littered with competition, that in itself is worth quite a bit.

AL stands for aluminum, the material the bike is made from. The company is small and just getting started but based on their initial bike, they have a fine future in front of them. Not that everything with the bike is right; there's definitely room for improvement. But it's certainly an impressive start.

The most unusual aspect of the AL 2's design is the use of large mandrel bent rear sections incorporating heavy duty dropouts instead of more traditional dropouts. Its relative effectiveness I'll leave to engineers to argue over. It worked fine for us and more than that a person can't really ask for. The bike's geometry is right in there with the latest race designs: short wheelbase, short chain stays, and somewhat steeper angles than has been traditional until now.

The 19 inch frame we tested had 17.3/8 inch chain stays, a 42 1/4 inch wheelbase, and a 22 inch top tube. Seat and head tube

angles were 70 degrees while the Unicorn fork had 2 inches of rake. The result was expected: an excellent climber, highly maneuverable at slow speeds, somewhat demanding in high speed descents. Those short chain stays were great. Sit or stand, it didn't really matter, rear wheel traction was superb just as it was with all the short chain stay designs. The fairly short wheelbase and 70 degree head gave it the maneuverability everybody admired. A twitch of the handlebars was all it took to dodge around trail obstacles yet the front end wasn't overly harsh on rough terrain. As with the other aluminum bikes tested, the AL 2 was wonderfully smooth, evidently due to the aluminum frame.

The tubing wasn't oversized like that of the Klein and Mantis but no one noticed any lack of stiffness. But it's difficult to discern the difference since the AL 2's smaller frame is inherently somewhat more rigid than a 21-inch frame. The bike's 28-pound weight wasn't exceptional though it was definitely lighter than most steel bikes. The heavier gage tubing accounted for part of that weight. More weight could easily be shed by careful component selection also.

Not that the components the test bike came equipped with were shabby. Quite the contrary, it was all top-of-the-line, Suntour XC for the most part. The XC gruppo included the hubs, rear derailleur, shifters, pedals, brakes, brake levers, and stem. The rims are Araya RM 25's, front derailleur Suntour Le Tech, crankset Sugino AT (26/36/46), and the freewheel a 5-speed Suntour New Winner (13-30). An Avocet Touring I saddle on a Suntour seatpost and IRC X 12 125 knobbies finished off the bike. As I said, there's nothing wrong with the componentry.

The same frame and fork can be bought with different components, mostly Suntour with Dia-Compe brakes, for a \$200 savings over the XC gruppo. The XC gruppo bike

retails for \$1095, the less expensive model for \$895.

What were the bike's problems earlier alluded to? Number one was the front break and head set. The XC cam rubbed on the head set cage despite its having been bent to avoid that. That rubbing definitely interfered with the brakes performance plus it was downright annoying. Within a matter of minutes, the finish on the head set had been worn off. The friction could be felt when turning the handlebars also. The rear brake was also a problem. The distance from the rear cable stop to the cam was too short and made adjusting the brake difficult. There just wasn't enough room to get everything in and still be able to work on it easily.

Any other problems with the bike were due to the preproduction blues. The kinds of things that are pretty straight forward to clean up as the company gets into production. All in all, we liked the bike. Three water bottle mounts plus rack mounts are always appreciated. The design is competitive with the hottest bikes going without being radically race oriented. It's a very sporty bike, light, stiff, and smooth.

But the price bracket it's entering has become highly competitive. Two of those bikes the Crotch Rocket has to go up against are in this issue, the Team Stumpjumper and the Klein. They're not the only other bikes in the \$1,000 price range. How the AL 2 stands up against the others you'll have to judge for yourself. Judging bikes is entirely too subjective. In fact, I'm no good at it because there's hardly a bike I ride that I don't like. Well, maybe that isn't entirely true but it's not far off.

The Crotch Rocket has simply upped the ante in \$1,000 bikes. It's got the geometry, the components, and it's made out of aluminum. They're not readily available but if the company is able to fulfill their plans, that will no doubt change. It's definitely a bike worth looking into if you're interested in an aluminum mountain bike. ★ ★



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