

September - October 1986

mountain bike

for the adventure

Preventing Dehydration

7500 Vertical in Bishop

Richard Cunningham

Ironhorse Wrap Up



Bulk Rate
U.S. Postage
Paid
Permit No. 465
Birmingham, AL

\$2.95 US, \$3.95 Canada

**DESIGNED WITH
ONE THING
IN MIND.**



Made in Italy

Circle number 33

A rigorous sport demands footwear that's up to the task. And if you're asking a tennis or jogging shoe to do more than it was designed for, you're asking for trouble. Presenting the AXO Mountain Bike Boot, designed with only one thing in mind: mountain biking.

Fabricated of rugged top-grade cowhide and water-proof nylon, it's lightweight, yet durable. It features high density foam padding to protect your ankles. Injection molded rubber inserts on the heel and fore for flexible movement. Adjustable laces and a wide Velcro® strap give you a snug, secure fit. The exclusive Velcro®

tongue keeps comfort in, and elements out. A thinner toe accommodates clips for surer, safer pedaling. Top-quality stitching throughout to ensure lengthy service.

The inner sole itself is a work of art. Anatomically designed, it matches the shape of your foot. Inside there's a removable terry

liner for comfort. A steel shank insert for added stiffness and protection. The unique directional outer sole gives you incredible traction



whether you're on the bike, or on the ground. It even extends up the toe and heel for surer grips on uneven terrain.

So, instead of asking a shoe to live up to standards it's not designed to meet, why not give your feet the boot designed with just one thing in mind.

The AXO Mountain Bike Boot. It'll make those old shoes head for the hills.



Available in Blue / Red or Tan / Red • Sizes 6 through 13 • Dealer / Distributor Inquiries Invited

AXO Sport-America, Inc.
25702 Rue Cameran Road, Suite F, Valencia, California 91355

1-805-257-0474 (Inside CA)
1-800-227-6296 (Outside CA)



Shimano offers 28, 35, 44, 48 and 50 tooth Biopace chainrings. New 600EX crank arm lengths are 175, 170, 175 and 180 mm, available separately or as a complete crankset with Biopace chainrings.

biopace
Computer Designed Drive System

This triple is a first.

The powerful new 600EX/Biopace triple crank.

Now all cyclists can have optimum pedal spinning efficiency without going around in circles.

Through extensive biomechanical



Biopace chainrings and 600EX triple cranks are designed for popular 130mm bolt pattern.

© Shimano Inc.



New Shimano 600EX utilizes CAD technology for optimum rigidity.

Rigid 600EX crank arm allows maximum ankle clearance and is cold-forged for optimum strength-to-weight ratio.

research and computer aided design and manufacturing (CAD/CAM), each Biopace gear has been individually designed to make our new Shimano triple crankset far more powerful than cranks with conventional round chainrings.

How the unique Biopace shape ends wasted motion.

The Biopace point symmetric shape, combined with crank arm position, vary high/low rotational speed to match natural leg movement, thereby maximizing leg power output. In contrast, round chainrings waste energy by forcing your leg through dead spots at the top and bottom of each stroke. They also fail to take advantage of the greater strength and speed of the pedaling downstroke.

Computer analysis shows round chainrings force unnatural leg dynamics that interfere with smooth cadence. This creates inefficient application of power and can lead to knee strain.



More gain, no strain hillclimbing.

Biopace delivers power when you need it most—on tough climbs or under heavy loads. Its special design eliminates energy gaps and provides a smooth, rhythmic transmission of leg power.

The result is a more natural cadence that not only increases speed but helps reduce fatigue and knee strain— even on higher gears. Try the remarkable new 600EX/Biopace triple crankset from Shimano. It's a first.

Write for our free pamphlet, "Biopace: The New Shape For Pedaling Efficiency" and related technical literature.

SHIMANO SALES CORPORATION 9530 Conroy Avenue, Chatsworth, CA 91311

SHIMANO

Circle number 4

mountain bike

September - October 1986
Vol. II No.

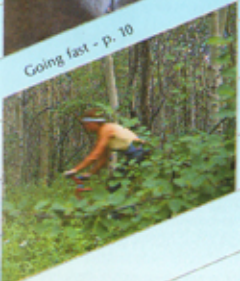
Editor's Note	<i>Perspective</i>	6
Teresa Bradford	<i>Preventing Dehydration</i>	8
Mark Slate	<i>Going downhill fast</i>	10
Dennis Coello	<i>Being prepared</i>	18
Profile	<i>Richard Cunningham</i>	14
Bodfish	<i>Peak Bagging</i>	22
Framesets	<i>Building your own</i>	24
Bike Tests		27
Bishop, California	<i>Plumline 7500 & more</i>	38
Ironhorse Wrap up	<i>Ned does it again</i>	48
Events	<i>Sign up now</i>	20
New Products	<i>Keeping you informed</i>	36
Book Review		37

Cover Photo - Frank Staab

Cooling off - p. 8



Going fast - p. 10



Mountain Bike Magazine, September - October 1986, Vol. II, No. 1, is published bi-monthly by Backcountry Publications, Box 969, Crested Butte, Colorado, 81224. Subscriptions are \$12 U.S./year, \$21 U.S./2 years. In Canada \$17 U.S./year, England \$20 U.S./year. All other countries are subject to current postage rates.

**TWO
HEADS
ARE
BETTER
THAN
ONE!**

PAT. #3866946

NOW YOU CAN CHOOSE EITHER OUR REVOLUTIONARY NEW BEARING ASSEMBLY OR OUR MORE CONVENTIONAL STANDARD HEAD SET. BOTH ARE HAND MANUFACTURED WITH LIGHT WEIGHT ALUMINUM BY SKILLED AMERICAN CRAFTSMEN.

CONTACT A DEALER NEAR YOU, OR:

Circle number 53

**MONTANEUS**
AMERICAN BICYCLE MFG. CORPORATION

3102 SOUTH ROOSEVELT ROAD • P.O. BOX 1245 • ST. CLOUD, MN 56502 • TELEPHONE (612) 251-1641



editor's note

Getting caught up in the seriousness of this mountain biking business is all too easy for anyone attempting to earn a living from it. After eighteen months working to turn a dream into reality, I can fully understand the river runner's bumper sticker. To wit: "River runners are like prostitutes. First we do it for fun; then for our friends; and finally for money!"

In the August Bicycling Magazine was an article on training for centuries. The author listed reasons why people ride bikes, such things as conditioning, better health, reduced stress, etc. Conspicuously missing, at least in my mind, was the reason I, and everyone I know, ride: for the sheer, unadulterated, exhilarating joy of it. But I could also relate.

When you work in the cycling industry, in whatever guise that may entail, the seriousness of it all can overwhelm and bury the fun. Bicycling is a serious magazine industriously and sincerely working to improve the sport. They do a good job of it too for the most part; I read it regularly. But the story's conspicuous lack of the word "fun" struck me.

Probably because that's where I was beginning to find myself: always writing about mountain biking but too rarely getting out there and doing it myself. Time is so short. There are too many things to be done. Etc., etc. I've been told the same thing by frame builders too. They're swamped with orders - which is good since that's how they support themselves - and haven't the time to ride the backcountry anymore - which is what got them involved in building frames in the first place. The same fate befalls many a shop owner who works late and then finds himself (I have yet to meet a female bike shop owner) to tired to go pedal. Or else family responsibilities are calling his attention like a flag snapping in a high wind.

I decided I had to rediscover what mountain biking is all about. My wife and I took three days and rode from our home outside Crested Butte to Aspen to visit friends and then rode back. Our route traversed the heart of the intervening

mountains for an absolutely glorious nine hours of backcountry cycling! This summer's wild flowers are the best they've been as far back as any of us can remember. They're running rampant across the slopes with waves of blues, greens, reds, purples, and yellows swirling over the mountains. Trails are barely visible through the vegetation.

We departed from home laden only with food for the day, water, rain gear, emergency shelter, tool kit, and a change of clothes for town. Instead of following a known route, we took one I'd hiked parts

Getting caught up in the seriousness of this mountain biking business is all too easy

of fifteen and twenty years years earlier. I was confident the route would work out but there were doubts.

Everything turned out wonderfully. The trail was there (not all the time but often enough that we kept running across it), the views were even better than I remembered, the threatening rains never crossed our path, and the riding was superb. At one point, we had a choice of dropping down a drainage via a well used jeep road to a paved road and a fast pedal into Aspen or remaining on top of the ridge and following another jeep road to within two miles of town. My memories of that particular road were also some fifteen years old. Nevertheless, I suspected it would be one of Colorado's finest rides so we followed it. Consequently we saw the most extensive display of alpine forget-me-nots and moss campion either of us had ever seen. An above timber line hillside up which the road zigged was blanketed with

these most delicate and tiny flowers with their sharp colors and rich fragrances.

We arrived in Aspen - tired, and rode directly to the Mother Lode, an Italian restaurant owned by an old friend. He's now an avid mountain biker so the evening was spent talking bikes and planning a ride for the following day.

Then the seriousness of mountain biking reared its foalish head over coffee and desert. Another friend, a lady who's replaced road racing and triathlons (including the Ironman) with racing mountain bikes, mentioned the local bike was pitting bike shop against bike shop.

The crux of the issue is the weekly mountain bike time trial. Clubs are putting on evening time trials with only respective members able to enter. One of the "clubs" is an "outlaw" group of riders who said the heck with it all and are staging their own races but with no entry fees, no prizes, no permits, no insurance, no organization. This irks the club that jumped through the hoops to get permits and insurance so they called the cops and complained. The whole thing is rather humorous unless you're involved. Then it's downright serious.

A similar situation happened right here in Crested Butte with two shops glaring at one another like suitors jousting for the same woman's love. That's all water under the bridge today and no doubt such will be the case in Aspen in the near future. It's a shame to see all this energy being dissipated in futile directions but such situations are common across the country. Local shops, operating with low profit margins, scrambling for as large a share of the sales as possible, eye one another as the enemy robbing their cash registers.

The same holds true for bike manufacturers. Some seem to hold an attitude that every time Builder B sells a bike, they just stole a sale from Builder A. Exasperating the situation is the cycling industry's habit of copying one another's designs.

I'm continually being asked my

impression of the newest cycling magazine, Mountain Bike Action, and how I think it'll affect both Mountain Bike Magazine and the sport in general. My response is simple: welcome to the club. Each cycling magazine - Fat Tire Flyer, Cyclist, Bicycle Guide, Bicycle Rider, Bicycling, Mountain Bike Action, and Mountain Bike Magazine - appeals to a different perspective and every time of them is bought, the entire industry profits. The same thing is true with bike sales. Every time Schwinn sells a bike, they increase by many fold the number of potential mountain bike buyers. Even those garage builders sweating away over their hand crafted frames will profit. Why? Because the reason all of us are out there riding these fat tired flyers is because they're so much fun. And every time anyone takes up the sport, they immediately begin enthusiastically telling all their friends about what a great time they're having and how they ought to get into mountain biking too. The more a person gets into off roading, the more likely they are to start wanting a higher performance model, either production or custom. There's always room for more people in any pool full of fun.

What struck me about Aspen's bike was wasn't the fueding. It was how many people were showing up for the races! Two years ago, only a handful of folks

rode beyond the city streets. Now they're having forty people show up for an evening time trial! When they get it all worked out over there and realize they're all in the same boat, Aspen's mountain biking world will really take off. In Crested Butte, the shops now get along just fine and 80% of the town's residents own mountain bikes and most of them are regularly ridden on the dirt. No, that is not a typo; 80% of the residents own and ride mountain bikes!

After spending our mini-vacation's second day in Aspen visiting and cycling with friends, the third morning found us back in the mountains, reversing our trip. This time we got a ride in a car to the end of the pavement at the base of the pass, avoiding the beautiful but long ridge-top ride. It was one of those silver dollar days that neither of us wanted to end. Our breaks became longer as we hung out watching the world. At one point, we spotted a deer laying down in a niche in some thick krumholtz just below timberline. She was so still we finally decided it was a rock that looked like a deer. When we were within fifty feet, the rock moved her head. Our path slipped by her no more than thirty feet away yet other than that one movement of her head, she never stirred. I wished the Sierra Club's Sally Reid could have been there then to see us "harrassing the wild life".

Shortly after we passed the deer, we heard then spotted two motorcyclists across the valley. We'd seen them earlier trying to follow a trail up the valley floor. The trail was still buried under snow and they had to forge a new route. We stood and watched them while they gunned their engines and ripped the fragile alpine soil in their dash for the top, leaving scars we could see from across the valley.

I wished again that a Sierra Club director was there with us to witness our silent, trackless passage around the basin compared to the angry sound of those motorcycles gouging their way up the mountain. I wished they could have seen that and then looked me in the eye to tell me mountain bikes should be classified as ORV's.

But then the sun came out from behind a cloud and the sea of colors we were traversing burst into life again as the motorcycles disappeared over the ridge. We turned and continued our ambling trek through the mountains, heading to the pass where we lay back on the soft greenery for an extended lunch break. Once again I knew why I loved mountain biking so and made myself a promise to get out regularly, to keep my mind firmly grounded in the exuberance that is mountain biking, and not to get swept away by the seriousness of it to the exclusion of all else.

Backcountry Publications consists of a core group of people here in Crested Butte, Colorado. Part of this group is:
Hank Barlow - Editor
Kimberly Schappert - Art Director
Mark Waters - Advertising Manager
Nancy Schappert - Business Manager
Contributing Editors are:

Mark Slate
Dennis Goello
Teresa Bradford
Frank Staub
Gary Sprung

We work hard to put out a quality magazine and welcome queries for both photography and stories. Contact us at:

Mountain Bike Magazine
Box 989
Crested Butte, Colorado 81224
303-349-6804

Copyright 1986 by
Backcountry Publications
All rights reserved.



DO YOU WANT A QUALITY BICYCLE
WITH REYNOLDS 531 TUBING
HANDBUILT, IN ENGLAND AND
AT A PRICE YOU CAN AFFORD?



THEN YOU WANT A DAWES -
Triathlon, Touring (incl. mixer), Mountain bikes and a Tandem all with the famous extra light Reynolds 531 butted tubing. For more information call 800-688-3334 or for a full color brochure send \$3 to cover postage & handling (refundable against purchase) to DAWES CYCLES, PO Box 1036, Solihull, CA 95463 (19015 Hwy 101).

GET AWAY FROM THE PACK WITH A DAWES



30 YEARS OF
HANDBUILDING
BICYCLES
IN ENGLAND



IF YOU'RE VERY SERIOUS ABOUT MOUNTAIN BIKING, OUR ALL ALUMINUM BIKES ARE JUST WHAT YOU'VE BEEN LOOKING FOR! GET OUR FREE INFO SHEET AND A REAL VICARIOUS THRILL. WRITE OR CALL:

Crotch Rocket Bicycles
700 N. Fairview Ave.
Goleta, CA 93117
805-964-1371

Preventing Dehydration

by Teresa Bradford



exceeds that taken into the body, a negative water balance, dehydration, occurs. Dehydration is the major physiological problem experienced by summer endurance riders. Water loss goes up with increased pace or prolonged periods of exercise or a combination of the two. Low humidity can also triple respiratory water losses, a major cause of dehydration, during exercise.

If dehydration only entailed water loss, the remedy would be simple but because electrolyte balance is also effected, the cure becomes more complicated. Electrolytes, minerals such as potassium and sodium, play an important role in essential body functions. These electrolytes, found in plasma, may be depleted during exercise because of heavy sweating. While dehydration can occur in only a few hours, electrolyte depletion usually requires a period of two to three days.

Dehydration can be fatal and signals of oncoming dehydration should not be ignored. First signs are parched lips and a dry mouth. Thirst is next. (Because thirst is a learned response, it may not be an accurate warning sign of oncoming dehydration.) If you're thirsty, a negative water balance has probably already occurred. Symptoms of a life threatening condition are quick resting pulse, fatigue, stupor, headache, and nausea.

An average person, depending upon body fat content, consists of approximately 57% water. Most of that water is confined to compartments. Vascular compartments consist of the heart and blood vessels, cellular compartments are areas within individual cells, and intercellular compartments are the spaces between cells. Though these compartments are separate, they also rely on each other as reserve tanks.

When dehydration occurs, the depleted sweat cells must tap the blood's water reserves. The ensuing loss of blood fluid could result in a rapid lowering of blood pressure. Prevention is the result of

homeostasis (water balance) system include metabolism, heart rate, central nervous system activity, brain hormones, and contributing factors of diet and exercise conditions. Approximately 99% of sweat content is water with the remaining 1% a combination of sodium chloride, potassium, and trace amounts of urea and lactic acid.

When the amount of water lost

an influx of water from cellular and intercellular spaces and the kidneys' membrane channels into the vascular compartments. This process leaves behind a concentrated solution of electrolytes. Because the brain, heart, and muscle tissues are so excitable, this can upset their normal functions, possibly resulting in mental disturbances, (i.e. delirium), neurological imbalances, involuntarily muscle relaxation as in heat prostration, and in heart arrhythmias (irregular pulse).

The hypothalamus, located in the brain, is responsible for monitoring body temperature and water levels. When water levels fall, the antidiuretic brain hormone, ADH, signals the kidneys to cause an opening in certain membrane channels which temporarily sponge up water, decreasing urine output, and dump it into the blood. When body temperature increases, cells in the hypothalamus initiate a chain of events that turn on sweat gland activity throughout the body. The most obvious indication that this may be happening is a deep yellow or cloudy urine. Yellow pee means you're not

increases.

When the heart can no longer supply adequate amounts of blood to working muscles and the skin for cooling, the circulatory system collapses and heat exhaustion occurs. Blood pools in the skin and legs and is unable to return to the heart in sufficient amounts.

Symptoms of heat exhaustion are: headache, tingling in arms and back, fatigue, rapid weak pulse, pale moist skin, profuse sweating, and chills. Anything that promotes the return of blood to the heart such as the ingestion of fluids and laying down helps to alleviate heat exhaustion.

If heat exhaustion is not recognized, it can lead to the more serious threat of heatstroke (sunstroke), the breakdown of the body's heat regulating mechanisms. Heatstroke is the second major cause of death among U.S. athletes. (The first causes are head and spine injuries.) Symptoms of heat stroke are: headache, bizarre behavior, convulsions, rapid full pulse, hot flushed skin, loss of consciousness and coma. Profuse sweating may or may not be present.

Factors that increase your body's need for water:

- Hot weather
- High altitude
- Dry climate (low humidity)
- Metabolic changes due to diet (i.e. inc. salt intake, large amounts of protein)
- Caffeine
- Alcohol (blocks ADH, promotes H₂O loss)

drinking enough water.

When Olympic Marathon Runner Alberto Salazar participated in studies conducted at the U.S. Army Research Institute of Environmental Medicine, they reported he lost water at the rate of three quarts per hour during Olympic conditions. His six-quart water loss during the marathon, a total of twelve pounds, resulted in an 8.1% decrease in body weight. Since the average blood volume of a person his size is six quarts, the consequences of losing and not replacing those six quarts are obvious.

Prolonged exposure to heat can cause an elevated body core temperature besides the loss of water. The body produces heat which is then carried to the skin by the blood to maintain a body temperature of 98.6 degrees Fahrenheit. This heat is released through the evaporation of sweat. Internal heat production is also increased when exercising in hot conditions. As dehydration occurs, the ability to sweat is depleted, cooling through evaporation slows, and core body temperature

When these symptoms are recognized, regardless of ego or need to finish an event, STOP ACTIVITY IMMEDIATELY! Reduce body core temperature by immersion in cold water.

Electrolyte replacement drinks -

Most commercially available "thirst quenchers" contain a high concentration of salt (twice the normal body electrolyte concentration) and are designed to rapidly hydrate and replenish electrolytes. They can in fact have the opposite effect, increasing hydration time because of the time required to dilute and re-absorb the beverage. According to Dr. Patricia Beckworth of the Childrens Hospital in Los Angeles, "electrolytes lost through sweating are more adequately replaced by a well balanced diet. Additional electrolyte salts may burden the body with a load it cannot tolerate". Studies have shown that a person who drinks fluids containing a high concentrate of electrolytes will initially experience a loss of body water. The ingested fluid must first be diluted with gastric water until it matches the

concentration of the surrounding fluids. Only then can the intestines re-absorb the electrolytes through the intestinal wall. Not all of that will necessarily be absorbed either. The result can be diarrhea, in turn causing further water loss. Drinking undiluted electrolyte drinks can be like drinking seawater, defeating the purpose of hydration.

Because electrolyte depletion usually occurs over a period of days, a well balanced diet and pure water for hydration appears the best way to go.

Prevention of Dehydration and Heat Exhaustion:

1. Use common sense; educate yourself on the causes and symptoms of dehydration and heat exhaustion.
2. Increase your exercise rate slowly over a two week period.
3. Drink water before, during, and after exercising - one pint to one quart ten minutes prior for adequate pre-exercise hydration. Optimally, drink eight to sixteen ounces of water every 15 minutes (a higher rate of water absorption is apparently unlikely during exercise.)
4. Don't let thirst be your guide. Make a drinking plan and stick to it.
5. Monitor urine volume and color; water deficit is indicated by yellow or cloudy urine. Normal urine volume is approximately 1 1/2 quarts per day.
6. If environmental factors are harsh (i.e. high temp, high or low humidity), decrease pace, putting aside ego and ambition.
7. Wear loose fitting, light clothes so air can flow over your skin for evaporation. If you are comfortable before you exert yourself, you are probably overressed.
8. If symptoms of either dehydration or heat exhaustion occur, stop immediately, sit down, drink water, and, ideally, submerge yourself in a stream or pool, otherwise wet your skin with cool water.

Prevention is always less damaging, more healthy, and more pleasant than the cure.

circle number 10 on reader service card

NO HANDS

TOE FLIPS rotate your pedal for easy toe clip entry, every time. Installs in seconds. Durable spring steel.



Designed by and available only from WTB. Sent \$9.95 plus \$1.00 for postage and handling to: Sun Flips, Mountain Transport Inc., PO Box 362, Point Reyes, CA 94956.



mark slate

Greetings, Mountain Bikers. Before I get involved in a monologue of a technical nature different from those of preceding issues of Mountain Bike Mag, I'd like to make a point.

I don't consider myself a very good writer although I have improved. The struggle to get my thoughts into print is sometimes a painful process. Thanks for hanging in there with me. I strive to put out concise information that sounds like me, but somehow through all the rewriting and editing, the final product seems as if someone else wrote it. This can be discouraging. Positive response keeps me going.

The delicate subject I will try to cover to my satisfaction in this issue is the art of descending. I feel it is essential to convey the idea that more speed is not the bottom line. In our politically delicate situation, I feel control is what it's all about. The art has to do with being completely tuned into the terrain and your chosen or even unchosen line. The reward is in doing the job well, not just fast.

Speed is a by-product of a thrilling descent that almost goes unnoticed by you, the operator. Be aware that anybody you pass will have a pretty good idea how fast you're going, so when you pass people, don't be going fast. Okay, so you're going down a fairly steep grade and can see there are no hikers or bikers coming your way and you feel like touching on that all-encompassing inner consciousness.

You begin by channeling all your thoughts to the feel of the surface and the apparent best line through the immediate section (next 3 to 5 seconds). Braking, shifting and pedaling are relegated to a subconscious status for most sections. You have to let yourself be pulled along without experiencing any reluctance. Never push for speed. Look for that comfortable controlled feeling and don't give up the idea that as long as you can see where you're going and have a plan, you're in control. (So what if you're not on

the bike anymore.)

The job at hand is balance, body English, and weight transfer. You must follow your eyes and if a bike swallowing rut appears, you better look elsewhere or you'll be in it sure as shootin'.

Positioning your weight properly on the bike is important. You should feel balanced and as one with the bike. Control the bike with your feet as well as your hands and don't sit too heavily unless it's real smooth terrain. Unweighting the bike over ruts and uneven surfaces is sometimes necessary for preservation of bike and body. This little trick is such an integral part of off-road riding that you probably do it already. Think of your body as a spring ready to be loaded and released upward, bringing the bike with it.

Timing is all important. Unweighting the bike simply lightens the load and smooths your transition. The amount of lift necessary is dependent upon the section. Off road descents at maximum speed have been likened to being strapped to a paint shaker. The only suspension or shock absorption on a bicycle are the tires and to a much lesser degree the inherent (and indeed desired) flex of frame, fork, handlebars, wheels and cranks. Without a doubt softer tires make rough descents a whole lot more enjoyable. The primary component of this softness is air pressure. Other components beyond your control and inherent in particular tire models are suppleness of casing and base rubber, tread block spacing and flexibility, and air volume.

I am in the habit of running my tires quite low on pressure because I like to be comfortable in the rough. I usually leave them alone because of my close proximity to dirt. Sometimes during an abrupt pavement maneuver, I feel the sidewall flex, temporarily reducing control. Thirty psi front and thirty-five rear is a good minimum for all-around riding on a mid-size tire. A larger tire may be stable with less pressure while a 1.75 needs forty to forty-five psi minimum, mostly to prevent

rim damage. I rarely feel my tires to be too low at speed on dirt unless I'm banging my rims. Low pressures provide a pleasant ride. You are deflected less and can see better, enabling you to avoid any rocks sharp enough to pinch a tube.

Picking lines requires both far range targeting and close immediate subtlety of movement. There is real joy in executing maneuvers deftly at speed. It's been said that the fastest way through any corner is a straight line. The guy who said that must not have had any large obstacles in his way.

I recall one particularly educational experience I had two years ago while riding back from Pearl to Crested Butte. My friend, Chad Dad, and I had left camp later than almost everybody for the Pass, destination not Aspen. We got to about 12,720' to check the pressure before our descent back the way we had come. Maybe 400 vertical feet down the road it started to hail, which was novel. I'd never ridden in hail before. Wasn't unpleasant at all, quite exhilarating as a matter of fact.

We stopped back at camp where our friends had been keeping the fire stoked, and warmed up before continuing to Crested Butte. I was really feeling pretty good about now, carrying quite a lot of speed coming into an abrupt left hander with average rock size about two feet round. I went for a handful of my trusty roller cam rear brake which did absolutely nothing. Being funneled quickly to the outside wasn't really my choice but the line seemed good getting there. When I got there, no more outside line existed. I hooked left at about 45 degrees across the road (seemed like 90) and hit high on the inside bank for the smooth line out of the corner.

Now that it was clear sailing I couldn't figure out why I was slowing down so fast. I still had my rear brake on! What a Daryl. The rim had finally dried off enough to provide some stopping power. The real lesson seemed to be that a line is all important and brakes just slow you down.

Confidence and TOTAL concentration are prime ingredients that make downhill a thrill better than any drug, and it's borderline legal too.

Joey Peterson and Roy Rivers are members of the Wilderness Trail Bikes/Trek/True Temper race team. More importantly, they are riding companions and screaming downhillers whose bike handling skills are stunning. Mark asked them to share their perceptions of downhill with readers. During a recent phone conversation with Mark, he told me about the three of them, in close formation, hitting fifty-five (55) mph on a downhill - on a trail. We were impressed that their respect for the federally mandated speed limit carries over to their cycling.

THE ESCAPE VEHICLE
DESIGNED BY RICHARD CUNNINGHAM
WITH ITS LEGLESS TUBULAR FRAME
CONSTRUCTION AND TRIPLE-BUTTED
TOP AND DOWN TUBES. FEATURES
INCLUDE ANGLE APPALACHIAN 3-
PIECE ALUMINUM CRANK, 10K
ALUMINUM HUBS, SEALED TECH
SANDWICH HUBS, SUNTOUR XC
SPORT FRONT AND REAR
DERAILLEURS, SHIFTERS AND
BRAKES. TAKE YOUR CHOICE OF 18",
21" OR 23" SIZES.
COLORS AVAILABLE
PEARL WHITE
OR RED

RELINE
439 CALLE SAN PABLO
CAMARILLO, CA 93010

SEE YOUR LOCAL BICYCLE DEALER

circle number 60 on reader service card

How Joey Does A Downhill Race:

First - having Roy around for fun helps a lot!

Warm Up

Ride enough to get loose (usually not much room at the top of these hills so small loops around area). I do bunny hops, front wheel wheelies, wheelies, sideways bunny hops, etc., all my tricks to get me jazzed, help loosen up my whole body, and install the fun and confidence I have and need.

Pre-run course at least once

To know I won't die anywhere in some section I didn't know about.

To get a feel for the flavor of the course.

To find any spot needing extra inspection or particular lines. Inspect gnarly sections carefully for lines you can ride.

Race

Go from the first second, get a good start (the most you can get away with).

Don't worry how steep a hill is; just how long it takes to stop for a turn.

Ride smart, machnelike, perfect lines and deep, way late braking, carry as much speed through turns as possible.

Pedal hard out of slow turns, stay in a



GET 'EM AT YOUR PLUMLINE DEALER.

circle number 15 on reader service card

Mountain Goat[®]
The Catalog

Send \$2.00
P.O. Box 923
Chico, CA
95927

circle number 26 on reader service card



circle number 24 on reader service card

Above All Else... Be Tenacious!

Wherever you go, Phil's frame-mounted green oil is there when you need it. Available now at your local bike shop.

Phil Wood & Co.
153 West Julian St. • San Jose, CA 95110
Phone: (408) 298-1540



Chuck Pryor

what's coming, then steal quick glances. I cannot go fast on a bike I don't have confidence in or on a bike I think I'll crash on. I want a bike whose front end sticks more than rear.

Keep the chain on the big chain ring and a midfish cog in rear to keep tension in chain & derailleur to eliminate bouncing chain off.

Roy Rivers
The Art of Performance Descent

Blowing down The Mountain, adrenal injectors on max, sensory input on fast forward, adventure factor eleven. Successful performance descent. Ingredients? A mastery of performance handling techniques, an ability to make split second nature decisions, and an attitude that plays with limits and never spares a single synapse for a stray "what if."

Handling skills refined to the reflex level are the first step. Controlled braking is key. The front brake dissipates the most speed by far. It drives momentum through the fork into the ground while the rear brake drags its heels behind. The front brake also inhibits steering. The more resistance on the front wheel, the less ability it has to track in any direction away from the bicycle's inertial path. If you need to dump speed in a hurry, both brakes, if you need control, rear or none.

Agility is critical. Stand in the clips, upper body flowing, legs and arms absorbing. Be nimble. Need to be a foot to the right in a hurry. Don't steer over, pick up the bike and put it there. Stay in the clips, you've got to have them for jumping over things and to the side. Lift the front end, don't stuff it into anything. Get the front through and the rest is right behind.

Ok, you happened to make that particular corner. On into the straights. Now what? This is no quiting party, you've got adrenalin to burn here, come on get cranking. Smooth power, don't torque the back wheel all over the map, but don't leave anything to gravity, this is your chance to pump more speed into the situation.

Spun out that 52-12? What you need here is a quality tuck. The most efficient is body forward, hands against stem, belly button on stem bolt, chin scraping dust off the front tire. Whatever compromise is closest to this but allows enough control to deal with the local topography is the position to use.

All of the above should be hard-wired into

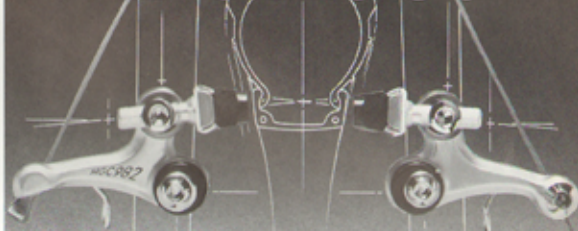
the brain. You decide where you want to be and your reflexes get you there. Meanwhile, there are decisions to be made, lines to choose. Ideally, you want the largest radius curve which takes you closest to the inside of the turn's apex. On this line you make the turn with the least abrupt change in direction and carry the most speed. Life is never this simple. There are always rocks, ruts, rivelets, your position after the last turn, where you need to be two turns down road, sandy sections, berms to use, banks to beware of, and an occasional brahma bull belying up to the bar. You also need to decide what sort of speed to carry through which parts of whatever line you choose. Do you jam into the turn at full speed, jump on the brakes just past the last possible moment, and then power out, sacrificing a graceful curve to kill momentum? Is it better to lose speed earlier, follow a more flowing arc and carry more speed through the turn? Experiment. One technique is not appropriate in all situations. This is the most artistic part of the Art. Look for opportunities. One of the best ways to improve your creativity, whatever your ability, is to follow someone who's good. Learn from their lines, adopt their ideas and apply your ingenuity.

Be looking and thinking ahead. The terrain immediately in front of your wheel should have been scanned, course plotted, and its handling delegated to the reflexes department. The cognitive process needs to be seconds ahead. When approaching a turn, be looking to the next, if you can't see around it, be thinking to the next, always anticipating.

Ok, you've got the reflexes and Picasso would be jealous of your lines. Now comes the most ethereal part, the attitude. This applies to life in general, but more importantly, to effective descent. Fear does not have a place in this situation. Safety comes from your abilities, fear is snow on the screen. One essential component is familiarity with falling. If you know you can fall effectively, safely, maybe a little loss of skin but probably nothing more, you won't be obsessed with fear, you'll know you can push to the verge of the fall and still have all your faculties. Skiing, water skiing, surfing, any sports where the penalties for a mistake aren't necessarily so severe are good ways to learn to fall. Ultimately you'll have to lose a little skin, there is no substitute for bicycle falling experience.

All of the ingredients for performance descent work together. Improve one thing and everything improves. Concentrate on one or a few things at a time, give your mind room to perform. Above all, do it for the right reasons. Do it for the adrenalin. Do it to share it. Do it for fun. If it isn't fun, don't do it at all.

Position Perfect



INTRODUCING THE GRANCOMPE 925 CANTILEVER BRAKESET

The GranCompe 925 Cantilever is a highly refined, precision brake designed for high-performance mountain bikes, ATBs, tandems, city bikes and touring bikes. They have been designed and engineered to provide the ultimate in braking performance, under the roughest conditions, and still be "user friendly."

Technical innovations like extended, cold-forged alloy arms, an eccentric pivot bolt adjustment, longer brake pads and allen-key fittings all improve performance and rider convenience. Our brake-on-frame mounts are machined from one piece of steel for a more precise fit and greater strength.

But the most innovative feature of the NCC 925 is the eccentric pivot bolt barrel adjuster. By rotating the eccentric adjusting barrel, the pivot point of the arm can be moved through a circular range of

approximately 1mm. This allowing precise and quick positioning of the entire brake assembly at the optimum angle rather than making all adjustments with the pads alone.

We have taken our popular 280 mountain bike lever one step further with improvements that add performance and convenience. First we changed the shape of the cold forged alloy arms to improve the feel and increase the throw.

Then an adjusting set screw was added to the lever bracket to position the lever exactly where you want it. The GC 282 still retains the classic features of the 280 lever, like allen-key fittings, and a slotted bracket/adjusting barrel/locking assembly for easy cable installation. The lever arms are hand polished and clear anodized.

The GranCompe 925 & 282 Cantilevers, the definitive statement in high performance cantilever brakes.



CANE CREEK ROAD • FLETCHER, NC 28732

© 1985 Dia-Compe, Inc. All Rights Reserved.

circle number 30 on reader service card

big gear and hammer, don't worry about tiring out.

LOOK & SEE ALL ROCKS - MISS THEM!

If you hit one, unweight & jump it or bounce off it like a jump without plastering wheels into it.

Keep light on your toes, fly over things, the air is the smoothest place to be.

Jump over rain ruts, if two or so lined up one after another, jump one and land between them (if can't jump both) and bounce right back up and over second.

Be relaxed - confident - believe in your ability.

I'm not intimidated by the steepness of a hill, steeper the better, although I do get haired out when it's so steep that when I put brakes on, I'm still gaining speed.

Rocks don't bother me either; be smooth, relax your grip and see a line and ride it.

Looking ahead is important. You must see where you are going to get there. If it's hairy and heavy concentration on what you're doing isn't allowing you to look at

circle number 25 on reader service card

Fat Tire Heaven

- 1986 Specialized Rockhopper - Shimano XT derailleurs and brakes, bused chromoly throughout, bullet-proof wheels. Frame sizes available: 17.5, 19.5 and 21.5 • \$449
- Specialized Sport - Lugged frame. Lightweight components - alloy bars, straight pedals. Frame sizes: 17.5, 19.5, 20.5, 21.5, 22.5 • \$559
- Fisher Montrose - The best eight-hundred-dollar sport/touring ATB. Frame sizes: 16, 18, 19, 20.5 and 22 • \$769
- Ritchey Aspen - Least expensive sport bike for enthusiasts, with characteristic Ritchey attention-to-detail • \$799
- Ritchey Ascent - Dura-Ace hubs, RM-20 rims. Sport/racing quality • \$899
- Ritchey Ultra - Prestige tubing with carefully selected gauges to emphasize strength and light weight. White paint with black anodized componentry • \$999
- Mountain Klein - Heat-treated aluminum. Lightest ATB around. Frame sizes: 19, 21 and 23 with sloping top tube. \$995
- Fat Chance - Climbs like the Dickens. Made in U.S.A. \$849



Parts, accessories and friendly, knowledgeable service offered. Call us now for a free, informative catalog.

FREE FREIGHT ON ALL BICYCLES. ALL BIKES CAREFULLY ASSEMBLED AND TEST-RIDDEN. VISA, MC AND CHOICE CARDS. OR CHECK ACCEPTED.

Orders 800-255-8377
800-538-9500 (Colorado)
Information (303) 484-0682

Mountain Bike Specialists
1611 S. College
Fr. Collins, Colorado 80525

Visit our retail store at 2200 W. Alameda in Denver, Colorado. Prices may vary in store from advertised prices.

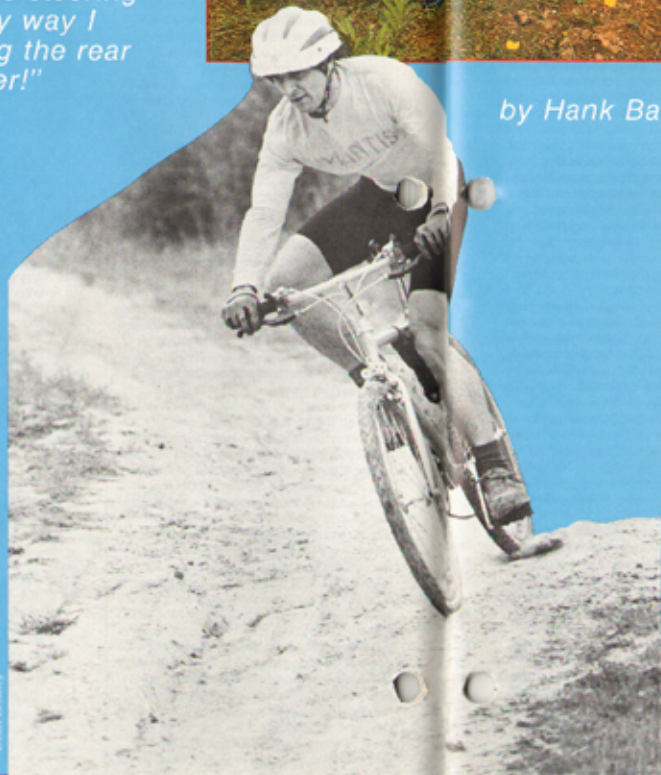
"The first frame I built with the Mantis name on it was a disaster. I'd decided that since a steeper head angle makes for really quick and easy steering, that's what a mountain bike ought to have. It didn't work. On downhills, the steering was so squirrely that the only way I could steer it was by hopping the rear wheel to one side or the other!"

The Mantis XCR Composite



Richard Cunningham

by Hank Barlow



The silence is shattered by the piercing wail of a Porche 934 accelerating to over 200 mph down the back straight at California's Riverside Raceway. Powerful headlamps light up the narrow band of pavement. Lap after lap, the car speeds alone through the night. No beer guzzling spectators watch the action; no other cars are on the track. The Porche flies by unobserved but for its support crew. Except for the headlamps and the bright red glow radiating from the exhaust system and double turbines seemingly heated to the point of melt-down, the car slices through the blackness unseen.

One of those huddled along the track monitoring the Porche's progress is Richard Cunningham, the designer and builder of the ductwork surrounding the turbines, the same ductwork that is glowing in the night. The Porche is going through its final test in preparation for the upcoming racing season. The all-night, high speed drive is the last tune-up in a protracted series of steps to insure both the car's speed and its survival.

That happened in 1976, about the same time that mountain bikes were first making their tenuous appearance in the sea of skinny tired, 10-speeds. Like the tiny mammals that once scurried around the feet of dinosaurs, those initial fat tired bicycles seemed destined for a short lived existence beneath the collective weight of European racing bikes. The possibility that in ten years, instead of designing and fabricating key parts for quarter million dollar race cars, Richard would be totally immersed in the building of Mantis mountain bikes was as likely as someone predicting forty years ago that an actor would become president of the United States.

Porche 934's to mountain bikes seems an almost unbridgable distance, both technically and philosophically. Yet Richard spanned that chasm easily and smoothly as if the switch was perfectly logical, as if Porche 934's were simply an elementary learning ground in preparation for the building of bicycles, as if it was all simply part of his process of maturation. Considering the ever growing clouds of pollution fouling city after city and the inevitability of running out of oil with which to propel man over the earth's surface, Richard can appear leagues ahead in the evolutionary process.

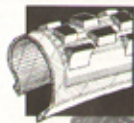
Yet he wasn't alone in those changes, in having perceived mountain bikes as one method of improving the world in which we live. Wanting to affect man's environmental lot through the marketing of these fat tired flyers is a common thread amongst such diverse mountain bikers as Joe Breeze, Scot Nicol, Charlie Cunningham (no relation), and Charlie Kelly to name only a few. All have via their own paths evolved to a similar viewpoint, that mountain bikes provide a reasonable alternative to the problems of too many people attempting to move about the world.

A natural bent for working with metal led Richard into opening a machine shop at age 23. And that led to his involvement with the Porches. Someone walked into his shop and asked if he could build some custom ducting for a race car. One thing led to another and soon Richard was up to his elbows inside Porches. His involvement with race cars in turn introduced Richard to the use of large diameter aluminum tubing in frame construction.

Builders were looking for some way to build lighter cars but without sacrificing

Circle number 42

FISHER FATTRAX™



Improve your
Fat to Weight Ratio
with FatTrax™

Never before has
so wide a tire been so
light and performed with
such speed and smoothness.

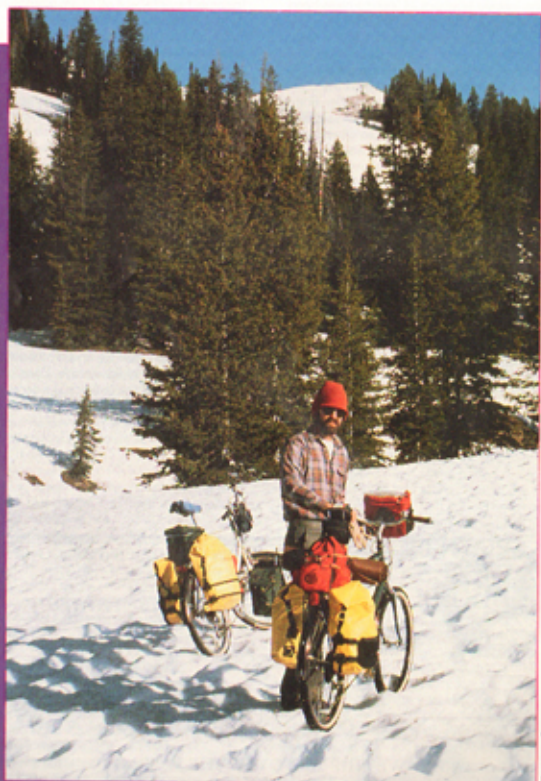
699 grams/
High Density Sidewall/
15% more air volume.



Down Roadies

Off the Road

by Dennis Coello



Dennis Coello

Being Prepared

You know the kind of trip. A buddy gets a long weekend off from work, you match his schedule, and suddenly ADVENTURE raises its head. Quickly a route is chosen, a friend of a friend has heard this is a great ride, and he has a friend who's actually done it! Nah, no problems. Hell, it's only a hundred miles! And half that's pavement! What, are we getting old or something? Don't you remember those fully loaded, double centuries we did back in...?

Like all true adventures, the trip begins to breathe a life of its own as if the experience awaits, like a movie in a can - whole, complete, already ridden. All you have to do is get there! Then come half a dozen phone calls each day and late nights in garages as rusted chains are lubed, derailleurs adjusted, panniers mounted and packed.

But not packed too full. Remember, it's only four days. Let's really take a break from home and comfort and rough it a bit, you think. Beside, the riding's so much more fun with less weight. And so the warmer sleeping bags are left behind, with the extra food and winter clothes. Last-minute preparations keep you from obtaining detailed topos, but no matter; after all, didn't what's his name tell you there are plenty of road signs? And that the ranger station is probably open.

Does it all sound familiar? Probably. Especially if you, like so many riders these days, think mountain bikes and days off work go together like chips and salsa.

But what's the point. I'll let the following story tell the moral, for I just returned from such a four-day wonder.

Look at a road map of Wyoming and you can see it easily. Southwest part of the state, below the Tetons by forty miles. I'd ridden the region twice before - on pavement tours from Salt Lake to Yellowstone. But never had I been there on a mountain bike and each year the lure grew stronger. A perfect one-hundred mile ride divided almost equally between dirt and blacktop, the latter through small Wyoming towns and watered valleys, the dirt roads up in alpine forests. Moose and elk and eagle country, from the headwaters to the mouth of a raging mountain river.

What could be better? Especially when riding with a friend whose strength and camaraderie were beyond question?

At last we pushed off, hot black coffee in a thermos for the six-hour drive north,

two good bikes swinging from the rack, the back seat piled with panniers. A couple times we thought of things we had forgotten, then thought again of how very short a trip and how warm it was, and laughed at ourselves for the concern. After all, we'd taken January rides before through frozen deserts, every inch of the three-thousand-mile Lewis and Clark Trail, and dozens of training rides over the years in inclement weather. This would be a piece of cake.

We turned off the highway onto the dirt road, our anticipation growing. Lovely alpine scenery lay before us, the road surface was hard-packed and smooth. And dry. Thoughts of flying along on our Ritchey tires pumped up to eighty psi were comforting, for this would give my partner

thousand. But we couldn't see any snow in the mountains around us and the paper's weather report had talked of 'unseasonably warm temperatures recently' for this part of Wyoming.

Visibly stunned, we thanked the fellow and said we'd ride on up and take a look.

The scenery turned from lovely to beautiful as we passed conifer and aspen forests. A deer bounded off shortly before we reached the Smith's Fork River, flowing fast and cold with meltwater. It wasn't a good sign.

Then came two men walking down the dirt road. Cowboy hats and boots, dungarees, no packs. It was evident they weren't out hiking. "Got our 4-wheeler mired up in snow just around the bend. Any chance of a ride back to town?"

Hell, we were here. We had the days off work. And though we hadn't planned (or packed) for anything like this we surely didn't want to leave.

time to fish. We'd heard the Grays River was excellent for trout, a wonderful addition to our throw-together larder of peanut butter, honey, cheese, and bread. Not that we needed more supplies, mind you. Sixty miles or so would put us in the tiny town of Alpine, with cafes and pavement after that. With the road in such good condition, we figured on one camp-out before rolling into town. Turning toward Art I muttered a hope that maybe near the pass we'd find a patch of snow for pictures.

A car pulled alongside. "Howdy!" we shouted with enthusiasm. "How's the road ahead?" My question was almost rhetorical, as I expected an answer of "just fine - have a good time".

"Well," the fellow answered, pushing back his ball cap and grimacing ear-to-ear, "you'll never get through with those things." He nodded toward the bikes. "Nor with anything else, for that matter. Couple snowmobilers tried it a week ago and couldn't do it. Even the Ranger Station's still closed; can't get to it."

We were devastated. Snow? What was he talking about? This was late June, and we'd been sweating in Salt Lake for weeks. Granted, we were now a couple thousand feet higher, and the pass we'd have to take was somewhere around nine

Brother. We were still a long four miles from the summit. If snow was present down this low - and enough of it to stop 4-wheelers - what was it like at the pass? For that matter, how many miles down the other side would we have to push before hitting dirt again? Another vehicle arrived, driven by a gent who "used to guide up in these parts." He said he'd drive the cowboys out, warned us that the snow in places drifts at steep angles across the road (the reason the snowmobilers couldn't make it through), and ended with a reassuring "Better you than me!" as he turned around and headed back to town.

Hell. We were here. We had the days off work. And though we hadn't planned (or packed) for anything like this we surely didn't want to leave.

We turned the bend. There, stretching up the canyon road we saw our hard-packed dirt brown surface end abruptly in pure white. Well, almost pure. Green ribbons lay across it, tall pine trees which avalanches of wet, late snows had ripped out of the ground.

I looked at Art, asking silently if we should forge ahead. I could more easily than he spare the time from work. Besides, I had no family to consider. Chances were still good that we could merely push our bikes however far we

needed, but only weeks before a party (unprepared - like us) had died in the Cascades during a blizzard came. With a six-month baby back at home, it was his decision.

He smiled. "Let's go!" That exuberance lasted for an hour. Pushing our bikes when we could, dragging them over fallen pines when necessary, we covered only a mile during that time. We were nearing the summer solstice but our drive had eaten up most of the day. In this narrow canyon, we were losing light by early evening. We hoped to make the summit by nightfall, have a cold camp up on top and then reward ourselves with a far easier tomorrow. Our bodies labored hard trudging through the snow while our minds remained on calculations of how far we'd come, how far to go. Our maps were almost useless for such computations; they told of little more than direction and a guess at distance overall.

It was too late to continue by the time we'd travelled some three miles. We found a single patch of snow-less ground, the run-off having melted it, leaving a somewhat moist campsite. I broke out my trusty two-man Moss, a free-standing tent I've used for years without trouble. In fact, I'd recently acquired that company's one-man Solet, and had hoped to test it on this ride. But with the evening chill, we decided we'd be warmer with the heat of two bodies in a single tent.

For years I'd ridden with a closed cell Ensoite pad, putting up with its relative discomfort and lesser insulation for the savings in weight. Yet only months before I'd been convinced to try a Therm-a-Rest inflatable. A fortunate decision since our summer weight bags were rated around 60 degrees and the night appeared to promise freezing temperatures. The new pad at least would keep me somewhat warmer.

We made a fire, ate our meager meal, warmed water in a metal cup I'd brought and sipped tea communally. (The trip would have been impossible had I not packed along - at the last minute - the First Need water purifier I've carried now on many rides. Lightweight and fast, its filtration action is the only method aside from boiling of killing giardia.) Not wanting to sit on the wet ground, especially once we'd dried our feet (soaked from the beginning; not anticipating snow we'd brought only lightweight footwear), we pulled our Therm-a-Rests around the fire. I was used to an ensoite pad and neglected tiny flying sparks. I soon heard the sound of hissing air. Though nearly immune to the wear of normal use, not even Therm-a-Rests can withstand fire. No problem. I have the manufacturer's tiny patch kit for just such times. But then I thought: No I don't. It's at home!

I cursed myself each time that I awakened from the cold. I'd realized while

driving up from Utah that this was my anniversary. Twenty-one years ago this very day I'd left on my first bike trip. And now you'd think that I'd learned nothing in two decades on the road.

Breakfast was a time for *deja vu*; I'd seen that meal somewhere before. I'd also seen the snow, though it was slightly different. The snow was several feet deeper as we neared the summit with a surface resembling giant egg cartons. Crossing it was laborious, slow, painful. I'd twisted my left ankle two weeks before on a one-day ride and now winced each time I couldn't find an easy foothold. The early morning cold meant we broke through the surface of the snow less often (several times sinking to our thighs the evening before,) but these cone-shaped depressions kept us from pushing bikes. Instead it was a lugging action, like a low leap-frog a thousand times for each half-mile.

Nearing the summit we saw the angled snowdrifts and the snowmobilers' tracks when they'd slid sideways short of their goal. There was satisfaction in knowing we were making the first human tracks since fall. That emotion dissipated quickly, replaced by resignation as we saw the work ahead of us. Miles after the pass, the snow stretched on through fields of cone-shaped holes, over trees, and then, as the day warmed up, through miles of deeper, softer fluff.

Another meal, and another, still of the same food. Now came concerns of dwindling supplies. There would be no triumphant entry to the town which lay at our path's end. At least not that day. We were making awful time and had lost another hour when we couldn't tell in which direction lay the road.

I won't labor it. We did make it. This isn't being written from beyond the grave but we didn't leave the snow until late in the day. We made camp then once again awakened from the cold. More meals of peanut butter and cheese. And many, many more hours of riding once we reached dirt again for it proved to be far hillier than motorists had said.

On the bright side, we tremendously appreciated that first hot cup of coffee when - at last - we pulled into the town of Alpine. And the pavement was a treat.

But I've learned my lesson. No matter what the weather when I'm packing my panniers at home, and no matter how short and sweet a ride I'm anticipating, I won't in the future hit the backcountry without a few provisions. Like detailed maps, a winter complement of longjohns, and twice the food that I think necessary to get me through.

I learned the motto "Be Prepared" in my Scout troop in the Fifties, but have forgotten it time and again. This story, for all you early and late season mountain riders and myself, is but one more reminder.

EVENTS



Frank Strub

Canyonlands Fat Tire Bike Festival

Wrap up the biking season with style in Moab, Utah during Canyonlands Fat Tire Festival from October 26 through November 1. Organized by Rim Cyclery in Moab and Mountain Bike Magazine, this celebration of mountain biking promised to turn into a classic event, one you won't want to miss out on if you love adventure cycling.

The riding around Moab is justifiably famous; there's nothing like it anywhere else in the country. From the one and only Slickrock Trail to the White Rim Trail, the canyon country has it all. Shuttles and guides will be heading out daily for the countless rides, ranging from easy to sustained challenge, surrounding Moab.

This is not an introductory course on mountain biking. Most of the guided rides will be difficult enough that some experience riding off-road is recommended. Not that beginners aren't welcome; they are. But the Canyonlands Fat Tire Festival is a time to celebrate all that makes mountain biking the great sport that it is and as such, events will be geared for experienced mountain bikers. In fact, the festival is built around getting out and riding.

But there's more to Moab than just mountain biking. Adjacent to town are

Arches and Canyonlands National Parks while soaring overhead are the 12,000-foot Manti La Sal Mountains. The Colorado River runs right by town. South of town is the confluence of the Green and Colorado Rivers and downstream from there is Cataract Canyon. Rafting options will be available for those interested in seeing the canyons from John Wesley Powell's perspective. Riders can select one ride where the morning will be spent cycling deep into the canyon to a point where they'll be picked up by a jet boat for the return to Moab.

Petroglyphs and Indian ruins are found wherever you travel in the canyon country and should be left undisturbed. So to help riders experience this fascinating aspect of this land's history, at least one tour to ruins is planned though not yet finalized. There are also tentative plans for a tour for those interested in the land's formation. The forces that formed the land are so dramatically exposed in Utah that it presents a unique opportunity to gain some understanding to spaceship Earth's history. Staring out over the vast distances at the bare rock, you can practically feel the earth shifting and adjusting itself to unseen powers, to hear infinity.

If you're a rock climber, bring along your equipment. Routes range from the Fisher Towers to excellent boulders near

town. And definitely include your camera. If you don't, you'll just have to return the following year to get the pictures you missed this year. And if you have a road bike, bring that along too. The road riding is excellent. And definitely bring along a headlamp system if you have one.

A Time Trial over the Slickrock Trail with classes for everyone, slow and fast, is also on the agenda. This is one event you'll probably find yourself describing all through the winter to come. It's not finalized yet but if everything works out, there'll also be an opportunity to test ride a number of high performance bikes the likes of which you may never have seen before.

If you haven't figured it out already, the Festival coincides with Halloween and yes, there's going to be a party so come prepared to get down and party. Just leave all the seriousness behind. This is the week to celebrate how much fun mountain bikes really are. The Canyonlands Fat Tire Festival could turn out to be the event of the season; don't miss it!

For more information, contact Rim Cyclery, 94 W 1st North, Moab, UT, 801/259-5333

Fat Tire Bike Week, Crested Butte

Fat Tire Bike Week is once again happening the week of September 14 through the 20th. This is mountain biking's annual get together in the middle of what many consider the finest mountain biking in the country. As usual, a number of events are scheduled but mostly it's a time for old friends to gather, exchange tales, and experience the incredible single-

tracking Crested Butte offers. The aspens are turning into seas of quaking gold washing over the mountains' slopes while fresh dustings of snow may sparkle on the surrounding summits. Fall in the mountains is always a time of sublime beauty and there's no better place to feel that than in Crested Butte.

For more information, contact: Murdock, Crested Butte, CO, 81224

Circle number 41

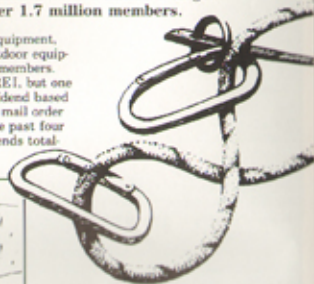
REI:

(ār - ē - ī) n. 1. 1938 was the start of something big—a consumer cooperative that would grow from 23 Pacific Northwest climbers to the nation's largest with over 1.7 million members.

"The Co-op" was named Recreational Equipment, Inc.—REI. REI brings only the best outdoor equipment and clothing to its customers and members. Membership is not required to shop at REI, but one of the benefits is a yearly patronage dividend based on your regular price purchases through mail order or in any of our stores nationwide. In the past four years REI has declared patronage dividends totaling over \$24 million.



Enjoy the outdoors this fall with bicycling gear and clothing from REI.



2. At REI, we strive to have your order on its way within 24 hours of receiving it. Our staff takes pride in providing service that keeps our customers coming back. REI makes shopping by mail the convenience it was meant to be.

3. REI's full-time quality control team makes sure the items we carry stand up to rigorous outdoor activities. For bicycling and backpacking—even climbing the Himalayas, your REI gear is dependable. Our money-back guarantee ensures satisfaction.



Send for a free REI catalog!

Name _____
Address _____
City _____
State _____ ZIP _____
Mail to: REI, CODE 136, P.O. Box C-88127, Seattle, WA 98188-0127.

REI
Quality Outdoor Gear
and Clothing Since 1938

Epic Adventures for the Weekend Traveler



Bodfish

Is there some concrete reason you don't have the time to take on an adventure of grandiose proportions... a retracing of the Pony Express route, following John C. Fremont's nineteenth century explorations, riding the rim of the West's Great Basin or tight-ropeing the Continental Divide? Some folks find that jobs, family, debts and other obligations are impossible to set aside for the required string of months that might be necessary for such an outing.

If you live in or near a mountainous region (are you or are you not a "mountain biker") and you're the type that salivates at the mention of a challenging and possibly legendary feat upon two wheels, I've got weekend work and adventure for you.

Peak bagging on bicycles started here in the Far East as nothing more than a way to survey the terrain, identify the ridges, drainages, and prominent landmarks of an area before committing oneself to a weekend of exploration into the tricky depths of granite-walled, heavily timbered, scrub choked canyons. This method of reconnaissance has of course, been used by North Americans for thousands of years. It was first popularized by mountaineer Norman Clyde, who penned stories of his numerous peak bagging conquests in the central Sierra Nevada nearly one hundred years ago.

Peak climbing as a challenge to the bicyclist was probably first recorded by the indefatigable members of Great Britain's Rough Stuff Fellowship in the mid nineteenth fifties. The Rough Stuff Fellowship survives today and still publishes member accounts of incredible two wheel sojourns around the world and in their own backyards in a bi-monthly magazine The Rough Stuff Journal.

my memory. A region viewed from a promontory such as a lookout tower becomes a permanent entry in your personal "Backyard Explorations Albums", especially when you've cranked, kicked, grunted and sweated a pint or more of mountain spring water through your pores to get there.

My first experience with peak bagging was more than a dozen years ago on unplanned adventure while living in Kern County, California. I wandered south from Lake Isabella, in the saddle before sunrise searching for a good cup of coffee. I'd heard there was a small cafe in Havilah, only ten miles south of the lake, "where the coffee'll make yer nose hairs curl. Oh, it's a few miles outa town and it's one helluva climb up there on a pedal-bike but I'm quite certain you'll like their high-powered joe", warned the old fella who ran the combination bicycle/radiator repair shop just below the lake.

All I could hear during the climb was the rhythm of soft inch and a quarter wide tires on pavement mixed with a before-breakfast wheeze from my surprised lungs. Havilah turned out to be a couple thousand feet and some ten miles above the Kern River but they had legendary coffee and a hearty stack of hot cakes... "We're down to the last few cups in this pot, but I won't charge you extra for it", a grizzled looking fry-cook boomed from the kitchen as I helped myself. "Ya want milk or real cream in your poison?"

In the mountainous regions of North America there exist excellent opportunities for peak bagging by bicycle. Dirt roads and tracks lead to fire lookout towers or former lookouts on the prominent peaks every twenty miles or so throughout most forested regions. Even if you aren't as goal minded or achievement oriented as many of the more competitive off-road riders you may like lookout bagging for the full body workout required by the climb, the incredible view of the topography below you (after all, the Feds were looking for the best view when they chose the peak you're on), or the freefall/body English practice the downhill offers.

A tamer version of this fat tire trophy hunt (especially in areas where roads to lookouts are behind locked gates) is "pass bagging". The view may be narrower from the top but the rules and rewards are much the same. To claim a legitimate "bag", you park the car down in the nearby lowlands (often this means near the end of the pavement) and execute the climb while in the saddle. Yes, walking the steep stuff is acceptable. When you return home, send an account of your conquest to The National Registry of Peak Bagging by Bicycle c/o Mountain Bike Magazine P.O. Box 989 Crested Butte, Colorado 81224.

I've only been to a couple dozen peaks and lookouts with my bicycle. Each of these journeys has left a vivid imprint on

he asked while lumbering up to the counter.

"Cream thanks. How far up does this road go?" I ventured to ask while keeping one eye on the coffee and the other on the burly cook in the gingham apron.

"Oh Hell, this road goes on up to the Lion's Trail then shoots on down to Caliente. If'n ya want to go up, however, take a right two miles south of here and you'll climb right up into the timber. There's a spring and a campground near the top. What kinda rig ya drivin'?"

"I'm on a bicycle."
He stared at me several second. It was as if a hinge in his jaw had broken. Finally he managed... "Jesus, that road's dirt and damn steep in spots. Never make it. Stick to the Caliente road."

I hadn't planned to get off into the dirt on this outing. There was plenty of undiscovered pavement here in my new backyard. I saddled up and leaned into a serious breeze that seemed to be dropping out the Piute Mountains to the southeast, (the southernmost tip of the Sierra Nevada Range.) In low gear, knees aching, for the first time in my life I wished I'd been the runt of the litter. This 6 ft/200 lbs frame had little hope of finding an aerodynamic/windslingshot tuck. Yet, the caffeine kept me charging forward.

I stopped to zip up my windbreaker. There it was, on my right, an impressive stack of switchbacks... all the way up to the timber. I had a spare tube with me and it didn't seem all that rocky or steep. If only I could make it up to those trees before it got hot.

The back tire kept losing it's grip, throwing me into a maddening series of top tube straddles. "Steep in spots. Never make it. Stick to the Caliente road." Thank God that bike salesman matched

my 34-inch inseam with a 22-inch frame (three inches shorter than the 24-inch road bike I'd been riding for the last ten years.)

I walked a lot and drank liberally under the morning sun...until I realized there was only one swallow left in the dust-coated bottle. The trees were a couple hundred feet above me...it was hot...I needed that last drink.

I turned the bicycle perpendicular to the slope of the road and leaned back on the top tube. The Isabella dams to the north looked tiny and fragile - the arrogance of that piled earth and concrete; to think it could stop the rage of the powerful Kern River.

It must have been past noon. I found the spring...wet, cool water...probably not safe to drink but a wonderful find. The Mt. Breckenridge lookout tower was just above me. The road was trashed. I dragged my bike up anyhow...either I didn't want to leave it at the spring and worry about having it stolen or I just needed the companionship at the top, can't remember which.

Later I discovered that I had climbed 5,000 feet to the top of that peak. The downhill took the remainder of the

daylight hours to achieve. I was proud of my victory and not quite sure why. Actually, it was a stupid thing to do - take off on a dirt track on a bicycle without any food and a small bottle of water.

It was twilight when I rode up to the porch of my cabin. Somebody was having a party at my house...a half dozen friends were milling around in the kitchen. I threw open the door, "AII-RIGH-IHTI! How come nobody told me about the party?" Everyone looked seriously worried about something. No one talked, then all at once, "Where the Hell were you? We drove all the way to Caliente looking for you? Figured you got bumped off the road and down into the canyon and was drying out like a dead lizard down there."

"Naaa, I went up, up to the fire lookout on Mt. Breckenridge", I beamed.

"Bullshit, Bodfish. Let's get out of here, this guy's been hit by something. No tella what he'll do next."

I was too tired to do anything but smile as I watched them run out across the porch and hop in the VW Bus. Musta really been worried, those guys, they left three bottles of Anchor Steam beer on my kitchen table.



Terrain Tamers..for those who know where they're going

jamis®

Jamis Bicycles 3000 Commonwealth Boulevard Tallahassee, Florida 32303 (904) 575-9686

Framesets and Individually Selected Components

FRAMESETS

Have you ever walked into a bike shop specializing in exotic, high performance road bikes and noticed the array of colorful frame sets swaying from the ceiling like Japanese lanterns at a lawn party. Yet when you look at the bikes on the floor, none of these expensive models are built up and ready to test. Why? Because that's how most high performance road bikes are bought: people decide on a frame set then select what components they want. For two reasons: one, because there's very little difference in road bikes' geometry (the only differences are between the styles of road bikes: race, touring, etc.) and two, because there are so many high performance components to choose from. Consequently there's plenty of room for individual preference in how a bike is set up even though the various frames' performances are similar.

The situation among mountain bikes is exactly the opposite. Frames vary enormously while component selections are limited. Nevertheless, mountain bikes are becoming more sophisticated and their riders more selective. Consequently the option of purchasing a frame set then selecting individual components is increasing in popularity.

Choices are still sparse compared to what's available for road bikes. Parts from Campy, Edco, Huret, Maillard, Huret, etc. generally do not appeal to mountain bikers despite the current trend to forego some off-road components in favor of road racing components. The criteria for off-road performance involves far more than just weight. The ability to continue functioning when clogged with mud and weeds is one of the most important qualities.

Most mountain biking components are Suntour or Shimano with some Specialized and Sakae. Shimano appears to be replacing Suntour as the dominant off-road component manufacturer. Almost

Fat Chance Stem



every top-of-the-line mountain bike we've tested has been mostly equipped with Shimano components.

To research what are considered the finest mountain biking components to hang on a frame set, we talked to mechanics in three bike shops in the Crested Butte/Gunnison area: Bicycles, Etc. and Paradise Bikes and Skis in CB, and the Tune-up in Gunnison. All three have tremendous experience with mountain bikes, probably far more than most shops given the area's unmatched single-tracking yet we heard no unanimous recommendations for components. One shop preferred Shimano almost down the line. Another recommended some Shimano, some Suntour, plus bits and pieces from a few others. The third was big on Specialized and Shimano.

To test the following components, we asked Richard Cunningham to build us a Manis XCR Composite frame set upon which we'd hang them. Why a Composite? Because we've liked his bike ever since we tested one last summer.

The following components were selected on the basis of performance without regard to price. These are the bits and pieces you'll find on fifteen-hundred dollar bikes, not production bikes costing five or six hundred bucks.



Suntour X-C Brakes

The overwhelmingly preferred hubs were Shimano Dura-ace though there were a few votes for Specialized and Suntour. Those who chose Suntour selected a Superbe Pro for the front and an XC with quick release for the rear. Superbe Pro's are not available in a 130 spacing for the rear wheel; that's why the XC. The main argument on hubs

concerned cassette versus loose balls. The latter's ease of service was usually preferred since no hub is truly sealed. One hub that was mentioned quite a few times by mechanics is the new Wilderness Trail Bikes hub. A built-in greasing mechanism struck everyone as attractive though no one has enough experience with it to judge it. Because two sets of wheels have always struck us as useful considering the range of conditions we ride, we selected Dura-ace hubs for one and a Superbe Pro and XC hubs for the other.

The governing criteria for rim selection was invariably weight. Currently the favorite is the Araya RM 20. The only problem seems to be a poorly welded joint, resulting in a slight bump when braking. The next most popular rim is the Saturne X-22. The welds are smoother and the only reason we could discover for the preference for Araya was a supposed strength advantage that appeared strictly subjective. Sun Metal has also come out with a narrow mountain biking rim in their Mistral line but no one had any experience with it to date. Another option though rarely seen is a Bontrager rim, a cut-down Super Champion Gentleman weighing only 435 grams! This last rim is pretty exotic and you'll have to order them directly since your local dealer probably hasn't even heard of them. We selected RM-20's for the Dura-ace hubs and Saturnes for the Suntours. We're also building a set of wheels with the Mistral rims for a test.

Brakes are the most argued component on a bike. Those who prefer Suntour's roller cam are vociferous in that opinion while those who prefer cantilevers are equally opinionated against the roller cams. The one universal opinion was a dislike of mixing cantilevers and roller cams.

The source of the brake controversy, though that's probably too strong a word, are the Suntour roller cams. Their failing appears to be the difficulty in correctly adjusting them and then maintaining that adjustment. Plus mud tends to interfere with their performance. The Suntour XC Sport version, though not as finely manufactured, is easier to adjust and consequently is often found on expensive bikes but not every mechanic chose the XC Sport over the XC. Cantilevers are lighter and easier to adjust and those who preferred them chose Shimano Deore XT's. An often overlooked cantilever is Dia Comp's 982. We've had some experience with it and found it equal in

FRAMESETS



WTB Graphed on Shifters

performance to the Deore and better looking. Its finish is superb.

If you're willing to spend the money, there is one more option: Wilderness Trail Bikes roller cams, the originals designed by Charlie Cunningham with help from Mark Slate, Steve Potts, and Scot Nicol. Their performance is unmatched with a light, smooth, and powerful action. They are the finest brake currently available but that may be changing. Interlock Braking Designs (IRB) has produced a race whose performance may match WTB's. We've only tried them once but that was enough to convince everyone of their excellent performance. Now we just have to wait for production models to be available. The only problem with WTB brakes is their limited availability. Nevertheless, rather than WTB roller cams, we decided on Suntour XC's.

Before you can select a derailleur, you have to decide what gearing you want. If you're strong and live at or near sea level, super low gears may not be necessary. Some racers are even going with double chain rings with a 34 tooth small ring and a 32-tooth cog. Others use a triple with a freewheel whose largest cog is either a 26 or a 28. The granny ring is usually a 28.

The rest of us who are not so strong or live in the mountains where long, sustained climbs are normal prefer a triple with a 24 or 26-tooth granny ring and a 28, 30, or 32-tooth large cog. A 28-tooth cog provides a bit tighter gearing than the larger options. A six-speed freewheel is pretty standard though some riders prefer a seven-speed to tighten up the ratios. Preferred choices are Shimano Dura-ace free-hub, Shimano 600, or Suntour Winner Pro. We decided on 13/14/16/19/23/28 gearing for the Dura-ace and a seven-speed 12/14/16/18/21/24/28 Suntour Winner Pro for the XC hub/Saturne rim wheel.



WTB Seatpost

WTB Roller Cam Brakes



Circle number 21 on reader service card

Descend with Conviction



SEAT LOCATING SPRING

- Adjust seat instantly and easily while riding. Push down for control or suggest terrain.
- Springs up to your most efficient height for cruising.
- Seat always remains centered with frame.
- Mounts quickly. • Prevents seat theft.

Available at better bicycle dealers in the USA and Canada.

Send no money now! Free information. Write: BREEZE & ANGELL, P.O. Box 8401-18, Mill Valley, CA 94042 USA (415) 388-3217



BREEZE & ANGELL

P.O. Box 8401-18, Mill Valley, CA 94042 USA (415) 388-3217

Circle number 12

TOM NELL

BIKES/BIKES/BIKES

SPECIALIZED

KLEIN

Fuji

- Ground Control & Quad XC Tires
- Suntour XC & Shimano XT components
- Rio-gance chainrings and cranksets
- Araya RM rims
- Specialized stems and bars
- Shimano Dura-Ace MTB cr. hubs
- Mountain Klein framesets
- SEND FOR FREE CATALOGUE

2520 Elizabeth Ln. Rd. Pontiac, Mich. 48054 (313)682-5456

8236 Cooley Ln. Rd. Union Lake, MI 48054 (313)363-6922

FRAMESETS



Sakae Crankarms

There was no consensus in crank selection. Shimano 600 cranks with Biopace rings, specialized touring cranks, Sugino TAT's, and Sakae FX triples are all mentioned. We went with a Shimano 600 but we replaced the 28-tooth granny with a 26-tooth round ring. We also decided to try a Sakae FX with a 24/36/46. Pedals are easy: Suntour XC Comps.

The consensus front derailleurs were either a Suntour XC or the Shimano Deore XT with the latter usually preferred. Road racing derailleurs can work with triples but usually not as efficiently. Because of the Composite's inch and a quarter seat tube, we're using a Suntour Cyclone II. Had we been able to locate a banded Shimano XT, we would have used that instead.

The trend in rear derailleurs is for short cage units. The choice is generally a Shimano 600 SIS derailleur but with it or any short cage derailleur, your largest cog shouldn't be bigger than 28. It's not recommended to use one with a triple because if you ever shift to the big chain ring while on the largest cog, you'll break the derailleur. You can only use a short cage with a triple if you're precise with your shifting and willing to accept the consequences if you screw up. Otherwise rear derailleur preferences are Shimano 600 long cage, Shimano Deore XT, or Suntour XC. But we threw in a ringer here to use with the seven-speed freewheel, a

Suntour Sprint. It's a short cage derailleur but it works beautifully with the seven-speed. We're also using a Shimano 600 GS with the six-speed free-hub.

Despite the preference for Shimano derailleurs, everyone recommended Suntour XC shifters over the Deore XT's. We concurred. Everyone also preferred XC brake levers over Shimanos. But instead of either of those, we selected Dia Comp 284's. They're smaller than the others and since none of our hands are big, decided to see what these would be like.

For handlebars, we decided to get exotic and go with Fat Chance titanium bars. They're amazingly light yet strong and look great. The stem is a Mantis. Grips were easy: Grab-ons.

We also decided to go exotic on the choice of seatposts. Probably the most commonly used seatpost is the SR Laprade while most the top-of-the-line bikes are running Suntour XC's but we went with IRD instead. It's light and strong with a fine adjustment to it. Our next choice would have been a WTB fixed angle seatpost. Saddle selection is more a matter of personal comfort than anything else. We've been riding a Cinelli for the past year and are quite happy with it though we've also used racing models from Avocet, Specialized, and Pearl Izumi with equal contentment.

Dura-ace was the most often

Suntour Sprint Derailleur



recommended head set though if you want to get exotic in this department, you can go with a King. They're rarely seen on mountain bikes but are reported to be exceptional. We went with the more available Dura-ace.

So there you have it. Mountain Bike Magazine's custom fitted Mantis Composite. We're going to ride hell out of it during the next few months and give you



Montaneus Comp Lite

We tested the regular Montaneus with adjustable head angle in the July/August issue. For the most part we liked it but we weren't walking around raving about it or anything either. It was simply one more fine bike on the market with characteristics that appeal to some and not others. The reasoning behind the adjustable head angle makes sense and we saw how it could appeal to some. What impressed us the most was the quality of the bike's construction and finish. There's no ginsaying the excellence of American Bicycle Manufacturing's Montaneus but as I said, we weren't doing back flips over it.

Then out of the blue arrived another bike box from Minnesota. We looked in and yes, there was the unmistakable adjustable head tube. We pulled the bike out and started doing double takes. The bike looked good and the more we put it together, the better it looked. We took a few quick measurements and lo and behold, this bike was totally different from the standard Montaneus. The only thing this version had in common was the aluminum construction and the adjustable head.

What we had in our hands was the Montaneus race bike, a 26-pound flyer

with 16.5 inch chainstays and 41.875-inch wheelbase (at the 71-degree long setting). We experimented with different head angles but settled on the 71-degree long setting. Head angles range from about 68 degrees to about 74 degrees with the neutral setting being either 71 long or 71 short (long and short refer to the wheelbase).

The head angle is adjusted via two cams, one at the top and one at the bottom of the head tube. The head tube is a bulky-looking affair inside of which the steerer column moves in response to the cams. (Though bulky, the head only adds four ounces to the bike's weight according to the builders.) Changing the angle requires loosening two allen bolts and turning the knurled cams by hand. If you're changing the angle from one extreme to the other, you may have to readjust the headset. This in turn requires a large wrench. Reference marks indicate the neutral positions. With the upper cam's neutral position forward and the lower cam's back, the angle is at its steepest. Reversing those positions places it at the shallowest angle. Both forward is 71 degrees long; both back is 71 degrees short. At any setting other than the two extremes or the neutral, the front wheel is measurably but not visibly off set to one

side or the other.

What all this means is that you can custom fit the bike to your needs rather than shopping around for a bike with the head angle you prefer. You can also change the angle according to the conditions you'll be confronted with during that day's riding but generally riders set it at one angle then leave it there. For trials, you may want to steepen the head angle for slow speed handling while for a long downhill race like the Kamikaze Downhill in Bishop, California, you might want to soften the angle.

Our complaint with all this is that there is no change in fork rake. The fork's two-inches of rake is pretty standard for mountain bikes, that usually works well with head angles up to 71 degrees. Steeper and the steering suffers because of too much rake. A 71-degree angle even seems to perform better with less than a two-inch rake. Admittedly, that's quibbling over fine tuning the bike's handling rather than a major gripe. Nevertheless, we felt the bike's steering could be improved with a change in rake.

The Comp Lite is an incredible climber, better than anything we've ridden. Most of us prefer climbing out of the saddle and in this the Montaneus was unbelievable. We could climb the steepest

Bikes Bikes Bikes

Montaneus Comp Lite



Bikes Bikes

Montaneus Headset



grades with rarely a spin of the rear wheel. That was fortunate since the bike arrived with what seems to be standard race gearing: a 28-tooth granny ring and a 28-tooth cog. We prefer a lower gear for Crested Butte's hills but because of the bike's uncanny traction, we just stood on the pedals and powered it up where normally a lower gear is needed. That worked fine as long as the hills weren't too long. During a ride over to Aspen and back, that high gearing took its toll.

Our bike testing usually consists of riding the incredible array of jeep roads and single-tracks around Crested Butte. The Montaneus arrived shortly before my wife and I took three days off to ride to Aspen and back so I decided to put it through its paces during an extended adventure. Admittedly that was a slightly risky proposition. The bike was barely out of the box. But the bike felt right so off I went. It performed flawlessly.

The trip consisted of a long ride up a smooth dirt road then a semi-bushwalk through a basin overflowing with wild flowers where the rarely used trail disappeared beneath the greenery. Much of this section required pushing or carrying the bike. (It pushed nicely but refused to do so on its own.) After crossing a low saddle into another basin where the trail contoured a steep hillside and was often buried by snow, we hit another section where the trail was lost in the vegetation. That ended soon enough and we found ourselves on an old mining road angling across the mountain side to Taylor Pass. From the pass, we followed a well worn jeep road along the top of a high ridge for some twelve miles before plunging down to the valley floor via a screamer of a downhill. The valley floor consisted of two miles of pavement into town.

The following day we joined friends who delighted in taking us over one of the

most fun single-tracks we've ridden but not until after we'd had to climb a succession of hills via a double-track. The single track darted through the aspen forest like the track of drunk raccoon heading into town for a snack. At one point, we swept down a steep hillside via a series of sharp turns so that if someone had been watching from the bottom, they would have seen five riders descending, each at a different elevation and each going in a different direction. It was wild.

The bike received a thorough test and passed with flying colors. Climbing was a joy though on long, steep climbs I'd eventually long for a lower gear. On the single-track, the bike flew along as if it were on rails, quickly and effortlessly handling every terrain change and corner. Fast downhill were also dealt with in exemplary fashion. The bike was a joy to ride. Everything worked fine, requiring nothing more than a few minor adjustments.

Component selection was just about what we've come to expect from bikes of this caliber: Dura-ace hubs, Deore XT front brake, Suntour XC Sport rear brake, Deore XT derailleurs (the front derailleur is unusual - standard XT's do not clamp around 1.25-inch seat tubes but American Bicycle Manufacturing mated a band clamp and a Deore XT), Shimano 600 cranks with Biopace chainrings, RM 20 rims with Ritchey Force tires, Suntour XC seatpost, etc. The major surprises on the bike were the Salsa stem and handlebars. This is the first production bike we've seen these products on. They're usually an after purchase change made to fine tune a bike's fit to a particular rider. They're excellent products so we were impressed to see them on the Montaneus. The Salsa stems' best features are the range in sizes available and super strength. You're assured of a perfect fit as long as you know what saddle/handlebar dimensional relationship you prefer. The test bike's stem had a bit too much extension for me, resulting in my hands being too far forward relative to the front wheel. That in turn slowed what should have been fast steering response. But not enough that I wasn't happy riding it for three days.

We were also surprised to see an Avocet Touring I saddle on this expensive bike. Not that there's anything wrong with the saddle; there isn't. But on a roughly \$1,500 race bike, we would have expected an Avocet Touring II or racing saddle or some equivalent saddle instead. But that's nit-picking. Specify what saddle you want when ordering. The only other

Montaneus rear view



gripe, and this one is more serious, was the lack of braze-ons for a second water bottle. Admittedly this is a race bike and most races are either short enough that a second bottle is unnecessary or there's an aid station. But the bike's going to be ridden more than just in races and a second water bottle is a necessity for backcountry cycling. You can use clamps to attach a second bottle but this is too attractive a bike for that. If you order one, insist on a second cage.

There was something about the bike that everyone enjoyed. Just looking at it felt good. The unpainted aluminum frame with its course looking welds gives it a sense of strength, as if it's ready for anything. There's no bridge between the seat stays and that combined with the rear brake placement under the chain stays makes for a sleek looking unit. The forks were nickle plated for a scratch resistant finish; this is one bike you won't have to worry about scratching up. Whoever selected the components had an eye for the bike's overall appearance. Black crank arms with dark gray chain rings, hard anodized gray rims, black Suntour XC Comp pedals with black clips and straps, and black Salsa stem and handlebar added up to a striking appearance, one everyone appreciated. As far as we're concerned, American Bicycle Manufacturing has a winner in this machine. If you prefer a fixed head angle, you can get that instead. In fact, the more I rode the bike, and I have to admit I did tend to preempt most of the time on it, the more I thought how that frame with a fixed 71 or maybe 70.5 degree head angle with a bit less fork rake and a shorter stem would be really hot.

Bikes Bikes

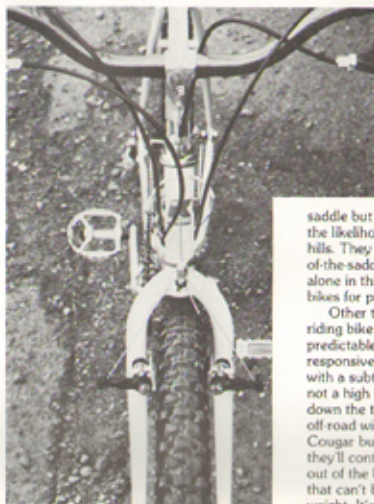
Kuwahara Cougar

This is one bike that stands out. The rainbow paint job (\$50 option) insures that regardless of how it rides. Fortunately the bike's performance is good. In fact, for some \$500, you're getting a pretty decent ride. Components consist of mostly a Suntour XC Sport gruppo including derailleurs, rear brake, shifters, brake levers, and stem. The front brake is a Dia-Compe cantilever. Cranks are Shimano with Biopace chainrings. Hubs are Sansin sealed mechanism with a quick release on the front. IRC X-1 Racers are mounted on Araya RM 25 rims with a Unicrown fork rounding out the package. The frame is lugged and made out of chrome-moly tubing with full braze-ons including bosses for three water bottles. Even more impressive is the fact that three cages are included.

It all adds up to a fine package for the money. For example, this is the first time we've seen a quick release front wheel on this inexpensive a mountain bike. A quick release on the front is better than none at all but we'd still like to see quick releases on both wheels. Our only two real complaints with the bike are pretty standard for most production bikes. The seat post is entirely too short. We've run across this in the past and no doubt will again in the future. There's no excuse for it as far as we're concerned. Mountain bikes are sized smaller than road bikes and require longer seat posts. And the fact of the matter is that most riders don't really bother looking at the seat post to be sure they don't exceed the maximum mark. So it's all too easy for someone to raise the seat, get on the bike to pedal off, and immediately snap the post. Or maybe it's in far enough to last until they're riding over rough terrain far from civilization.

Kuwahara certainly isn't alone in this. For instance, we complained about such posts on Schwinn's last issue. It's time manufacturers started putting long posts on their mountain bikes.

Our other complaint was with the handlebars but this one is more subjective. The bars rise up and while this does provide some adjustment ability by rotating the bars forward or back, we've found that flat bars are generally better for performance riding. Rising bars are fine for pedaling around town, and that's where most mountain bikes are ridden, but for riding in the dirt, flat bars are better. The reason is the saddle/bar relationship. It's preferable to have the bars lower than the saddle, or at a minimum, level with the



Kuwahara Forks

saddle but not higher. High bars increase the likelihood of pulling wheelies on steep hills. They also interfere with climbing out-of-the-saddle. But again, Kuwahara isn't alone in this; we rag at most production bikes for precisely the same thing.

Other than that, the Cougar is a fine riding bike. The steering is smooth and predictable. At slow speeds, it's stable and responsive. At speed, it bends into turns with a subtle leaning of the body. Yet it's not a high strung thoroughbred twitching down the trail. Anyone who's never ridden off-road will feel comfortable on the Cougar but as his or her skills improve, they'll continue to extract performance out of the bike. The bike's only handicap that can't be markedly improved on is its weight. It's a bit on the heavy side.

The bike's handling rather surprised us. With a 68.5-degree head angle and 70-degree seat angle, we had expected a slower reacting steering response and a more noticeable wheel flopping tendency. Instead what we got was a smooth handling bike, pretty neutral in its response. So the question became why. The rising bars which we weren't too fond of seemed to hold the key. Without really thinking about it, we had pivoted the bars back so that the line between our hands was behind the front axle. Pivoting the bars forward, thus moving our hands in front of the axle, slowed the steering response and increased the wheel flop. So to an extent, you can setup the steering response the way you want it.

The Cougar's 42.375-inch wheelbase and 17.875-inch chainstays also contributed to its handling. The somewhat long rear/center dimension didn't add anything to its climbing abilities but the short front/center definitely quickened the steering. The result is a bike that ought to feel rather comfortable to any recreational rider. It's quick enough to be fun without being overly demanding in skill requirements.

Kuwahara rear view



Bikes Bikes Bikes



Bikes Bikes Bikes



Mountain Klein Race

Contrary to public opinion, Klein mountain bikes are not race bikes, at least not by design, a fact Gary stresses. A close look at any Klein proves his point. The bikes come fully equipped with brazons for three water bottles and fore and aft racks. The geometry is also relatively conservative: 69-degree head, 71-degree seat, 17.25-inch chainstays, and 42.25-inch wheelbase. When we first tested a Klein in the summer of '85, the chainstays and wheelbase were shorter than almost any other mountain bike's. That is no longer true because of a trend to shorter chainstays and wheelbases. For example, the Montaneus race bike also tested in this issue sports 16.5-inch stays and a 41.875-inch wheelbase!

Despite Gary's claim that his bike is not a race bike, people still tend to think of Kleins as race bikes. Why? Probably because they're so light and fast riding seems inherent to the design. The Klein is, in our experience, the lightest production mountain bike available. The only bike we've heard of that's lighter is a Cunningham. Last year's test bike weighed 25.5 pounds as did this year's version. Those kind of weights, compared to the average high performance off-roader's weight of 27 to 28 pounds, are dramatic. Remember, the average European pro's racing bike is supposed to weigh 22 plus pounds, only 3 pounds less than a Klein.

Replacing the Ground Control tires with Ritchey Force or 1.75 IRC Racer tires may have cut a pound off the test bike's weight, putting it in the 24 pound range. But when Gary asked us what tires we wanted, we specified Ground Controls,

bike with fat tires or a mountain bike that ought to have skinny tires. Understandably, everyone was dying to know what it rode like after seeing all that rather exotic equipment hanging on an already impressive frame.

Unfortunately in some respects, the bike's initial performance was not as impressive as its appearance. The problem lay with the gearing and derailleurs. The small chain ring was a 34-tooth while the largest cog on the six-speed freewheel was a 28. Now Joe Murray could probably power that kind of gearing up a hill. None of our testers had that much power. There was no way we could get up hills we normally ride so routinely that we never even give them a thought. Though in all honesty, we did get up a heck of a lot further than we expected to. So we put a granny ring on. The crank set was a triple despite only having two rings so bolting on a 28-tooth ring was a snap. We wanted to put a 24-tooth on for a 22-inch gear but there was no way we could do so with the Superbe Pro front derailleur and a 48 tooth large chain ring. We tried it and when we shifted onto the granny ring, the chain dug on the cage. We couldn't readily replace the derailleur either because of the seat tube's diameter.

preferring the extra weight in exchange for the tire's higher air volume and larger foot print.

So how does the race version differ from the standard version? Only in the component selection; the frames are the same. Those components raised quite a few eyebrows too, not unexpectedly given Gary's penchant for doing things his way.

The first thing people noticed (other than the striking paint job) was the Specialized drop bar - heated and re-bent for off-road use then heat treated back to strength. That in turn led to their spotting the Suntour thumb shifters mounted just above the brake levers. After checking those out, people invariably stepped back (after picking up the bike to check its weight again) to look the bike over. That's when they noticed the radial spoked front wheel and half radial spoked rear wheel. The wheels proved to them this bike was unique and deserved a longer, more intensive scrutiny. About then is when they spotted the drilled out, Huret Jubilee rear derailleur. They'd then look at the chain rings and see two instead of three along with a Suntour Superbe Pro front derailleur.

That left every one scratching their heads and wondering if this was a road

Bikes Bikes Bikes

That meant changing the Shimano 600 freewheel since we weren't too keen about pushing a 28/28 up the hills. In truth, 28/28 is a pretty standard set-up for top racers and we could have ridden it but decided to switch to a six-speed, 13-32 freewheel since we needed to change rear derailleurs anyway because of the granny ring. The Huret's short cage and fragile nature was too extreme for triple chain rings. So out of respect for our knees, we opted for a 22-inch plus low gear instead of 26-inches. The difference doesn't sound like much but in the mountains, the lower gearing is an advantage.

We have to point out that this bike was specifically set up for racing. And a lot of racers run double chain rings. It's generally called "Marin gearing". The gearing worked well enough as long as we avoided any really steep hills. Whenever we did—and it's all but impossible to avoid doing so in the mountains—the gearing wasn't low enough for our recreational

legs. What all this means is that before you order a race Klein, know what gearing you want and specify accordingly. Just remember that you'll be able to push bigger gears with a Klein than with most other bikes. At least that's been our experience.

So how did it ride once we straightened out the gearing? Great. We loved the Klein a year ago and we still do. It climbs beautifully in or out of the saddle, maneuvers on the tightest trails with a darting quickness that eliminates any need to gain ahead, and it descends furiously with the best of them. In every off-road riding challenge, testers found themselves riding faster and more confidently than they had on most any other bike. Which isn't to say the Klein is the only bike with that level of performance. It's not. They're a number of bikes in the same category. What it does mean is that the Klein is the equal to any. The combination of the conservative geometry and short chainstays and short wheelbase gives it a

smooth blend of predictable handling and surprising quickness.

The drop bars are one of those things you'll have to decide on for yourself. They were mounted on a standard Specialized mountain bike stem and for most, that positioning was too low and too far forward. The trick to off-road drops is a tall stem with minimal forward extension. The tops should generally be level with the seat but the way the Klein was set-up, most of us found the bars too low. Minimal forward extension is necessary because of the drops' forward curve and mountain bikes' generally longer top tubes than are found on road bikes. Too much extension stretches the rider out with a resulting over weighting of the front wheel, particularly noticeable on downhill. The objective is to maintain the same relative positioning as flat bars. Klein's set-up failed in this. But that's also simply a matter of switching stems. Be sure to specify what you want when ordering any bike.

Not everyone complained about the

Bikes Bikes Bikes

It climbs beautifully (the Klein) in-or-out-of-the-saddle, maneuvers on the tightest trails with a darting quickness, and it descends furiously with the best of them.

Klein bottom bracket welding



bars though. One rider in particular, whose legs were short compared to others his height but whose torso was also longer, loved the set-up. His saddle positioning placed it level with the tops while the stem extension matched his torso/arm length. The bike fit him. Whether you'll want drops or flats is up to you. If you're comfortable with drops, that's the ticket for you. If you're hesitant with drops, go with the flats; they'll give you more confidence on rough terrain.

Component selection is typical of Klein. There's no such thing as a "gruppo" on a Klein. He picks and chooses amongst a variety of companies according to his performance criteria. Hubs are Hi E with Araya RM-20 rims. The front brake is a Shimano Deore XT but he's replaced the standard pads with Aztecs. The rear brake is a Suntour XC Sport and again he's inserted Aztec pads. Cranks are Shimano 600 with pressed in sealed bearings. The saddle is a Pearl Izumi race model mounted on an IRD seatpost. Both the saddle and seatpost are unusual to find on production bikes but Gary's selection of them is typical of his deliberate selection of components for maximum performance. They're both excellent products. Gary's also included a Hite-Rite, important for downhill riding with dropbars. The King headset is another product we've never seen on a mountain bike before. It's reported to be the finest available though we have no experience with it prior to the Klein's. Brake levers are sharp looking Modolos. Shifter and brake cables are still routed inside the down tube and though this adds nothing to the bike's performance, it sure does make cleaning the frame easy.

In summary, Klein's done it again. There isn't a better bike on the market; different, yes but better, no. If you like aluminum, and more and more cyclists are switching all the time, you'll love the Klein. The bike has a feel about it that sets it apart. There's simply something about

circle number 28 on reader service card

Lone Peak

"Tough Packs to Beat"

The challenge: design panniers for a brand new kind of bike — develop a suspension system capable of withstanding the shocks of off-road terrain — make them even more abrasion and water-resistant than our standard bags and, most of all, produce a final product worthy of our Lone Peak label. The result: Lone Peak's MB Mountain Bike Pack Series.



Packs shown: MB250 Plus MB275 Road Pack

Lone Peak Design, Ltd.
3474 South 2100 East, Salt Lake City, Utah 84109

riding a Klein that inspires riders with a nerve that was only latent previously. As always, you'll just have to ride one to find out if the bike is for you.

FISHER MOUNTAINBIKES



The 1986 Fisher Montare. Dependability by Design.

For specifications on our complete line of bicycles send \$2.00 to:

Fisher MountainBikes, 1421 E. Francisco Blvd. San Rafael, CA 94901 415/459/2247

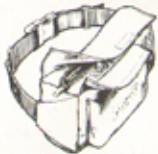
circle number 51 on reader service card

Running — Biking — Endurance Sports
WHEN COMFORT AND BALANCE ARE IMPORTANT YOU WANT THE BEST

BOUABELL® PRODUCTS

100 MILER™ — The Fanny Pack Designed For The Endurance Athlete Who Demands The Very Best In Comfort And Balance

- 100 MILER™ Features . . .
- NO BOUNCE — Due to its unique design the 100 MILER™ packs hold snug against your body with any size load.
- LARGE CAPACITY — Plenty of room for a rain suit or change of clothes and more. Just compresses when not full.
- DIVIDED INTERIOR — Materialized divider keeps things dry and organized.
- EASY ACCESS — Double top located zipper makes it easy.
- OUTSIDE POCKET — An easy to reach smaller pocket.
- WEATHERPROOF — Made from coated nylon and has large rain flaps that hold over openings.
- QUALITY — Only the finest materials and quality workmanship go into each pack.



100 MILER™ \$39.00

Name	Quantity	TOTAL Price
Package & Shipping		\$2.00
C.A. No. 348474		
TOTAL		

NAME _____
ADDRESS _____
CITY _____ STATE _____ ZIP _____

Send Check or Money Order To: **BOUABELL® PRODUCTS DEPT. M P.O. Box 256 BOULDER CREEK, CA 95006 PHONE (408) 338-9232**

Visa or MASTERCARD or Check or Money Order Enclosed Ex. Date _____

© BOUABELL PRODUCTS, INC.

Klein rear view



Bikes Bikes

Maruishi MT 15

For some \$350 (prices are rapidly changing due to the strength of the Yen), you can buy a pretty decent mountain bike these days. There are quite a few to choose between too. One of those is the Maruishi MT 15, a bike that compares favorably to others in its price range.

The bike's distinguishing feature is an

unusual geometry, a geometry that for novice riders may be more comfortable than the standard design. The head angle is 69 degrees while the seat tube is 67 degrees. We've seen only one other bike with such a shallow seat tube. The trend to steeper seat angles, not shallower. The problem with a shallow angle is how it affects the rider position relative to the pedal spindles.

Ideally you want your saddle situated so that if you drop a plumb from your knee to the pedal, it will fall directly over the spindle when the cranks are in a horizontal position. The further back the seatpost is angled from the bottom bracket, the more difficult it is to achieve that position. Forward movement of the saddle is limited. Most of today's mountain race bikes are running angles as steep as 73 degrees though such steep angles are not universal. Generally seat angles range from 71 to 73 degrees. One reason some builders refuse to run a seat angle as steep as 73 degrees is because of the harsher ride sleep angles generate. The rougher the surface or the longer the ride, the more that steep angle's harsh ride will be driven home, so to speak. Greg Lemond is reported to specify 71-degree seat tube angles on his road racing bikes because of the need for comfort during long race stages. Shallower angles provide that smoother ride. The further away from perpendicular the seat tube is, the greater the shock absorption.

Shallow seat tube angles also increase the rear wheel traction, an obvious advantage off-road. More of the rider's weight is over the rear wheel. Some riders also claim that a position behind the bottom bracket enables riders to push against the pedals while pulling back on the handlebars for a more powerful climbing ride. The idea is slightly similar to the thinking for recumbent designs. Given the overwhelming popularity of steeper seat angles by racers and cycling enthusiasts, such an argument appears to have little basis in fact. Except for one thing: novice riders invariably prefer sitting on the saddle at all times and usually with the saddle height lower than is recommended. They also tend to sit well back on the saddle for precisely that kind of positioning then they pull back on the bars while pushing down on the pedals. So the Maruishi MT 15's design suits them perfectly. It was designed to be ridden just about the way they novices prefer.

Drawbacks to the geometry are first, the already mentioned less than ideal saddle position relative to the bottom bracket and secondly, a distinct difficulty in coming up out of the saddle. Standing up is slightly similar to getting up out of your dad's arm chair. Rather than a smooth movement that intrudes not at all in your pedaling rhythm, you have to force yourself up and forward. There's also a noticeable tendency to perform unwanted wheelies when climbing steep

Shallow seat tube angles also increase the rear wheel traction, an obvious advantage off road.

hills, requiring a lower than normal bent body position to press the front wheel down.

Will a novice rider notice any of these supposed drawbacks? Not at all. What they'll feel instead is an exceptionally comfortable ride similar to riding a beach cruiser but with more performance available upon demand. None of those design negatives stop the bike from being a true mountain bike either. In fact, everyone rather enjoyed riding it as long as we weren't trying to force it to high performance levels. Once we got used to the seated/standing transition, we could fly right along, enjoying a smooth ride with adequate traction when standing. Would we recommend it to someone getting into the sport? That depends on what they're looking for. If their objective is to really get into riding off-road, probably not. A shorter bike with a steeper seat tube would probably satisfy them longer in over a period of time.

If what they're really interested in is a bike to ride around town for the most part, only occasionally dabbing their tires into some dirt, yes. The bike is comfortable, the handling predictable, and the component selection quite good for a bike this inexpensive. If you're interested in more performance, the MT 15's brother, the MT 18 (tested in the March/April issue) will probably be a better choice. No, the MT 15 seems designed for the casual rider who only wants to pedal on relatively unchallenging conditions in a relaxed manner. For that, the bike is fine.

SR SAKAE GOES TO GREAT LENGTHS FOR YOU

Like 330mm on the new extra long SR MTE-300 seatpost. That's 13 inches tall and only 11.8 ounces (335 grams) light. The SR MTE-300 has graduated markings on both sides - inches and centimeters - to guarantee correct saddle height. Designed especially for mountain bikes and taller riders.



MTE-300
26.6, 26.8,
27.0, 27.2mm

FXC-T310
110/74mm
bolt cricle

Great lengths like the popular crankarm lengths of 165, 170, 175, and 180mm on the new SR Low Profile FXC-T310 triple crankset. Outstanding power performance from the lower crank profile and shorter - stiffer - bottom bracket axle. With chainrings from 24 to 53 teeth to take you the distance you need in style.

For information and a catalog of SR Sakae parts write: SR Sakae USA, Dept. C, 330 SW 43rd Street, Renton, WA 98055

Circle number 43



ORIGINAL SJN

Suite 34, 1231 North Nevada
Colorado Springs, CO 80903
303-635-1253

ALL PRICES INVITED

Circle number 44

Attack the backcountry with comfort and style

"And most importantly, it's practical"
Mountain Bike Magazine



EMILY K SPORTSWEAR

Designers, Manufacturers, Factory Retail Store
539 State Street
Santa Barbara, California 93101

CALL 805-966-5748



continued from p. 17

needs. With steep angles and short wheelbase and stays, the Valhalla is practically a road bike, one that can be ridden hard and fast with big gears and a spinning cadence over smooth dirt roads or pavement with equal response. In Richard's mind, it's the perfect long distance touring bike for a wide variety of conditions.

But now Richard is attempting to make what he refers to as "a giant step forward in off-road design", what he calls a "true off road vehicle", one capable of traversing deep mud with impunity, climbing rough trails, crossing boulder strewn stream beds, and descending fast and furiously. He likens the stage of mountain bike evolution to what happened with dirt bikes.

For years, motorcycles were simply bicycles with engines. They were cluttered with junk and consequently heavy and inefficient. Then finally someone said let's throw out all the existing designs and start from scratch based on what we need for a true off-road motorcycle. The result was a frame with generous wheel clearances and lots of suspension travel so the bikes could go anywhere. Mountain bikes need a similar redesigning. They're just too inefficient. For instance, get into mud and the bike becomes worthless because of inadequate clearances. Mountain bikes are not yet true all-terrain bicycles."

So that's his latest project, attempting to reinvent the bicycle, to turn it into a bike that will in his opinion have the ability to go anywhere. Based on his results to date, there's no doubt that whatever he comes up with will be interesting and may well achieve his goals. But whether he will really reinvent the bicycle or simply find himself returning to bicycling's roots is the Coppi Bianchi remains to be seen. What he will do without a doubt is turn a lot of heads and make everyone think just a bit more about what they're building. Richard, in concert with all the other amazingly fertile brains designing and building mountain bikes and mountain bike components, is continually helping to push back the perceived limits of what can and cannot be done. When I look at all that this remarkable group of people have accomplished with what are in effect nickle and dime budgets, I can't help but think of how much more they could do with major R & D budgets supporting them. The thought boggles my mind.

Yet at the same time, knowing just exactly how superb the Mantis Composite already is, I have to wonder how Richard can possibly improve upon it. I mean, the Composite, and every other top-of-the-line, limited production mountain bike, is already capable of performance levels few riders can achieve. How much further can Richard and his fellow cohorts take this sport? According to Richard, quite a way-

Book Review

Cycling the California Outback with Bodfish
(including 21 maps for Fat Tire Cycling)

If you're nit-picker who obeys every rule and holds the authority of law as the absolute governing factor in your behavior, don't repeat, don't bother buying this book. Bodfish (known as Chuck Elliot in the world of Social Security numbers, drivers licenses, and IRS-FBI-CIA-USFS-UFO reports) will drive you crazy. He's irreverent, independent, thinks for (though definitely not of) himself at all times, and doesn't hesitate to express his opinions. And if your idea of a proper guide book is one that takes you by the hand and leads you through step by step, you'll probably not be too impressed with Bodfish's work either. His is the epitome of the generalist theory of guide books.

If you have a sense of humor, often look askance at governmental edicts, have a healthy respect, even reverent love of the land, either are not a hunter or else a hunter of food rather than a hunter of animals, trophies, and road signs, are a mountain biker in search of adventure and are willing to put your butt out on a limb now and then, by all means send for a copy of Bodfish's latest cycling guide. Do so even if you have absolutely no intention of ever getting close to California's outback.

This too thin gem (only so because it generates a desire for more) is more a piece of literature than a guide book. There are all kinds of guides but Bodfish's is one of a kind. The book is liberally laced with excellent maps that you'll probably want to supplant with more official types and delightful drawings by Bodfish's companion, Lisa Jo Sedlacek. The enclosed information will turn you on to some terrific rides and inspire you to pursue new routes of your own. He also covers a rather enormous area.

To order your copy of Bodfish's personal statement on backcountry cycling in northern California, write: Bodfish Book, 801 Main Street, Chico, CA 95926. He's also the author/publisher of *Cycling in the Shadow of Shasta*.

Mountain Biking the High Sierra
by Don and Reanne Douglass

If you've ever used a mountain climbing guide book, you'll feel right at home with *Mountain Biking the High Sierra*. This recently published paperback is a pretty complete guide to off-road cycling in the Owens Valley and Bishop, California. A bicycle computer with mileages presented to the tenth of a mile will be handy in fully utilizing this guide's directions. Information is surprisingly complete considering the scope of the area covered. Obviously a number of riders have spent much time compiling all the information contained on these pages. Maps are included and while they are excellent for providing a general idea of where the routes go, you may well find yourself wanting much more detailed top or even US Forest Service maps to back up the written information.

The book is well written in a straightforward, factual manner. Some may find the information excessively detailed, preferring a more general approach to guide information, but given the area's at times harsh climate, Don and Reanne's method can prevent accidents. The area has innumerable primitive roads, many of which are not marked on maps, and a wrong turn can have serious consequences. An excellent introduction sets the tone for the kind of riding you can expect - superb but always demanding the rider's awareness.

Taking the book along is somewhat like including a rather taciturn but knowledgeable guide in your group. Every once in awhile the guide will loosen up and let spill some gem of local lore to spice your appreciation of where you are. If your cycling plans include the Bishop area, and I highly recommend that they do, the book is a must. Available either locally in the Wheeler and Wilson Mountain Shop or from Fine Edge Productions, Route 2 Box 303, Bishop, CA 93514.

New Products

Nike Thunderdomes

Remember the Nike Lava Domes, for years the standard mountain biking shoe? Every time I saw a picture of Joe Murray winning another race, there he'd be with his Nikes firmly planted on the pedals. Then, for some unknown reason, Nike discontinued the model. Stores immediately put the remaining stock on sale and there was a small rush of off-road riders stock piling Lava Domes. Well, Nike is back. The Lava Dome has been replaced by the Thunder Dome.

Too often the new product just doesn't ever seem quite as good as the original. Like the phone system, people have a habit of fixing something that was working just fine. Well, in this case, the new is definitely better than the old. The Thunder Domes are lighter for one thing. They weigh less but more importantly, they walk lighter. The uppers are mostly leather also so now you can waterproof the shoes instead of your feet. I was always astounded at how wet my feet got in the Lava domes just from walking through a field of grasses wet from the night's dew. But in the Thunder Domes, my feet remained pretty dry.

The only drawback with them for mountain biking is the same one the Lava Domes suffered: the lugged soles aren't the easiest to slide into toe clips mounted on a pair of Suntour XC Comp pedals (formerly MF 1000's). If you do use toe clips and want to try out a pair of Thunder Domes, your best bet is to install WTB Toe Flips. We tried both the Toe Flips and Suntour's small, light pedal catcher with the lugged sole and found that the Toe Flip's larger, rounded surface worked far more effectively. Suntour's had a tendency to momentarily get caught in the lugs plus the sole didn't slide over the leading edge of the pedal as smoothly as it did with the Toe Flips.

Other than that, the Thunder Domes worked fine with toe clips. They're certainly not as light as say a pair of Rivat Cyclocross shoes but for all around backcountry cycling, the Thunder Domes are superb. One of our testers - a hard core Lava Dome who went through serious withdrawal when Nike ended production - spent three days in the backcountry with a brand new pair, biking, hiking, and climbing a peak. He reported no blisters, no aching feet at the end of the day, and most importantly, no undue wetness. He's now forgiven Nike; his last pair of Lava Domes have been relegated to work shoes, replaced by the Thunder Domes.

Fat Chance Hammerhead Stem

Fat Chance has for some time now offered titanium handlebars. They're dramatically light and exceptionally strong. The bend feels just right while the 24-inch width is perfect for most riding. To complement that stem, they are now handling the Hammerhead stem, a fine steel stem that looks great with the bars. Evidently the stem's strength will meet any rider's needs while still maintaining a relatively light weight. But this is no super lightweight like the bars. It's lighter than many, heavier than others. And on a purely non-technical basis, this is one good looking stem.

Specialized's New Bottle Cage

Specialized Bicycle Imports has introduced a brand new water bottle cage made out of some super light synthetic that is reportedly extremely strong and durable in a wide range of temperatures. There's no question it's light. All you have to do is pick one up to find that out. The cage design is also pretty sleek looking. But a cage's job is to hold the water bottle and when we first saw this new cage, we had our doubts. Those doubts remained after we mounted it on the Montaneux test bike in this issue. We were seriously wondering if the cage would securely hold the large Specialized water bottles we always ride with. A small bottle was no problem but the large size didn't seem to secure.

We can now report with a pretty high degree of confidence that it does hold the bottle. Our only caveat is that on a particularly rough passage with lots of log and rock crossings, the bottle might, but only might, fall out, especially if it gets banged sideways a bit. But this is only conjecture. We never had one fall out though we were worried about it at times. It never even fell out when we threw the bike up on a shoulder to haul it over some impassable section though the bottle invariably ended up askew in the cage.

So what do we think? We like it. It looks sharp and does the job it's supposed to. The new cage's biggest advantage is its lightness. The weight savings aren't all that much but if you ignore the grams and ounces, you'll never cut the pounds off.

Flex Your QUADS



The Ritchey Quad 1.9™ takes you from pavement to dirt without sacrificing speed or control. Whether you race over dirt or commute on city streets, the Quad 1.9™ delivers optimum performance for every application.

Width: 1.9"
Weight: 675 grams
Recommended
Pressure: 45-80 p.s.i.

DISTRIBUTED BY



AND
RITCHEY
USA

Send \$1 for brochure to:
Dept. TF
1326 Hancock Ave.
Redwood City
California 94061

by Hank Barlow

Scenery around Bishop



Egdo

Nearing the summit of 7500 race course



Chuck Pyper

The Cycling of Bishop, California



Chuck Pyper



Bracebones pines of the White Mts

Heading towards the sand of the racecourse

Nowhere in the contiguous United States is there more immediate vertical relief than in California's Owens Valley. West of the valley floor are the Sierras (elevations range from 13,000 to well over 14,000 feet including Mt. Whitney, the highest point in the contiguous US) and to the east are the White Mountains and White Mountain Peak (elevation 14,242 feet). The span from crest to crest is twenty miles while the rise from valley floor to summit consists of some 10,000 uninterrupted feet. Because the Owens River is closer to the Whites than the Sierras, their escarpment is even more dramatic than the Sierra's. So steep is the relief that were you to roll a very large and tough rubber ball off White Mountain Peak's summit towards the Owens Valley,

it probably would not stop until it arrived on the valley floor! (To get an idea what this all looks like, take two bricks and place them close together and side by side. Lift the adjoining sides until you've created about a thirty or forty degree angle off a perpendicular line bisecting the intervening space. The Sierras are one brick, the Whites the other, the Owens Valley lies between them.) Bishop, the valley's population center, is an oasis of cool green in the midst of shimmering desert, a desert created by the Sierra's extensive rain shadow (plus a little help by LA's pumping of the Owens River to the lawns of southern California). Staring up from the valley floor, feet planted in hot sand, and seeing snow-clad

granite peaks a few miles away can be a strange sensation. Even stranger is to pedal out of town and toil up a hill seemingly without end, sweat pouring off you, only to arrive on the White Mountain's crest and find yourself donning a sweater and possibly even a windbreaker. Yet you can look down at where you came from, see heat waves radiating off the land, know that people gasping for air are rushing from air conditioner to air conditioner, and all that is literally at your feet. The sensation may well be similar to what the gods experienced while hanging out on Mt. Olympus and watching man fret on the plains below. Seeing those peaks from town while you're weaving through the valley's heat

and knowing how much cooler the air is there can be frustrating. Like having a chilled fruit smoothy dangled just out of reach when you're dying of thirst. Escape is there in front of you but, as they're fond of saying in New England, you can't get there from here. At least not easily, not on a bike. The first time I ever saw this remarkable valley was during a meandering drive from Colorado to San Francisco via Canyonlands, Capital Reef, Bryce, Zion, and Death Valley National Parks. Our arrival at the latter occurred at one in the morning after passing through Las Vegas where we hesitated only long enough to fill our gas tank and stare at the flashing lights and slot machine zombies pumping one armed bandits with an

intensity that can make Joe Murray climbing a hill look like a couch potatoe. The heat in Vegas had been radiating off the walls so we knew Death Valley would be hot but in our mountain innocence, we assumed that by the time we arrived, the air would have cooled to a comfortable temperature. The nearer we got, the hotter the air became. Our van's wide open windows provided minimal relief. I kept checking the heater controls to make sure I hadn't inadvertently turned them on. We pulled into the campground, stepped out of the car, and wilted beneath the heat's onslaught. Late spring was too late for Death Valley, at least for anyone who considers eighty degrees a heat wave. Dawn's first dull gleam found us heading

to Mammoth and the coolness of mountain air. That drive out of Death Valley consisted of an incessant climb through waves of dancing heat - and the sun hadn't even floated over the horizon yet! The landscape was striking but we only glanced at it in our rush to escape the clutches of this giant heat trap. Onward and upward we drove through interminable stark desert. One thought dominated my thinking: "I'd hate to break down out here!" Abruptly, without warning or premonition, just when we were wondering if we'd ever escape the heat, we topped the pass and there before us was a wall of granite and snow soaring into an azure sky. Mt. Whitney, appearing much

closer than it really was, dominated the sky. At our feet, stretching into the north with pockets of green surrounding the towns of Little Pine, Independence, and Big Pine was the Owens Valley. The sight of those snow clad peaks instantly cooled us and Death Valley receded into the past.

We passed straight through the Owens Valley, only stopping for gas and a milk shake, but fled away in my mind was the thought "Someday, I have to return to explore these mountains from the back of a bike." The Sierra 7500 on the weekend of June 21-22, 1986 provided that opportunity.

Don Douglass, in real life president of the Wilderness Group (Plumline clothing and Kangaroo packs) but race organizer for the month of June, claims this is the "longest, toughest mountain bike race in the world". He's right. It is. The word that immediately comes to mind to describe the 1986 race is "brutal". The course was difficult enough in '85 but this year, heavy spring rains deposited sand on every road, turning the course into a strength sucking struggle from the start. Nor did it let up during the entire 50 miles.

It wasn't ordinary sand either. The Sierras are granitic. Their decomposition

results in tiny, angular shards of rock. Unlike beach or sandstone sand, granitic sand has an astounding ability to swallow a tire as if there's no bottom. At about the forty-mile mark, after having already climbed from 4,425 feet to just under 11,000 feet in 25 miles, on a downhill where last year's riders were reported to be hitting over 30 mph, this year's racers hit a five-mile stretch of ten-inch deep sand!

Fortunately news of this never reached my ears before or during the race. Had I known what a struggle getting through that sand would be, I may have elected to bail out into the 25-mile course instead. But in retrospect, I'm glad I rode the fifty miles. Despite whatever twisted reasons make man search out self-inflicted torture, I have to admit I enjoyed the race. There were times when I wondered why I was there and there were times during the long downhill back to the valley floor when the sight of an uphill made me groan out loud. The sight of sand eventually became so disheartening that I would have preferred walking into a dentist's office or joining the Marines (well, maybe not the Marines) than having to ride through one more sand trap.

As I said, the race was brutal. But really, that's an exaggeration. It was long and demanding but it was only brutal because of a lack of adequate training on my part. The route itself was beautiful.

We left the start line a touch after 6:30 in the morning with light dancing over the hills. We wound up through granite outcroppings, past desert shrubs and flowers, constantly climbing up the Sierra escarpment. Shadows swayed across the slopes while the sun rose faster than we did. The road finally darted into groves of aspens and slipped across small, intermittent creeks lined with grasses and wild flowers. No longer were we climbing. Instead, we flew over the slopes, relishing the cool air washing over our bodies while we contoured to the south.

After paralleling an aqueduct, we intersected a paved downhill where we tucked low over the bars and snatched as much rest as possible before swinging up another canyon and more climbing. Then we were at the fourth aid station for a mandatory stop before the final climb to the summit.

The trail angled up and across the mountain, not too steep, certainly rideable but for a thin deposit of sand, just enough to slow everyone down to the point that many walked. The higher we climbed, the more spectacular the views, the cooler the air. Wild flowers became abundant while the sweet smell of sage filled nostrils working hard to suck in more air. The trail crossed a small ridge then swept into a cool, dark grove of conifers before again continuing the climb.



Bruce Conrad

Then we hit patches of snow over which we had to carry the bikes. The world lay stretched out before us like some colossal visual buffet. A cool breeze blew and for the first time in the race, I wasn't sweating. Beyond a copse of trees was the summit and the fifth aid station welcoming all with fruit, water, and stunning views of the Sierras glistening in the foreground. The alpine tundra quivered with tiny flowers and brittle grasses waving in the wind.

Like a frosted glass sweating beads of moisture from the cold drink inside, the summit tempted me into stopping and relaxing. But the knowledge that if I did, I'd not be able to get going again plus a basic competitive nature urged me back onto the bike and back into the fray.

The downhill could have been, in fact for much of the distance was, a glorious descent back to the valley floor. The only reason it wasn't all the way was because of a severe tiredness deep inside my muscles. Just holding onto the bike was an effort. To lessen the jolting, I braked more than I probably should have. And while that did smooth out the ride somewhat, it also tired my arms and hands even more. I seemed caught in a Catch 22: I was too tired to go fast yet slowing the bike speeded up my rate of exhaustion. A flat tire three quarters of the way down, while a bummer because of the lost time - especially since I didn't have a spare tube so I had to patch it - was also a relief for it meant being able to sit down and rest. Had I known I'd soon find myself in the midst of the five-mile sand trap, I probably would have rested even longer.

sand should have been music to my ears. Instead, I flinched inside and wondered why they couldn't have moved it a bit closer. And while it was true that there was no more deep sand to traverse, by that time, anything resembling sand was too much. I even found myself wishing for the pavement last year's course had followed back to the start!

About four miles from the end, the course crossed Bishop Creek via a narrow foot bridge. I stopped, jumped in, and stood up to my thighs in the cold, rushing

water until my legs went numb. The relief, the ecstasy was only broken by the knowledge my bike and four more miles were awaiting me.

The sight of the finish area was the best view of the race. At last, it was all over. I could put the bike away and forget it. Afterwards, I sat in the shade, relatively numb to the world's existence, stuffing watermelon in my mouth, and watching a steady flow of finishers stagger in over the next few hours. I couldn't believe I'd made it. Six and a half hours after the start, like

TOOL-STOP

EAGLE CLAWS™

CANTILEVER BLOCKS

"POWER STOP"
5/8" CENTER
PRESSURE POINT

"WATER DISPLACEMENT"
DRIVE

KOOL-STOP SOLVES THE PROBLEMS THAT OTHER BRAKE PADS CREATE

OUR UNIQUE NEW "POWER STOP" DESIGN WITH THE OFFSET PRESSURE POINT, MAKES TOE-IN AND CHATTER OBsolete WHILE GIVING SMOOTH AND EVEN WEAR FOR AN EXCEPTIONAL LONG PAD LIFE.

THIS REVOLUTIONARY NEW DESIGN COMBINED WITH OUR HIGH PERFORMANCE BRAKING MATERIAL WILL IMPROVE THE PERFORMANCE OF ANY CALIPER BRAKE. SATISFACTION GUARANTEED.

Sales Agent: **KSI PRODUCTS**
CYCLE COMPONENTS
P.O. BOX 4363
FULLERTON, CA 92634
(714) 738-4971

Available now through your
KSI DISTRIBUTOR
Suggested retail \$5.95/pair

BULLSEYE

HUBS
COMPONENTS
SEALING BOTTOM BRACKETS
TUBULAR 2-PIECE CRANKS
LIGHTER STRONGER AND
3 TIMES AS RIGID

PULLEYS

Bullseye

WRITE FOR INFO
101 W. WILSON ST.
MIRAMONTE, CALIF. 91764

The Plumline 7500

This year's race story was Cindy Whitehead's phenomenal ride to first place in the women's pro race. Cindy rides for Ross Bicycles and in two earlier results against Jacques Phelan, she had a first and a second. A mile into the race, her saddle broke off. Anyone who rode past her at that point saw one destroyed woman. She wanted that race and the woman's seat. But without a saddle, all who rode by her assumed that was the last they'd see of her. That was certainly my reaction. Ah well, there was always another day, another race.

But then, on the long, steep climb to the summit, I looked back down at the switch backing trail and saw a girl in a Ross jersey. I literally did a double take. My first reaction was that she must have borrowed a saddle from someone, blatantly breaking NORBA's race rules. I mean, there was no way she could have come that far without a saddle. No way at all. Therefore someone gave her one. Some time later as I was slowly pushing my bike up a particularly steep section, there was Cindy Whitehead running past me, pushing her saddless bike! As soon as the slope lessened, she hopped on and took off — standing up. She rode 47 of the 50 miles without a saddle, decisively beating Jacques in the process.

Not one of the men's pro racers, nor one spectator had ever seen anything like it. Mike Jordan, also riding for Ross and the men's winner, stated emphatically that he would not have ridden the race without a saddle. His sentiments were repeated by everyone I spoke to. Cindy's ride is one of those acts of which legends are made.

Why did she do it? Because she wanted to win the race. Really. That was her day and nothing was going to stand in her way. How did she do it? Who knows. I'm sure she doesn't even really know. She just did.

Jacques Phelan (riding for Cunningham) came in second after sustaining a fall and a badly injured ankle towards the race's

end. Third was won by a newcomer to the mountain biking scene, Kathy Chamberlin from Aspen, Colorado with Carmen Carrouche (riding for Manfros) placing fourth.

The entire race was an overwhelming success for the Ross Indians, garnering a welcomed result by every pro racer and team. John Kirkpatrick, the team in charge of Ross' mountain bike efforts, has certainly said and done enough in the past to create plenty of bad feelings towards him from the west coast but nevertheless, his team's success was applauded. John and Ross have possibly done more over the years to promote and support professional mountain bike racing than any other individual or company. He's dropped plenty of money on the sport and has received sparse winnings in the past. Seeing his team consistently finishing in the top has been gratifying to all concerned but just John and Ross.

On the weekend, Joe Sloof won the Kamikaze Downhill while Cindy Whitehead and Mike Jordan won their respective divisions in the Sierra 7500. Mike also placed fifth in the downhill while teammate Todd Switzer finished sixth. Rounding out Ross' weekend of success were John Loomis' fourth, Todd Switzer's seventh, and Joe Sloof's eight in the 7500.

The men's race was close until the start. Mike Jordan, Casey Kuroshian (riding for WTB Trek-Tape Tempier), and Tracy Smith (riding for Cunningham) were right together as they hit the start. Then Mike was able to somehow carry a big gear through the sand, picking up two minutes on the others by its end. Casey picked up part of that before the finish to come in just over a minute back with Tracy three minutes behind him.

Tracy's third was without a doubt the surprise of the race. This was his highest placing to date and no one, not even Mike, was happier at the end than Tracy. The course's length and elevation were evidently perfectly suited to him and he made the most of it.

a prodigal son, I'd returned.

The Sierra 7500 is a great race, a true classic, one that any avid mountain biker with the slightest touch of competitiveness should attempt even if only to tour, not race, the distance. It's a course that has just about everything that makes mountain biking the superb sport it is.

The Sierra 7500 took place on Sunday. The Kamikaze Downhill, a 7,000 vertical foot, fifteen-mile descent down Silver Canyon in the White Mountains, was on Saturday. This was the first year for this particular course and post-race sentiments were that it too is destined to become a classic. Pre-race hype had it sounding like a death-defying ride with catastrophe lurking behind every stone. And indeed, grades were as steep as 30%! In fact, the first 3,000 feet of vertical descent averaged some 20%. But evidently, it wasn't nearly as difficult as it had been described. Every competitor I spoke to loved it and no one mentioned any undue difficulties. The only problem was just kicked up by the riders.

Speeds were fast: estimated 40 to 45 mph maximum speeds — and that's on the dirt. There was also never a moment when hands weren't gripping brake levers. By the finish, rims were too hot to touch! But according to participants, the course is a great one, long, fast, challenging, and fun.

The race's only controversy, and it was minor, was the start. Rather than running it as a time trial with the start at the top of the downhill, there was a mass start with a 600-foot climb to the crest. Some loved the start; others felt it should have been a pure downhill. There's no doubt the drama would have been increased had it been a time trial from the top of the ridge. The views from there are spectacular with the road dropping off into a deep canyon and oblivion, not to reappear until thousands of feet below where the racers hurtled onto the alluvium spread out on the valley floor 7,000 feet below. Starting racers at thirty-second or one-minute intervals could have built up a tangible combination of anxiety and excitement. It also would have cut down on the considerable dust the packs of racers kicked up. But it wouldn't have made it a better race, just different. This is one course that ought to satisfy the world's most ardent downhillers (no doubt mostly Californians) and I doubt if there will ever be another course to match it.

If these sound like a races you'll want to attempt next year (scheduled for June 20-21, 1987), do yourself a favor and arrive early enough to enjoy the area's riding before the races. You'll be hard pressed to find more beautiful or spectacular views to ride past. Especially in the White Mountains. I had arrived with expectations of spending all my time in the Sierras but left filled with the innumerable opportunities in the Whites.

One ride in particular stands out, the one on White Mountain Peak. You can drive via a paved road (the paved road is an adventure all by itself — the ultimate downhill for road bikes) to the crest of the White Mountain ridge where a maintained dirt road continues along the ridge line. The Whites' lee slopes are home to the Brittlecone Pines, magnificent conifers twisted by age and the shrieking winds that at times pummel the Whites. Pedaling past those striking trees while riding the latest high-tech mountain bike, 35mm camera in hand, and garbed in polypropylene and lycra can give a person reason to pause and take stock of just how far man has really evolved. Many of those trees were alive four thousand years ago, two thousand years prior to when some people believe the world was even created!

Resting against one of those ancient trunks while you stare south towards the LA basin invisibly sprawled well beyond the horizon, can provide perspectives on life that swirl through the brain like early morning mists on a silent beach pond, moments of illumination growing in magnitude the longer you meditate beneath the gnarly branches. But, the moment is only transitory and soon the lure of riding an aluminum and steel mountain bike up White Mountain Peak intrudes and you're off pedaling once again, unchanged but for perhaps a subtle shading in how the surroundings are perceived.

And those surroundings are spectacular. The road rolls along, rarely excessively steep, sometimes flat, sometimes angling gently down into a basin before again gaining altitude towards the still unseen summit. It's mostly middle chain ring terrain. A gate in a saddle overlooking the Owens Valley closes the road to vehicular traffic except for those working at the University of California Barcroft High Altitude Research Station where the graded road finally ends. From that point on, the road turns into a rough double track winding across the tundra.

Cycling here is surreal. The riding is easy, relatively flat. The air is cool despite a sky barren of any clouds and a bright sun shining overhead. I pedaled past a carpet of alpine flowers, past rock outcroppings glowing with lichens, past views encompassing 9,000 vertical feet of relief. To my left towered the granite walls of the Sierra crest. To my right, as far into the distance as I could see, stretched valleys and ridges of pure desert, as barren looking as photos of the moon. Even the Owens Valley, except for pockets of green around the towns, appeared barren of vegetation. There I was riding in the midst of colorful wild flowers and grasses, rolling along practically effortlessly in a moderately low

Congratulations
**KEVIN NORTON &
TEAM KUWAHARA**
1985 NORBA TRIALS
NATIONAL & CALIFORNIA
CHAMPION



Custom Designed & Hand-Made

Kuwahara

ATB Models for discriminating bikers in all price ranges.
TRAILS-KN, JAGUAR, LION-TK, COUGAR, PUMA, ALLEYCAT
Exclusively Distributed in USA by Everything Bicycles
1207 Mahalo Place, Compton, CA 90220
SOLD EXCLUSIVELY TO SELECT BIKE SHOPS

gear, on an island of calm in the midst of stark desert. It was as beautiful a ride as I have ever been on.

After a fairly steady but relatively easy traversing climb across a small basin to a broad, flat hill, the road quickly dropped down into a saddle before the final climb to the summit. The road zigged up that final slope in a series of hairpins before disappearing beneath snow left over from the winter. This last section requires some pushing of the bike, as much because of the altitude as the difficulty of the riding. With a low gear, strong legs, and large lungs, I imagine riding right to the 14,242-foot summit is possible once the snow's gone. But it's probably easier to leave the bike on the hill before the saddle and bike the remaining distance. But then there's something attractive about going all the way by bike, especially since most of the distance is rideable. Besides, how often do you get to ride to the summit of a fourteen thousand-foot peak?

Contrary to what I once read in an Early Winters newspaper/catalogue written by a pretty well known Bishop mountaineer (I forget his name, Keith something as I recall), this is a superb and easily ridden route. According to the article, the author was unable to enjoy the views due to his leaning over the handlebars while struggling to keep the bike moving forward. He afterwards concluded that mountain bikers were inappropriate in the backcountry because they interfered with his enjoyment of the scenery.

Our experience was exactly the opposite. The route is smooth enough and flat enough that we were able to fill our eyes to our heart's content with the

mountain grandeur. The riding was never a struggle. Mountain bikes have come a long way since that piece was written, no doubt accounting for his perspective. But if you once read that piece as I did and decided not to attempt White Mountain Peak by bike, I strongly advise you to change your mind. It's a superb ride, one I'd recommend to any mountain biker in good condition. The elevation might bother you but the pedalling really isn't too strenuous. This is a unique ride that every mountain biking aficionado ought to include on his or her list of have-to's.

Not that it's the only ride in the Whites. Not by a long shot. In fact, the Whites' opportunities for adventure riding are spectacular. One of the nicest aspects of the ride up White Mountain Peak is the ability to set whatever level of difficulty you want. You can cycle from Bishop to the summit, an elevation gain of 10,000 feet, for the maximum challenge or you can drive to the gate at over 11,000 feet elevation. That's pretty much the case throughout the Whites.

The Sierra side of Owens Valley is quite different. There's more vegetation for one thing and while the overall vertical rise is equal to the Whites, because the crest is set further back from the valley the rise is not so dramatic. The riding is also somewhat more limited than in the Whites for two reasons. Number one is simply the steepness of the Sierra crest itself, an abrupt wall of granite. Number two is the John Muir Wilderness border sprawling across the base of the crest like a mountain biker's Berlin Wall. But between the boundary and the valley floor stretches a huge expanse of rideable terrain.

Bishop, California

Probably the best riding of all is in what is called Coyote Country, a high plateau (elevation 10,000) southwest of Bishop.

Getting to it requires either a rugged ascent in a four-wheel drive or a long, sustained climb on the bike. The best access is via the race route from the end of the pavement along the South Fork of Bishop Creek. The riding is superb with incredible views of the Sierra crest. But this riding is reserved for those in excellent condition simply because of the steepness and length of the initial climb. Tours in this area are for the most part full day affairs.

Otherwise most of the riding is at lower elevations and is best left for fall through spring when temperatures are milder. For more information on where to ride, the local mountain biking center is the Wheeler and Wilson Mountain Shop in downtown Bishop. They can answer all your questions plus they can supply any equipment or repairs you'll suddenly discover you're desperately in need of. The Bishop Forest Service station also is amply stocked with maps of the area, topos and otherwise. Combine those sources of information with Don and Reanne Douglas' guide, Mountain Biking the High Sierra (see book review section)

and you should be set for as much adventure riding as you want.

The Owens Valley is full of campgrounds - county, state, and federal - plus Bishop itself has plenty of motels. If you're camping out, the RV Campground just north of town on US 395 has great showers. Bishop isn't exactly a gourmand's paradise but there are plenty of restaurants. The Mexican restaurant near the Forest Service station may be the best buy in town.

While cycling around Bishop is pretty much a year round affair, from what we heard, fall sounds like that might be the finest time of all. Temperatures have cooled, days are clear, and the nights are cold enough for comfortable sleeping. If there's a drawback to cycling in the Owens Valley, it's the need for driving to so many of the rides. You can't just set up camp near town and then pedal to all the best routes. But considering the huge expanse of terrain available to mountain bikers, that's a minor drawback. There is also almost no single tracking in the area. All the rides are on roads of one sort or another. Invariably the trails are closed to bikes. If you have a road bike, take that along too. There's some pretty spectacular

road riding in the area. And if you're a rock climber/mountaineer, you'll definitely want to take along your equipment.

Bishop is a mountaineer's paradise. But what the Owens Valley is even better known for is hang gliding. We saw car after car with hang gliders strapped on their roofs. Evidently the thermals rising up the slopes of the White Mountains are perfect for sailing.

By now Bishop is probably starting to sound like some sort of recreational dream scape. And I suppose it is. Especially when you consider that Mammoth Lakes is only a short drive away. It's certainly a place I intend to return to, especially in the winter so I can go explore the desert rides east and south of Bishop, maybe even into Death Valley. In fact, Death Valley in the winter is reported to be fantastic. All Bishop needs now is some sort of Fat Tire Festival a la Crested Butte's Fat Tire Bike Week or Canyonlands Fat Tire Festival in Moab. Maybe in the early spring when temperatures are still mild and the high mountains are buried in snow. Now that could be a great escape, the perfect start to another season of mountain biking adventure.



KLEIN EVERY MOUNTAIN.

The aluminum Klein. The ultimate mountain bike. With a super strong aluminum frame to reduce weight. With remarkably sophisticated geometry to improve performance. With incomparable Klein engineering and craftsmanship to tell the world you own the very best.

KLEIN

2078 South Prairie Road
Chehalis, WA 98532 More information?
Call designer/builder Gary Klein, direct, at
(206) 262-3305 or 262-9823.

Classifieds Classifieds Classifieds

THUNDERBOLT
SEND \$1.00 FOR CATALOGUE
ROCKY MOUNTAIN BICYCLE COMPANY LTD
#214-5000 1st. E Road
Richmond, BC
Canada
V6V 1Z1

Mountain Bike Tours in Utah's Canyonlands

GUIDED GROUP RIDES, SUPPORT & SHUTTLE SERVICES



94 W. 1st North • Moab, UT 84522
(801) 259-5223



94 W. 1st North
Moab, Utah
259-5333

Open
9 a.m. to 6 p.m.
Closed
on Sunday

— BICYCLES —
Miyata - Ross
Fisher - Specialized - Klein
Mountaineering
Clothing & Gear
TOURS & RENTALS

GAW COVER™
LEAN BRAKE
49.95
NOW ONLY \$49.95

DOC'S SKI and SPORT



MOUNTAIN BIKE RENTALS

• Bicycles - Sales, Service, Rentals
• Daily • Weekly • Hourly
TABLE MESA CENTER
BOULDER, CO 499-0963

THE MEGA POST FOR OFF-ROAD BICYCLES



*Indestructible 6061 T6
Aluminum Post
*No-Slip Micro-Adjust
Seat Clamp
*Available in Any
Length or Diameter

SPEED & RESEARCH

P.O. BOX 2778, BEND, OREGON 97709 (503) 338-4421



Mountain Bike Accessories

Tool Packs • Bar Pads • Fanny Packs
WE DO CUSTOM WORK, TOO!
For brochure send \$0.00 to:
Rumney Survivals
Box 31 • Rumney, NH 03266 • (603) 786-8388

BODABEL™ WATERBELT



BODABEL™ \$24.00
SLIDE ON POCKET \$6.00
• Holds up to one quart of drinking water
• Comfortable, conforms to body, fits snug, NO BOUNCE.
• A favorite of Ultramarathoners since 1978.
FILLS LIKE A BOTTLE,
WEARS LIKE A BELT

Wear Size	Quantity	Price

BODABEL™ PRODUCTS
DEPT. M
P.O. Box 256
BOULDER CREEK, CA 95006

NAME _____
ADDRESS _____
CITY _____ STATE _____ ZIP _____
 Check or Money Order Enclosed
 Visa or MASTERCARD # _____
PHONE (408) 338-9232 Ext. 400
*Patented © BODABEL PRODUCTS 1988

Parafalls
108 N. 4th St.
SUSPENDED SEATTLE, WA 98103
ELEVATIONS
(206) 633-4780 days

A PACK FOR ALL REASONS
World's most stable packs with Delta™ Suspension System.



For Catalog and Dealer List
Mountainsmith Inc.
11009 Spruce St. Me
Golden, CO 80401

MUSKIE

Custom ATB Frames
COMPO-TIPO competition
MALAMUTE expedition
MTN. MAIDEN 17" 19"

Built with European Experience,
and American Technology.



Available Through,

Turin Bicycles Ltd.
Denver, Colorado (303) 837-1857

**The Burley Lite
BICYCLE TRAILER**

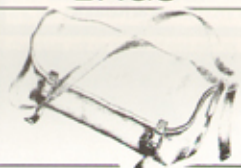
carries 2 children or loads to 100 lbs.
easy to maintain
easy to attach
lightweight
stable
strong
safe



4300 Stewart
Eugene, OR
97402

Call or write for free color brochure
and your nearest dealer

**ZO
BAGS**



2000 Cu. In. Cordura Messenger Bags
lined with Herculite Colors: Blk,
Red, Blue, Gry 49.95 Ca. Res. add 6%
Rasta Cyclery (415) 258-9120
74 Windsor Ave., San Rafael, CA 94901

**Vermont,
Mountain
Bike Tours**



P. O. Box 526M, Pittsfield, VT 05702
802-746-8943

Guided Tours through
the Green Mountains
Nightly stays in a country inn

**Mountain Bike
SPECIALISTS**

New store in
DENVER, COLORADO

At MOUNTAIN BIKE SPECIALISTS, we carry
nothing but mountain bikes (ATBs), or race bikes, off-
road bicycles, wherever you want to call them. If you're
looking for one of the above, come see the experts at
2200 W. Alameda in Denver, Colorado 80212.
(303) 735-1201.
We sell Specialized, Ritchey, Fisher, Fat Chance, Nishiki,
Klein and Mountain bicycles, and all the accessories
you'll need on or off road.

Mountain Bike Soft-Clips
2" webbing rae straps with
strong velcro adjustment fits any
off-road pedal for 30%
performance increase.
Color black, one size fits all.
\$15 postpaid to:
Alpine Mountain Gear
3860 N. Broadway #45
Boulder, CO 80302

MOUNTAIN BIKERS:

**LOOSE HEADSETS=
BROKEN FORKS!**

Prepare your equipment for hassle-
free riding with SADDLETREE'S new
HEADSET LOCK for mtn bikes.
Super trick with nylon buttons to
protect against thread damage. Beau-
tiful silver finish.

**IT'S MORE
THAN A
PATCH KIT!**



IT'S ALSO:
3 Allen Wrenches (x.5mm)
2 Screwdrivers (x1 Phillips, x1 Torx)
A Chain Tool (exceeds 1/8")
BESIDES BEING THE BEST PATCH KIT!
Our SURVIVAL KIT also includes a 4"
crescent wrench (w/ full "C" capacity)
and a nylon tire lever set all con-
tained in Tailwind's Little Pocket (fits on
top of seat rails). Choice of red,
blue or black pack. Really small.
Really Trick!

HEADSET LOCK - 13.50
SURVIVAL KIT - 28.00 (Please specify color)
Add 2.50 postage/handling
CA residents add 6%

GEAR

Send check or money order to:
MOUNTAIN GEAR
P.O. Box 173, Kings Beach, CA 95719
916-546-2413

FAT TIRES ONLY

BIANCHI
BONTRAGER
BREEZE
CANNONBALL
CUNNINGHAM
SANTITAS
MANTIS
MINATA
PANASONIC
POTTS
RITCHIEY
SPECIALIZED

The San Francisco
Buyer's PRO
MOUNTAIN BIKE SHOP

**MOUNTAIN
AVENUE**

415 221-6630

1063 HAIGHT ST. SAN FRANCISCO, CA 94117

Blue Sky Cycle Carts. Carry large loads, camping gear, or up to
4 children. A steel all welded construction, with 24 x 1.75
wheels (optional) handles off pavement use. Load limit 300 lbs.
Send \$1.00 for brochure. P.O. Box 704, Redmond, OR 97756,
503-548-7753.

**CYCLE OPS
NIGHT VISION™**



A lightweight helmet mounted rechargeable
lighting system with a unique quick release
mount.

Available from
iBike Systems
iBike Cycles builds custom mountain bikes with
responsive geometry.
Custom sizing, components and paint are our
specialties.

Send \$2.00 for literature
PO Box 275, Silverdale, CA 95472 (707) 829-5015

COLORADO BOOMERANGS

Manufactured by
JIM MAYFIELD
204 N. Main
Gunnison, CO 81230

FUN & FITNESS
PERFORMANCE BOOMERANGS
that are easy to master

ALL 'RANGS TESTED, SIGNED & DATED
throwing instructions included

TAKE ONE ALONG ON YOUR NEXT TRIP
SEVERAL STYLES AVAILABLE
write or call for price sheet
dealer inquiries welcome
(303) 641-5539

**CYCLING THE
CALIFORNIA
OUTBACK**

WITH
BODFISH

n.california
national
forecasts

21 MAPS FOR FAT TIRE CYCLING

MAPS ARE AVAILABLE AT YOUR BICYCLE SHOP OR
ORDER DIRECTLY FROM BODFISH. \$14.95
INCLUDES TAX AND SHIPPING. BODFISH, CHICO, CA 95926

grate
of Colorado
Bicycle Village
Expert Equipment Specialist

**RALEIGH
TREK
FAT CHANCE**

Large Selection of Mountain Bikes

COMPLETE CLOTHING DEPARTMENT
EXPERT REPAIR SERVICE

Lakewood Littleton Aurora Denver
988-3210 740-0900 369-9090 722-1800

Mountain Bike in China

Room Expedition announces two exploratory trips to the
mountains of western Sichuan. Each trip includes 9 days cycling
in high alpine terrain. Average distance 20-25 miles per day
Stay in local hotels and some camping. Mountain bikes and
log wagon provided

HONGYUAN GRASSLANDS: At 12,000 ft. elevation the
grasslands are summer home to nomadic Tibetan herdsmen
and their yaks. Gradual terrain surrounded by snow capped
peaks. Friendly people, spectacular scenery. July 30-Aug. 22

DADU RIVER: Biking down the valley of the Dadu River
along the route of the Long March. Day hiking and camping
near Four Sisters Mountain (21,600 ft.) and visit Wolong Panda
Reserve.

BOJUM EXPEDITIONS
Box 2236, Berkeley, CA 94704 • 519-436-1927

**Bruce Gordon
Chrome-Moly
Mountain Bike Rack**

NEW!

- Machine mounted
- Hard braided construction
- Rotates on track opens
- 4130 Chrome-Moly tubing
- Fully adjustable

Send \$20 for rack under base and bracket or
\$140 for a bracket on your computer bike.
Bruce Gordon Cycles
222 West Second Avenue Eugene Oregon 97402
(503) 343-9113

Dealer Inquiries Welcome.

**World's finest
touring packs**

If you're serious about touring
there is only **one** choice. **NEEDLE
WORKS**, off-road and on.

For information on the panniers
that bicycling magazine features
and test comparisons have rated
as "the finest in the world", "the
Rolls Royce of bikepacks" and
"in a class by themselves" write:

Needle Works
780 Monroe St.
Eugene, OR 97402

Dealer inquiries welcome

Brite Lite

At Last — Performance Lights
For Cyclists Who Demand More

Safety and Practicality for • commuting
• touring • training • off-road adventure

HALOGEN Lighting Systems

- Systems come complete with Halogen headlight, tailight,
rechargeable battery pack, rubber mounting brackets.
- Systems Available From \$69.95

CALL TODAY for a FREE BROCHURE

TOLL FREE 1-800-34-BRITE
41982 1-800-342-4441 (In California)
Brite Lite, P.O. Box 1386-M9, Soquel, CA 95075

WE SHIP ANYWHERE

Friendly expert service
Custom bikes & wheels
Full line of equipment,
clothing, packs, &
off-road gear

Ritchey, Cannondale,
Univega & Bianchi
in Stock
Call For Local Racing News

**PEDAL PUSHERS
CYCLERY**

In Boulder 30th & Walnut
(303)-447-8931

The Ironhorse Classic



Scott Warren

Women's winner,
Mary Lee Atkins

Durango's Ironhorse Classic was until two years ago strictly for roadies with the feature event the Durango to Silverton road race via Coal Bank and Molas Divide passes. Start time is the departure of the Durango-Silverton Narrow Gauge Railroad's early run to Silverton. The bikers' objective is to beat the train but it's no race, the bikers clean up.

Race organizers in 1985 combined a mountain bike stage with the road race, creating a first-of-its-kind King of the Mountain prize awarded to the racer with the fastest combined time. Because of another USCF race held in nearby Telluride the day of the mountain bike race, the organizers' goal of attracting road racers into mountain bike racing failed. Such was not the case in '86 for two reasons.

One, there were no conflicting races during Sunday's mountain bike race. Two, Schwinn jumped in as a major sponsor and King of the Mountain competitors were presented with a sizeable cash prize list. (The distinction between "amateur" and "professional" seems to be the immediacy with which prize money can be spent.) Consequently the mountain bike race, in the opinion of Schwinn team rider Ned Overend, "had the most competitive field" he'd seen. So strong in fact was the

field of road racers entered in the mountain bike race, there was an excellent chance that not only would the King of the Mountain be won by a roadie, the mountain bike race itself might be also! In a matter of speaking, it was, by Ned Overend, a mountain bike racer with impeccable road racing credentials.

Ned was the favorite from the start. Not only is he one of mountain biking's top racers (many of his competitors claim he is alone on the pinnacle of off-road racing) and a strong road racer (Schwinn considered adding his name to their already impressive road team), he was also racing at home in front of family (including his newborn daughter) and friends. Still, he had no lock on first place. Far from it. Not when the field's as competitive as the one that lined up for the start of the race.

Included in that field were many of mountain biking's finest: Joe Murray and George Theobald from the Fisher team; Steve Cook racing for Ritchey; Joe Sloop, Todd Switzer, and Mike Jordan from Ross; John Weissenrieder and Jeff Norman along with Ned racing for Schwinn. From the world of road racing were Jock Boyer, Rishi Grewal, Bruce Whitesel, Mark Southard, and Mike Carter to name only a few. The King of the Mountain prize list swayed many of



Eric Irwood

the top mountain bikers into joining the Durango/Silverton road race and despite their unfamiliarity with road racing, they netted some impressive results.

Ned made it clear during the road race that he wanted the King of the Mountain. With help from his road racing team, Team Breckenridge, he sat near the front throughout most of the climb up to Molas Divide before putting a move on and hammering into first place where he remained until Silverton. His convincing win appeared to give him a lock on the King of the Mountain. Because of a substantial lead over the nearest off-road racers, only a flat or mechanical failure could push him back. Indeed, Ned's fiercest competition for the overall win came out of the roadies' ranks, not the mountain bikers. The long road race gave the roadies too great a time advantage for the off-road racers to make up on the dirt. Six out of the top ten King of the Mountain finishers were road racers while the mountain bike race saw the first six places and eight of the first ten places won by off-road racers with Ned again winning decisively. Steve Cook's fifth place in the King of the Mountain after placing fourth in the mountain bike race was the off-road racers' highest overall placing with George Theobald's eighth and Joe Murray's tenth

the only other top ten finishes.

The mountain bike race was on a new course for '86, in a luxury subdivision northeast of Durango. Unlike so many courses, this one was almost entirely a single-track (but with ample room to pass) that wound through the development's woods and meadows. Climbing was minimal and speeds high. Technical difficulties were limited to the single-track itself and one abrupt ditch crossing that ate at least half a dozen expensive frames. There was also one extremely steep but short hill that, according to reports, forced every racer but Joe Murray off their bikes. How he was able to pedal up that one hill no one was able to discover, particularly considering the high gears he pushes. If the course had a drawback, it was the dust kicked up by the competitors but once the first lap was completed and the field strung out, the dust quickly subsided.

Ned grabbed the lead immediately and continued pressing hard throughout the race. He put the hammer down and let everyone know they were going to have to keep up and hope he flatted if they had any dreams of winning. Only Fisher's George Theobald was able to stay at all near him, eventually finishing fifty-six seconds behind (some seventeen minutes back in combined time). Joe Murray came in third, just under four minutes back while Team Ritchey's Steve Cook finished with an impressive fourth, seven minutes off the pace. The Ross Team, off to an excellent start this year, saw Mike Jordan and Joe Sloop finish fifth and sixth respectively.

Another first in '86 was a Queen of the Mountain prize, a surprising development considering the small number of women who race off-road compared to on-road. Unfortunately, no mountain biking women were in contention for the overall prize. The women's mountain bike race winner, Schwinn sponsored Mary Lee Atkins, didn't compete in the road event so the Queen of the Mountain turned into a parade of road racers with Pat Engberg combining a third in the mountain bike race (just over two minutes off the winning pace) with an impressive six minute and 45 second lead in the road race to clinch the win over second place Queen of the Mountain finisher, Tamiko Warden.

If the lack of mountain biking women competing for the combined prize was disappointing, that was amply off-set by the prize's very existence. Hopefully this first meeting of the two disciplines will lead to more of the same in the future. The race also brought out a pretty basic difference between the off-road women versus the road racers: the roadies'

competitiveness was fierce while the off-road racers were dramatically more laid back and relaxed. Anytime a road racer came up on a slower racer, they attacked like piranhas on a limping cow, yelling at their victim to get off the track and generally behaving in a distinctly rude manner. The mountain biking women approached the same situation with a polite request for room to pass followed up by a thank you and a word of encouragement. Hopefully, the road racers learned a lesson from their off-road brethren.

From both a competitor's and spectator's point of view, the race was superb. The course was fast, challenging, and fun with enough variety to make it interesting without handing downhillers, climbers, or technicians any particular advantage. The altitude was also low enough that non-Colorado racers weren't overly affected by it. Spectators were able to easily move about the course to watch the tremendous range of skills these riders displayed. The favorite viewing area was the ditch crossing where so many riders took spectacular spills with often disastrous results as far as their bikes were concerned. Temperatures were hot but because so much of the course wound through a lodgepole pine forest, it wasn't as hot as it could have been. Plus race organizers had an efficient watering station manned by volunteers.

All in all, the entire weekend of racing once more displayed the Durango cyclists' superb organizational skills including another fine pasta feed put on by Pronto's,

one of Durango's many excellent eateries. Maintaining a high carb diet in Durango is easy, some say too easy. Days start off with croissants and rolls from the Stonehouse Bakery with maybe sandwiches to go for lunch during a long ride then end with dinner in any of the variety of restaurants, from Mexican to Italian to seafood and steaks, you name it. Expect to be spoiled by the time you go home. In fact, the hospitality extended to the racers by the Durango community was enough to convince any who attended to schedule the race into next year's calendar. And with Schwinn's apparent long time commitment to sponsoring this weekend of racing, there's no doubt that it will get better and better as time goes on, with more and more roadies and off-road racers cycling onto the other's turf.

What did the King of the Mountain category prove as far as the relative merits of roadies vs mountain bikers. Number one: that they all had a good time, the roadies off-road and the off-road racers on-road. Second: that they're all excellent athletes and bike racers no matter how fat or skinny the tires they ride may be. Third: that any top racer is going to be hard to beat on his or her own turf no matter how great the competitors' success was in another field. Fourth: that a properly staged mountain bike race is far more exciting than a road race. Fifth, that the Iron Horse Classic is indeed a classic, one that justly grows in stature every year. And last, that Ned Overend is one hell of an athlete.

circle number 27 on reader service card

American Handbuilt

FAT CITY CYCLES

P.O. Box 218
Somerville, MA 02143
617-425-4922

Info Pack and
Dealer Listing
on request.

- Adventure
- Performance
- and
- Comfort
- On & Off Road



FAT CHANGE

ENGINEERED TO TAKE THE PATH OF GREATEST RESISTANCE.



S I E R R A

It takes a uniquely ambitious individual to take the path of greatest resistance. For those who qualify, the Schwinn All Terrain Sierra is sure to become a necessity. The Sierra is a maximum performance machine of outstanding durability. It's made of 4130 Double-Butted Chrome-Moly, the strong, lightweight



RIDE WITH THE TREND
SCHWINN

material of racing bikes. It's equipped with a light action derailleur, and cantilever brakes by Shimano. And not to be overlooked, it's designed by Schwinn—a company with a uniquely ambitious dedication to unqualified excellence in engineering. Test ride a Sierra at your Authorized Schwinn Dealer.

FOR COMPLETE DETAILS, SEND
FOR THE 1984 ATX CATALOG
SCHWINN BICYCLE CO.
396 N. KOSTNER AVE.
CHICAGO, ILLINOIS DEPT. 32