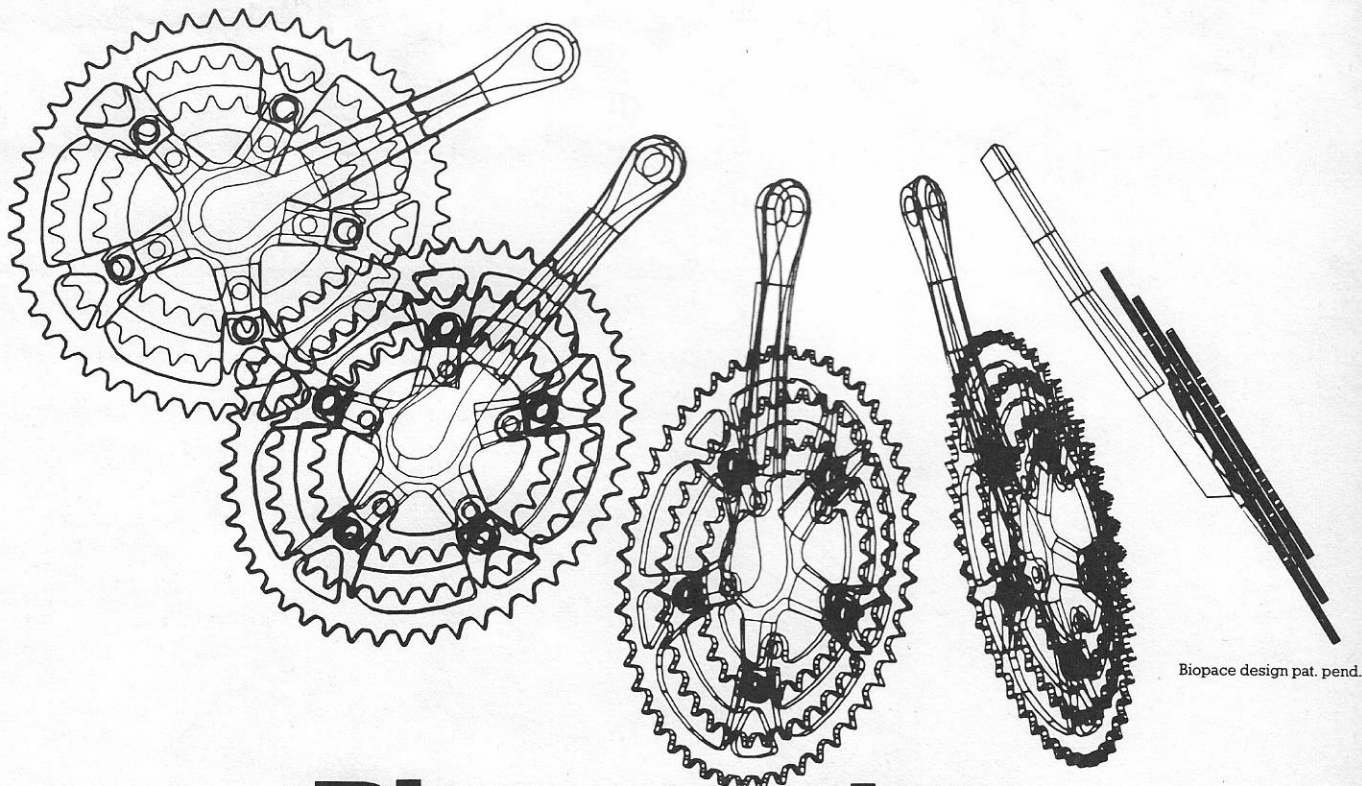


Fat Tire Flyer



MAY/JUNE • VOLUME 3, NO. 3 • \$2.00



Biopace wins the uphill battle.

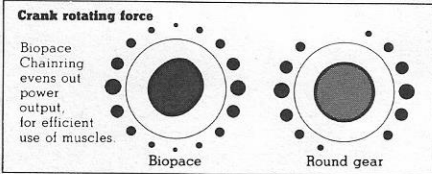
CLIMBING IS EASIER WITH THE COMPUTER-DESIGNED CHAINRING.

If you want proof positive of the superior efficiency of Biopace chainrings, then riding is believing.

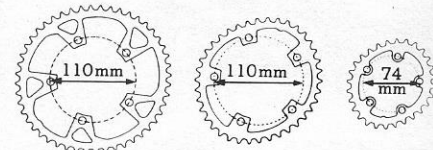
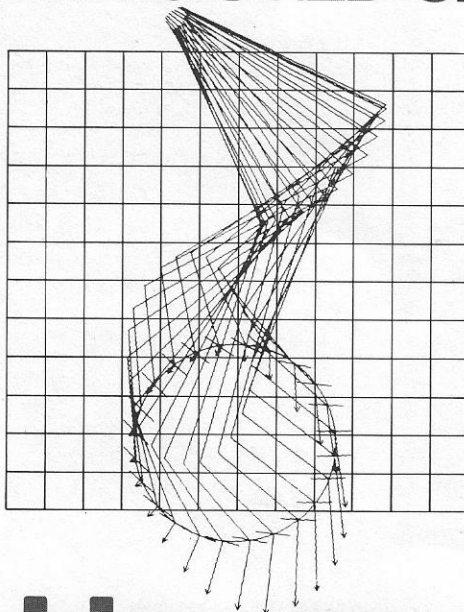
The difference is immediately obvious, but nowhere is it more apparent than in climbing.

Biopace gets the most power from your pedalling muscles because its unique shape was biomechanically engineered to reduce wasted motion.

While conventional round chainrings produce little power at full leg extension, the Biopace shape regulates crank rotating speed to "fill the gaps."



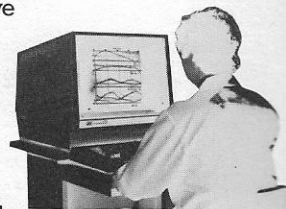
The Biopace design creates a natural application of power, allowing the leg to extend quickly and rhythmically, to reduce body sway and pedal pressure.



Biopace is available in 110/74mm bolt circle diameter triple ring sets.

With Biopace your climbing efficiency is maximized, for faster ascents most likely in higher gears.

Lighter, more rhythmic pedalling is just one of the five extraordinary features found only in the Biopace design.



For the whole story, please write to Shimano for a free Biopace Technical Booklet.

But better still, get in gear with Biopace and aim for the summit. You'll prove it for yourself.

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EDITOR/PUBLISHER

Denise Caramagno

CONTRIBUTING EDITORS

Charles Kelly
Glenn Odell

ART DIRECTION

David & Pamela Ross

GRAPHICS

Imagine That Studio
Larkspur, California
(415) 927-0996

PHOTO EDITORS

Wende Cragg
Dave Epperson

PHOTOGRAPHERS

Wende Cragg
David Favello
Tom Meyer
Mark Miller
E. Utterback

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Sonoma, California

COVER PHOTO

Rock Hopper promoter
TOM HILLARD at Annadel State
Park balancing his responsibilities.
Photo by Mark Miller.



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Editorial

The turnout of over 350 riders for the Rockhopper race held in Santa Rosa, California recently should serve as ample notice that Fat Tires have arrived in force. There are several other observations that we'd like to make regarding this major turnout.

First, it seems that the people involved in Fat Tire riding are, on a percentage basis, much more willing to engage in competition. Even though Northern California is a strong area for Fat Tires, the road cyclists still outnumber the Fat cyclists by a considerable margin, yet there are not many road races that draw fields of over 300. Perhaps the reason for this is that riding an off-road course is fun even if the rider doesn't feel that he is in the running. For once, the rider is free to come storming down a rough road, as fast as he or she wants, without surprising anyone.

By competing several times on the same course and comparing times, the rider can tell whether there is any improvement. Off-road racing doesn't depend on the exacting strategy required for road racing, and it's fun even for people who have never raced. In other words, no experience is necessary.

On the other hand, this large field must be controlled if everyone is to get an equal and fair chance. Regular readers will have noticed that we announced in our last issue the information of a national association of off-road racers (NORBA), and with this kind of interest, it is increasingly obvious that an organization is necessary.

We recommend that starts to be grouped by class and staggered so each group starts separately. This will mean that an expert who has paid a fee to race other experts will not be trapped behind riders of lesser ability, a situation that can lead to bad feelings. Times can then be adjusted to reflect each rider's true time on the course.

With the large number of participants now turning out race organizers should prepare accordingly, so each rider has fun and a fair chance in the competition.



Wende Cragg

NOTICE

from the Fat Tire Flyer

To any and all Fat, Creative people! In order to provide a complete, well-rounded, and objective publication, we need your help.

Photographers, writers or just plain readers/riders, we need your stuff.

Unsolicited manuscripts are always welcome as are letters or comments. Photographs should be black and white.

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Fat Feedback

Dear Editors;

I am 25 years old and never was athletic, but ever since I traded my old Motobecane in on a Schwinn King Sting I have had a renewed interest in bicycling. Particularly fun are the off-road odysseys. Even though my boyfriend manages a Schwinn shop, I never was comfortable on a "regular" ten-speed. I'm a "born-again" cyclist. The versatility of these fat tire bikes is incredible! We would like to know of more areas to ride and other details...

Thank you, and happy trails!

Carolyn Conegan
Cupertino, CA

Ed: Our sentiments exactly!

Dear FTF;

I am enclosing a check for a one-year subscription to your magazine. I am really interested in the new mountain bikes coming on the market, and would like the best source of information available. I've always been interested in riding off-road but my expensive narrow-tired road bike just wasn't appropriate. Now it seems as if the mountain bike might be the answer to every cyclist's problem. Commuters, tourists and off-roaders now have the perfect bike for their needs, and the racer can ride a mountain bike in the winter months to stay in shape for summer riding. Here's to Fat Tires!

Jason Cloutier
Pawtucket, RI

Howdy Fatheads;

I like your new format almost as much as my Stumpjumper. You guys (sorry Denise, Pamela, etc.)... you folks even have ads.

I need to modify parts of my viewpoint expressed in my last letter to

be somewhat less sexist. The ladies seem to be appearing on Fat Tires, and I'm all for it. It just took a while for me to tell (they were all covered with mud) it was a girl that blew my doors off goin' up the wall. Oh, well.

Latest flash on the tech scene is get rid of that greasy kid stuff on the chain. Wash your brand new sedisport with solvent. Then soak it in hot paraffin for five minutes, stirring occasionally. (Use a double boiler--paraffin fires are nasty.) Remove the chain and let it cool. After breaking each and every link loose you will have a chain that stays lubed a ridiculously long time without attracting crud.

Tired of having a ratcheting headset after only a couple of sets of stairs? Try Galli's tapered roller bearing headset. It ain't cheap, but it's TOUGH. Stronglight is marketing a new "needle bearing headset" at a considerably better price, hope to hold one soon.

Don't let your mud slide.

Rob Glover
Huntsville, Alabama

Greetings Fellow Fliers:

Loved the Jan/Feb issue. Fat Tire bikes are scarce here in Wisconsin's Kettle Moraine area. This gives me plenty of room to romp on frightening foot trails and slide around in the snow.

I'm sure you Fat Fellows in California and Colorado scoff at what humble Wisconsin has to offer, but I still enjoy this area even if the locals find me eccentric and my bike foolish. Nuts to everybody! I'm going Fat Tire riding.

Charles Osthelder
Plymouth, WI

Ed: Our sentiments exactly!

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BAD PRINTING?

It has come to our attention that a few copies of the last issue got past our rigid quality control with some blank pages. If you are one of the unfortunate recipients, send it back and we'll replace it, and we'll even refund your postage.

SHOWDOWN!

SUNTOUR AND SHIMANO PRODUCT REVIEW

by Glenn Odell

Fat Tire enthusiasts rejoice! New products designed with you in mind are now being produced by SHIMANO and SUNTOUR. Slick new designs in derailleurs, shifters, brake-sets and hubs in the SUNTOUR MOUNTECH and SHIMANO DEORE XT groups should be waiting for you at your favorite supplier by the time you read this.

The following data have been compiled to assist you in evaluating which products suit your needs best.

In order to have a relevant evaluation by press time our testing was limited to the DEORE XT and MOUNTECH derailleurs and shifters. Next issue we will move on to brakesets and hubs.

Our goal in testing was to determine shifting performance in the field under moderately tough conditions. This was accomplished by equipping two identical BRUIZER framesets (vintage 1981--no longer in production) with MOUNTECH and DEORE XT components.

Specifications of drive train:

	MOUNTECH MODEL	DEORE XT MODEL
Chainstay	18-1/2"	18-1/2"
Crankset	Stronglight 99 46x40x28	Stronglight 99 46x40x28
Bottom bracket	Voris Dixon sealed	Voris Dixon sealed
Freewheel body	Winner series	600 Series
Freewheel cogs	13-15-17-20-24-28	13-15-17-20-24-28
Chain	Ultra-6	Uniglide
Cable guides	Campagnolo	Campagnolo

Before the shift under load test was conducted a shake down ride was taken over a variety of terrain and both bikes performed smoothly. The concensus was that the Shimano bike was the smoother shifting of the two, however, this was attributed to the freewheel/chain combination rather than the derailleur performance.

MOUNTECH REAR DERAILLEUR

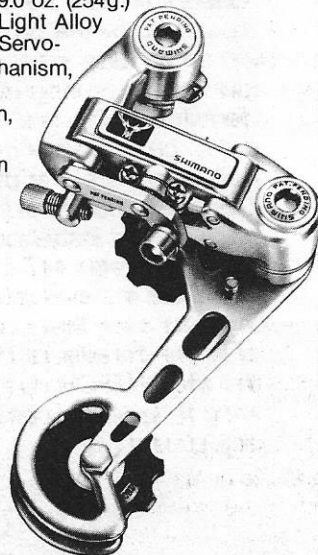
Model: RD-4900
 Specifications
 Material: Light Alloy (Body)
 Steel (Cage) with Search Light Finish
 Total Gear Capacity: 34T (In Case of Below 14T)
 Rear Largest Sprocket:
 Below 34T (With Superbe Rear End)
 Mechanism:
 Parallelogram
 Non-Bending
 Easy Cable Threading
 Pulley Self Positioning
 Quick Cage
 Top Normal
 Weight: 277 g (Without Bracket)



DEORE XT Rear Derailleur

Model RD-M700

SPECIFICATIONS
 Capacity • Front Difference/22 Teeth or Less
 Rear Largest Sprocket/34 Teeth or Less (W/Bracket)
 Total of Front & Rear Sprocket Difference/40 Teeth or Less
 Weight • 9.0 oz. (254g.)
 Material • Light Alloy
 Features • Servo-Panta Mechanism, Centeron Mechanism, Sealed Mechanism



MOUNTECH FRONT DERAILLEUR

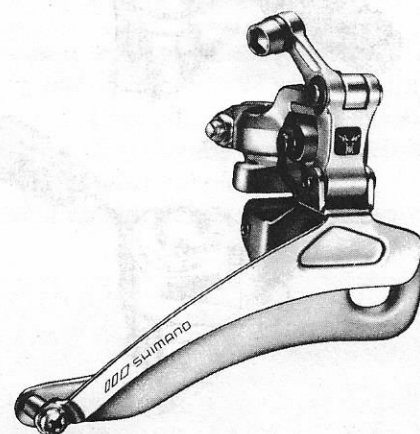
Model: FD-2700
 Specifications
 Material: Light Alloy (Body, Outer Cage)
 Steel (Inner Cage) with Search Light Finish
 Gear Capacity: Below 26T
 Mechanism: Parallelogram
 Two-Way Cable Setting
 Tail Dodge Guard
 Super Wide Range
 Low Normal
 Clamp Diameter: 28.6 mm (1-1/8")
 Minimum Difference of Sprockets: 6T
 Weight: 100 g



DEORE XT Front Derailleur

Model FD-M700

SPECIFICATIONS
 Capacity • 22 Teeth or Less (Top & Middle Sprocket Difference/8 Teeth or More)
 Weight • 4.3 oz. (120g.)
 Material • Body/Light Alloy, Right Link/Forged Light Alloy, Chain Guide/Steel: C.P. Finish
 Type • Lower Inlet Type 1-1/8" Trap-Ease Mechanism, Sealed Mechanism



NEW POWER THUMB SHIFTER

Model: LD-2800

Specifications

Material: Light Alloy (Lever)
Stainless Steel (Clamp)

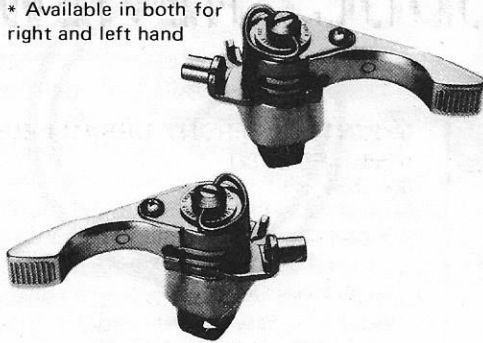
Mechanism: Power Lever with Ratchet

Clamp Diameter: 22.2 mm (7/8")

Mounting Position: Handle Bar

Weight: 155 g (Pair)

* Available in both for
right and left hand



DEORE XT Finger Shifter

Model **SL-M700FF**

(Front/Friction Type)

SL-M700RC

(Rear/Centeron Type)

SL-M700RF

(Rear/Friction Type)

SPECIFICATIONS

Weight • 7.5 oz. (212g.) Pair

Material • Light Alloy

Type • Front/Friction Type (SL-M700FF)
Rear/Centeron Type (SL-M700RC)
Rear/Friction Type (SL-M700RF)

Attachment Position • Handle Bar

Lever Clamp Diameter • 7/8" (22.2mm.)

Features • Uni-Shift Mechanism (One-Way
Clutch),
Centeron Mechanism
(SL-M700RC),
Sealed Mechanism, Smooth
Shifting with Ratchet

Use • Model SL-M700RC/Rear Derailleur
with Centeron Mechanism



REAR DERAILLEUR PERFORMANCE:

Three riders (Ira Hughes, Rick Hosier, Shawn Kirby) spent a full day riding both bikes up a 10 degree incline as close to 60 rpm as possible in the 28 x 17 position, making a shift at a predetermined point.

The result of each shift by each rider was given a value of 1-4 according to the cleanness of the shift. The low number of flawless shifts was an indication that the incline we chose was at the outer limits of practical shifting. Both systems functioned superbly on average terrain and continued to deliver acceptable results when the going got tough.

Since we see no clear trend in quality or performance, your choice will likely be determined by economics, weight, and aesthetics. I like the cage design, cable thread feature, and the overall appearance of the MOUNTECH, however with costs being equal I would choose the DEORE XT due to its larger total gear capacity and lighter weight. (Editor's Note: MOUNTECH with 40T capacity will be available in early summer.)

FRONT DERAILLEUR PERFORMANCE:

As with the results of the rear derailleur test, this test, performed in the same manner, showed no appreciable difference in performance. We found that the change from the 46T to the 40T could be accomplished with reasonable dependability, but the 40T to 28T was much less dependable. The fact that both derailleurs are low normal type was thought to be the problem since shifting under load is not a strong point of low normal (spring down/power up) derailleurs. The real problem turned out to be the tail of the cage being pulled into the rear derailleur cable. This could not be adjusted out and required the installation of 52T outer chainrings and 44T middle rings to complete the evaluation. If my gearing was such that I could use one of these derailleurs I would opt for the MOUNTECH due to the lighter weight, larger capacity and ease of adjustment.

THUMB-SHIFTER PERFORMANCE:

Comparing a SHIMANO FINGER SHIFTER and SUNTOUR THUMB-SHIFTER side by side on the work bench the SHIMANO appears half again as large as the SUNTOUR although it is only one ounce heavier and the lever arm is only 3/8" longer than the SUNTOUR. They also sound the same when the lever is operated. I noticed that the DEORE XT literature stated that the front shifter was a one-way clutch mechanism (friction type) while the rear was a ratchet mechanism. Upon disassembly of both units I found them to be identical in every way except that the spring in the front shifter anchors in a narrow slot while the rear anchors in a wide slot to give it the CENTERON feature. The ratchet sound comes from a spring loaded plastic "finger" contacting grooves cast in the bottom of the lever arm. I don't want to cause any friction; it works very well, it's just not my idea of a ratchet.

The new lever arm on the SUNTOUR POWER SHIFTER is well designed and has a comfortable feel. The ratchet mechanism is the same one as previous editions and is mounted on a base that provides three different angles to best orient the lever to suit your system.

The DEORE XT FINGERSHIFTER has visually pleasing lines and a slight mechanical advantage, but I feel that the SUNTOUR is a better value considering the price, its proven mechanism, and its lighter weight.

According to wholesale prices currently available, retail prices on the products tested should range as follows:

	SUNTOUR	SHIMANO
Front		
derailleur	\$8.50-10.95	\$10.50-11.95
Rear		
derailleur	\$17.50-17.95	\$18.95-21.95
Shifter pair	\$16.95-17.50	\$26.50-26.95

(Special thanks to Ira's Bike Shop, Arroyo Grande, CA, and the Central Coast Mountain Maniacs.)

PRODUCT RELEASES

AMBROSIO RIMS

These 26 x 1.75 alloy rims from Italy are three to four ounces lighter than the Japanese rims found on most Fat Tire bikes. They are not box-section, but they feature a patented heat treating process similar to that used on road racing rims ("Durex"™). Ambrosio rims require some unusual spoke lengths, approximately 266mm for three-cross or 274mm for four-cross.

SUP'AIR LATEX TUBES

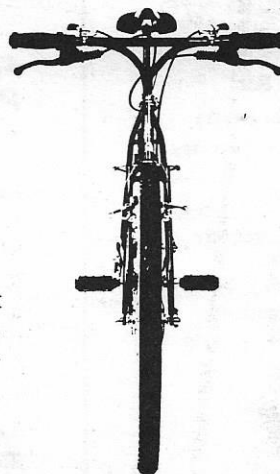
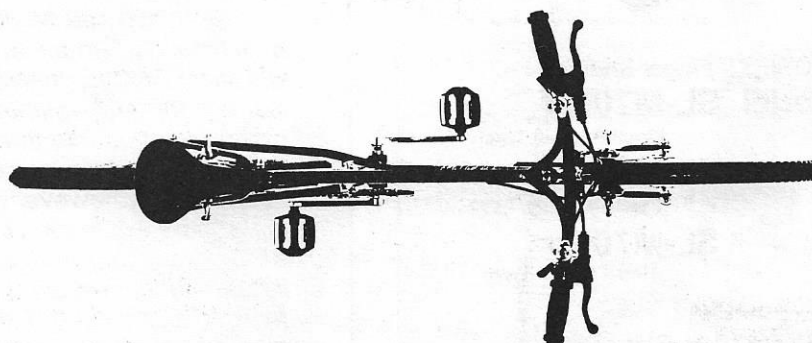
These latex inner tubes are the lightest available for off-road bikes. The current version is designed for a 1.75 tire, and we have reports that they don't work well when used in a 2.125. The manufacturer has stated that a larger version will be out soon.

How light is light? For comparison:
 SUP'AIR 26 x 1.7585g.
 SPECIALIZED "SUPERLIGHT" .161g.
 SPECIALIZED presta valve206g.
 26 x 1.75 regular tube223g.

SHIMANO BIOPACE SYSTEM

The BIOPACE system consists of chainrings that are computer designed to extract maximum efficiency from the cyclist's stroke. Shimano is quick to point out that this is not an "elliptical" gear of the type that enjoyed brief attention about ten years ago. The Biopace has one short and two long axes carefully positioned in respect to the crank arm, and is said to increase climbing efficiency.

See the SHIMANO Bio-Pace ad on the inside front cover for more details.



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T

by Tim Gotwals

Here in New England a growing sect of cyclists who enjoy watching their bottom brackets sink from sight in a pool of muck, people who don't mind getting sideways around a switchback. All over the Northeast riders are cruising on Fat Tires and leaving their Guercottis to collect dust.

Here in New Hampshire we have superb cycling terrain around the Lakes Region and further north in the White Mountain National Forest. One can cruise down beautiful, winding dirt roads lined with white birches and sugar maples, look for adventurous trail link-ups (if one doesn't mind shouldering the bike occasionally) or find a nasty hillclimb with an equally nasty descent.

Explorations of old railroad beds, logging roads and hiking trails have pushed our physical limitations close to the brink of absurdity. We've ridden the Squam Range, which has spectacular views of bigger mountains to the north and looks directly down "On Golden Pond." Mt. Cardigan provides strenuous hill-climbing through beautiful woodlands and ends with a half-mile of exposed granite slabs. And of course there's the classic "Wilderness Trail" through Zealand Notch and past Zealand Falls for a full day of excellent trail riding.

The evolution of this movement involved the usual bent and damaged human bodies, and being stubborn Yankees, the local riders were at first unwilling to accept the new fat-tire Hot Rods with which a few of us were terrorizing the neighborhood.

A few seasons passed, along with changes in frame and component selection and, in turn, changes in local attitudes, assisted by the perseverance of a determined bunch of "Mud People." It all started during a sloppy "Mud Season," that short spell of balmy weather between winter and spring. The temperatures climb, the snow level drops, and signs are posted: "Road Closed for Mud." Ah, the realm of the Dirty Dawg.

Since those days our activities have gained acceptance and even respect, as manufacturers supply us with new and better equipment and as we explore new areas. The tide turned last summer, when a local Veteran road ace bought a renovated Schwinn with Fat Tire commuting in mind.

New England Report

Lately we've gotten into "trials" riding--trying to get through a set of obstacles without putting a foot down. After numerous attempts on certain "problems," we started to approach this activity much as a rock climber might. In that light, we apply gradings to levels of difficulty: B-1, B-2 and B-3 (for Bike-1, etc.). B-1 indicates any obstacle(s) that could impede progress, B-2 indicates a difficult problem requiring advanced techniques and/or luck. B-3 indicates a section that's been done once, by one person, and if he or she repeats it, problem is downgraded to B-2. At night, over beers you might hear, "The Chute? Yeah, it's B-2, but 60 degrees and loose." If you couldn't decode it right away, don't feel bad ... have you ever listened to climbers? Other expressions of lunacy include traveling downriver, in the river, with the bike

submerged, riding atop three feet of hard-crusting snow, and cornice jumping in nearby sandpits.

To my knowledge, only one competitive event has been held, a short-course time-trial outside Boston. However, the annual USCF Mount Washington hillclimb, which gains 4700 feet in eight miles, saw half a dozen Fat Tire bikes join the ranks of the "roadies." The fastest of these posted a time of 1:20:21, good enough for 10th place, Category III. That turned some heads, as did the descent, with times of 17 minutes causing a bit of ruckus among the officials. Next season is expected to produce more racing, and I'll keep you posted as things develop.

Now I believe only one question remains unanswered, "What will happen when MudPup meets the Dirty Dawg?"



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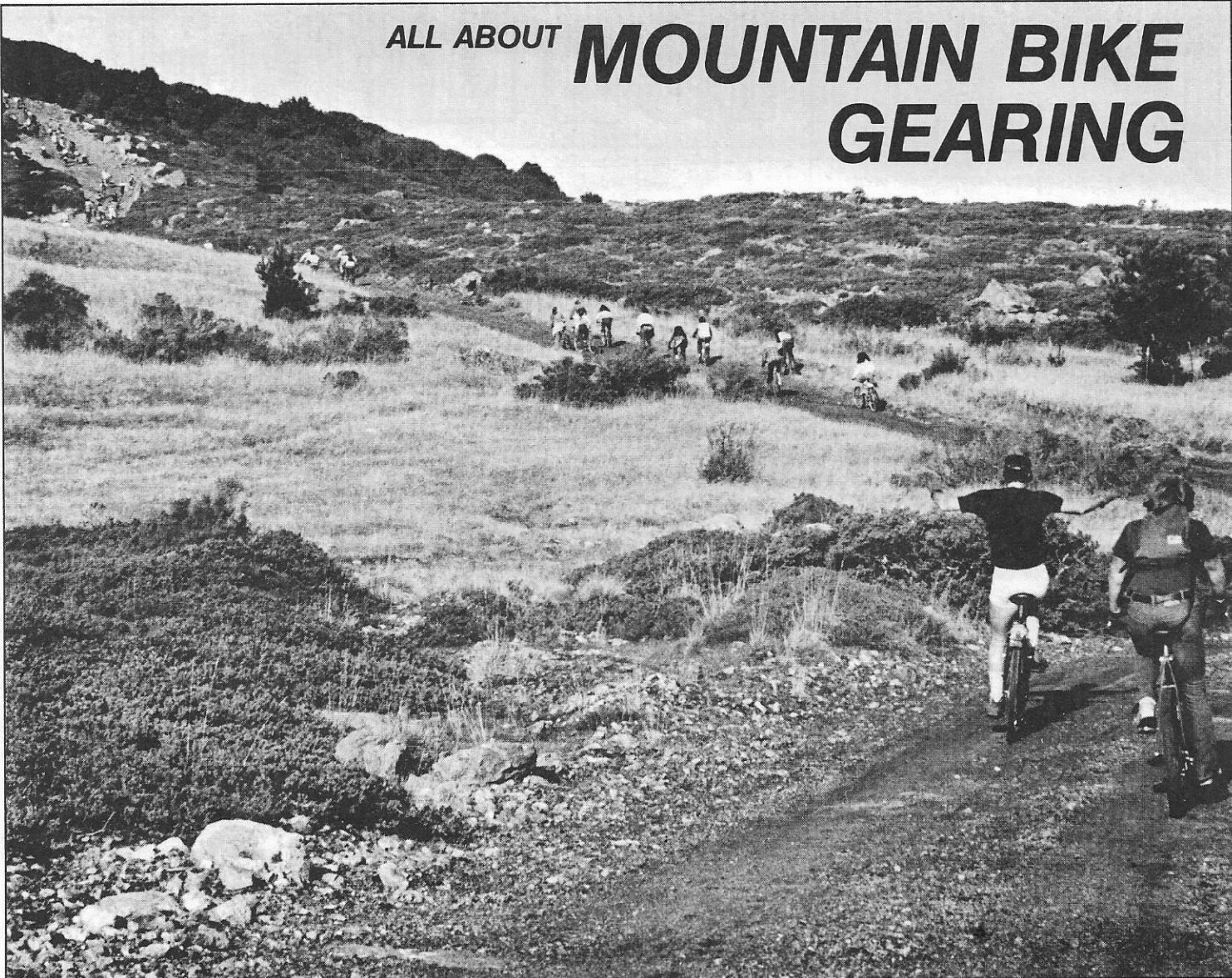


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ALL ABOUT MOUNTAIN BIKE GEARING



PART II - IRON MONGERY

by Frank Berto

Freewheel and Chain Selection

Shimano and SunTour are the freewheels of choice. No one else makes a 34 or 32-tooth large sprocket. Wheels with Shimano Freehubs hold up best if you stick with the five-cog 120 mm or the six-cog 126 mm models.

The next choice is six-cog versus six-cog narrow spacing versus five-cog. I don't have a strong position on this. I lean toward five-cog, 120 mm, over-locknut hubs. This minimizes wheel dish, and it uses a short strong rear axle. If the bike sees a lot of street mileage, the six-cog freewheel will reduce the steps between gears.

The Shimano Uniglide is my favorite chain. You can't use it with narrow freewheel spacing. The Sedisport and the DID Lanier both work with narrow or wide-spaced freewheels. They have also built up a good track record.

Cranksets

The Sugino Aero Tour is everything a mountain triple should be, including:

- 24-tooth minimum inner chainwheel
- 34-tooth minimum middle and outer chainwheels
- crank lengths from 165 mm to 185 mm

- close spacing between the middle and outer chainwheels, so the chain can't ride on top of the middle chainwheel
- a wide gap between the outer chainwheel and the crank arm so you can use today's wide cage front derailleurs.

The Aero Tour has been such a success that Takagi and Sakae have produced almost exact copies.

The T.A. Cyclotouriste has been the most popular mountain crankset. It has good news and bad news. It uses a 26-tooth minimum chainwheel. It has the widest range of chainwheel sizes and crank lengths of any crankset, and it's been around for ages so parts and chain-

wheels are widely available.

The bad news is that the TA crank arm is so close to the outer chainwheel that you have to use old-style narrow-cage derailleurs. The antique TA system is flexible and marginal for strong pedallers.

The Stronglight 99, Sakae 5ATG, and Shimano Deore are 28-tooth minimum touring triples rather than real born-again mountain cranksets.

The smallest middle chainwheel for the Deore is 39-tooth. Only Shimano's Deore pedals fit the DD special 1-inch thread.

Stronglight has widened the gap between the crank and the chainwheel on current 99 production, so you can use anyone's front derailleur. The spacing between the outer and middle chainrings of the Stronglight 99 and the similar Sakae 5ATG is a bit wide. This is more of a problem with Half-Step gearing than with typical mountain bike gearing.

If you wear Gucci cycling shoes and like to flaunt your bankroll, Jim Merz of SBI or Gary Klein will drill and tap a Campagnolo double for a 24-tooth inner chainwheel. The finished product then has the same problems as the Avocet. The 41 or 42 tooth middle chainwheel is too big for mountain service and the crank-to-chainwheel gap is on the skimpy side.

Rear Derailleurs

The three new SunTour "Tech" rear derailleurs (Superbe Tech, Mountech, and AG Tech) plus the Huret Eco Duopar are the standout rear derailleurs. They shift predictably and reliably over 14-34 freewheels and under load.

The wide-range SunTour GT rear derailleurs and the new Shimano Deore XT are a step down in shifting precision. The Deore XT includes Shimano's self-centering action.

If you insist on driving pitons with a rear derailleur, the steel Sun Tours are probably the most rugged.

Front Derailleurs

Front derailleurs fall into two categories: modern Japanese derailleurs and old-fashioned European

derailleurs. The modern derailleurs have a curved contour on the inner cage and the cage is wider at the back. The curved cage persuades rather than cudgels the chain to shift up from the small chainwheels. The wide cage lets you shift at the back without fine-tuning the front.

Within these categories, there are rigid derailleurs and flexible derailleurs. Flexibility is a demerit. If the cage bends on upshifts, then the chain wedges between the cage and the chainwheel and you can't shift under load.

The above comments apply equally to mountain bikes and wide range touring bikes. The demands are the same. In fact, the tourist makes more shifts on the front derailleur.

The SunTour Mountech and AG Tech, and the Shimano DuraAce EX (not AX), 600 EX and Deore XT are my favorite mountain derailleurs. All of these derailleurs need a wide gap between the crank and the chainwheel.

If you don't have a wide-gap crankset, then you need a narrow-cage derailleur. The Simplex SLJA-523 and its siblings are the best of these. The Campagnolo Record is rigid, but it is limited to a chainwheel difference of about 18 teeth. The Huret Duopar and Success front derailleurs have lots of capacity but they are on the flexible side.

Shift Levers

Ratchet-style, handlebar-mounted shift levers let you shift gears with your thumbs with both hands on the handlebars. SunTour's Mighty Shifter was the only model available until 1983.

In fact, you could count mountain bike sales by counting Mighty Shifter sales and dividing by two.

Now, SunTour has come up with a sexy new Power Thumb Shifter and Shimano has developed the near-identical Deore XT. At the New York show, Huret showed their new ratchet thumb shifter.

The last item is the Ultimate Gear Chart, covering freewheels from 11 to 38 teeth and chainwheels from 24 to 60 teeth.

Gears to You

Math Tech

For those of you who are unfamiliar with the method for comparing bicycle gearing, here is a brief explanation of the sort that appears in mainstream bicycling publications about once a year.

Gears are given in "inches," and the natural tendency is to assume that the gear reflects the number of inches the wheel will roll from one pedal stroke. This is not the case. Gearing "inches" are handed down from the days of the "penny-farthing" bicycle, which had one large wheel connected directly to the pedals. The stronger a rider, the larger a wheel he could turn, effectively a higher gear, and the faster he could go. (The fastest riders, who could turn the largest wheels, became "Big Wheels" in their clubs.)

The gearing chart defines the size of an imaginary front wheel with a fixed gear that duplicates the gear of the modern or "safety" bicycle, whose gearing is defined by the ratio of the front to the rear sprockets. In other words, if you are riding in a 100" gear, each turn of the pedals takes you the same distance as one turn of a wheel with a diameter of 100". (This distance will be 100" x pi.)

If all that is too much for you, here is the formula used to calculate gear inches, and you can work them out for yourself. Inches (I) equals front sprocket teeth (F) divided by rear sprocket teeth (R) times outside diameter of the wheel (W). In algebra, $I = W(F/R)$.

If any readers would like a copy of Frank Berto's off-road gear chart, send 25 cents and that Self-Addressed Stamped Envelope (S.A.S.E.) to the Flyer, and we'll rush one out.

Tech Tips by SeeKay



David Favello

In a recent off-road race we were amused, as much as one can be amused while putting out maximum effort, by the sight of a fellow competitor carrying his bike on a trail section. His technique was terrible, but at that moment we had neither the time nor the inclination to correct him, since we only wanted to get past him. Now it can be told, however, so here are some tips on carrying the bike.

In competition it is essential for the rider not to waste time or energy on carrying his machine, and although the casual rider doesn't need maximum efficiency, it doesn't hurt to know how racers do it. There are three elements to carrying, picking up the bike, carrying it, and remounting.

The expert rider will pick up his bike without losing his momentum; the idea is to transfer your forward speed from the riding mode to the running or jumping mode without having to stop and restart. As you approach the obstacle, swing your leg over the bike and coast the last few yards while standing on the left pedal. Swing your right leg between the bike and your left leg; you will take your first step with the right foot, and if you put it down behind your left leg, you will only trip. Reach down and grasp the down tube with your right hand, while braking with the left. At the last possible moment step down with your right foot, and as soon as you make contact, pick up the bike and swing it onto your shoulder. If you timed it right you will now be running at the same speed you were riding.

The actual carry is done by placing the top tube on your right shoulder and holding either the bars or the stem in your right hand. This gives you firm control of the bike, but leaves a hand free for grab-

bing roots or branches or scrambling up a bank. The bike is lined up with the direction of travel, which means that it won't hang up on narrow passages and it is in a good position for a remount.

Sometimes it won't be necessary to shoulder the bike, for example when the obstacle is a log or a ditch that only needs to be jumped. In these cases your foot plant is important, because your momentum will provide most of the spring for your jump. Lift the bike only high enough to clear the obstacle.

When it comes time to remount, grab the left grip before putting down the bike. As you set the bike down, grab the other grip and look down for the left pedal; if you've done everything right it will still be in the lower position, ready to step on and ride.

BRAKE STUFF

Here's a tip that might save you a few gouges on the leg. Mafac cantilever brakes have a crossover cable that links the two arms; one end is loose so the brake can be opened up to remove the wheel, and the other end is clamped by a bolt. The clamped end of the cable is on the left side of the bike on the rear brake, and since most people push their bikes from the left side, a frayed cable end can put the mark of Zorro on your right thigh. Either solder the cable end or put on one of those cute little aluminum caps, and save yourself a little self-surgery. Also, by keeping the cable from fraying you prolong its life.

Sometime in the dim past, somewhere in the wild reaches of Southern California, a Fat Tire rider broke the little hanger that pulls the crossover cable of his cantilever brake. The crossover cable dropped onto the knobby tire, caught on one of the

knobs, and stopped the bike even quicker than anyone ever thought a brake could, to the owner's obvious consternation and possibly other injuries.

Since that incident an anonymous L.A. inventive person devised a simple method to keep this from ever happening again. A small cable is tied to the crossover cable and the other end is tied to the cable stop hung from the handlebar, with a little slack so the brake can operate freely. Then, if the brake cable breaks or the hook gives up, the crossover can't drop onto the tire.

BEARINGS: SEALED OR NOT?

There has been so much misinformation floating around concerning "sealed" bearings, that the time has come for us to clear the air.

For starters, there is nothing in the bicycle world that is a truly "sealed" bearing. What there are a lot of is cartridge bearings with dust or dirt shields. Most salespeople will refer to all of this type of bearing as sealed bearing, if only because that is all the customer can understand or wants to hear, but don't get the impression that these bearings can be dunked continually with no damage. If you put them in water, they will soak some up. Period. Depending on how good the dust seal is, some will soak it up faster than others, but eventually it will get through, especially if the shaft is turning in the bearing.

Now, you ask, what is the advantage to these things, anyway. Well, there are a few. For one thing, they still hold out water better than most loose-ball systems. But more important, a cartridge bearing usually doesn't fail abruptly. It will continue to operate even after it is totally shot, and although it might complain and rattle, it can get you home. A loose-ball can suffer from the collapse of a bearing and lock up, or the bearings can drop out when something works loose.

Working on cartridge bearings is either easy or hard, depending on the product. Usually all you need to do is pull out the old one and replace it, assuming you can find the right size to do so. It's a good idea to use a little Loc-Tite to seat it firmly.

An alternative to replacing them is to gently pry up the seal with a sharp knife, taking care not to bend the little aluminum edge. If the bearing is out of the bike, clean it out with solvent, making sure all the solvent gets removed, then re-grease it with good waterproof grease such as Phil grease or marine lube. If you were careful removing it you can gently snap the seal back into position.

Another way to service cartridge bearings is to find a syringe with a large needle, and use it to inject grease around the edge of the seal.



Manhattan Bikes?

4 April 1983

Denise Caramagno, Editor
Fat Tire Flyer
P.O. Box 757
Fairfax, Ca. 94930

A recent *New York Magazine* story announced that the Big Apple has adopted the clunker. But to scotch any rumor that the West can just shuttle its brats East full-grown, Manhattan has tidied up Mudpup's image and renamed him "City bike" (C.B. for short). Without a doubt, it is more durable, more practical, and more fun to ride than other types of bicycles we have used here in the past. For years city cyclists have been modifying their traditional, lightweight machines with straight handlebars, wider tires, and fenders for greater comfort and safety, but progress toward a truly functional city bike was largely hit or miss until Tom Ritchey, Jeff Lindsay, Joe Breeze, and a few other Fat Tire Flyers designed a new bicycle from the ground up. The result: Mountainbikes, Mountain Goats, and Breezers.

Lately, this obscure cottage industry has faced competition from giant off-shore bicycle factories. These less expensive versions reach more riders, but let the buyer beware: it is easier to copy the style of an original than the substance. And since even the \$1800 custom models are not entirely bulletproof, don't expect your \$500 import to be maintenance-free. Luckily, the wildmen who really understand these clunkers are still out there on the Bolinas Ridge breaking forks, fixing frames, cursing in broken Japanese, and redesigning components to work even better for us urban primitives, whether we cruise down Fifth Avenue in a business suit or hop boulders in Central Park.

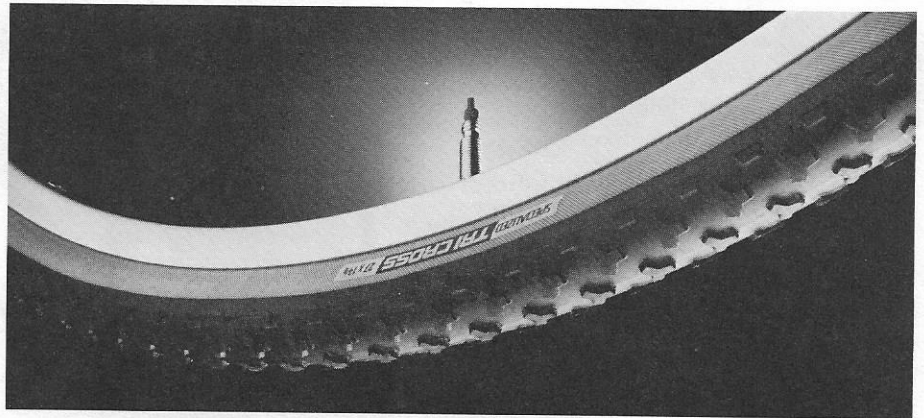
Stephan Wilkinson's article was useful as an introduction to the new breed, but he overstated the difficulties of transplanting the West Coast bike to the concrete jungles of the Northeast. The changes he cites as important for the "Manhattan Bike" of the future can be easily performed now by any competent mechanic. By reducing three chainwheels to two or one, fifteen or more gear combinations can be trimmed to ten or five. Smooth, high pressure tires for off-road touring have been around for a couple years now; they adapt well to city streets. Cutting two or three inches with a hacksaw from each end of a wide handlebar permits easy passage between buses and cabs. Even fenders and

chainguards are possible. At the time of purchase, these modifications can be done inexpensively at most bike shops.

The visuals in the article were attractive but misleading. Technical jargon is certainly off-putting to the general reader, but the labeling on Linda Clenney's illustration was careless. Errors included calling the rear derailleur "triple chain rings," the seat post a "quick release height adjuster," and the actual triple crankset "fifteen gears." Ken Regan's photograph showed a highly romanticized cycling environment, and little regard for safety or rules of the road. Where are the taxis and buses and exhaust fumes? Bicycles should serve the Wall Street commuter as well as the ath-

lete and the hustler, but must the well-dressed career woman point her machine the wrong way on a one-way street? Is she any different in this respect from the "kamikaze" messengers Mr. Wilkinson criticizes as one of a "minefield" of hazards New Yorkers have to contend with? What prevents city riders from breaking this vicious cycle anyway? Manhattan may be a congested island, but it is certainly not Alcatraz. Escape to the wilds of New Jersey is just a bridge away, and C.B. knows the route. After all, he's got Mudpup's nose.

Richard Lockwood
50 W. 85 Street #9
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SPECIALIZED

Race Reports

ROCKHOPPER II A KNOCKOUT

The most recent Rockhopper, held on May 15 in Santa Rosa's Annadel State Park was notable for a number of reasons--three hundred and seventy-four, to be exact. This was the largest field ever started in an off-road race that we know of, and who should know better? Of this number over one hundred did not finish, which gives some indication of the toughness of the 18 mile course.

Home-town pro rider Gavin Chilcott, who rode in Italy last year, roughed up Gary Fisher's old course record, lowering it by 5:27 to 1:25:45. Gary had nothing to complain about, since Chilcott was riding Fisher's own bike and racing for his company, MountainBikes.

Another notable aspect was the appearance for the first time of several organized teams, Mantis and Ross being the most visible. The Ross riders had striking uniforms, matched jerseys and knickers, and made a strong showing with riders in third, eighth and thirteenth places.

A flat tire cost Central Coast winner Scot Nicol four or five places, and he ran across the line in ninth. Eric Heiden, a well known pro cyclist and former speed skater, rode his first off-road race and finished a creditable sixth place. Somebody's going to snap that boy up for a team, you watch.

Jacque Phelan turned in a remarkable performance, 33rd over all and first woman. Next woman was local fave Suzy Babcock, while last year's winner, Denise Caramagno, retired with two flats.

First in the antique-geriatric category (over 35) was Charles Kelly, who hadn't won a race since the coaster derby he was in when he was eight. But we digress.

Photos by Wende Cragg



GAVIN CHILCOTT, 1st Place



JACQUIE PHELAN, 1st Woman



CENTRAL COAST CLUNKER CLASSIC

The fourth running of the Central Coast Clunker Classic was the gnarliest to date, since heavy winter rains made the twenty-plus stream crossings more than interesting. Rushing, thigh-deep water was a welcome relief from the heat of the day, but added the possibility of drowning to other more familiar off-road hazards.

The first four finishers were on custom-made bikes, all from different builders. First place went to Scot Nicol, riding his own Ibis brand bike, the only machine at the race with drop-style road handlebars. Second was Jim Harlow on his Ritchey (he has since joined the Ross team and rides a Redcay Mountain), third was Don Davis on his Ron Miller, and fourth went to last year's winner, Clark Roberts, riding a Mantis XCR.

Denise Caramagno was the winner for the third time of the women's category. Hey, how come there isn't a perpetual trophy for the women?

RESULTS, CENTRAL COAST

1. Scot Nicol
2. Jim Harlow
3. Don Davis
4. Clark Roberts
5. Dennis McKeown
6. Mark Michel
7. Richard Cunningham
8. Steve McIntosh
9. Steve Walters
10. Mark Grayson
18. Bob Nichelson (1st over 40)
20. Dean Kandler (Iron Person)
44. Denise Caramagno (1st woman)



CHARLES KELLY, 1st Over 35

WHISKEYTOWN GETS DOWN

The extreme rains of last winter left the Whiskeytown Downhill course a shambles, with erosion ruts, wash-outs, and runoff diversions creating serious problems for the 200+ competitors. Jim Harlow collected the first win for the new Ross team along with a \$200 reward from his sponsor, but he was unable to approach Gary Fisher's 1981 course record, failing to match it by nearly an hour.

Finishing times seem to indicate that the Whiskeytown course is one of the toughest in use right now. Harlow needed 3:30:43 to ride the distance that Fisher covered in 2:36. Women's winner Lea Brooks took 4:50:37, good for 63rd place.

John Howard, world 24-hour cycling record holder, Ironman winner and former National Cycling champion sandbagged the rest of the over-35 class in his first off-road race, finishing a creditable 13th place in 3:50:20.

The Ross team made another strong showing, although Clark Roberts was out of the action early with a flat. Other Ross riders Steve McIntosh and Don Davis finished 5th and 8th respectively.

The "Bad Break" award went to Marcus Ganister, riding for a loosely organized Specialized team. Marcus suffered a broken hand, while teammates James McLean needed 14 stitches to close a scratch, and Chris Barrett fell victim to heat exhaustion.

Gary and Bonnie Larson of the Chain Gang Bike Shop are to be congratulated for another successful event.

PARTIAL RESULTS

1. Jim Harlow (Ross)
2. Mike Jordan
3. Todd D'Angelis
4. John Stein (Chain Gang)
5. Steve McIntosh (Ross)
6. Scot Nicol (Ibis Cycles)
7. Joe Breeze (Breezer)
8. Don Davis (Ross)
9. Greg Edwards
10. Jim Gentes (MountainBikes)
13. John Howard (Mountain Goat)
1st over 35
63. Lea Brooks 1st Woman

Coming Events



Coming Events

Coming Events

JUNE

Sunday, June 26, ride. Stevens Creek Park, CA. Contact: Joe at Brightside Cycles, 408-294-8536

JULY

July 4, 5 (Monday-Tuesday), tour. Overnight tour, Henry Coe State Park, CA. Contact: Joe at Brightside Cycles, 408-294-8536

Sunday, July 10, race. Topanga Sun Tour, CA. Contact: Victor Vincente of America, 213-VVA-3300

Sunday, July 10, ride. Point Reyes, CA. Contact: Joe at Brightside Cycles, 408-294-8536

Sunday, July 10, race. Cardigan Mountain Hill Climb, Plymouth, NH. Contact: White Mountain Cycles, 603-5326-3655. Outside New Hampshire, 800-223-5001

Sunday, July 17, race. Velo-Promo Cross-Country, Santa Cruz, CA. Contact: Bob Liebold, 408-425-5688

Sunday, July 17, ride. Ventana Forest, Carmel Valley, CA. Contact: Joe at Brightside Cycles, 408-294-8536

Sunday, July 31, race. Tahoe City to Truckee, CA.
Contact: Basecamp's Bike Shop
P.O. Box 1864
Tahoe City, CA 95730

AUGUST

August 9, tour. Tour of Northern Pakistan. Contact: Appropriate Designs, 208-628-3437

Sunday, August 14, race. Devils Mountain Hillclimb, Mount Diablo, CA. Contact: Jack Ingram, 415-798-3950

August 20-September 14, tour. Mongolia Overland-China Passage.
Contact: Angel, 206-527-4822
Josh, 206-625-5177
China Passage, 800-223-7196

Sunday, August 28, race. Sandwich Notch Dirt Road Race, Plymouth, NH. Contact: White Mountain Cycles, 603-536-3655. Outside New Hampshire, 800-223-5001.

SEPTEMBER

Sunday, September 4, race. Dirt Time Trial, Plymouth, NH. Contact: White Mountain Cycles (above)

September 10 & 11 (Sat/Sun), race. Sespe Hot Springs 2-stage. Contact: Victor Vincente of America, 213-VVA-3300

September 12-18. Fat Tire Bike Week. Crested Butte, CO.

Sept. 12, 13, 14, Organized tours.

Sept. 15, Orienteering and Bike Rodeo.

Friday, September 16, race. Paradise Divide Fat Tire Stage Race, Crested Butte, CO.

(For race contact Paradise Bikes and Skis, 303-349-6324.)

September 17 & 18 (Sat/Sun), tour. Eighth Annual Crested Butte to Aspen Tour.

September 15-17, Exposition. Concurrent with other activities, Fat Tire Expo and Display.

Contact: Murdock, 303-349-6286

September 23 & 24 (Fri/Sat), tour. Dirty Dawg Open Tour, Plymouth, NH. Contact: White Mountain Cycles

OCTOBER

Sunday, October 9, race. Mount Lemon Hillclimb, Tucson, AZ. Contact: Ric at Gordon's Bike Shop, 602-326-4652

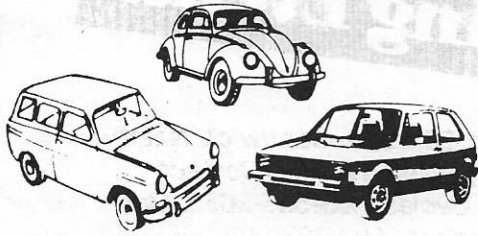
Sunday, October 9, race. Rockhopper, Santa Rosa, CA. Contact: Tom Hillard, 707-526-BIKE

NOVEMBER

Sunday, November 13, race. Puerco! Off-Road Bike Classic. Contact: Victor Vincente of America, 213-VVA-3300

Thursday, November 24, ride. Ninth Annual Thanksgiving Day Appetite Seminar, Fairfax, CA. Contact: Charles Kelly, 415-457-7016

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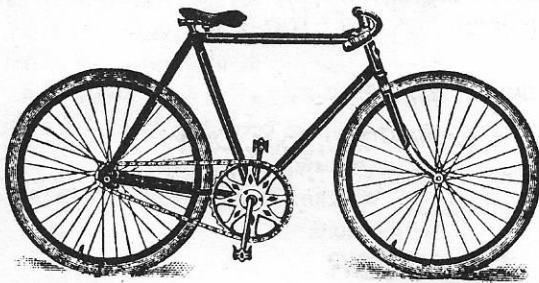
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MORE ORGANIZATIONS

Not to be left behind, the mid-west is catching on to Fat Tires. We recently received a call from Larry Perkins of the American Bicycle Enduro League, headquartered in Kansas. Larry says that they're running two-stage weekend events, with each stage consisting of about 25 miles of dirt roads. Sounds like our brand of fun. For further info on the League contact:

Larry Perkins
American Bicycle Enduro League
1214 Tennessee #3
Lawrence, KS 66044
(913) 842-0444



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EDITORIAL

An open letter to F.T.B. Even

At a recent mountain bike event, I witnessed the pains of a new sport growing up.

The incident I refer to was an event staged at a busy urban intersection. At starting time, fifty cyclists swarmed into the street blocking both southbound traffic lanes. Then traffic continued to be obstructed while the six minute pre-race briefing was given. Finally, the go ahead was given for the two mile dash down the pavement to the dirt. There was a four way stop along the way. Unfortunately, there was no flagman or attendant of any kind present. Not one cyclist stopped! Motorists' jaws hung slack! After twelve miles of delightful fire road, it was still three paved miles to the finish line on a divided four lane boulevard.

The usual festivities at the end of such an event were highlighted by three riders riding wheelies abreast down the road, again blocking traffic. Fortunately, no one was hurt. Fortunately (or unfortunately), no law enforcement people happened by either end of the ride. Unfortunately, as fifty riders were having a grand time, at least twice that many citizens probably formed a negative opinion of our sport.

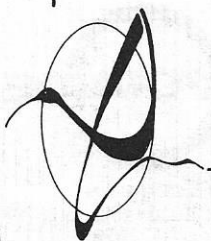
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COMMENT

Promoters and Participants:

Events that two years ago drew twenty or so participants, can now expect fifty, seventy-five, even one hundred participants, due to increased product availability. Gatherings of this magnitude require planning on the part of the promoter to provide for the safety and welfare of participants and spectators as well as the general public that these events may impact.

I believe that most fat tire enthusiasts enjoy riding in the open spaces which our machines are designed for. To ensure our continued free access to these spaces, we must begin to see ourselves as ambassadors for off-road cycling when riding in urban areas. Responsible group behavior when in the public eye, will assist those who are lobbying in our behalf to be successful in securing our continued access to public lands.

In closing, I would like to emphasize the need of responsible organization for events that impact the public. Events staged in urban areas require more planning and support than for an event held in the back country. If you are promoting an event in your area and have few helpers and limited resources, it is in the best interest of all concerned to keep the event entirely on the dirt.

Glenn Odell

with prepayment to the Fat Tire Flyer. Now is the time to get rid of that old bike or even the neighbor's dog; whatever it is, we'll help you sell it.



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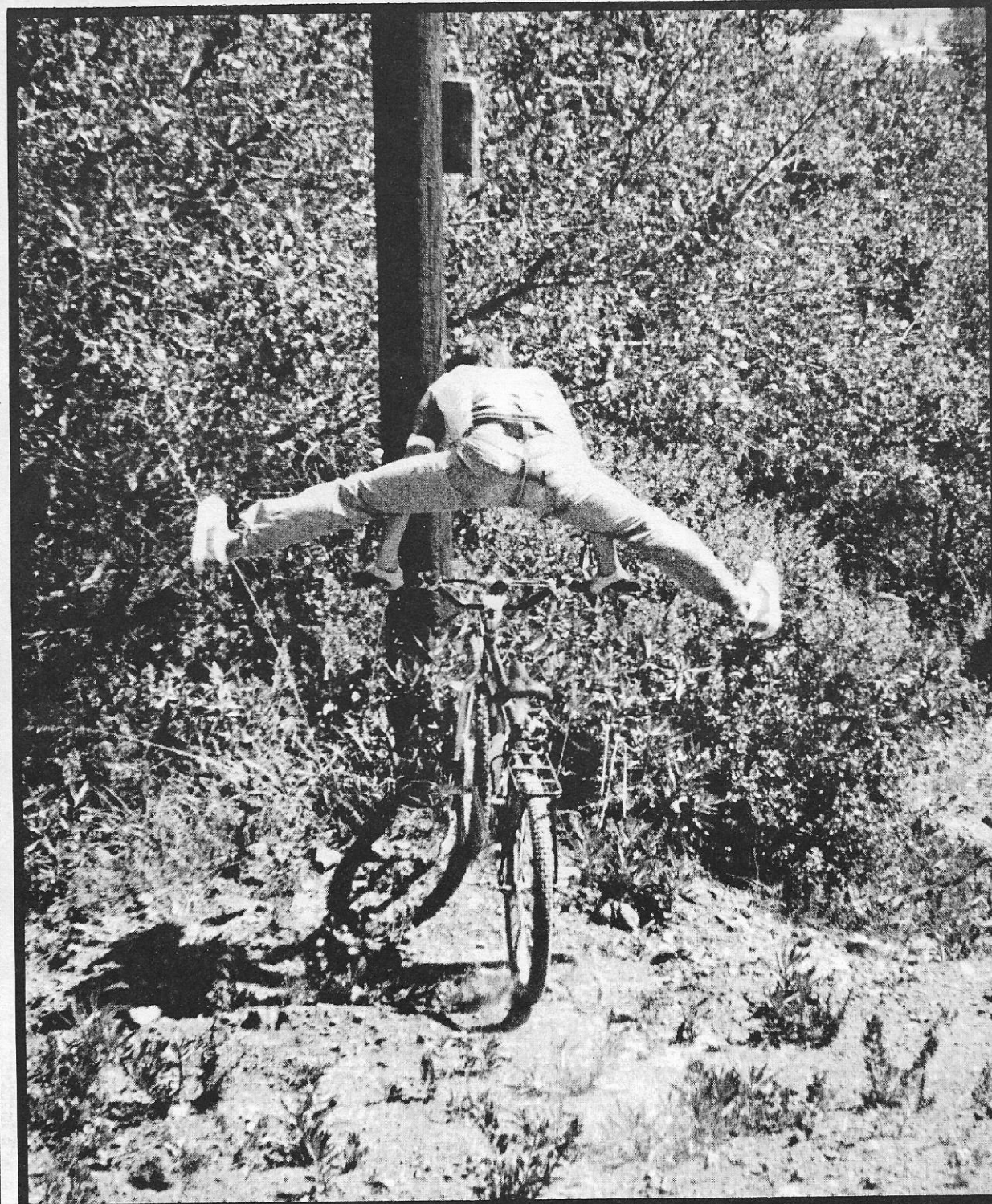
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by mail if you need it. Also bike tours of varying lengths and difficulty, and a schedule of races to keep you on the roll.

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E. Utterback

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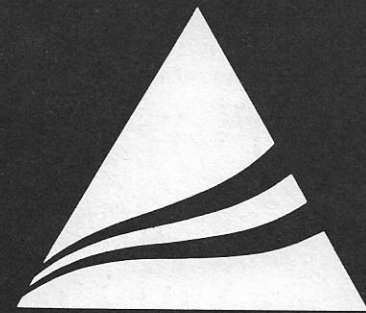
SunTour components. From the beginning, the preferred choice of fat tire bikers. For more information, talk to your favorite professional bike shop.

The SunTour Philosophy:

- The bicycle is a tool...a means to an end. Its fundamental purpose is to stretch how far, how fast, and how comfortably you can travel under your own power.
- The bike and its rider are an ergonomic system whose mechanical components

must work in complete harmony with the human component's needs and behavior.

- Each SunTour component is designed to be fully compatible with other SunTour components. This Modular Component Concept lets you select the exact features which you need in a derailleur, lever, freewheel, etc., with the assurance that the components will work in complete harmony.



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