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The Rivendell Reader

Issue No. 33 Fall 2004

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A Quarterly For Bicyclers

When Toothpaste Was Dense and Came In Lead Tubes

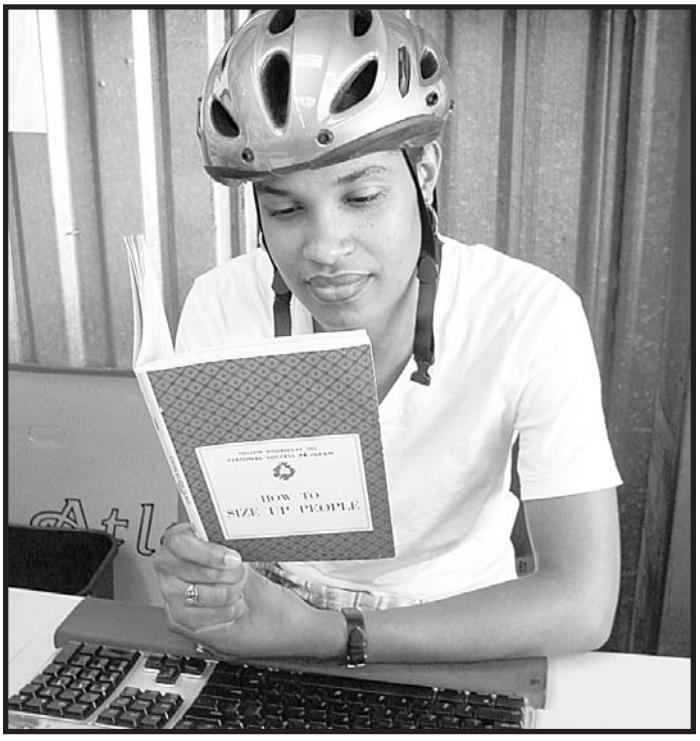
Brakes need to stop you within a reasonable distance, and be easy to modulate. They should fit the bike and wheels, and be easy to release for letting out tires and so on. They should be adjustable, and if it's do-able while riding (I'm talking about things like opening a quick-release, or using the barrel adjuster), that's good, but not a requirement.

Stiffness is an issue with brakes, and comes from stretchless cables, compressionless housing, low-flex brake arms, snug and multipoint attachments, hard brake pads, minimal toe-in, set up (straddle wire length if there's a straddle wire, how close the pads are to the rim), beefy brake levers, and minimal friction. How stiff brakes should be or need to be is something not everybody agrees about. Flex in brakes can prevent skidding.

Brake issues are surfacing here now, because we're working on the Saluki, and the two brake choices, cantilevers and centerpulls, have different things to offer. Cantilevers flex less and seem to be more powerful. The center pulls we're looking at flex more than cantilevers, but not excessively, and are easier to set up, don't require braze-ons (that is a plus in several different categories), and seem just ideal for the volume of the available 650B tires. Aesthetics matter some, they always do, and centerpulls win there. I'm not saying I think cantilevers are unattractive, because I don't, but I prefer the look of centerpulls, just barely.

Probably some of the stiffness of cantilevers comes from having them brazed on, and you can braze on centerpulls, too, but in the case of cantilevers, there is a standard location for the bosses to be brazed-on, so you can use any cantilever made on any frame made for cantilever brakes.

It's not like that with centerpulls. Centerpulls have fallen so far out of fashion that they exist sort of like Esperanto and the California Condor exist. Dia-Compe still makes its ancient (and I would say excellent) Mod. 750 centerpull, and that's it for high-volume and easily had models. It can



be mounted directly through the fork, like a sidepull, or brazed onto rare (but available) Dia-Compe centerpull braze-on bosses.

Paul Components of Chico, California makes a new machined model that looks nice and works fine, but lacks the versatility and range of adjustment that the Dia-Compe model has; and it's available in braze-on only. The clearances work for some tires, not for others, but overall it's a nice brake when mated with the right sized wheel. It uses widely available cantilever bosses, but requires (this is a fact, not a drawback) its own unique mounting position for those bosses.

With either the Dia-Compe or Paul, if we go with brazed-

…continued on page 3

In This Issue

The Rivendell Reader

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Grant, who still has a long way to go

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Usually Amy Whalen, but no time for this issue, so Grant did it himself.

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on brakes, you're limited to that one particular brake. They're both fine, but all things equal, it's best to have options. It could be that your other option is simply to ride another bike, should you ever find out that something happened to the brakes and now they don't work. I can't imagine what that might be. It's more of a theoretical possibility than a practical concern, but there are hair-trigger worriers out there who, well, that'll kill it for them.

With a longer reach bolt-on centerpull like the Dia-Compe, you can minimize flex, I'd say to the point where it's not an issue, when you put the brakes high in the slot. That's nothing a user can do after the fact, but it can happen at the design end of things, and we do that with the Saluki.

We've debated the style of brake to use on the Saluki. I want to use a bolt-on centerpull, because it works well, seems appropriate for the tires likely to be ridden, doesn't require braze-ons, leaves the bike available to future centerpull variants that may or may not come down the pike, and differentiates the Saluki that much more from the Atlantis, which has cantilevers. Plus, the way I see it, most riders who can get over the 650B hurdle can get over the centerpull hurdle, if they even see it as a hurdle. I imagine most would prefer them to begin with. John here wants the centerpulls, too.

I've ridden the centerpulls a lot down steep trails over bumpy rocks and turning in deep powder, conditions that require good technique even just to not crash, and they work well.

Mark favors cantilevers, because he's used to them, and thinks bolt-on centerpulls look too cheap. He also thinks their history of being used on old cheap bikes will make them seem inappropriate (too cheap) for the Saluki, which is going to cost $1400 or so for the frame and fork.

Brian could go either way, but has concerns about our customer's ability to set up the centerpulls to best advantage. Unlike Mark, he isn't put off by the association centerpulls may have with old cheap bikes, and if anything, sees that as a plus.

Both brakes make sense. so we'll get 50 Salukis made for cantilevers, and 50 for centerpulls. That's not 50 of each size, that's 50 total, of each kind, spread out among seven or so frame sizes. Mine's going to have centerpulls. So that's one of probably nine 58cm centerpull Saluki frame that won't be available to buy.

It is tempting to belileve that good brakes will make you a good braker, and it's a notion easily sold these days, since we live in computery times, when more money buys more performance. But bikes are less like computers and more like brushes, paint, and a canvas in that the equipment only takes it so far.

I don't know when we'll get the Saluki here. Toyo is eager to make them, but we need one more round of samples, before the green light. Early December at the earliest.

I hope you like this issue. The next one will be pretty good. It'll have lots more information on the Saluki, Glorius, and Wilbury, and there's a decent chance of a long interview with a really famous fellow. That will take place in September sometime, and I'll have the issue out sometime mid-winter. —Grant

confidential to Hunkapillar: If you're there, please contact. Nothing bad.

This prototype Saluki (unpainted and well-ridden) has a cantilever rear and a centerpull front. We also have a spare fork for it, with a cantilever on it, We won't mix brakes on frames; we're just testing. We'll use a longer straddle wire on the centerpull.

Fixed Gears and Parkinson's

Five years ago, a couple of days before my birthday, I found out I had Parkinson's Disease. The doctor said he could tell by watching me as I walked in. I couldn't tell. There isn't a blood test, the diagnosis is by observation. Since it usually affects one side of the body more than the other, the neurologist compares flexibility and suppleness of one side versus the other.

Parkinson's first affected me on my right side when I got stressed out it would show up as sewing-machine leg. That wasn't much of a complaint so the explanation hit me hard. It took about a year for me to get over the initial shock. One year, a change of doctors, a change of medicine, and now I'm dealing with it.

Okay, what about cycling? Well, over the past year my once smooth spin has deteriorated and now my right leg pedals squares. On every pedal stroke when my right foot reaches 1 o'clock, it goes clunk. Riding a bike isn't fun when you really have to concentrate to not go clunk. I'm not giving up my riding, so I put together a fixed-gear bike. The fixed gear smoothed out my pedal stroke. Riding is again a pleasure.

Meanwhile, I changed neurologists to one who specializes in movement disorders. She is doing that uses low impact exercise. The exercise was walking on a tread mill while suspended in a harness. So only some percentage of your weight would be supported by your legs. After I left her office I thought, "That sounds like riding a bike."

These days my riding is almost exclusively commuting back and forth to work. Work is in downtown Los Angeles and home is about 15 miles east of there. My fixed-gear Rivendell has two brakes, unlike the hard-core fixed-gear-riding bike messengers who use neither brakes or helmets. I can't afford another head trauma.

Parkinson's Disease comes on slowly. Like accumulated stress there's no one factor. Add them all together though and it's a problem. However, I believe that a major factor that led to my early contraction of Parkinson's (most people get it in their '60's) was a bike crash in 1986 I went over the bars and landed on my head. Remember the helmets back then? They were hard plastic with maybe a quarter inch of soft foam padding. It prevented my skull from being scraped. I spent three days in the hospital ˆ three days I have no memory of. Boxers have a higher incident of Parkinson's.

One aspect of Parkinson's that's damaging but subtle is a vague feeling that you need to do something more. An underlying sense of urgency. The result is not enough sleep. Objectively I know I need more sleep, but it's hard to resist that need to accomplish something more. —Jack Price

It's "Flappy Pants" Advertising

The Summer/Spring 2004 catalog depicts two guys on bikes with no helmets. I was astounded that you're selling bicycle gear, yet neglected the most important aspect of bicycle safety.

In the USA annually, 800 people die from falling off bicycles and they die because their heads crack like an egg yolk when they hit the pavement. Over 50,000 people go to hospitals when they fall off their bikes annually. You can stitch cuts and cast broken bones, but you can't put brain matter back together.

Also, you've got that guy riding with flappy pants that can get caught in the chain and throw him. What kind of advertising is that? After having ridden 100,000 miles on six continents in the past 26 years, I hadn't had a fall in 20 years, but this spring I fell and cracked my helmet on the pavement. My head was fine but my helmet was trashed. If it can happen to me, it can happen to anyone. Suggestion: Show riders in helmets. Show them in proper bicycle clothing. It will show you care about your customers.—Frosty Wooldridge (author of *Handbook For Touring Bicyclists*, *Bicycling Around the World*, and *Salty Tights: A Slice of Heaven and Hell—Riding the Continental Divide.*

Frosty, thanks for writing. Yours is one of many such letters condemning us for the cover photo, and we don't relish the controversy, or try to be controversial in the first place.

The topic is important because we're talking about safety, and even life and death, and people tend to regard issues they care about so strongly as black or white. I (Grant) don't have a firm stance on this, and if I did, I wouldn't try to sell it to anybody, any more than I'd try to push flax seed meal or Bob Dylan music—two things I do feel strongly about.

I'll address a couple of the things you said, then send you and anybody interested in helmet issues, to page 20 or so of this issue.

If you've cycled on six continents in the past 26 years, you've seen plenty of cyclists wearing street clothing and no helmets, and my guess is that you didn't try to change their ways. In this country, on television and real magazines, you've seen cycling heroes more influential than our cover boys riding helmetless, and I'll bet you've not written to Trek or Lance or OLN to complain.

As for the two riders on the cover—they were going uphill on a hot day, and the right leg of John's Levis was cinched with clothespin, not because it's safer, but to keep it out of grease's way.

It's better to hit the ground with a helmet on than without one on, but when somebody looks at their broken helmet and suggests *that would've been my head!* I think maybe & maybe not. There's no doubt that styrofoam absorbs impacts, but it also makes your head bigger, and it doesn't take much of an impact to crack styrofoam, which is World Famous for being flimsy.

I am all for wearing helmets. I like my Bell Metro a lot—it's the only one I can stand to wear, and I wear it half the time.

Adults get to make up their own mind, and it's human nature to rebel against whatever somebody is forcing on you. Helmet use isn't the no-brainer issue most folks would like it to be.—G

A Tough, Technical Quiz For Subscribers. Must Be Answered By Mail.

1. What is the bead seat diameter of a 650B rim? _____
2. What is the bead seat diameter of a mountain bike rim? _____
3. How about for a 700c rim? _____
4. If the axle-to-brake hole distance on a fork is 371mm, what is the brake reach requirement for the following rims:

   a) 700c: _____ b) 650B: _____ c: mountain bike: _____
5. Radius is what percent of diameter?: ____ 50.5 ____49.5 _____ 50
6. Your name _____ Customer number if you know it _____

Perfect scores will be awarded a $12 Gift Certificate good though October 2004. Send to RBW QUIZ, Box 5289 Walnut Creek, CA 94596

We're Tired of Singing the Outa Stock Blues

by John Bennett (of Rivendell)

If you've been a customer for the past year or more, you know we're often out of stock. Our vendors are nice, and seems to genuinely want our business, but we spend more time following up on delivery and hounding vendors than we do on a lot of other projects around here.It's frustrating for you, and bad for our business and reputation.

One source of the problem is that we try to give our business to manufacturers still making things in America. That's getting harder to do when more and more of the stuff at the local WalMart or Walgreens bears a label proudly proclaiming "Designed in the USA" with a Stars and Stripes logo, but the fine print on the bottom of the box reads 'Made in China.'

Trying to use American companies for the goods we sell and the quantities that we can afford to order is hard enough. It's easy to imagine how much worse it would be if we needed ten or a thousand times as much as we do.I imagine one reason American companies source foreign labor is that the delivery is reliable.

We recently hooked up with somebody who can help us. It's a company called Erickson Outdoors, and is based about 20 miles from here. Mark Erickson is the founder, and was head designer at The NorthFace back in the late 70's and 80's. When The North Face and its competitors went overseas in the late '80s, Mark used his design and sourcing experience to form his own company, and it's done okay for about 20 years.

Our first projects with them will be baggy riding shorts, a pants version of the shorts, and a seersucker shirt. They will be the first items in our new line of clothing called MUSA, for made in the United States of America.

Everything MUSA is going to be made right here in the East Bay, which is about as American as you can get. Grant and I visited the factory, asked the hard questions about pay and benefits and working conditions, and we're comfortable with the way things are there. We're excited to get started, and are about as optimistic as we allow ourselves to get around here.

The MUSA tag line is "For What It's Worth," which we don't think will get us sued by songwriter Steven Stills. The deal is we will sell it for what its worth, pay Erickson what it's worth, and the workers, too, earn what their work is worth. We won't compete on price, but the gear will be good.

Most importantly, we expect delivery will happen on time, our shelves will be full and when you order, we can ship things in 24 hours.

Also, we need to think about using more than one supplier for certain lines. Relying on a single small company for a range of products makes us too vulnerable. In the past, items have been out of stock simply because the one person at a given place who knew how to sew something of ours was out sick. If everything we sold was made in China or Vietnam, not only would we not know the name of the person who was ill (which we often do), we wouldn't know about it period.

Trying to find the balance is an ongoing challenge here. We want to Stick To Our Guns, but we also want to Have Stuff In Stock when you place an order. The fine tuning continues. We're still hoping that working with folks like Mark and Tam at Erickson, we'll be able to do it.

Meet Brian, New Guy

Hi! I'm a local guy, having spent my formative years in nearby Pleasant Hill, then San Francisco, and now I live about a mile from Rivendell. From my first years on a bike, I've loved the simple feelings of speed, balance, and freedom. It's like flying close to the ground. I love many kinds of cycling: touring, sport riding, commuting, on and off road. I want to encourage all kinds of riders, especially those who are more challenged.

I've been in the bicycle industry since friction shifting, wool jerseys, and leather saddles were the regular thing. I worked for Avocet, Bianchi, Shimano SPD, and others. I've worked in wholesale, as an independent sales rep, and retail with REI. I'm certified with Barnett's Bicycle Institute as a Master Tech.

I'm impressed by the quality and dedication of the Rivendell staff. I hope I can sustain and build on this experience.

I've got lots of jobs here. First, I'm in charge of the shop and all builds. I don't assemble all of the bikes—Mark and Robert do some, too—but I build most and approve all the ones I don't. Second, this fall we're going to be open on Saturdays, and it's my job to turn what's now a warehouse into a respectable retail space; and as I understand it, I'll be working some of those Saturdays, too. Third, I'll be managing our dealer accounts. Finally and like everybody here, I get the phones, enter orders, and service our customers.

I'm married to Kara who also rides. We just got a medium-sized light brown dog, named Tyler.

How Steel Fails

Failure is just a response to overwhelming stress, and any material can fail. But how a material fails determines how fail-safe it is. Slowly is better than quickly, bending is better than snapping, and a high tolerance for abuse is better than a low tolerance for it.

The fork shown here is from one of the fanciest bikes we've made. Joe Starck made it for a fellow who, at the time, was known as "key guy," because he had an old key that his father had given him turned into a pump peg. Every now and then we take on such projects, and Joe did a great job of it.

And about a year later,"Key Guy" called with the news that he got in an accident in an intersection and hit the bumper of a car with his front wheel and fork. He received some stitches but was otherwise okay. He sent the frame and fork to Curt for inspection and repair.

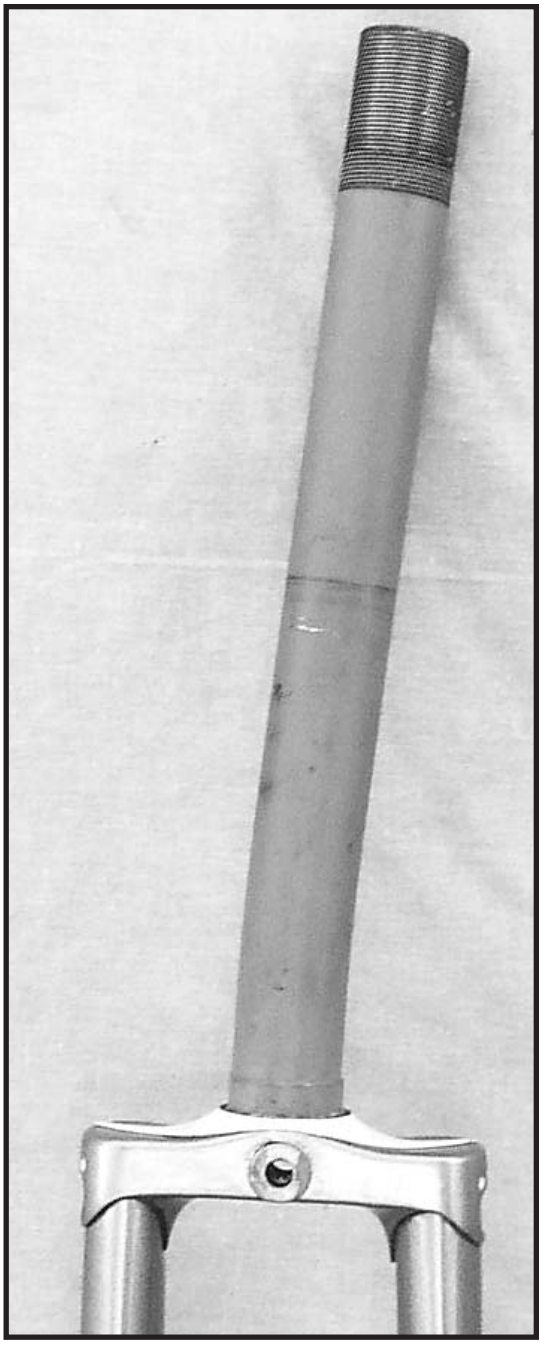
Curt got the frame and fork back for repair, and when he told me about it, he said, "I've never seen a fork this messed up without a damaged frame to go with it. I don't see how this could happen to the fork without something happening to the frame. It must be the oreos (the lug rings)."

The fork is amazing. Look at the steer tube and see how it's bent. The bend isn't just down at the bottom, but continues up through the middle of it. That bend happened inside the head tube, but the head tube itself was undamaged and still straight.

Without any better explanation, Curt attributes the fine condition of the frame to the extra metal at the top and bottom of the head lugs. Don't go thinking we think lugs without this are inferior. All lugs have extra metal there—the lugs itself. Ours happen to have extra metal there and must be stronger because of it, but we put the metal there just for looks.

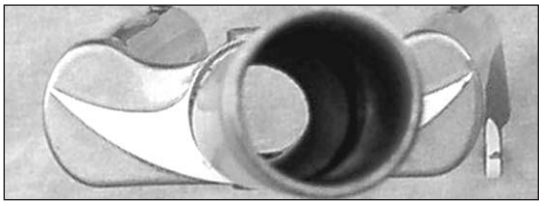
Curt built Key Guy a new fork, JB painted it to match, and all's fine. A lugged steel frame is able to take a lot of abuse, and is more repairable than any other frame. Steel is a wonderful material, with the best failure properties of any frame material. How a material fails matters. Materials that bend rather than snap are simply better, safer materials for bicycle frames.

Inspect your bike regularly, at least at the chainstays, base of the seat tube, rear dropouts, fork crown, and underside of the bottom head lug. These are the places bikes break most often. And, if you have a carbon bike with a nasty gouge in it, probably you shouldn't ride it.



It's unusual to see a steer tube bent this much this high up. Usually it's bent just above the crown,

Here are two views of a bottom head lug, showing the rings (oreos) and the extra material they provide. You could ride ten lifetimes and never need it; but the weight is negligible, and where's the harm?

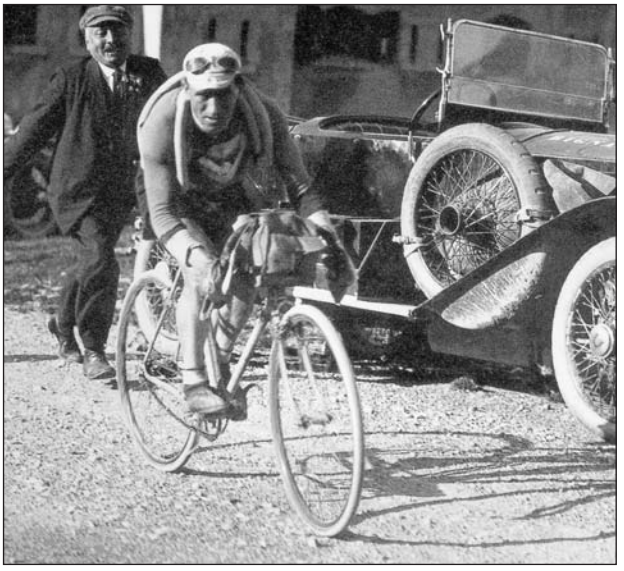


Top view showing the bentness. The blips you see down on the blades are just braze-ons.

Racing Reflections

by Peter Moore

In July 2003 I was in a bike shop, and I bought a copy of the Italian cycling magazine Bicisport because it had an article on a hundred years of the Tour. My Italian isn't good, but I bought it because it showed bicycle racing's evolution in pictures.



Until the mid-1950s, riders still carried an extra tire or two wrapped in a figure eight over their backs and around their shoulders. Team and neutral mechanical support wasn't what it is now, and being self-sufficient saved time. In the old photos, lead riders or groups are often pictured with only a single car, or a car and a motorcycle around them, not the immense caravan of later tours.

Likewise, through the 1960s, mountain roads were often unpaved. Not only did riders have to contend with the climbs, they had to do so with road tires on unpaved surfaces. These riders climbed steep passes with their 45-52 or 42-52 chainrings, then descended the steep (often unpaved) roads down the other side.

There's something archaic and heroic about these earlier racers straining over dirt roads in the Alps or Pyrenees, lower legs coated with dirt and dust, shoulders working against the bars as they climb, even as they themselves are bound by their spare tubulars, their leather Bindas, their cleated shoes. There is something almost transcendent in their efforts that, as I look at pictures from the later sixties and seventies, is lost.

This is not to minimize the talent, the fitness, or the mental toughness of more modern cyclists, who are as tough as they need to be in a race that's still tough, but not as rough. It is instead to give credit to an immense strength visible in these older cyclists, pedaling without two way radios, without visible team cars, over dusty and pebbled roads that most cyclists today would ride on a mountain bike.

What I find admirable is that these cyclists possessed a variety of skills, rather than just the ability to pedal quickly over paved roads. They needed mechanical skills: the ability to replace a tubular quickly, while they also needed phenomenal physical strength to ride as they did. But it also seems to me that they needed an immense inner strength, facing terrain and competitors without most of the support-and-safety net that later riders came to expect. They reenacted a more primitive and more compelling drama than can current riders with their team cars and radios, their immense support systems.

These earlier tours were an archaic contest: the primary agents were the riders themselves, and their struggles with terrain and each other. As the years passed, and the caravan of support vehicles became larger and larger, the Tour de France (and bicycle racing in general) began to highlight different areas of human endeavor: the technological race as bicycles became lighter and lighter and ever more specialized—the time trial bike, the mountain stage bike, and so on—which takes away from the human drama that is at the basis of every athletic endeavor. And now we also have the tech-enabled strategic race, where team cars are in constant contact with their riders through two-way radio; the exercise physiology race, in which riders, under the instructions of highly specialized and sometimes controversial doctors, have become more and more scientifically trained both in the racing season and out of it. These other races have not removed the human drama of the Tour, but they have lessened it.

In WWII my dad was a waist gunner in B17 bombers flying out of England. In those days, airborne fighters still confronted each other as individuals over iron gunfights, and saw the racers strike home. But once computer and radar guidance and air-to-air and surface-to-air missiles all came together, the relative importance, the individual drama, of the people in the cockpit lessened. Technology has a way of reducing the role of people in any drama.

I realize that I am in a minority among cyclists when I count these changes as a loss. For when I look at the average speeds in the tour and see how they have gone up, I see a mixed blessing: sure, riders go faster. But for me, the archaic, heroic struggle--of rider against terrain, of rider against rival-- that lies behind such competition has been diluted.

Reconsidering Kickstands

When Barbara Torres ordered her Rivendell with a kickstand plate and couldn't be talked out of it, I said fine, and that was that. Two others followed, and I've since put one on one of my bikes (see the cover of RR30), and my daughters insist on them, and my wife wants one. I don't think every bike should have a kickstand, just lots of them. They weigh as little as 9.5 ounces, are simple to use, keep your bike from falling over, and are cheap. Most of the bikes in the world have kickstands, because they're shopping and commuting bikes. That's not dorky, just smart—Grant

Center-mount, single-leg (CMSL).

The classic American kickstand, the kind kids use It attaches to the chainstays and is the most widely available, the cheapest, the lightest, the least conspicuous, the easiest to mount, It works passably with medium to heavy loads, and wonderfully with no or light loads.

The CMSL's major drawback is that you can't safely clamp it onto the thin-walled chainstays that come on nicer bikes. It'll squish them. This isn't an issue on bad bikes with thick chainstays and cheap price tags, which is what they're made for. The solution is what we did for Barbara Torres (and a few others)—braze on a mounting plate, so the kickstand mounts to it, and not to the chainstays. We just had some kickstand plates made, which will allow these to go on fancy frames.

We've decided to stock the Greenfield.

Greenfield. Die-cast aluminum, made in the USA, simple, good. Comes with rubber foot, not shown.

Wt: 10.3oz Cost: $8 Where: Most bike shops & RBW.

Wald. Made in Kentucky. Steel, simple, basic, well made. Modified here with a seat stay section slipped over a chopped leg, just 11.0oz. A nice stand.

Wt: 16oz Cost: $6 Where: Old bike shops?

Rear-Mount Single-Leg (RMSL).

Foreign cyclers prefer this style, which attaches just forward of the left rear dropout. It's bulkier but not always heavier than a center-mount, and it holds the bike better.

If you can get over the looks and overall conspicuousness of it, it's the way to go. And if you have a nice bike with thin-walled chainstays and no brazed-on mounting plate and you still want a kickstand, get over the looks, because it's your only option. Since mount where the stays are thickest, no squashing problems.

We're stocking both models shown, but availability isn't great, so if you order one, please try to be flexible.

Hebie Superlight. This is a wonderful stand, but Hebie is reconsidering its U.S. (land of lawsuits) distribution, and this may go away for good.

Wt: 9.2oz Cost: $26 Where: Permaco.com

Minoura (Japanese) lightweight silver stand. It has that "dapper penguin with a cane and top-hat" look, as opposed to the Hebie's "dark German complication" look. We sell this one.

Wt: 10.3oz Cost: $23 Where: RBW or your bike shop.

Hebie double-legger. In the up position the legs tuck neatly out of the way. For a bike that's heavy already, it's a good & stable stand, in shiny German Black.

Wt: 29oz Cost: $26 Where: Permaco.com

Center-mount double-leg (CMDL).

Doubly stable, mainly because it holds your bike upright, with two legs. The drawbacks are weight, cost, and appearance, and the chainstay-damage factor. If they weighed nothing and were free and invisible, all bikes would have them, even Lance's. Why not?

Double-leg models are popular in countries where the moms (and yes, it's always moms) tote tots. Another style, not shown, mounts to rear nutted axles

The cagey Swiss, have made their mark with watches and chocolate, and are now tackling kickstands. The legs of this double-legger fold up and rest on the same side of the bike. And when push comes to shove, you gotta pay for that.

Wt: 21.3oz Cost: $45 Where: Any bike shop can order from J & B.

Alternatives to Kickstand (for those who still refuse to reconsider)

Hebie Spring Thing

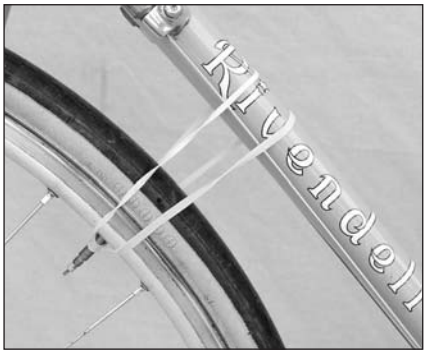
It mounts as pictured and prevents the front wheel from flopping a lot (which makes standing bikes fall). It claims not to interfere with steering—so you can ride with it—but it must have some effect. I've ridden with it a lot, though, and whatever affect it has, I can't tell. I'd put one on a touring bike any day. Shown on an A lantis.

Wt: 2.5oz Cost: $12 Where: Permaco.com

The Strap of the Irish

This is how they do it in Ireland—a fine Irish strap around the wheel and downtube prevents wheel flop and stabilizes the bike. It's also stops spur-of-the-moment thefts, and when not in use as one of these, the strap can be used for something else.

Wt: 1 ozg Cost: $5 Where: RBW



Rubber Band

A thick rubber band looped around the down tube and hooked twice onto the valve stem will keep your wheel from flopping. If you ride off without removing it, no real harm done.

Wt: 1 to 5g Cost: Free Where: Desk drawer

Pain Pills

by Doctor John Reach

The expected warning and qualifier: This information is designed to supplement, not replace, the relationship that exists between you and your doctor, and is meant for informational use only. Please contact the author at ortho_doc1@yahoo.com if you wish to make copies of this article.

There are two kinds of over-the-counter pain medications: (1) acetaminophen (Tylenol) and (2) NSAIDs (non-steroidal-anti-inflammatory drugs).

N.S.A.I.D.s (Non-steroidal Anti-Inflammatory Drugs) are used to decrease pain and inflammation.

The first NSAID—aspirin—exists naturally in the bark of certain willow trees, and up to the turn of the last century, chewing willow bark was the preferred way to get it. Then in 1828, a German chemist named Buchner isolated the active compound (salicylate) from willow bark. Most patients found the white powder too bitter, so it was "buffered" by a French chemist (Gerhardt) in 1853. Then the Germans took over again, as Friederich Bayer's company patented Aspirin, much to the delight of generations of his heirs.

Things To Know About Names & Pricing

1. A drug may be sold under many different names. Read the active ingredient and dose information on the label to see exactly what you are taking.

2. Cost varies widely for exactly the same medicine.

Things To Know about NSAIDS in General

3. In general, NSAIDs at lower doses relieve pain. Higher doses relieve the same amount of pain, and also decreases inflammation.

4. NSAIDs block hormone-like substances called prostaglandins that help control physiological functions. Because all NSAIDs work the same way, taking different Taking NSAIDs at doses higher than the recommended level won't relieve more pain; but may lead to stomach ulcers, bleeding, and death.

4 NSAIDs block hormone-like substances called prostaglandins that help control physiological functions. Because all NSAIDs work the same way, taking different types of them simultaneously will not further decrease pain or relieve inflammation, but will increase the risk of bleeding and stomach ulcers. And some studies suggest they slow bone healing. That's why your doctor may give you harder drugs after surgery.

If you need more help with pain than the recommended dose, your doctor may recommend up to 81mg of aspirin or tylenol (not an NSAID) along with your NSAIDs. I'm not telling you that—ask YOUR doctor.

5. Some NSAIDs work better for some people than for others. It's good to know which works best for you.

What You Should Know About Tylenol

Bad thing: Acetaminophen (Tylenol) is a liver toxin.

Good: Tylenol does not block prostaglandins, it does not interact with NSAIDs. So you can take them together.

Use it to: Decreases pain and fever.

Doesn't work for: Inflammation.

Maximum pain-relieving dose: 650mg every six hours; Maximum fever-lowering dose: 1000mg every six hours. Don't take more than 4000 mg of acetaminophen in 24 hours, less if you drink alcohol.

The Dope On Hard Dope

Narcotics. Addictive qualities aside, they often cause constipation, psychosis, itching, redness, nausea, and occasionally an inability to breathe. A red, itchy, nauseated, constipated addict is not what you want to become, so even when they're prescribed, be leery of narcotics, and work with your doctor to have a plan to get off them as soon as possible.

Save your money

Most of the prescription formulations of NSAIDs are just twice the recommended dose of those sold over-the-counter. For example, Aleve is 200mg every 12 hours over-the-counter. Naprosyn is 400mg every 12 hours available only by prescription.

What I Take

For minor pain, generic aspirin 650mg every 4 hours. If I need a longer course of inflammation relief, I take the generic form of over-the-counter Aleve (200mg of Naproxen twice per day). If I need more relief, I will double the over-the-counter dose of Naproxen to its prescription strength of 400mg every 12 hours.

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Shawn Jones Update

As you might have read in past Readers or the current catalog, Shawn Jones is a 12 year-old local boy who was attacked by 3 pit bulls a couple of years back. He lost his ears, a lot of his face, and anything that you can imagine happened, happened.

We made a pitch for donations, and have been rewarding them with 50% Rivendell credits: You give the Fund $100, and we give you $50 off your next order. We add some from time to time, and together, we (all of us) have given Shawn $8,606.88 since last October..

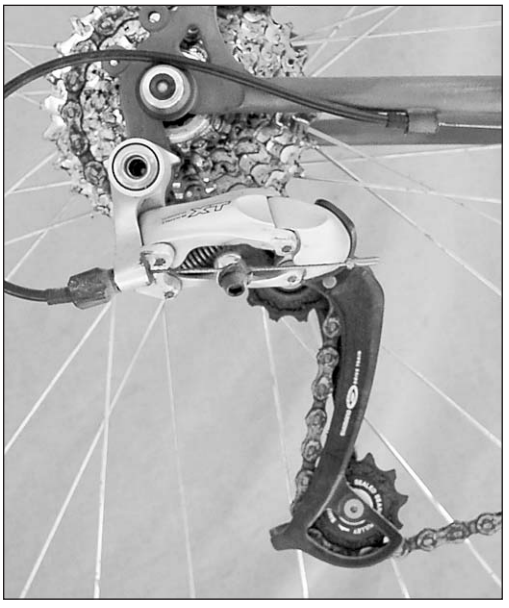
The manager of the trust tells us Shawn has been "up and down" lately. Due to the severity of his injuries, he's still needs, many skin grafts.

Some of the grafts on his face have not taken, and the wounds have become infected. He's been getting sick more. His basic medical care is covered by insurance. Without our help, he would be living on a monthly SSI payment.The fund manager says the money you and we send him "pays for his life"—meaning it buys things that help him forget his problems for a while—toys, games, things that aren't related to his physical recovery, but mean a lot to his emotional state.

If you would like to make a donation, please make your check payable to the "Shawn Jones Special Needs Trust" and send it along to us at RBW Attn: Shawn Fund PO Box 5289, Walnut Creek CA 94596. We'll continue to give you half the donation amount in store credit.

Another way to help Shawn is to sign up for low-cost long distance service with Telphonic.com and name Rivendell as your beneficiary. Telphonic will donate 10% of your bill to Shawn. They will also send you a $50 Rivendell gift certificate. This, seriously, is a super cheap, good phone service. It will save you money every month, and you'll help Shawn and get free stuff here. —JB

Quick Review of Rapid-Rise (reverse action) Rear Derailleurs



Until a few years ago, all modern rear derailleurs moved the same way in response to a push or pull of the lever. For instance, if the lever happened to be a bar-end shifter, you pulled it toward you to get a lower gear. Then, nearly secretly and at first only on its futuristic city & comfort bike groups, Shimano introduced derailleurs that moved the opposite way.

Shimano calls them "rapid-rise" because a powerful spring pulls them inward and upward toward the bigger cogs. Shimano claims that the shift happens faster and easier, and that shifting becomes more logical and less confusing with rapid-rise derailers, because you move the left and right levers the same direction to get higher or lower gears.

Now the same rapid-rise models are creeping into its mountain bike groups, and are available as options in Shimano's top three groups—XTR, XT, and maybe Deore LX. I never would have given them a second thought, but when we were scrounging around in boxes and knooks trying to assemble one of the prototype Saluki models, without taking parts out of the inventory, Brian or Mark or somebody put one of these oppo-action derailleurs on the bike. We had it around, because it was mis-ordered.

I messed lots of shifts for two weeks, but by week three it was fewer, and by week four it was few. Then I got back on other bikes and got all confused again. It sounds like an unnecessary hassle, and it would be, if the consequence of pushing the lever the wrong way was a rotten pie in the face, but in fact you notice it immediately and just correct, and the screwup/correction sequence is quick and private. Slow, late, grinding shifts to low gears are easier. If I could afford to swap over all my bikes, I think I'd do it. Right now I go back and forth between bikes, and I'm finding that each bike gives me the right cues, and I'm not messing up as much anymore.

I doubt that Shimano will introduce road derailleurs with rapid-rise. It could be a flash-in-the-pan for mountain bikes, too. But if I knew it was going to go away, I'd buy a dozen or so right now. Having tried it, I like it. I don't mind having different bikes with different shifting. We'll probably offer a rapid-rise derailleur soon.—Grant

The 650B, & Why It Should Live

If the entire bicycle-riding universe had to start all over and settle on one wheel size for all riding, I'd vote for this. It wouldn't win a popular vote, because almost no voters have heard of it, much less ridden it. But it's a good size, still.

A 650B RIM IS 1-INCH BIGGER THAN A MOUNTAIN bike rim, and 1 1/2-inches smaller than a 700c road rim. The actual bead seat diameters of the rims are:

700c—622mm; 650B—584mm; Mtn 26—559mm

It's doesn't have the best or worst attributes of either, and it's not a magical "sweet spot" size. It's just a size between, and it rolls like a regular old bicycle wheel, except with a special twist I'll mention later.

How *any* wheel rolls and feels depends on how heavy or light, soft or hard, skinny or fat it is. The skinniest and lightest 650B tires aren't as light and skinny as the skinniest and lightest road tires, and the fattest 650Bs aren't nearly as fat as monster mountain tires. The range, shown above, is all medium-like. I can't see any need to go skinnier, but fatter would be fine.

But for now the available 650B tires are suitable for all road riding short of racing, and all off-road riding short of really rocky or loose trails. I have a feeling a fatter 650B tire will become available soon. We won't do it, but I'm going to try to talk somebody else into it, and I'll be respectfully pugnacious, Mark my words!

Here's another difference: In mountain- and road-sized tires, there are hundreds of models over that wider size spectrum, and you can get them in any bike shop in the country. In 650B, there are only about ten to twelve models available, at least in this country. That's a guess, but I can name seven, and I'm guessing there are three to five that I don't know about. But it's like when you're shopping for film and all the drugstore has is Tri-X and Fuji 400 in color, it just makes shopping easier.

Most bike shops haven't even heard of 650B. That's why we have the internet, the telephone, the postal service, and UPS!

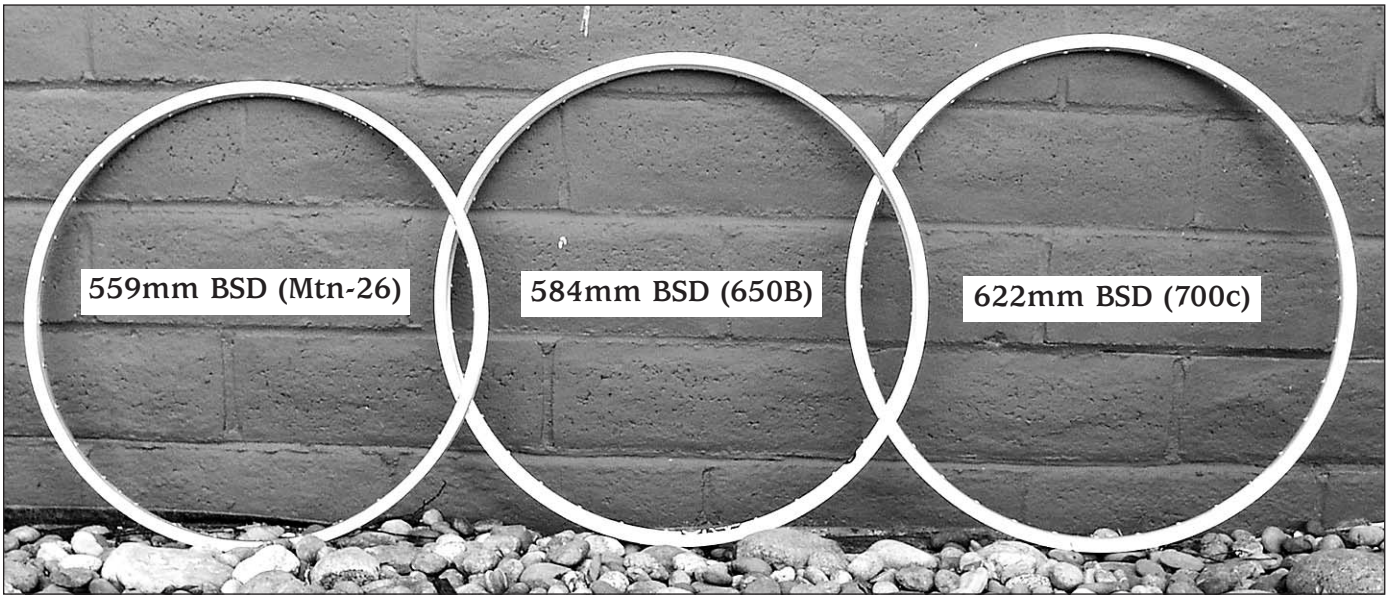
Worldwide Popularity of the 650B

There are about 1,000 rabid 650B fans in the world, and 95 percent of them either live in France or wear berets.

The French connection is the 650B's public relations problem. When it comes to bikes, most un-French riders and bike mechanics who go back a few years and now enjoy influential positions in the bicycle industry, and don't like French bike things.

That's because in the '70s and '80s while the rest of the modern world was trying to standardize certain bicycle frame and part dimensions, the French wouldn't play. While everybody else was settling on either English or Italian threading (which in many cases was interchangeable) and standard dimensions for stems, downtubes, handlebars, and even dropout details, the French dug in their heels with "French-sized" this and that, frustrating bike riders and mechanics the world around.

It would have been easier to swallow if the French had had a radically different perspective that warranted radically different sizes, but it wasn't like that. A French



The three wheel sizes discussed here are shown above. BSD stands for bead-seat-diameter, which is how rims and tires are specified by makers. It would avoid a lot of confusion and duplicate language if all riders were familiar with these numbers.

stem quill was 22mm, not 22.2mm. A French down tube was 28mm, not 28.6mm. French threads were different and offered no advantage, just made it harder to maintain your bike. The French didn't budge until the early-'80s, when the unFrench up and stopped buying their bikes. The freaky dimensions on top of the quality control issues just got to be too much, sorry. By the dimensional concession was finally made, the Japanese had already been doing everything right for too long, and that was the end of French bikes in the U.S.

In any case, having 950 Frenchmen and a handful of Francophiles campaigning for 650B tires does about as much good as having Dead Heads behind the effort to legalize medical marijuana.

But this time the French are right. The 650B is a great tire size, and well worthy of its own section in the Bike Nashbar catalogue.

Rim Availability

Rigida (France) makes a big bunch of them every year, and we have ready access to them. But not wanting to rely on French sources, and wanting to expand the number of available models, we contracted with Velocity, a fine and popular high-end rim maker from Australia, to make 650B rims for us. We currently have more than 400 of these rims in stock, and have ordered 50 of the Rigida model ("Sphinx") as well.

Interesting maybe: It was easy to get them to make the rim. We had to commit to this amount and pay half up front, but they did it. Trek would have, too, and will if we want to add yet another model to the availability mix. If they'll work with us, they'll work with anybody.

And now that we have the rim, a distributor in Japan wants to buy them from us. We'll do that, but it's not as though it was hard to pull it off. Anybody could ask Velocity to make the rims, and they would. Trek said they'd do it, too. Manufacturers want customers, and they don't care about the numbers. If we wanted a rim that would fit no tires, they'd make it if we paid.

Tire Availability

650B tires are the same as 26 x 1-1/2-inch—old 3-speed tires—and apparently there are enough of the old bikes around to justify Kenda (for one) to still make them. They're coarse-threaded, gum-walled cheapies, but they're inexpensive (less than $20) and available-enough in the age of UPS and mail order. Harris Cyclery has them, as do we. Maybe even variety stores do.

From France. Michelin's USA distributor doesn't import any 650B, but makes a fine one, the lightest in the list. It's a 650Bx32, and is called the Megamium. We source these from the same distributor as handles the Rigida rims, and we currently have fifty in stock.

Hutchinson lists a 650B also, and we'll have samples the day after this goes to the printer.

From Germany. Schwalbe, a German company, makes two models—a 650x38, which measures about 35mm wide, and the current fatty leader in the category, a 650x44, which at 37mm isn't even close to 44, but still wins the pudge contest. We offer both, and any bike dealer in the country can easily order these from Schwalbe. They're a delight to do business with.

Continental lists a 650B tire, but doesn't return email. It may be available only in Europe.

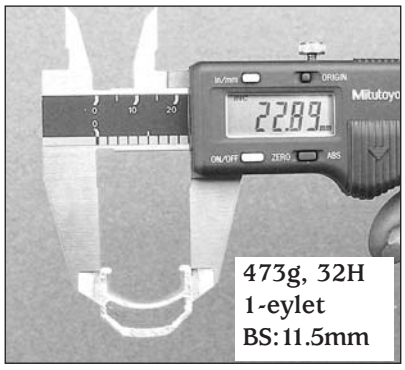
What We Have in 650B Rims & Tires

In the upper rim photos, BS = braking surface height. Taller is generally better, but both are acceptably tall. FYI.

Velocity Synergy Rear

An excellent rim, made even better for us sans machined sidewalls. So the wall thickness remains consistent. Beautiful seams. Asymmetry adds strength.

P/N 18-182, $48



Velocity Front

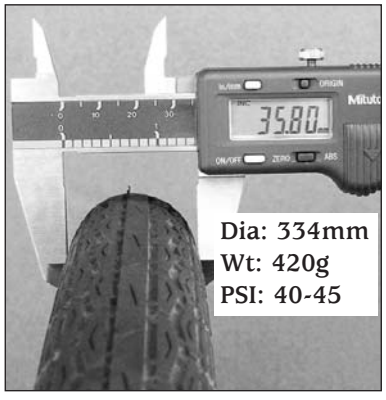
The same as the rear, but symmetrical, since there's no cluster to deal with. The 23mm width works well with tires as skinny as 26mm, and up to mtn size.

P/N 18-183, $45

Rigida Sphinx

Made once a year by the familiar French maker. It's a stout touring rim with old-world details—double eyelets, no machining, it's wide. Great for super tough use, even though it's not available in asymmetrical rear.

P/N 18-186, $54



Mitsuboshi Trimline

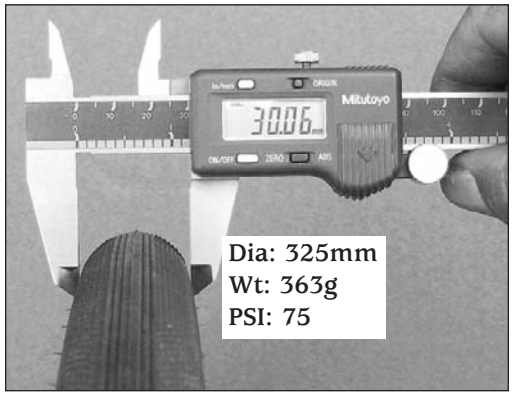
Top-notch skinwall, light & puffy, up to 65psi . Mounts and comes off easily by hand. Good-looking, great-riding on road or fire trails. Not as "trim" as name implies. In stock after October 2.

Part No. 10-061, $30

Panaracer Col de la Vie

Panaracer's equivalent to the Trimline, and a wonderful tire. I've ridden about 700 miles on it in all conditions, and it's good. Col de la Vie means "Pass of Life." In stock.

Part No. 10-063, $30



Michelin Megamium

Skinnier tire, but still puffy enough for any road riding, just not trails. It's the 650B fasty, for aggressive club rides and timed personal 650B record attempts. Blackwall only, though that may change. In stock.

Part No, 10-064, $50

650B-specific tubes, presta. Part No. 10-006, $6, in stock.

From Taiwan. Kenda, one of your lesserly prestigious brands that still makes fine-enough tires, offers a low-end 650B that's marketed as a 26 x 1 3/8, mainly as original equipment replacement tires for hundreds of thousands of department store and three speed bikes that were popular until mountain bikes took over. These are easily available through any bike shop. A well-known distributor, J & B, stocks them.

From Japan. Panaracer makes a fine lightish 650x38 skinwall called the Col de la Vie, and Mitsuboshi, who used to make Specialized tires when they were made in Japan, offers an equivalent model called the Trimline, in the same 650x38 size. We have 300 of each in stock, and will stock them indefinitely.

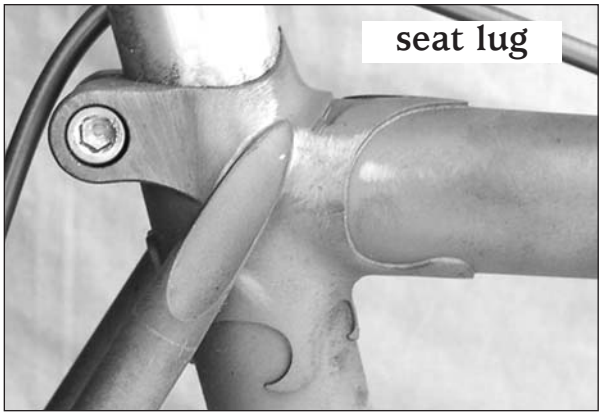
Tubes are easy, since both mountain bike (559bsd) and road (622bsd) tubes work. But we're stocking a Schwalbe model designed to fit 650B.

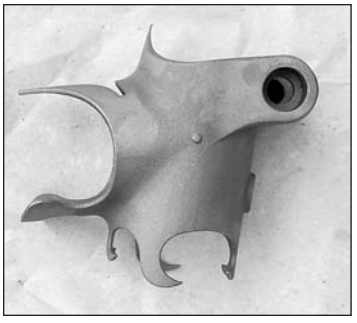
Availability Summary

You can get the tires, rims, and tubes. It's not as easy, but you don't get shafted on the price, and they are out there for you. I expect availability to improve, too. (See *pugnacious* remark, earlier.)

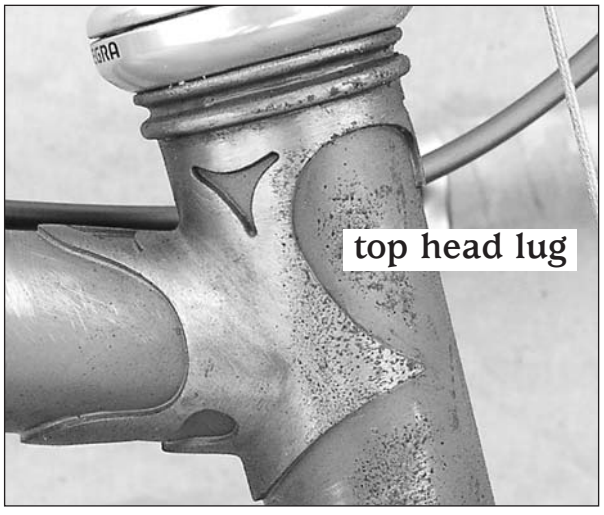
My dream tire, of course, is a 650B x 33 Ruffy Tuffy with SpeedBlend sidewalls.

A Look At Lugs, XII: The Saluki Lugs

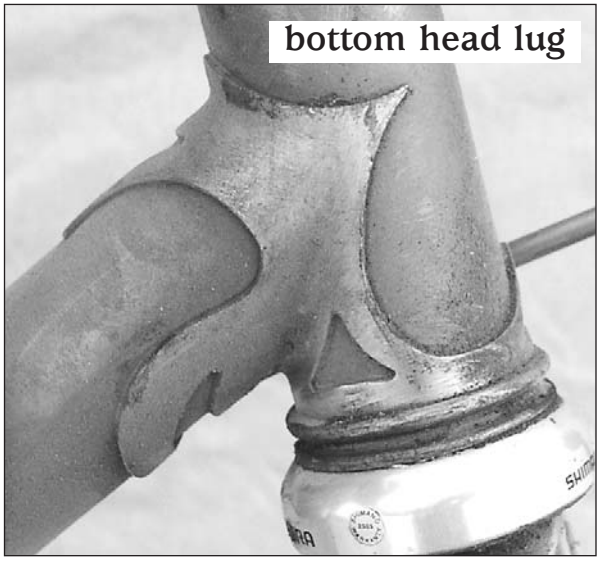




We use this seat lug on the Atlantis, Rambouillet, and customs. All of our set lugs —there are two others— have the same binder area (stout enough for thousands of loosenings and tightenings). Also, as we've pointed out before, the binder bolt itself is a standard M6x16 socket-head cap screw, available at any decent hardware store in the world. The raised stress-relief hole, visible in the inset photo, stylizes an area that's usually pretty blah.



By the way, this bike is a prototype Curt made for us, and it's unpainted—that's why the paint looks so terrible. The top head lug here shows the same oreo reinforcing rings, and shares some of the details of the lower head lug. But there are just enough differences to either a) keep you guessing; b) offend some folks; or c) disappoint future bicycle historians. I (G) especially like the herniated window in on the underside of the top tube. You can see the concave triangle, which is just a stylized version of a normal triangle, something common on lots of old lugs, I like the unclassical concave sides better, though,



The head lugs are new designs. The inset photo shows clearly the "oreo" bottom rings, a fancied-up variation of the reinforcing rings on some old French lugs. These add thickness to the head tube and absolutely prevent an accident from ovalizing the head tube. Weapon-like points curl around the head tube; a concave triangle in the lower rear looks nice and aids brazing. A large, round spoon on the downtube reduces the chance of a fatigue failure in this highly stressed area; and a cutout in the same spoon divides the spoon into two "crumple zones"—which is either engineering genius, or just another pain-in-the neck for the painters, depending on whether you think we're smart or sadistic.

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How I converted an old 700c frame that I had no interest in, into a 650B bike that I like

By Rory Cameron

Riv member Rory uses outside dabox thinking and basic arithmetic to turn an unexciting road frame into a smart 650B bike Good job, Rory!—GP

I bought a Univega "Gran Rally" frame, fork, and headset from a local bike shop for $20. The biggest tire it could fit is a 700x28, with short-reach sidepull brakes.

I like larger tires and fenders, and I knew a smaller wheel would allow clearance for those, but could I get brakes to reach the smaller rim? I needed some numbers to work with.

I measured the distance from the center of the dropouts to the center of the frame's brake holes. In both cases, it was 355mm.

Then I referred to Mike Barry's article in RR33, to look at rim diameters, and noticed that the next-smallest rim size is 650A, with a bead seat diameter of 590. But that's even more obscure than 650B, so I rejected that, especially when I noticed that 650B rims are just 6mm smaller, with a bsd of 584.

To find a compatible brake and rim size—meaning a brake that would reach down far enough to contact the rim—or if you prefer, a rim that would reach up high enough to contact the brake pads—I did some math.

Starting with 355mm as the distance from the center of the wheel to the brake mounting point (it was the same front and rear, remember), I subtracted the maximum brake reach (63mm) on some old Dia Compe Mod. 610 centerpulls that I had, and got 292mm. Remember, a 650B rim's bead seat diameter is 584mm, and diameter halved is radius—292! So it ought to work.

I got some 650B wheels from Rivendell, complete with Panaracer 650Bx38 Col de la Vie tires, and true to the math, they worked. The brakes contact the rim, and there's fender clearance, too—exactly as I'd hoped.

But with the smaller wheels, would the bottom bracket now be so low that the pedals drag? As it turns out, the BB drop on this frame is 65mm—resulting in a high bottom bracket with the original 700c wheels, but a nice, medium-low bb with the new 650Bs!

I am psyched this 650b thing is happening. There are a ton of quality made Univegas and Centurions, not to mention the old Masis and Derosas that could be taking these size tires and center pulls and become a way more useful.

MEASURING. In the photo above, although you can't see it, the tape is in the center of the brake hole in the fork crown. You can see that the hole-to-axle distance is 355mm (see where the skewer sits in the dropout). Right: Full view of the equivalent measurement on the rear part of the bike.

You Want To Try It?

There must be fifty-thousand frames like this around and not being ridden, and most would probably go for about the same $20 Rory spent. Their owners have either gone on to fancy modern frames, or replaced them with a better frame, but couldn't bear to just toss out the oldy. I've seen plenty of them at garage sales, and I don't buy them because I don't have room or the time to mess around with them, but if you do, go for it.

If you want to be sure the bike will work with 650B wheels, read Rory's story again for the important measurements. It's not a matter of coming up with a rare combination of number that let the magic happen. In the case of this Univega that Rory had, the closest call was the front wheel, which worked only because the maximum reach of the brake was the minimum reach required to find the rim. But that happened with a no-longer-made Mod.610 brake. It's longer-reach brother, the Mod. 750 (shown below right) has a much longer reach, and will reach more rims on more forks.

An issue here is fork length and bridge placement. Most of the time—like 99 percent of the time—they're willy-nilly, you get what you get, and the designer doesn't expect you to ask questions. But proper dimensions in both places are one sign of a well-thought out frame. —GP

The inital wheel-installation was encouraging, meaning it looked like it might work, and the bike looked proportional. So I kept going.

The front brake shoes are at the bottom of the slot, because the reach on this brake is shorter than it is on the rear. It barely reaches the rim, but "barely" is still a bullseye. There's easily room for a fender there, even with the 650B x 38 tire. There'd be even more room with a Michelin Megamium, 650B x 32. With 700c wheels, the bike fits only a skinny tire, and no fender.

For the rear brake, I used a longer Dia-Compe Mod. 750 model, to account for the rim movement when using the full length of the adjustability of the horizontal rear dropout. This would make a better brake for the front, too—but I don't mind the slight mismatch. Also plenty of fender clearance—

Bicycles & Bicycling in Holland

by Mike Barry

Everybody who rides a bike in this country and goes to Holland on vacation comes back inspired by the rampant bicycle use there. Author Mike, from Canada, had the same reaction, and tells and shows us about his recent trip there.

I recently spent a few days in Maastrict, a mid size town (Pop. 130,000) in Southern Holland. One of the sites I saw was two teenage girls cycling along shoulder to shoulder, wearing normal teenage-girl clothes, chatting away and sharing a some pop. They handed the can back and forth between them as they negotiated the downtown traffic. Riding a bike was the natural to them, and they were competent bike handlers.

Mothers pedal along with children in child seats on the back and front of the bike. The child seats fitted to the front often have windshields to protect the child from the weather. I imagine those two girls would be doing the same some day.

Holland is an affluent country and most families have cars. But most ride bikes, because urban design and the government encourage cycling. Riding a bike downtown or to work is more practical, more convenient, and the easy way out. Bike makers and sellers play along, too, and most bikes have fenders, full chain case, upright handlebars, sprung saddles, and internal hub gears.

Contrast that to North America, where homes and work places are often far apart, and the bikes (usually fenderless mountain bikes) are not practical for year-round commuting. Overall, commuting here makes you stand out. Commuting in Holland makes you fit in.

Holland has its own brands (Batavus and Gazelle are two of the big ones), but most of the newer commute bikes are made by Giant, Trek, and other brands familiar to anybody over here. They aren't sold here, though, because North American dealers and distributors don't think they're sellable. They may be right. For years the 10 speed was promoted as being the ideal bike for everyone and now the mountain bike reigns supreme. Bikes are sold by fantasy, not practicality. Lance races a bike but commutes in a Subaru.

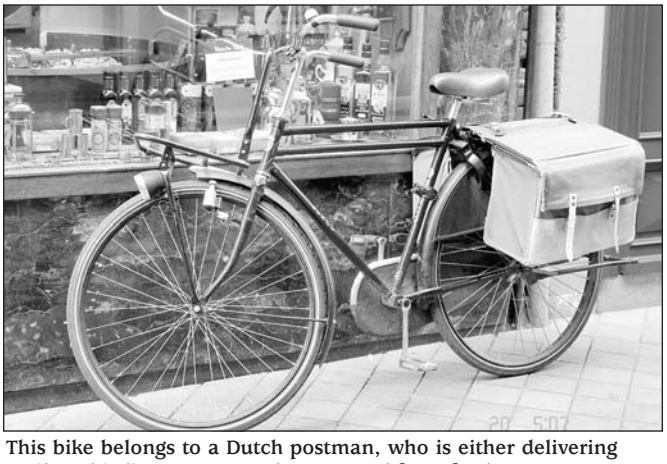
In Holland there are bike paths everywhere. No new road may be built unless there is a bike path built adjacent to it. Many bike paths, far removed from roads, wind their way across country between villages. These are popular with both sporty riders on fast bikes wearing lycra and helmets, and cyclists in street clothes riding the practical commuter bikes.

All railway stations have secure bike parking facilities, often huge. You can rent a secure covered parking space by the day, week, month or year, and there's usually a bike shop nearby where you can leave your wounded bike in the morning and pick it up fixed for the ride home in the evening. And there are open-air bike parking lots big enough to hold thousands of bikes, and they're packed with bikes. While I was there, still another new bike parking facility was being built to make more room.

It's not like anything you'll see in North America. Here, you can commute or shop by bicycle, but you fight the infrastructure every trip you take—from the bike itself, to your commute route, to what to do with your bike once you're there. In Holland, it's just the opposite.

Dutch-style bike that's actually a trike, and not actually in Holland, but London. Still, it is typical of the utilitarian bikes in Europe—and for the most part, unpurchasable in North America.

The elderly often have a hard time riding a "diamond" style frame, and even a standard mixte. These "step-through" frames are popular in developed countries with a large popularion of elderly riders.



This bike belongs to a Dutch postman, who is either delivering mail to this liquor store, or has stopped for refreshment.

We interrupt this page of bike photos to congratulate Mike Barry's daughter Dede on her silver medal in the olympic time trial, even though it was not on one of Mike's own lugged steel Mariposa frames.
Way to go, Dede.

A typical, crowed bike parking lot. The photo makes finding and extracting her bike seem hopeless, but that's just the photo. She got her bike.

Double-top tube bikes are quite common, as are stems with quills that allow the bars to be raised high. By the way, the average man in Holland stands 73 inches high.

The Helpfulness of Helmets

by John Franklin

John Franklin, whose credentials you can read at the end of this article, has studied the statistics on helmet use and injuries more than most people have, and the statistics are troubling. Our position on helmet use is: Be careful when you ride. Wear a helmet if you like—and always if you're under 18, and helmet or no, always ride as though your brain is being protected by a gutsack. —Grant

Cycle helmets have been around for a quarter of a century, and during the 1980s, reports began to be published suggesting that if cyclists wore helmets they would be less likely to suffer head injury.

Dozens of research papers have been published. The most influential reports have predicted up to an 85 percent reduction in head injuries, and an 88 percent reduction in brain injuries.

Of course, what really matters is real-world performance. It is now possible to look at traffic crash statistics from a number of countries to see the actual effect that cycle helmets have had.

Great Britain

In Great Britain, cyclist fatalities have been falling almost continually since 1934, when there were 1,536 cyclist deaths. By 2000 this had fallen to 127.

Injuries have declined steadily since 1984, stabilizing at around 20,000 per year. From 1974, the number of serious injuries rose until 1984 and has fallen steadily since. The number of minor injuries also rose until 1984 and has remained at around 20,000 per year.

But looking at casualties in isolation from cycle use is meaningless. What matters is the proportion of cyclist casualties that involve fatal or serious injury. We call this the *severity ratio*.

Since 1974 the *severity ratio* has fallen almost consistently. Until the mid 1980s helmet use was rare amongst British cyclists. By 1996, however, around 1 in 6 British cyclists wore helmets.

One would expect a marked decrease in the severity ratio from that point on, but the statistics show just the opposite: the *proportion of serious injuries actually increased during the period of greatest helmet use.*

London

Greater London has the largest incidence of helmet use by cyclists in Britain. Over the decade to 1996, the wearing rate rose from near zero to over 40 percent.

Serious injuries, on the other hand, have increased in total number since 1994. For cyclists, there has been no improvement on the severity ratio of the early 1980s and, indeed, the seriousness of crashes has increased since 1994.

It may be, of course, that some mitigating factor is cancelling out benefits achieved through helmet use, so it is useful to compare the severity ratio for Greater London of cyclist and pedestrian road casualties. Over the years, pedestrian trends have been similar to those for cyclists. However, since 1985 the severity ratio of pedestrian casualties has decreased more than that for cyclists, and the severity ratio has not increased since 1994. Clearly, pedestrian trends have not been influenced by the wearing of helmets.

Other cities in Britain show similar trends. In Cambridge—the city with the greatest amount of cycling—1 in 3 cyclists wore helmets in 1998. But there has been no decrease in severity ratio.

Other countries

In **Australia** helmets are required, providing a whole-population sample with which to assess the effectiveness of helmet use. Early official studies claimed a success as head injuries declined significantly. But these studies failed to consider that the significant decrease in bicycle use brought on by the helmet laws.

More recent official research suggests that head injuries may only have fallen by 11 percent, which is less than the decrease in cycle use. The risk of head injury amongst those who continue to cycle has risen, and in some parts of Australia injury rates are now at an all-time high.

In **New Zealand**, large increases in helmet use seem not to have brought about any reduction in the proportion of serious head injuries, whilst legislation caused cycle use to fall. Some reduction in mild concussions and lacerations was balanced by an increase in neck injuries.

In **Canada** cycle helmet use had risen to 50% by 1997, but analysis has shown there to have been no detectable impact on cyclist fatalities.

In the **USA** as long ago as 1988, Rodgers studied over 8 million cases of injury and death to cyclists over 15 years – by far the largest sample analysis of cycling casualties ever undertaken. He concluded that there was no evidence that helmets had reduced head injury or fatality rates. Indeed, he suggested that helmeted riders were more likely to be killed.

Later Kunich analysed cyclist and pedestrian fatalities

over a period when cycle helmet use rose from close to zero to 30 per cent or more. Although cyclist deaths fell during this period, the decline was proportionately less than for pedestrians and the continuation of a long-term trend probably associated with exposure.

Last year the Consumer Product Safety Commission reported that helmet use in the USA increase from 18 to 50 percent between 1991 to 2001. During the same period cycle use declined by 21 percent. Yet head injuries in total number had increased by 10 percent.

In March this year the Canadian Medical Association published a review of a cycle helmet law in Nova Scotia. The headline conclusions of the researchers were that in 3 years cycle helmet use had more than doubled from 36 percent to 86 percent and the proportion of head injuries to cyclists was cut in half.

But in the same journal there was another article from a senior health professor pointing out that cycle use over the period had declined by 40 to 60 percent. The reduction in head injuries had fallen in line with cycle use. In particular, there was no evidence that those who continue to cycle but now wear a helmet are any less at risk from serious head injury. Most worryingly, however, the total number of injuries (not just to the head) to cyclists over the 3 years had increased by 6 percent. Taking account of the average 50 percent decrease in cycle use, this means that those who continue to cycle are now 87 percent more likely to suffer injury than before helmet legislation.

Why the shortfall?

First, the quality of helmet research is often bad, typically being based on small samples with poor control populations. Bad science is too common, and in some cases, there seems to be confusion between true scientific research and campaigning for helmet use. Some of the most widely-quoted papers have now been criticised to an extent that they can no longer be considered to be safe, yet they continue to be cited without question and as gospel.

Secondly, a difference between hospital and road casualty statistics is that the latter do not always include injuries suffered off-road, although they will usually include most serious injuries. It may be that helmets are more effective away from traffic and in particular in child play situations involving low-speed falls.

If that is the case—and this remains more speculation than fact—then perhaps the promotion of helmets should embrace other forms of play activity and not just cycling. It may be that play helmets would be better for such situations. A number of children have died in the USA, Canada and Scandinavia through strangulation when their cycle helmets became trapped. Few people know this, yet it is the only indisputable evidence linking fatalities and helmets.

Thirdly, cycle helmets are probably much less capable of minimising injury than is commonly suggested. The design and testing of helmets is simplistic, mimicking only simple, low-speed falls. Helmets are neither designed nor tested to mitigate angular acceleration impacts that lead to rotation of the head, which some doctors associate with more serious injuries. Helmet standards seem to be less rigorous that they might be and in important safety criteria have declined. In tests for the UK Consumers Association, 16 out of 24 helmets failed to meet the European standards to which they were constructed and only two met the more demanding Snell standard, with one of the two causing some impairment of a cyclist's vision.

Fourthly, many people do not, and are unlikely to, wear a helmet properly.

And then there is risk compensation

Cyclists may ride more riskily because they feel better protected. This phenomenon is well acknowledged in other activities—hockey to downhill skiing to mountaineering—where there is an element of risk. You feel protected, your take more chances. It's only natural.

Head injuries in perspective

When considering the gain to be achieved through the wearing of cycle helmets, real-world evidence of performance is a key factor. But it is also important to keep head injury when cycling in perspective.

Road cyclists account for less than 1 percent of the people admitted to British hospitals with head injuries. Other road users suffer many more head injuries than cyclists, and still more occur in the home and at work.

Cyclists, on average, live up to 10 years longer than non-cyclists with healthier lives, which cannot mean that they are specially at risk.

Helmets for motorists are now available that are said to be much more effective than those for cyclists, and better than air bags, interior padding or seat belts. This begs the questions: If more protective bike helmets were available, they'd likely be bit heavier and hotter than current bicycle helmets—would they be worn less? Would they discourage new riders even more?

If helmets are beneficial, it would seem illogical–even discriminatory–to focus only cyclists. We seem to be infatuated with cycle helmets per-se, rather than meaningful injury prevention.

We all want to see fewer injuries on our roads and that includes injuries to cyclists. But what we should be keen to optimise is life-long health and life expectancy. It's easy to eliminate all cyclist injuries, simply by banning cycling or scaring people from the activity, which is much the same. But cycling increases our chances of a longer and healthier life. That's indisputable.

Yet it's becoming the view of many people that helmet promotion—not just mandation—has caused cycling to

decline over the past 10 to 15 years. This is leading to a vicious circle of less cycling, higher risk of obesity and associated problems, and a decline public health.

On the other hand, there has been recent research in Sweden, California and Britain that suggests that by far the best way to make cycling safer is to encourage more people to ride. For every doubling of cycle use, the risk per cyclist goes down by 37 percent.

Head injury rates in countries where cycling is common are well below those that have been achieved by cycle helmets anywhere. Contradictory though it may seem, less emphasis on helmets could bring about a lower risk of head injury and all the other health benefits.

Conclusions

On a case-by-case basis, there is no doubt that helmets have saved some lives. But when large population samples are examined unemotionally, it is difficult to detect any improvement in cyclist casualty trends. Statistics suggests that injuries increase with helmet use.

Moreover, helmet use promotion sends the message that cycling is dangerous, leading many people to forego cycling altogether—while missing out on the immediate and lifelong benefits of cycling.

JOHN FRANKLIN has been involved with cycle planning and rights issues for more than 25 years, and holds positions in cycling organisations in the UK at both local and national levels. Professionally, John works part-time as a consultant in cycling safety and skills and acts as an Expert Witness on cycling for the courts. He is author of the definitive guide to skilled cycling technique, Cyclecraft, which has the backing of the UK Government and is recommended reading for the new UK National Cyclist Training Standard.

For more information: cyclehelmets.org.

More Thoughts on Risk Compensation

Risk compensation is real, has always existed, and is all around us. Dressing for the weather is risk compensation. Coats of armor and shields are risk compensation. Air bags and seat belts are risk compensation.

A few months ago there was an article in *The New Yorker* about how the bigger and more cushy and quiet and like-your-couch your car is, the more chances you tend to take driving it. It pointed out that in some ways, dinky little frail cars were less likely to get into accidents, not only because they're more maneuverable than big cars, but because when you drive one, there's a sense of vulnerability that keeps you on your toes. The author referred to *passive* and *active* safety—passive being the big armored vehicle that you can't maneuver, but can take a hit, and active being the squirty little car that can't take a hit, but you can maneuver. I don't know if active and passive safety have anything to do with bikes, since bike maneuverability and protection don't vary as much as they do with cars, but that's an interesting concept.

Anyway, the relationship of safety and the feeling of safety is an interesting one to think about. If you're scared, you won't ride at all! If you feel truly protected, you'll dive right in willy-nilly and heck-bent-for-leather, bring it on.

But then, if the protection doesn't measure up to the promise, you can find yourself in quite the pickle—like fearlessly crossing a wide, icy river in a Norwegian fjord, only to find the soles of the waders aren't as grippy as advertised, and the waders leak. You'd have been better off without waders, walking a mile upstream through berry bushes to walk across the natural bridge.

John Franklin's article makes me feel uncomfortable on many levels, as a person, a rider, and mostly, as the editor of the *Reader*, but I printed it (this edited version) because it's thought-provoking, and that's always good. Riding a bike is risky, no doubt. If you feel safer with a helmet, you are more likely to ride a corner faster. or look around less at a busy intersection...than you would if your brain were in a wet paper bag.

Knowing this, is it possible to make a conscious choice to pretend you're not wearing a helmet? I doubt it, but I also think that if you don your helmet fully aware that you're likely to risk compensate, you're more likely to risk compensate less. At that point, the physical protection the helmet provides combines with your more sane riding style, and you might be better off than you'd be without it. *Might* is the key word. Nobody really knows. I find myself descending faster with a helmet—the guys I ride with have remarked on it.

There are so many related issues, all interesting to think about, and some more disturbing than others, Here's one that falls into the "less disturbing" category, at least for me: Two riders—one wears a helmet all the time, so it's second nature, etc., and the other rarely wears one. They both go for a ride, let's say even on the same course, and they both wear helmets. Who's more likely to risk compensate? I don't know. Then take the helmets off of both riders—then who'll be more careful?

I don't have any answers. I know that if I'm crashing, I hope I have a helmet on. The question is, would I be crashing if I didn't have a helmet on? Just what constitutes "playing it safe"? If you're sure about all of this, that's great. I'm sure that I'm not.—GP

Helmet Review: The Bell Metro

The Bell Metro is designed and marketed as an urban cycling helmet with an optional rain cover, visor, mirror, ear warmers, and red flasher light. If you like a systems approach to noggin protection, here it is.

It's hasn't even a hint of a Cadillac tail-fin to make you look like you're trying to look fast, and to catch on something in a tumbling fall and corkscrew your head around.

The paint scheme is simple, no fades, no mixed colors to give the impression of speed. When you put a bowl of plastic and foam on your head, why draw attention to it? The Metro comes in black, white, grey, blue. No greyish green, and no light grey, but maybe that'll come next year.

Weak points

None. It's easy for any reviewer to snip at this or that, but I can't think of anything to criticize. I like this helmet, because as helmets go, there's less to dislike about it than there is with any other helmet I've seen. Maybe I'd add one more hold in the lower middle front. But shoot, it's a winner, as you can see. Weight: 11 to 12oz, light enough.

Wearing the Metro

It is the only helmet I can stand to wear, because it's so compact that I'm less aware of having it on. Plus, I can stand its looks. Without the visor, I can't see the helmet at all. I feel the strap, but other than that, nothing. That may make this the safest helmet of all—the less you're aware of it, the less likely you are to ride risky.

Bell has done a good thing with this helmet. I hope they don't discontinue it, and I hope it's widely copied.

Atypical Bell Metro wearer.

Random thoughts on helmets

The straps always get sweaty, so why not make them either out of a different fabric, or removable and washable? They're always tubular nylon, which is plenty strong, but it gets soaked on any hottish ride. Skinnier straps would be better, I think—maybe 1/2-inch wide, or less—nobody wears the straps so snug that the skinny ones would be uncomfortable.…but then what to do for a buckle? How strong should the straps be? If your helmet gets caught on something, it seems some kind of a breakaway action would be a good thing.

Is white styrofoam cooler than black? Is a white shell cooler than a black one?…The anti-rock devices that most helmets have now are really good. If you have an old helmet without one, don't wait to wear it out before getting a new helmet. New helmets fit way better and don't flop around.

Colored helmets attract more bees, and yellow is the worst in this way. If you like yellow and aren't allergic to bee poison, go for it, because bees don't make it through the holes that often. But if you are allergic to bee poison and can take or leave yellow, get something else…Statistically, as John Franklin points out, when helmet use is mandated, bicycle riding goes down. Maybe it's because normal people don't like the look. The Metro is hard to find, but I don't get it. You can pretty much lump all the others together, visually—the elongated vents and the fins and wings make them all look alike. It seems only about one in twenty Bell dealers even sells the Metro. If we ever sold a helmet, this would be it. I think we'll start, if our insurance company will allow us to. We'll let you know.

A Rust Primer

by Kevin Moore

Many manufacturers tout non-steel frames in part for their resistance to corrosion. Here Kevin Moore talks about what corrosion is, how much it should worry us, and what to do about it.

Metal corrosion is a chemical reaction between a metal surface and its environment. It can occur in a gaseous (dry) environment or a wet environment. Since most people take good care of their bikes and rarely ride underwater for extended lengths of time, we'll focus on gaseous corrosion.

Metals that have been protected from their environment, including polished steel, are as bright and shiny as your grandmother's silver. Just as silver tarnishes, though, steel in a dry environment reacts with oxygen to produce a surface layer of oxidation, or rust. On copper, we call this layer patina; on aluminum, we see a dull surface.The oxide layer itself—the rust or patina—forms a barrier between the metal and environmental oxygen. Eventually the chemical reaction stops and electrons and ions stop moving across the oxide barrier, protecting the metal underneath from further corrosion. Despite what pop music may have taught you, rust does indeed sleep.

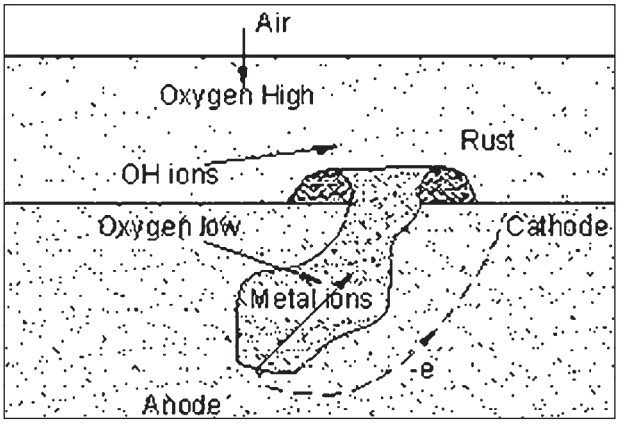
The extent of corrosion varies depending on the concentration of oxygen. Metal parts in contact with oxygen are cathodic and will form a protective oxide layer, while parts not in contact with oxygen are anodic and will corrode as a result of an electrical reaction from the cathode. This is evident in steel posts (not seat posts, just…posts, like fence posts) buried in the ground—the highest level of corrosion occurs just below the ground surface, where there is little oxygen.

As corrosion continues, an oxide layer builds up immediately around the anode and cathode, saturating the respective areas and eventually slowing the rate of corrosion. If the rust is cracked or scraped away, the newly exposed metal will again react with oxygen to re-form the oxide layer.

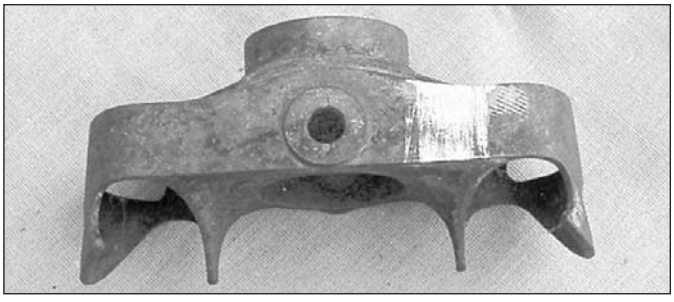
Pitting corrosion appears when different areas of a metal surface take on different electrical potentials because of variations in metallurgical properties or variations in the surface oxide layer, such as a crack or chip in bicycle paint, thinning of the oxide layer, or a contaminant like dirt or grease. The metal at the top of the pit is exposed to more oxygen and becomes the cathode. At the bottom of the pit, oxygen is depleted, and the metal there becomes the anode.

Crevice corrosion begins when joined pieces of metal form a crevice not easily filled by oxygen.That isn't as much of an issue for bicycle frames.

When dissimilar metals are joined together by an electrolyte—such as seawater, rainwater or water vapor—



Pitting Corrosion Cycle (from Metal Corrosion Basics by Mike Sondalini). This is typical surface rust.



A purposely-rusted fork crown with some of the rust removed to show the protected metal beneath it. Of course, this is a thick piece of steel, and frame tubes are thinner. Rust-prevention sprays are good on any steel frame, but are mandatory on super-thin (0.4mm or less) tubing. Typically, our thinnest tubes are 0.5mm.

the more anodic metal corrodes. This process, known as galvanic corrosion, results from the difference in electrical potential between different metals, and is why we grease aluminum seat posts before installing them. (This is especially important with titanium frames.)

Steels Rust at Differing Rates

The steels used in modern bike frames are much more resistant to rust than, say, railroad spikes, which are pure iron. Left unprotected and exposed to a harsh environment—repeated wetting and drying, extreme humidity, salt water and air, for instance—they'll build up a crusty orange coat, yes. But a ride in the rain won't hurt them.

Is rust a big deal?

That depends upon the chemical content of the steel, the ambient environment, the presence of an elec-

trolyte, and stress conditions. Some studies show that steel placed in a marine environment for 15 years could corrode at a rate that reduces the thickness of a steel plate (or rolled tube) on the order of 200 microns (1 micron = 1 one-millionth of a meter). Since the thickness of most bicycle tubing ranges from 400 microns to 750 microns, there's no short-term threat. And, you can prevent corrosion.

Preventing Rust

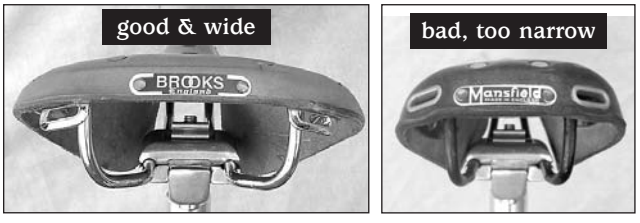
Steel can be galvanized, with a bonded, protective coat of zinc; the zinc corrodes first, and a protective layer of zinc oxide forms. Non-metallic coatings—paint or metal protectors like Frame Saver or Boeshield—act as a physical barrier between oxygen and metal. Nail polish and paint will do the same, as will lanolin, grease, or anything else that coats the metal and provides and oxygen-free environment.

(Editor's note: I coated a bare steel lug with a thin layer of lanolin (wool oil) and left it outside for almost three years, and it looked the same at the end as it did at the start of the test.)

Finally, make sure the surfaces of all metal parts are completely protected with grease before you bolt or clamp them on.

Would you have less corrosion with a non-steel frame? Maybe, but titanium corrodes, just at a slower rate than steel. Likewise, carbon fiber is made of individual fibers woven into a material that is infused with resin. While resin and carbon fiber do not corrode, resin degrades, and heat and ultraviolet light can dangerously weaken it.

Rust looks worse than it is, and is easy to keep under control and outright prevent. Now that you understand what's going on between the metal and the environment, and you know that rust can even be a protective barrier against further corrosion, maybe it won't seem so ugly to you. There's no need to cultivate it, though.



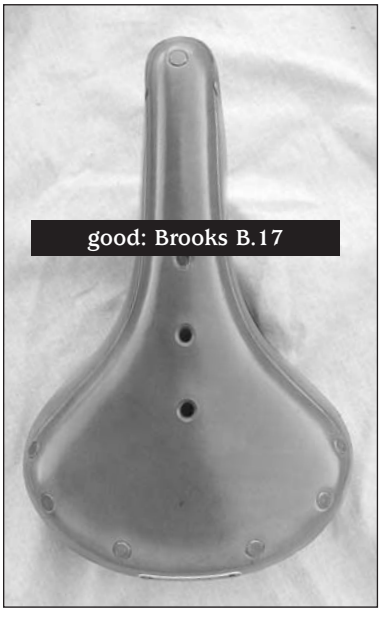
Above: Rear view of the Brooks B.17 at left, and the Mansfield Mod. 44 at right. The B.17 is 17cm wide; the #44 is 11cm wide—2 3/8-inches narrower, and nobody has sit bones that close together. If it didn't have bag loops I'd have guessed it was made for track racing only. But it does have the loops, so by golly, why so skinny?
Top right: Top views. The Mansfield #44 is so skinny, no room even for the post clamp, so the leather got forced outward.
Right: Side views. The B.17 is higher in back than in the middle, so you sit on your bones, not your artery. The arch of the Mansfield drives hard leather right up into your crotch, and it hurts immediately.

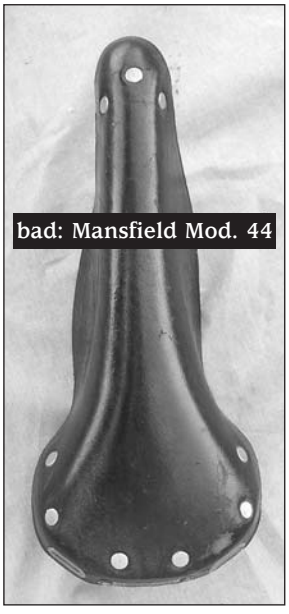
The Worst Saddle Ever?

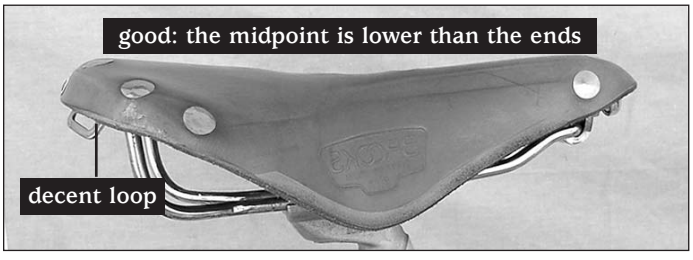
Totally unrelated to metal corrosion. Merely a harmless pot-shot at the Mansfield Mod. 44, a no-longer made saddle from a defunct maker out of Birmingham, England.

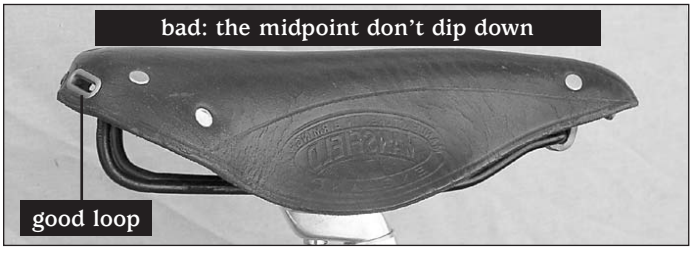
It's not kicking a dead horse. The real point is to show, not just by good example but by bad as well, the details that go into making a comfortable saddle: Sufficient width, rear flatness, and a mid-portion that's lower than the rear part. If those things are in place, the saddle would be comfortable made of almost anything. (Leather is good because it doesn't crumble and has some give to it, but it's still the shape that makes the comfort.

We put the Mansfield Mod. 44 on a bike. It is shockingly uncomfortable. I mean, you can't believe it. It actually feels worse than you expect it to. If you're local and want to give it a try, come on by, but sign the waiver first.









New Projects

Buffalo…just like the -head nickle

Bikes aren't designed for riders who weigh upwards of 350 pounds. but big people stand more to benefit from riding than anybody else, and have fewer exercise options. No fair. We'd like to see a bike made specifically for them, and have designed a bike that ought to do the job. It's a prototype, tig-welded for us, to our specs, by Kirk Pacenti. If we end up making the bike it'll be lugged, and as much as we'd like to be able to do that now, it's not likely, given that it would require $25K in tooling. We are that dumb, but not that rich. Meanwhile we had a prototype tig-welded, and one of our members will test it and report on it in the next issue. The working name is Buffalo.

SB Q/R for B.17

Ex-RBW employee Andrew has designed a neat saddlebag quick-release, and we'll send it to Nitto for fine-tuning & making. No eta, but hoping for 3/05.

Unicycles?

Nobody here knows how to ride a unicycle, but we wanted to learn, and naturally we wanted to start off on a quite nice lugged one. The folks at Toyo like unicycles and know a lot about them, and they want to make some for us, and in the absence of somebody mean and with lots of clout saying NO, we're going to do it. This may be a one-time run, but these will be special unicycles. The seat lug will be the Glorius/Wilbury lug, and we have at least one other nice detail in the works, if it's not too hard and doesn't jack up the price too much. The plan is to get 50 here in time for Christmas. I know what you're wondering: 650B? *Maybe.*

Maybe a new Atlantis-style bike in '05

We are considering offering a complete Atlantis, sort of a Romulus to what the Rambouillet was—in other words, a frame nearly identical to the Atlantis, but with a few inconsequential simpler details, and sold as a complete bike for less loot than a complete Atlantis is—not that a complete Atlantis isn't a super bargain already. But this would be a single-color paint bike, with simpler lugs, and would likely be built by National/Panasonic, not Toyo. It would have Moustache H'bars, and all Japanese parts, just like our other bikes. Target price, about $1600.

MUSA

We're getting our own line of semi-serious cycling clothing. Not like WoolyWarm, our brand of woolies, but things like shorts and tops that aren't wool. It's nothing against wool, it's just not wool because, as world-beating as wool is, there are some time when wool comes in merely a close second. MUSA stands for Made in the U.S.A., and again, it's nothing against foreign labor, but we thought we'd try to make a go of a small line of clothing that's actually made here. It doesn't work for high volume makers—the savings from Chinese or Vietnamese labor are just too great to overlook when you're doing $10 million dollars or more per year. You could save several million dollars, and heck, use a small fraction of that for some high-profile community project, or brag that you donate 5 percent of post-tax profits to this or that organization, and you're still way ahead in profits, and lots of people benefit. As a bigger company made possible by more profit, you can employ more people here, and that counts for a lot. So, "Made in Sri Lanka" isn't always a bad thing. But these are MUSA, not MSL.

How does one start a clothing line? One hunts around, and one eventually hooks up with a company made up of people who used to design and make gear for The North Face, before The North Face went east like everybody else. We're starting small with the following things, which are designed right now and will be available in February of 2005. More photos will follow as we move along.

Riding Shorts

Light brushed nylon with no liner at all (wear separate undies, like Andiamos). Two pockets front, two rear, medium long, separate removable plastic belt. Cacky only, $37 and worth it.

Riding Pants

A long version of the pants, with the same fit, fabric, and details. You can hike up the lower portion to knickerize them (or you can tuck them into socks). They're neat enough for casual wear, and will cost $55. Cacky.

Riding Shirt

Long-sleeved seersucker, of course. Styled like a regular buttoned-down shirt, but with a buttoned breast pocket to hold a small camera. You can wear this one anywhere and nobody will stare. $42

Saddle Bonnet

Not for human bodies, but if it's a bonnet it's a garment, and we wanted a better supply of saddle covers. The Carradice ones are great, but these are as good and delivery is a lot better. Grey. $14.

Progress Report on current & old Projects With Extreme Emphasis on the 2 Bikes Shown Below

Glorius & Wilbury (the Mixte bikes)

Originally set for Summer, now it's looking like January or February. If you're in line for one and eager, sorry about that, but there's no way around it. We have prototypes, and based on those, we've decided to—well, a long story, but originally we'd planned on a 50, 55, 59, 63cm size run, with the two smallers using 559 (mtn 26) wheels, and the two biggies, 700c. It made sense on paper, but we built up a 59 prototype and discovered some clearance issues that would have made it impossible to fit a 700x37 and a centerpull and a fender, and have sufficient room on the sides. So we are now putting 650B wheels on the bigger bikes, and since we're doing it on the bigs, we're doing it on the 50 and 55, too…bupcept we've changed the sizes now, too, to: 50, 56, 60cm.

Before you howl "Stupid, short-cut, *they're dumbing down the mixte, for crying out loud, and even before it's hatched!* what a rook!", don't even think that. The wheel size, yes, it's a pill to swallow, but it makes functional sense, especially considering the problems they solve that 700c created. And as far as availability goes, well, we've got that covered. You still won't be able to buy a 650B rim at Cornelius McGillicuddy's Bike & Mower, but we'll have them, and Sheldon @ Harris will, and we expect many of our dealers to keep a few on hand, and if you're really paranoid about being left high & dry, don't get the bike. But you'll be missing out on a fine bike if that's the case.

We say hang in there. Be patient. We're going to do this right, nail all the details, or we just won't do it at all. An update in the next RR, which will be out before the end of the year. If you want the latest news earlier, check the Riv Forum, or email updates, or email Grant@rivbike,com. Colors: Dark Green, Red, and Periwinkle.

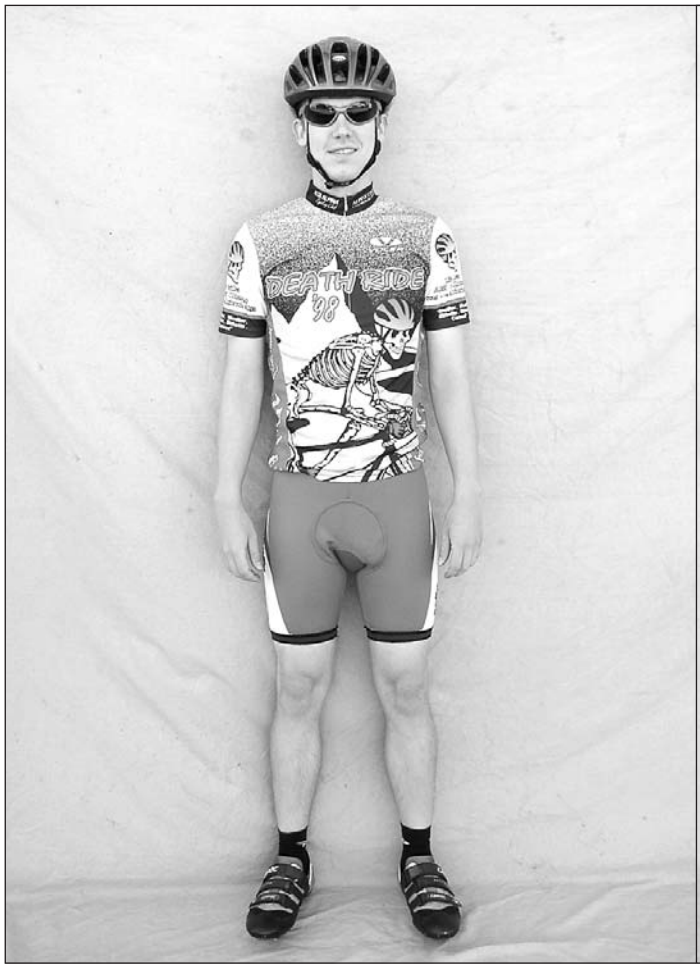
Saluki

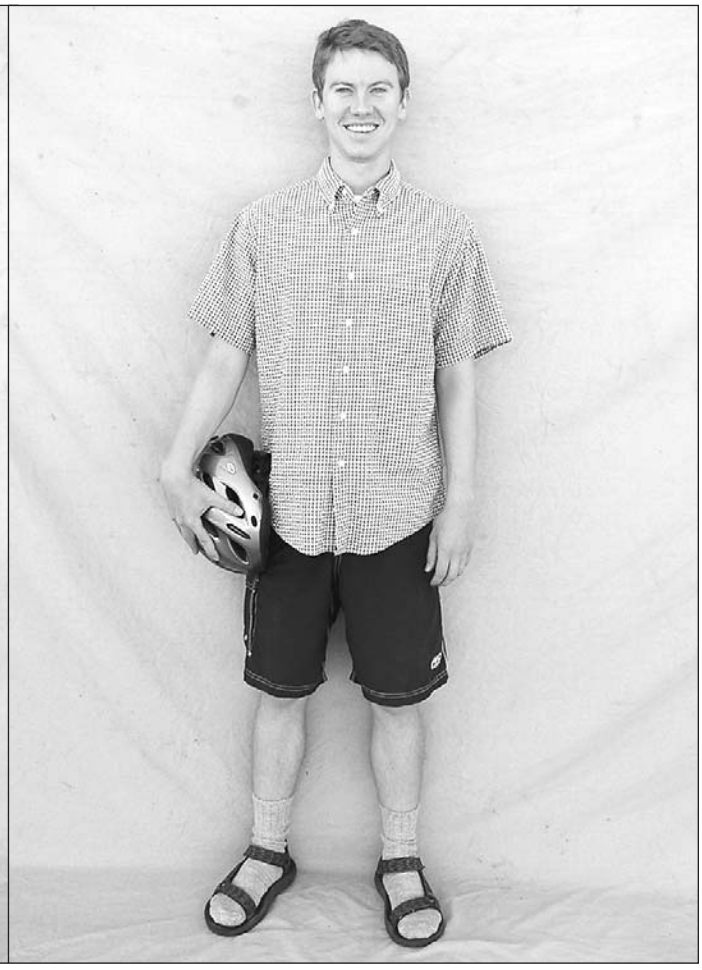
The Saluki, our tourish-trailish-brevetish 650B bike, should be available before the year's end. Have we ever beat a deadline, though? Have we ever even made one? This time, we're trying really hard, but there are a few details that need ironing out, and we won't rush those.

Sizes 47, 50, 52, 54, 56, 58, 60, 62, and we're getting in 100 of them, Half will be built for centerpulls (we will stock), half for cantilevers. Holy cow, that's only about six of each size in each variant. Two colors: Undecided. You can see the lugs in this issue, and we'll have lots of photos in the next issue.

Some of you have these on order already—about 25, as I recall. Thanks. Now it's time to pick the brakes for it. We'll call you if you don't call us, but we have a toll-free number: 800 345-3918.

Big Saluki report in the next issue.





Sartorial Advice For New Riders

You didn't put on a costume to ride a bike when you were a kid, and you don't have to now. This seems contrary to the message you get when you see riders on the road, read a bike magazine or visit a bike shop. But it's true, anyway.

Will serious bike riders reject you if you don't dress like the rest? The nice ones won't. They may try to mentor you, suggesting you start wearing cycling-specific gear. Part of the reason is that groups like it when their members look alike, and part of it is plain, old-fashioned, let's-not-read-evil-motives-into-it good intentions.

Their arguments will be compelling: tight clothing is more efficient, a shoe that locks solidly to the pedal and has a rigid sole transmits power better, gloves save hands, glasses save eyes, padded shorts save crotches, helmets save brains, and neon jerseys in wild patterns make your more visible. Taken in all at once, cycling-specific clothing seems like a no-brainer. But how relevant are any of those to someone who just wants to have fun riding a bike, go somewhere, and burn off a pork chop? Not too, of course.

For every modern/common cycler item of clothing, there's a more humble alternative that works as well or better, much, most, or all of the time. For instance…

Tight clothing

Tight clothing is for showing off bodies and aerodynamics. It's great when some people show off their bodies, but aerodynamics don't matter unless you race, and even then, just barely. If you drift that way over time, , then don your skin suit. But until then, a loose flappiness keeps the sunbaked fabric off your skin, improves ventilation, and feels good. For hot weather riding, nothing—including the fine wool cycling jerseys we sell—beats a loose-fitting lightweight seersucker shirt. For bottoms, go with lightweight, baggy trunks or multi-purpose shorts. They're usually brushed or textured nylon that's made to look and feel sort of like cotton, and with a Coolmax liner.

They'd be even better without the liner. It's best to have

a separate panty you can wash. Sewn-in panties for cycling don't make any more sense than they do for high-fashion slacks or farm boy dungarees. The worst ones are cycling-specific "casual" shorts, with a sewn-in diaper pad. You're way better off with a non-cycling short and, for the pad, wearing Andiamo cycling underwear. You sweat up the crotch and wash the undies separately, just like you do with your normal pants.

Warmth and Wind Blocks

Cold-weather cycling clothing is easy, too, and you probably already have plenty of it. Our favorite is wool, in layers—t-shirts, long-sleeved shirts, vests, sweaters, whatever you have or can get. But if you're allergic or already have a closet full of fake fleece, that'll do.

What about a shell of some sort? Some riders put on a rain/wind shell at the slightest hint of drizzle or breeze. That may be because shells pack smaller and are easier to carry than an extra insulating layer. But shells totally block wind, cut off ventilation and the pleasant cooling of evaporation (even breathable shells do this). And they flap like mad and make noise. If you still want your shell, try wearing it under your outer layer of normal clothing. When it's just windy and not raining, this makes sense.

Wear clothing you feel comfortable in, physically and in your head. I tend to emphasize wool because I'm nuts for wool, but be true to yourself.

Shoes & Socks

Cycling-specific shoes that click in to "clipless" pedals are the most oversold and unnecessary cycling things ever invented, at least for non-racers.

Their benefits have been grossly exaggerated. Their main selling point is that they allow you to apply power 360-degrees around the pedal stroke; but that's impossible, and studies prove it. Joe Blow rider may say he does it, but when scientists hook up wires to the leg muscles of elite cyclists to determine which muscles are active during which phase of the pedal stroke, they've consistently shown that, with the exception of super low cadence, ultra-steep climbs, nobody pulls up on the backstroke. People say they do.

Good pedalers are more efficient not because they apply power all around the stroke (because they don't). They're more efficient because they unweight the upward-moving pedal. You can do that fine without being clicked in. Unweighting and efficient pedaling comes from training your muscles, and that doesn't depend on being locked in. Consider that if you don't unweight, one leg is fighting the other as you pedal.

Anyway, for lots of riding, it's hard to beat sneakers, court shoes, and Teva-like sandals. Sandals are good all year around. In the winter, you just wear thick socks with them. In a downpour it's good to have a bootie over any kind of shoe, and you can get them for sandals, too. You can get cycling-specific sandals, and if you ride with click-in pedals, they're necessary. But the problem with cycling sandals, is that they're always too rigid, and they isolated your foot too much for riding on regular (non-click-in) pedals. You can't tell where the pedal is beneath your foot.

So regular sandals are great. Teva Hurricanes are super light, grippy enough, protective enough, and they don't completely block the feeling of the pedal.

But if sandals are too out there for you, ride in court shoes, Vans, or just about any regular shoe that doesn't have a slippery sole. See how liberating it is to be able to hop onto your bike without changing your shoes, start and stop at a traffic light without even thinking about disengaging and reengaging your shoe and pedal, stop halfway up a steep hill to take a photo or wait for a friend, and be able to restart by stabbing the pedal with your shoe anywhere. Just like when you were a kid.

Gloves

Obviously, gloves protect hands when you fall, and there's always a risk of a crash. If you're a surgeon who's going to operate on *my* brain, *my* heart, *my* plumbing—by all means, wear the gloves. But for pleasure rides on known routes and at speeds of less than 25 mph, gloves don't make that much difference. We sell gloves, and I like the ones we sell a lot, but they don't belong in the "don't ride without them" category.

Gloves get stinky over time unless you wash them a lot. If the prospect of putting your clean hands into stinky gloves turns you off cycling, give up the gloves or have several pair and a rotation going. If you're concerned about sun-damaged hand skin, consider lightweight white cotton gardening gloves. Think outside bike shop and bike catalogue.

Sunglasses

I wear them and wish I didn't. I like the effect on me (no squinting, eye-protecting), but shielding your eyes from other people isn't…well, I don't have the studies to prove it, but when people can't see your eyes, they don't care as much about you, and when you know you're behind sunglasses, you're more likely to behave badly because at some deep level there, buddy boy, you think nobody can see you. That's my theory, and I'm sticking to it. But still, I wear them—about 60 percent of the time, anyway. I like non-wrap-around, because I think they're less scary to people who don't know me.

Summing Up

A full-race costume tends to put you in a go-fast frame of mind, good for racing and fast club rids, but not on recreational and fitness rides, commutes, and fun rides with friends or family. A casual get-up lowers some of the barriers to riding, encourages impulse rides, and works as well or better for lots of riding.

Although it's not obvious in this photo, the saddle was 4cm too low for Beth's 69.5-70cm saddle height (based on her 80cm pubic bone height). Also not obvious, her knee is too far forward, the result of moving the saddle forward on the rails to shorten the reach to the bar. That's not the way to do it. A better way would have been to set the saddle for-aft properly, then raise and shorten the stem. The stem can't be too much shorter, maybe a cm, but it could be raised a lot. We could've done that for this makeover, and maybe should have, but it was more fun to put the Albatross set-up on it, and everybody needs a bike like that. Besides, Beth is going to get another road bike once she's back into it again.

Good clearance! Room for up to 700x35, or Ruffy-Tuffies w/fenders. Oops, the Q/R is up.

The stem was too low. It could have been raised. The headset looks bad, but was in fine condition.

Natural gum hoods look great but don't age well. She needed new levers, and the new ones will.

The bike came with 52x45 rings, an odd combo even back then. Nice Campy crank, but the wrong gearing for hilly rides. This bike need a triple, so we put one on.

Bicycle Makeover IV

Fuddyduddy-izing a classic English road racing bike

Beth has lots of miles on this Raleigh Pro, but it never fit her, and due to a change in job and life, she hasn't ridden it in 11 years. Now she's starting up again.

It's a 54cm with a 56.5cm top tube, and Beth is 5ft-3in. with long legs. The frame size is what she'd ride in a Rambouillet, but the bottom bracket drop is less on this Raleigh, and so the top tube is too high.

Beth used to live in Berkeley and managed to grind over the Berkeley hills for years, even with the 45x26 low gear. Now she lives in the mountains and the climbs are longer, the elevation's higher, and she wanted lower gears for that. Plus, she wanted a super comfortable bikefor just normal pleasure-utility-putput riding, and so the old parts had to go. This is *not* a shame.

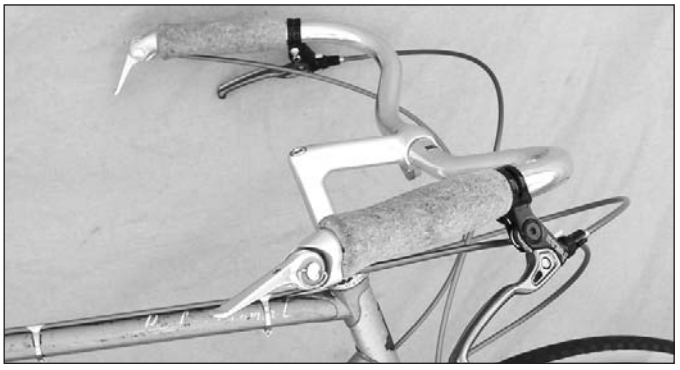
There are tons of old road bikes and mountain bikes out there that aren't being ridden for one reason or another, but are still perfectly good bikes. Usually you've gotten a newer better bike of the same style, so there's no reason to ride the old one anymore. To make the old one more usable and desirable, you have to move it out of the category it's in (road bike, mountain bike) and put it into a new category (fun-comfort-utility bike).

The best way to do that, and the biggest difference you can make, with the most dramatic positive effect, is to swap out the bar and stem for an Albatross (or Dove) bar set up. On an old mountain bike, it's a big improvement over the flat bar that came with it, and on an old road bike, this set-up will lift you right up. You'll have a good bike and a more comfortable ride. That's the idea.

The madeover bike is much more comfortable and practical for casual rides and just getting around on a bike; and it fits better, too. The new parts cost between $300 and $350, and with only basic maintenance and the odd replacement part, Beth will be riding this bike 25 years from now. Although by then, she might want to be on a mixte.

The wonderful, good-for-everything Sugino XD2 crank gives the bike a wider range of useful gears. 46x36x24. New BB & pedals to go with it. $170 total.

I always like to force SpeedBlend tires on anybody, and did so to Beth—the idea being that perhaps when she's riding around her small town in the woods, maybe an influential car tire executive will see her, like the tires, and the next thing you know, I've covered the cost of the patent.



Cork grips, mtn levers, Albatross bars, Nitto stem, Silver shifters. The bike was a 6speed. It got a new freewheel, too (13x28). She has a better position on this bike, and perfect shifting and braking. We kept the Campy brakes, just lubed the pivots, replaced the cables.

The lovely old Campy derailleur wouldn't work well with a triple or the bigger cassette, and doesn't work as well a new Shimano anyway, so good-bye. We kept the Campy front. Even though it's designed for two chainrings, it works well enough with three to make it worth keeping, sort of as a reminder or something like that. It works fine still.

Red Hen Baking Company

In every issue we profile a member's small business. This time, it's Randy and Liza George's Red Hen Baking Company, in Vermont. The interview is with Randy.

Some of the crew out front last Winter, when Liza was still pregnant. Randy at right.

How did you become a bread maker?

I have a picture hanging on our wall at home that my parents gave me a few years ago. It's of me baking bread with my mother, in 1972, when I was three. I've been baking ever since, but more intensely since 1993 after I graduated from college (with a theater degree). That's when I went to Seattle to find a full-time baking job. (I put myself through school working part-time in the college kitchen.) I was there a year, moved back to Maine near my family, and worked in another bakery for about a year. Then I went west again to Portland, Oregon, where I worked for the Grand Central Baking Co. Eventually got to manage a smaller offshoot of Grand Central called Black Bear. We made organic breads

I met my wife, Liza, in Portland, but she was from near where we now live in Vermont and we both wanted to get back here. I knew that if I was going to continue to do the only thing I knew how to do in the way I like doing it, it would mean going into business for myself, so I hauled a used, 8000 lb. oven (that I bought from Grand Central) across the country in January of '99 and in September of that year, we opened.

What were the first years like?

That first year, we had no idea what to expect. We've always been a seven days a week operation and that summer I worked 100 days in a row without a day off—and most of those were at least 12 hour days). Things have mellowed since—I'm down to six 10-hour days, so I can ride my bike about 3,000 miles a year.

Why don't you use yeast?.

This is a complex subject, and a confusing one for a lot of people, especially those who don't bake bread. It's not easy for me to sum up, or even to talk about, but I will try.

We live in a country that has a limited history with leavened breads, and lacks the proper vocabulary to describe them. In most European languages, there are words that describe the way these breads are leavened, and people have an expectation for how bread made with a certain method will taste. In this country, we have the all-purpose "sourdough," which is fine if your bread is sour, but so many of the unleavened breads made with the traditional European methods aren't sour, and have a more complex flavor than most sourdough breads.

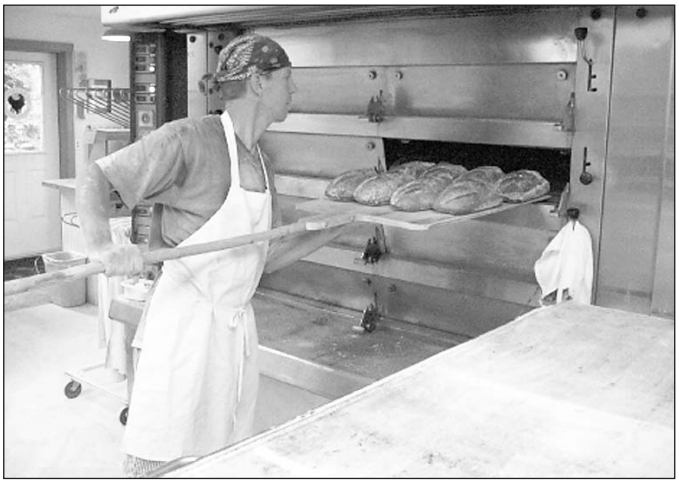
Sourdoughs are naturally leavened (meaning they don't use commercial yeast), but some use a yeast starter to help with the leavening. So, to answer your question: there is yeast in our breads and they're all leavened. But most of them make use of natural (or "wild") yeast and bacteria to do the leavening. Unleavened breads are things like tortillas and crackers.

To make things more confusing, about a month ago we changed to a more traditional method for our baguettes—one that uses a *small* amount of commercial yeast. It's only been about 150 years since people started isolating yeast and producing it in a factory, separately from the bread making process. Before that, all bread was naturally leavened. But when yeast began to be cultured separately, it enabled bakers to leaven bread without the starters that had been used for centuries. This was great for saving time, but bakers who were paying attention also discovered that eliminating the starters eliminated the flavor and nice texture that characterizes a good loaf of bread. Some bakers advocated a return to the traditional of making naturally leavened breads. Others worked with commercial yeast, but in very small quantities, and found that if they made long-fermenting starters with this yeast, new flavors and textures arose that had some of the characteristics of the old breads and a little bit of the lightness of breads made solely with commercial yeast. The most famous method of this type is that known as "poolish." The first baguettes were made with a poolish and that is still how most of them are made.

Because I am a purist to a fault, and because my first love in baking will always be for the natural leavening process, when we opened the bakery, I wanted everything we made to be naturally leavened–even our baguettes. I knew we were bucking tradition by making baguettes that way, but I thought that we could make a good baguette without any commercial yeast.

For four and a half years, we did a pretty good job of this. But one thing about a bread made with natural leavening is that it will have thicker cell walls and the crust will be a little more tough than a bread made with even a very small amount of commercial yeast. The crust and crumb (or interior) of a baguette should be light and flaky and we proved to ourselves that, although you can come close, you just can't get a baguette as light and flaky as it should be without this "poolish method," as it is called. So now our baguettes use a method that's been around for over a century and the rest of our breads are made by

LEFT: Proof that Red Hen Baking is a family business. Mom Liza and Maia.



RIGHT: Matt removes loaves.

methods as old as bread itself.

All of us like our baguettes a lot made in this way and we enjoy the fact that using a poolish expands what we do. We work with six different starters now that we've added a poolish and it is the manipulation of the fermentation process using flour, water and microorganisms that endlessly fascinates me about bread baking. We will always make breads using long fermenting starters. Now our baguettes have about 3 tablespoons of commercial yeast for every 100 baguettes.

Is this a dream or temporary?

I think that I will always be involved with baking bread for a living. What we have achieved as a business is beyond my wildest dreams in many ways.

Aside from the fascination I have with bread, the other thing I love about having this bakery is the feeling of being appreciated in the fairly local area that we deliver to. I never thought that what we do would be as popular as it is and, although that is a lot of fun, it can be overwhelming on a personal level. It's not like we can just turn up the machine and crank more bread out. There are people behind every part of the process and we're small enough that I'm very personally involved with managing our crew. This has been very gratifying, because we have always been blessed with a lot of great people who come work for us, but people usually move on and when they do it becomes stressful, since our business operates nearly 24 hours a day, 365 days a year. So in the next few years we're going to look

at ways that we can change things so that we have a little more of a life outside of work.

Hopes for the business?

As I said above, we need to work on finding a way to run the business rather than having the business run us. I want to stick to what we do, but be able to get away to spend time with my wife and new daughter– and to ride my bike. I envy people who have businesses that aren't so demanding, but at the same time, I love the fact that, like cows that need to be milked, we have starters that must be fed twice a day and bread that must be baked and delivered every morning. I feel like what we provide is an essential service to the community. My hope is that we can keep that element and still find a way to get away from the business a little bit more.

If you could have the past back and do ONE thing over, what would it be?

I guess I'd say that I wish that we had started by making our baguettes the way we are now. That way people wouldn't be confused or think that we've turned our back on our ideals.

Is there anything you'd like to change now?

We'd also like to move to a place that would offer us some more retail opportunity. We're starting to look for a building that we could renovate or build to suit our needs.

Who decides what kind of bread?

Mostly me, but a couple of our bakers have provided the inspiration for some of our varieties. The Pumpernickel and Sprouternickel were ex-baker Josh's brain-children. Dave has made several different special items that we offer on a limited and rotating basis at farmer's markets and to some CSA (Community Supported Agriculture) farms that we have partnered with.

Favorite breads (you and customers)?

I like them all, but my favorite is the Miche, a traditional French country loaf inspired by the bread of the famous French baker Lionel Poilane. He helped revitalize that type of bread in France, and has inspired bakers in the U.S., too. His miche is a huge, round bread weighing 4 1/2 lbs. Ours weighs 2 1/2 lbs., which is still pretty big. We make a special, mild starter for it, and it has Vermont-grown organic whole wheat and organic whole rye. It's just hearty enough to make it feel substantial, but light enough to be a good accompaniment to almost any food, and since it's so big and is naturally leavened, it keeps well.

Do you ship your breads?

We will, but then you get day-old bread at best, and it costs twice as much or so, with the freight. I always tell people they're better off buying from their local artisan break baker—which works if they live in the S.F. Bay Area, Seattle, or New York. But we still get orders, and we will ship, yes. If you buy several loafs, the overnight freight gets spread around more.

Contact

tele: (802) 244-0966

email: randy@redhenbaking.com.

website: redhenbaking.com.

Rick ‘n Me

by Maynard Hershon

My buddy Rick lives in Denver, but he and Sue often visit Tucson. Rick decided to buy a bike here and leave it here, save the hassle of hauling one back and forth. At a local shop, he saw a steel frame from a respected builder in French Canada. It'd been assembled with Shimano Ultegra pieces, precisely what Rick wanted, and it was just his size. He even liked the colors and paint scheme.

Perfect, he thought, and bought it. He and the dealer agreed that the next time he came to Tucson, Rick would stop by the store so someone there could set him up on the bike: saddle position, stem length and height, you know.

Next visit to Tucson, Rick made an appointment for the fitting. When he arrived at the shop, the employee asked him to put on shorts and cycling shoes. While Rick changed clothes, the guy clamped Rick's new bike into a stationary trainer.

The idea was, Rick would sit on the bike and pedal. The shop guy would study Rick's position, then make changes so he'd be comfortable, balanced and in control.

Rick threw a leg over the top tube and clicked into a pedal. When he sat on the seat the bike abruptly fell over, Rick with it. Somehow, the guy hadn't fastened it securely into the trainer.

Rick was surprised but unhurt. His bike wasn't so fortunate. The rear-axle mount on the trainer had scraped the new bike's seat stay just above the dropout.

Heartsick, Rick brushed the scratched area with his fingernail; he saw steel shavings mixed with the paint chips. There was no way to tell if the frame had been weakened. Was the damage merely cosmetic - or was the frame ruined?

Even if he could be sure the frame was still strong, Rick couldn't imagine how he could successfully touch up the paint. His new bike would never look new again.

Rick asked the shop how they wanted to handle its replacement.

Was Rick too fussy? What would you or I have done?

Remember, WE did not just buy a lovely new bike that's now marred (perhaps ruined) by the dealer who sold it to us. It's Rick's bike, not ours. We can be clear-headed and casual – about damage to other people's bicycles.

We might say: If the rear wheel fits like it did before, if it still centers between the stays and under the brake, that frame is fine. It’s strong and straight as new. Clean up the scraped area with sandpaper. Find some touch-up at a hobby store. Paint the seat stay and ride the bike. It's just a bike. Ride it.

And maybe that's just what Rick should do. What should I do?

Last month, I submitted a piece to a local cycling magazine, an article about bicycle seats. It was not Hamlet. I hope it was fun and informative. It came from hours of work and years of learning about cycling.

After I sent the piece to the magazine and before the readers saw it, someone, surely with the best of intentions, "edited" the piece. That worthy person did not find technical mistakes, bad information or grammatical errors. The piece was not overly long, as is all too common. I welcome editorial help with any or all of the above, by the way. This was different.I suspect the editor felt he had to justify his title, so he went at my article with a chainsaw, not a red pencil.

That person cut-and-pasted the piece into a form I never intended. combining many nice, short paragraphs into fewer, longer, harder-to-read ones. And wrote a silly, senseless sentence and inserted it into my article. MY article.

Does it surprise you that such things happen? Trust me, they do.

By the time I realized that some well-meaning editor had (in my view) sabotaged my article, 25,000 copies hit the shops. Twenty-five thousand readers assumed that because my name was on the piece, I wrote every sentence in it and arranged it precisely as it appeared on the page.

I would joyfully return my paycheck if the nice folks at the publisher’s office would recall all those magazines, but that can't happen.

Looking at the wreckage of my piece, I got heartsick the way Rick did looking at his scratched-up bike. I couldn't stay clear-headed about the way my article turned out. If I could've, I'd have reminded myself that the work I sell to most print and online publications is merely filler. It fills the spaces between ads.

It's not Hamlet, remember. No one reads it carefully. Perhaps no one reads it all the way through. I may be the only person who noticed that stupid sentence or the order and length of the article's paragraphs. Maybe no one cares but me.

Is my article ruined because I alone think it is? If no one else is bothered by the changes, am I just being a big pain? Is the article every bit as effective, every bit as good as it ever was? Am I too fussy?

You could say Rick earned the right to be fussy when he paid for his lovely new bike. You might say I earned the right to be fussy when I made a story out of nothing, out of my imagination.

Hey, Rick's bicycle is probably fine; my piece is probably fine. Enough already. Rick and I should just cowboy up. He should slap some paint on that stay and get back on his bike. I should touch up the scratches in my pride and get back to my keyboard.

I might have done just that, too. But I emailed the magazine, saying that I'd have been pleased to have done any editing they deemed necessary. I've been in town all along, I told them, never far from my computer, always happy to help. I asked them not to edit behind my back.

They told me my scratched bike was better than new. I did what you'd do. Now they're deciding how to handle my replacement.

Who rides a Rambouillet?

Name & Age: Cora Haselbeck, 41

Job: XRay/CT Tech

Hobbies: Gardening, Bead Stringing, Yoga for Hardtails, Caring for my Elderly Bikes

Favorite Author: John Steinbeck

Favorite Movie: Silent Running, Mad Max, Alien(s), A Clockwork Orange.

Favorite Foods: Duck L'Orange washed down with Orangina. Orange Otter Pops on a hot day.

Years riding a bike: The day training wheels came off the Schwinn Pixie (my first lugged steel bike, Age 6)

Typical Ride: Santa Cruz Mountain Roads and Trails.

Dream Ride: Single Track and Language Immersion Tour in the Alps.

Other Bikes: A tricked-out Charlie Cunningham, and an old custom Ibis mountain sike.

Why this bike?: I was turned on to the Rivendell Frame by a friend who spoke of its beauty, design principles and the builders high standards. I thought it was an bargain for a piece of Kinetic Art.

I've ridden mainly off road and wanted a touring bike that could frolic onrough mountain roads and mellow single track. Also I enjoy cleaning a pretty bike. The Rambouillet is the obvious choice for me.

To be here: Send image, posed as shown behind the left side of any of our bikes on a plain background, and with no harsh shadows. No need to hang up a sheet behind you, but it helps. B/W TIF or JPEG preferred, not required. If you send us an electronic image and know about these things, might as well make it 8-in wide, 200 dpi, TIF or JPEG to John@rivbike.com. Then....be really patient. Thanks.

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The USPS RULES!

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