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A Secret Magazine for Bicycle Riders

32



When Song Censors Worried About *Louie Louie*

T

his year Shimano introduced Saint, a blackish-grey component group for downhill and stunt riding. Imagine the possibilities if Shimano put its engineers and weight behind a touring group at the Ultegra level. Here's what I'd like to see:

A 132.5mm rear hub, which would fit in either a 130mm frame or a 135mm frame. Both sizes have been common for years now, and the proposed group should accommodate either. The in-between 132.5mm-spaced rear hub would do that. If it were a 130 or 135, no biggie. I think the concept of "splittin' the diff" might not sit well with Shimano's engineers. *If that's the case, do the 135.*

A 7-speed cassette with two ranges: A 12-13-15-18-21-24-27 for riders who don't need super low gears, but still don't want to hate the hills; and a 12-13-15-18-22-27-34 for touring. This one would work for half-steppers, but would also be just a generally good all-around super-wide range cluster.

A 110x74 chain ring bolt pattern triple crank with 46 and 48t big ring options, 34 and 36t middle ring options, and 165, 170, and 175mm crank arms. If they want to be nice, a 172.5 also.

A front derailleur that matches the radius of the smaller big rings and works well on bikes with low bottom brackets. All they'd have to do is make a shorter cage and radius it differently. This is asking a lot, but: A matching 7-speed indexable bar-end shifter would be great. You can tour with STI, but bar-end shifters make more sense, and seven rear cogs is plenty for non-racing use. The rear wheel would be stronger, and the chain wouldn't require a special pin, as the current 9-speed chains do.

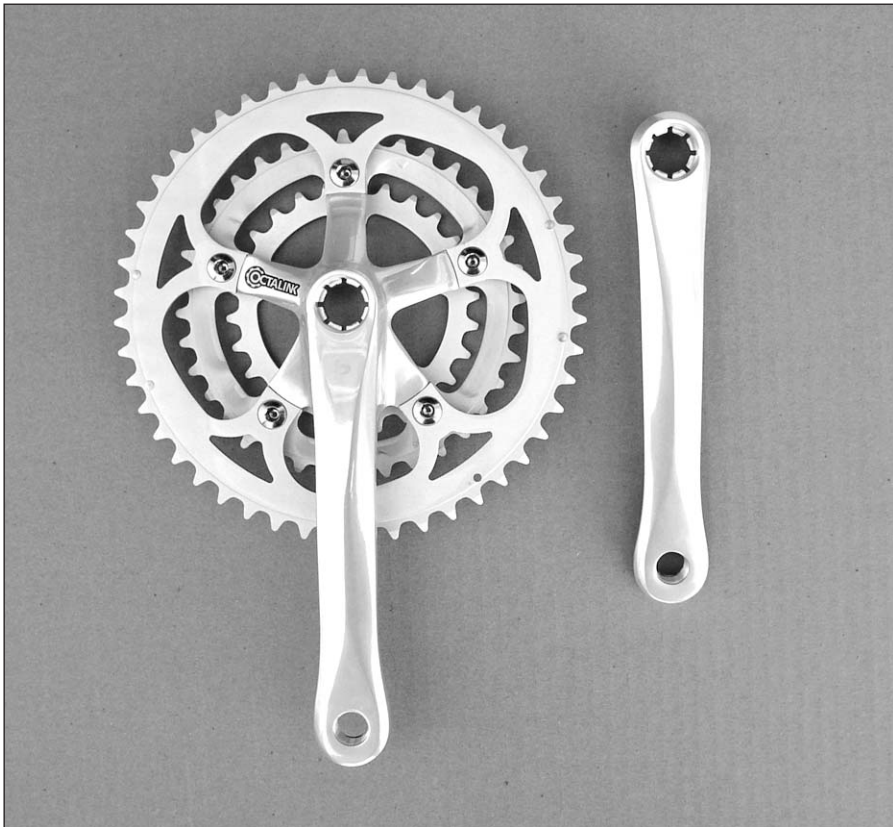
Current, interbrand-usable bottom brackets. These days Shimano's top groups come with the bottom brackets that have external bearings. This is Shimano's direction, but it is really hard to make a good case for that in a group like I'm talking about. I wish they'd use their current square taper or splined bottom brackets. *No need to make anything new.*

Dual-pivot sidepull brakes with a maximum reach of 63mm—6mm more than the current maximum reach of Shimano's "long reach" sidepulls. We do fine with the current 57mm reach, because that's only because we lengthen the fork and raise the rear seat stay bridge to the point where the brake shoes have to be set just about at the bottom of the slot. That way, you get maximum tire and fender clearance. That's not practical for high-

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Sugino's Alpina triple. Delivery late July. It easily converts to a double.



THE RIVENDELL READER

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Grant, who still has a long way to go
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 after she fixed it, so all typos are his.

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volume makers, and the group I'm proposing here is a group any maker ought to be thrilled to have.

More on the brakes:

- **make the barrel adjuster 4mm longer**, to make it easier to deal with a fatter tire;
- **make the quick-release take up more cable**, for the same reason. You ought to be able to mount a 37mm tire on a 22mm rim and have the calipers open up enough to clear the tire when you take out a wheel.
- **shape the underside of the calipers the way cheap old sidepulls are shaped**, to clear fenders instead of pushing the fenders onto the tire (this happens when there's hardly any clearance there).

It's all so doable, but two things are in the way of it getting done. **First**, the fact that it doesn't require new technology makes it less attractive to Shimano, who like being perceived as leading edge. They think, *been there, done that*, but in fact nobody has been *here* and done *this*. And **second**, Shimano has to see a market. The magazines could help develop that market, but they're stuck on racing-bike glorification. Bike manufacturers are reluctant to ask for something that's different from what their competitors are offering. They see that as risky.

But Shimano could do a lot of good with this group. It would be a practical group for riders who want Ultegra quality in a no-nonsense group and who have moved beyond the notion that more gears is better, which it isn't. It would add dignity and class to non-racing road bikes, and people would have more fun on it because the gearing is better, the tires could be cushier and more versatile. It would open up a whole different attitude about road bikes, and a different way to ride them.

CAMPY JUST CAME OUT WITH A NEW ROAD CRANK that will accept 34t inner chainrings. The obvious way would've been to use the familiar 110 bolt pattern, first introduced about 30 years ago and still common. But that would have made existing chainrings compatible with the new crank, and Campy is steadfastly against that sort of backward compatibility, so the new CT model will have its own unique bolt pattern. Campy can do it because its fans are loyal, and pro racers will use them and make lowlings want the same thing. But make no mistake, this move was in nobody's best interest except Campagnolo's.

It will be interesting to see how the media talks about this crank. I wonder if the reviewers will gloss it over and gush on and on about the new cool CT crank. I bet the harp on the light weight.

Even though I don't like the CT crank's Campy-specific bolt pattern, I do like that it pressures Shimano to make a compact road crank also, and there's no way Shimano will copy the Campy pattern. Shimano will make it a 110, and with any luck, they'll make it available with a 74mm inside chainring bolt circle too, so you'll be able to add a third ring as small as 24t. I just hope they don't make it compatible only with their own bottom brackets. I'd rather have it that way than not at all, I want to be clear about that.

SUGINO IS MAKING THE PERFECT CRANK NOW, by the way. It's called the Alpina, and I've mentioned it here before. We have a couple of samples, and the one shown under the table of contents is now on my bike. By any way that I've ever evaluated anything, it is perfect. The first production will be compatible only with Shimano's splined bottom brackets, with square-taper versions to follow later this year. Square or splined, I don't care.

I am surprised the Alpina happened. A few years ago we asked Sugino to make a super 110x74 crank, but the discussions

never went anywhere, and I just forgot about it. So, we're not taking any credit for it.

Shimano and Campy have such a presence in the market that they can make whatever they want and know people will buy. Whenever the big makers and big advertisers make something new, the media gets behind it and makes sure you gotta have it. A bad review, or no coverage at all, in a major magazine will guarantee no advertising. So, we have a case where, when the biggies mess up, the magazines still rave—for the most part.

It doesn't work that way for Sugino. Sugino used to be well-known, but most new riders have never heard of them, and I can't remember seeing a Sugino ad in a consumer bike magazine for a few years, maybe eight. In recent years, Sugino and other small-to-midsized companies have had to copy Shimano and hope to get business from customers who Shimano can't supply (due to too much demand). Or in some cases, they have to underprice their goods to sell them.

But look at what Sugino has done lately: The XD crank, which we sell for \$110, is far and away the best value in any crank, ever (my opinion). It's the brand new \$5,000 Toyota Camry of cranks. It's such a great deal, anybody with more than a couple of bikes and a lifetime plan to keep riding ought to have one—if not on a bike, then ready for a future bike, in case they quit making it.

And now this Alpina. Where the XD is made from 6061 T6 aluminum (good stuff), the Alpina is made from 2014 T6 aluminum (the best and most costly stuff). Both are cold-forged. In a triple version, the Alpina has a lower Q-Factor (154 compared to 163-167mm). The finish on the Alpina is better, but the XD's finish is plenty fine already. The Alpina now comes splined (for Shimano compatibility) now, and will later be offered in a square taper version. Sugino made the Alpina fit the same bottom bracket as Shimano road triples, so you can replace your 52x42x30 crank with a way more usable 48x36x26, and keep the same bottom bracket. You may call this thoughtful or strategic, helpful or business-smart, but whatever Sugino's reasons, it's a good thing for everybody in a time when there aren't tons of good things for everybody. Also, the Alpina has a tiny logo, hard to even see. How often does a modern maker take its ego out of of way for the sake of good looks? Hurray for Sugino. (The Octalink sticker you see on the crank is Shimano's, and undoubtedly was part of the deal they struck.)

Generally this editorial part of the *Reader* isn't a sales pitch, and I don't mean this to be, either...but the Alpina crank is great big fancy news, and you won't read about it anywhere else. Besides, heaven knows we've griped and whined and moaned plenty here before about the State of Bikes, so it only seems right to relay good news when it comes along.

Overall, things with bike parts aren't too bad. Cheap stuff works great. The problems come when manufacturers cater to the racing minority, and the magazines present extreme riding as something everybody should aspire to. Selling funny clothing and unwalkable shoes to beginning cyclists under the banner of "helping them be more efficient" or whatever is naive at best, shameful at worst. That's like telling people the best way to see Yosemite Valley is by climbing El Cap, or *enjoy the seaside—go surfing!* Selling and pushing of extreme cycling keeps people off bikes, and keeps many who are already on bikes questioning their place in the pecking order. For every new convert to cycling, there are eight whose image of cycling is that of a bunch of wildly dressed, fitness-obsessed weirdos, and can't see themselves as part of that crowd. *Whine, whine, whine*, but it's true.—GP

MAIL

Tall Dude From Florida Doesn't Want To Be Fooled Again and Waste More Money

I own two very nice bikes—a 58cm road bike and a 20.5-inch mountain bike. I bought both after having had hands-on fitting as well as various professional adjustments in the usual ways.

It's difficult for me to say with certainty which of them is more uncomfortable in actual use, even with stems with huge rises, etc. Numb hands, straight arms to reach the hoods, excessive bend in the back, saddle pressures, a litany of complaints that I had thought was simply to be expected. Short of sitting bolt upright with no contact with the bars whatever, there seem to be no answers.

I am curious—how can Rivendell to produce a comfortable bicycle for someone sight-unseen? The material on your web site is persuasive, but I I am looking for a little more assurance.

I have roughly a 92.7cm ground-pubic bone height and my current saddle height from BB center to saddle top is 85.1cm (self-measurements, not to be taken too seriously). At what point would a person's proportions move him beyond the fitting capabilities of your "production" frames, please?

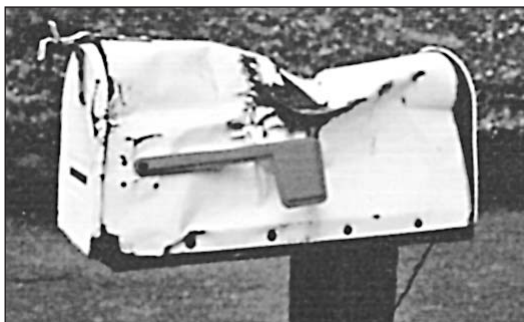
—Tall Wayne in Florida

Your experience is common, especially with tall guys. Tall guys almost always get mis-fit onto small bikes.

Here's how to get your bike size, and apologies in advance to those who already know what's coming:

- 1. Measure your pubic bone height. Bare feet ten inches apart on hard floor. Metal metric tape squeezed between two thin slats of wood about a foot long. Put the tape in the middle of the slats, one hand in front of crotch, the other behind your bottom, and pull up as hard as you can, to reach the pubic bone. Not pubic region, but the bone.**
- 2. Have a friend take the reading on the floor. That's your PBH, (pubic bone height).**
- 3. Your saddle height is ten to eleven cm less. Unless you wear elevator shoes or ride barefoot. You say your PBH is 92.7cm and your saddle height is 85cm. That doesn't fit the range, and suggests that you aren't pulling up hard enough when you measure your PBH. The other explana-**

tion—that your saddle is too high—is unlikely, because too-high saddles feel strange and make you point your toes and



rock your hips, and are obvious even to "non-professionals." Plus, it's common to undermeasure your PBH.

It's also common for tall guys on small bikes, to ride with the saddle too low, because a lower-than-right saddle keeps the difference in height between the saddle and the bars from getting even worse than it is already.

4. Your PBH tells you how high of a top tube you can straddle reasonably. The CPSC says you need an inch between crotch and top tube. If we interpret "crotch" as "pubic bone" and not "bottom of scrotum," then that suggests your 58cm frame is about 8cm too small. (A friend who owns a bike shop recently told me a 6ft 5-inch customer in his shop rides a 58cm Trek, recently purchased at another shop in town, which goes back to "your experience is common.")

5. On our bikes, you'd be on a 64cm minimum, a 68cm maximum, and a 66cm probably—once we had a little more information to go on. You'd do fine on a production model. There are reasons why people buy made-to-measure Rivendell, but they're related to weird body proportions only about 3 percent of the time.

Why a 650B Bike? Why not 700c or 26?

I see the Saluki is going to be designed for the freaky 650B wheels. Too bad! It otherwise sounds like a great all-around touring and road bike. I'd be scared to get it, for fear I couldn't get replacement rims, tires, and tubes for it. Please reconsider.

—A composite letter made up of about a dozen or more real ones that basically expressed the same concern.

Good question. I think we've answered this on the Rivendell Forum, so apologies to Forum readers who already know the answer. It's a logical concern. But we're already the oddballs in the world of bikes, and so the territory, in general, is not scary or even unfamiliar. For the rest of this answer, it will be easier if I refer to the various tire sizes by their bead-seat diameter. (700c = 622mm; 650B + 584mm; Mountain 26 = 559mm).

The 650B/584 shares qualities of both, and from a frame design point of view, it makes smaller frames easier—which is why it'll be offered down to 47cm—and at the same time allows a slightly bigger bike than a 559 wheel does. The 559 is great for small and mid-sized frames, but results in too-long head tubes in the bigger sizes. Since a fork made for a 584 wheel is longer, the head tube is shorter, so a bike can be bigger and not look weirder.

There are more than 1,000 rabid 650B fans in France, and a growing number in this country. There are enough, worldwide, for manufacturers to notice. Rigida makes a great rim, and we'll have them. Velocity makes one for us (there's a photo somewhere in this issue). Tires are easy—Kenda makes one, Panaracer and Mitsuboshi from Japan make them, Michelin and Schwalbe from Europe make them. Michelin and Schwalbe make tubes. We'll have all the backup stuff.

It all boils down to how paranoid you are. At this point I would recommend against a 650B/584 bike for long self-supported tours in countries other than France. Ride 700c/622 or Mtn/559 for those trips. But for riding locally, which is 99 percent of the riding 99 percent of us do anyway—there's nothing scary about 650B/584. The rims are inherently stronger than 700c/559. The 559 tubes will fit, so if you don't have our part number 10-066/\$6 tubes, you won't be stuck.

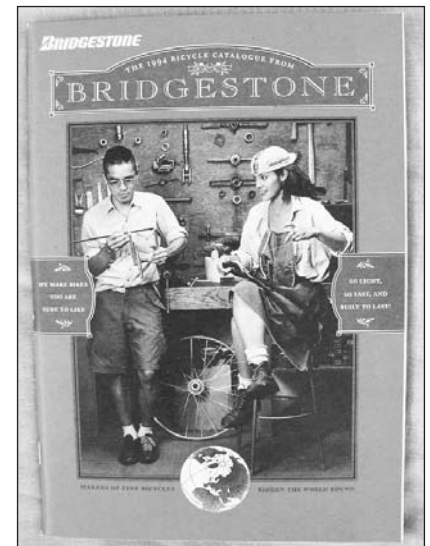
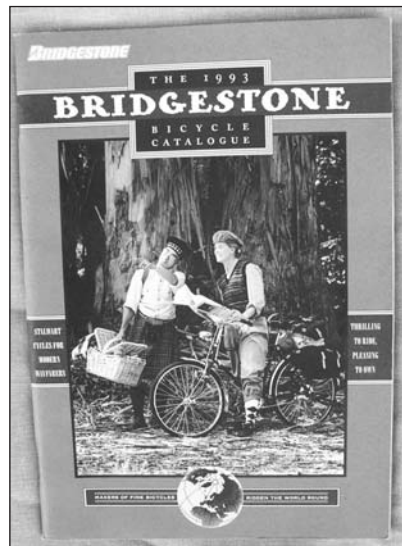
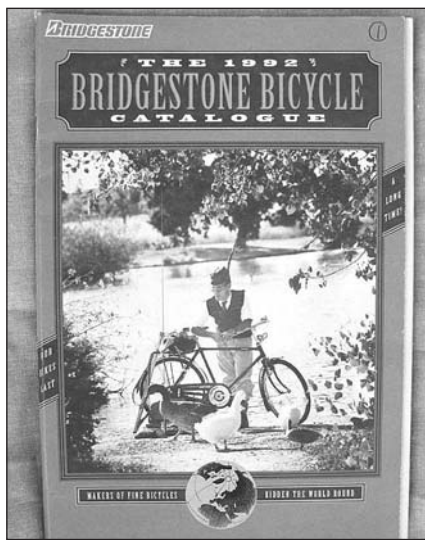
A good website:

www.cyclos-cyclotes.org/650/index_ang.html

We have an online forum now. Lots of questions asked and answered by folks who use and know our gear. There are no ads, and it doesn't cost anything. You're always free to ask us directly, or me directly (grant@rivbike.com), but the online group is smart and helpful. Go to our website: rivbike.com to sign up.

Life At Bridgestone

People ask me about Bstone all the time, as though I'm still there. I worked there for almost ten years, and if I hadn't been there I wouldn't be here, and I like it here, so I'm grateful for that. I'm proud of having worked at Bstone, and I'm thankful for the relationships that started there and continue today, both personal and businessy. This is a synopsis of life at Bstone from the early days to the end; and after that, some commentary on Bstone bikes. I've abbreviated Bridgestone Cycle Co. Ltd of Japan (our parent company) as BSCJ, which is how we did it back then. We, the U.S. division, were BSCA, for Bridgestone Cycle Company of America. Sometimes I just say Bstone, which could be either, depending on the context. It's all clear, I think. —Grant



Bridgestone's 1992, 1993, and 1994 catalogues—well-received by bike riders, not so loved by all bike dealers. With contributions from Maynard Hershon, Peter Egan, Ted Costantino, Keith Mills, and other good writers, and George Retseck's illustrations, and Yoshi Ohara's and Bob Schenker's photographs, they were bound to be good. Cover models Robert, Karen, and Kim are still friends, and Robert works here.

I was 30 years old in November 1984 and I'd been working at REI, some part-time, some full-time, for about eight years as I was going to school. It was a good job for an active skier-climber-hiker-rider; but a friend, racing teammate, and Bstone sales rep, Chris Watson, told me Bstone needed an inside person to handle grunt work, data entry, and technical questions. I wanted to marry my girlfriend and get out of working weekends, so it seemed like a good opportunity to move on.

My interview was on a Tuesday, and the Sunday before that I went shopping for an outfit to wear for my interview. I didn't even own a shirt with buttons, or a jacket, or the right shoes, a tie—nothing like that. Chris and Mary took me to Nordstrom, I spent \$450 on clothes, the interviews went fine, and I was hired—mainly because I knew the right people, not because of clothes or skills.

Bridgestone BSCJ (Bridgestone Cycle of Japan) at the time was in its second year of what was supposed to be a ten-year joint venture with C. Itoh, a trading company. Bridgestone Cycle Co. Ltd of Japan (BSCJ) was then and is still the biggest Japanese bike maker and, being so big,

was slow to move to the U.S. market during the earlier years following the 1970 bike boom of 1970 to 1978 or so. A brief wholly Bstone-owned venture in Southern California (Bridgestone Bicycles) failed, so this time they wanted some financial and management help and came back to the U.S. market as Bridgestone Cycle (U.S.A.), Inc., which was half owned by BSCJ, and half by C. Itoh, a trading company.

I'd heard of C. Itoh before. Once I was up in Canada hiking and was in a campground, when a stocky blond fellow rode up to chat, and he was riding a C. Itoh brand bicycle. I didn't know it at the time, but it was made by Bridgestone, and I remember just two things about it: it was lavender, and in small type on the top centerline of the down tube, it bore the curious phrase "World's Finest Tested Precision Mechanism," a funny thing to say on any bike, especially one that was just a couple of notches above entry-level. This story doesn't relate to anything else here, but if we ever put that on our bikes, you'll know where it came from.

The idea behind teaming up with C. Itoh was to share

costs and three-year management shifts, with C. Itoh providing the first manager. The new office was in Northern California, because that's where the mountain bikes were, and BSCJ wanted BSCA to be around the action.

The first day I was surprised to find that only five people worked there—four in the office, one in the warehouse. The president, Tom Arika, mainly did presidential things behind a closed door. Jackie Fox was his assistant and was about as nervous a person as I've ever known, always afraid of something going wrong and quick to panic, point fingers, yell, and smoke. Lindy was the office manager, who made the day-to-day operations work and trained me patiently. I would soon take over some of the tedious work she was doing so she could do other things. Sally was the secretary.

My second day on the job, I walked in to find Mr. Arika yelling at Sally. She was bawling up a storm, more like the way a child cries than what I was used to seeing from an adult. Mr. Arika was a C. Itoh guy, not a BSCJ guy, but he was the boss and that was the arrangement, and that's what happened. It was a shock because it was my second day, I was still nervous, and I'd never seen a well-dressed grownup yell at another well-dressed grownup. She quit right there.

Within a week Mr. Arika was unhappy with me, too. One of my jobs was to receive inventory into the system, and the computer program I used for this task didn't allow me to go back and make corrections. For instance, if I received 250 items totaling \$86,647.56 but the total should have come to \$9.26 more, I couldn't just check the line totals and find the error. I had to delete the whole batch and start over. It was tedious work, and Mr. Arika would actually wag his finger at me to let me know I was an idiot when I had to re-do the work to get it right. I was used to REI, where I was liked and among friends, so this was a nightmare.

One day after a particularly harsh scolding, Mr. Arika asked me to lunch, and I figured he wanted to apologize. We went to a local Japanese restaurant, and I felt almost like a big shot. But as soon as the water was set onto the table, he took to scolding me more and said I'd taken the wrong job, wasn't cut out for it, and shouldn't work there. But to my surprise, he didn't fire me.

He had another year two years to go on his presidential shift (after which a Bridgestone guy would take this job),

and I wasn't sure I could make it.

The one good thing he did for me was to put me in charge of the advertising. It came about in a sales meeting in which I voiced mild disapproval at the ads we had at the time (mostly fine art body drawings that said nothing about the bikes). He asked me if I could do better. I said yes, so he said in a "put up or shut up" way, "then from now on we have Grant Petersen Advertising Agency." That's how J. Walter Thompson, at the time one of the three biggest ad agencies in the world, lost the account to me, who didn't know anything. I assume they didn't protest because it was a small account, but in any case, it was my job now.

I didn't know anything about how words or pictures got into magazines, but I read up on it and muddled through with guidance from books by Ogilvy and Caples, mainly. Those old-time advertising honchos favored simple layouts and long copy; every ad I've had a hand in since has followed the same format: photo on top, headline beneath it, text below that, and never any type over a photo.

If there had been any hierarchy, or if the boss had cared about what our ads looked like, I wouldn't have been given that job; and even if I'd somehow managed to wrangle it, I wouldn't have lasted. I remember one ad that had ten typos and one sentence that started with plain type but **changed in the middle of a word to bold type for no reason, like this.** I was messing up hugely on ads that cost anywhere from \$3,000 to \$7,500 to run and in some way were a reflection of Bridgestone. Now I'm messing up on Readers, but not as badly, and they cost less, and I can't fire myself.

Arika was my only boss, and he didn't notice or care or even look at the ads, so I just kept learning on the job. Some of the early ads weren't so awful, and I was starting to feel settled. I was still doing the tedious inventory receiving, and I was there for any technical question, but I liked the advertising part, too.

One day in 1985 I rode an employee demo mountain bike home and didn't like how it handled, and to make a long story short, I and Chris Watson (the guy who helped me get the job) ended up redesigning the 1986 model. It was a success, and that's how I got started designing bikes.



On one of my Japan trips, I went to Bstone's own museum and saw a display of headbadges that made me swear off decals. About 20 of those badges made the cover of our 1989 or '90 catalogue, and except for one or two that looked like '60s beer cans, they'd blow the doors off of any headbadge I've seen since, including ours. Somehow this one found its way to my desk at BSCA, and I recently found it. I've sent it back to BSCA (after photographing it). The colors are out of this world. To see the it in color, go to <http://rivendellbicycles.com/grantpics/BSheadbadg e.jpg>. It is brass and enamel, with lots of relief. The stone in the crown appears to be an insert. I've shown this to other headbadge makers, asking them if they can do this kind of highly relieved brass bumpy badge, and they can't.

By 1990 I was designing all the bikes, and specifying the parts for most of them, too. But as I've said many times, it wasn't by any means all me. I was the American guy in a huge Japanese company, and any American guy working for a huge Japanese company knows exactly how little influence one in that position can have.

As product manager and marketing director, my job was to create a reason for dealers and consumers to want a bike with a car tire name, and it was clear that the bikes needed to be different. Imagine how tough it would be to get people to think "bikes" when they hear "Goodyear." I know "Bridgestone" now conjures up bike images to anybody who's reading this, but it wasn't like that for Bridgestone in 1985.

It was easy to not follow the trends when I didn't care for them and when following them would quintuple our competition. So I made the bikes as much as possible the way I'd do it for myself, mixed in with some compromises here and there to keep dealers happy and to make them more saleable to an audience that didn't have time for detailed justifications. We had about 300 dealers, and if we made our bikes too different, they would require more time to sell, and most dealers didn't want that. That's why our ads and catalogues were so informational—to educate the customer so the dealer didn't have to. Not all Bstone dealers were this way, but more than half were, and they were the most vocal.

When you work for Japan's biggest bike company, and it's your job to pick or at least suggest parts for original equipment, all the parts makers treat you like royalty. I got factory tours to see how parts were made. Any question I asked, they answered. I saw all kinds of manufacturing processes and testing and got a rare (for an American bike guy) education in how parts are made. The factory tours just came to me, and every time I'd see something new, I was fascinated. I was the American in the dress clothes and factory-issue hat and white cotton gloves, walking around a clanging and hissing factory that smelled like cutting oil and seeing parts being forged, brazed, stamped, welded, bent, cast, rolled, formed, de-burred and polished and dumped into a huge crate with hundreds or thousands of identical pieces. I'd pick one up and stare at it, amazed that I was seeing a familiar part before it was completely made. Sometimes I'd ask if I could have, for instance, a Dia-Compe brake forging two steps into production but four steps back from completion. I left many factories with my pockets bulging with odd-shaped pieces of metal, thinking for sure they all thought I was nuts for wanting

them. Sometimes I said I needed them for something I had planned for the catalogues, and it was generally true. I figured any bike rider would kill to be here now, but since that wasn't possible, I'd show the stuff in the catalogues.

The catalogues were fun to make. I'd been writing them for a few years and handing off the copy to BSCJ to hand off to its layout/ad agency, but they didn't read English well, and there were some awkward goofs, so in 1991, BSCJ let us do the catalogue by ourselves, and that's what we did from 1992 on.

In 1992 I had a budget of \$150,000 to cover all costs, and we needed to print 100,000 catalogues. At the time, the marketing department was Ariadne Delon-Scott and I. We were both green, but worked hard and hooked up with the right folks. I liked the layout of VeloNews, and Felix Magowan, then publisher of VeloNews, told me who did it—a small firm in Cambridge named DeFrancis Studio, for owner Lisa DeFrancis—and we worked with them. I sent them old fishing catalogues I liked the looks of, and they got the idea and did the rest. I liked the illustrations in the old Avocet tire ads, and I knew the guy who wrote Avocet's ads (Tom Petrie), and he aimed us at the artist, George Retseck. I read something about recycled paper and found the greenest stuff ever (and the most expensive). It's 100 percent post-consumer recycled, acid-free and archive-quality, made for rich companies for small leaflets, but we used it for big runs of thickish catalogues.



After getting revved up about head badges from my museum trip, I pushed for them the '93 bikes, and this was the result. In about 1984, BSCJ got a new "corporate identity" package, with strict guidelines, all contained in a two-inch thick three-ring binder. The new guidelines didn't leave room for art.

Ariadne and I worked on the catalogues, entirely unsupervised and with nobody to answer to along the way, and the 1992 catalogue debuted at a trade show in late 1991 to a shocked group of sales reps, management, and dealers. One dealer, a famous industry fellow, told me, "it's the worst catalogue I've seen in more than 20 years in the bike industry." Others called it a comic book, since it had no photos. There was hardly any color in it, and the paper, though expensive, didn't look expensive. All in all the initial reaction wasn't so positive. Some of our staff liked it, some didn't. But within a month we started getting praise for it from consumers, and then the dealer critics started warming up to it.

That was the first of three Bstone catalogues of that type—Bstone's last three catalogues. They were fun for Ariadne and me to work on, and we always came in under budget.

All this time the bikes were evolving and Bstone (and I) were under increasing pressure to make our bikes just like everybody else's. Most of the pressure was from

dealers. There was the notion that if we out-spec'd Specialized and Trek and under-priced them, we'd steal market share from them. Some (not all) of the staff and reps had the idea that BSCJ was so deep-pocketed that we could, if we chose to, crush Trek in a year. All we'd have to do is throw our money around in the right places—pro team sponsorship, mountain bike sponsorship, super inexpensive/overspec'd bikes, and everything short of hotties at the trade show.

It was a well-intentioned idea, but we were already losing money, and we couldn't just up-spec and down-price and continue to exist.

To understand anything about why BSCJ pulled BSCA out of the market, you have to understand that in 1984, when BSCJ and C. Itoh started BSCA, one dollar bought 250 yen, which made it cheap for Americans to buy great Japanese stuff. But little more than a year later, in May 1985, the value of the dollar fell to 150 yen, which hurt all Japanese makers. A more complete story is told in the 1992 Bstone catalogue, but basically it meant Japanese makers had to either cheapen up the parts or double the price or go out of business. (It affected all Japanese products. Cameras, appliances, machinery—after the “yen shock” of 1985, it had to get cheapened, or assembly had to be automated, or it had to be made in another country where labor was cheap.)

BSCA was stuck, and BSCJ was shocked. We were a rookie brand not too well known, going against Specialized, Trek, Panasonic, Bianchi, Fuji, Schwinn, Centurion & Diamondback, and lots of others, and our bikes cost too much to make. Other companies switched from Japanese lugs to Taiwan tig-welds, something they could do because, unlike BSCJ, they didn't have five huge Japanese manufacturing plants to support. This was before giant partnerships and mergers and factories and the opening up of cheap-labor factories in Taiwan and China. All of BSCJ's bikes were lugged and made in Japan, and it cost way too much.

BSCA lost between \$50,000 and \$1 million a year for ten years before BSCJ pulled the plug. One year we showed a profit on paper, but it was mostly due to shuffling numbers.

All this time, BSCJ was indoctrinating me in the benefits of lugs, showing me tests and data that supported the notion (“proved” is more like it) that lugged joints are stronger. They didn't tig-weld in Japan and didn't want to. In 1987 we did go to Taiwan for tigged bikes, but it was just too late, and we no longer had the advantage of owning our own factories.

On my business trips to Japan I often visited BSCJ's custom frame shop, where I saw craftsmen filing away, and really fine frames being made, just beautiful work that never made it into catalogues. Those frames were for BSCJ's racing team and for professional racers (Keirin racers, like track racers here). Refreshingly unlike racers in other countries, Keirin racers have to purchase their own gear, and Bstone BSCJ sold bikes to nearly 20 percent of Japan's 600 or so pro racers. It may have been partly due to their being less expensive than frames by more prestigious builders and firms (Nagasawa and Toei,

to name two), but I've no doubt that the frames were as well-made as any. Bstone was always a stickler for quality, conscientious to the point of tardiness to release new things, and fanatical about testing.

Bstone's frame and parts testing facility is equal to any in Japan, and Stone's own test standards are higher than industry standards. This came to the surface more times than I can think of when I was picking parts for the next year's bikes. I'd often choose a part that our competitors had used the year before, only to be told that it didn't pass our tests. But we could upgrade the axle or change the hardware and it would.

Bstone's reputation in Japan is that of a huge maker that's not entirely hip, but has the money from mass-market sales to buy a good racing team; and therein comes the hipness. But as is the case with other companies (Schwinn was an American equivalent), Bstone couldn't sell high-end bikes in its own country. That's one reason they opened up BSCA—to lend international prestige to a fuddy-duddy domestic brand. It's an old song in bicycles. The giant, mass-market brand earns the money to buy hipness and a racing image. It's common for ho-hum brands in the home country to be regarded much more highly in a faraway land.

But Bstone Japan had some really sharp bike people working for it. One was (and is) named Hiroo Watanabe. (There is a Japanese custom builder named Watanabe; this is not the same Watanabe). Like many Japanese bikies, he's heavily influenced by and in love with French bikes, especially those by Singer and Herse. His day job is working for BSCJ, but his own influences and passion sneak out once in a while. The XO-1 fork crown is his design, for instance. It was made for a French-style touring bike called Atlantis, which BSCJ made in 1982-83. There were fewer than 200 of this model made, so ironically, the fork crown's major use came on a bike that was designed for the American market.

What's BSCJ Doing Now?

It remains Japan's biggest bike company. Closing BSCA was like flicking off a tick. Bridgestone has shifted most of its production to company-owned factories in China, but still operates three factories in Japan, and makes—this is a guess—about 750,000 bikes there.

A few years ago I approached BSCJ with a proposal to make some bikes for us, and they weren't ready to do it. It's a good thing, too. Good bikes and super engineering, but trying to get BSCJ to move on something that needs to happen within six months is like playing ping-pong with a manatee. As slow as deliveries seem now, and as long as it takes to launch a new bike, it would be triple that if BSCJ were involved. That I know. Bridgestone was my strongest influence and best bicycle education. They treated me well. Aside from the first boss, who wasn't actually from Bstone. I had great bosses—Mifune, Kimura, and my last boss, Tad Kodama. I met people there who continue to be good friends today and made contacts with suppliers who we still deal with; and they're friends, too. I was given opportunities that my background didn't warrant, and after that first horrific year, I got to learn and grow in a supportive and non-punitive environment. It was great.

If Bstone Stayed In the U.S., What Would It Be Like Now?

If we'd lasted even another year, you'd have seen drastic changes. Although our smart bikes were well-received by a vocal minority of like-minded riders, there was an equally vocal majority of un-like-minded dealers out there who felt their difference made them too hard to sell.

And when dealers squawk to their sales reps, the sales reps have to listen. So ultimately at least 12 of our 15 or so sales reps were tired of fighting the battle and just wanted our bikes to be as much like everybody else's as they could be. The last two years at BSCA, I was starting to be seen as the guy who was holding us all back.

For the 1994 model year, we finally had a suspension mountain bike, a "last-gasp" mid-year introduction designed to appease dealers who were starting to see us as backward. It was sort of an embarrassment for me, because right or wrong, I felt the bikes had my stamp on them, and this sure wasn't something I liked.

There was one suspension I did like, though—but nobody ever made it commercially. It was developed by Mike Augsburg, one of the founders of Merlin, and a smart metal and bicycle guy, and Roo Trimble, who has often been described as "the brother of Brent Trimble, the guy who invented the Kestrel frame," but is an accomplished innovator in his own right.

Mike and Roo developed a wonderfully low-tech but effective suspension made of the bladder from a football. It was contained within and suspended and held between strands of wide nylon webbing, right about where the down tube would have been. To fine-tune the suspension, you inflated or deflated the bladder with a ball pump, the same as you used when your four-square ball went flat.

I remember taking a trip back to Massachusetts with Tad, my boss, and we looked it over and rode it, and I came back all jazzed about it, with technical information to show the reps and so on. Ultimately, it was perceived as my wacky way of doing suspension—low tech, not normal—and it never went anywhere. I doubt the engineers in Japan would have allowed it,

anyway. Not because it didn't work well, but because it was a freak and they didn't invent it.

Anyway, in early 1994, after the '94 models were out but before the announcement that we were shutting down, the catalogues also took a hit. The "famous" catalogues, the ones that still go for up to \$25 on eBay, were for the model years 1992, 1993, and 1994.

There was the notion, internally, that they were cute, but now it was time to get real and have a catalogue that reflected our new mainstream ways. I was to be in charge of making sure the catalogue happened—and I could even write it—but I wasn't allowed to make another funky one. This was almost too much to bear, and it made me the most stressed out I'd ever been up to that point (since eclipsed many times here!)

Two other people and I were the only ones told of the closing in December of 1993, and we were sworn to secrecy until the general announcement four months down the road.

It wasn't a complete surprise—I imagine no more so than finding out that your 16-year old Christina Aguilera look-alike daughter has been cutting a few classes, and whoops, now she's pregnant (this is not autobiographical); and in fact, it took all the stress off spec'ing next year's bikes and making the catalogue. It was odd, knowing this and not being able to tell anybody. I remember giving a clinic to one of our local dealers and talking about next year's bikes as though they were going to happen. Taking notes on what they'd like to see, and so on.

We didn't announce it earlier because we were still owed lots of money from the dealers, and we figured if they knew we were going away, a good number wouldn't bother paying us at all. So we waited until early March.

Up until then, I'd been planning to start this company but didn't have a name yet. At one point I thought we'd be super hard-core green, so the working name was *EcoVelo*. My wife thought the concept was okay, but the name was goofy. I wrote out a business plan and researched sources for

greener-than-green wool, bags, you name it, and it became clear that we might be able to have a catalogue, but it would be nearly impossible to get the actual goods. About that time I'd read Paul Hawken's *The Ecology of Commerce*, and it was influencing my approach to business. I called up Paul himself and talked with him about my dilemma—trying to do good but not being able to get the stuff. He was reassuring and said something like, "do what you can, move slowly, but get a business." I hope we are still under the same influence. We don't powder-coat frames, though—it can't work with our paint jobs.

I contacted Nitto about handlebars and stems. Would they sell to me? Yes, no problem. I needed a frame maker, so I started a fax-n-phone correspondence (using only a little of Bridgestone's time and fax paper) with Waterford's Richard Schwinn and Marc Muller. Richard came out here on a sales trip, and we met and walked around the Marin Headlands, talking about how the bikes would be, and costs, and so on.

I needed the BOB list. Without that, how would I even get started? So I printed out labels first and later asked if I could have it, and Tad said yes (thanks).

On September 25 my mom died. Five days later I lost my job, and eleven days later Mary and I had our second and final baby (Anna). Our garage was a mess, I was collecting bike parts to sell in our initial public offering, I'd just spent half my retirement money and all of my severance pay, and I'd gone about \$30,000 into debt (and sold about \$40,000 in stock to my friends) to start Rivendell. My wife suggested that name one night, and I liked it right off the bat.

Anyway, back to the headline: if we'd lasted another year or more, it would have been a different Bridgestone. Whether it would have been better or worse, I don't know, but I suspect worse, by far. I still have many friends from Bstone. We're all doing okay. Life is better now, but those were some good old days, that's for sure. —G

Some Bridgestone Bikes

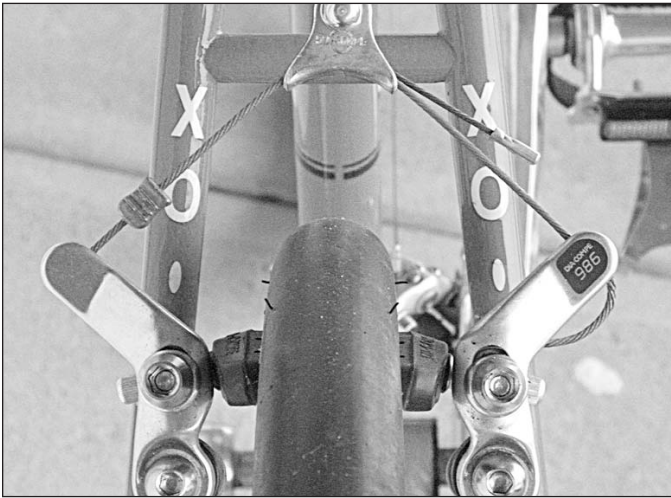
All Bridgestones were reliable and well designed, and that was the case even before I had anything to do with them. I specified the geometry and parts for most Bridgestones from 1987 through the end in 1994. During that time, among other things, I increased clearances, slackened seat tubes, widened handlebars, racified mountain bikes, trailified road bikes, and got the bars higher with headset spacers on longer steer tubes. Picking the parts was a compromise between maintaining good internal relations (with sales reps and dealers), hitting necessary price points, and doing what I thought made the most sense. We were the last to use STI, the last to use integrated shifter-brake levers on mountain bikes, and the first to drop BioPace chainrings. Those were the kinds of things that won us praise among bike riders and scorn among many dealers. We had about 15 bike models per year, typically. Here are some that stood out, contributed a lot to our reputation, or that I just liked a lot—and that I could get photos of. Thanks to Elton Pope-Lance for the XO-1 photos.—Grant



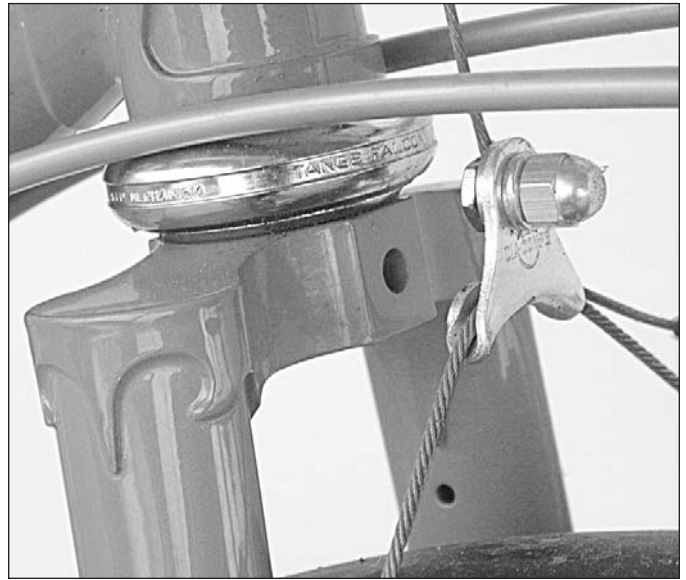
The second model XO-1, from 1993. It should've had a triple, but I was still in my "two beats three" mode back then, and I've evolved since. The crank was tapped for a third ring, at least, and a lotta folks put them on. This is a good bike, and there was nothing like it at the time we introduced it—which is why dealers didn't buy it. Ultimately, slow sales of groovy things lead to the Bridgestone Owner's Bunch, our way of direct-marketing. And that lead to Rivendell, so it's not outrageous to say that if the XO-1 either hadn't been made or had sold better, Rivendell wouldn't have had a mailing list to get off the ground with. So I want to publicly thank all of the dealers who turned up their noses at this bike, thinking it was, as we heard so often, "Just too weird. How do I explain it?"

XO-1

Designed as the ideal do-everything frame, and the inspiration for the Rivendell All-Rounder and the Atlantis. It rode like a road bike, but riders on it set lap records at the 24-Hours of Canaan off-road race, and John Stamstad rode it to a 24-hour world record off-road ride on a challenging course in Mammoth, CA. The XO-1 debuted in 1991, with standard reach sidepull brakes, which fit tires to 26x1.5. From this bike I learned the importance of fork design and brake reach, which continues to lead me around by the nose. The bike was a hit, but we made only about seven hundred of them. The next year, by popular demand, it came with cantilevers and had slightly more clearance, and was more versatile. That was the orange one, and it was the first orange bike made in any numbers in at least a decade. More oranges followed. The graphics were good. I and a Bstone Japanese guy ("Buck") picked them out at about 11p.m. at night at the end of a long day. I still think it's the best orange I've ever seen, but it's in the past, unavailable, yes I've asked, so let's just move on.



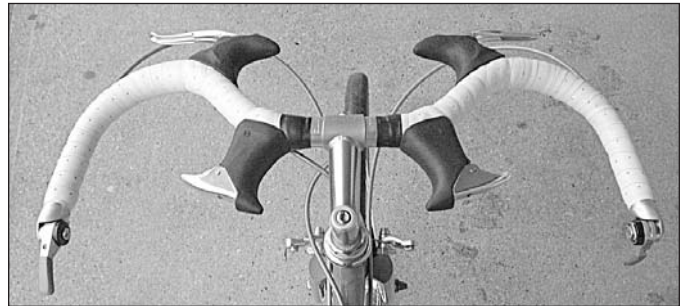
Rear view of tire clearance at the brake bridge. Behind the brakes there, there's a "1".



A closeup of the investment-cast crown. It took the old Reynolds-shaped blades (29mm x 16mm, compared to 28mm x 20mm). And it was originally made for a Bstone model not imported here, called the Atlantis. Anyway, back to this picture: Notice the good clearance. That's a 26.1.25 there, but it accommodated tires up to about 26x1.9.



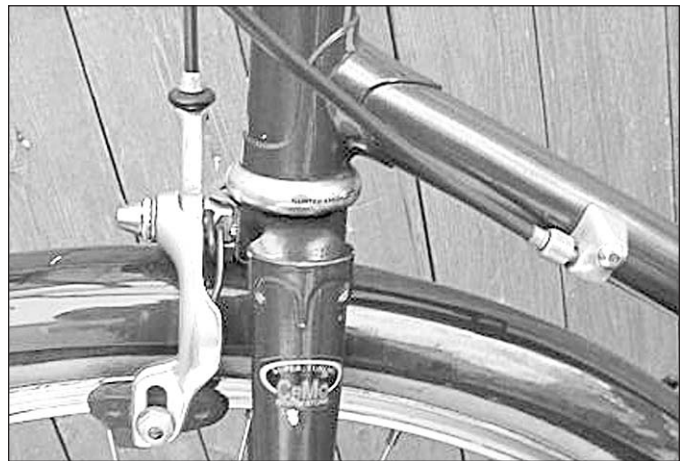
Soft-focus picture of the underside of the BB shell. The shell was stamped, with no effort made to spiff it up. Internally, we called this a "chop-chop" shell, because the chainstay sockets looked like they'd just been chopped off straight and brazed up. This was norm for bikes of this quality. It's not a terrible thing, just reality. Notice the well thought-out cable guide.



The 1992 XO-1 came with "dummy levers" originally made for tandem stokers. They provided another hand perch, just looked funny. These days, dummy levers cost as much or more than brake levers, so if you want them, make them yourself.



The XO-1 seat lug, like all Bstone seat lugs, is stamped. In this case, the binder portion is brazed on separately. See the seam? We had a lot of customers say "it looks like a crack," but it wasn't. This is perfectly acceptable on a bike of this overall quality.



The 1991 XO-1 came with standard reach sidepulls, by Dia-Compe. By that time, standard reach brakes had died, but they found the tooling and made more for us. This XO-1 could accept tires up to 26x1.6. This one here has a fender on it, and probably a 26x1.25.



Even on this 62cm bike, the bars are 38cm. That happened to lots of Japanese bikes from that era and earlier. I didn't spec this bike, but if I did, I'd have putten 44s on it. And these days, a 46.



The Bridgestone SC brake. This unique brake was made by Dia-Compe, but was a Bridgestone design. The SC stands for self-centering, and it worked great. No matter where the wheel was, when you applied the brake, the brakes would automatically center themselves around the rim upon release. It was really smart, and still is, and if this brake were reintroduced in a spiffed-up version by Shimano or Campy, holy cow, it would set a new standard. But Bstone had this middle-of-the-road version. It worked well, but wasn't distributed as an aftermarket brake, an certainly couldn't compete against the top sidepulls of the day. A pair cost about \$25 to \$35. Nobody was going to take off Campy to put on this. It is a super design despite its lack of commercial success. Imagine it with a micro-adjust q/r, fine finish, and a Shimano label. It would set a new standard, I think.

Mile 112

The name is odd, coming from the last mile of the cycling leg of an Ironman event. Plus, it was lavender and white, giving it a feminine look through and through. It had lots of fork rake, something like 60mm, the idea being to produce a gentle ride to help rest the arms, which were tired from a 2.4-mile ocean swim. I don't buy the logic there, but either way, it was my trail-riding on this "triathlon bike" that changed how I thought about road bikes in general. I got one and put on 700x35 tires—there was good clearance (typical of Bstone bikes) and rode it mostly on trails, and discovered how well it worked and how fun it was. I didn't have anything to do with the design, by the way. The idea of the longer wheelbase was to soften the ride, giving the triathlete's arms a rest after the 2.4-mile swim, something I can't relate to. This was one of the first triathlon-specific bikes, and is the antithesis of a modern tri-bike. The modern tri-bike is event-specific, good for nothing else, and marginally even dangerous on steep and winding roads. The M112 may be bad for triathlons, but it can beat the Speedos off a tri-bike on a mixed, real-world course.



The MB-1 was a good frame between 1986 and 1994. The early ones (through '87) were slacker than the later ones, but they all rode well. This frame will be rebuilt with Albatross bars.



Detail of the head lug. Nothing fancy or especially high quality here, but the bikes held together well, and were great values. But make no mistake about it—just because they're oldish now and no longer made doesn't mean they were, say, on par with old German or Japanese cameras, quality wise. They were well-designed, they handled well, and there was nothing shoddy about them. That alone is worth bragging about, because it was not all that common back then. This fork crown was designed by Tom Ritchey, and was based on a crown he made in his really early years. It was investment cast (this one) and had a nice shape. I've often been asked if I have any "lying around," and of course I don't—honest.

The MB-1

1986: The first mountain bike with toe clips, quick-release wheels, a racing saddle, narrow handlebars, "two-finger" brake levers, progressive geometry, and Ritchey tires. It was red.

1987: The most rebellious bike we ever made. By 1987 all bikes were indexed, and all mountain bikes had mountain bike stuff, but this one had drop bars and SunTour power ratchet (friction) shifters. In 1987 it was the boldest bike out there, and I'm proud of it still. I was at my cockiest then, not having suffered from being scolded for being too weird with the bikes yet.

1989: This one was more normal, all Deore XT, and was the most popular MB-1 ever.

The MB-Ø (Zip)

Modeled after the Ritchey P-23, the lightest mountain bike to date. Every part on it was the lightest of its kind, including a Mavic mountain bike crank, Superbe pedals, a special Ritchey tube set, and a tusk-colored Turbo saddle.

The RB-1

Good clearances, smart geometry, and decent-to-good aesthetics. Designed largely for my challenging commute to work, 27 miles over great roads and trails. It taught me the capabilities of 700x32 tires off-road and the importance of good clearance for tires, fenders, and mud. It was a smart bike.

1990: This year it was the winningest frame in American racing, thanks entirely to the fast people who rode it, not the guy who designed it.

1991: Framewise, this is the one with the nicest details, and to my mind, the best paint job (the green and tusk one). Bstone supermodel Pineapple Karen is shown riding it in our catalogue, about a month after a horrid crash that left her face a bloody, scraped-up mess. If you have an original catalogue, you can see the healing coming along, and that's my favorite ever Bstone photo (although these days I'd put her on a bigger bike).

1992: Another good year for this frame. The lugs weren't as nice as in the two years previous, but were still pretty good.

1993-4: Details started declining—well, don't get mad at me, I didn't request it, and I was bummed and even mad. But continuing losses encouraged the factory to cut costs. The lugs were thicker, and the seat stays-to-dropout transitions were awkward. Still good frames, but not as groovy as the '90, '91, and '92 models.

The CB-1

1990: The best cheap city-bike we made, but more significant because two year later it morphed into the XO-1.

There were other good bikes, but these stand out. RB-2s were like RB-1s, but didn't have quite the wheel clearance because the crown was stamped, not cast, and the brake hole was too high (but not as high as the holes in a modern carbon fork.). High holes are dumb.

The lesser MBs were generally geometric clones of the MB-1s, and they were even better values. The lugged MB-3s and MB-4s from the early '90s are inexpensive classics, and most are still going strong today.

Bridgestones were well designed, strongly built, reliable, factory-built bikes. The tubes were barely coped (formerly known as "mitered"), so they didn't form a tight

joint under the lug. It didn't hurt them, but it's not ideal, either.

During brazing, the tubes glowed orange almost a quarter of their length. I remember touring the factory with the then-editor of *Bicycle Guide*, Ted Costantino. We were watching the tubes glow orange for maybe 30 seconds. I was thinking, "Oh, great. This is not what we should be seeing." Then they cooled down. Then they were re-heated to the same orange-hot temperature, and Ted smirked and asked me, "Why do they do that? To make sure there's absolutely no temper left in the tube after the first heating?" Keep in mind that Bstone tested its frames more than any other maker did (I think), and they don't break, and there are RB-1s and -2s out there with more than 150 thousand miles on them. That's a testimony to steel. Bridgestone frames were made in a factory that turned out several hundred thousand bikes a year, by a company that made more than a million. That doesn't happen with the slow file stroke and the gentle puff of air. But such high volume begot consistency and reliability—it would have been chaotic otherwise. Bridgestone bikes were good.

There is so much more care and coddling in any of our frames, though. The copes are perfect, the tubes don't glow. The geometry is better, the clearances are better, the details are prettier. At least once a week somebody will tell me they don't need an Atlantis or Rambouillet or Rivendell

because they already have "one of your MB-4s." Well, I am proud of that bike for many reasons, but none of the Bstones we offered were in the same league as a Romulus or Atlantis or Rambouillet. They were well-designed, and they rode great and held together, but there wasn't the care given and the time taken during the actual building. They made them by the hundreds, and shortcuts had to be part of the process

Rating By the Numbers

Set up a scale from 1 to 100, and let's agree to call our current Rivendell customs a 100, and a Magna (department store) mountain bike a 5.

The high-end Bstones were 45s, and the middle ones were 35s. Comparably priced production bikes in the late '80s and '90s were in the low 30s. Some of the better production bikes in the early '80s—especially '81 through '85 (Specialized Expedition, Sequoia, Centurion Dave Scott, Miyata 600)—were in the low 50s, about 55. The Toyo-built bikes are 87s.

This isn't the gospel, and it's not worth dwelling on or discussing. It would be sad if owners loved their Bstones any less because I gave I give them 45s or something. The bike is the bike, and Bstones were and are good ones. Compared to their same-priced contemporaries, they were exceptional, I think.

Meet Sterling and Miesha (two newish emps)

My official title is Operations Manager, which means I make sure the daily processes happen smoothly, and computer and copy machine problems get fixed promptly. And I buy most of the inventory.



I had an interesting upbringing: I grew up in a military household, and lived around the world, from Okinawa to North Carolina. I remember in grade school in 1968, just having moved from North Carolina to San Francisco—as I introduced myself to my new class, out came this Andy Griffith-like voice, a thick North Carolina drawl you could slice with a knife. I could tell what the other Asian kids were thinking:

"He looks like us, but he sure doesn't talk like us!"

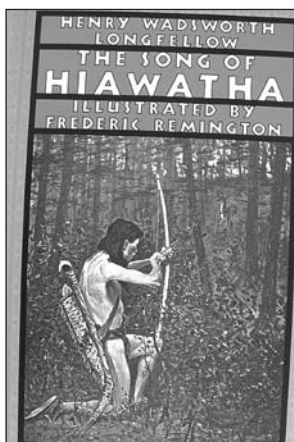
I've ridden bikes all my life, and was a Rivendell customer before being hired. I tend to like long rides, and Grant made me point out that I took off last Thursday and Friday to make it a four-day weekend, so I could go on a long group ride that covered 460 hilly miles. There, it's done. I also like playing extreme Jeopardy, and I volunteer at the Pt. Reyes National Seashore as a docent naturalist for the Elephant Seal and Snowy Plover programs. Happily married to Betsy, with a 12-year old daughter, Katy.



I'm 27, graduated from Skyline High School in Oakland, Ca. (the same one Tom Hanks and Chris Carman went to—ed.), and am still in school working toward my bachelor degree in medical administration. I'll be a nurse, and I want to work in labor & delivery. I have a wonderful 2 1/2-year-old son, Brian. I like fashion, camping, animals, reading, and working out. I like working at Rivendell, too. I enter web and other orders here, do some fil-

ing—sort of normal data-entry and light secretarial things. I haven't ridden a bicycle for about 15 years, but am told I'd ride a 60 or 61, and I'm also told that bicycle dry spell is going to change.

Books From Longfellow and Bittner, and another video



The Song of Hiawatha

Paperback : #23-035, \$15
Hardcover : #23-035, \$25

Henry Wadsworth Longfellow wrote this 150 years ago, and it's been my favorite epic poem ever since. Twice in the past five years I've made bad attempts at copying the beat and style of it in Holiday Flyers, just for fun. Everybody knows a smidgen about Hiawatha. I learned about him for the first time in Dell comics, about 1963, when they used to have the Classic series. The thing I remember from that was a porcupine shooting out some of

its quills to Hiawatha so Hiawatha could do something with them; and then later on in an unrelated incident, Hiawatha shooting ten arrows skyward "ere the first one landed." That always impressed me, and I never shot more than three, and the third was just a flicker.

I never got Hiawatha out of my system, and then, in about 1973 or '74, I checked out a library edition, with pen & ink illustrations by Frederick Remington. I've always liked Indians and Indian artifacts, and the combination of Longfellow's story and Remington's pictures just won me over. There have been many editions of Hiawatha—all with the same words, of course, but with different illustrators. As far as I'm concerned, just as nobody can or should even try to illustrate Pooh after Shepherd, the same is true of Hiawatha and Remington. About 15 years ago I bought five or six Remington-illustrated editions, and subsequently gave most of them away.

David Godine is a small publisher back east from New Hampshire. He's really selective about his books, as though he doesn't care how they sell, he just wants to be a guy who makes really nice editions of really good books available to folks who like that kind of thing. They aren't snobby books, and there's a huge variety on all kinds of subject matter. I've read many of them, and they're all good. Also, David is an amazing writer. His book catalogues are worth keeping just for the introductions. If you want to feel like you can't write a sentence, let alone a paragraph, read anything David wrote.

Anyway, and tragically, the Remington-illustrated edition of The Song of Hiawatha went out of print about five years ago, and I mentioned that to David, and two years after expected, he has finally republished them. But in his ultra-classy style, these are the most beautifully published editions ever. The right paper, the right type, and all in all, this is the edition every Hiawathaphile ought to have. We offer both a paperback for the poor and a hardback if you're well-off.

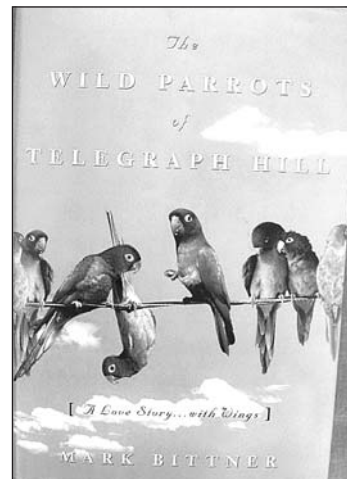
The story/poem itself is hard to describe. I could say, "each line has eight syllables, and it doesn't rhyme, and it tells a story," and all that's true. But the thing about Hiawatha is its rhythm, which carries you through it as though you're riding down a swelly river in a two-person raft with your best friend. Up and down, up and down, familiar and repetitive, but never the same, as Hiawatha's story unfolds and you find yourself liking it as much as any novel you've read.

I can't imagine anybody reading this and not being moved by it, permanently. It's just so engrossing and powerful in that way. The prices are cheap, and if you've any hesitation, consider that any bookstore in town would gladly take it on trade-in, since there's no way they'd have it already. And if that's not enough, if you buy it here and read it and wish you hadn't, we'll double your money back in store credit. That's all I'm going to say, and I apologize for being so pushy. I just love this book so much, and I think you'll like it. In stock NOW.

The Wild Parrots of Telegraph Hill

Hardcover : #23-036, \$23

Rivendell member Mark Bittner, also an RB-1 owner, has lived an interesting life by anybody's standard, a good part of it as a homeless fellow in San Francisco. To make a long story (told in this book) short, he ricocheted here and there and even once lived on the roof of a hotel with several other homeless folks. Ultimately he wrote this book about his life with a flock of wild parrots. It is a fascinating and happy book. I loved every page of it, and it has changed the way I look at any bird. You don't have to live in or near San Francisco to enjoy it or get stuff out of it. It has nothing to do with that; it's just a really good book, and for a while was on the local best-seller list. I wonder if bookstores in other states carry it. I doubt it, but they ought to. Ordinarily, an author makes maybe a 12 to 20 percent royalty on a hardcover book. Since Mark is a member, we're going to do this: order the book from us, and we'll give you a \$10 credit toward a future order. You don't have to be a bird person to like this book.

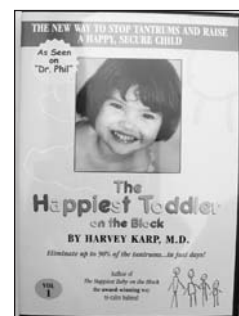


Free If You're Quick; Cheap If You're Not

In the last *Reader* we offered 30 free videos of a new DVD titled Happiest Baby On the Block. Well, the same pediatrician, Harvey Karp, has branched out to toddlers now, and we're offering the same deal on The Happiest Toddler.

That's right, free. But: You must be a member, and you must be one of the first 30 to ask, and you gotta ask by fax and use the part number 31-382 925 933 7305, and include your contact info.

After that, we're selling them for \$14, which is cost. We don't have room to rave on and on about it here, but basically it's like this: If you have a toddler who throws tantrums, and you'd seriously like them to stop, this is going to do you more good than the next medium-sized pizza you'd buy with the same money. A good gift, too. Harvey Karp is a smart guy who understands babies and has figured out a way and a way to explain it. It's not magic, it just makes lots of sense and works. Below are both the Baby and Toddler videos. Both are for sale, but the first-30 freebies is only for the Toddler. If you want one only if you get in on the freebies, say so. Other wise, include your MasterVisaDisco card, and if you don't make the cut, we'll still sell it to you at cost—because it's important to understand babies and toddlers.



Baby DVD. 31-380 \$14 Toddler DVD. 31-382 \$14

A Look at Lugs, Part 12:

The Glorius & Wilbury Set

The Glorius & Wilbury are our upcoming men's and lady's mixte frames. The Glorius comes in 3 sizes: 20, 55, and 59cm; the Wilbury comes in 3 sizes too: 55, 59, and 63cm. The two smaller sizes are designed for 26-inch (559bsd) wheels (same as a mountain bike or small Atlantis), and the two bigger sizes are for 700c (622bsd) wheels. These are their lugs.

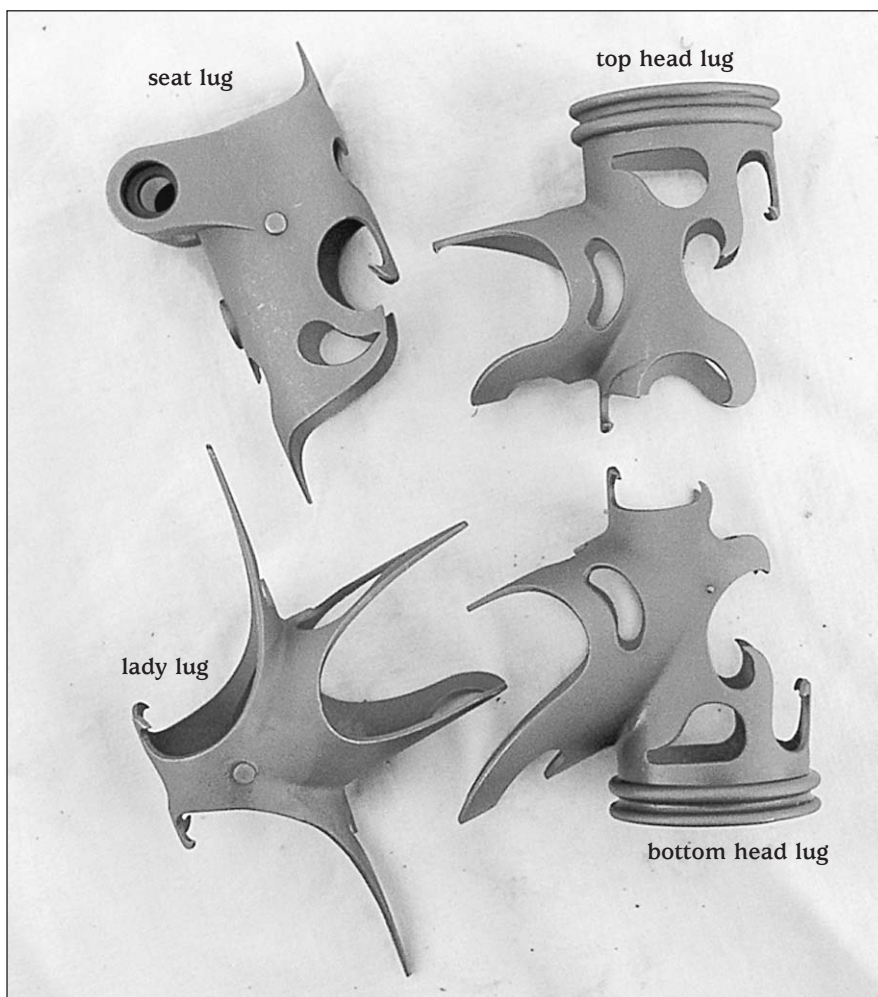
It's extravagant to introduce a high-end lugged mixte frame in 2004, weird to offer it in sizes up to 63cm, and foolish to spend \$11,500 on lugs for a bike with a yearly production of 100, so at that point, why not go nuts with the lugs? The Glorius and Wilbury lugs are all over the place and out of control, and that was the intent. They're not designed to win the approval of ascot-wearing cognac connoisseurs, but to make average bike folks say, "whoa! What's going on here?" when they see them.

Not counting the bottom bracket shell, a normal bike has three main frame lugs—a seat lug, a top head lug, and a bottom head lug. The Glorius and Wilbury need a fourth, the lower seat tube lug, where the diagonal tube intersects the seat tube. Our "working" name for this was the "lady lug," not because we put any thought into it, but because mixte bikes are often called ladies' bikes, and this lug is unique to them. You don't have to call it anything, but here, we call it the lady lug, even though it's on the Wilbury, too.

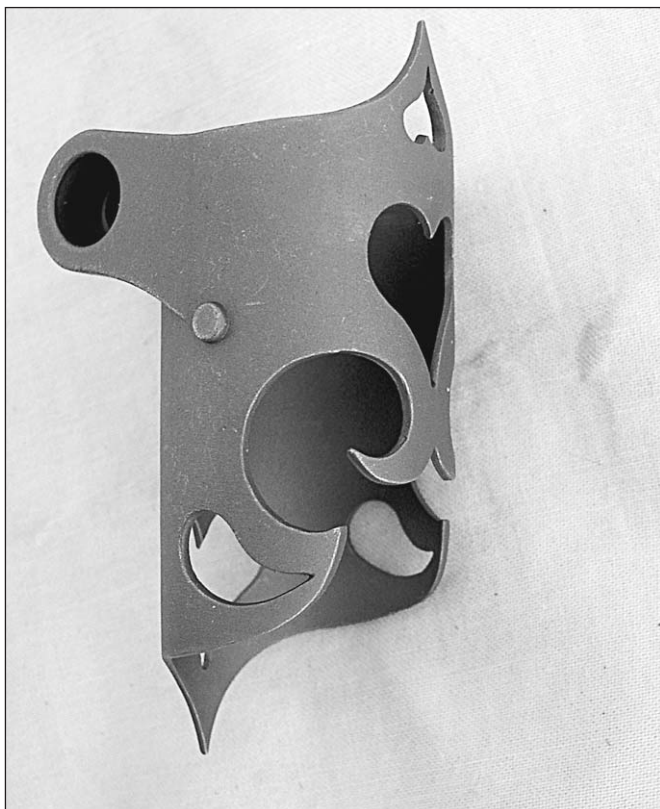
For our first ladies' bike, which we showed several issues ago, then-builder Joe Starck modified existing lugs to make them work as a seat lug, lady lug, and top head lug. We'd expected that one to be the only one we ever made, and the extra work makes sense for a one-of-a-kind. But now we want a hundred of them, so we needed actual mixte lugs that didn't have to be reworked. This certainly isn't the first set of mixte lugs made—they were around by the tens of thousands up until about 1980 or so—but it is the only set of investment cast, precision, super-fine mixte lugs that I'm aware of. They're fancy, too, in a wild sort of way.

I'll be curious to see the painters' reaction to the first mixte frame they get with instructions to mask off the head tube and fill in the windows. I imagine they'll either be thrilled at the opportunity or scared to death of the challenge. We could specify a single-color paint job, but what a waste that would be.

We'll use the same lugs for made-to-measure Rivendell mixte bikes. Joe Bell will have to paint those. The Glorius and Wilbury will be out sometime this year. Frame and fork with headset: \$1,400. Or, if couples buy them at the same time, two for \$2,600. Details and photos of prototypes to follow, probably online before in a Reader. More details in RR33.

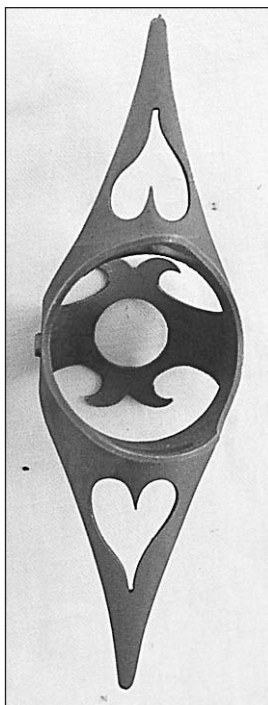


No big deal and I hope not to mention it again, but see the reinforcing rings on the top of the top head lug and bottom of the bottom head lug? We started reinforcing these stress areas mainly for style points, back in 1997. I got used to the look and at some point Joe Bell requested an "easier to paint" groove, so what started—and remains, on most of our lugs, as a more subtle reinforcement somehow grew to this, which is way overboard in the reinforcing arena, but I like the unique style. Richard Sachs, who may or may not do this on a future lugset he designs, calls the reinforcements "oreos," for the famous cookie. When Joe Bell paints our bikes, he paints the groove creamy.



The seat lug. The “pip” sticking out there is just a centerline indicator that may or may not be a builder’s aid, depending on which seat stay plug is attached. But the main thing here is the lack of a top tube socket—since the bike has no top tube. I like the curves and swirls; and the heart in back, which you can’t quite see.

The Lady Lug, which is better described as “the lug that the diagonal tube that sort of substitutes for the top tube intersects at roughly the middle of the seat tube with.” You’ve probably by now noticed the crooked hearts. Here’s what happened: The first hearts didn’t have a deep enough cleavage, so I pencil-sketched a better heart showing the deeper cleavage. Long Shen looked at the whole heart, not just the cleavage, and thought I meant “please duplicate this shape exactly,” and of course it wasn’t a perfect heart. So the next round of CAD drawings came back showing both the deep cleavage and the asymmetry. At first I felt like, “holy cow, why’d they do THAT?!” But several days later it grew on me (the flub), and so I signed off on the drawing, and have liked it ever since. Most castings are symmetrical and perfect—because they CAN be. This one has a human imperfection in it, and after seeing one perfectly symmetrical casting after another for so many years now, I find this refreshing. I don’t know what the general reaction will be, but I can always say to any critic, “Then make your own mixte lugs!”



Top head lug. This was the hardest to design. All of our other top lugs have extensions, and this one started to, too, but I had a hard time fancying up that part. My epiphany came late, when I realized we didn’t need a “signature” extension on a mixte lug, since there’s no top tube, and we could jack up this lug as we saw fit, without bringing a top tube with it (which would increase stand-over height). I tried to mimic some parts of the seat lug and bottom head lug. I got it about 3/4 of the way there. See the hook on the lower right? The one on the other side curves the opposite way. This was the second top head lug. The first—which was cast and paid for and all—was incredibly ugly and malproportioned. We paid for the tooling and samples, but will never make those lugs.



Bottom head lug. I was worried about this one. The drawing I approved was 2-D, but a real lug is 3-D, and I’ve been disappointed before. I can see a few details I’d like to change—I think the small heart at the lower right is too small, for one; and I should have made it asymmetrical to match the top head lug—but the overall look is wild and OK, and ought to give painters a real headache. I think it

would be a shame to not give the G & W a painted head tube and window fill, but no matter what I think, the painters will look at this lug and think it’s a cruel joke. I wonder how many of these bikes we’ll make. Sometimes I think it will be our most popular model, and other times I think nobody will pay that much for a mixte. Either way is fine with me—it’s satisfying to make these lugs, and I’m going to love seeing them on nice, gentle bikes.

Comparing Frame Joints

by T.J. Sutherland, MS, M.L. Hull,, PhD. and J.C. Giberling, PhD
University of California, Davis

Originally published in *Cycling Science*, 1992. That publication is no longer in print, and this was reprinted with permission from the last publisher, Edmund Burke, PhD...who gave permission a month before he suffered a fatal heart attack while riding his bike, sometime last year.

The predominant failure of bicycle frames occurs at joints and is caused by the development of fatigue cracks. The purpose of this study was to apply cyclic loading to the head tube and top tube joint of a bicycle frame and quantitatively compare the resulting fatigue strengths of three joining methods commonly used in the manufacturing of mountain bike frames. The joining methods studied were brazed lug, brazed fillet, and butt weld. The number of cycles to failure of ten specimens manufactured using each method was determined at two load levels (five specimens at each level.) An S-N diagram plotted for the average cycles to failure shows that the butt weld method offers the lowest resistance to fatigue failure whereas the brazed lug yields the highest.

There are three joining methods commonly used in the construction of steel frames for mountain bikes such as that shown in Figure 1. Pictured in Figure 2, the three methods are the brazed lug, the brazed fillet, and the butt weld. The brazed lug joints utilize a reinforcing sleeve, which is brazed to the tubes, whereas the brazed fillet utilizes a butt joint with a substantial amount of filler metal built up into a fillet in an attempt to make a smooth transition between tubes and minimize the stress concentration at the joint. The butt-welded joints are fabricated using a TIG machine with no added filler metal. All of these methods might seem equivalent, from a consumer's standpoint, since one can observe a manufacturer using various methods in his product line, and, in some cases, using several joining methods in an individual frame.

Mountain bike frames are subjected to higher loads than frames used for road bikes, due to the strenuous conditions (i.e., uneven terrain) encountered when riding off-road. Consequently, fatigue crack failure of the frame near joints is of concern to manufacturers. For this reason, the goal of the present investigation was to examine the relative fatigue resistance of the three joining methods described above.

Methods

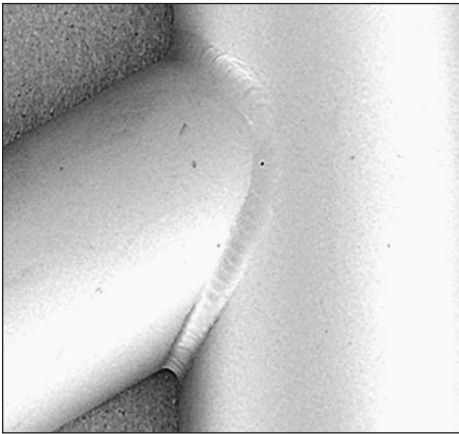
This study applied loading to test specimens constructed so as to include the head tube and top tube joint of a bicycle frame (fig. 1). For the three joining methods, a number of specimens fabricated using 4130 steel tubes were procured from bicycle frame manufacturers who used their standard manufacturing techniques. The specimens were identical in their geometry except for the joining methods. The head tube was 1.25 in. OD with a 0.048 in. wall thickness while the top tube was 1.0 in OD with a 0.048 in. wall thickness. The head tube angle was 72 degrees. All specimens were tested in their as-fabricated state (i.e. no post-fabrication heat treatment).

The specimens were mounted in specially designed test fixtures, which enabled a 20-kilopound servohydraulic MTS system to apply the alternating loading necessary to produce fatigue failure. Illustrated in Figure 3, these fixtures were designed to assure both proper alignment of the specimens with respect to the load frame, and rigid mounting of the specimen. Specimens were mounted so that the head tube was held fixed while load-

ing was applied to the top tube. Each specimen was positioned in the fixtures so that the point of application of the load on the head tube was at the same distance from the joint in all cases. 3.0 in. from the joint. The specific geometries of the tubes, distance from the joint to the point of application of the load, and a planar free body diagram are shown in Figure 4.

Due to the geometry of the tubes, unknown stress concentration factors, and heat effects caused by the joining methods, a close estimation of the stress levels occurring in the specimens due to applied loading was not feasible. Therefore, determination of the load levels to be used in the experiments was based on calculation assuming a cantilever beam model (Ref. 1), with a static load applied 3.5 in. from the fixed end. This result was then coupled with data taken from a reverse bending experiment (Ref. 2) of 4130 steel tubes butt welded and tested in the as-fabricated condition. After calculating a stress value, which would yield a reasonable number of cycles to failure, this number was reduced by one-half to include the previously mentioned unknowns. Preliminary tests were then run at this value and from the results, the actual load values at which subsequent experiments were carried out were determined. Each type of specimen was tested at two different loads, one, which would yield a failure at approximately 10,000 cycles, and the other at approximately 100,000 cycles.

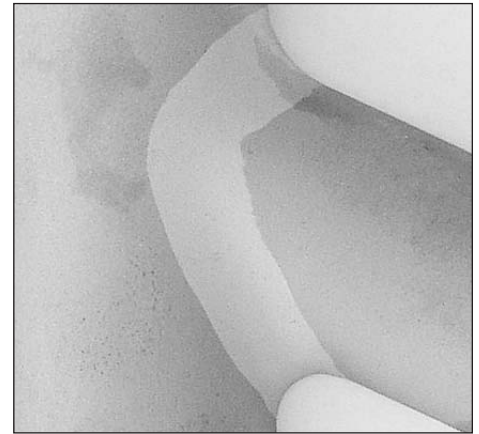
Once the specimen had been aligned and secured in the fixture, fully reversed vertical loads were applied to the top tube until failure



TIG-welded. Tubes melted together with some filler added. Third place in this test, but plenty strong. TIG-welding's contribution is light, strong, inexpensive-to-make frames



Lugged. The tubes aren't heated enough to melt. Reinforced with extra metal. Won this test, but not the only good way to make frames. Not the way of the future.



Fillet-brazed. Second place. A good way to make frames. The stress is less concentrated than in a TIG-weld, and many folks like the look a lot. Pronounced "fill-it."

had occurred. The MTS system was operated in the load control mode to insure equal stress from cycle to cycle. Failure of the specimen was achieved when a macroscopic crack had formed. The failure criterion of a macroscopic crack for this study was established by upper and lower deflection limits of the actuator of 0.015-0.025 in. above and below the deflections obtained under static loads applied prior to any cyclic loading.

Each of the three specimen types was cycled at a "high" and a "low" value of load in an attempt to establish a relation between load and number of cycles to failure. Because of the differences in the fatigue life evident from the preliminary tests, the two load levels were different for the three specimen types. These load levels are given in table 1. At each load level, the average number of cycles to failure was computed from five specimens. In order to enable ready comparison of the data, the average number of cycles was plotted as an S-N curve with the results of all three specimen types superimposed on a single plot.

Results

The results for individual test specimens are given in Table 1, while the load versus the logarithm of the average number of cycles to failure is plotted in Figure 5. In Figure 5, each

joining method is represented by a line on the plot consisting of two data points, one corresponding to the "high" load level and one to the "low" load. The method by which to interpret the data is the relative position of these lines; the lines closer to the horizontal axis have the lowest fatigue resistance with the fatigue resistance increasing as they (are) more farther from the axis. It is clear from Figure 5 that the brazed lug method is most resistant to fatigue failure, followed by the brazed fillet, and then the butt weld.

Different modes of failure were observed depending on the joining method. The most common failure encountered was a circumferential crack originating at the top surface of the top tube adjacent to the reinforcement of the joint. The majority of the brazed lug, and all of the butt-welded specimens, failed in this fashion. In the case of the brazed fillet specimens, however, the geometry of the fillet (i.e. the distance and thickness of the filler material from the joint) seemed to have an effect on the crack location. The welded specimens all failed at the edge of the weld bead. These failures are sensitive to the weld condition (undercut, porosity, etc.) and heat effects in the tube materials. Two of the brazed lug specimens failed in a completely different fashion, such that the lug plastically

deformed sufficiently to cause a separation of the lug from the head tube.

Discussion

In reviewing the data in Table 1 for a particular joining method and load level, it is evident that these data exhibit large variability. For example, the data for the brazed lug specimens at a load level of 300-lbs. give a coefficient of variation of 0.41. One cause of this variability would be differences in material composition, material processing, and specimen manufacture. Because of this variability, it would be desirable to subject the average values to paired tests for statistically significant differences. Because it was necessary to adjust the load levels in order to control the number of cycles to failure, such tests cannot be meaningfully performed, however.

Although basing the fatigue failure criterion on deflection limits may seem somewhat inaccurate, this approach was actually quite accurate due to the speed at which the crack propagated compared to the length of the test; that is, crack development accounted for most of the life, whereas crack propagation was relatively rapid. As the crack propagated the compliance of the system increased rapidly, causing the deflection to increase proportionally. Therefore, the time from the initiation of the crack to the end of the test due

to excess deflection was insignificant compared to the total length of the test. As an example, if the deflection limit were set at 0.005 in. above and below the peak deflections obtained from static loading instead of 0.025 in., then the difference in the cycles to failure would be at most 100 cycles. This corresponds to a 1 percent "error" out of a total of 10,000 cycles to failure. This effect is considerably smaller than the specimen-to-specimen variability.

It should be emphasized that the results of this study do not lead to a definitive conclusion regarding the adequacy of the joining methods for the bicycle frame application. In spite of some scatter due to specimen variability, the data clearly show the relative fatigue strength of the three joining methods and rank the order of the joining methods in decreasing order as brazed lug, brazed fillet, and the butt weld. However, this study did not simulate the actual loading of a bicycle frame, and failure in a bicycle may not occur at the head tube. Further, the actual stresses developed in the head tube-top joint may not fall in the range of these experiments, and therefore the butt-welded joint

would fulfill the design requirements. The purpose of this study was not to simulate actual loading in a frame, but rather to develop a quantitative method by which to compare the three joining methods using a representative joint geometry.

Determining the design requirement of joining methods in regards to resisting fatigue failure is a challenging problem. This is because there are two distinct sources of frame loading, muscular action and terrain irregularity. Further, the loads, due to muscular action, occur at all rider contact points, and develop a number of components at each contact point. Finally, there is a broad spectrum of riding situations, which will influence the quantitative description of loads from both sources. Consequently, due to the multiplicity of frame loads and the difficulty in characterizing these loads, a rational fatigue failure analysis is difficult.

While difficult, a fatigue failure analysis could be undertaken if data, which quantify those loads developing the greatest frame stresses were available. To the authors' knowledge, some of these data are available for road bikes, but no such data are yet

available for mountain bikes. Accordingly, to determine the fatigue performance requirements for joining methods, a useful direction of endeavor would be to measure frame loading during actual riding situations.

Conclusion

Of the three joining methods used in the construction of steel bicycle frames, the data show that the fatigue life at a given load amplitude is greatest for the brazed lug, followed by the brazed fillet, and, finally, the butt weld. As previously stated, this is a comparative study and the adequacy of the specific methods cannot be judged. Therefore, frames constructed utilizing either the brazed fillet, or even the butt weld joining techniques, could be quite adequate if the actual loading levels are below those used in this experiment.

References

1. Crandall, S.H., Dahl, N.C. and Lerner, T.J. *An Introduction to the Mechanics of Solids*, 2nd edition. McGraw-Hill, San Francisco, 1972, p. 425.
2. Collins, J.S. *Failure of Materials in Mechanical Design*. John Wiley and Sons, New York, 1982, p. 190.

Frame Joinery Afterthoughts

Tig-welded frames aren't our thing, but the reality is that they hold together pretty well—they're trusses, after all (read that story elsewhere in this issue). A skilled tig-welder is crafty, just like a skilled brazer is, but the process and results are different.

Although this article doesn't state who did the lugging, filleting, and tiggging for the test samples, I've heard it was Spectrum Cycles, Tom Ritchey, and Gary Helfrich, respectively. Each was considered a good candidate for supplying top specimens representing their particular methods—thus at least minimizing the chance that bad craftsmanship would invalidate the test.

What do I believe? That properly built lugged joints are stronger. But don't forget there are better and worse reasons for buying any bike than joint strength alone. I mean, if you're scared of your bike breaking out from under you, your fear is likely to cause you more harm (through panic maneuvers that cause you to crash) than frame strength ever will.

For me, it comes down to big picture stuff and small picture stuff. In the big picture, any bike is good, the bike that gets ridden the most is best, and rides that take cars off the road and help keep the Place clean are the best of all. In the small picture, lugs can wreak havoc with your peace of mind, waking thoughts,



ability to sleep, social skills in non-bike environments, and general wholeness; and any chunk of metal that can do that is worth building a bike with.

I like lugs because I like the way they look, and all the variants and variations possible even within the same variant or style. Every curve, point, window, and scallop was put there by a person and for a reason. It may be a bad reason, it may not have been your reason or the way you'd do it or I'd do it, but makes the frame interesting. I also like lugs because it just makes more sense to join tubes with common sleeves, than to melt them together and hope they stay that way.

It is okay to be romantic and nonsensical about bike things. I'm not saying lugs are nonsense, I'm just saying that if a bike or a detail on a bike excites you, let it happen. For me it's lugs. You might think that at the end of the day I'd be sick of them, but there's no evidence that will happen. Loose lugs litter the house, and I pack one or two with me on every trip I go on, no matter where it is. They're fun to hold, fondle, look at, and hold up to the light and turn, watching the silhouettes change. They make good Christmas tree ornaments. Their shape, color, and general steelness are something that either gets you or it doesn't. If lugs were only as strong as tig-welds, I'd still like them as much, or maybe even more; mainly because I'd feel sorry for them. —Grant

Projects

BAGS. It is clear here that the only way to maintain stock on the Baggins Bags is to have more than one maker, so that's what's happening with them. We started the line with Duluth Pack making them. Good bags, okay delivery. Then several of the folks there split off and joined a bag maker called American Outdoorsman. We followed, and in short order one of the main guys formerly from Duluth bought the company and ultimately renamed it Frost River, and that's who's been making the bags.

The fabric and leather and details have changed slightly over the years, but basically we're talking about stout bags of waxed cotton duck, with leather trim, brass hardware, and now and then a wooden stick. The earlier fabric from Duluth wasn't waxed, but it shed water okay anyway, so it must have had some kind of treatment. The Frost River-made bags are good, the delivery is not, so we've been trying to line up one or two other makers, one of which is the old original, Duluth—who we know makes fantastic bags, and who we have reason to believe will deliver them reasonably.

There is yet another possible bag maker in the line, but this one is dragging its heels as though it's a race on Opposite Day, and we're no longer optimistic. The interesting twist here is that this unnamed potential vendor recently bought the small company that supplies the waxed cotton duck to both Duluth and Frost River. All we want is bags, and we'll be loyal to whoever can actually supply them. If this were happening in China or Taiwan, we'd be up to our armpits in bags every day. Ultimately we'll solve the supply problem.

BIKES: By the time you read this, the first run of QuickBeams will be nearly gone, except for the 68s. We don't think we're going to do that size again. Bhima's gone, so he doesn't need one. I know there are lots of tall guys out there who ride this size, and if you're one of them and think you might want a single/two-speed bike someday, you could do worse than to order up a QuickBeam now, because it'll be a cold day in heck before the Real Bike Makers offer this kind of bike in this kind of size...

The 650B Saluki frame/fork/headset is now officially for sale, even though we don't have any yet. But the build schedule is set, and we expect to have them before the end of summer. No, not true. We wanted them to come in June, but stuff happens and things get delayed, and now I think we're looking at September. So, if you're looking to get a 650B bike this summer, better head on down to your local bike shop. The Saluki is a touroy road bike, a long-distance road bike, a country-riding bike,

and all-around road bike built on the nearly dead 650B wheel size that we're feebly trying to pump some life into, whether that's a smart thing to do or not. To support the bike, we'll be stocking 650B tires from Michelin, Panaracer, and Mitsuboshi, and maybe just to really calm the doubters, we'll have some Schwalbes and Kendas, too...

More BAG news: Starting September and in honor of our resident vegan, John, we're going to offer a few bags with no leather at all. John has never said a word of this, he uses the



This will be available by September. By July 4 we'll have one that's lugged in front at the bar, fillet-brazed in back. But please note on Palm Pilot: We are closed that day, due to Holiday.

leathered ones just like any old normal person does, but it's something we wanted to do anyway, for the heck of it. We'll update you on the Forum or in an email update...

Speaking of the Forum, it's our Rivendell-specific online talking group, and a good place to stay updated on related issues, and get tips and ideas from other folks. There's no cost to joining it, we don't sell ad space, it's just a way to learn from others and share information about Rivendell-related things. If you go to our website (rivbike.com) you'll be guided through the signing-up process...

More bike stuff: Is there anything more foolish than trying to sell lugged steel children's bikes? We're investigating that. The thing is, if you try to buy your child a regular old bike—something with round tubes and a familiar look—good luck. You may be able to find something, but it's hard. Most children's bikes are quite a bit on the flashy side, and aren't that fantastic graphically, either. Plus they're heavy as sin, and all in all, we think there's a need for something different, and we're gonna offer it. Starting in mid 2005, or so UNLESS I/Grant come to my senses before that. The price will be low, by lugged bike standards. They won't be made in Japan...

Bikes continued: The Glorius and Wilbury, our mixte frames, will be here in late summer, but

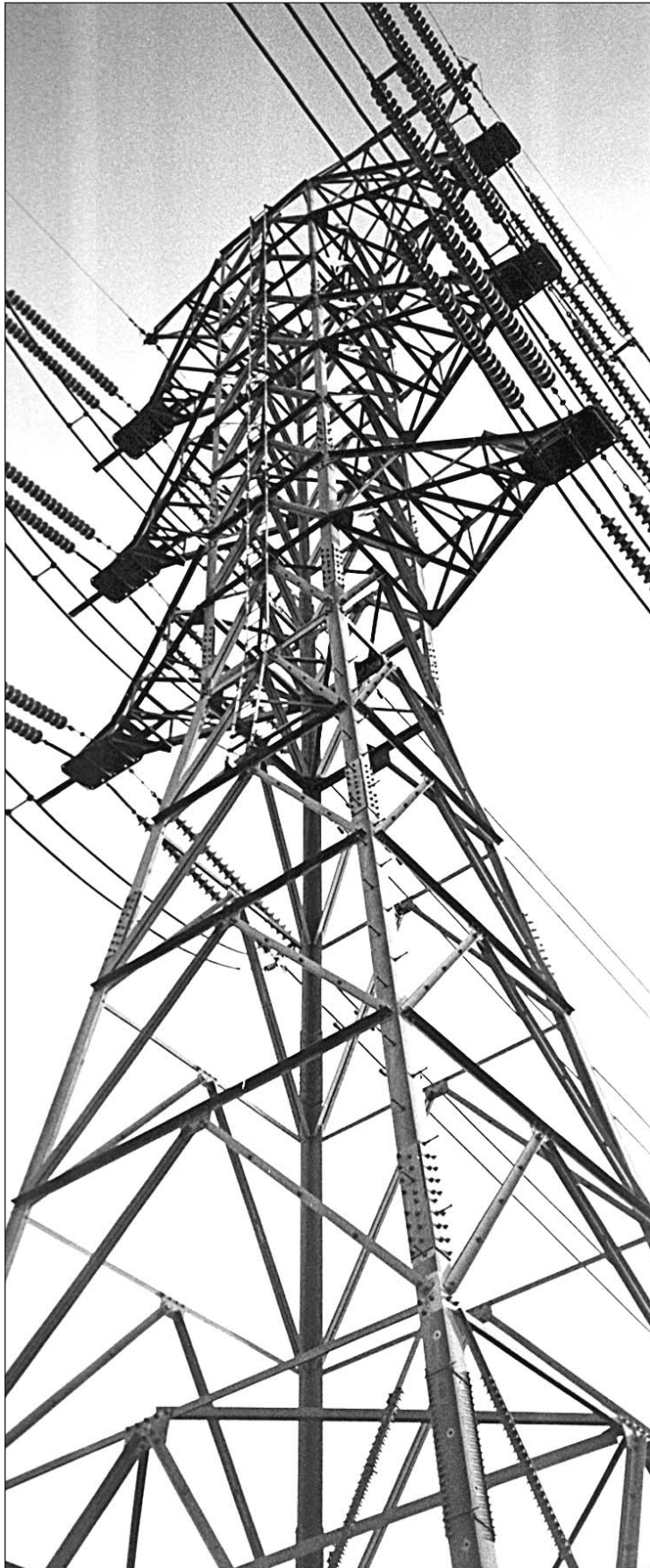
we'll have prototypes by mid-May. Tandems: A way off still, and for us that's saying something. We're too poor for the tooling and too far behind in delivery right now to take on tandems, but it will happen, and I hope within a year and a half.

The Rivendell embroidered jerseys, our first ever semi-flashy one, were sold out before they arrived (a good thing for us, since we'd paid for them). We're going to do another one, this time green where the first one was blue, and long-sleeved instead of short-sleeved. We're also hoping to get some in a size even larger than 3XL, but we don't know if that'll happen. Anyway, we'll post the news and details in an email update. There may be another note about that in this issue.

We are trying to get some bike shorts made. Basically baggies, maybe even of heinous Supplex nylon. I/Grant pretty much wear these all the time, and they work well. I don't like bike shorts with built-in diapers, because it makes more sense to wash the diaper separately—so these newbies won't have that. I also don't super cotton to larges that fit like mediums, so ours will be sized right; and finally, ours will have a seamless crotch—not because the seams in normal baggies are bulky and problematic, only because it seems the

right thing too do in a bike short. So...hold off on that bulk purchase of summer du-all shorts until we're ready with ours. Which, we don't know when that'll be, but June 20 is the target, and we'll keep you posted on the Riv List and email updates.

By the time you read this we'll have lugged stems back in stock, along with a half-lugged, half-fillet brazed clamp-on stem for threadless steerers. That one will have an inch-and-an-eighth clamp and a shim to make it work with one-inch steerers. Made by Nitto, as always. And now, two days before this issue goes to the printer, we just got in a sample all-lugged threadless-style stem. I'm not ultra-fan of clamp-on stems, but this one here—and the half-lugged/half-fillet one mentioned in the previous sentence—yep, these I like a lot. Most clamp-ons are hideous-looking things, overfat and bead blasted, painted grey or black and not particularly nice looking. But these are wonderful, and if you've got a nice-looking bike with a threadless steerer and you want sometime fine to put on it and look at and be happy with, these are the way to go. When we get the half-n-halves in we'll put them on the site. We got one sample in and I misplaced it—otherwise I'd show it here. But this new fully lugged one I haven't yet misplaced, so that's why you see it here. —Grant



Trusses

by Kevin Moore

Kevin Moore is a registered Civil and Structural Engineer in California, and Principal and Co-Founder of Certus Consulting, Inc., a consulting firm. He graduated from UC Davis and completed a Masters Degree at The University of Texas at Austin. Bicycling has always been a part of Kevin's life, and he rides 30 to 50 miles per week up and around Mt. Diablo (in Rivendell's neck of the woods).

Large structures are made of a combination of smaller structures. One of the most useful combinations is an assembly of a series of triangles in a single plane, or a truss.

A structure comprising elements arranged in squares or parallelograms has to be rigid, stout, and heavy, or it will collapse under a heavy load; but structures made of triangles do not have to be as substantial to carry the same load. As a result, they're ideal for many weight-bearing structures, regardless of function.

The first trusses appeared around 2500 B.C. You see examples of them every day in bridges, skyscrapers, cranes, the Eiffel Tower, gates, cathedrals, humble homes, and geodesic domes (a geodesic dome may look round, but it's made of triangles). Sometimes trusses appear obvious, uncovered and exposed as in bridges; sometimes they're hidden beneath an outer shell, as in the roof of a house. Nearly any big structure that traverses large expanses, such as a bridge or stadium roof, is supported by trusses.

How do they work? Basic structural elements that resist forces can be grouped into three general categories: tension elements, which resist tension/pulling forces along their length; columns, which resist compression loads along their length; and beams, which are horizontal elements that span between two or more support points. Forces theoretically move through trusses via axial paths, creating compression (pushing) and tension (pulling) forces only. That is, the components (members) of the structure experience tension or compression forces, but not bending forces. Members that resist axial forces can be extremely efficient, lightweight, and small, so the overall structure can resist higher loads while requiring less material—a true model of efficiency.

Structural engineers evaluate structural efficiency, or the strength of an element relative to its weight, by dividing the highest load resisted by an element by that element's weight. Of the three structural elements, tension elements are capable of the highest ratio, and therefore the highest structural efficiency, followed by columns. Beams are the least efficient; for that reason,

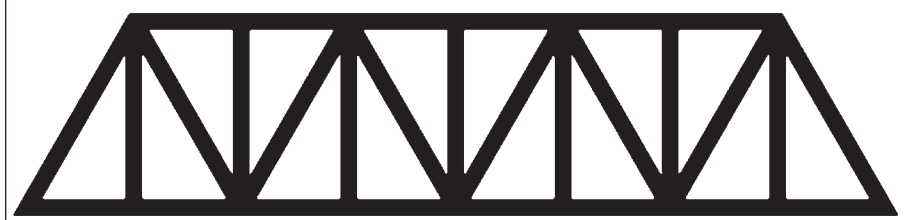
a truss system is often used to span like a beam (or to act as a column).

The theoretically perfect truss consists of straight elements connected together such that no bending forces are transferred between elements, a stable but improbable configuration. The connected elements forming the top and bottom of the truss are known as the top and bottom chords, while the diagonal and vertical elements connecting the chords are collectively referred to as the web of the truss. Designers strive to arrange triangular panels, using elements with infinite strength and stiffness, so the panel cannot be distorted by stress.

Elements that possess infinite strength and stiffness are purely theoretical, thereby limiting the capacity of the element and in turn the structure that contains it.

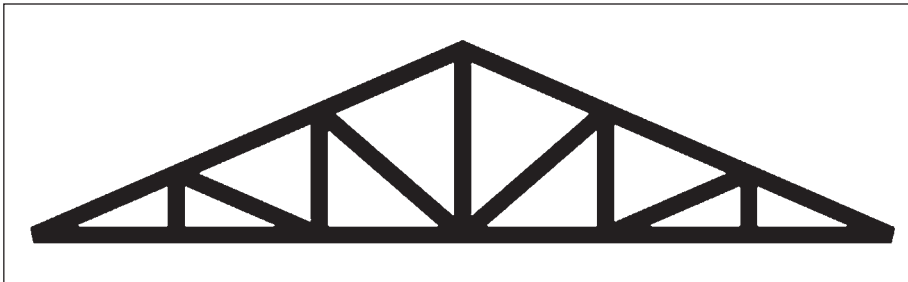
However, even the most inefficient truss can span very large distances or support heavy loads with minimal structural weight.

Over the years, many different styles of bicycle frames have been developed, not all of which function like trusses, but the standard “diamond style” has stood the test of time. With the understanding that trusses are arrangements of triangles, and that the more triangular the arrangement is, the more structurally efficient it will be, you can understand why the standard diamond style frame, properly designed and well-made, is able to support around one hundred times its own weight.



WARREN BRIDGE

Perhaps the most common, the Warren truss is primarily used in bridge construction spanning 150-300 ft. The addition of vertical members within triangular panels enables the truss to work for longer spans.



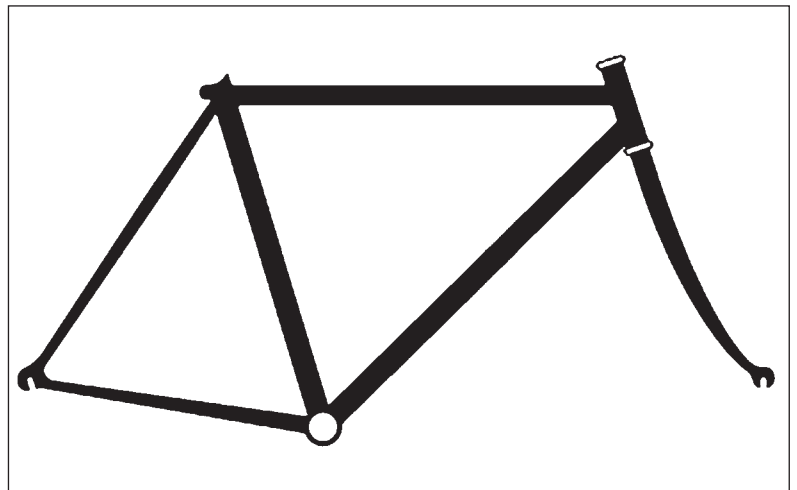
HOWE ROOF

The frame members are arranged with diagonal members pointing down and out from the center. As a result, the diagonal elements must resist compressive forces and the vertical elements resist tension forces. The force distribution that drives this change in element behavior is relatively complicated, but can be attributed to the compressive forces developed in the top chord and tension forces developed in the bottom chord. The Howe truss arrangement will tend to result in a

more costly structure than the Pratt truss for long spans because the Howe truss’s diagonal/compression members will be larger and longer. Because of the difference in material costs, the Howe truss is rarely seen in bridges or large structures, but can be useful and aesthetically pleasing for other applications.

BICYCLE FRAME AS A TRUSS

The portion of the frame consisting of the seat tube, chainstays, and seat stays is casually referred to as the frame’s “rear triangle,” and a frame actually has two of them (because of two sets of stays). Ahead of that, the part made of the seat tube (again), top tube, down tube, and head tube—is the “front triangle.” The front triangle isn’t a perfect triangle—because of the head tube—but close enough. The triangulation makes the frame vertically rigid and trusslike. It would take a whole lot of weight to impart enough flex to the frame to affect comfort, and yet manufacturers, riders, and the media continue to make claims that this happens. The fork—that’s another story. It’s not part of the truss; it’s just there.



Descent Without Brakes

By Duane Hutchinson

This story was originally published in *Bicycling* in the early '70s. I don't know how to get in touch with Duane Hutchinson, but Duane, if you contact us, we'll pay you the going rate—and if your lawyer is especially intimidating, maybe a bit more. It is not our intent to rip you off.—G

My bicycle quickly gathered speed as I followed the ribbon of asphalt threading its way down through dark oak trees. The cool wind felt good on my face. Perhaps I could get down to the valley and make camp before it was completely dark. With only fifteen miles to go and going perhaps thirty-five miles an hour at times, I shouldn't take too long.

Thirty-five miles an hour It seemed as if I might be doing fifty at the moment. Already I had to lean low on the curves. The slope down seemed steeper in its way than the upward climb had been.

During mid-afternoon I had begun the long climb up to the Cumberland Gap. My lightweight bicycle was loaded with forty pounds of camping gear, and I was determined to cycle across the range of the Smokey Mountains.

More than one passerby along with road had warned me about what lay ahead. In the first place, they agreed, I would never be able to ride up the mountain. They claimed no one had ever done it. Eyeing my bulky baggage they assured me that with all that extra weight, I would be worn out from just pushing the load to the top on foot. But their real concern was with the trip down the other side of the mountain once the summit had been gained. Unless I kept in very careful control, bicycle and all would go careening over a cliff. Thus cautioned, I remembered having seen the wreckage of a truckload of shelled corn, which had taken its driver to the bottom of a steep Ozark ravine. Probably corn would be growing there for years to come.

Still undaunted, I continued the grueling ascent. The climb started badly because at the sign announcing the beginning of the Cumberland elevation I was already in my lowest gear. It was hard work. Cars passed and appeared to go so easily up the grade. My weight to power ratio was very poor, and I was suffering now under the weight of my equipment. But the camping gear would pay off in dividends during the days ahead.

I was standing on the pedals now, and would have to remain out of the saddle most of the way. The alpine gear I ordered had not arrived, but vacation time had.

The miles slowly slipped behind me as the afternoon wore on. It occurred to me that, if the natives were right, I might be the first to conquer the Cumberland Range on a bicycle! This idea spurred me on (even though I was sure many cyclists had made the crossing) until I spotted the

sign announcing Cumberland Gap reflecting the last rays of the setting sun.

After a gasping rest I began to consider the descent. The warnings of the natives seemed to have a new seriousness now. Nevertheless, I felt that many things could be done to keep a bicycle from running away. "There won't be any trouble," I thought with smug confidence. This should be the time to enjoy victory, not to indulge in worry over the future.

I checked over my luggage and tightened a strap here and there. The heavy tubulars looked all right, and were stuck fast to the rims. I pulled up the collar of my poplin jacket. It was cold here on top, and it would be colder by morning.

With a resolute shove I rolled past the orange sign warning: "Danger! 15 Mile Slope. Check Brakes. Use Lower Gear." The fading sun clothed the distant peaks and ridges in amber, but the valley looked dark and mysterious. What curves and unknown danger lay ahead I could not guess.

Now as I plummeted down the other side of the mountain, I could feel the pressure on my forearm as I crouched down on the drops of the handlebars. Just as I saw a sign announcing a sharp curve ahead, I heard a car coming up from below. I applied the brakes lightly to stop my acceleration. It would be better to be going a bit slower in case one car might be passing another. Because it took a surprising amount of force to slow my pace, in growing desperation I squeezed the brake levers with all my strength. Two cars swung around the curve ahead. It wasn't until they had gone on past me that I could smell the hot rubber of my brake blocks. They were taking a lot of punishment.

Just as I was thinking about the dangers of deferred maintenance, my front brake cable snapped. A terrifying chill swept through me as the bicycle seemed to leap forward.

For a split second I must have been mentally paralyzed because I remember how the trees came at me from the side of the road at the curve. I lay into the turn so quickly that I hadn't time to get the inside pedal up and it sent chips flying as it scraped the pavement. I survived the curve, and as relieved to see a straight stretch ahead. It didn't look so dangerous. Perhaps I could zigzag here a bit to slow my momentum. I began to whip from side to side, taking the whole road for my slowing maneuver. The

grade didn't look particularly steep yet the ricocheting tactic seemed to have no slowing effect whatever. Some times in the mountains, I learned, even the level-appearing plac-ing can be very steep. It was rather a cruel optical illusion at this point to race toward destruction on a safe-looking stretch of road.

I pressed my gloved palm down hard on the front tire, but the glove was too thin to offer sufficient protection. The wind ripped at my clothes and made tears stream in rivulets from my eyes back into my ears.

A series of "S" curves came up this time. I was too busy to read the signs, which probably warned me to be cau-tious. I tired wedging my shoe between the tire and the frame on the front wheel. This had a braking effect, but it also could bring sudden disaster if the shoe drew in too tightly and locked the wheel. The thought of an end-over flip at this speed unnerved me. Anyway, I was so busy with curves that I needed my legs on the pedals for balance. "Oh, don't let there be any loose gravel!" I gasped.

Another curve disclosed a car immediately ahead of me. This time the car was going the same way I was going—down—but at a fantastically slow speed it seemed. I had to turn sharply to avoid hitting it; it came up so fast. As I flashed around it, the driver gaped in amazement. How I wished for some way to grab on to him.

My eyes were streaming so much in the cold wind that it was hard to see. It was getting darker. The cars I met had their parking lights on. In the midst of my agony I won-

dered, ridiculously, what sort of speed record I might be setting. Two more cars going down; I passed them as if they had been standing still, but I could tell by the squeal of their tires that they were going fast too.

I had visions of myself plastered flat against a big boul-der or flying off into space to end up who knows where. A sharp curve was coming up fast, but there was no rock. The curve just seemed to tip up with nothing but ruddy sky on the other side. Thank God for curves that are banked properly.

I started the curve low inside, lying down as flat as I dared, and taking the whole road, coming upright in the other lane. No cars? Yes, headlights, but far enough down the road to let me get back into my own lane again. If no, it wouldn't be a bloody boulder but a car bloody with me all over the grill. Close! I made it this time, but one more curve and a well-placed auto could end my whole adven-ture—if not my life.

Even as I prepared for the worst, the best came. A slight turn in the road and a "Y" appeared. The highway turned and led on down the mountain, but the road, which appeared to go straight ahead went up. It was smooth enough to take my speeding mount even though it was a dirt road. Sailing onto the "high road" I felt the beatific sen-sation of slowing down. I slid to a stop on the crest of a knoll and saw laid out below me the twinkling lights of a town in the valley. I had counted death for fifteen plunging miles and I was still alive!

How Much Lighter Should Your Bike Be?



crashed carbon

The typical rider weighs between 170 and 210 pounds and has been taught by the media to squawk when his bicycle frame approaches four. A four-pound frame is incredibly light. A superlight Rivendell designed for a 130 pound hill climber, weighs about 4.25 pounds.

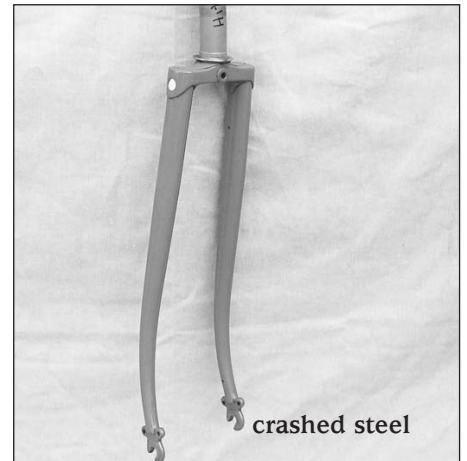
IT'S NOT FRAME WEIGHT THAT MATTERS, but the total package (frame plus parts plus rider) weight. This is an easy fact to neglect, and it's fun to, because the alternative means eating

less and exercising more. So when a magazing blantly or insidiously sells super lightness, it knows it has thousands upon thou-sands of readers who will feel good believing it.

Fighting the notion that the lighter is better is hopeless. As humans, we know the difference between lifting empty cardboard boxes and

full ones, and that's how we relate to weight even when we're sitting on it, as we do when the thing is a bicycle. When we're told, "This frame is a pound lighter than that one," we instinctively think riding the heavier one is going to be like walking around holding a one-pound can of black beans.

Science can prove that removing a pound from your body or bike short-ens the climbing time, but for recre-

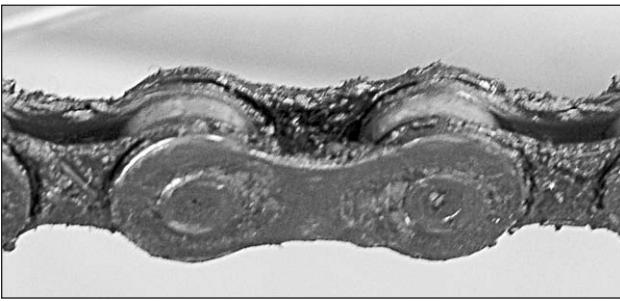


crashed steel

ational riding no matter how strenu-ous, steep, and long, a five pound weight reduction won't matter. And if you want it, lose it off your body. I know that's hard, but taking five pounds off an already lightweight bicycle is dangerous.—Grant

How Mark Always Cleans All Chains

Mark rides a lot and races cyclo-cross, and has cleaned his chain more often than anybody I know. During cyclo-cross season, he claims to get about 1500 miles out of a chain before throwing it out. The rest of the year, a lot more than that. It's a detestable job, but here's how he does it.



He starts with a dirty chain. This is John's. It was not lubed with ProLink! It may have been lubed with Mucilage.

Mark's tools.

2 plastic tubs. 4 brushes. Flat-bladed screwdriver (forgot to put in tub). Simple Green. Water. Simple Green is available all over, and the brushes you get at a hardware store. Cheap, with stiff bristles.

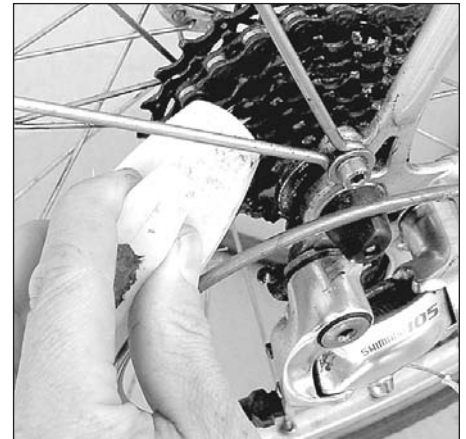
Basically, the process goes like this: Scrub the muck with Simple Green, flush with water. Scrub more with simple green, flush again with water. Scrub, flush, and so on until you just can't stand it anymore and the chain is clean enough.



STEP ONE. Use the screwdriver to clean the major gunk off the pulleys. Easiest with bike in a stand, pedaling to rotate the pulleys.



First go at the chain down here with Simple Green. Then water. Then more S.Green, and so on. This is not fun, but it works.



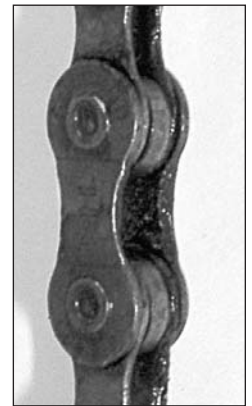
Use the same or similar brush to get the major grime off the cogs. Flush with water, and of course repeat until you can't stand it.



When the cluster is fairly clean on the outside, it still has built-up gunk deep between the cogs. Remove the wheel and using a raggy towel (also not shown in the first photo), floss deeply in each groove. This is the most satisfying part of the process, and it is not actually that satisfying.

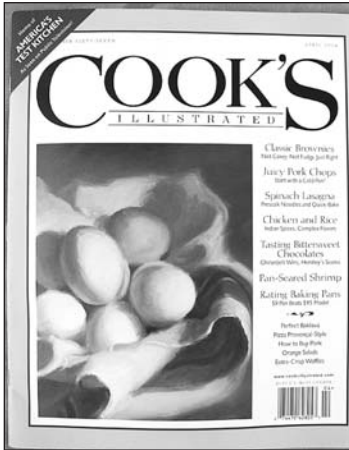


After the cogs and chain and pulleys are pretty clean, go over the chain again, paying more attention to the side plates. Do it like this, and you'll also clean the chainring. Go at the others, too.



The cleaned chain. It's not spic-n-span, but it's way better. Lube it with ProLink and it'll won't get yukky as fast.

Good Things Review



Cook's Illustrated
 reviewed by *Mike Rasmussen*
 This is a magazine about cooking by people who really cook. When they write an article on "How To Make The Perfect Macaroni And Cheese" or anything else, they cook dozens of batches. The article tells what works, what doesn't work and why. They describe what they consider to be ideal—so if you decide that cookies should be flatter and drier there's enough information in the article so you can adapt the recipe to your taste. This is good for non-cooks because

they come away with a clear, easy to follow, tested recipe. This is good for cooks because they get the background on how ingredients contribute to the final dish. Every issue includes recipes, ingredient and equipment reviews. They name names and don't fret about describing something as "divine" or "disgusting." Bonus: there's no advertising. I originally bought a gift subscription for my wife as a Christmas present three years ago. We've been enjoying the magazine ever since.—M.R.

cooksillustrated.com 6 issues, \$24.95



No Sweat (brand) Fake Converse All-Stars (they're Indonesian!)

The last time we showed alternative shoes—Vitruvian running shoes—we got scolded by a guy who lives near Nike headquarters, and thought we were on a high horse knocking Nike. That wasn't the point, and it still isn't. These are blatant Converse All-Star knockoffs, but they're made in a union shop in Indonesia, where the workers are well-paid and benefitted. It's one of the few ways to feel puffed up and bragg about Indonesian shoes.

nosweatapparel.com \$35/pair

Interested in really fine alternative running shoes, but missed the issue where we talked about them? Go to

vitruvianrunning.com



Marcato Grain Smasher

For 9 years, member and knife maker Tim Wright has influenced my thinking about a lot of things, generally for the better; so when Tim comes on strong for something, I go out and buy it. Tim told me, "You can't believe the difference in taste between store-bought rolled oats and fresh

ones!" Since I like the store-bought ones anyway, I was interested. It got it and it works great. It's solid metal and plastic, made in Italy, and it's easy to mount to a table, use, and clean. It mashes oats and other elliptical-type grains in a flash (half a minute for a bowlfull). There are three settings. When mine arrived I went to the store for non-rolled oats, and they were out, so I got barley and buckwheat groats instead. That with brown sugar, maple syrup, raisins, flax seeds, and walnut pieces and milk, and you've got your holier than thou breakfast right there, and it's delicious. I'm not going to be an oat farmer, but with this thing, I can at least roll my own oats (and groats, and barley...). Lots of places sell it online. Just Google "Marcato Oat Roller" and you'll come up with many sources. Fern's Nutrition sells it for \$79.95.



Daughters Magazine

We aren't going to continue too much with the parenting books them (started last issue), because it comes of as preachy, and who wants that? But if you have a daughter and like to read about daughter-specific issues, then this is a great little newsletter.

It comes out 6 times per year and costs \$24.95. (Hey-same as Cooks Illustrated). I learn something, or get a different perspective on something, ever single issue. I'd say it's easily worth the cost. Website:

daughters.com

Voigtländer Camera

This is the photographic equivalent of a Rambouillet bicycle. If you know how to expose properly and load film, and you'd sorta like a Leica but it costs too much, look at the Cosina-made Voigtlanders. Cosina's owner is a camera nut who is not at all interested in photographic trends. There are four models. Three are rangefinders (like Leicas), one is a scale-focusing model (like a Rollei 35) They fit not only the wide range of Voigtlander lenses, but lenses from Leica, Cannon, Nikon, and other rangefinders. Models range from \$98 to \$469 (body only). If you want to get into good camera stuff cheap, and you don't mind giving up electronics, go to



cameraquest.com

Proud To Be a Tourist

By Jan Heine

I believe the industry's emphasis on racing—role-modeling it, glorifying it, and developing hardware that's good only for racing and fooling non-racers into buying it—is largely to blame for everything from keeping our sport small to the war in Iraq. Jan's story here makes a good case for a shifting around the heads on the totem pole. Too bad our circulation is so microscopic, but say la vee. —Grant

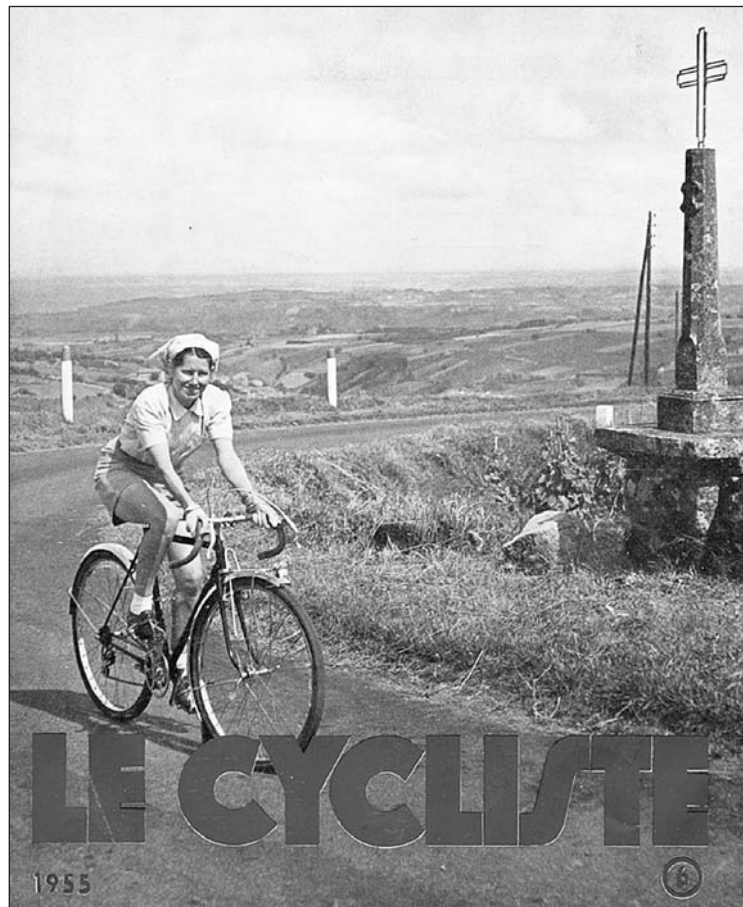
Riding down the local trail or paging through one of the more popular cycling magazines, one could think that all cyclists in North America race.

Astride high-tech wonders (or at least bikes going to great lengths to appear as such), decked out with their sponsors' logos (or at least their idols' sponsors' logos), every stretch of road becomes the finishing straight on the Champs Elysees. The ads talk about "dropping your riding buddies" and the magazines promise to unveil the secrets of "climbing like a pro."

Bicycle racing is a wonderful sport - I enjoyed racing for years and miss it dearly from time to time. My first real racing bike, with its exquisite Campagnolo components, was a revelation. I was glad to leave the heavy, poor-quality, be-fendered ten-speed of my teenage years behind. Now I was gliding along in a pack of racers while proudly wearing the colors of my team. I met many nice people at races - people so nice that I often felt they deserved to win as much as I did! Later, my love of long distance cycling brought me to the randonneurs. I tried to adapt my racing bike for the different riding I now did. Around this time, I was introduced to the French cyclotourists. And finally I felt at home: among cyclists who enjoyed cycling so much; who rode wonderful bikes that combined the nimble ride and beauty of the best racing bikes with the utility of fenders and lights.

The French term "cyclotourist" encompasses a large and diverse group: Everybody who rides for fun, rather than only for transportation or to earn money and recognition as a racer. It doesn't matter how far and how fast you go, cyclotourism (not to be confused with the more narrowly defined American "bicycle touring") is a big tent with room for everybody. In fact, most American cyclists are cyclotourists. Whether you ride with friends on weekends before stopping for pastries or lunch, whether you enjoy centuries or longer rides, whether you tour on a bicycle (self-supported or not), you are a cyclotourist. Most mountain bikers, out in the woods to enjoy themselves, are cyclotourists. So are the randonneurs who test themselves in brevets culminating in the famous 1200 km Paris-Brest-Paris.

Unfortunately, many cyclotourists lack a positive identity, a pride in their chosen sport. Too often, one hears a self-conscious "Well, I don't race..." Or "I just ride for fun..." What better motivation could there be than riding for fun? It is the noblest pursuit in cycling, riding for the sake of riding.



A typical tourist. Holland? Mid-50s.

Maybe we can take our inspiration from the French cyclotourists. They are a proud group. They love the way they ride, and do not aspire to become racers (or look like them). Cyclotourists are true amateurs, in every sense of the word. They ride because they love riding.

To me, cyclotouring represents the spirit of cycling. Cyclotourists are self-reliant. They carry the food they need or buy it along the road. Their machines are reliable, and they know how to fix things in the unlikely event that something breaks. Their fenders protect them in case the weather forecast is inaccurate—or even allow them to enjoy their bikes on a rainy day. If they get caught in the dark, they simply switch on their lights and continue.

Instead of seeing other cyclists as competitors to be

dropped, cyclotourists enjoy the company of those they meet on the road, to share stories and experiences. Cyclotourists respect each other, no matter their speed and bike.

Cyclotouring has been a democratic sport. The idea is that everybody is welcome, that any able-bodied person can do it, no matter his or her gender, fitness, age or body composition. For example, women always have participated on equal terms in the randonneur PBP, in the technical trials and in other events. Nobody is a "better" cyclotourist than another - because you cannot measure the enjoyment of cycling. Cyclotourists enjoy the scenery and are curious about the culture of the area they visit - the old French cyclotouring magazine, "Le Cycliste," rarely featured a cyclist on the cover, but usually some wonderful photograph taken during somebody's bicycle travels: of cathedrals, tree-lined roads, mountain peaks, a farmer by the roadside.

This doesn't mean cyclotourists always go slow, or that they don't like competition. Randonneurs have their record books with the best finishing times of various events, and the fastest randonneurs train not that differently from racers. But the spirit is different: Every finisher within the time limit gets the same medal. And randonneurs are allowed to share the joy of coming first, so there are no final sprints, few attempts to drop others on the last kilometers, no disappointment because somebody "lost" by a few inches. Instead, a group of riders can work together and finish together, feeling a great sense of achievement. And usually, the conversation after the ride quickly turns from the competitive aspects to the great scenery, lovely roads and wonderful experience of the ride.

In fact, it seems that inside many racer look-alikes, there are cyclotourists waiting to come out. When people ask about my sponsor-free "Seattle Randonneurs" jersey, their faces light up when they hear of climbing mountain passes in the spring, with snowbanks on the sides of the road and rivers swollen with meltwater rushing alongside or of riding through farmlands at night, the only sound the hum of the tires on the road until you hear the horn of a freight train in the distance. Many are inspired. Some even admire my bike with its shiny fenders and integrated lights - "so different from anything you see these days!"

Different indeed, because most of today's bikes are bred for competition. Whether "road" bikes (actually road racing bikes), mountain bikes (actually offroad racing bikes), or even the "alternative" cyclocross bikes. Most of these bikes perform admirably in their intended races, but elsewhere, they are fraught with compromises. Cyclotourists are expected to buy a competition bike and adapt it to their riding, with varying degrees of success. The popularity of trailers, clip-on racks and "innovative" solutions for mounting fenders to bikes never intended to carry them speaks for itself.

Here the French cyclotourists can serve as an inspira-

tion. In the early 1930s, they were as unhappy with the offerings from mass producers as we are today. To change things, they organized "technical trials" to prove that cyclotouring bikes could be lightweight, nimble, durable and beautiful. In these events, bicycles (not riders!) competed over the worst roads and steepest passes, with points awarded for light weight and technical innovations, as well as penalties for broken and malfunctioning parts.

A few small builders used these events to showcase their amazing hand-built machines, and thoroughly embarrassed the mass producers of bicycles, who had hoped that sponsoring a few professional racers was all they needed to do to persuade people that their bikes were superior. Few people remember, but cyclotourists introduced innovations now often ascribed to racing, such as derailleurs, double and triple chainrings, thin-gauge and even oversize steel and aluminum frame tubing. Aluminum was used for cranks, stems, handlebars and rims on cyclotouring bikes decades before racing bikes finally ditched their heavy steel components. Cantilever brakes and sealed bearings in hubs and bottom brackets were common on 1940s cyclotouring bikes, which truly represented the state of the art of bicycle building. For those who could afford them, small makers ("constructeurs") like René Herse, Alex Singer and a number of other, less well-known artisans made wonderful bikes, which even today continue to be the stuff of dreams.

It is said that history repeats itself, and so I think cyclotouring has a great future. I look forward to the day when cyclotourists in North America proudly identify with their pursuit of two-wheeled enjoyment. Things are beginning to move in that direction: Technical trials are planned for 2005 to showcase cyclotouring bikes as the wonderful machines they can be: Useful, complete, integrated bikes with lights, racks and fenders as part of the original design, not added as afterthoughts. Bikes that are ready for the riding we do, bikes that are good-looking and proudly can stand their own next to the latest carbon-fiber wonder. As long as cyclotouring bikes have fenders that rattle, lights mounted with unsightly brackets and rack trunks that swing from side to side, it is no wonder that most riders aspire to be on a spare, lithe racing machine, clothed in color-coordinated outfits, in the pursuit of victory.

But in the end, the machines are secondary, because cyclotouring is a state of mind. No matter what bike you ride, take pride in what you do. If you enjoy riding your bike, there is no need to apologize for it!

Aluminum was used for cranks, stems, handlebars and rims on cyclotouring bikes decades before racing bikes finally ditched their heavy steel components.

Jan Heine is the editor of Vintage Bicycle Quarterly, a magazine dedicated to cyclotouring and its history. Information at www.mindspring.com/~heine/bikesite/bikesite/

KRAFTBRAU

In every issue for the next year 8 issues or so, we're going to profile one of our members' small businesses. We have a few on the waiting list, but if you'd like to be, please send a brief profile of your business to John@rivbike.com. Thanks—Grant

Business owner: Steve Berthel

Location: Kalamazoo, Michigan

Type of business: It's a microbrewery. Beer.

How old are you, and how did you get into beermaking? I am 49, and 12 years ago I moved into a house with a bike-racing pal who was a homebrewer. He moved to New Mexico, I inherited his brewing equipment, and for the next few years I really got into making all different kinds of beer with my fabricated homebrew setup. In 1996, I got a job here at Kraftbrau as a bartender on Monday nights, and when the original brewer and president quit in the spring of 1997, I bought the business. I'd been a remodeling contractor, so I jockeyed two jobs for a year. I have been a full-time partner now for 6 years.

Compare your early beers (and skill) to now.

Well, I started brewing Northwest-style hoppy ales, Anchor Liberty Ale, and pale ales like Sierra Nevada, so I tried to duplicate them. When I started at Kraftbrau, they had already been known for German-style lagers, so I learned to brew those styles, too. In the last 6 years, I've expanded my recipes to over 45 different styles of lagers and ales. I now brew German, European, and American lagers, American ales, Belgian and French ales, and English cask-conditioned ales. I'm better and more consistent. You've got to be consistent, because people count on their beer always tasting the same.

If you could apply your current knowledge to your early years, what would you do differently?

I would have been more aggressive trying to bottle and distribute my beer regionally. It is definitely not a money-making way to sell your beer, and the equipment is expensive, but it makes people aware of your product. We focused on our pub sales and music promotion, which is more lucrative, but now we are known for our entertainment more than our beer.

How widely distributed is your beer?

We are available in 100 mile radius of Kalamazoo.

If a big beermaker wanted to buy you, under what conditions would you sell?

That is an interesting scenario. I guess it could go two ways; one, I could take a cash settlement and the majority of my recipes and open a new brewery built just the way I would like it, or two, have a large brewery give me the backing to upgrade and improve on what I already have going, allow me to have creative control, and give me enough working capital that we would not have to worry about making payroll or taxes or insurance for a couple of years.

Are you happy with your current state of the business? If not, what would you like to change?

Sort of. I would like to have a bigger production facility, so I could make more beer, and maybe get a real packaging plant. We haven't found the right space here in town. On the up side, the beer is good and consistent, we see new customers every week, and the music has been great!

Where would you like to see Kraftbrau in 20 years?

Doing the same thing we are doing now, only more efficiently. I don't want to get so big that I lose control of what we are doing and then have our consistency start to slip.

Of the beers you make, which is your favorite?

If I had to pick one, it would be our Bohemian Czech-Style Pilsener.

Do friends or family or customers give you business advice, and if so, how often do you take it?

I have people giving me advice all the time on what beers to make, what bands to book, how late to stay open, and all that. They mean well, but I don't pay much attention. I listen to my wife Karen, though. She knows me better than anyone and has good insight. And I have a couple of regular customers/friends that travel to England and Europe. Their advice on beer styles is invaluable, since I never had the opportunity to visit those countries. They tell me my beer compares to what they experience at the pubs over there.



Steve and his 1996 Rivendell cyclo-cross bike,

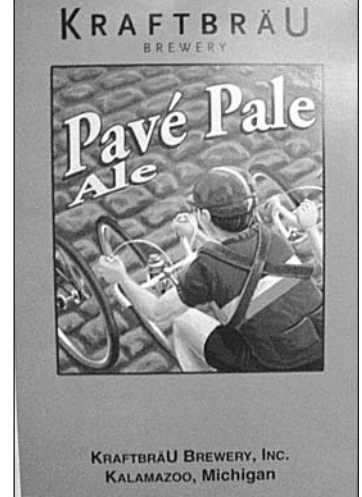
KRAFTBRAU



Here's what to look for as you ride by.



Steve and co-owner Jim Quinn posing for the Rivendell Reader; Steve in his Woolly-Warm vest from England.



One of Steve's bike-related beers.



Brewing.

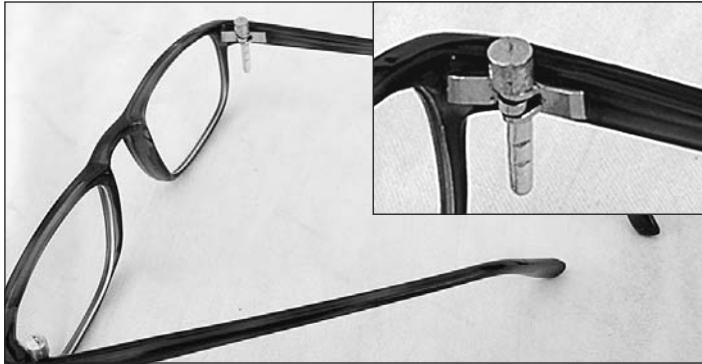
Does Beer Make You Fat?

By Steve Berthel

No! It is a misconception that if after a ride in the woods or on your favorite road, you and your pals will all develop a beer belly if you choose to have a beer or two to celebrate a great day of being alive. The average 16 oz. glass of micro-brewed lager or ale contains roughly 180-190 calories or more, depending on alcohol content. It follows that if you consume beer and sit around on the couch watching the big game, invariably someone will break out the chips, and before you know it, voila! your pants don't fit.

Now, on the other hand, one can easily burn 400 calories or more on a fairly average ride, so the calories you gain from beer will cancel themselves out. In other words, make sure that you use the calories you put in your body through the course of the day. Unfortunately, the macro-breweries have people believing that the only way you can enjoy a beer if you are active is to embrace a "low-carb" brew, which is basically a light beer with more rice and corn than normal and even less flavor. I am 5'8" and weigh about 155 lb and people (jokingly) comment that my beer must not be any good because there is no such thing as a skinny brewer. I feel that eating healthy food, getting enough sleep, and regular exercise will allow you to enjoy this wonderful social beverage, so take a ride and meet at your local brewery afterwards, and enjoy what the brewmaster has made!

Odds & Ends



Save Glasses With Derailleur Cables? *Oui!*

John lost the screw to his glasses. Mark, ever the innovative mechanic, fixed them with a stub of a derailleur cable and a cable cap. The fix has held for 2 months, and is expected to last forever. They should assemble them this way at the factory.

Cheap Good Shades

Being cheap, you might think they'd be made someplace far away, but in this case—and assuming you live in the U.S.—you'd be wrong. These are Vaughn brand, but actually made by Uvex. They're light-weight safety glasses. Grey lenses, adjustable temple pieces, adjustable lens tilt, and optically Fine (no distortion). And all for eight dollars. Too cheap to be your main shades? Then get them as spares.



SuperShades: 31-378 \$8

Paul's New Centerpull

Paul Price of Paul's Components is a bike rider who runs a machine shop that specializes in high-end, relatively low-volume runs of quirky and clever bike parts that big parts makers either don't know about, don't care about, or don't see the market for. He's makes hubs, brakes, brake levers, thumb shifters, racks and baskets for carrying heavy and odd-sized loads, and probably more. But most notable is this centerpull, modeled after the Mafac Racer, and named the Racer itself. Like all Paul parts, it is machined from aluminum. Unlike all other centerpulls ever made, it mounts to cantilever studs. It won't go on just any canti studs—they have to be brazed on with this brake in mind, but "your local builder" can do that, presumably. We haven't tried them, but that won't be the case a month from now. Curt's brazing up a fork for them, and we'll put it on a bike. But in general, this much is true: It is well made, attractive, and a good idea. A report will follow. Until then: Paulcomp.com.



Strong Fancy Costly Refrigerator Magnets

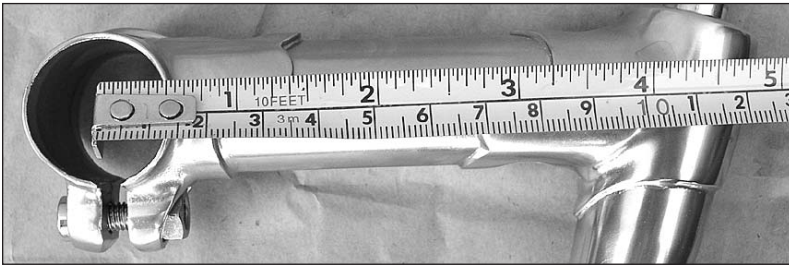
These are cloisone badges, made on a copper base and colored with fired enamel powders that flow into the spaces. They're what the Rivendell head badges are made of. But these aren't curved, and they have rare earth (super strong) magnets super-glued to the back of them. Seriously, keep away from pacemakers. These are lovely and will hold anything to your refrigerator. Two models:

Rambouillet: 24-112 \$10 ea Baggins Bags: 24-087

SIXFIFTY BEE

Many of you know that we're coming out with a rough-stuff/toury-brevet/roady bike called the Saluki, and that it's being designed around the popular-as-Latin 650B wheel size. It seems odd-to-foolish to do that, but we've never denied being either, and besides, it's a GOOD size for a bicycle wheel. About halfway between 26-inch mountain wheels and 700c road wheels, this in-between size has advantages of both—more inherent strength than a road wheel, and more diameter (so looks better on bigger bikes) than a 26-inch wheel. Of course, critics are quick to say "then it's not as strong as a mountain wheel, and not as fast as a 700c, and it's impractical for touring because the rims and tires and tubes are so hard to come by." Those statements are true, but miss the point. The 650B wheel is a terrific, all-around size. It looks good, works good, and the fact that it's rare only supports the notion that the bicycle industry gets stuck in its ways every now and then. As for availability: The rim you see here is the first of 400 rims we've ordered from Velocity. The tire is a Schwalbe, and we'll have these AND Panaracer AND Mitsubishi AND Michelins...all by July. In addition, we'll carry at least a Schwalbe tube, and maybe a Michelin as well. In a pinch, a normal mtn 26 tube works fine. The lug under the table of contents is a Saluki lug, by the way. We're committed to this bike. Sizes 47, 50, 53, 55, 57, 59, 61. Sold as frame/fork/headset, for about \$1400. First production run will be 100 bikes, and there's already a list going. We're excited about this bike and its funny wheel size. More info soon.





How it is measured

The normal way: Center of the intersection of the quill and extension, to center of the bar clamp, and along the centerline of the tube. Since you can't access the centerline of the bar clamp when the bike is on a bike, most riders measure center of quill bolt to top-center of bar clamp. This one's an 11cm (or 110mm) by the measuring method shown here. If you were to put it on a bike and stick a bar in it, you couldn't access the centerpoint of the clamp, so you'd likely measure along the top, in which case it would come out as 11.6cm or so.



Rider's eye view.

Despite its strength and straightness and all that functionality stuff, most people buy it for its looks. The stem is always right there under your face, so a beautiful, svelte, and interesting stem is not to be trivialized on the basis of "all it does is hold the handlebar." As you're pedaling through Crack Alley or on the legal freeway shoulder, this stem here may be the only beauty you'll see, and you'll be glad to have it.

Three or four of our lugged stem customers have gone to the additional expense of having Joe Bell (Rivendell painter) paint their custom stems to match the bike. In this case, JB sandblasts the part to be painted (sometimes the lugs are kept nickel), then puts down primer, and then paints the stem. If you want to do that, contact JB direct:

(619) 469-4312

After 2 years, the Lugged Stem Is Back

AT LEAST TWO HUNDRED of you have one of these already, but nobody has bought one for at least a year and a half, maybe two, because we've been out of them that long. A lugged stem is not clearly superior to a cold-forged aluminum one, like the Nitto models we offer. Those are fantastic stems, and you can get six of them or more for the cost of one lugged stem. And, as a matter of fact, that's about the ratio we suggest: if you have seven bikes, one of them ought to have a lugged stem. If you're Bill Gates, two.

This lugged stem is made with thin-wall chrome-moly tubing, brazed by Nitto's Noriko Yabashi, then plated with nickel in Nitto's own facility. Nitto began in 1923 as a plating company, and there is nobody, anywhere, who does a better job of laying metal-on-metal. Will rust eventually get it? Maybe, but we haven't seen it happen yet, on stems even 5 years old and manytimes rain-soaked.

Weight. See the chart. This stem is about an ounce heavier per size than a Nitto Technomic Deluxe. But if you're like me, you've got an ounce to lose, and we suggest you do it so you can justify this stem.

The quill is 190mm tall. The Maximum Height mark is 75mm above the bottom. The stem clamp is sized for 26mm handlebars, but works for the few 25.8mm bars out there, too. The upper portion of the quill, at and just below the rear lug, is 25.4mm in diameter; the lower portion that fits into the fork steerer is 22.2mm. Basically, it has the same fit-proportions as a traditional road stem, and will fit virtually any bike with a normal, non-weird 1-inch threaded fork.

This is a gorgeous stem. Especially so compared to the range of stems you see on bikes these days, so often bulky and bead-blasted, silkscreened and shaped like sin. This beautiful lugged stem is the strongest stem ever, it will outlast your grandchildren, and it's gorgeous. Considering how much time you spend with your face just above it, that's no unimportant thing.

Specifications & Ordering Info

SIZE	grams	Part No.	No sevens—these particular lugs won't allow it. No thirteens, either. These would be easy, and if you want one and can commit and wait til December or so, drop us a note and we'll plan for it.
8cm	362	16-088	
9cm	368	16-089	
10cm	374	16-090	
11cm	382	16-091	
12cm	388	16-092	

Adventures in Online Bike Sales

by Maynard Hershon

EARLY LAST SUMMER, I CALLED MY FRIEND Steve Smilanick of SandS Machine, the guy who makes the coupling devices that allow you to pack your bike small enough for air travel without surcharges. I asked Steve to note on his web site that my coupled Waterford was for sale. I don't often fly with a bike these days.

A photo of the lovely Waterford, along with many other owners' bikes, had for several years been featured on the super SandS site. Steve graciously added a notice that it was for sale. A few guys emailed me about it. Most asked legitimate questions. None stepped up and bought the bike, one reason or another. Classy ones wrote to say thanks, but no thanks. The others just quit sending me email questionnaires. Why say why? Who was I, anyway, but an email address?

A few guys were jerks, to use the technical term, from the git-go. One guy really wanted Reynolds (tubing) logo stickers like the ones he could see on my bike in the photo. He sent three emails full of useless questions. He didn't want my bike. He wanted stickers.

Eventually, I got an email from a guy in the UK, or so he said. Jerry Diko is his name. That's the actual name he gave me. I don't care to protect Diko or whatever his name is. I don't think he'll be coming after me for slander. I want to buy your bike, Diko wrote, I'll send you money. A friend or client or agent of mine who lives in the US will collect the bike. Okay, I wrote him.

He asked me for my mailing address so that he could send the \$1500. I emailed my address to him; he wrote to thank me and assured me a check was forthcoming. There was no dickering, no questions about particular aspects of the bicycle. He evidently did not care about the stickers or if the bike were in need of work.

At that point, the lack of the back-and-forth that usually accompanies a sale began to bother me. I recalled hearing about overseas buyers and possible fraud over the internet. I couldn't believe it could be happening to me, particularly in the context of a bicycle sale. No way.

I mentioned the overseas buyer and US agent to a couple of friends. One of them nodded sagely and pointed me to a bike classifieds web site. When I checked it out, there were many, many notes about scams involving foreign buyers, bad checks and theft beyond the price of the bike.

Works like this, at least sometimes: The buyer sends you a check for more money than you asked for your bike. Someone owes him such-and-such an amount, he explains, and that someone would send it to you, not him. The buyer would ask you to keep the money for the bike, send the rest to him. And ship the bike after the various sums changed hands.

You wouldn't realize the cashier's check that the buyer sent you was bogus, and that it would take a week or so to bounce. You'd THINK you had the money, send the balance to the buyer out of your own checking account, maybe ship off your bike, then get the big surprise from the bank.

A week or so passed. Diko wrote that the check had been mailed. Coincidentally, he mentioned that the check would be for three thousand dollars MORE than the \$1500 I was asking for the bike. A guy in Africa owed him the money, he said.

Would I send the three grand via Western Union to his associate in London? Sure, I wrote, as soon as the check clears.

Diko wrote again, saying the check should arrive on such-and-such a day. He asked me to send the three grand soon as possible. He did not mention, really, how he'd take eventual delivery of my nice green 853 Waterford. I don't think he cared about my Waterford.

TWO DAYS AGO, THE CHECK ARRIVED in an EMS Speedpost "Extremely Urgent" envelope from Nigeria. First mail I ever got from Nigeria. The return address read: Jones Brian, 640 Park Lane, Mary Land. The Customs Declaration stated the contents were a Document. Nowhere on the EMS envelope or on the small brown envelope inside does one find the name Jerry Diko. In the brown envelope was a really authentic-looking cashier's check, drawn on the Peoples State Bank of Clyde, TX, for \$4,500.82. The remitter shown is Audio Corner, Inc., whatever and wherever that is. The only name on the check is mine. You can't read the banker's signature.

I took the check and envelopes to my Wells Fargo branch, thinking they'd want to verify the check and prosecute the bad guys if it turned out to be bogus. The bank officer wasn't all that interested in the check, saying that transactions from Nigeria were often, in her experience, scams. She suggested we visit the police.

My buddy Rick told me to search online for the Clyde bank, see if it was legit. I did; it is. I also found a web page dedicated to scams like this one. Seems fake cashier's checks from Peoples State in Clyde are common as summer colds. Diko wrote again, saying he knew I was in possession of the check. Would I rush down to a local Western Union office (he gave me two Tucson addresses) and wire the money to Micheal Jonas, #19 Harewood, London SW19 2nd, UK. Yes, Micheal was misspelled.

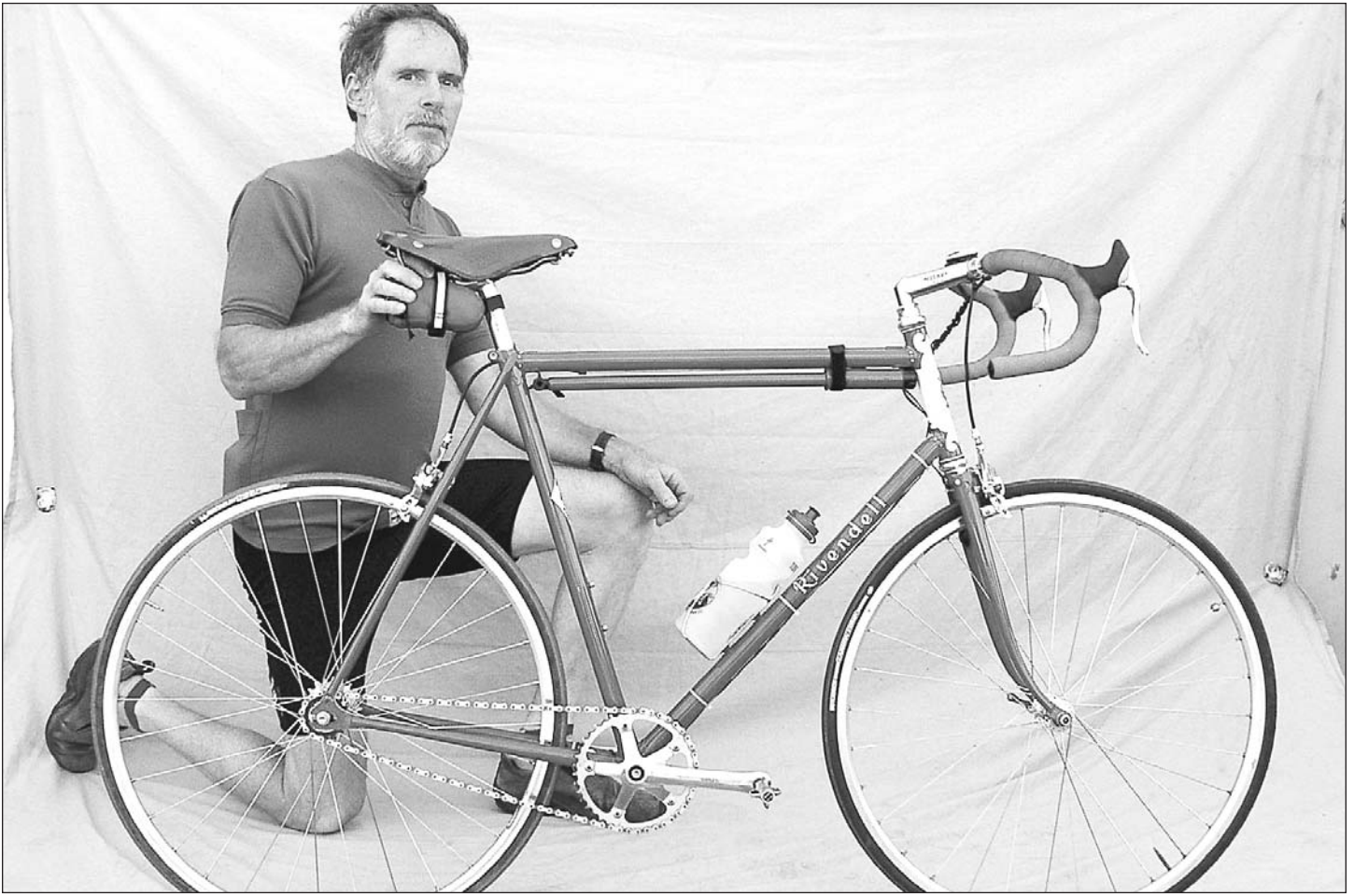
I wrote Diko on a Saturday, telling him that I did have the check but my banker had not been charmed by it, coming as it had from Nigeria, scam central. I told him I intended to talk to the issuing bank in Clyde, Texas, first of the week.

When I'm assured that all is well, the check genuine, I told Diko, I'll deposit it and go directly to Western Union with your three grand.

I just chatted with Leona B at Peoples State Bank in Clyde. Leona, who deals with the fallout from these bogus checks, told me she's seen 10 in the last three working days, all with the same check number. It's not just checks from the one bank, either. It's checks from plenty of banks. It's an industry. In Nigeria, Leona said, people teach classes in how to defraud Americans.

The bank, she said, is working with the Secret Service to catch the perpetrators. She asked me to send the check to her for forwarding to the Secret Service. I told her I'd send the check, copies of the six or eight emails and a copy of this article, which she would ordinarily not see.

She told me to expect to be harassed about sending the extra three grand, that Diko might threaten legal action against me. Thanks, Leona, I said, you take care too.



Track dropout with creamed points. The threaded eyelet makes fenders easy.



Brian's buddy rides a fancy single-speed, so Brian asked for extra fancy lugs. It's red.



The head lugs have the same custom cutting as the seat lug. The crown wave is painted cream.

Brian's Rivendell Single-Speed

IT'S IMPOSSIBLE FOR ME TO THINK one Rivendell is any prettier than another, because even when a bike isn't set up and equipped just the way I'd do it if it were mine, the individuality of the bike makes up for that. I even like the Rivendells I see with carbon-fiber handlebars on them. Wait a minute—I haven't actually seen one of those and hope never to, but if I did, I'd at least like the fact that its owner was pig-headed enough to do it, knowing how contrary it would look with the weird brown fabric-bar on the gorgeous frame.

But Brian Martinelli's single-speed sticks out more than most, because it has fewer parts to distract you from the frame. I'm not saying derailleurs are ugly, because I think they aren't. But just having fewer parts shows off the frame more.

Brian rides a regular bike, too. He's a local guy, and he's the electrician who hooked up our ceiling fans here in the sweat-box we refer to as our office. He's also a regular, and one of the fast ones, on the Wednesday evening mountain rides.

RR 32 SPRING 2004

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