Rivendell Reader No. 41

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The Tuff Thymes Issue

Remember forty years ago, when people talked about Pride of Ownership? Nobody ever went around talking about it, but it came up when they talked about their purchases. It seems so quaint, so weird, the concept, and the name—*Pride of Ownership.* It drove buying decisions then, and still does. Sometimes PO comes with Fun of Usership (FOU-1), and sometimes *Fear* of Usership (FOU-2).

Somewhere along the line value enters the picture. Value has to do with some ratio of cost to performance to longevity, with PO, FOU-1, and FOU-2 stirred in the mix.

If a carbon fork that cost $400 and has a safe lifespan of zero to four years makes you swell with PO and FOU-1, then the $100 per year may *seem* like a great value. If you spend $800 on a bike and after you've paid off the credit card bill you regret having bought it, or wish you'd gotten something else, it's not a good value no matter how long it lasts. Twenty years of wishing you'd bought *up* is dreadful.

I predict that in six years nobody will be making carbon forks anymore, because nobody will want to ride them. It's just a prediction, and the carbonmakers say it's already happened with lugged steel frames and forks. Rookies to bikes don't seek them out, that's true.

We'll just have to wait and see about carbon forks, but I think of this as the dot-com boom in them, and the dot-bomb will come. If carbon forks are still around, it will be because they finally figure out how to make them safe.

One thing about current carbon is that is can't safely be shaped with sharp angles in it. That has challenging ramifications in bicycle design.

For instance, look at a steel fork with crown, and look at a carbon fork. Invariably the carbon fork has super sloping shoulders that nearly skim the tires. The steer tube seems to flow right into the blades, forming what amounts to an upside-down Y with the branches (the fork blades) nearly closed.

It's because carbon is strongest when it's in a straight line, not right-angle corners.

A steel fork isn't by nature a better-designed one, but steel by its nature *allows* better designs. The forks I like have flat crowns and broad shoulders, like proud soldiers, and have enough blade separation for good tire and mud clearance, and enough clearance that if your wheel gets wobbly it'll still clear the blades. It may rub the brake pads, but you can open them up. On most of today's carbon forks, a broken spoke/28mm tire combination just will not work. You have to tote the bike.

One of carbon's selling points, from the get-go, has been how shapeable it is, but I haven't seen a single well-designed carbon fork.

Steel forks are much safer than carbon ones. Not in the lab, but in real life. *Steel forks can break*—and to prove it, in this issue here we show a 30-year old fork that did. But will any of today's carbon forks last half as long, or be safe for a fifth as long? Would you trust a five year old carbon fork on a 30mph descent, or a thirty year old carbon fork on a five *mile* descent? I wouldn't.

Carbon is amazing, unpredictable stuff. About two years ago we had a fork fight, like a sword fight. Not the people-poking kind just whacking a carbon fork against a steel one while pretending they were swords. After about fifteen blows, the steel fork dented, and repeated whacks folded it over 90 degrees. At that point the carbon fork appeared unharmed, so I threw up.

Well, I was mortified, anyway. I wished I could undo the swordfight and just go home and lead a quiet life. But then my gibbon-sized brain realized that denting & bending are the opposite of catastrophic (sudden) failures. *They're the goal, they're what you want*, especially in a fork. Any bike can break, any fork can break, but *how* something breaks matters a lot.

I notched the carbon fork and the steel one, and one more whack sent a ten-inch section of carbon fork flying. There's no such thing as inconsequential damage to a carbon fork. When they go, they go fast.

A big wheel maker recently recalled some of its fancy wheels made with hollow carbon spokes, and only sixteen of them, at that. Carbon snaps, skinny is weak, hollow is weak, and hindsight is 20-20. Wheels live a hard life, and how is your life or ride is improved with carbon spokes?

I don't understand it. It's light and it fails suddenly. It doesn't absorb shock (neither do steel or alum or ti, for that matter). Not detectably, anyway. It isn't tough when it's new, and it certain degrades quicker than metals do over time and with sun exposure and surface nicks. At what point during a ride do you look at your fork & feel glad it's a pound and carbon?

On another topic, there's seems to be so much more to any thing than what it is. It can get weird. It's best to be vague but not spooky. Sometimes a little exposure to a well-made thing and a certain point of view presented just so can put a bee in your bonnet that never gets out. Developing a personal style based on your history and values is tricky. Get comfortable with your values, but stay flexible and let them change when the right siren calls, but hope they reject the advances of the bad siren.

Caring is good, but caring too much about the wrong thing can suck the joy out of it, and the descent into the maelstrom begins. I have been a perpetrator, and to a certain extent I still am one. It's hard to locate the line between "bicycle appreciation" and snobbery.

I am a snob about fork rakes and the way dropouts meet chainstays and seat stays. Because up to a certain point, it doesn't matter. But every job has its consequences, and this is one of mine. If you are a veterinarian, it is hard to look at a dog walking chipperly along the way, without seeing a hip problem. To a speech therapist, everybody talks with a mouthful of marbles. A hair cutter or stylist would hate my hair. Bill Blass saw slobs everywhere he looked. I can't look at a bike rider without thinking, "Bike too small, bars too low, elbows locked, seat too far forward, no room for fenders, tires too skinny—what's the point?"

Whatever you do, there's an equivalent burden to bear. When you've been overexposed or overeducated in the artsy-craftsy aspects, it's easy to think of the result as knowledge, when it's more a curse or preference or point of view. If you read a poem & like it, then later realize it's not quite haiku or iambic pentameter or a proper sonnet, do you like it less?

When somebody looks at our bikes, at what point do I point out the details I'm most proud of, even though they don't affect the important stuff? Should I do it at all, or only after the purchase? I don't know how I feel about that.

Does it do anybody any good to "learn" that the centerline of the fork blade should _____"? Or that old French cranks had Q-Factors that are ten to fifteen percent narrower than those on modern cranks?

I apologize for the damage I've done. I'm a victim myself. Some things that used to make me happy make me sad, and some things that used to thrill me aren't much better than ho-hum these days. I like crummy old bikes with good clearances more than dainty connoisseur bikes with bad clearances. I still like lugs, but I will be more careful about how I talk about them.

— Grant

An all Helvetica Reader (a first, the last)

Helvetica is the simple, sans-serif font you see here. It was designed in 1957 in Switzerland by Max Miedinger, who wanted to make a clear, neutral typeface that would work for just about anything.

Originally it was called Neue Haas Grotesk, but Miedinger's type foundry changed the font's name to Helvetica, the Latin name for Switzerland, to make it more appealing to non-Swiss people. It worked, and that is a minor reason why Helvetica is now so downright ubiquitous.

Prevalence can make people get sick of something, but that hasn't happened with Helvetica. It is so simply plain, so geniusly neutral, so fantastically familia, that we don't give it a second thought.

The logos of 3M, Jeep, Lufthansa, American Airlines, Microsoft, and Panasonic are Helvetica, as are lots of government forms, and tons of other things, pretty much wherever you look.

To an untrained eye, Helvetica is nearly indistinguishable from some other sans-serif fonts, especially Arial—the main difference is that Helvetica's strokes are cut horizontally or vertically, while Arial's are cut at a slant. In other words, when you look at the ends of the letter c, in helvetica, the open ends are parallel to one another and horizontal; but in Arial, they are angled. Not a big deal, but why not go with the classic?

In 2007, the documentary *Helvetica* was released to commemorate the font's 50th anniversary. It is a collection of interviews with typeface designers and experts, some of whom love Helvetica, and others of whom hate it. We like it, which is why the *Reader* is all Helvetica this time around.

All newspapers and most magazines use serif fonts. The New Yorker is set in Caslon. Serifs are the blobs and curls and cuts at the letter ends, and they make small type easier to read, which is why we've always used serif fonts up till now. Still, Helvetica is pretty easy to read, even without serifs. It's easy enough.

Inside

Mail, man

Hear ye, hear ye… all ye diabetics

I enjoyed the story in RR40 about the Paleolithic or Primal or whatever diet and exercise, and I want to share with my experiences with that kind of diet with your readers, because it might help one of them, you never know. Most of what follows is about diabetes, which I didn't have a month ago.

I'm 39, 5ft 7in, 140 lbs. In high school I was a pole vaulter (4 years Varsity), and I still start each day with 40 pull-ups. I'm not saying this to brag, just to point out that diabetics come in all shapes & sizes.

I have a lot of respect for doctors—and my dad was one. But a month ago I was diagnosed with diabetes, and by *not* following my doctors' advice—and instead, by doing my own research on the internet, I am not just alive, but doing well. Thank goodness for Google. I know it's foolish to diagnose myself on the internet, I wouldn't recommend it to anybody, but I'm glad I did it.

Diagnosis

It started one night when I had to pee every half hour, all night long. That's a classic symptom of diabetes. The morning after my pee-night, I saw Doc1 for blood work. (I saw several doectors, and I'll refer to them by number, in order.) Doc1 checked my fasting glucose. Normal is 77 to 99, and mine was 131. The doc brushed it off and said that it was probably because of the vitamin C supplements that I was taking.

So I quit the vitamin C, but kept peeing. One night between trips to the bathroom, I Googled "frequent urination" and I got a slew of explanations. Naturally, I assumed I had prostate cancer. I wasn't prepared to accept this self diagnosis, so the next morning off I went to my Doc1's office unannounced, but couldn't see him.

So I looked up an old doctor that I had years ago. Doc2 saw me and gave me another fasting glucose test and a prostate exam right then and there. It confirmed I didn't have prostate cancer. Yay!

The next day I got my blood results, and this time my fasting glucose was 98, so Doc2 said I didn't have diabetes. I calmed down, but after dinner that night I was peeing every half hour again.

Back to Google. Everything I read on the net suggested diabetes— I had the classic symptoms—dry mouth and constant peeing. So the next morning I went back to Doc1 to get his take on my new labs.

I stayed up most of the night Googling, and found a test called the A1C test that gives a blood glucose score for the three months preceeding the test. Diabetes is all about blood glucose. (Here's a quick primer on diabetes for those few non-diabetics reading this: You eat carbs, your blood glucose rises. Then your pancreas shoots out insulin to reel it back in. A diabetic's pancreas doesn't produce much or any insulin, so there's no way to reel in the blood glucose. Type 2 diabetics can control their blood glucose with diet (low carb); Type 1 diabetics need insulin.)

Doc2 reluctantly agreed to look at my labs, and when it came back normal, he said that I definitely didn't have diabetes. My A1C was 5.8 and the the worry number is 6.1 or above. About this time, Doc1 seemed to be loosing patience with me, so called Doc2.

In the meantime, I'd found Jenny Ruhl on the net. She's a writer, not a doctor but her site is filled with information on diabetes. I looked up "self diagnosis" steps. It is simple, and all you need is a blood glucose meter and test strips and a bagel. I ran down to the drug store and bought a meter and strips. Then I went home, ate a bagel, and gave myself the Oral Glucose Tolerance Test (eat bagel, wait 2 hours, pric finger, test blood in the meter). My blood glucose was 230—a score only a diabetic would have.

Next morning I called Doc1 and requested the same Oral Glucose Tolerance Test from him. He said no, so I got Doc2 to test me, and this time I got a 207. Anything over 140 is abnormal. I was upset at Doc1 and let him know it.

He told me he didn't know that much about diabetes, but based on my test results, I had Type 2 diabetes and should see a Endocrinologist. I went home and Googled like mad, and came to suspect I didn't have Type 2, but Latent Autoimmune Diabetes for Adults (LADA, sometimes called Type 1.5.) I stayed up peeing and reading, reading and peeing, and learned the peeing was due to high blood glucose, that my pancreas was trying to get rid of the extra glucose, and to right my system I should stay off carbs and sugar.

I immediately cut back on carbs about 95 percent, and the next day I was pissing like the old me. I also read that if I'm misdiagnosed and treated for Type 2 when it is actually Type 1, the type 2 treatment could speed the destruction of Beta Cells in the pancreas that produce the insulin for someone with Type 1 or Type 1.5.

By now I'm all wound up and eager for a proper diagnosis, so I went to an Endocrinologist (Doc3). He asked me my symptoms and lab result numbers, and when I told him, he said, "Oh just stay off the sweets." I told him I think I might have Type 1.5.

"What's that?" he asked.

I called Doc1 and asked for another referral—another endocrinologist. His secretary told me Doc3 is one of the most respected diabetes experts around, but reluctantly gave me another name. I call him, and his receptionist told me I had to wait five months for an appointment. I panic. I know I have to save my beta cells and need treatment now.

I emailed UCSF diabetes center and reached a diabetes researcher. I told her my symptoms and lab numbers, and she told me I fit the LADA Type 1.5 profile, and that all LADAs become Type 1 eventually, so I'll be dependent on insulin. I got bummed but at least she referred me to an endocrinologist 10 miles south of me. She also said not to be too hard on my endocrinologist for not knowing about LADA. "It is a relatively recent thing; only about 10 years old."

The new endo (Doc4) saw me and confirmed Type 1. He recommended insulin

treatment now, and that I should start off with some oral meds first.

I ask him if I can just control my blood glucose by limiting my carbs to avoid the spikes in blood sugar they bring on. He says, no I should eat bread, eat carbs, and he gave me a pamphlet put out by the American Diabetes Association (ADA) — a diabetic's fast-food eater's guide. The ADA says go ahead fill up on fast food, and cover your blood glucose with insulin. But I know that if I eat a bagel for breakfast my blood glucose in two hours will reach 230 and damage will be done to my body. If I eat eggs with fish and mushrooms, it's 96.

Treatment

Confused and irritated at the fast food suggestion, I called UCSF and spoke with a patient recruiter for studies on diabetes who happens to have Type 1 diabetes and takes 5 shots of insulin every day. I asked her why diabetes treatment seems to actually promote carb consumption instead of limit it. She tells me that carbs are just part of our culture; they're everywhere, so it's more prudent to teach people how to cover the carb consumption with the insulin rather than tell them that they can't eat the foods that they enjoy. She said if she wants a double fudge chocolate brownie she will get it and make sure to just cover it with insulin. If someone offered *me* a brownie but I had to take a needle for it, I'd pass on the brownie. The needle isn't my big fear, though. My big fear is the constant rolllercoaster management of blood sugar which seems to be guesswork.

I don't understand why the ADA doesn't tout low carb diets. The ADA says I can have 60 grams of carbs in every meal. (One bagel is about 60 grams.) The ADA says I can eat three bagels a day (or the bread/pasta/candy equivalent), but that would send my blood glucose through the roof, and I'd have to take insulin shots to keep my blood glucose below 120.

I don't want in on the insulin program and the lifestyle of shooting up my blood glucose, then bringing it back down with a shot of insulin. I know it's the normal way, but I'm new at this and not ready to throw in the towel. So I eat 20 grams of carbs per day, instead of 60 grams per meal. I eat meat, fish, poultry and vegetables with an occasional fruit thrown in, and my blood glucose is under 100 all the time, with no injecting.

I will go as long as I can without taking drugs to manage my diabetes. No more cookies, chocolate cake, bagels, potatoes, or cereal, and only the occassional piece of fresh (never dried) fruit. My riding is as good or better than ever, but I don't do long slogs. I follow the Primal Blueprint way now—easy rides plus anaerobic sprints now and then. I have never felt better in my life and I have the numbers to prove it. *I am far leaner, stronger and overall healthier than I was before I became diabetic.*

I don't expect other diabetics will want to hear this, and I don't know if non-diabetics will even follow it or care. I'm just writing it because among your readers there's bound to be somebody who'll be diagnosed with diabetes in the next few months, and thought my experience might interest them.

Listen to your doctor, sure. Don't do anything stupid. But help yourself some, too.
—Sean Cooper

On a related note…

The RR with the article by Mark Sisson really set me off, and I changed my eating and exercise on since Feb 9, 2008. In the first three months I dropped 65 pounds, from 225 to 160 (I'm 5-11), and went from 34 percent body fat to 9 percent. I logged everything I ate for months, every day. I'm not eating that much less, I've just been exercising differently (the way Sisson says to), and I've dropped the carbohydrates.

Let me tell you about my food now, OK? For my TV snack last night, I had 1/4 cup blueberries (frozen, unsweetened) with .5 oz walnuts, all mixed up in 2 oz of Voskos Greek style (high protein, low carb) yogurt. Waaaay tastier than my old habit of 2 bags of M&Ms, 6 to 10 Oreos, dunked in a tall glass of milk.

I use www.fitday.com to track my food and progress. Also, I carry my little notebook to write down foods eaten during the day, to transfer into Fit Day. I use the journal to note how I feel, exercise, etc.

I've also incorporated Intermittent Fasting (see theIFlife.com) and resistance training (3-4 days a week on either, no super regimented system on either at this point). My biking, running, walking have all stayed at the same levels as before. It is just easier to do all activities now! My cycling is better than ever, even with the low-carb eating. I don't do long slogs anymore, because I know they're not good for me.

The food I eat is natural, but not always organic. My protein comes from mostly from meat; my carbs, from veggies, limited fruits, and dairy; my fat, from meats, nuts, avocados, and olive oil.

I have a bike shop, so I'm out there in the public a lot, so a lot of people ask me how I did it, and I tell them. One shop kid (now off to college in Minneapolis) dropped his 6 donut breakfasts and got on board. He's went from 245 to 175—seventy pounds— in four months, all while eating at the college cafeteria buffet.

This Thanksgiving I ate loads of turkey—light meat, dark meat, skin and all—plus vegetables, and salad. But no baked goods. If this is a diet, it's easy to stay on.

A few months ago when my wife was out of town I ate "off the land" for a weekend. I picked a little over a gallon of raspberries, about 2/3 a gallon of grasshoppers (freeze 'em, then rinse them, then cheated and cooked them up as a green coconut curry, no rice, of course) and Suka, my Siberian Husky caught three rabbits. She got the guts, I got the meat to grill. Suka now eats 90 percent raw meat, and is loving it.

The "ethics" of having a pet are more clear to me now. We have 2 cats and the Husky. All three now get fresh meat. I've even trapped crickets and grasshoppers in the breakfast room with the cats so they can have a fun time "hunting" them. The cats act just like little lions on the Serenghetti. They attack, gorge themselves, then sleep all day in the sun. Repeat a day or two later. PETA wouldn't like this, but it seems natural to me.

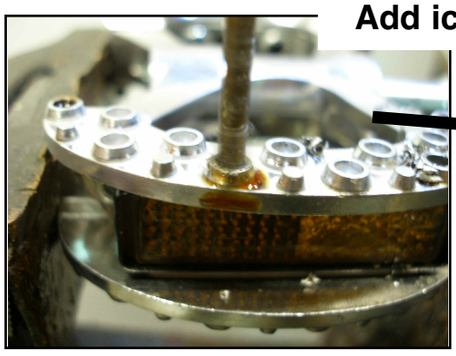
Suka likes to hunt rabbits and mice on our walks in the rugged open space by my house. I help her roust rabbits out of wood piles and brush, then she chases and nabs them. She always is willing to share, a bit begrudgingly, but she will "give" when commanded. Coordinated hunting, I'm sure the evolution of a dog aided Grok immensely. I don't eat the rabbits as a habit, just to see if it'd work in that test case. But there are days when Suka gets only rabbit and mice for food. Wolves didn't eat cereal, after all.

—Tim Rangitsch, Rapid City

Mark Sisson's story in the last Reader inspired many of you to get healthy a different way, and so I thought he'd be a good interview. It's in this issue.—G

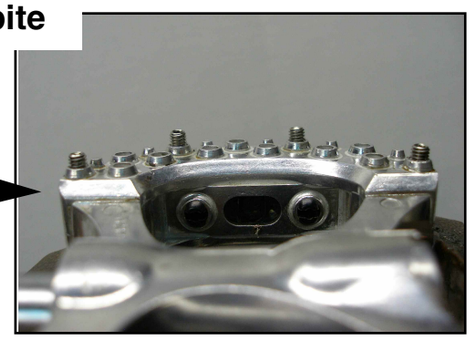
Insider Mechanix

Add ice pix to Grip Kings for ultra-bite



Drill, baby, drill. Use a 5/32 bit to prepare the GK for the spike (online, pedal section). Drill out four to six cavities per side. That'll do it.

Set screws or small socket-head capscrews make fine teeth. Again, this may be overkill for a "Grip King" pedal, but in really slippery condtions, the extra helps.



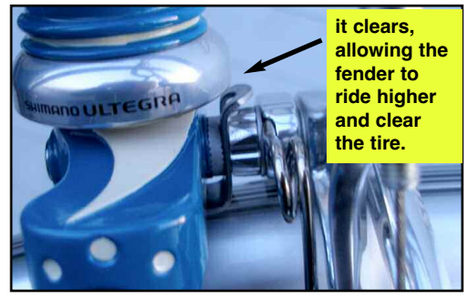
The finished pedal. Other pedals may lend themselves to this kind of monkeying-around with. Work on bikes long enough and you'll find yourself inventing, innovating, improving.

Fendering difficult bikes

See gap? in short reach brakes, that means you have to do this, or no fenders for you. In the above photo, two Blackburn-style ajusting stays were cut and bent to form bridges, and the fenders were likewise cut so they wouldn't run into stuff. Allen bolts & nuts hold it all together, and it works just fine. Tricks like this come out of rainy areas where there are lots of tight-clearance road bikes.

Smash the tab to increase clearance

Fender tabs are too tall, and often need to be bent at the top to clear the headset. Because if you lower the fender so the tab clears, the fender may hit the tire. So again, you simply must bend the tab. No way around it.



Upside-down Moustache H'bars

Measch poet & former Riv employee Debashis flipped his Moustache H'bars upside down & pointed them backwards; then mounted reverse/bar-end brake levers. The bar angles upward a bit. You get another hand position next to the stem. It works better than you think.

DIY fender 'lets

If your bike doesn't have fender eyelets, you can make them out of P-clamps (hardware stores have 'em) or, if you've bought a Nitto rack from us and didn't need the clamps, those.

By combining this meager trick with the fancier one above, you can mount a fender on the back wheel of any bike. Unless is has a "wishbone" style seat stay, in which case, more challenges.

It looks archaic, and a little funky too—with the second top tube and all. The kickstand is almost humorous, sure. But this is as good as a mountain bike gets. Everything is purposeful, nothing is extra, and it's ready for any terrain you have any business pedaling a bike over. It would never sell in a bike shop.

The *Bombadil.* The most unlikely bike of its time.

When you make a mountain bike in 2009, there are way more considerations than there were in 1984. Brake type, suspension, materials, fork travel—a caucaphonious kaleidiscope of options!

The Bombadil plan, from the start, was a super strong, dang-da-weight frame that would make the normal modern mountain bike look like a high tech wuss. A bike that in the year 2160 would be regarded as the jewel of the early 21st century mountain bikes, a beacon of sensibility—and besides that, still fully functional, and with somebody still riding it every everlovin' day.

It came out right and is everything we wanted it to be. It's steel; it's lugged; the frame and fork has no moving parts; the tube diameters are right out of the early '80s and give it that boney look we like so much. And it uses a quill stem, for all that adjustability. There's just nothing stupid or trendy about it.

The tubes are extrastrong, thicker here and there than Atlantis tubes. The down and top tubes are straight-gauge, because straight gauge makes more sense there, for this kind of a bike. It was not, for the love of Zeus, a cost-cutting measure (if we wanted to do that, we wouldn't have made this bike in the first place). There's a lug extension brazed on just behind the bottom head lug on the underside of the top tube—the most vulnerable part of the frame—for extra crash resistance in a front-end impact. Those kill lots of frames.

In the earliest stages, I was firm in wanting it to be super strong, & let the weight fall where it may. I figured we could sell twenty-five Bombadils, and I didn't care whether we sold more than that. It wasn't going to be a main player in our line, and there are worse things than having a dozen super stout steel mountain bikes unsold in the warehouse. I and a few others who work here would ride one, and some others eventually would, in twenty years or something. In the meantime a small bellyflop like this wouldn't kill us.

But the Bombadil is lighter than I'd hoped (proving that an extra 0.1mm of tube wall thickness doesn't add much weight). The first prototypes, made by Toyo (our builder in Osaka, Japan) weighed less than five pounds, or a hair less than a high quality touring frame weighed in the early '70s. For the Bombadil—a super sturdy mountain bike—to weigh less than a good old touring bike was disconcerting.

The Bombadil's most obvious freaky feature is it's second top tube. The 48 doesn't have one, doesn't need one, there's no room for one, and is already the way the others are trying to be without one. On the bigger frames, this second top tube restores triangulation (and hence, strength) to the main frame of the bike. All structural engineer-wannabes know a triangle is magic in the way it distributes stress and maintains its shape under loads that would collapse any other shape. That's why electrical towers, bridges, loading cranes, & every load-bearing structure & building in the would is made of triangles. When you can't see them, it's because they're covered. But if you could snap your fingers & turn those triangles into squares, rectangles, pentagons and hexagons, those structures would collapse in a heap of dust the likes of which hasn't been seen for 65 million years.

Now, most modern bikes are generally well-enough triangulated even when the head tube mucks up the perfect triangulation. If that weren't the case, only dinky bikes would survive. But the next time you're in China or India, look at the poorly made cheap bikes of bad metal that tote wood and livestock loads that often exceed 100 pounds every day on lousy roads, yet roll on year after year: The ones that last have double top tubes, because the ones with single top tubes went extinct. No disrespect intended (by the "cheap bikes comment); those bikes do good service, but once you're finished exalting them for the lowly good work they do, it's not the way to make a fine bike.

The Bombadil is an expedition mountain bike that is light enough to be a practical do-all bike for anybody who's given up lycra for good. In the bigger

This lug extension reinforces the part of the down tube that's most vulnerable when you ride into something immovable. Any lug strengthens this area and protects the joint better than, say, a tiny tig-weld—because the closer to the actual joint, the more the stress. But when you smack really hard, the portion behind the lug can buckle, and brazing on this piece all but prevents that. The stress decreases with distance from the head tube, and the idea here is that there's not much stress left at the end of the extension—3 inches or so from the head tube.

sizes, it's replacing the 64cm and bigger Atlantis frames—because we have limited space and money and can't handle the ultra duplication.

We've been riding Bombadil (including prototypes) since late 2007 now, and it is a delightful bike, as comfortable or more than any bike in our line. That's largely due to the high handlebars, a result of the "expanded" frame style, which you can read about later in this issue. It is all we wanted it to be.

How To Size the Bombadil

(PBH = Pubic Bone Height; SH = Saddle Height; cm = centimenters

Size		Standover cm	PBH w/52mm tire	SH range
S	48	75.7	77 - 83	76 - 83
M	52	79.6	82 - 87.5	72 - 78
L	56	83.5	85 - 90	75 - 80
XL	60	89.5	89 - 96	79 - 85
2X	64	94	96 - 105	86 - 94

The smallest wheel you should ride on a Bombadil is 38mm, and that, only for road riding and touring. Remember, it's a *mountain* bike. With the smaller tire, the standover will shrink maybe 10 to 15mm. The standovers listed are with "big fat knobby" tires in the 50-52mm range.

Geometrical note: It follows the Rivendell formula, with long chainstays, high bars, lowish bottom bracket (for a mountain bike), and a trail I think is appropriate for a mountain bike. If I were to list the top tube lengths, it would mean nothing unless you were to compare them with other bikes with the same seat tube angle, same upsloping top tube, same head tube height, and same stem. And that's not going to happen, because there is no other such bike. What matters is the fit and ride. The frame gives appropriate launch-off points for the seat post and handlebars, and there's enough adjustability in the available options to dial it in pretty much any way you like.

For heavy off-road use, we recommend only DirtDrop stems. Not to suggest the others will break, but Nitto makes the DD stems specifically for the stresses of rocky riding, and so...so do we.

It's a chainstay-bridge! It's a kickstand plate! It's a double-duty hunk of metal. A Pletscher kickstand bolts right on, adding just 7.2 ounces to a bike that doesn't count ounces.

There's a lot going on with these three pix, so please pay attn. The tapped fork crown and top eyelet on the front dropout allow creative rack mounting that wouldn't be possible without them. Tubus rear racks on the front, for example; or the R14 Top rack (and another we have in the works) on the front.

Above: Currently, the 2nd top tube's lugs are carved from existing lugs. This nonsense must stop. Too much work, too much $$$$! We'll get lugs made special for this.

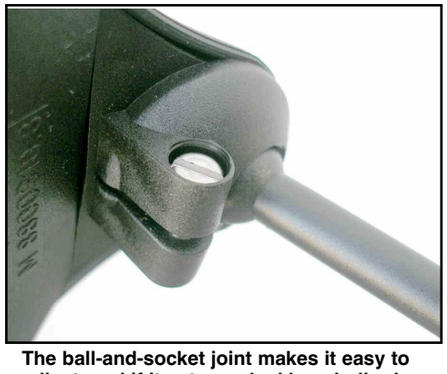
Graphics

The lettering is mostly gold, and yet the first run of head badges was antiqued silver. If you got a Bombadil with a silver badge and you want a gold one, send back the silver and we'll swap you. The silver doesn't look bad, but the gold is a better match for the decal letter color, if that is a concern.

Ultralight: The best mirror we've ever used, by far.

There actually is a near-legendary mirror; one so good that nobody who has them will sell it because they can't get another one. It is the old metal Rhode Gear one, and is no longer made. The newer one is fine, but not as fine; and there are a handful of mirrors that fall into the Acceptable category. This German mirror, called the Ultralite, is the best of the lot.

On Moustache H'bars, it fits best about seven inches from the shifter. It goes easily on any bar ever made. Every Albatross bar needs one of these.



The ball-and-socket joint makes it easy to adjust, and if it gets wacked by a bollard, the mirror won't snap off. Smart Germans!

It attaches to your handlebar with a plastic hose-clamp and tightens with a metal screw; then you snip off the extra if you don't want it hanging.

The neck ends in a ball which goes into a socket and another screw tightens it. The mirror part is as you see—taller than it is wide and wider at the top and the bottom, the idea being I don't know what, but it works well; and the surface is convex, for a wide angle view even though it's a skinny mirror.

Now, with a convex mirror part, things look farther away than they actually are, just as they are (and for the same reason) on your car's outside rear view mirror. But that's just a matter of learning your mirror, and you do that by looking at a car in it, then glancing over your shoulder to get a feel for that.

Mirrors don't have to do much, but everything they have to do, this one does well. It mounts easily anywhere on any kind of handlebar. The optics are fine (there's no Fun House effect). It keeps its adjustment, it's reasonably durable, it's light, it's cheap, and believe it or not, it's not made in China.

Got drops? This is where we put it on ours. You know it's there, but it's not bothersome, not even a little.

The Germans are ga-ga over the radiator-hose style tightening clamp, and to this day make the one by which all others are judged. Works great.

Shiftmate lets Campy shifters work with Shimano Derailers

Every now and then we run into folks who have a race bike with Campy Ergo brifters (as Sheldon called them) and now want them on their country-ish bike.

Most of the time they've tried Shimano STI shifters and don't like them. To be fair, there are STI fans who don't like Campy, too. Everybody takes such a stance, don't they? With STI, you can't shift more than a gear at a time, and the cables stick out and can interfere with bar bags, and the bodies look like somebody squoze something when it was hot & mushy, and it popped out the gaps and stayed that way till it was cold and hard, and there it is now, looking the way it does.

So if you've ruled out our kinds of shifters—bar-ends, thumbies, and down-tubers, you will certainly consider either Shimano or Campy. If you want the low gears that come with 32t and 34t rear cogs, Shimano can easily handle it, but that requirement rules out a stock-from-box Campy set-up. Fortunately, a $30-or-so widget called a Shiftmate solves that problem. It's a small piece of aluminum that lets you use Campy Ergo shifters (with their better looks and absence of getting-in-the-way cables) with Shimano mountain derailleurs (with their 34t capacities).

by jtekengineering.com. Go to the site to find dealers. We don't sell it, but it works great.

Things we like but don't sell, either because they're made in China, not up the Rivendell Alley, or—well, we can't sell everything we like…

But they're all really good. So if you have no problem with China, or they're up your alley, and the time is highly right, we heartily recommend...

An intelligently designed plunger

For more than 25 years, John 3:16 has been showing up on audience member placards at major televised sporting events, and is now on toilet plungers, too. This particular plunger is the bee's knees. It has never failed, and it's Made in the USA by G.T. Water Products. This is the Master Plunger 100. Not sure if they still have the John 3:16, but when you need to use it, it doesn't matter. GTwaterproducts.com

Reelights

These are fantastically nifty lights, and I'm not saying that just because I'm Danish and they were invented by those savvy Danes (who then arranged for their manufacture in China, so make that "cagey-savvy-Danes"). Two magnets mount on your spokes. The light and bracket mount on the hub axle. When the magnets whirl past the bracket, the light shines. So it's a pulsey light, but less pulsey the faster you go. They're unfazed by weather, age, and General Jostling, and the light lasts five million years. Sold as a set, front/rear. About $50, and any bike shop can get them. Tell the shop: J & B distributes them. We'd sell them too, but we're staying away from China. That doesn't mean we don't use these ourselves, of course. Google reelights if you like, but they don't sell direct, only through bike shops, and bikes shops get them only from J & B. About $50.

Coach Flyer's Revenge

Never again fly across the country or to Australia, envying First Classers. This three-chambered inflatable pillow lets you sleep like a mutt on morphine. It's 8 x 10 x up to16-inches high when inflated. Put it on your lap or on the tray-table, and you'll be drooling in five minutes. $24.95 + s/h. Made in China. www.thezami.com

Heart Rate Monitor for Dummies

This is a Polar B1, but models change and other brands have equivalents. One-button models are cheap (<$45), and easy. It's good to know how hard your heart is working. After a while, you'll be able to tell just by how hard you huff and puff. Available all over, or on line.

Rivendell staff's favorit nut cracker

Comers-by have seen our big African basket full of local walnuts, & when they try out the nutcracker they rave about it. "You guys shouls sell it!" they often say.

Not a chance, not interested, not our deal. This one was a giveaway at the Grand Opening of a local kitchen store, and although it still sells nutcrackers, it has never sold this one and nobody there knows who made it. But customer Carl Hurley found it at kitchencollection.com. Search for nut cracker (two words, just like that) and you'll see it. It costs about $6.99, and they say it has a bottle opener, too. Big deal.

Non-vegan custom shoes

This isn't the first time we've mentioned Russell, but maybe you forgot or weren't here then. Russell makes mocassins (above) and moccasin-style shoes in Wisconsin. Styles range from turkey-hunting boots to golf shoes, with lots of dressies, casuals, and hikers in the mix—something for everyone, but no bike shoes. (Wait—they're *all* bike shoes!) Russell has made fantastic footwear since 1898. The catalogue is great & the prices are shockingly low for custom shoes— $121 to start, but count on $200 to $240 or so for normal-type shoes. If you're not a compulsive returner (that rules out six of you) or a vegan, and you can handle those prices for killer shoes, go to www.russellmoccasin.com.

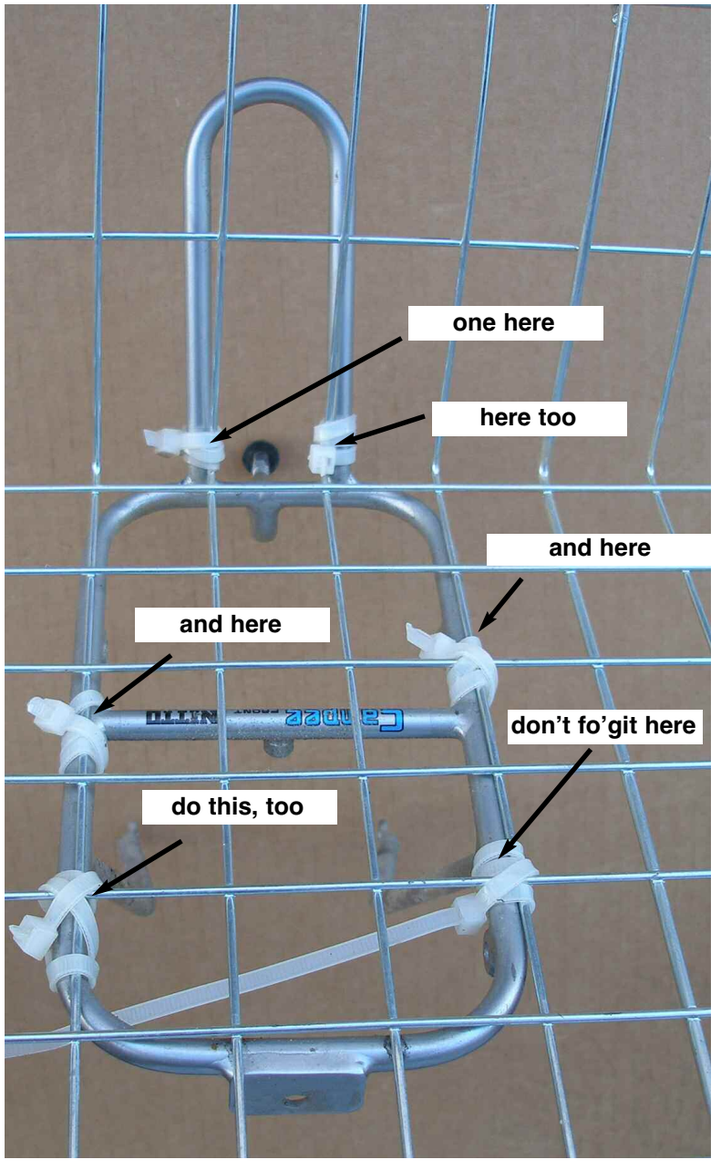
Water Rower

There are basically two famous rowing machines out there. The Concept II is the original, the one you see in gyms, and the one that has a bike chain on it. It's fine. This Water Rower one, though, is super groovy, and you row water. It feels terrific, sounds swooshy, and the whole experience is as good as it gets for indoor rowing. There are a few models.We have this basic oak model, no frills, about $1,095. Assembly is simple, and if you must store it vertically to keep peace in the house, it takes ten seconds to do it. Rowing machine people say rowing works your thighs, but if you ride regularly you won't feel that, but you will feel in everywhere else, and bike riders need that. Riding tightens you and works your lower half. Rowing stretches you and works your upper. Do both, and you'll be better off. Waterrower.com. Made in USA.

Strapping on a basket

From forty to sixty percent of the time, we zip-tie Kentuckian Wald baskets to Tokyoian Nitto racks, and top them with Beijing or Shanghai nets to contain the load. Mating a basket to a rack not specifically designed for one requires almost no mechanical aptitude, and about six zip ties. Velcro one-wraps work great, too, and your local office supply store may have those. If, for reasons we don't care to discuss you are against both zip-ties and Velcro, you can use tape, twine, or bailing wire. The point is to do it securely. Below we show a zip-tie way. It's best to use the biggest zip-ties you can find (or buy). Rumors are that black ones hold up better than the whites; something to do with the ozone, or sunlight. Multi-wrapping, as shown, may be good.

Use thick ones, & multi-wrap in many places.



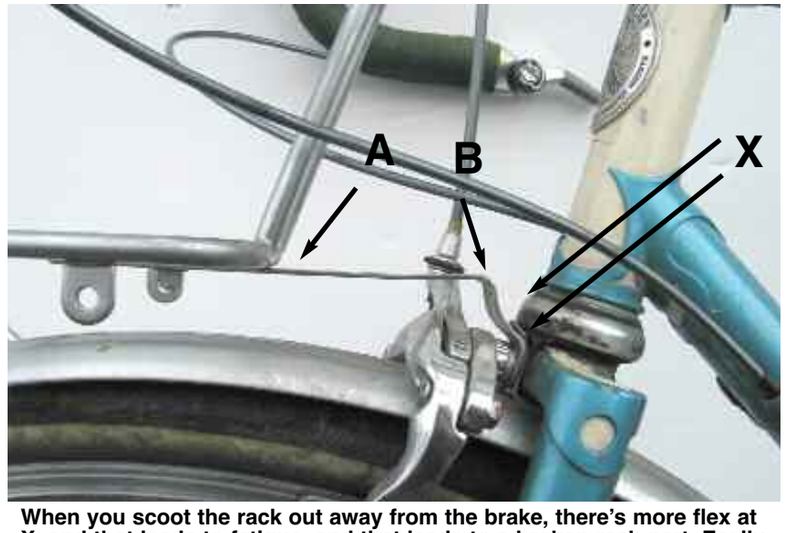
Black zip-ties supposedly resist the ill effects of the sun's rays (as Oprah says, "black don't crack!"), but many thick white ones, multiply wrapped, has for us. Still, next time we order, black it'll be. Six connections per rack. Velcro One-Wraps also work.

Rigging a Mark's Rack

It's all about eliminating fatigue by reducing flex by shortening the distance between the rack and the frame, so as to not turn the adjusting flat into a wiggled paper clip until it breaks on you. Because, just because something is expensive and made of metal by a Beyond Reproach Firm such as Nitto and sold by a Sincere & Honest Firm such as we are, doesn't mean you can't break it.

Here we show the right and wrong way to rig a Mark's Rack.

The Bad Way

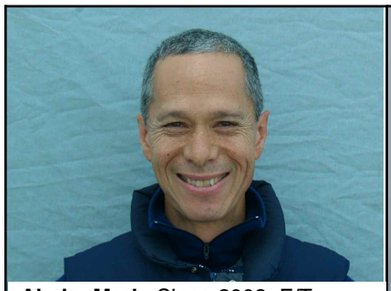


When you scoot the rack out away from the brake, there's more flex at X, and that leads to fatigue, and that leads to a broken rack-part. Easily replaced, but still...

The Good Way

Now we're getting somewhere. Scoot the rack back so there's not as much of a diving board between A & B, and therefore less flex at X.

Staph Guide. We had no idea we were this big. On any given day, there are seven to nine of us here.

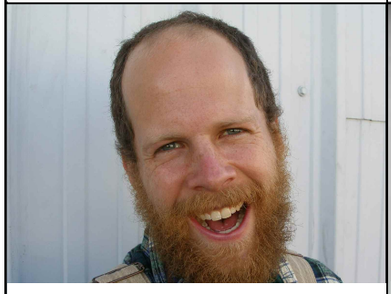


Abele, Mark. Since 2002. F/T. Head mechanic, bag-rack design, custom frame orders. Phones, too.

Anderson, Mary. Since 1994. Money person, pays bills, behind the scenes. You'll never talk to her.

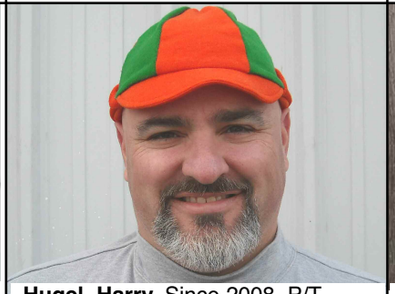
Bennett, John. Since 2000. F/T. General Manager. Solves problems, gets phones.

Chan, Spencer. First employee (1995), then long absence. Since 2007 F/T buyer, site manager.



Dice, Vaughn. Since 2008 F/T. Shipper, with Robert. No phones.

Holby, Aaron. Since 2008. P/T. Saturday guy. Most of the time, a personal trainer.



Hugel, Harry. Since 2008. P/T. Saturday guy. Most of the time, works for a bank.

Kerl, Miesha. Since 2004. F/T. Order entry, clothing buyer. Freddie's mom. Phones.

Freddie. Since Dec 11, 2008. P/T. Mostly a hat model, but shown here during off hours. No phone/email.

Kurosawa, Robert. Since 2000. F/T. Head shipper, with Vaughn. No phones.

Lesnik, Rich. Since 2002. F/T. Wheel builder, buyer, phones

Lieutzinger, Eric. Since 2007. P/T. Bike/frame packer, sometimes shipper. Usually a student.

Mowen, Keven. Since 2006. F/T. Frame logistics/paint mgr, cust service, phones.

Petersen, Grant. Since 1994. F/T. Bike design,writing, typos, phones.

Ritchey, Jay. Since 2008. F/T. Mechanic, rack designer, phones.

Schonenberg, Dave. Since 2008. F/T. IT, publications, phones.

Contact:

email: firstname@rivbike.com.
tele: (925) 933-7304

Staffavorites

Grip Kings

Funny looking & fantastic feeling. You can't not like the support. Who doesn't want good grip? The pedal reflectors may save your life. Not toe-clip compatible. Datsda point.

part no. 14-053 $54

Kucharik Jersey

These are as good as jerseys get. 100% wool, warm, soft, long zipper, good neck coverage, three pockets in back.

Various Sizes and Colors $100

Seersucker

Why expose your arms to the blistering, cancering sun? Desert dwellers know better, & you should, too. Cover up, cool down. The crinkles keep the cotton off your skin. It shades you and flaps in the wind.

Various sizes and styles $54

Wool Skivvies

Daniel brang three pair on his Great Divide mtn bike trip, but said, "I could easily get by with one." For riding or general wear, these are the mink stoles of skivvies. Worth $38.

Many sizes available Womens, too.

$35

Jack Brown

If you've got the room for this 33.333mm tire, you'd be nuts not to run it. Light, big enough to run soft but not too soft. Best all-around roadish tire made, we say. Green is lighter, Blue is extra tough.

Blue part no. 10-092 $52

Green part no. 10-091 $46

Schwalbe Marathon

Expensive tires to buy, the cheapest to ride. They don't get flats or wear out. They mount perfectly. They have reflective sidewall stripes. Several variants. More on our site.

$40-60

More at rivbike.com

MUSA Shorts

These shorts blow the pants off any others we've tried for all-around riding, swimming, and General Wear. Seamless crotch, no built-in diaper, nothing to not like.

Various sizes and colors

$40

SKS Fenders

Not flashy, not fancy, but good-enough looking, easy to mount, quiet, easily modified.Year after year, they keep on being our favorite fenders. German.

Various wheel sizes and widths
$37

Tektro Bigmouth 73

Great clearance for tires up to 40mm, even fenders. Plenty of power for anything. Light, forged, wide-opening quick-releases.

part no. 15-151 $53

Noodle Bar

The most comfortable drop bar you'll ever ride. Flat behind the brake levers, slightly swept back on top, smooth radius, and medium drop. Sleeved and engraved, and beautifully made by Nitto.

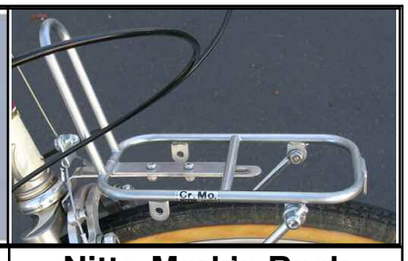
41 cm part no. 16-111 $54
44 cm part no. 16-112 $54
46 cm part no. 16-113 $65
48 cm part no. 16-114 $65

Albatross Bar

This bar saves backs, hands, necks, and turns any bike you put it on into a big comfy couch. Nearly our most popular bar. Perfect for fixing too-small bikes, or as original equipment on a new fancy.

Alum. 54cm part no. 16-127 $60

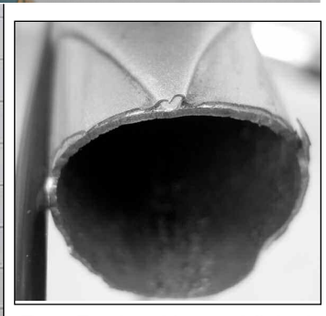
CrMo 56cm part no. 16-122 $44



Nitto Mark's Rack

It fits a Little Loafer or even a big basket. Fits front or rear on any of our bikes and all but the weirdest other bikes, whether they have sidepulls or cantilevers. Makes bikes useful and better-looking.

part no. 20-108 $97



Top;: Top head lug and flaked-off paint. Paint often shows stress before the metal does. Bottom: End-view of down-tube behind bottom head lug.

Time & misplaced lug point broke an old frame

A fellow came by last year wanting to get a new bike, because his 30-year old steel bike broke ”all of a sudden.” An exagerration. His frame broke from fatigue, a gradual creeping of a crack until the remaining metal just gave away; and it took thirty years. It seemed to be “all of a sudden,” because when it went, it happened fast. But there were months and maybe years of crack-growth and all of its attendant warning signs—creaking, funny feeling, funny riding. He wasn’t hurt.

The failure started at the pointy tip of the lug on the underside of the downtube lug. I broke a bike like this in 1987, and I’ve seen it many times, and here’s the story: The sharp point of the lug is a “stress riser,” a surface feature that because of its shape or location or shape and location, attracts stress like a magnet attracts iron filings. Points are fine when they’re out of stress zones. You can have a million of them, no problem. But in stress zones—and the underside of the down tube behind the head tube is one of those—they concentrate stress, and that can lead to see the picture above.

The more honest among us will acknowledge that being jabbed with a knife hurts more than being jabbed with a soup spoon, and bikes feel the same way. Our lugs, and most lugs, have rounded, spoonlike “points” on the underside, so no problem.

Applying the brake to the front wheel forces the fork rearward, and some of the force makes it to the upper-underside of the down tube. The sharp point of the lug “digs in” to the tube the way a can-opener pokes the lid of a can. A small crack forms at the tip of the lug, and pushing on pedals and pulling on handlebars creates twisting (torsional) stress on the down tube, which steer the crack around the tube.

Steel is so great because cracks grow slowly in it, they don’t zip right through it like they tend to do in lesser frame materials (and *all* other frame materials are “lesser”). In a steel tube, the crack can extend about halfway around the tube before the tube “suddenly” rips apart, as happened here.

Every failure tells a story, and every fatigue failure follows the pattern of all fatigue failures. There’s a “fingerprint” that lays it all right down there, just how it happened.

The cross section of the broken tube is divided into two distinct zones—the Fatigue Zone and the Overload Zone.

The fatigue zone is where the crack started and grew slowly around the tube. There are two indications that it grew slowly, and they can’t be faked. One indication is the smooth, burnished surfaces. The cracked surfaces rub against each other, wearing the high, crystalline points down to smooth, rounded points. The other indication is rust. The longer the tube has been exposed, the more likely it is to be rusty. But here’s the deal—two deals, actually: First, rust won’t form on surfaces that rub-a-dub-dub all the time. Second, rust may take a long time for form, longer than the tube will last. As much as the anti-steel brigade would like you to believe that Rust is Instant, it’s not that way at all, and in dry unsalty air, you can sit around till the cows come home before you’ll see rust.

The Overload zone is the part that just truly suddenly ripped apart, after the fatigue zone creeped about halfway around the tube. The sudden rip-apart doesn’t give time for rubbing or rust, and so the Overload zone has sharp, high, bright, crystalline surfaces.

No part of a steel bike will rip apart suddenly unless a much greater force than you can generate by riding rips it apart. With aluminum and other materials, it’s a different story. They’re not as tough as steel is, so cracks grow quickly before much rubbing can occur, and the failures are almost immediate, with less warning.

No bike is break-proof, but that’s not the point. In any bike, or in any structure, you want a slow failure, so you have time to catch it. That’s not to say you will catch it before it rips apart; only that there it is, happening as you ride, and if you pay attention, you might catch it before it overloads. Otherwise, it’ll fail “all of a sudden.”

Time & misplaced crown point broke an old fork, too.

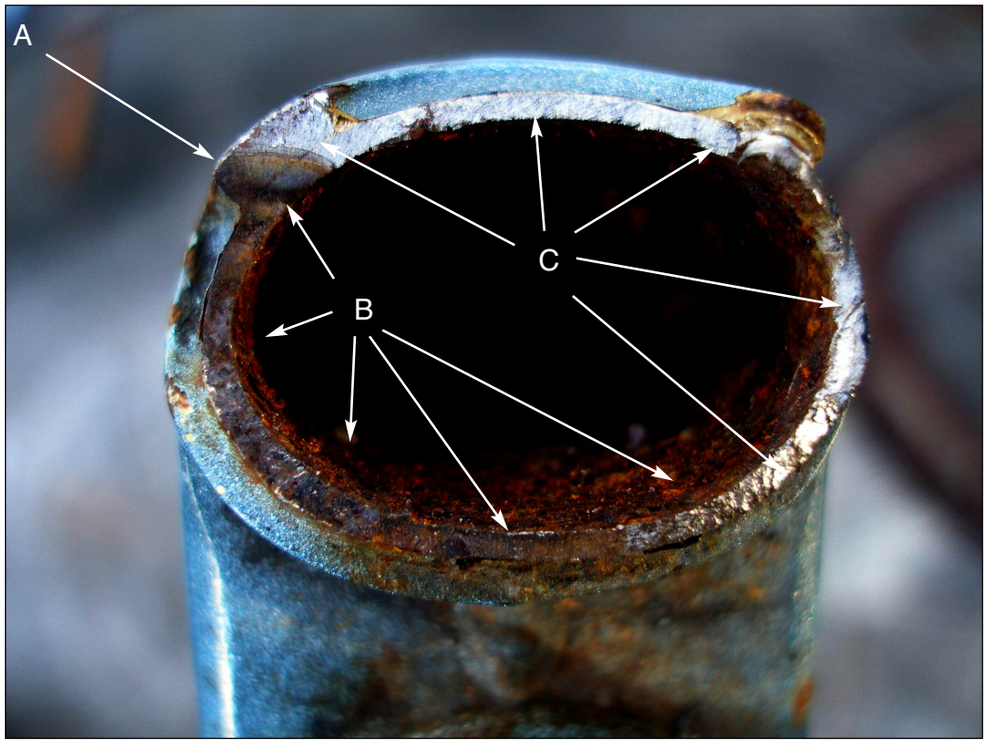
A few days before picking up his brand new A. Homer Hilsen, Chris B. had his old bike in a shop for some repair work, and when the mechanic removed the front wheel, the right blade came out with it. That Chris had been riding the bike for a while in this dreadful condition is, I think we can all agree, testimony to the remaining strength of the left blade. Go, steel!

We traded Chris a knife, a tire, and a tube for the fork so we could do this story. And just for the record, we consider this fork to be worn out, not defective. It was a well-ridden 30-year old bike, and just wore out. Things wear out, even good things. It's hard to call this a defect. Still, there was a reason, as you'll see—and keep in mind that this fork lasted five to ten times as long as many carbon forks made today can expect to last.

Here's the old fork. A decent and well-known brand. It is not defective, just worn out, like all of us will be some day. Like I'm feeling now.

This is the left blade, the still "good" one, and it shows where the fatigue started—at the point of the crown, back side of the fork. The point "caught" the rearward flex from braking.

Here you go, a view from the inside of the still intact blade, showing the crack growing. This is still fatigue, at this point. It never got so far around that it just rippped apart, like the other.



(A) is the start of the crack, at the point of the crown on the back right side of the blade. A fork is a long lever, and when you apply the brake, there's a rearward force that, in this case directed itself to the crown point (a stress riser). Over thirty years, a crack formed, crept around the blade under increasing stress of continued riding.
(B) is the dark, rusted fatigue zone. Starting from (A), the fatigue worked its way counter-clockwise (in this photo). The exposed cross section is relatively smooth from constantly rubbing on the corresponding part of the lower blade; and dark and rusty, from prolonged exposure.
(C) is the "overload zone," which is just a way of saying it just ripped apart quickly here. The exposed surfaces are bright and crystalline, proof that the steel has not had time to rub itself smooth or get rusty. You should see the color photos on rivbike.com. They look great!

Hear that rock in your brake pads? Extract it.

Tires can fling up small rocks, which now and then get stuck in the brake pads.The clue is a gritty, scraping sound when you brake, but it's not always loud and obvious. This rim here, a perfectly good, even excellent new Velocity rim, left the west coast new, and this happened by the time it reached Minneapolis, just two thousand miles away.

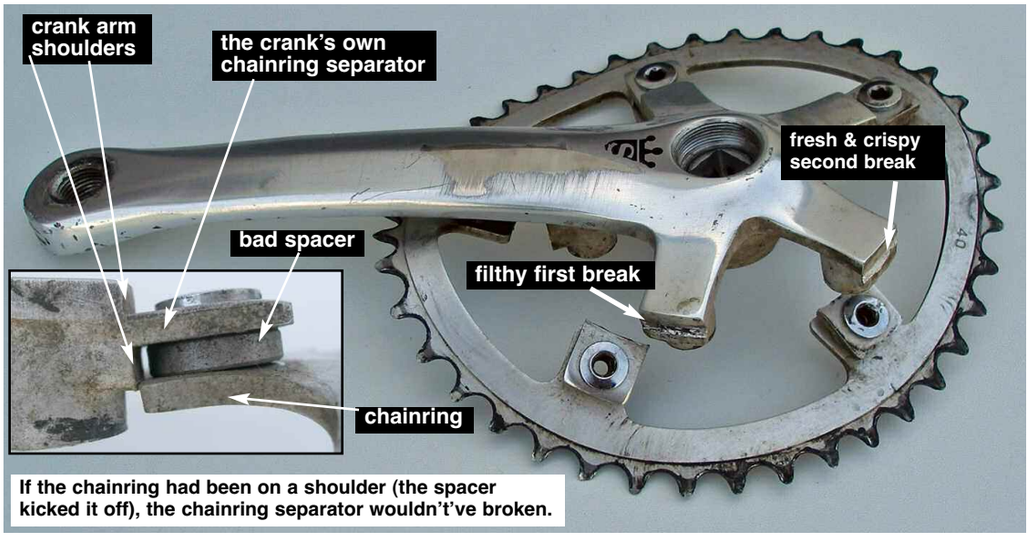
Y'all: Make sure your brake pads don't rub the tire

If your brake pad is too high, it'lll rub on the tire and eventually abrade a hole in the sidewall, through which the tube will poke & pop. We've had a few of these come back in the past half a year. The owner of this particular tire returned it as defective, and wanted not only a new tire, but replacement tubes and free quick freight, as well, with a scolding in the bargain. It's OK—when we explained what happened, he was more agreeable, and in exchange for his newfound agreeableness, we cut him a deal on a new tire and tube.

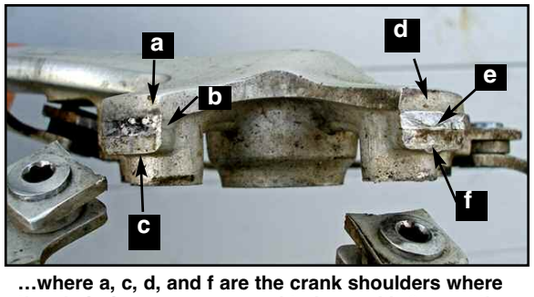
A little lube is fine, a lot kills the leather saddle

This Broken Brooks doesn't reflect poorly on either Brooks or the User. Brooks did nothing wrong, and the user was clearly trying to do everything right. He treated the leather to protect it from buttsweat and cracking out and rain, and he helped it with both a shoelace (which he provided) and the saddle's own nose-tensioning bolt. He got involved and tried to do good, but the combination of his own weight, hard riding in wet conditions, and overly stretched leather ultimately did it in. We were happy to trade this saddle for a new one. A cheap way to get half a page in the RR, and everybody wins.

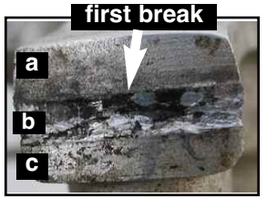
Don't monkey with the chainring spacing



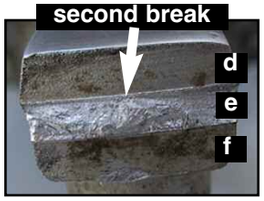
A fellow said his Sugino crank broke. Now, I've seen broken cranks and many of them, but never a Sugino, and I was crestfallen, nearly inconsolable. I said "I've never seen that before, please send it to me." This is how it came, and I was much relieved. He'd converted it to a single chainring, and in the process of trying to nail a fantastically superb chainline, he spaced the chainring off of the support shoulder (to get that perfect chainline). Without the support of the shoulder and with more leverage on the crank's built-in chainring separator, the pedaling forces slowly cracked the first separator. Then without the load-sharing support of it, the next one in line broke in no time at all.



…where a, c, d, and f are the crank shoulders where the chainrings are supposed to be, and b & e are the crank's chainring separators. They don't have an official name, but "chain ring separators" is descriptive.



The darkened, long-exposed surface has had time to get dirty, and there's some obvious (maybe not in this photo) burnishing—evidence of a slow, fatigue failure.



Yeah, after the first one broke slowly, this one broke much faster. There's hardly any burnishing, and the aluminum is bright and clean, since it didn't have time to collect dirt.

Robert Bailey Update

Robert Bailey told his story in RR39. He was mowing with a tractor, and an accident led to his legs being amputated above the knee. He has not stopped being a bike rider, but has certainly faced more than his share of challenges on Recovery Road. Here's his last installment.

First, I want to thank the Rivendell members who have sent me e-mails and support over the past two or three years.

The last time I wrote RR was in December of 2006. I had just taken myself off all pain killers with a stay in the local chemical dependency clinic. It was rough, but I left clean and with emotions I'd forgotten I had. I was "sprung" on my birthday, November 10th. The one thing I wanted to do was ride my bike, an early Rivendell "LongLow," (that you may remember, I bought used about a week before my accident). But I promptly damaged my leg, and spent most of December in my wheelchair allowing my leg to heal, and it took about a month—of frustration and boredom.

I was walking again by Christmas 2006 and I returned to my grandfather's house for Christmas Eve—the same celebration I was preparing for when the accident occurred. Life had come full circle. The tractor was still sitting out by the shed with the bush hog attached. I can't really describe how I felt, but it was good to be alive. I went out to see it and kicked the bush hog hard with my prosthetic foot.

The thing about pain killers is it kills both the good emotions and the bad. In 2007, a bad year for me, the painkillers I was off were masking emotional pain also, and now that I was off them, I was badly depressed, and had to deal with that. All amputees get depressed, it's too hard not to. On the outside I was fine— optimistic and full of life. But under the surface you get a screaming case of the blues. I had to give up some of my duties with my Boy Scout troop. I tried to help pass a bill in the Louisiana Legislature regarding prosthetics and health insurance, but I didn't have the enthusiasm needed, for that or anything else. My life felt like some kind of trench warfare.

It gets better, so stay with me. Finally, with proper medication, I started to improve. Twice I had to return to the wheelchair. I started riding my little Raleigh Twenty folder, a great bike for a healing amputee, although never advertised as such. It has no top tube and is low to the ground, and I'm sure I looked like a bear on a circus bike, but it helped. I caught the Twenty bug because of Sheldon, and over the years I had exchanged e-mails with him about English 3 speeds.

In July 2007, Amputees Across America passed through Baton Rouge. AAA is a group of amputee cyclists who visit clinics across the country during the Summer. I couldn't ride with them during their visit because I'd injured my leg again. The group rode to Hanger Prosthetics, and when I went down to meet them, I noticed a Rivendell sitting in the parking lot. I had the great pleasure of meeting Cliff Clark, who had read about me in the Reader.

In January 2008, my prosthetisist Jay Tues decided I'd injured my leg enough and something had to be done. Up to this time my sockets cradled my leg just under my knee and were held in by a pin system. I had become rather famous for ripping the pins out of the gel liner—something the manufacturer said was impossible.

My new sockets fit a vacuum system, not pins. When I put my leg into the socket, a tapered cylinder, it pushes air out of a valve and creates a vacuum. There's is no friction on the bottoms of the legs, so even when I get a blister on the bottom of one of my legs (always the right), I can walk comfortably. The vacuum even helps the injury heal.

The exciting part is I can now ride my Rivendell. My legs have now healed enough I could can pedal fairly normally, but the hardest part is starting and stopping. I've been using MKS touring pedals with Power Grips. I slide my right foot in first and kick off. I crank

a couple of times with my right foot and then pull that pedal to 12 o'clock. My ankles don't bend, so I have to get my left foot into the pedal when it is at the 6 o'clock position. I can feel some things up through my feet and sockets, and I can even feel my feet and ankles, which is pretty amazing, considering they aren't real. It's called phantom sensation, and you have to be an amputee to feel it.

I phoned Scott Rigsby, the first bilateral below the knee amputee to complete the Ironman Triathlon of Atlanta to find out what he learned from being the first bilateral below the knee amputee to complete the Ironman Triathlon. He has been working with Georgia Tech on developing prosthetics for amputee athletes. I told him I couldn't twist my ankles to get out of my Eggbeaters. He replied; "But you don't have ankles! Move your knees." So now I am trying my Eggbeaters and Shimano MTB pedals to see which work best. An amputee friend, Mike McNaughton, uses Lollipops and says they are easy to get out of.

One triumph I have had a small part in was the passing of the Louisiana Prosthetics Parity Bill. It still needs Governor Jindal's signature, but we are hoping for that soon. I urge everyone who reads this to look at your health insurance. If you were to lose a limb today, would you be covered and for how much? Some amputees wake up in the hospital thinking they are covered only to find a lifetime cap of absurd amounts like $2,000 or one limb lifetime. Each of my legs cost $10,000. An above the knee leg with a C-Leg computer can cost close to $50,000. Please protect yourself, friends and family.

In June 2008 I was fitted with the Otto Bock Harmony —a suction socket that uses a pump to maintain vacuum. The pump is located where the ankle should be. Each time you take a step a piston moves expelling more air. If properly fitted, it creates a very strong suction. Mine didn't work out—too tight and too tapered, and it didn't leave my leg any room to expand, so it led to injuries.

I wish I had some good news to report, but it's been rough lately. Both legs have had injuries, and they've been slow to heal. The blood seeps down to the bottom, and it gets messy down there. Katrina—you've all heard of that, right? That's my neck of the woods, and it got really humid down here. My leg was moist for too long, and slid down deeper into my socket, and the bottom got torn, and the humidity makes it hard for injured and torn skin to dry and heal. It's better now, but that was a side of Katrina you might not have heard.

My doc says to stay off the bike until I'm healed more, and to walk as little as possible. I'm diabetic, and exercise helps lower my blood sugar, so I'm eager to get that going again.

My legs are doing a little better now. My socket fits well, and supports the leg. The nerve endings at the bottom of my leg have pressure on them, and I swear I can feel my feet. I have good control over my lower leg. I'm still not supposed to walk or ride until it's healed a lot more, and the Doc says it'll probably be two more years until it's fully healed and my leg is settled and stable.

Meanwhile, I'm training to be a peer counselor to help other amputees.

Scour the World for Those '80s Steel MTBs

(and make killer cheap beater bikes out of them)

Almost every mid-to-high end CrMo steel mountain bike made between 1983 and 1989 will, even in fifty years, continue being a mountain bike or a city bike, or a tourer or commuter or a magnificent grocery hauler, or whatever else you want to convert it to. Did you get rid of yours? Too bad, should've kept it, because they truly don't make bikes like those anymore.

Those bikes were made when Just Being a Mountain Bike was all the cache they needed. Then around 1990, the high-end ones got race-ified with suspension forks, and it wasn't long before bikes had rear suspension, too.

Suspension killed the simple, proven truss-frame made with safe-and-proven steel. Many would say good riddance, and by 1994 every mid-to-high end mountain bike had suspension. But the pre-suspension era produced wonderful workhorses that are as functional now as they ever were, and will keep rolling long after their replacements have been buried in landfill.

A rare lugged Specialized Stumpjumper with a rarer lugged unicrown-style fork. Man, this is a nice old bike.

In the early '90s and after that for sure, the bikes got lighter and lousier and more complicated with immature technology. The technology trickled down the price scale like fashions trickle down to middle-schoolers, and now you can't find a simple cheap rugged mountain bike at a bike shop anymore.

They're in streets and garages and backyards by the millions, though. Some were lugged but most were tigged, but the used/beater-bike market is not the place to apply the same standards that guide your dream bike purchases. Just look for CrMo frames and a brand at least somebody you know has heard of, and a decent fit. If it's on the small side, tall stems and a rising or rising-n-swept back handlebar, like the Albatross, can make it work great. Even if it's a lot too small.

Find them online and at garage sales. If you buy online, make sure it's not stolen.

In the shell: Hartley on the left, Chandler on the right. The Hartley is more heart-shaped, and has a thicker shell. The meat is fine. Most in-the-shell walnuts are Hartleys.

One can see how one might sort of think these might be good for one's brain, but what does that suggest about eating them in the shell? Here we have two halves from the same shell. Female on the left, male on the right. Unless they're upside down.

Walnuts—and chief among them, Chandlers

Being a **Walnut** Creek-based company, the city strongly encourages all local businesses to sing the song of the walnut at least once a decade; so bear with us.

Greek lengend says the wine god Bacchus got mad and turned his girlfriend into a walnut and her sisters into rocks, and that's how we got walnuts. These days, thanks to science, we know better. There are walnut fossils in what is now Asia, Alaska, Europe, & North America, and they predate the Greeks.

All walnuts are deciduous, grow in moderate climates, produce good wood for furniture and some sort of edible fruit. Over the years, by nature and intentional hybridizing, the walnut genus has grown to about 20 species.

Ninety-nine percent of the walnuts grown in the United States are grown in California. Seventy percent of that 99 percent are Hartleys, 30 percent are Chandlers. The taste is so similar that you can't like one and not the other but Chandlers are ten times easier to crack, on account of thinner shells.

And yet 95 percent of the walnuts sold in the shell in grocery stores are Hartleys. More on that soon.

The Chandler was developed in 1963 at the University of California in Davis (UCD) by walnut breeders Harold Forde and Gene Serr—both now deceased. It stores better than the Hartley; meaning it resists walnut-fungus better, and you'd think, then, that with easier cracking and better storage, the total market should be 70 percent Chandlers, not 70 percent Hartleys. But Hartleys harvest earlier than do Chandlers, so the stores fill up their warehouses with Hartleys before the Chandlers—with harvest in late October—have a fair shot. Meanwhile, the Chandlers get shelled and packed in the baking section, to be used in whatever mom wants to put them in. If you're in California, you can get them at farmer's markets.

People don't buy walnuts in the shell anymore. There are generations of children being reared without ever having cracked a walnut themselves and digging out the meat. It used to be a matter of pride for a fourth-grader to be able to open walnuts by cracking them against one another. Show me a fourth-grader who can do that today. (With Chandlers it's easy; doesn't count.)

The traditional Christmas stocking fare was oranges and walnuts if you were good, coal if you were bad. Now it's chocolate, candy canes, and Gift Cards. For my kids, starting next year: Walnuts & oranges!

Walnuts won't make you fat. They're high in calories, but it's good fat, and you're better off eating a dozen Omega-3 rich walnuts a night than a lot of other things. Plus, there's the taste.

Walnut Trivia

• In Asia they believed—unanimously, each & every one & for thousands of years—that walnuts are good for your brain. They thought that because walnuts look brain-like. And as it turns out, they weren't half wrong. Omega-3 oils are famous for regulating heart and brain functions, and in the Omega-3 department, walnuts have lapped the entire nut field. Peanuts, pecans, Brazil nuts, almonds, and filberts are off the back.

•• Walnut shells are used for umpteen purposes, including but not limited to (because of the "umpteen") the following:

•• paint thickeners

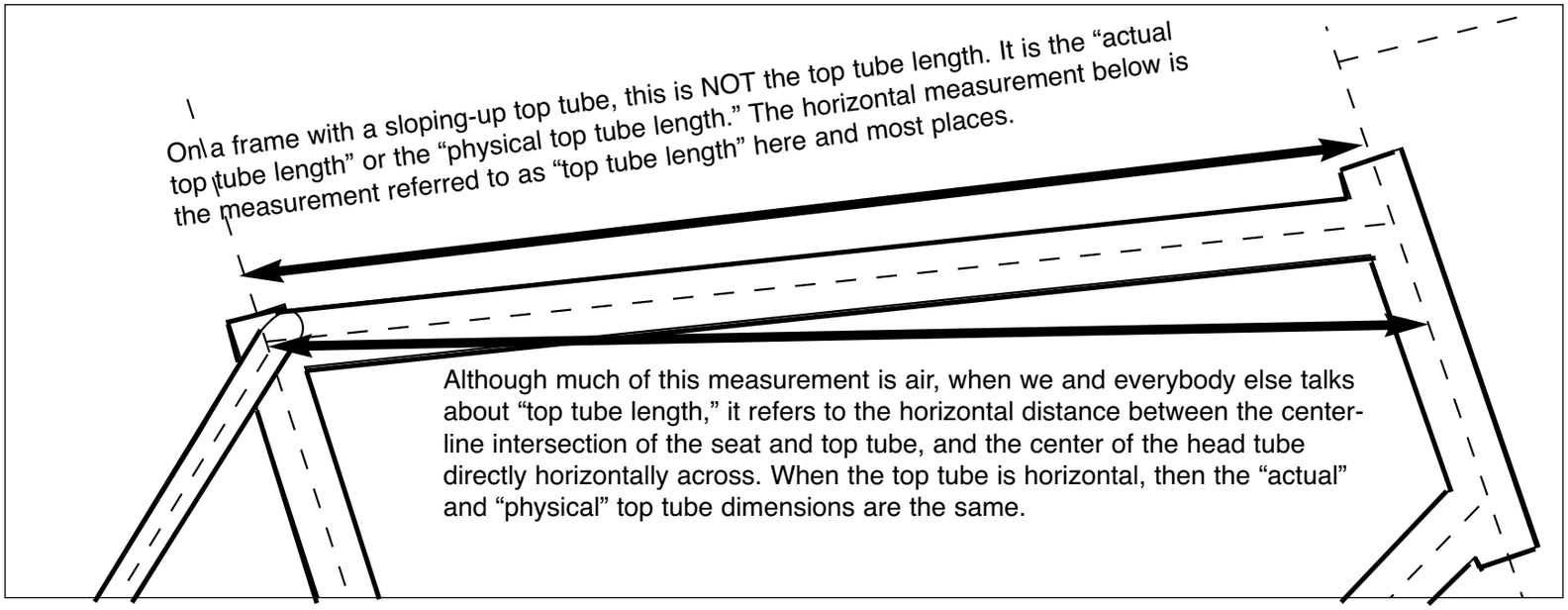
•• a filler in dynamite

•• dyes

•• deburring metals, according to the maker of our new Sackville name plates. That's a contract winner!

•• cleaning jet engines, electronic circuit boads, & graffiti

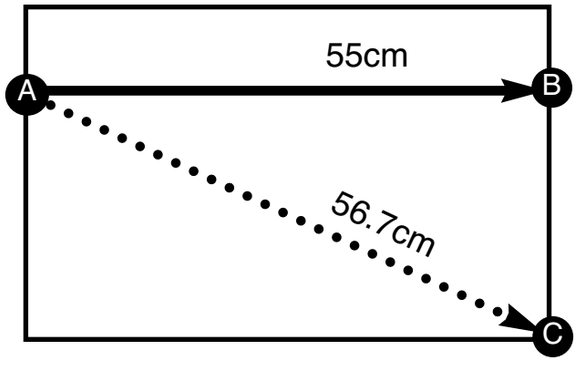
•• soaps, as an exfoliant. If it can clean jet engines…



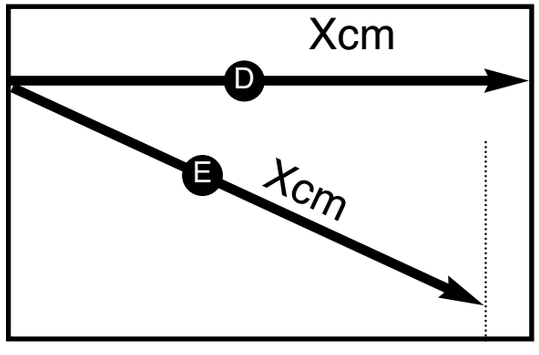
The Top Tube Ruse (sort of)

In any case: The relative unimportance of top tube length on what you really care about, which is how far you have to lean & stretch & reach to grab the handlebars.

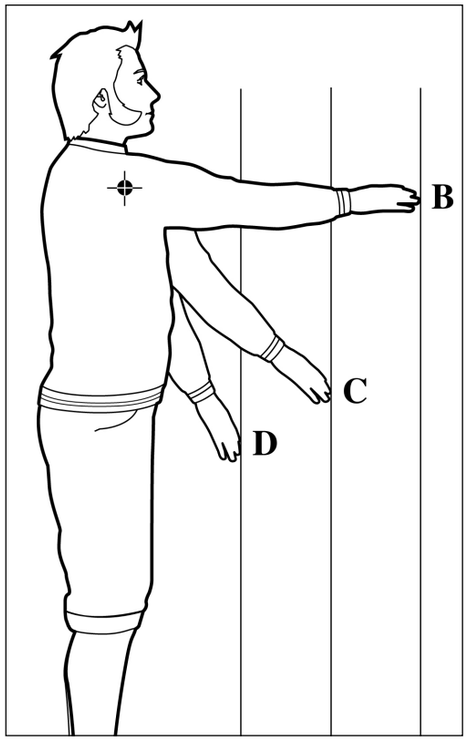
There is continuing widespread, rampant, epidemic, pandemic, titanic-like misunderstanding about the actual influence of a one or two or even-as-much-as three—*count 'em!*—centimeters of top tube length on how far you have to lean over and reach to grab the handlebar. Unlearned bicycle rookies and supposedly learned Hall of Famers alike misunderstand it, because it's easy to. But thanks mainly to the George Retseck's fine illustrations (below right and on the next page), all who read this will be crystal clear about it forever.



A is your shoulder. B is your handlebar when it's high; C is your handlebar when it's low. The actual lines, think of them as your arms. Assume that both bars are in the same vertical plane. The high bar will always be closer.

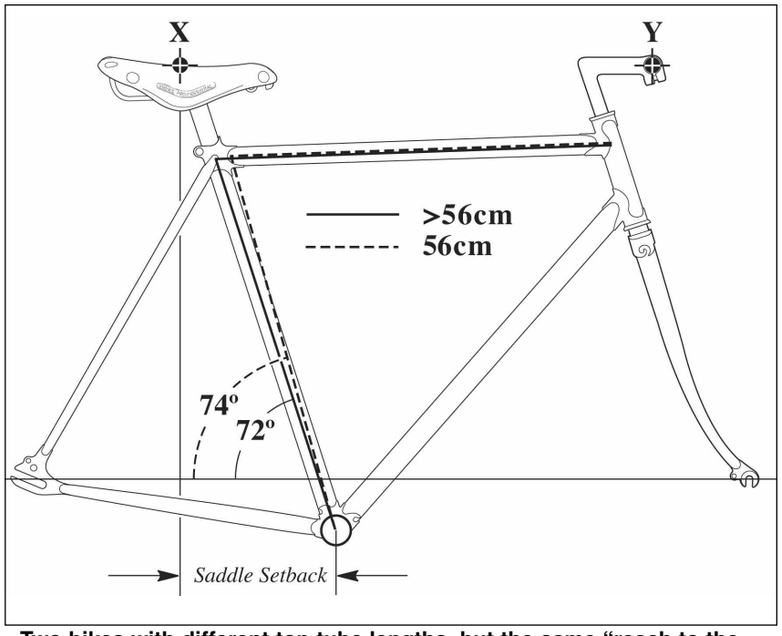


The same idea here, just shown a different way. Lines D & E (could be your arms) are the same length, but D reaches the wall (your handlebar?) and E doesn't, because it's…well, it isn't horizontal. Pretty obvious, but easily overlooked in the world of bicycle fitting.

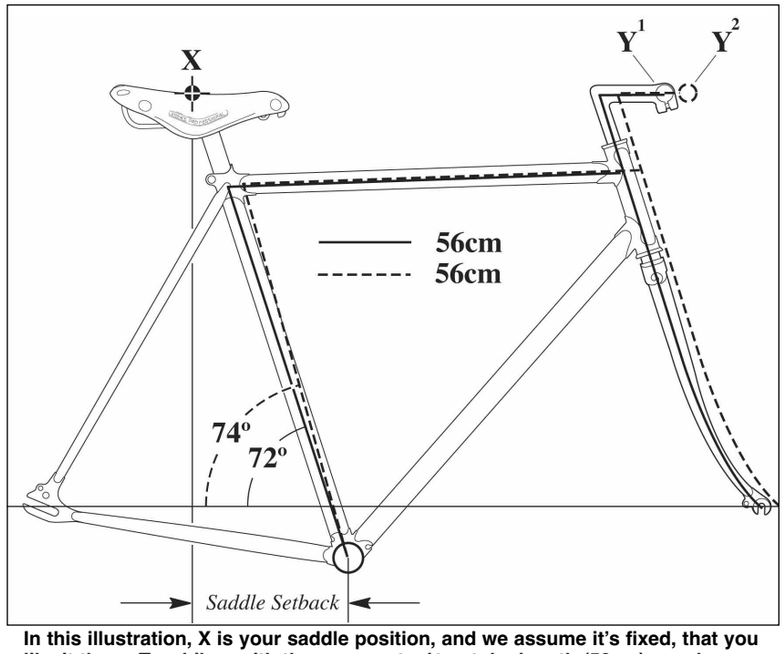


Mutton-chop Marv demos how he can reach farther when his arms are more horizontal. He also rides a bike, and is thinking, *hmmm...the higher my hands, the longer my arms. I bet this somehow relates to fitting and comfort issues on a bike!*

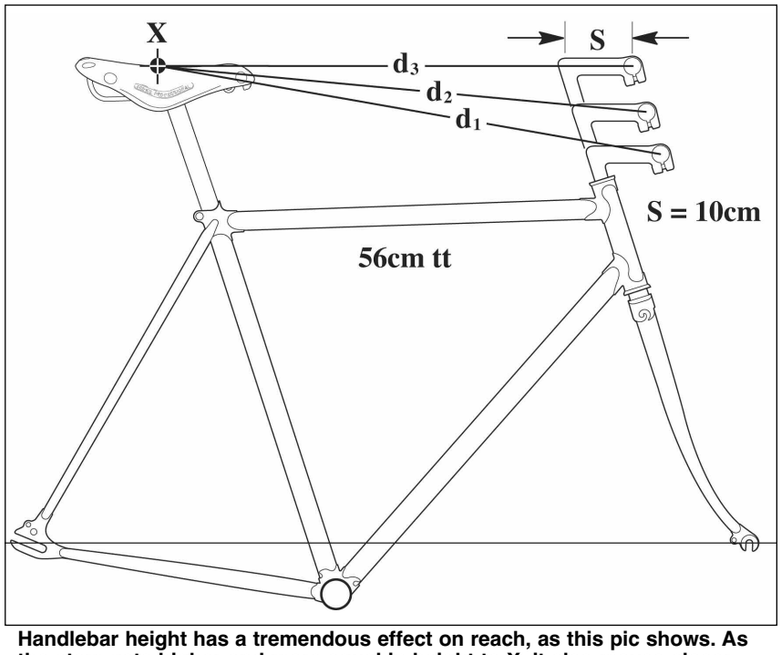
Now look at the box top left, and see how the solid line is shorter than dotted line. In the context of fitting and handlebar height, this is huge. The bars get closer to you as your arms are lengthening.
For any given back angle, you can see how low bars not only are further away from you, but also effectively shorten your arms as you go to grab 'em!
Buying a small bike because it has a short top tube usually don't make sense. The lower handlebars cancel out the shorter top tube.



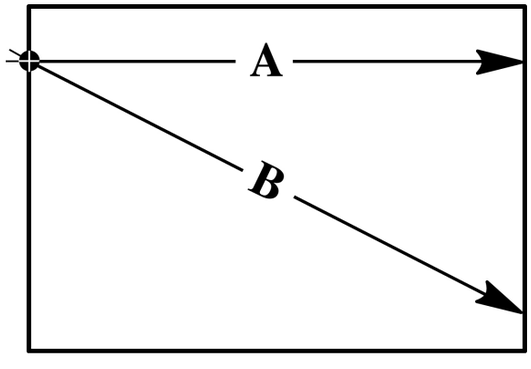
Two bikes with different top tube lengths, but the same "reach to the bars" (distance from X to Y). Given that X and Y are fixed as you see them, and that one top tube is longer than the other, the only explanation for the same "reach" can be that the saddle is shoved further back on its rails.



In this illustration, X is your saddle position, and we assume it's fixed, that you like it there. Two bikes with the same *actual* top tube length (56cm) may have different *effective* top tube lengths. The 74° seat tube angle pushes the front of the top tube farther away from you (and "X"). So the distance from X to Y1 is less than the distance to Y2. Even though the top tubes are the same length.



Handlebar height has a tremendous effect on reach, as this pic shows. As the stem gets higher and more equal in height to X, it also moves closer to it. And at the same time, fella, your arms become more horizontal and therefore "longer," as we've already shown in that other box on the other page. Now, if you understand all of the illustrations and explanations, you'll see why a seemingly simple statment such as "I need a 56cm top tube...." must always be suspect.



Pop/Follow-up quiz

Mark in pen only, corrections not allowed, don't assume anything, and send it in to us attn: TOP TUBE QUIZ. We'll select perfect scores and draw for random prizes ranging in value from tiny to medium. FIve bucks to fifty. The prize size is the luck of the draw. Deadline: May 15, 2009.

1. Two bikes, both 58cm, both with 57cm top tubes. Bike A has a 73-deg seat tube angle; Bike B has a 72. Same length stems raised to the same height; same saddle height & same setback. Which has the longest saddle-to-handlebar distance? _____

2. Short rider, gender indeterminate, looking at two bikes, both blue. Blue Bike B is 50cm with a 74° seat tube and a 52.5cm horizontal top tube, threadless headset etc. Blue Bike C is 52cm with a 72.5° seat tube, a 54cm top tube, and has a threaded headset. Assuming sufficient standover clearance in each bike--in other words, the 52cm is not too big--which bike is more likely to be the more comfortable, and how come?

_____

3. How do low handlebars effectively shorten your arms?

_____

4. As the handlebar gets higher, it also moves…

a. toward you
b. farther from you
c. further from you
d. it depends where you happen to be.

Name _____Member No _____

Street/City: _____

State/Zip: _____

Th Ravn Challng Continus: Vrs Fiv

As a refresher to long-time Reader readers and an introduction to rookies: We have an ongoing contest-like challenge among our readers to rewrite Edgar Allen Poe's The Raven without using the letter E. Verse by verse. This is the fourth of eighteen verses. I'm a huge Poe fan and Raven fan in particular (I also like quite a lot Ulalume), so it wouldn't surprise me. The last entries were submitted almost a year ago—since this Reader is so late—but they were too good to just let evaporate…so here they are, likem or not. (I do!)

Verse Six

Open here I flung the shutter, when with many a flit and flutter
In there stepped a stately raven from the saintly days of yore;
Not the least obeisance made he, not a minute stopped or stayed he,
But with mien of lord or lady, perched above my chamber door
Perched upon a bust of Pallas just above my chamber door; —
Perched and sat, and nothing more.

Rules & Tips & Prizes

1. You can't use an "e" except in "Lenore."
2. You can't just drop the e as I've done in the headline. In other words, "Opn hr I flung th shuttr..." disqualifies you.
3. Try to stay true to the mood and story line.
4. Submit your entries by snail mail on paper, addressed to

Raven Contest
Rivendell Bicycle Works
Box 5289
Walnut Creek, CA 94596

It'll take forever again for us to get around to publishing them and picking the winners, but this is our way of fostering patience in these instant-feedback times. The winner gets a $100 gift certificate. Runnerups get $50 gift certificates. All e-free entries that show effort and don't make a joke of it will receive something. Include your contact info on your entry, not just on the envelope. We throw out the envelopes as soon as possible.

Other and notes & comments

Although verse six is written above, I'm sure Poe would have implored you to read the whole poem. It's really good. There are rhymes within lines and lots o' 'litteration, and it's spooky & humorous.

It was written around 1848, before the Civil War, before Lincoln, before the bicycle. If you seek it out in enough books or internet sources, you'll come across versions with slight differences. In the fifth verse, for example, "But the silence was unbroken, and the darkness gave no token…" is sometimes "But the silence was unbroken, and the *stillness* gave no token…" There are about seven others, but the differences are small, and not surprising. If you'd written a long poem like this, chances are you'd go back a few times and change a word or two.

Who picks the winners? Not me/Grant. If you're mad at not winning, either blame my oldest daughter (who judged this one with no outsie influence) or try again next time, when we'll have another judge.

Poe's

Deep into that darkness peering, long I stood there wondering, fearing,
Doubting, dreaming dreams no mortals ever dared to dream before;
But the silence was unbroken, and the stillness gave no token,
And the only word there spoken was the whispered word, "Lenore!"
This I whispered, and an echo murmured back the word, "Lenore!" -
Merely this, and nothing more.

Runner Up

Far into that dark hall gazing, mind afraid and orbs a-glazing,
Slowly wasting 'way my night thinking scary thoughts in fright;
No sounds did flit, no signs did fly to kill my watchful standing by,
Until a word was said aloud, softly it was said, "Lenore?"
My word floats in and nigh it sighs, that hall sighs back my word, "Lenore!"
Still it stands, that vacant door. *Alanna Besaw Portland, OR*

Runner Up

At black night now simply staring, shut my mind to stop this caring,
Haunting hallucinations hit, soon old horrows start to pour;
No sound could stop my thinking, nor my sad soul and brain from kinking,
Coiling back now as though shrinking from a murky word, "Lenore!"
This from my lips, and again it sounds a frightful call, "Lenore!"
All this loss sits at my door. *Jim Edgar Corte Madera, CA*

Runner Up

Far into that dark night staring, hardly moving, wishing, caring,
Doubting, thinking thoughts no mortal had thought in any moor;
But no sound cut still air, and dark of night fought not fair,
And only a solitary word split air, a soft, "Lenore?"
This I said, and as from a parrot back sprang, "Lenore!"
Only this, on that fallow moor. *Dan McCuaig Washington, DC*

Winner

Far into that dark maw scary, long I stood fast, wanting, wary,
Doubting, drooling mortal drool upon my bathroom floor;
But thusly hush was nigh unstopping, and a dark night's slow hint dropping,
And a singular word said, "Shh! Lenore?"
This through my lips, a murmur backward, "Lenore!"
Just a word, without a roar. ***Dwight Dau Minden, IA***

Trout, rivers, insects, trout flies, and fly-fishing

I wrote this about four or five years ago, in 2002 or so, intending to include it in a *Reader*, but never having the nerve. I didn't want emails saying, "If I wanted to read about fish, I'd buy a fishing magazine!" But things have changed. Now, your "membership" entitles you to the rebate, and the Reader is no longer part of the membership deal other than if you aren't a member you won't get it. But it's not the hook, and because it isn't, I have more freedom to include non-bike topics that either I find interesting or I think or hope you will. When I write them myself, they'll be about things I'm familiar with (of course). Even if this one about fish isn't in your normal sphere of caring, I've tried to give it a good combo of shortness, completeness, and accuracy , so you can at least understand something about the trout and fly-fishing hubub, and it's good to know about things you don't care about, isn't it? Maybe not. Anyway, I started fly-fishing in 1965 and don't do it nearly as much as I'd like to. Bummer! But when I'm out there, I still understand what's going on beneath the water's surface. That's key to having fun. —Grant

Trout fears and fitness

Trout that don't live in New Zealand are afraid of fish-eating birds, so they hang out in deep water, in undercut banks, and under overhanging trees and bushes. They're also afraid of sudden shadows, which suggest something from above is about to get them. New Zealand-based trout often hang out where no other trout would dare to be, because there are no trout bird-predators there.

Athletically, trout are sprinters, with little endurance—much like a caveman in that way. This makes as much sense for a trout as it does for a caveman, since a trout not hooked to a line wouldn't ever have to exert itself maximally (and anaerobically) for more than the five or five and a half seconds it might take to escape a river otter trying to chomp it.

Water requirements

Trout need cold, clean, clear, well-oxygenated water. If the water doesn't have enough dissolved oxygen in it, the trout can't breathe well, and it's like you or me in a room choked with smoke or tear gas.

How much oxygen is in the water depends on its cleanliness, temperature, elevation, plant life, and turbulence. Oxygen is highly soluble in the 56 to 60°F water trout prefer, and a lot less soluble in water above 70°F. Clean water holds more oxygen because it lacks pollutants that eat up the oxygen. Turbulence caused by steep gradients and rocks helps infuse the water with oxygen.

If environmental conditions such as a hot drought, or man-caused conditions, such as letting warm lake water into a river, make the water too warm, the trout's metabolism increases and it needs more oxygen, at the same time that the water provides less of it. Then trout go into a lethargic survival mode, and don't care about food. If you were in a room full of smoke or tear gas, you wouldn't care about food, either.

Besides well-oxygenated water, trout also like slow water, because it's easier to live in than fast water. The rivers may be fast on the surface, but even the fastest white-water rivers have plenty of slow places, and trout find them.

Where trout find the nice, relaxing slow water

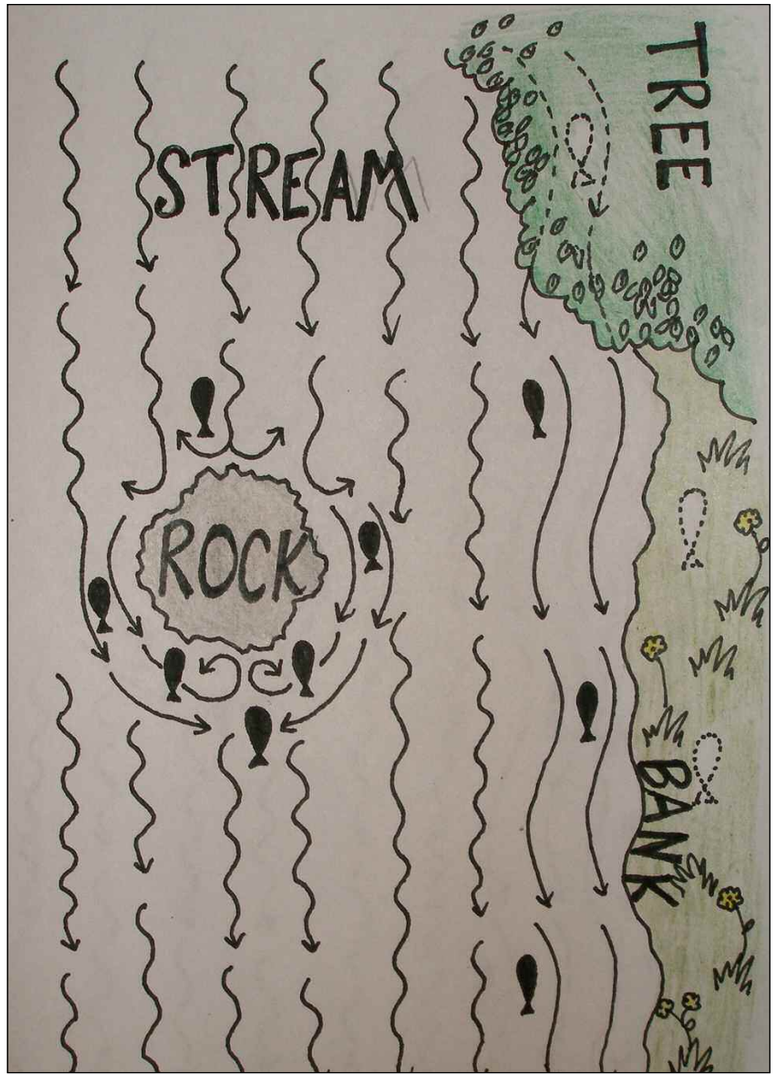
1. Next to a bank. Water in a stream moves by "laminar flow," where, the closer it is to the unmoving mass such as a stream bottom or a bank, the slower it flows. Maybe it's friction.

2. Behind rocks. Rocks break up the flow, and the pools behind them are good shelter from the current.

3. In front of rocks. The water hits the rock and rebounds upstream against the flow, and the rebound cancels out the downstream flow.

4. Next to rocks. Going back to that "laminar flow" phenomenon, the water is slower next to a rock than it is well away from it.

5. On the riverbottom. The bottom has it all: Protection from raptors, lots of food (bugs live there), & friendly slow water (because of the "laminar flow).



In this unusual photograph, the tight squiggly lines represent the faster water; the loose ones, slower water. There are eleven trout shown in typical trout hangouts—where the water's slow, but with ready access to faster water that brings them food, like one of those sushi bars with the floating food trays. Did you find the dotted line trout under the tree branches, and in the undercut bank?

Trout eating habits

Trout are foragers, and rarely refuse food if they don't have to work hard or risk their lives to get. If a familiar bug drifts by a trout in a familiar way, most of the time, the trout will eat it.

Ninety percent of a typical river-trout's diet is aquatic bugs that live at the bottom of the river.

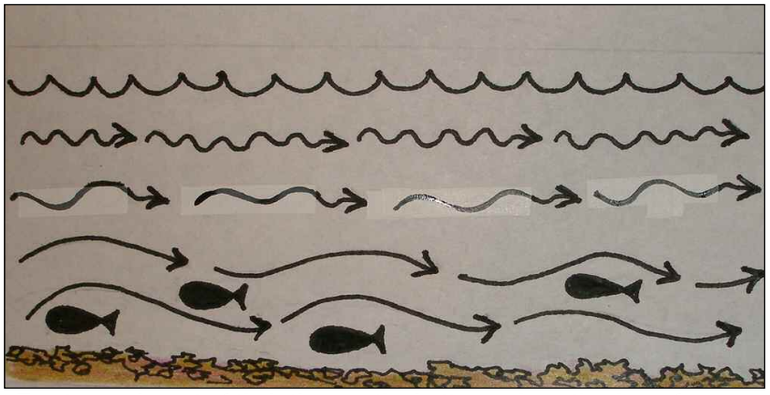
The rocks and depth provide the bugs with shelter and food (vegetation and other bugs), and trout eat them when they get dislodged and are drifting freely, or when it's time to change from juvenile to adult. Then they let go of the rocks and drift or wriggle up to the surface to hatch.

Why trout like to be near, but not in, fast water

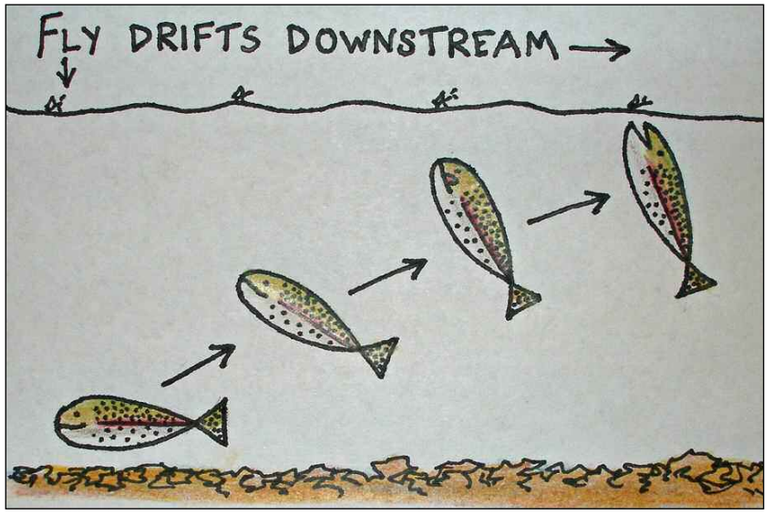
Fast water delivers food more quickly than slow water does. The food in the fast water is generally drowned adult insects, and sometimes drifting bugs that were floating to the surface to hatch, but got caught in the fast water at the surface, and are being carried by it quickly downstream. Trout like to be in slow water, with ready access to fast water, so they get food from both.

How far will trout move for food?

In a slow, clear stream, three or four feet for a big mouthful. In a typical roily stream, when the food is a tiny bug, a foot is the most you can expect. Trout will move farther for food in clear, slow water because they can see it better, and they don't have to fight the current. In a lake, they cruise for food, because the water doesn't bring it to them.



Trout spend most of their time on the bottom, where they're safer from fish-eating eagles, and also where most of the bugs are.



Trout may rise to the surface when the bugs are ready to turn float up there, molt into adult flies and then go mate. The flies float on the surface while their new wings are drying, and that's a favorite time for trout to chomp them. After the trout eats the fly, he goes back to where he was. It's a good spot, after all.

When do trout eat at the surface?

When the river is slow and the water is clear, and the water bugs have drifted or wriggled their way to the surface, and are ready to hatch into adults and fly off to mate.

Sometimes trout eat only bugs that are an inch below the surface; sometimes they eat only bugs that are emerging into adults; and sometimes they eat only bugs high on the water letting their wings dry before flying off to mate.

Trout also feed on top when the flies are laying eggs in the water, or when land bugs, like beetles, grasshoppers, and ants, fall in.

In clear, deep, slow water, trout sometimes feed at all depths, but in a typical two-to-four foot deep trout river with a decent current, most of the eating is done at the bottom and most of the rest is done on top.

What a trout sees

Fishermen and scientists have studied how trout see things underwater, on the surface of the water, and above the water (for instance, a fisherman casting to them), but in the absence of a trout's testimony, the debate goes on.

Everybody agrees that trout see things underwater better than on top of the water; and that trout see color, but differently than we do; and when the water's clear, trout see you standing tall in your bright red shirt waving your fly rod at them.

The trout-sight debate is about how much of the water surface trout see from various depths, and whether or not they see the portions of bugs or flies that are just above, but not touching, the water's surface. Nobody is quite sure, but everybody has ideas.

Can trout hear?

Trout can't hear you talk, but can feel the vibrations created from tramping heavy along the banks and stirring up the rocks in the river as you wade it.

Do trout feel pain when they're hooked?

PETA may have a problem with fishing in general, but a trout's mouth is mainly cartiledge, and if it's like our cartiledge, they can't feel the hooks. When you fish with bait the trout may swallow the hook along with the bait, and then when it fights it's also ripping its own guts out. Not a pretty picture, but also not a possibility when fishing with flies. Once the trout can tell it's been duped (immediately), it tries to reject the fly, like a person ejecting foil stuck to the chocolate.

The kinds of food in trout rivers

Trout are opportunistic omnivores, but in a typical small to medium-sized stream, most of what they eat are are caddis flies, mayflies, and stone flies. Caddis flies hold their wings like an inverted V; mayflies hold their wings upright and parallel; stone flies hold theirs flat over their backs.

They also eat freshwater shrimp, crawdads, frogs, damselflies and dragonflies, small fish, and land bugs (called "terrestrials") like beetles, ants, inch-worms, and grasshoppers.

Local fly shops know the kinds of bugs in the rivers, and the fly patterns that best imitate them. You can also pick up rocks and look for yourself, and mostly what you'll find will be small and dark. There are no "secret flies," although fly shops depend on your thinking there are.

Kinds of trout flies

Flies that float are called Dry flies, and usually imitate or at least suggest to the trout mayflies, stone flies, or caddis flies. Since dry flies are flies that float, the category also includes flies that imitate land-born insects, like beetles, grasshoppers, ants, and inch-worms, since they also float. Land insects and the flies that imitate them are referred to as terrestrials, and they float, too.

Flies that sink are called wet flies. "Wet flies," is a big category that includes: nymphs (pupal forms of the insects...remember "egg, larva, pupa, adult"?); emergers (flies that imitate hatching insects, and are fished sometimes a few inches below the surface, since many insects actually crawl out of their pupa casing on the way up to the surface; and drowned flies that got splashed by a wave and sunk before they could fly off.

When a guys says "wet fly" he usually refers to one that looks like a drowned insect, with wings swept back all soggy. Streamers and bucktails, which are tied with feathers and hair respectively, imitate small fish. Big fish eat small fish, and in some rivers these fish flies catch the most and biggest trout.

But a typical trout between 9 and 16 inches eats mostly bugs.

Tricking the trout

When you cast to trout feeding on the water's surface, make the fly land three to six feet upstream from where you saw the trout come up. That's because as the trout moves up to the surface to eat, it drifts downstream to do it. Then it eats a bug and goes back to where it was before it started to drift up and back to get the bug.

Why trout can be hard to catch

Trout are no different than people, in how they eat. If you're an omnivore at a smorgasbord, you go for the stuff you like most and select

An assortment of trout flies any halfway decent fisherman could catch fish with in most of the trout streams in the country.

an ant

a small nymph

a wet fly

a streamer (like a fish)

a real mayfly

a real mayfly nymph

the choicest morsels. That's what trout do when there's a lot of food in slow, clear water..

The literature of fly fishing propagates the notion of "educated" trout. But a trout has fish brains, and if it's hard to catch, it's because the water's clear, there's lots of food, lots of time to inspect the food before trying to eat it, and there's a lot of people fishing on that river, so the fish learn to discriminate between imperfect imitations imperfectly presented, and real bugs.

Which trout are easier to catch & how come

Trout living in a shallow river with lots of fast water and not much food grab stuff that moves by them fast just in case it *is* food, and spit it out if it isn't. They can't see it well, and they can't afford to be picky, or they'll starve. That's why they aren't as hard to catch. Trout in typical high-mountain creeks are usually easy to catch because there's not much food and the water's fast.

Summary

Slow, clear water and lots of food and lots of fishing pressure makes trout hard to catch. Faster water and less food and fishing pressure make trout not as picky, and easier to catch.

KINDS OF TROUT FLIES

Close imitations of specific insects

When there's a preponderance of one particular bug on the water, typically when it is hatching, sometimes trout won't eat anything else. Then you need not only a good presentation, but a good imitation, too. In rare circumstance, trout have been known to eat only crippled bugs that didn't hatch successfully (equivalent to a butterfly that got only one wing out). These situations are rare, but everybody experiences it eventually.

Generally buggy looking flies that look like generic food

Unless you know the exact bug the trout are eating to the exclusion of all others, you're best off fishing a fly that's generically suggestive of common trout food, in its size, shape, and color: small, dark, and slender. The trick is not so much to imitate the food exactly, as it is to not present anything the trout can find fault with. Good flies usually don't look like much.

Flies that look bright & gaudy

Trout sometimes go for a gaudy or oversized fly, in the same way that people sometimes go for gaudy people with oversized features.

These flies are called "attractor" flies because they're highly visible but don't look like real food. Sometimes they'll catch more or bigger fish than grubbier, more realistic flies.

How you present it is more important than what it looks like

It's easy to get caught up in the trap of fly pattern obsession, where you think you have to have flies for every possible bug and every stage of its life. But you'll catch trout if you use flies that are the right size and color (usually small and dark) and make them appear to be free-drifting, like a real bug that isn't tied to a line. If you drift it so the trout doesn't have to move more than a few inches to eat it, he'll eat it. Some bugs move in short spurts, and when you're fishing one that does, you need to make it behave the way its real counterpart does. For example, mayflies don't race across the surface of a slow current, and grasshoppers don't swim upstream underwater.

The two most common mistakes fly fisherman make

1. Casting too much. People learn how to cast, and like casting, so they cast too much, which keeps the fly in the air, where you can't catch a trout.

2. Changing flies too often. It's comforting to think, "it's not me, it's the fly I'm using," but unless your fly is way off, it's not the fly.

If your fly is reasonable and you aren't catching fish, either the trout aren't seeing it, or you're doing something to the fly during the drift to make it look wrong to the trout, or the fish just aren't there.

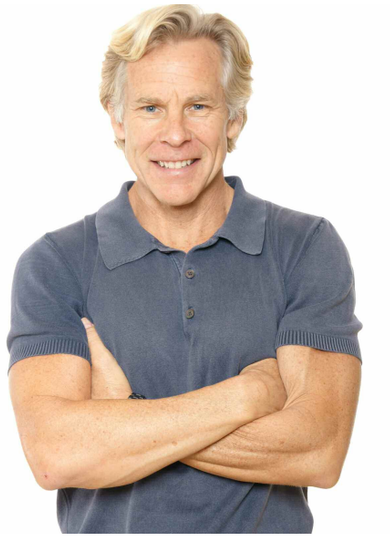
If you understand all of this and can wade and cast quietly, you'll catch trout. You may go all day without one, or two or three days, but if you don't give up, eventually you'll catch some. Then you'll repeat the things that worked,and learn the particulars of the rivers you fish, and then you'll catch a lot more trout. Plus, some rivers look good, but don't have many trout in them, because even though they look like a classic trout stream, the chemistry or temperature is wrong for trout, or lots of the trout get killed when conditions become inhospitable over a hot, low-water summer, or a freezing winter.

There's still a lot more to catching trout than understanding their environment, nature, and preferences. You have to be able to put the fly where you want it, and to control it once it lands. That can be tricky when the river is tumbling and swirling at different rates between you and your fly.

It is common for a new, rich fly fishermen to short-cut the basics covered here, and hook up with a professional guide who knows the river well, and can provide the right flies, tie them on the line, and all but guarantee that they drift by fish, because he knows the river and where the fish are. It's sort of the equivalent of gym-fit businessmen climbing Everest with sherpas, guides, and oxygen.

A skilled fly fisherman fishing solo, without a guide, and without doing any research or even quizzing the locals, will learn where the fish are in any river, and will figure out how to catch them. Trout are the same everywhere. They like slow water near fast water; they like safety from raptors; and they like pretty much any food that floats by or falls in, so long as they're familiar with it and they don't have to work hard to get it. Probably all fish are like that, but trout *for sure* are.

In Which We Interview Mark Sisson



In Reader 40 there was the "cave man article," written by Mark Sisson about what he calls the Primal Blueprint way to eat and exercise. He is confident of his assertions, and there's not a lick of evidence that suggests he's off the money. It's based on what people did as hunters and gatherers, and the idea behind it is that yes, that seems like a long time ago, but evo-lution-arily it was yesterday, and despite our modern swankiness and savoire-faire, our bodies are still back there, expecting this kind of exercise and that kind of food. Yet we generally provide it with the opposite.

For cyclists, this stuff is threatening and mind-boggling. It's tempting to write it off as extremist quackery, but once you understand even a smidgen of it, it's impossible to do that. It not only makes sense, but it feels right, everything about it. There is a swell of change out there, and Mark and a handful of others have been leading the charge and all saying the same thing. The best part is, it's easy and fun. Way better than oatmealing up for a 70-mile ride, washing down an energy bar or two along the way with some blue electrolyte replacement drink, eating a low-fat pasta-and-salad dinner, and waking up hungry and stockier the next morning.

Whatever the case, I thought a follow-up interview with Mark would be a good thing. It is long, and there is repetition by design. If you read the same thing more than once, it'll stand a better chance of sinking in. Mark's site, by the way, is marksdailyapple.com. It is a fine place to dwell. —Grant

Questioning the benefits of aerobic exercise seems like a good way to make lazy people like you and most athletic types discount you as a nut. In an age when grandmothers run marathons, it seems like a cry for attention. I imagine the first question that comes to most people's mind is: Who is this guy, and what are his qualifications? With as little humility and as much candor as you can muster, why should anybody listen to you?

I don't know…but I didn't just get into this. I have had a life-long obsession with health and fitness. I pursued a pre-med curriculum at Williams College and got a BA in biology. All during my extended career as an endurance athlete, I researched ways in which the body best responds to exercise- and diet, and the damage done by overtraining, etc. I wrote the *Runners World Triathlon Training Book* in 1983 and by then had already recognized that all of us in the endurance community trained too much.

Later, in my book *Training and Racing Duathlons* (1989), I proposed cutting the longer workouts and focusing on occasional brief "Breakthrough Workouts." When I started my supplement company twelve years ago, it was to acknowledge the damage done by training and to find natural, legal ways to mitigate the damage (particularly oxidative damage) and still compete.

I spent 15 years as the head of the International Triathlon Union Anti-Doping program (responsible for drug testing triathletes around the world) trying to prevent the athletes from using steroids and other drugs whose main purpose was to enhance performance by speeding up recovery and repairing damage quicker.

So I've been doing this a long time. Over the past ten years I've averaged about two hours a day of reading research on diet, exercise and health.

How do you research it, and who writes what you read?

Damn the Internet. Just when you find a great article and settle down to read, you see a link to another one that's just as relevant or even more so. And then another link. The internet changed everything when it comes to research.

And you're sure it's reliable.

Yes. Most of what I read is written by scientists or science writers who have been doing "behind the scenes" work in niche areas for years, but few in the mainstream know about them. Just going to PubMed and entering something like "cardiac marathon" returns 344 possibilities. So when I suggest that too much running or cycling can be bad, I can access 20 or 50 research papers that offer evidence of this, as well as Google a few bloggers who have made similar discoveries and tap into their knowledge base, too.

As far as my diet philosophies, there's nothing really new (*Good Calories Bad Calories*, *The Great Cholesterol Con*, *The Paleo Diet*, hundreds of other great books). I condense it into life plan—a blueprint—people can understand. My job is explaining in simple terms how so many of the things we've taken as gospel could be so wrong. Chronic cardio exercise is just one of those.

I find all of your warnings against long, hard exercise kind of a bummer, since I spent 40 years riding painfully hard for health, and it's a drag to think it was counterproductive. I'm glad to know I can slack off some for the next 25 or 30 years, and get healthier for doing it.

Everybody "knows" thousand-mile months ridden at 75 to 85 percent of your maximum heart rate are better for you than casually 250-mile months ridden at 65 percent., and we're still told this. How can so many experts be wrong? When your book comes out, they're going to hate you.

Hey, don't hate the player—hate the game. First off, I want to clarify one point: There *are* benefits to aerobic exercise. Our ancestors lived a life of low-level aerobic activity their entire lives: walking, migrating, foraging, climbing, hunting, and so on. I agree that that form of totally aerobic, fat-based activity is great for health and longevity.

But when you say "everybody knows thousand-mile months at 75-85 percent are better than 250 at 60 percent", what do you mean better?

If "better" means being able to perform better in a race, that may be true (it may also not be true). But what about better for health, energy, productivity, body composition, and illness avoidance? I'm saying what's unhealthy is the "chronic cardio" stuff, where we get out there day in and day out, keeping

our heart rates elevated and requiring massive amounts of glucose and glycogen to fuel that kind of exercise.

I think I can back that up. We didn't evolve to handle that amount of glucose throughput, that continuous oxidative damage, that amount of repetitive unbalanced motion. To train that way for health doesn't make sense.

Yet for every one of you saying long hard cardio is damaging, there are twenty-five other authorities saying it's good for you.

That's true, I know. But the majority is wrong in lots of areas concerning health. Cholesterol is a good example. The most up-to-date evidence strongly refutes so many of today's givens: That cholesterol causes heart disease; that it's acceptable to take statins to lower it; that avoiding saturated fat is a major cause of it. I don't believe any of those "givens," not because I'm a skeptic, but because I've read the much more compelling evidence suggesting otherwise.

The ADA says type 2 diabetes is not caused by excessive carbohydrate consumption, and that diabetics can eat dessert, no problem. I don't believe that, either—and yet "experts" continue to repeat it.

So when some of us suggest too much exercise is probably not healthy, we are going against a majority that has just looked at grossly oversimplified studies comparing people who exercise with people who don't do squat. I'm saying that among people who exercise, those who do too much strenuous cardio in the pursuit of better health or longevity are fooling themselves and making some erroneous assumptions about the effects of exercise at chronically high levels. And what constitutes chronically high is different for different people.

How does somebody determine how much and how hard? Is "feels about right" good enough?

It depends on your own personal starting point and family history. It's different for a 300-pound guy getting into shape for the first time than it is for a 140-pound woman who's been spinning for years and wants to lose another 10 pounds. Remember, I'm not talking about training to race. When you train to race, you agree to take on some unhealthy aspects of exercise and diet in pursuit of that ego-driven task. And even that is a continuum. Some race for fun and train easy. They might give it all once or twice a year and then cross-train in between. Others live to race and every workout pushes the envelope. They are the ones I'm most worried about.

In my book and on my blog, I address those who want to be fit, healthy, productive and happy. I assume they want to look and feel the best they can on the least amount of work possible. Not going out every day and putting in extra credit mileage or feeling guilty because a planned three hour ride was cut to two. It's ironic that most people who knew me when I was a top athlete tell me I look healthier today at 55 than when I was one of the fittest guys around. That says a lot to me about the physical wear and tear and the chronic muscle breakdown that comes with "chronic cardio."

All that hard work, and it hurts you. Are people just stupid exercisers?

That's a little strong, but we are certainly the only animal that voluntarily expends inordinate amounts of energy doing something that has no immediate tangible reward (unless a trophy is your thing).

Chronic cardio, as I like to call it, is new to us. A hundred years ago, nobody would have run six to ten miles a day at 80 percent of maximum heart rate—without a clear immediate life-altering objective. But it's not a matter of being stupid. Unlike other animals, we have advertisements and testimonials and hype to deal with, and our tendency is to believe, not to doubt, so we are more succeptable.

... a hundred years ago, nobody would have run six to ten miles a day at 80 percent of maximum heart rate....

But that unnatural exercise requires an unnatural amount of carbohydrate to fuel it. It's a vicious cycle, where high carbs allow you to exercise for long periods of time, but regular high carb intake can lead to more fat unless you burn off the carbs and the fat.

So there you are, training every day to stay "slim" but you have to eat a lot of carbs to be able to train hard. Sucking down sugar snacks so you can stay on the treadmill. It's like digging a hole to place the ladder in to wash the basement windows.

How did it get this way?

None of this nonsense was possible until 10,000 years ago, when we learned to plant grains and stopped hunting and gathering low-carb foods.

OK now—you used to run marathons. How did you get into that, how long did you keep it up, and how fast were you?

I started running distance at 13—because I was too scrawny to play other sports—and became a fairly good runner. I had no speed, so the longer the race, the better I was. My VO2Max was only 68, but I had a high threshold. I ran over 100 miles a week for several years in the late '70s, raced 10ks and marathons many, many times and finished fifth at the last AAU National Championships in 1981 with a time of 2:18:01. After classic overuse injuries and a high-carb inflammatory endurance diet cut my marathon career short, I migrated to triathlon where I did well in the early days. I could ride well and my running background allowed me to hold my own in the run without a lot of training miles. For a short time I held the world record in the Versa-Climber mile climb (5,280 feet in 22:30). But I stopped competing at anything 15 years ago, and my health and fitness have improved each year since.

VO2Max of 68 isn't bad. It's not Greg Lemond, but it's not slouchy, as you know. You did the Ironman in 1982? Wasn't that the year Julie Moss crawled across the line?

Yes, and that was the race that put triathlon on the map. I went from 80th out of the water to 10th off the bike to 4th. If that race had just been another 20 miles longer…

You got fourth? Wow. So, you must know Scott Tinley, Mark Allen, Dave Scott, all those old tri-guys. Are you still in touch with them, and what's their take on your new religion? Are you the apostate now?

I know them all and respect everything they have done for the sport. I don't stay in touch, mostly because I retired just as they were coming into their peaks and I was headed into administration (I was executive director of TriFedUSA for 3 years). More than an apostate, I was the antichrist when I led the charge to allow drafting in the Olympic triathlon. But I digress.

At what point did you start to question aerobics? What set you off that way?

Well, I've addressed that some already. But understand that questioning aerobics isn't like questioning a tradition that goes back thousands of years. Aerobics were first presented as a sort of "more is better" paradigm in the late '60s, with Kenneth Cooper's book, *Aerobics*. You awarded yourself points for how much time you spent doing aerobic activity and got more points for faster and/or

longer. It was presented as "heart-healthy" and the antidote to disease and aging. Running took off in the '70s with influence from guys like Jim Fixx, George Sheehan, and with Frank Shorter's Gold Medal in the '72 Olympics. Millions trained for 10ks and marathons. Jane Fonda brought intense one-hour aerobics classes to the masses of women who didn't take to running. Cycling and triathlon started to take off in the early '80s. At the same time all this endurance frenzy was rising, a high carb diet was pushed as not only healthier than a high fat diet (a faulty recommendation based on faulty science), but as the perfect way to fuel your muscles. Everyone was carbo-loading and living on pasta and whole wheat bread, thinking it was healthy. It was crazy.

But to answer your question, I started questioning the wisdom of high-mileage training when I noticed I was getting upper respiratory tract infections several times a year and just lots of minor injuries. The "fitter" I got, the worse it got. Alberto Salazar—he was one of the top distance runners in the world—told me he had a dozen or colds in the last year of his peak fitness.

My resting pulse was 38. I ran through injuries, oblivious to what they were doing to me because my endorphin output masked the true pain. I developed osteoarthritis and tendonitis to the point that I couldn't run without favoring one side or the other, and the pain forced me to retire from marathoning in 1980—after qualifying for the US Olympic Trials marathon.

My story is just the answer to the question you asked, but there are tens of thousands of similar stories from that era, and even now, that you don't hear about.

After I stopped running a lot I started to see that the same thing happening with other athletes. Injuries, illness, overtraining stresses, adrenal fatigue and anti-social behavior were the red flags. When I started researching diet and performance I saw a double-edged sword: the work itself increased oxidative throughput and damage by a multiple of twenty and the high levels of sugar that kind of exercise required exacerbated the oxidative damage. Chronic high levels of the stress hormone cortisol may have posed an even greater threat in suppressing the immune system.

But it was only five or six years ago that I started to witness the devastating systemic effects that ten or twenty years of hard endurance training could have on a body. Many of the best endurance athletes from the '80s have had severe heart problems Ryan Shay died last year; Alberto Salazar almost died from his heart attack at 48; 2:14 marathoner Brian Maxwell of Powerbar fame did die at 53; top ranked multi-sport athletes Greg Welch, Maddy Tormoen, and Emmy Carney all had defibrillators or pacemakers installed while they were still in their 30s. RAAM racer and Spinning inventor Johnny G has a pacemaker. Yet the general public hasn't made the connection that too much of this good thing can be bad. The media still promotes it and encourages people to push their limits, run marathons, and so on.

It sure seems nuts, and it's got to be especially frustrating for you—since you were part of that, and you got out of it—to see others go down the same path. No wonder you have your site. Anyway, you were a coach and official with the US Triathlon organization. How did your revelation affect that?

I coached the Pioneer Triathlon Team in 1987 and 1988. I had already figured out by then that most people train too hard. Despite my admonition to these elite athletes to train less but smarter, the Conventional Wisdom was to hammer all the time, and many of them had short racing careers as a result. Later I was the Executive Director of USA Triathlon from 1989 through 1991, and was a founding member of the International Triathlon Union. I was the architect of the ITU anti-doping program and oversaw that for fifteen years.

While I was charged with catching the athletes who used banned substances, I began to see how ridiculous it was for the federations to want to produce superhuman athletes through inhumane training – and then withhold from them some of the medicines that could keep them from becoming overtrained or put them at risk for future heart problems, cancer, and joint and bone density problems. I eventually became an advocate for judicious use of some of those banned substances.

You're advocating an exercise regime that takes less time, is less stressful, less dreadful, trains your body to burn fat, and it sounds too good. Some people must think, "You're just telling people what they want to hear."

Yes, it's easier to believe that pain and suffering are good for you, but I'm not saying you can slack off entirely. Probably as many athletes have challenged my beliefs as have supported them. Hard endurance training is an addiction. When I was injured and fried, it still took me five more years to wean myself off the long bike rides and other multi-hour, high heart-rate endeavors; so I get it. But once you realize all that 's going on internally when you train hard all the time (and consume the obligatory high carb diet to fuel the madness), it's actually quite scary. The thing is, your body won't spell it out for you, so you keep on doing it, and everywhere you look you'll find affirmation that you're tough and good for continuing your harmful regime. The irony is that by eating properly and cutting carbs, you can see more benefits in less time and effort.

You started off the article in Reader 40 by saying endurance training ages a person, and quickly. Talk about that again, and distinguish between "endurance training" and "aerobic exercise." Where's the line between "good healthy aerobics" and "bad unhealthy endurance training"?

I am a big fan of low level aerobic training. The kind that burns almost all fat, the kind anyone reasonably fit can do whenever they want and in various forms—hiking, swimming, cycling, paddling, just playing. The good kind of aerobics get your heart rate into the 50 to 70 percent of max range, which is well below the weekend warrior training ride efforts, that kick it up to 80 to 85 percent. The kind of multi-faceted training I espouse—low level aerobics, occasional all-out sprints at about 90 percent of your maximum heart rate, and twice weekly weight lifting—leaves you fit enough that, sure, once in a while you can take the bike out and get in a great time-trial or even hammer a century. Or you can get on a paddle surfboard and stay balanced while you paddle and have fun for two hours. But the idea is to be well-rounded fit (I call it Renaissance Fitness in my new book) and prepared for any activity, any time.

The danger comes when you put all your eggs into one basket – cycling, running, skating, whatever – and all your energy is focused on that one thing, at the expense of greater fitness, health, enjoyment and peace-of-mind.

Again, I really want to emphasize this— it's OK to hammer once in a while, on the group ride on a Saturday or a race here and there. The danger is "chronic cardio," where you ride hard all the time just so you can ride hard all the time.

Many people feel guilty when they finish a run or ride and don't feel exhausted. They figure it was a waste of time. People are the only animals that feel guilty for not doing a long workout. I'm not saying you can't ride your bike everyday; maybe most of your customers do that. I'm saying that if you do, make your easy rides easier and your hard

rides less frequent, shorter, and harder. One intense sprint day a week that might take only 20 or 30 minutes is better for you than yet another medium-hard 40-mile ride. It's even better to mix it up and hike a day or two. Lift weights or do some compound-movement bodyweight workouts. Don't just ride your bike.

Talk about how Grok-ish workouts take less time, and so on.

Grok-ish workouts *take* less time for a few reasons. The main one is that the Primal Blueprint low-carb diet burns body fat at a much higher rate and tends to make you a fat burner instead of a fat storer. High carb diets make you store fat. So as a Grokafarian, you simply don't have to work out very much to get all the aerobic, strength and power benefits. There's no reason to (unless you are engaged in a truly fun pursuit). You are not on this vicious treadmill of having to fill glycogen reserves every day just to go out and hammer hard the next day to burn off some fat (which doesn't happen to many non-elites because they wind up overeating that night and overstoring fat anyway). If your main reason for regular hard aerobic exercise is weight loss or weight maintenance, you'll generally fail, since 80 percent of body composition—how fat you are or aren't—is determined by diet. Even if your reason is to compete, there are more efficient ways to get race-ready.

A Primal Blueprint sprint day takes 30 minutes from start to finish and generates more human growth hormone, more testosterone, and less cortisol than a long hard ride. A Primal weight training day often less than 30 minutes. The low level aerobic stuff is up to you. We say a minimum of 2 hours a week of walking (or easy cycling) but it could be 4 hours a day if it were easy enough. Easy riding, easy touring, is the cycling equivalent of how our ancestors moved about.

Play is a big part of the lifestyle. I don't even count my weekly Ultimate Frisbee game as a workout because I am totally immersed in having fun. Same with snowboarding or standup surfing. I am fit enough to play hard because of the variety and shortness of my regular workouts.

What about the idea that at higher aerobic levels, you want to maintain the HR for at least 12 minutes, because something kicks in after that? I used to think hard efforts for less than 12 minutes were wasted. In the low-aerobic zone, are ten four-minute sessions as good as two twenties?

Well, there's nothing magic about 12 minutes. Tabata proved that quite convincingly, which is why Tabata sets are only 4 minutes of 20 secs on and 10 rest. But those are nearly all-out. In the lower aerobic end, ten fours are as good as two twenties. But go easy, at 50 to 70 percent of your maximum heart rate.

That sounds low, of course.

Well, understand that this is all about burning fat and avoiding the reliance on glucose. To burn fat, exercise well below the high-performance, race-oriented, glucose-burning training zones of 80 percent plus. It's easy to burn fat, but you have to know how.

What about weight lifting, and in particular, reps—Grok probably didn't do lots of reps, but what did he do—tilt big rocks over to find grubs under them, something like that? Am I better off doing 50 normal push-ups or six, with books on my back?

Just mix it up. Grok climbed a tree (20 reps) or lifted a boulder (1 rep at maximum effort). It's about muscle "confusion." Some days do three sets of 30 push-ups and other, do 5 sets of 4 push-ups with a weight on. Give your muscles a reason to get bigger and/or stronger while you learn to squander your stored body fat.

Clarify cortisol, since you mention it a lot. It's a new word to most of us. I know you went into it in the last Reader, but not everybody read it, and new information needs repetition. This is as much for me as for any of our readers.

Cortisol is the major catabolic hormone

— what's "catabolic"?

It's the opposite of anabolic, which most people know to mean "building". "Catabolic" means "to break down". Catabolism is a natural metabolic process that breaks down molecules into smaller units and releases energy. When you stress your body by exercising in the 80 to 85 percent recommended trainging zones, your adrenals secrete cortisol in response to stress. In survival situations it's a godsend, shutting down all growth processes to divert resources to more immediate needs. Under life-threatening conditions like starvation, trauma or "flight or fight", cortisol causes an increase in gluconeogenesis (manufacture of glucose) to fuel the brain and the "fight or flight" muscles. It does this by stripping muscles of protein and using that protein to make glucose in the liver. Cortisol shuts down the immune system (why waste resources identifying something that might make you sick in a few weeks when you might not survive the next few hours?), shuts down reproductive hormones (testosterone, for one), and it decreases the uptake of calcium by bones (to allow for more calcium to be used in cellular communication). Cortisol also increases insulin resistance, and promotes fat storage in visceral tissue. It helps an animal survive until food is available or until it can escape being trapped by another animal, or so on.

Cortisol breaks down lean muscle to make glucose to fuel your hard efforts, and makes your bones porous, and makes you store more fat?

It does, yes, but listen—we need it for day-to-day emergencies. The problem is, our adrenals and cortisol don't diffferentiate between a true life-threatening danger and artificially induced stress, like long, high-effort runs and bike rides.

The perception of stress often starts with the brain, which signals the adrenals to put out cortisol (HPA axis, actually). In the 21st century, we can be constantly worried "to death" about our overdue mortgage, unpaid bills, an abusive boss or partner, the long commute to work or the noisy neighbor next door. It's not just exercise-induced stress. That's one way stress causes people to gain weight.

All this made-up stress generates a prolonged cortisol bath that manifests all the normal cortisol effects: suppressed immune system, muscle wasting, decreases in bone density, increases in insulin resistance, increases in fat storage, fuzzy thinking, depression, etc. If this cortisol bath continues for too long, health suffers dramatically. This is why stress is at the root of so many illnesses and doctor visits.

Ironically, hard endurance training has a similar effect. We just weren't designed to rev our hearts at 80 percent of max for an hour or four every day.

The body perceives these long hard workouts as stresses that require more cortisol. Once in a while it's OK, possibly even beneficial. Train day in and day out this way, however, and the adrenals pump out way too much cortisol to help deal with the real physical stress (on top of whatever mental stresses you have). The main reason many top endurance athletes can't keep good upper body strength is because cortisol tears down muscle in the upper body to help fuel the legs. That's another reason (beyond diet) why they also get sick more often, have abnormally low bone density and are more moody than most. It's why Tour cyclists have low testosterone (and why they try to dope).

It may also help explain the more devastating health problems that accrue over time.

The Primal Blueprint diet and exercise regimen—what I've been talking about—minimizes the amount of diet-and-exercise induced cortisol in your system.

Back to "muscle confusion," the notion that our bodies adapt to repetitive motions and become so efficient at them that we have to work harder and harder for less benefit. Bicycle riding seems to be the champ of muscle confusion, since pedaling is so repetitive.

Cycling is actually the "chump" of muscle confusion, right. When you ride every day and do no other form of exercise, you can develop muscle imbalances that affect you now or later in life. Many injuries are just repetitive motion injuries. Grok never repeated the same motion twice. He walked barefoot on uneven ground, moved laterally, sprinted, twisted, lunged, jumped, and bounded. That's what we try to emulate in the Primal Blueprint. Crossfit, the group out of Santa Cruz, CA that posts a different workout every day has some great workouts that involve full range of motion, compound exercises, body-weight resistance, etc that continually recruit new muscle fibers and promote a higher level of strength, power and fitness.

The idea is to be ready to tackle anything that comes along, whether it's a game of soccer, climbing a tree, jumping over a creek, a sprint race, or a 50 mile bike ride, or moving furniture. To have enough all-around fitness to do anything.

What's a typical day's eating for you? Breakfast, lunch, dinner, snacks.

A typical breakfast is four eggs fried in butter, half an avocado, a cup of raspberries and coffee with heavy whipping cream for breakfast. BigAssSalad for lunch (15 veggies plus scoop of tuna or a chicken breast with olive oil-based dressing). Handful(s) of nuts as snacks or maybe organic beef jerky. Grassfed beef steak for dinner with a full bunch of steamed asparagus (smothered in butter) and a glass or two of cabernet. Tell me I'm sacrificing something.

It sounds like a high-fat breakfast.

When you cut carbs to under 150 grams a day (and most days to under 100), you have to get your calories from somewhere else. Fat is the solution. Around 60 percent of my calories come from fat. The biggest fallacy in modern medicine and dietary science is that fat is the enemy. It's not. Of course, you should avoid at all costs the "Frankenfats" like hydrogenated oils and trans fats. But monounsaturated fats, omega 3s and even saturated fats are hugely important to excellent health.

Which foods were the hardest to give up, and how often do you slip?

Breads were easy, although the smell of sourdough toast still stops me in my tracks. I used to drink a lot of beer, but I cut back to a bottle or two a week, since beer is liquid grains. My biggest vice, and it went on for many years, was a half-gallon of ice cream every night. That was tough to drop. Now I have a small cup maybe once a month.

What's your favorite food, tastewise, without regard to how healthy it is?

Rack of lamb is my number one, and number two is my BigAssSalad which can have 15 or 20 ingredients. I don't like candy, except for dark chocolate now and then, and I never liked soft drinks or cake.

If your main reason for regular hard aerobic exercise is weight loss or weight maintenance, you'll generally fail…since how fat you are is determined by diet.

Do people who know you get intimidated serving you dinner? How do you handle "conspicuous" social eating?

People might joke about it when I'm at their house, but sometimes it's just doubling up on vegetables and meat and avoiding the starchy side dish. I want to be polite and taste the dessert, but I don't eat all of it.

If you had a year to live, how would your diet and exercise change?

I wouldn't change my diet much, because I love what I eat, but I'd drink more beer. I wouldn't go to the gym at all, and I'd snowboard more, and play more, in general. I wouldn't exercise to help my play, I'd just play. Is this a trick question? Is the next one going to be "OK, why aren't you doing that now?"

No trick question, nope. If it were me, I'd eat more ice cream and egg nog. You make your living how?

I run a supplement company I've had for twelve years—high-potency multi-vitamin-antioxidant formulas, protein powders, and fish oil capsules. I sell it on my web site. But my main focus is still education.

How's your cholesterol, HDL, and total triglycerides? Do you have those checked?

Total cholesterol, 180; HDL, 80; triglycerides, 70. I don't know if those numbers will mean anything to your readers, but they're healthy numbers.

In the book you're writing, do you find yourself becoming less hard-core—or at least coming off that way, to win more fans and scare fewer people off?

Absolutely. My blog readers have digested the concepts and understand them. The book is for a new audience, and so it spells out the entire concept in simple terms. For instance, I compare the daily life of "Grok" (my prototypical paleo-guy) and his family, and a modern twenty-first century family who are trying to do eat and exercise right, but are in fact messing it all up. The main part of the book tells how eat and move the way we've evolved to.

You're married, with children.

Been married for 18 years to my wife Carrie who, at 53 is among the fittest looking women you'll ever meet. 25-year-old girls come up to her and ask how she does it (while their 25-year-old boyfriends are staring at her). My daughter Devyn is 17 and son Kyle is 14.

Is it just you, or do others in your family follow the same program?

Kyle is a vegetarian from birth. My wife raised him that way for the first two or three years and then he took it upon himself to continue (even as she decided to start eating fish 12 years ago). He drinks protein shakes, eats tons of vegetables, some soy, fish oil capsules and has no problem with eggs in French Toast or a bit of cheese on a pizza. He's a good athlete and good student, too.

My daughter Devyn eats as I do and works out with a trainer at the gym a few nights a week. Carrie works out every day, mixing weights with low level aerobic and sprints. And she watches her carbs on Fitday.com.

Do you own or ride a bicycle? If so, how often, and how?

I used to be king-of-the-hills here in Malibu, climbing everything in sight on my road bike, but when my kids started to get older and I saw the danger in riding along the narrowing stretch of Pacific Coast Highway, and the crazy cellphone abuse, I decided it was time to get off the roads. I moved to inline skating for a few years, but even that got old. Soccer

games, paddleboarding and Ultimate Frisbee with my kids became more appealing than a three hour ride to nowhere. I might ride a Lifecycle in the gym for 30 minutes once in a while—hard enough that whenever I get invited on a mountain-bike ride with my neighbor I can still keep up.

Do you own other exercise equipment?

I own a stand-up paddle surfboard, golf clubs, inline skates, snowboards and Frisbees. That's it.

What do you think of the ROM machine, that $15,000, 4-minute exercise device. I'm sure you've heard of it. Forget the price—in four minutes, can you exercise all of your muscles through their maximum range of motion and get an extraordinary muscle and cardiovascular workout? And would that be better than a long run or ride, for example, or worse?

I know the ROM guys and I have to hand it to them. Who wouldn't want to benefit fully from four minutes a day and be done? Let me repeat myself: Low level aerobic work is important and provides far different gene signals from that of an intense anaerobic session (although you do get some aerobic benefit going anaerobic in certain circumstances). The ROM doesn't work you through a true "full range of motion" since the tracks the mechanical arms follow are restricted. As to whether it's better or worse than a long run or ride, you have to consider the context. On some days a ROM workout might be just what you need, but as a steady diet, it will leave you deficient in many aspects of fitness.

We're going to wrap it soon, and I want to make sure the message I've gotten is the one you want to send. OK, you're saying this: Low-level aerobics burn fat, but strenuous (training-zone) aerobics burns sugar and requires carbohydrates (sugar) as fuel. This triggers an insulin response, and that makes your body store fat. About right?

Mark Sisson with wife Carrie

Pretty much. When we train to burn glucose, the body learns to prefer glucose. When we deplete glycogen (stored glucose) every day, our muscles and brain crave the immediate replacement of that fuel. Most people tend to overconsume carbs as a means of replacing glycogen (it's a survival mechanism). Replacing that glycogen with a carb drink right after your workout is OK, because in that window of time there is little or no insulin spike. But as you consume lots of carbs later in the day, you produce a lot of insulin to store that glucose. Once the muscles and liver are full, the rest gets converted to fat and stored in fat cells. High insulin levels lock the fat inside those cells and prevents that fat from being burned as fuel. Over time, there is a tendency to accumulate more fat—even though you are doing a ton of cardio to burn calories—and you still depend more on glucose and glycogen to reel off the miles.

But with low level aerobics and low carb diets, you train your muscles to burn fat instead of glucose and glycogen. You rarely deplete glycogen, and if you do, your body partially replenishes it though gluconeogenesis. Since you're eating far fewer carbs, your insulin levels are lower and fats flow freely from fat cells into the bloodstream where they can serve as fuel. Of course, you can still do the occasional intense interval session (because you will still have ample glycogen that you haven't depleted daily) and get the full benefit of strength and speed from those sessions.

It sounds good to me. Now, considering our obsession with weight & health, and all the books written about diets, how do you think this low-carb/natural exercise approach will shake out in the next ten years? Will it catch on, or will it be "just another diet & exercise program" ?

The momentum is huge, and I'm so immersed in it that I forget it's still not hugely popular. All the scientists I hang out with are in total support. I think it will catch on within the next few years and become the new paradigm, but there will be resistance. We'll have to get past the deep pockets of Big Pharma, the idiocracy of the FDA and US Health policy-makers. Those may be the biggest hurdles.

When will your book be out, how much will it cost, and how can people buy it?

The Primal Blueprint will be out at the end of March. It's hardcover, will retail for $26.99 and will be available on Amazon.com, in all major bookstores and, of course, at Marksdailyapple.com

More on this stuff

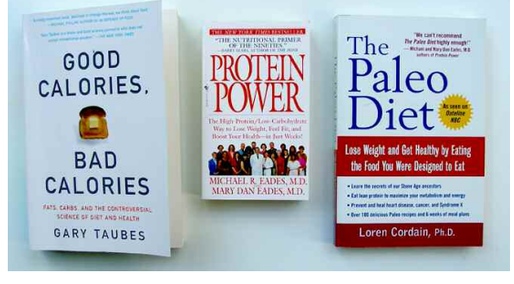
1. *Good Calories, Bad Calories*, by Gary Taubes. Gary Taubes is a science writer, and this book will knock you flat on your back.

2. *Protein Power* by Michael Eades & Mary Dan Eades, MDs. It's a great book but will be hard to read if you live for carbohydrates. You will be glad you read it.

3. *The Paleo Diet,* by Loren Cordain. PhD. Highly recommended by everybody who's into this, including Mark Sisson.

4. **marksdailyapple.com**

5. Google "*tabata*" or "tabata sprints" and see what pops up. Four minutes a day, two or three times a week. Got that much time?



6. Look into *CrossFit*. It's the "paleo-primal" version of chrome-and-white gyms, and works better. Google YouTube "crossfit" and get the idea.

Fender Tips

Sometimes fenders don't go exactly where you want them to, so you have to force them to go where you want. In this case, the front of the fender was rubbing the tire. I could have fixed that by taking the fender off and re-bending the tab, but frankly, I didn't want to bother. Takes too much time, and in general, I don't like to undo things. It makes me feel dumb. So I reamed two holes in the front of it, and zip-tied it to the rack, pulling it off the tire by a mile and a half.

Nearly Bare Bars—

Not for sub-zero temps, but most of the time—suprisingly not half bad.

Spencer has ridden his Rivendell for 13 years without bar tape, and doesn't exactly swear by it, but likes it well enough to keep it that way. And in our haste to pedal freshly built-up samples, we often don't bother with the tape, and it's no big deal. Bar tape serves many functions, but they're all tiny and practically inconsequential:

Tape aids grip, but guess what? Bare metal is surprisingly grippery.

Tape adds cush, but guess what? It doesn't add any significant cush, even cork, and if you're relying on tape for comfort, your handlebar is too low or too far away or both.

Tape insulates against cold metal, but guess what? Spring is just around the corner.

The thing about bare bars is the smooth feel of smooth metal. It's round and nice, and it makes you feel like you're grabbing a sword. Got a lot of bikes? Try bare bars on one, see if you like it. If you don't, you can undo it.

Makeover CLLXIV: An old Belgian Bike

This bike belongs to a 65-year old Belgian rider-fellow who now lives in Walnut Creek, same place we are. A friend recommended us to him. He speaks mostly French, but with the help of a translatoress, we determined the following:

• He bought this bike, a 60cm J. Henikenne, from a bike shop of the same name in Belgium in the early '70s. Rode it a lot, but not much lately, and wants to get on the bike again.

• He lives near the base of Mount Diablo, our local peak, and wants to ride there.

• He has Parkinsons, not too bad, can still ride, and is fit. He looks fit—6' x 176lb, according to his driver's license, and with mean legs.

• He was willing to buy a whole new bike, and wanted to know which way to go—new bike, or change parts on this one, and how much of it could or should he keep, if that's what he opted to do.

After plenty of discussion and lots of test-riding and three visits, we (he and I/Grant) decided, it's a nice old bike with lots of good details about it, and good clearance, so ride This Old Bike. Maybe repaint it, maybe not. If it seems sound, use the frame and don't be sentimental about the parts. With the current parts, it would not be a fun bike to ride, and not practical for where he wants to ride it. So build it up with practical, good parts, and that'll be it, and that's what we did.

This is not akin to giving the Mona Lisa a makeover. If bikes had feelings, they'd want exercise like any of the rest of us do, and better to get the frame out there with new parts, than to tackle a thorough restoration at considerable expense, only to wind up with Little Lord Fauntleroy afraid to play outside.

The makeover went fine, but was way more work than I anticipated. The bike was made in Belgium, and had one bb cup English, the other, Italian. I thought it would be Itall tried to get original decals for it, even joined a Belgian bike forum, even talked live with the original seller, J. Henikenne on the phone one morning, but he'd closed his shop years ago, didn't have any decals.

A local fellow modernized the bike with braze-ons, some of which were necessary to make the frame compatible with the parts and stuff he needed it to be compatible with—the downtube shifter stops, for example. Others, like water bottle- and rack bosses, were optional, but why not? It's what you can do with steel, and since it's getting a repaint anyway, you put those things on. It took longer than expected, but we provided him with a loaner A. Homer in the meantime.

An appropriate bike then, but not now

This old Joseph Henikenne bike used to be a highish end club-racer bike, and Jean bought it in Belgium when he lived there, and Belgium is flat.

Now Jean lives at 175 feet above sea level at the base of a 3,849 foot mountain with about 11 miles of climbing...and he wants to ride there. Restoring the bike to new condition, even if he wanted to do that, wouldn't make sense. He'd just end up with a sparkly bike that didn't work for him.

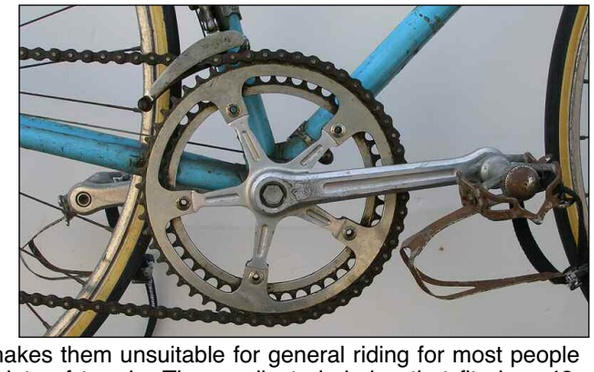
So we felt no remorse in stripping the bike of those parts and replacing them with less rare, more practical parts for the hilly mountain.

It's good to save rusty-dusty idle old classic bikes from isolation and forgottendom by restoring them to better-than-new condition and displaying them in one's garage or den and now and then on a club ride or event featuring fixed-up and resplendent classics. But when the bike in question isn't appropriate for where you live, and you have one on your hands, don't pretend it's anything more than an inanimate object. Don't think, this is what it would want me to do. Or this is what the maker would want me to do. Don't get sentimental; get practical. It's a bike, and you should ride it. To ride it with joy means it's got to be right for you and where you ride now.

Nice old seat lug

A nice and classically styled seat lug, showing the round holes I tend to like so much. The seat stay ends are nicely detailed. The stay-caps on cheap bikes of the day were bulkier and cruder. If you look closely, you can see that during construction, the builder extended the seat tube beyond the seat lug, then cut it down to fit the lug shape. At the back of the lug there's a bit of seat post showing, that's been flared out and away from the post. This is not a horrible thing, just a window into something about the frame's construction that, after all these years, is kind of neat to see, kind of har to explain, not important and no room for that kind of a photo.

Old Campy crank



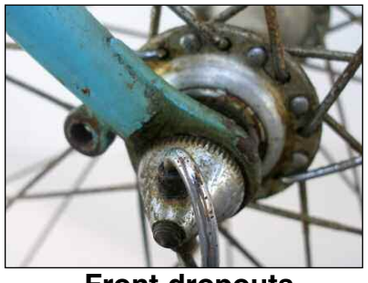
All top-quality non-French bikes of the early '70s had Campagnolo drivetrains, and that pretty much means all top-quality bikes. Not a fault, just a limitation that makes them unsuitable for general riding for most people over a wide variety of terrain: The smallest chainring that fits is a 42. Don't think you're so smart if you're thinking, "uh-UH…forty-ONE." Those 41ers didn't appear til much later.

Cinelli handlebar

It's a Mod. 64, the most popular bar on good road bikes of the era. It is 40cm wide, also typical (42cm bars were to appear shortly.) Although the bar is top quality, see how steep the ramp is, behind the brake lever? Your hand cannot easily rest on such a steep section. But the purpose here is to show some of the bike's details, not to knock it down. It was and is a fine, well-designed bike, after all. But some things have improved over the years.

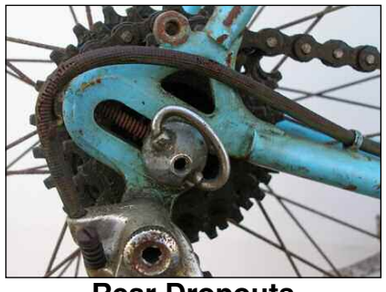
Old Universal 68 brakes—and a well-placed brake bridge for super clearance.

That's because the builder put the rear brake bridge high enough, away from the tire, to allow room for a larger tire or (more probably his intent) a fender.
The sidepulls are Universal 68s, the next-best-Italian brake-to Campagnolo back then. It was common for nice bikes to come with all Campy parts except brakes, since Campy brakes were so costly and the others worked fine. Notice the nice, open shape of the inner calipers, which allowed fenders to fit and not get squeezed and pushed into the tire when you braked. Modern Campy and Shimano brakes would benefit from this shape.



Front dropouts

The dropout tab is wider than the end of the fork blade, and you can see the ridge. The maker could have filed it down, but it was common to leave it that way as both labor-savings and an ornamental mark. These days, most fork blades, even steel ones (but not ours) are fatter there, and dropouts tend to be narrower at the tab, so a "raised ridge" is impossible without a concerted effort to match a skinny blade with a fat tab, and then more labor in making it look special. It is not the sign of a better bike or a worse one; it's just a detail that some bikes have and some don't, depending on the fork blade, dropout, and the whim of the maker/instruction from the designer. We're moving toward high-ridges these days.



Rear Dropouts

In the pre-indexing early '70s, rear dropouts could be long like this, allowing a rather unimportant chainging of wheelbase to suit dfferent terrains. And in fact, this dropout was typical of the dropouts on about 80 percent of the better to best road bikes of the early and mid-'70s. It is probably a Campagnolo dropout, back when such things existed.
Jean kept his adjusted all the way forward, as evidenced by the paint still being in place behind the axle. Our tendency and preference is always to yank the wheel maximally rearward to lengthen the wheelbase and generate more tire clearance behind the bottom bracket. But that's neither here nor there, as they say.

That's a nice-looking, super comfortable, great shifting and practical bike! Although it still needs a new saddle.

Silver brakes & Jack Browns. Back then, clearance for tires like this was normal. Now, it's super rare (and good).

Almost all old road bikes ridden by their original owners can use lower gears. The replaced crank was a Campy Record—the jewel of its time and a nice crank by any standards. But if the gearing is wrong and can't be fixed practically or ecomonically, then for crying out loud, don't weep when you replace it. It's just going to make every ride miserable.

The Sugino triple here is an ideal replacement. It looks nice. It has wonderfully sensible rings: 46 x 36 x 24. And in 99.999 percent of the cases, the switchover is cheap and easy.

In this case, though, the frame's bottom bracket shell had a mix of Italian and English threads. So we used a mix of Phil cartridge bearing rings, and a Phil bb. A perfect solution.

Rick's new paint copied and improved on the original scheme; and plenty of hand-buffing cleaned up the headset. It's still pittied on the outside, but the guts were perfect, so no replacement required.

Aftermath. Well, before doing anything, we quizzed and questioned and verified all the details, everything he wanted changed and kept; and he test-rode various bar-shifter combos for as much as 3 weeks. Then, a week after he got this bike, his friend talked him into STI shifters and drop bars, and nothing's as powerful as a friend's advice, so a lot of this work was undone, & sometimes that's just how it goes. But we're gonna be ultra-reluctant to intervene to such a degree again. We lost about $700 on this one. —Grant

The Tools You Need To Have a Decent Home-Shop

Maybe you have your own favorites. Vive Usted! But I asked our head mechanic, Mark (of Mark's Rack fame) to list every tool he uses when he assembles a bike that already has a headset and bottom bracket in it. In other words, what tools a home mechanic needs for general maintenance and assembly, short of shop tools that cost a lot of money and don't get called to action more than once every few years. All of the tools below are affordable, and although you may want some special tools beyond this (like the Nitto stem pry), you can absolutely get by with these, easily. You may notice an odd numbering sequence in the early double-figures. It was a simple solution to a duplication problem, that's all.

1. Hacksaw (or small boltcutters)
2. Mallet (Wood or Rubber)
3. Hammer
4. Dowel (opt. Holds fork during headset snugging, other)
5. Round File (grooving cork grips)
6. Sixteen-inch Crescent wrench. Headset/BB,
7. Pedal Wrench
8. Chain Whip for cog removal
9. Headset Wrench
10. Headset Wrench Stein-type for upper?

11. Cable end caps, brake and der, or just brake
11.1. Fourth Hand (not essential). Snuggens brake cable.
12. 4-5-6 Y-Hex wrench. Assorted bolts all over.
13. Electrical Tape. Snugs brake housing to bar pre-wrap.
14. 8-9-10 Y-socket wrench. Fenders, brakes, racks.
15. Vise grips, normal & needle-nosed. Fender tabs, misc nut-holding,
16. Bottom Bracket tool
17. Pliers. Snuggens cables, general.
18. Chain tool. Pliers or screwtype
19. Chain checker. If you're obsessive.
20. Tire levers
21. Patch kit & talc
22. Scissors. For the bar tape, silly!
23. Channel Locks. Not sure. Probably don't need it.
24. Crank Bolt Extractor. Crank-specific.
25. Crank puller. Crank-specific.
26. Spoke wrench. Only if you know how to true wheels. Otherwise, you'll just make things worse for the person you take your wrecked wheel to.
27. 8, 9, 10mm open-end wrenches with box-ratcheting other sides. Brakes, racks,
28. Screwdrivers, Phillips and flat-head. Derailers.
29. Cassette Lock-ring tool
30. 2, 2.5, 3, 4, 5, 6, 8mm L-hex wrenches with ball-ends. Get long ones. Seat posts, stems, ders, water bottle cages, generally everything.
31. Cable cutters. Hozan, Park, Pedro's, Felco...

Not Pictured:
Floor Pump
Grease and brush.
Rags.
Phil hand cleaner. Nothing else comes close.

In November ‘05 Scott Cutshall weighed 501. Twenty-seven months later, in February ‘08, he weighed 232—269 pounds less. We covered that in RR40. A year later, he’s down another 56 pounds, to 176. Here’s Scott’s follow-up.

Between the feature on me here locally in Minneapolis, MN in the *Star Tribune* newspaper, and the article in the *Rivendell Reader*, I've received a lot of press. Some great (folks wishing me, and us as a family, well/congratulating me/asking for advice on how they can do a similar thing for themselves or someone they know), some strange (low & high level politicians from Minnesota and Minneapolis asking for photo ops and rides with me/being invited onto local and national radio & tv shows/people stopping me, Chloe and Amy for cell phone photos, handshakes and autographs) and downright bizarre (marriage proposals from not-so-distant and distant places like Japan and Poland: I pass those onto Amy for her to handle). And a few offers for book deals, which I'm thinking about, but not sure I want to spend the "seat time" in order to pen as I prefer riding my bike to talking about riding my bike.

It's been weird, wonderful, scary, amazing and interesting... but it's also shown me that folks like 'comeback,' 'underdog' and 'against all the odds' stories told honestly by real people. And that's reaffirming.

And now we're about to embark on another new adventure as I write this: in a couple weeks we are packing up again and heading as far west as we can go, without snorkels & fins, to Cycling Mecca: Portland, Oregon. Why? Because it was our original plan, before Minneapolis, and the thought of riding everyday thru another Minnesota Winter seems daunting. I did it, I am proud I did it, and I know I can do it again, but I don't want to.

So, Portland here we come.

To answer many of the questions I get currently:

Yep, we still eat the same. Lots of folks think this is limiting thing and say: "Hey, I bet when you hit XXX lbs, you're gonna start eating the occasional burger and fries, right?"

Nope. I've completely retrained my mind and body to deal with food that is natural and good for me.

Yep, I still ride everyday, and still love it. I also get a lot of well-meaning suggestions on this one too: "Dear Scott, now that you've come so far, you should ride less and just enjoy all the work you've done to get where you are!" Many of these well wishers, good folks all, don't understand something key and very base about me and my journey. The work is the reward. Just 2 years & 9 months ago I could only sit in a chair and watch others live their lives, and now I can ride as far, for as long as I desire. How can I top that feeling?! And besides, I enjoy riding, so why stop or even cut it back?

My rides always bring suprises. It could be the weather, the terrain, someone good or bad you come across... all of it leaves me with a unending sense of wanting more of it. I come home exhausted sometimes, but I always find myself thinking about tomorrow's ride within 10 minutes of ending today’s.

Yes, it is bizarre to look in the mirror and not recognize the person staring back at me. Amy says it’s like someone returning from war and needing a debriefing on what has come to pass. She says my brain is going to take a while to process the changes my body has gone through. I recognize my eyes and teeth, but not much else.

Mostly these days I ride 25 to 30 miles, and I want to enter my first brevet and then qualify for Paris-Brest-Paris.

Amy, Chloe and I want to explore the possibility of opening a bike shop/coffee shop/small eatery. I think, and Amy & Chloe agree, that melding good, healthy, wonderfully tasting food with cyclo-culture is something that folks would enjoy.

Several months ago, Chloe started riding her own 2-wheeler and regularly rides 10 to 12 miles per day with either me or me and Amy. Her Schwinn "Corvette" is still too big for her, but with a padded top tube protector given to her by a friend of ours, she's riding it! She used to fall at intersections, but always got up quick and shook it off. As of yesterday, Chloe announced to us that, "I want to be a Cyclo-Cross champion by 12 years old, a zoo keeper as a grown-up, not use a car too often and live with my mommy & daddy forever!"

As I write this sentence I weigh 175.8 pounds and with the opinions of Sport's doctors, approximately 30 pounds of that is empty, deflated skin (called a “pannus”). People ask me if I’m going to keep it or have it removed, and I’m not sure. It's a complicated procedure with the normal risks involved [and some other not so normal risks] but what really bugs me is the

long recovery time and during that time, not being able to ride. Maybe scars serve as reminders of where we've been and what we've lived through?

Further Update: February 13, 2009

We are now in Portland, Oregon. The relocation was wonderful, exciting, exhausting and nerve-wracking. I think I am slowly learning that relocating for cycling is a tough cookie. Saying goodbye to great friends, a familiar day to day climate and all the other things of 'Standard Life' is taxing.

I can't say much about Portland & cycling, as we haven't been here long enough to really know. But I do know karma caught up to and snapped the Universal Rubberband of "Ha!" on me when Portland had one of it's worst snowstorms in years about a month after we arrived. It shut down the city, plopped a rather significant boatload of snow on everything, and I found myself putting on studded tires. And then we found out there was almost zero snow removal out this way, and the studded tires didn't help much, because of all the rutted, icy & unplowed streets. So I began riding 15, 20 and 40 miles every evening in the parking garage underneath the apt. building where we lived until we got a rental house. The tenants & management thought I was insane, but tolerated it.

We now have found a nice rental house in a good little community near the Willamette River and really like it. It feels good to be settled in once again.

Chloe is doing great. Amy came out here with the promise of a great job, started the job, everything went off without a hitch, and then they disolved her job—the first time in 23 years as an RN she has ever had that happen. After eating our nest egg down to nothing with the move that was a real shocker to all of us. After 3 weeks of panic, she is back at it with a new job in a different and more financially stable hospital.

I'm still home-schooling Chloe, doing the shopping & errands on our Surly Big Dummy, making all of our food daily, living the life of an overworked house-dad, and riding.

Amy made me weigh in the other day after commenting that she's going to be prickly when I weigh less than her.

She calls me her hero for my single-minded devotion to her, Chloe, our lives together, and for never giving up or laying down on the job.

In the end though: Chloe & Amy are my Heros.

Bikes are great... Bikes & Family are even better.

A netherworld of a good degreaser

A year and a half ago we bought eight degreasers and tested them on a new Shimano chain to see if they could remove the Special Factory Lubricant. It is good lubricant, there's no compelling reason to remove it, but the fact that it foiled eight famous degreasers just made us want even more to find a degreaser that could slay the stuff.

The one non-compelling reason to remove it is to prepare the chain for a less goopy lubricant, like frinstance T-9, or ProLink. Any lubricant tells you to start with a clean chain, and they're meaning as close to bare metal as you can get.

The guy who makes this emailed me and wanted me to try it and wanted to send me a bottle. I politely told him if it won't strip Shimano's Special Factory Lubricant, don't bother sending. A week later it came in the mail, and I immediately put four ounces of the lube into a water bottle, added the Shimano chain, shook for a minute, then let it sit. After 18 hours I took it out and dried it off, and the Special Factory Grease was gone. Given its soy base and environmental friendliness, I'd have bet $10,000 against it, but there it was, a clean, bare-metal chain, and me four green points ahead.

We like this one so much we've decided, heck, let's carry it. You'll find it on the website in the chain section. Don't know the price yet, but if you need a degreaser, might as well get this one, because it actually works.

What we-all carry in our everyday seat bags

I asked everybody who was here that day if I could empty out their bag and show the contents. Nobody said, "wait til tomorrow, it'll be much better" or "OK, but first I need five minutes of privacy with my bag, then fine" or anything of the sort. As you read this, remember that the contents of the bags isn't necessary well thought-out and check-listed on a spreadsheet, and it's certainly not what we'd recommend for you, especially in some cases. One case. Maybe two. But there's a century of riding-as-adults here, and voyeurs at least will like it. G

Mark

Every company has a natty-tatty buttoned-up & tucked-in minimalist, and Mark is ours. He's not weird, not anal, not anything bad in any way, just super neat, and he knows what he needs and has no provision for on-the-ride catastrophes.

He rides with a Burrito wrap, and carries inside it two spare tubes, a mini-pump, and a tire boot. It all straps to the rails, and then he has one of those Cat-Eye lollipop lights that fits around it.

John

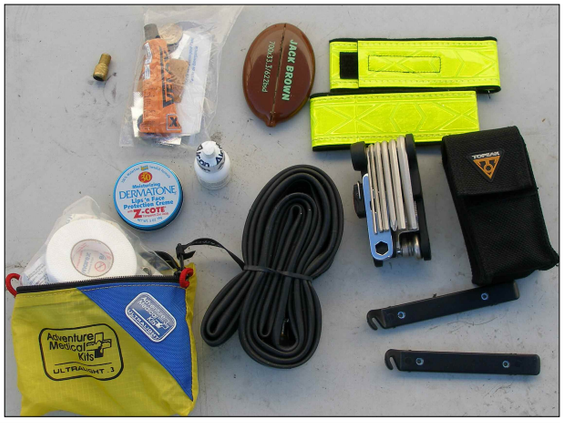
John's kit makes sense for a guy who lives and rides in San Francisco. A mini-pump, 5, 6mm allens, the Hozan 8-9-10 Y-wrench, spare tube, small Kryptonite U-lock, and the other thing there is a quick-release replacer that makes it harder for a ne'er-do-well to steal his Quickbeam's rear wheel. It all fits into a Burrito wrap, which fits into a Banana Bag (or a Seat Pouch; same thing).

Keven

Finally somebody who actually prepared for mid-ride tube repair. Good. Keven has a mini-pump, a chain tool—good thinking!), an 8-10 open wrench, two tire levers, a spare tube, and a cloth tape measure for nobody wants to know what.

Harry

Spare tube, tire levers, patch kit, huge multi-tool, two ankle reflectors, a coin purse full of cash and a first aid kit with an emergency tub of Dermatone.



Grant

Finally, a super-smart kit. Spare tube, tire levers and some other kind of multi-tool in that pear-shaped thing, another multi-tool, a bandana, an ankle reflector that can also mount anywhere on my bike, and a Watch It, Bub! reflecto-triangle. And some zip-ties, and a coin purse with about $22 in it. I almost always have a patch kit, too,but somebody must've stolen it.

Spencer...

...has some explaining to do. Along with the normal things like mini-U lock, spare tube, repair kit, tire levers, and multi-tool, he also carries three latex gloves, a greasy rag (for chain work, presumably), about eight plastic bags, and fifteen feet of that cheap not-even-twine that they use to tie up Christmas trees. He keeps it in a Carradice saddlebag, with two red flasher lights, a belt to keep it from dragging, and a small cable lock.

Getting the right size

PBH	SH	SAM
74-79	64-69	48
79-84	69-73	52
84.5-88.5	73.5-78	56
87-94	76.5-84	60

PBH = Pubic Bone Height. Go to rivbike.com to learn how to measure.

SH= Saddle Height from center of crank to top of saddle. Typically, a good SH is PBH minus 10 to 11cm.

The Hillborne is a great value and if you're between 5-2 & 6-5 one will fit your body. But a bike has to fit your head, too.

It's lugged and steel, and for us, that's the required. But don't even consider getting one if you're lusting after carbon, because…because…because that just wouldn't be good to do.

Meet Sam Hillborne: Our new A. Homer Hilsen-like country bike

Four sizes, two wheel sizes. Fits riders 5-2 to 6-5. It rides as well as any of our bikes, has all the design values, looks lip-smacking killer, and costs not much at all.

The Sam Hillborne is the kind of bike we like & ride, & think *everybody* should like & ride. It's **steel**, gosh darn it, so it's safe. It's **lugged**, wouldn't you know it, so it's strong & beautiful. Plus it has every **dad-blasted** design value & detail we hold high & holy: great tire clearance, easy fendering, easy racking, easy to get high handlebars. You can ride it just about anywhere, *definitely* in any weather.

Like its nearly twice-as-expensive uncle, the A. Homer Hilsen, it's a *Country Bike*—a road bike with capabilities far beyond the tiny, confining, smooth, dry asphalt island most road bikes live on.

The Sam Hillborne is ideal for any road ride, charity ride, non-racing club ride, fitness ride, commute, and road tour with a load up to 50 pounds. It's nearly a do-all! But it's not a race bike; it's *useful*.

The Sam is our least expensive bike, because it's made in Taiwan, not Japan or America. It's made by the same people who made the Bleriot for us, and we're familiar & totally comfortable with the quality. Its hand-crafted frame, with investment cast fittings throughout, is far superior to the top machine-made Japanese frames of the golden early-'80s. I know those bikes well, and the Sam is better.

It comes in four frame sizes (48cm & 52cm for 650B wheels; 56cm & 60cm for 700C wheels). We have detailed sizing information at rivbike.com, but one of the neat things about expanded frames (see the sidebar on the next page) is that each size fits a much wider range of riders, and without any compromise at the extremes. Sometimes things work out, even though you want them to.

How *does* it compare to an A. Homer Hilsen?

The A. Homer has a few more artsy details. The fork bend on the AHH is perfect; on the Sam is only excellent. The AHH has double-tapered seat stays; the Sam has single-tapered ones. That's purely cosmetic, and the difference is "beautiful"compared to "quite pretty." The AHH has heat-treated CrMo tubing; the Sam has normal CrMo tubing—as did the bikes Eddy Merckx on 95 percent of his races on. The AHH has fancier lugs and a fancier paint job. The A. Homer frame costs $2,000, and is a bargain at that. But the Sam: $1,000, and that includes a headset, bottom bracket, and seat post.

The Sam may be even more versatile than the AHH, because the tubing is slightly thicker (same gauge as the Atlantis), so it more suited to loaded touring. With AHH clearance, Atlantis tubing gauges, and a fork that splits the diff, you can think of it as halfway between the Atlantis and A. Homer Hilsen.

Just for fun, kicks, & to drive home a point, let's compare Sam to a typical modern road bike:

	Sam Hillborne	Typical road bike
tire clearance	42mm	28mm MAX
bar height ability	higher than u-need	not high enuf
if a rear spoke breaks	tire rolls on	tire jams
suitable for which surfaces?	any road, fire trails	smooth roads
do real, full fenders fit?	heck yes	no
canya rackit?	heck absolutely	nope
fork toughness/safety	hecka high	low low low
material failure mode	gradual	catastrophic
safe to ride with minor dings?	yep	nope
frame/fork price	$1,000	$1K-$3.5K
whole bike price	$2,000	$1,500-$6K
estimated frame lifespan	20+ years	5 yrs or less
frame cost per year	$100 max	$400 - $830

As good a value as the Hillborne is, a bike has to fit your body *and* your head. It has to feel right as you're riding it *and* when you aren't. If you still gotta have carbon, this isn't the bike for you. Once you're beyond carbon, though—it's hard to beat a Hillborne.

Top: Ignore the bubbly background around the letters in this decal. We decaled this one ourselves, and it's the kind of decal that we aren't used to, so we did a bad job.

Left: The 48cm & 52cm fit 650B wheels. That's a 52, there. Size reminder: Any given size Sam will allow the handlebar height of a Hilsen up to 5-6cm bigger.

Two things going on in these photos. One: there's stupendous but not ridiculous clearance, ample for 40mm tires (whether 700c or 650b) even with fenders. It's key to Sam's versatility.
Two: You can use either cantilevers or V-brakes on the Sam. Both work great. With cantilevers you need front and rear cable hangers, easy to get and we'll supply 'em if you go that way. V-brakes are the more powerful, less classical choice, and are easier to adjust/replace pads on if you're a lousy mechanic. Interuptor brake levers (sometimes called top-mount levers) are available for each kind of brake. All's well & under control.

Underside view of the chain-stay bridge, which doubles as a kickstand plate, too. A Pletscher kickstand bolts right on. If we install, it'll have a stubby allen-head bolt. The whole thing weighs just 7.2oz.

Sam's gorgeous gold head-badge and cream fork wing details.

Expanded v. Compact: Same looks, big diffs

The Sam frame is "expanded," with a sloping top tube that gives it the *look* of a compact frame. But in a compact frame, the head tube is the normal length for the frame size, and it slopes down to a shortened seat tube. You get a shorter seat tube and more standover clearance—big deal, who needs it? You save an ounce or two in frame weight, but make it up with a longer seat post.

Now, the expanded frame is another deal altogether. The seat tube length is true to the frame size, and the top tube slopes up 6-degrees toward to the head tube. The head tube grows (expands) to intercept it, and the result is a higher starting point for your stem & bar—so it's a cinch to get the bar high enough (as opposed to "impossible" on most bikes).

The shortest longish-seeming top tubes around

Sam Size/TT	48/54.5	52/57.5	56/59	60/62

Don't be scared, these numbers make sense. Read "The Top Tube Ruse" in this issue to get the full story. No time to read it? OK: The shallower seat tube (71.5-deg) sucks up .5 to 1.25cm (1cm per 55cm of saddle height). The higher bar potential effectively chops off more, as you raise the bar—and the 6-deg upslope lets you do that, easier. As the bar gets higher, your arms effectively grow. We still recommend, as a general rule, short-to-med stems on these bikes. They are not race bikes. If on your current bike you ride an 11, try a 9. Stems are changeable. Shoot short, but monkey around.

Particulars, Pricing, Sizing, Availability

Sizes: 48cm, 52cm (650B); 56cm, 58cm (700C).

Color: Pearly olive with goldish highlights.

Geometry: Details on our site, but: shallow seat tubes, moderate head tubes, lowish bottom brackets, long chainstays, and designed to let you jack up the bars.

Fittings: 135mm hub, 27.2mm seat post, canti or V-brakes.

Braze-ons for: Two bottle cages, pump peg, rack mounts, kick-stand plate. Plus the normal cable stops, etc.

Getting the right size: There's fitting info on our site, but it's basically easy & boils down to this:

frame size = PBH minus 29 to 33cm. For example:

If PBH is 85, then 85-29=56 (biggest you can ride); and 85-33=52 (smallest you can ride). Sorry to not be more definitive, but these expanded frames fit a wide range. You can level-the-bars with the saddle (with a Technomic Deluxe stem) even if your saddle height is 24cm bigger than the frame size. If PBH is Greek, go to rivbike.com.

Price: $1000 for frame-fork-headset-bottom bracket (107mm Tange, perfect for Sugino XD2 triple). And $2,000 for a bike with the normal parts we tend to put on most bikes.

How to get: Direct through us, or thru any of our 8 dealers. Call us direct (800) 345-3918, or see a dealer list on our site.

Some things to think about when you're shopping for a used bike

or: How to not throw your money down the loo

There's a hot-n-heavy market for used bikes, and it's sometimes hard to see past the label, price, color, brand, and model. None of that matters if the bike doesn't fit, or it fits your body but not the tires you want, and so on. Here are some tips from, for better or worse, our perspective.

1.It's gotta fit YOU

If it's a road bike and you need more than a two fistfulls of seat post to get the saddle at the right height, the frame's too small. A single fistful, or maybe a fist-plus two and a half fingers (F+2.5) is better. More than that, and you probably won't be able to get the bar as high as the saddle, and that, for most people, is where the comfort starts. A 56cm 1972 Cinelli in perfect condition is no bargain if it's too small.

Good. This is never a bad sign, If it's two fists, the bike, if it's a road bike, is too small unless you're really tall, with long arms.

Apply the Shoes Standard to any bike (new or used) you're looking at: If it doesn't fit you, the price doesn't matter.

2. It's gotta fit YOUR TIRES

The fattest tire you want to ride. There are tens of thousands of road bikes out there that won't accept even a 700x28. That's like setting a table fork, spoon, and razor blades. Tires, more than anything else, determine what the bike is going to be good for, so if you buy a frame that won't fit a tire bigger than a 700x25, for instance, it's not going to be all that useful or comfortable.

If you can't actually mount your tires in the frame before you buy, at least eyeball the space between the tires it has now and the frame tubes all around it.

Good. You shouldn't have to look hard to see the air above the tire.

If it doesn't have wheels, it's just a frame, then you don't have enough to go on, & you shouldn't buy it. Yes, there are dimensions you could measure, but the guy selling it will think you're a weirdo, & you'll probably measure wrong, & basically, just move on to the next candidate.

3. Federable, rackable?…

If you use fenders, make sure it has room for them. Arizonians and La Jollans don't need it, and neither do you if you never ride when it's wet, but since you never know when your wants or needs will change, and since fender clearance doesn't compromise a bike in any way, it's worth caring about when you're bike-shopping (new or used). Ask if the bike can take fenders, and look for eyelets. If there are no eyelets, fenders clearly weren't a consideration in the bike's design, and fender clearance doesn't happen by accident (new or used). If it doesn't fit you, the price doesn't matter.

Good. Check fender (and tire) clearance everywhere the tire passes by the frame tubes. If it fits one place and not someplace else, you're stuck.

4. What's it made of?

Aluminum ages faster than steel does, and has a much shorter fatigue life. Skinny tubes flex more than fat one. So an old Vitus or Alan with a lot of miles on it is not going to be your lifelong safety bicycle. A used carbon fiber bike, one that may have suffered invisibly on its way to you, is never a good & safe choice. Carbon has some amazing properties, but its least amazing quality is its ability to fail catastrophically in circumstances that would barely harm, or maybe not even harm, a steel bike. If you want carbon, fine, but buy a new frame, not one somebody else may have already compromised.

Bad. To be fair, this happened in an accident. But accidents happen, and a steel fork would have bent or dented, both of which are better than this.

5. Is it old & French?

I'm not talking about old Singers and Herses and those natty fellows that aren't likely to show up at a garage sale. Beware mainly of pre-'80s Peugeots, Motobecanes, LeJeunes, Merciers, and other run-of-the-millers that were exported here by the quintillions. They use French-dimensioned seat posts, pedals, bottom brackets, stems, headsets, freewheel and hub threadings, and sometimes even front derailleurs and rear derailleur hangers—and it's a son-of-a-gun finding the replacement parts you're going to need right from the get-go. On the other hand, if you have money to burn and enjoy looking for parts more than riding, these are just the ticket.

Just be careful. If it says Made in France *and* it's old, the makeover won't be without its hitches.

6. Don't be wowed by lugs or labels

Modern lugged bikes are generally way better than the typical lugged bike from the days (pre-1985) when virtually all bikes except some Schwinns were lugged. It's sort of like bamboo fly rods: In the '30s that's all there were, and most were, by modern standards, quite lousy.

The lugs themselves add a certain integrity and charm, and when the bikes come cheap, that's something to be happy about; but don't think the 1975 Nishiki for $110 is a bargain just because a modern lugged bike sells for many times that. The old bike probably had crummy tubing, lousy lugs, and poor finish work. It may be just what you're looking for if you're looking for a cheap bike with old-fashioned charm to putt-putt around town on (a good thing!). But don't overpay for it.

Who rides an A. Homer Hilsen?

Name: Yvonne O'Brien

Age: 45

Job: Escrow Officer for First American Title Co.

Y**ears riding since you were 18:** Twenty-six. That plus eighteen is forty-four.

Why'd you start?: Transportation/fun as a youngster, then for fun/exercise, and recently to train for the America's Most Beautiful Ride in Lake Tahoe.

Favorite foods: Italian, French - olives, cheese, bread, wine

Favorite restaurant: Little Napoli & Cassanova in Carmel/ 515 in Santa Cruz

Favorite books/authors?: John Irving, Stephen King, Barbara Kingsolver; Harry Potter series, Wilbur Smith

Favorite movies: Hitchikers Guide to the Galaxy, Bridget Jones' Diary, Lock Stock & 2 Smoking Barrels, just three of many faves.

Other things you like to do: bake; golf; go to the beach with my dog Paikea; hike; dinner parties with my friends

Favorite ride: Aptos to Santa Cruz via the coast line

Dream ride: through the South of France while the lavender is blooming

Other interests: Travel; would like to learn about the constellations someday; want to do yoga consistently someday

Other?: Fortunately for me my other bike had serious issues when I began the current training schedule for AMBR and then was lucky to borrow a Rambouillet, which led me to Rivendell & love at first sight with A. Homer Hilsen. It's such fun riding "Homer"! It's beautiful and the best fit I've ever had on a bike so I'm out and riding more often, more comfortably and with more confidence. This spring and summer I'm looking forward to bike-camping trips. *Giddyup!*

Surly Big Dummy

Surly makes good, cheap, strong, smart, solid, honest no-nonsense bikes for everybody from cash-strewn directionless 20-somethings to upscale pennypinchers. There are single speeds, road bikes, touring bikes, and extreme bikes.

Surley's first extreme bike was the Pugsley, made for snow, boulders, and sand dunes, yet good on the street. Its main feature is 4-inch tires with rims to match and a frame to match the wheels. It has solved problems everywhere you look, and the designer in me is admiring and jealous.

Now comes the Big Dummy, an ultimate load-hauler and spawn of another great extreme design, the XtraCycle, developed in the late '90s by Ross Evans (still of XtraCycle) and Kipchoge Spencer. For more on Xtracycle, Google it.

Normal bikes work great for normal loads, but when the load is abnormal, the bike should be, too, and the Big Dummy is all that. Still, it's not right to brand the Dummy as a bike only for carrying chandeliers, surfboards, and 250 pound loads (its rated capacity).

It would be a fine bike if it were so limiting, and I'd probably like it even more than I do. But the son-of-a-gunning thing is, it's not lousy unloaded. It feels a little different—that's what an extra XXXX inches of wheelbase will do. But if you ride it without trying too hard to perceive nuancical differences between it and your normal bike, you'll be used to it in ten strokes of the pedal if you're slow to adapt, half that if you're normal.

If you can get around its long wheelbase—meaning, if you don't live upstairs or share a 500 feet with a roommate and three other bikes already—then don't cross a Big Dummy off your list yet.

If you want to shop by bike, but realize that normal baskets and panniers aren't up to the task of bringing back a week's worth of food for a family of five, then still don't yet cross a Big Dummy off your list.

If you are committed to using a car as little as possible, start to seriously look into a Big Dummy, because whatever you carry in your car short of family vacation loads—B. Dummy can handle it.

Let's say you want to go touring with your husband, but you're much stronger than he is, and less intimidated by adding 30 to 40 pounds on a bike and pedaling 40 to 70 miles a day. On one of these trips, he can carry a small handlebar bag and seat bag, with light toiletries, and you can carry all the camping gear, food, clothes, and cast iron dutch oven. Consider a Big Muddy for that kind of riding.

All of those things really just scratch the surface. We have one here, and it comes in handy at least once a week. I hauled two logs totally 209 pounds with ours. I'm a big stump fan, and the two logs I picked up will eventually be a wheel trough for bike photos. Keven has carried frames to our local builder about 5 miles away, and 60 pounds of groceries. A friend fit his wife and two children (4, 9) on a ride. On the next S24O (quickie bike camping over night in the local hills, from where we get most of the home page photos)—Keven and Jay will alternate a normal bike with the Gim Buddy, promising to bring a huge group tent for sitting around at night out of the weather.

The Big Dummy is a wonderful concept, characteristically fantastically pulled off by Surly. Huge applause for everybody who had anything to do with it. A complete bike starts with every offered accessory costs $2700, but you can get stripped-down versions for a lot less. We tricked ours out some, but what the heck, it'll get a lot of use.

I'd Like a Do-Over

by Maynard Hershon

When I ordered my Rivendell in 2000, I was getting around Chico, California, by bike, just as I do now in Denver. But I was still a bikie, still focused on cycle sport – not touring or commuting or utility cycling. I was no longer a racer but I thought like one.

In Tucson, between late 2000 and late 2006, Tamar and I fell out of love with recreational cycling. Too much riding around motorized traffic and too many miles in bus lanes on wide, fast streets robbed our cycling of its sparkle.

We escaped to Denver in November 2006. We can ride on hundreds of miles of off-street bike paths here. On those paths, we can reach lightly traveled suburban streets that will take us nearly anywhere we want to go. We like riding again.

I like it so much I think about touring or towing a trailer for errands. I think about fat, studded tires for winter. I don't think so much about training or competition.

I keep a headlight mount and a blinking taillight on my Riv 'cause I might just want to ride at night. I run errands in jeans and mismatched reflective Velcro pants straps. I crashed in my favorite Lycra tights and tore a hole in the left knee. The tights have stretched; they bag a bit. Probably look awful. I wear them anyway.

In winter, I use Shimano pedals with platforms on one side and SPD on the other. I ride on them in street shoes or cheap, dorky mountain bike shoes. I have a Timbuk2 bag hung over my shoulder more often than not.

I would never in the past have done any of the things listed in the above two paragraphs. Wear shabby tights? Unthinkable. Took me months to get over my embarrassment at my jive mountain bike shoes and dweeb pedals. Now, especially in winter, I like 'em.

I'm telling you all this to preface my caveats about your ordering your own Riv. After 8 years, I wish I'd done it different. My bike is the same as it was in Y2K but I'm not.

I believe, reflecting on the guy I was then, that if Grant had let me, I'd have ordered a "racing Rivendell" - a short wheelbase frame with no eyelets for fenders or racks, no fender clearance, nothing.

Grant refuses to sell bikes that are limited in use by their lack of eyelets. Grant is right. I should have listened.

My Riv has been through two incarnations in those eight years. In 2000, I had been working for Shimano Technical Support at the races. When I needed a part or a group, I could ask for it and I might get it.

I asked Shimano for a road group. They sent the first 9-speed group anyone had seen, and the first Flight Deck computer, so new that they included a photocopied instruction book.

Using Shimano "racing" parts then meant using short-reach brakes. Short brakes mean a low rear brake bridge and short fork legs - limiting the distance from the tire treads to the underside of the brake calipers. The result: "Bare fender clearance" – just enough room to use fenders with pudgy but not fat tires.

I built the bike up with that stuff, a Chris King headset, Speedplays and a Nitto bar and stem. On my new Riv, before I left Chico, I won the age-graded prize in the 2000 Forest Ranch Hillclimb. Hey, at my age, if I finished the same day I started, I was a winner.

While I lived in Tucson, I stripped my Rivendell and set it aside for months. When I decided to make it into a bicycle again, I found a near-complete group of old gray Shimano 600 parts (Ultegra level) and bolted them onto the frame. I bought a set of old wheels at the terrific twice-yearly Tucson bicycle swap meet.

Now my purplish-blue Rivendell is 8-speed. The brake cables are taped to the bars. I use old Dura-Ace 8-speed (indexed) downtube shifters. It has side-pull brakes and an old 8-speed Dura-Ace rear derailleur – the 600 one was tweaked and unusable.

By the way, I used Silver (friction) shifters on the bike at first. I gave up on them before discovering that the rear derailleur was faulty; I thought I just couldn't shift accurately. If I still had the Silvers, I could use my two 7-speed wheels, the 8-speed wheel that's on the bike and my several 9-speed wheels.

The bike does work fine with all that older equipment. But it still has only one eyelet on each dropout. Not much room under the brake calipers. No rack mounts on the seat stays or Low-Rider mounts on the forks. No tiny, elegant, fender mounting bolts under the brake bridge or behind the chain stay bridge.

If I want to mount a rear rack, I have to bolt hokey coated clamps around my seat stays. If I want to use a rack and fenders, I have to bolt the rack and the wire fender stay to the same single eyelet.

Because of choices I made then, I do not now have a Rivendell as versatile as I might have. Would those "extra" eyelets and rack mounts have been nuisances over the years? Nah. Would they have cost me my glory day at the Forest Ranch Hillclimb? Nope.

Would I be happier with my bike had I listened to Grant? Yup. Was I in a "buying a bike to last me the rest of my life" frame of mind in 2000? I was not. Maybe my Rivendell will make me happy forever; maybe not. It makes me happy today; has for eight years.

I thought in 2000 (at 58 years old) that I knew who I was and who I was likely to be down the road. As it pertained to cycling, I was not perfectly right, and in this instance, not right enough.

Beam me back, Scotty; I'll do it differently this time…

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