

'BIKES ARE BUILT FOR RIDING'

The latest subject in the Great Craftsmen of Cycling series, Tom Ritchey, has some controversial views on his sport and his work.

by Maynard Hershon

Tom Ritchey is the builder most associated with the mountain bike phenomenon. He created many of the concepts used on virtually all today's off-road bicycles. He is 27, and lives with his wife Katie and children Jay and Sarah in a beautiful, newly-built log home near La Honda, California.

Winning Many people think of you as exclusively an all-terrain bike rider and builder. Is that accurate?

Ritchey No! I'd like people to know that I didn't suddenly become a builder when I made my first mountain bike. I became a builder when I built my first road bike. My background is in road bikes and in racing, but my getting into making mountain bikes was a natural progression in my evolution as a builder. I loved advancing what I thought was fun. I built my first bike when I was 15 (1972), when building was very uncommon. You could have counted all the frame-makers on two fingers. There was nothing happening in Northern California.

Winning How do you account for the increase in number of builders?

Ritchey The thing that's interesting about builders... there's not too many builders that make a living. It's a hard life. Like a farmer, traditionally.

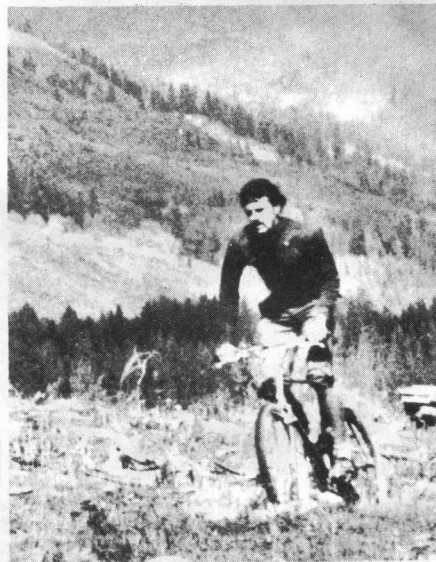
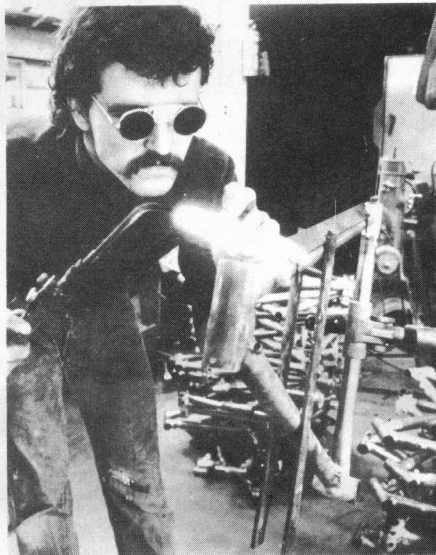
Winning You appear to be doing well at frame and bike building...

Ritchey It is a living for me. I'm fortunate in that way. I'm able to hire people and pay them a fair wage and still make a profit on my bikes.

Winning Why do you build primarily lugless frames?

Ritchey Working with specialty tubing and oversize tubes as top tubes for bigger bikes. For instance, if I used lugs I was down the drain. I couldn't make the bike right. So that's when I started seeing ways to do it more efficiently and developing new brazing techniques. And the same thing goes with braze-ons. If I had to use the braze-ons available, I'd be using those little cable stops for the rear derailleur, on the chain stay, and the heads have no mass.

They break off from the amount of braking force. So I developed a braze-on



for that use and the same thing with water-bottle bosses; they're worth it for me to make — the ones that are available don't have a wide enough base, not enough diameter. So when you put them in, they don't reinforce the tube enough after you drill a hole in it.

Winning You use a pressed-in bottom bracket bearing assembly, don't you?

Ritchey That was another thing. In the beginning, there were no axles over about 125 millimeters. We had 130-millimeter rear spacing and we had crank-chainstay interference problems and chainwheel-chainstay problems. I had to develop a new standard. That's why I had

to go to a sealed bearing; I had to make an axle... I had to make a bottom bracket — there was nothing available. Now, I'm going away from that, I'm going back to a threaded assembly because they're available now. A threaded assembly is easier for a bike shop; easier for the individual to service. That's what's important to me: that someone in an emergency can do his own servicing.

Winning Whose bottom bracket will you use?

Ritchey I'm having them made for me. They'll be cone and race bottom brackets with labyrinth-type seals in them. A frictionless seal.

Winning So you'd like your products to become more conventional?

Ritchey Oh, yes. My contributions to cycling have got to be standard enough so that they can be widespread contributions, not so oddball that you have to take them back to the builder to have them serviced. You have to be able to go into a bike shop and have things done. You shouldn't have to have a conventional bike modified to accept some new accessory. There have been some things like the bottom bracket and the axles... I really had no alternative but to make my own. The (mountain bike) thing would not have developed, but I always try to get back to the spot where it's so simple... and it does the trick.

Winning Is the UniFork lighter than a conventionally crowned fork?

Ritchey Oh, yes... significantly. And stronger, which is the neat thing about it. There are a lot of fork blades that are strong but they have a cast iron crown that weighs a half a pound. You have strong blades and a strong fork crown, and they dump all the energy into the steering columns. That's why some brands of off-road bikes have had so many bent steering columns. My philosophy of building bikes is that each unit of the bike has to be compatible with every other unit...

Winning Who influenced you in your building ideas?

Ritchey Lots of people... Jobst Brandt has influenced me a lot. He says there are design criteria for everything they make at Hewlett-Packard; he says each design has to meet five basic principles before the design is even worthy to be put into print. They're all principles like

'what does this design offer that hasn't been developed before?'. Is this just a titillation of some man's fantasy about having his name on a product? Jobst's influence can be seen in all my products: he likes standardization built into everything, he likes conservatibility built into everything...

Winning *What is conservatibility?*

Ritchey Sound design, design factors built into the product that exceed the demands of conventional use... a bike would be able to support not only a five-foot-six man weighing 150 pounds but a six-foot-five man weighing 300 pounds. Enough margin in the design that a broad use-application or weight or intensity of rider won't cause it to fail. We're not all lightweight racers who are agile about riding a bike. When a person gets on a mountain bike for the first time, often they're a new rider; they don't know how to lift the front wheel out of a pothole or jump a curb... they run into things. You can build lightweight bikes for yourself or if you know the intended use, but for the average person I've got to build a bike that's not only going to last the lifetime of that rider, but if he sells the bike to some guy who weighs twice as much as him, it has to be built for that guy too. That's the short-sightedness of the custom builder; it's too custom, often...

Winning *Are you experimenting with other materials for framesets?*

Ritchey I like steel. The fantastic thing about steel is its forgiving nature. You don't see *springs* made out of aluminum. A bicycle frame is a spring. It has a certain frequency of flex determined by the diameter of the tubes, the wall thickness of the tubes and how it is fabricated. A bicycle that has an optimum feel is a pleasure to ride. The reason why a bicycle became made of tubes of certain wall thickness and diameter evolved to a point and stayed at that point for so long... because, at some time, someone realized that building them that way satisfied not only the strength criteria but the *feel* criteria. To go off on a limb and say that strength is the most important thing... the question is: Are we trying to make a bike stronger? I don't think so. I think bikes are adequately strong. Also, steel has an optimum modulus of elasticity for bike frames. A steel tube will have a different fatigue nature than aluminum and other metals. It will start to creak when it starts to crack; you've got warning of a failure. You know that's something's going on with the bike. With aluminum, it all of a sudden goes. You have to overdesign an aluminum part; you can design a steel part marginally — it gives you a warning. My racers tell me my frames feel better, that they are able to go downhill faster and in better control because of the feel of the frame. The bike doesn't beat them to death by transmitting so much of the road-shock. The steel bike has the kind

of flex that is optimum for bumps. Aluminum would be terrific for track use, for pursuit... I think the industry as a whole is kind of not thinking; missing the boat when it comes to analyzing why bikes are made the way they are. Fad is dictating how bikes are made now. There *are* contributions being made, but... most designs are for the public, for sales, not for function. People, the average customers, are being shown these exotic products and told that these are the ultimate, they are what you have to strive to buy... that seems very shortsighted. To claim that you have a corner on creativity, that you and your ideas are on some pedestal, that everyone else's creativity is limited... is just *ignoring* the 100 years of bicycle evolution that have made the product what it is. It hasn't changed in any *big* way in 100 years. Two wheels, tubing, a chain... there haven't been enough *really* significant contributions.

Winning *How do you figure you build bikes differently than other constructors?*

Ritchey Well, as I said, I build with an appreciation for the history, for what has gone before. I'm not continually trying to re-invent the wheel. I think my building techniques are greatly influenced by my racing background. I think a road bike receives more abuse than a mountain bike; I'm probably one of the only guys who says that. The way I ride a road bike is harder than I've ever ridden a mountain bike. The reason I got so enthusiastic about the (mountain bike) sport is because I rode so much off-road on my road bike. The mountain bike evolved, and I think I had a lot to do with it, because of all those times when I was out there somewhere on my road bike thinking about a better way to do it. Initially, there was no thought of monetary gain; it was just because I had a lot of enthusiasm personally. Not to boast, but to give credit to factors that would make my product significant: *I ride*. I'm a rider. I'm a rider more than I'm a builder. Riding to me is life-style; if I didn't have riding, I wouldn't have building. Riding gives me creative thoughts, it helps my building. If you don't ride a bike, you're not going to build a good product. You gotta do it; gotta ride it. You've got to understand the problems from the road up. You need miles on a bike. How many builders are there in the United States who ride a bike? I've put on a minimum of 10,000 miles a year since I've been 15... and I'm not a small guy, I weigh 175 pounds and I thrash bikes and I use all my bikes as guinea pigs. I want to see if in the worst case, under the most abused conditions, if the bike will hold up. If it holds up for me, in all those situations, it will hold up for someone else.

Winning *What would you like to tell the Winning reader, the committed roadie and bike-race fan?*

Ritchey I think the real bikie, the long-

time rider who's been in racing long enough should know a fad from something that's *real*. I see him still needing to buy a new bike every year and still making claims like 'oh, this bike feels so much better!' Bikes aren't that different. It's how you feel that day or what you ate the night before that makes you feel different on a bicycle. I'm not going to say that *my* bike is what he needs. My bike is just a combination of 11 pieces of tubing that'll get you down the road and it doesn't break. And I think that's about as much as you can ask, because the ultimate is the experience, not the bicycle. When I go out on my road bike, I do not have the time to look at my bike and make sure it is going to work. I do very crude maintenance on it. It is just there. It gives me the *experience* that I need. If people's bikes need to be perfect before they can ride them, they're gonna think of reasons why they can't ride their bikes. I think of reasons *to* ride my bike. I'd like to see people appreciate cycling for its simple ability to give pleasure, not to be seen with their new skinsuit on and a new fancy bike. I've had the best times of my life on a bicycle.

Winning *Do you mean riding with friends?*

Ritchey No, not necessarily. I think of riding over Sonora Pass at 6 o'clock in the evening and chasing the sun into Sonora, knowing I only had three hours to get there before dark after a long ride, not knowing whether I had the energy, and getting there right as the stores were closing, getting something to eat and thinking, 'wow, that was a job well done.' The hardness of it appeals to me. Not how easy a bike is to pedal, but doing something hard you can feel good about.

Winning *How do you feel about your achievements?*

Ritchey I'm proud of my work. I'm proud of a lot of things. People, like, put me on a pedestal. They look at what I've done with my business, they like my product, they see that I've got a happy marriage and two kids that are healthy. There's a lot to be proud about. But that's not the whole picture... it's hard to think... I feel I'm no different from any other man. Even though I do have things which I could boast about, and which I do boast about, I would like to say that if there is anything good about me, about the way I am, it's because of God. Because of the Lord in my life. I'd like to be *thought* of as a servant, someone who's *not* known for an attachment to his personal possessions or skills, but known for someone who doesn't think of himself all the time. Who doesn't just think about the profit in his business... who thinks about doing things *right*. If he makes a living, that's the blessing of doing something right. If he doesn't make a living, he can still take peace and confidence in knowing he didn't compromise himself. ■