



PHOTOS: JUSTIN STEINER

**H**aving a “geeky physics background.” Davis Carver isn’t afraid to mess around with unusual wheel sizes, and in fact, sees advantages to offering more than the standard 26” wheel for mountain bikes—in getting the fit just right, and in being able to mix front and rear wheel sizes. But the fact that he’s also a bike shop owner, and thus could argue against the potential multiplying of replacement parts, doesn’t dissuade Carver from experimenting. From his shop in Woolwich, Maine, he dreamed up some bike designs, and then about ten years ago met a bike builder based in China who offered to help make them a reality. Carver started with the 96’er, a 29” front/26” rear combo bike (reviewed back in issue #112), and from there, has produced a collection of mountain bikes with almost every conceivable wheel size combination.

The 650B, or 27.5”, wheel size is something

This is a bike that felt comfortable right away (which was fortunate, since my second ride on it was the Shenandoah Mountain 100). Some of the instant comfort I attribute to the fact that it’s a fairly straightforward hardtail, but its 650B-ness was also a factor. I felt like Goldilocks tasting just the right porridge. With 29ers, I tend to fit the smallest available frame size; this 17” tester is right in the middle of Carver’s six size options, with geometry that is nearly identical to my personal 17” Mooto-X 29er singlespeed (the smallest that Moots makes). The Killer B’s chainstays aren’t particularly short at 17.5”-18.5” (depending on where the sliding dropouts are set), yet the rear end felt nice and compact. At 4.5” the head tube was actually a quarter-inch longer than my bike’s, but no extraordinary measures were needed to keep the handlebar height reasonable, and in fact it measured 2.5” lower than on my bike with a similar stem. Already some benefits to

swear), and there was a tightly-wound woody section, in which I could sling the bike around easily, approaching the flick-ability of a 26er. In singlespeed mode, there was less of our old friend momentum coming from the smaller wheels, but that had its advantages in quicker acceleration.

Running gears, the bit of acceleration gained was nice to have. On long smooth sections, of which there were a lot in the aforementioned 100-miler, the 650B wheels rolled along slightly better than 26” would, but didn’t generate the keep-on-truckin’ feeling of 29”.

I don’t tend to get airborne much, but when I did, the Carver was less bike to pilot, yet stuck to the ground upon landing a little better than a 26er. I generally felt less high-up off the ground than on my Moots, and it was easy to hang off the back of the bike in techy downhill bits. This could be due in part to the the Killer B’s low-ish bottom bracket height of 11.25”; it also caused me to strike my pedals more than a few times on rocks and logs. (Newer Killer B frames have a BB height of 11.77”.) The Neo-Moto tires’ in-between contact patch worked well in most situations, but once the mud started getting re-hydrated in the fall, they started sliding, probably exacerbated by the very ramped center knobs.

All that wheel size experimentation seems to have served Carver well. There was nothing jarring or weird about the ride. This is a bike that seemed perfectly at ease in a variety of cross country environments.

There are a ton of options for Carver frames. My tester’s sliding dropouts (with a derailleur hanger) closely resemble ones from Ti experts Paragon Machine Works, only thicker, and add

\$250 to the basic \$1100 frame price. The drop-outs are Rohloff-compatible. Carver also offers their own brand of eccentric bottom bracket (but Davis cautions that it can slip more easily in a Ti frame), as well as a BB30 option. Custom geometry can be ordered with no extra charge. A third bottle mount, fender mounts, S&S couplers, and other tweaks are also available.

The only problem I had with the frame was the rear derailleur cable braze-ons—they stuck out from beneath the top tube enough, and were sharp enough, to put holes in my skin along with a couple pairs of tights. While I was running the bike singlespeed, I wrapped multiple layers of electrical tape over them. Newer versions of the frame have these braze-ons more tucked under the top tube.

Carver also offers a plethora of build kits. My tester arrived with XT hubs and Velocity Blunt rims, a huck-worthy but hefty combination, although the Velocity rims have a fairly wide 21.6mm internal rim width, which helps eke out the maximum tire contact patch. (I’ll be reporting on a lighter 650B wheelset from Notubes.com in an upcoming issue.) Although the Killer B was sent with a straight handlebar, for all-day comfort I hit up Eric for the Carver MyTi alt-bar that he had tested in issue #144, and was damn glad I did. Its curves matched nicely with the frame’s and it helped keep the bike comfortable.

This Killer B got its suspension action from a 2009 X-Fusion Velvet fork, a \$350 option. As we reported from Interbike ’09, X-Fusion has been flying under the radar for a while now, making forks and shocks for other brands, but they are poised to grab more attention soon.

They just might do it by offering this excellent 650B fork choice (it’s actually a 26” fork, but approved for 650B use). If I had to describe the Velvet in one word, it would be, well...velvety. Through all kinds of conditions, the fork remained supple and smooth. Its only drawback was the lack of a lockout.

So are 650B bikes the next wheel size revolution? Hard to say. Personally, I agree with Mr. Carver, and think it makes a lot of sense to offer as many options as are practical. The offerings from this particular bike maker, being grounded in real-world experiments, are especially attractive for conducting your own try-it-on-for-size experiments.



## I felt like Goldilocks tasting just the right porridge.

relatively new, at least as applied to mountain bikes. Andy tried out the first one for Dirt Rag in issue #131, a prototype by Kirk Pacenti. This “tweener” size, Carver feels, gives some of the sure-footedness of a 29er without the potential geometry problems in smaller frame sizes. The Killer B frame is made of 3/2.5 titanium and has a clean, “normal” appearance; at first glance it’s hard to tell what size the wheels are. The welds are not quite stack-of-dimes perfect, but aren’t bad either, and the closed-in, box-section head tube gusset is elegant. The top tube is subtly bent for standover clearance. The chain- and seatstays swerve in an S-shape for tire clearance, giving plenty of room for the Pacenti Neo-Moto 2.3” tires plus lots of mud.

the smaller wheels reveal themselves.

Overall, the handling was about what can be predicted—somewhere in between that of a 26er and a 29er. Duh! It was interesting to note how the tweener wheels worked better than two-nines or two-sixes in some situations but worse in others. The course of the 2009 Singlespeed World Championships, in Durango, Colorado, was a perfect test track to illustrate these pros and cons: there was a rocky ridgetop section, in which the wheels got caught up between the giant slabs of rock more than 29” ones would have (and I firmly believe I would not have been passed by so many racers if I hadn’t been crippled by smaller wheels—the elevation had nothing to do with it, I

**CARVER KILLER B 650B**

### TESTER:

Karen Brooks

### AGE:

36

### HEIGHT:

5’8”

### WEIGHT:

125lbs.

### INSEAM:

33”

### VITAL STATS

### COUNTRY OF ORIGIN:

China

### PRICE:

\$1345 frame with options, \$2700 as built

### WEIGHT:

25.3lbs. built as a singlespeed, 27.3lbs. geared, 3.2lbs. size 17” frame

### SIZES AVAILABLE:

13”, 15”, 17” (tested), 19”, 21”, 23”

### CONTACT:

www.carverbikes.com

Go to our website, find the green box to the left, and enter “39” to find Karen’s testing blog and account of SSWC09.

**Dirt Rag Go To**

39

what’s this?