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Bike test

FAT BIKES

Is fat good for you? Editor **Dan Joyce** reviews two bikes with 26×3.8in tyres to find out: a Surly Wednesday and a Singular Puffin

FAT BIKES were designed for riding on snow. Their wide, low-pressure tyres can keep you rolling on other surfaces where you might bog down or stall. Pioneer Surly calls them Omnitera bikes as they'll tackle all terrain. 'All' includes conventional singletrack. In fact, fat bikes have increasingly been marketed as left-field trail bikes. A sceptic might say that's because it's hard to sell a snow bike in, say, Surrey.

Yet wider tyres can confound expectations. I've been riding off-road on 3-inch 'plus size' tyres for the last couple of years. They roll well, offer excellent traction, and they're comfortable. While full-fat tyres threaten to impose extra weight and rolling drag, fans claim they're capable and fun.

I picked two of the most versatile fat bikes I could find for this review: the Surly Wednesday and the Singular Puffin, two steel bikes that bristle with braze-ons and possibilities.

FRAME AND FORK

To fit fat tyres into a bike frame, the bottom bracket needs to be wider (100mm or more) so that the cranks won't hit the wide chainstays. To keep the chain lined up with the chainset and prevent it rubbing on the tyre in low gears, the cassette has to move over too. That requires either an offset rear triangle (as used by the Surly Pugsley, which has 135mm dropouts) or wider dropouts and a wider hub; 170mm or more is typical. The fork also needs to be wider, commonly 135mm or 150mm.

The fork height and chainstay length need to be fairly generous too. For although fat bikes use 26in rims, a tyre that's fatter is also taller. A 26×3.8in tyre is roughly the same diameter externally as a 27.5+ tyre or a conventional 29er tyre (i.e. 730-740mm). A 26×4.8in tyre is about the same as a 29+ tyre (765-775mm). A happy side effect of this is that you can swap out any fat bike's wheels for similar diameter ones with taller rims and narrower tyres.

The Surly Wednesday and Singular Puffin are more adaptable than most. They have 26×3.8in tyres measuring 734mm in diameter but will accommodate fatter 26in tyres or taller 29+ ones. The Wednesday has horizontal dropouts: a bigger wheel fits by being set further back. The Puffin has roomy chainstays and an eccentric bottom bracket, so a bigger wheel has minimal effect on bottom bracket height. With no need for a derailleur to tension the chain, either bike could take a singlespeed or Rohloff Speedhub XL rear wheel.

Both bikes are made from chrome-moly steel, reinforced with gussets at the head tube joints. The Wednesday has a 44mm head tube, while the Puffin's is tapered. Either will accommodate a suspension fork with a tapered steerer, such as the fat-bike specific Rockshox Bluto. It's an easier upgrade for the Wednesday because it has a Bluto-compatible front wheel with a 150×15mm front hub; the Puffin has a 135mm quick release front hub.

The Wednesday has a 30.9mm seatpost and cable routing – internally through the

seat tube – for a dropper post. The Puffin has a 27.2mm post. Droppers are rarer in this diameter but a narrower, rigid post will flex a bit more. The Puffin's fork uses narrower tubing too, although both forks are fairly beefy; being ~470mm from axle to crown, they need to be to meet CEN tests. (A skinnier and more compliant steel fork would likely need to be shorter, like the 445mm one on my 29+ Genesis Longitude.)

Both bikes have plenty of frame fittings for bottle cages, mudguards, fork-mounted Monkii Gorilla cages, and pannier racks. Widely-spaced rear racks are available for fat bikes, while low-riders with separate side frames fit fine to wide forks. If you're going to carry a lot of luggage off-road, a rigid fat bike isn't a bad way to do it. Softer tyres isolate the load well from bumps, so the luggage gets bounced about less and the wheels don't get slammed into ruts and holes to the same extent.

COMPONENTS

Fat bike wheels are *heavy*. The Puffin's each weighed over 3.5kg (including tyre, etc.) So much weight is tied up in the wheels and tyres



Above: Both bikes come with 26×3.8in tyres but you can fit bigger – up to 26×4.6 or more in both frames and fork. Alternatively, 29+ wheels and tyres will fit

TO FIT FAT TYRES INTO A BIKE FRAME, THE BOTTOM BRACKET NEEDS TO BE WIDER (100MM OR MORE) SO THAT THE CRANKS WON'T HIT THE WIDE CHAINSTAYS



**SURLY
WEDNESDAY**
Probably the most
versatile fat bike in
pioneer Surly's range



**SINGULAR
PUFFIN**
Longer offset fork
makes it more
manageable on trails



Left: While the Wednesday will claw its way up much steeper slopes than this, you need to lean forward and stay focused to stop the front wheel wandering. Its trail figure is quite high

TO TAKE ADVANTAGE OF A FAT BIKE'S TRACTION, IT'S WORTH HAVING REALLY LOW GEARS. THE WEDNESDAY OBLIGES

that the gains you can make by upgrading them are anything but marginal. Converting to tubeless, for example, lets you remove two innertubes weighing around 400g each. Even allowing for sealant and other paraphernalia, you should save half a kilo or more at a stroke.

With holey rims like these, I've found it easiest to convert to tubeless 'ghetto style'. That involves slicing a (much lighter) 24in innertube around its circumference and using that in place of tubeless tape and a tubeless valve. As well as reducing weight, going tubeless improves puncture resistance and enables the tyre to deform better, reducing rolling resistance and improving traction.

Both bikes use 3.8in Surly Nate tyres on 80mm wide rims. The Wednesday's rims are lighter but its tyres have a slightly stiffer 27tpi casing; the Puffin's more pliable 60tpi tyres should roll and grip marginally better.

On both bikes, the huge tyre footprints and big tread lugs mean that traction is excellent on steep climbs and soft surfaces (although not *all* kinds of mud). To take advantage of

this traction, it's worth having really low gears. The Wednesday obliges, its 34-22 double chainset and 11-36 cassette giving an 18in bottom gear. The Puffin has a 30-tooth single ring, which means out-of-the-saddle efforts in situations when you can sit and spin on the Wednesday. There's nothing to stop you fitting a front derailleur to the Puffin, however.

Being more expensive, the Puffin has nicer equipment than the Wednesday: Hope Fatsno hubs rather than Formula ones; Deore XT gearing rather than Sram X5; and XT hydraulic brakes with huge rotors rather than Hayes MX mechanicals with 160mm rotors. In practice, this didn't make much difference to the riding experience, which is dominated by the wheels.

RIDE

I tested these bikes in summer, so wasn't able to try them on snow. I did ride on the beach, which was pleasant and peaceful. Fat bike tyres provide easy progress on soft, dry sand. There's not that much scope for coastal exploring where I live as the bays are hemmed

Details



■ This 100mm-wide eccentric bottom bracket was made specially for Singular. It's a good solution for accommodating different diameter wheels



■ The Wednesday does it with rear-facing dropouts. With different wheels/tyres, bottom bracket height can't be fine-tuned but the wheelbase can be

OTHER OPTIONS



1 Trek Farley 5 £1400
Aluminium fat bike with adjustable 'Stranglehold' dropouts. Takes tyres up to 26x5in and comes with hydraulic discs – but fewer braze-ons. trekbikes.com



2 Marin Pine Mountain 1 £850
Plus-size rather than fat, with 27.5x2.9in tyres and a chrome-moly frame and fork with lots of braze-ons. marinbikes.com



Woods aren't a Puffin's natural home – unless you change the wheels

in by cliffs, but I can see the attraction in more open areas. To limit drivetrain damage, I'd want a belt drive or some kind of chainguard to stop sand showering off the tyre and onto the chain.

On normal off-road trails both fat bikes were such hard work that they sucked the joy out of riding for me. They were harder to get moving and harder to keep rolling. Garmin data says my average speed fell by 1.5-2mph on fat bike wheels compared to 29+ wheels.

I quite enjoyed barrelling down descents with 3.8in of undamped suspension. It's a very different feeling from telescopic suspension. The tyres tune out high-frequency 'trail chatter' well, but while the hits from bigger bumps are softened they can still send you careening off course. Both bikes are good at winching slowly up climbs too, particularly the Wednesday.

The medium-sized Wednesday was a better fit for me than the medium Puffin, due to its longer effective top tube. (I'm 5ft 10in.) But I preferred riding the Puffin on singletrack. It's a little lighter and has sharper steering geometry, thanks mostly to its 55mm offset fork, and this helps counteract the inertia of the massive wheels. So it handles more like a normal bike.

I've mentioned that both bikes are compatible with 29+ wheels. Sam at Singular sent me a pair for the Puffin. Fitting them transformed the bike for the better. (Disclosure: 29+ is what I normally ride so confirmation bias is likely.) Weight dropped by over 1.5kg and the bike became quicker, more manoeuvrable, and more enjoyable to ride. Comfort and traction remained good, 3in tyres at 10-12psi losing little to 3.8in tyres at 7-8psi. As a 29+ bike, I'd have preferred the Puffin with a slacker head angle because the steering became quite quick with lower-inertia wheels.

Both bikes have a wider pedal track than any I've ridden before. It didn't seem to compromise pedalling, but as the test went on I picked up a niggling ache in one knee. As this

disappeared after the test, the wider 'Q factor' may have been a factor. I cycle with SPDs; flat pedals might have ameliorated the effect.

SUMMARY

Fat bikes divide opinions, so be sure to take a test ride. If you're visiting a Surly dealer to do so, try a 29+ Krampus or ECR while you're there. For the terrain that most of us ride on most of the time, a plus bike with 3-inch tyres – or a conventional mountain bike with 2-inch tyres – is a better compromise.

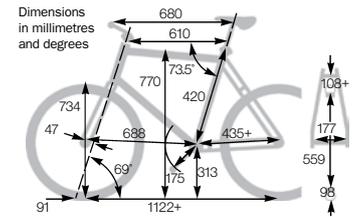
Fat bikes excel where the trails end. If you want to cycle over beaches, snowbound countryside, or boulder fields, a fat bike will do that best. And a fat bike widens your options for unhurried, off-piste exploring anywhere with open access, such as Scotland. To enjoy ordinary trail riding or cross-country type riding, however, you'll need a more tolerant attitude than mine towards a fat bike's idiosyncrasies. That or a second pair of wheels.

Plus wheels turn a fat bike into a trail bike. So it's like having two bikes in one. The Surly Wednesday and Singular Puffin will accommodate bigger wheels so well that I'm tempted to suggest buying either as a frame and fork and building it up with 29+ wheels. But that's only a better option than a stock plus bike if you'll *also* run fat wheels. So you may as well buy either as a complete bike. As a fat bike, the Puffin handles a bit better while the Wednesday costs less, has lower gears, and is easier to upgrade with a suspension fork and dropper seatpost. **G**



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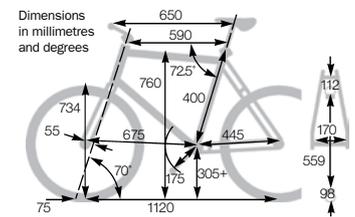
Tech Specs



SURLY WEDNESDAY

- PRICE:** £1499.99 (£449.99 f&f)
- SIZES:** XS, S, M (tested), L, XL
- WEIGHT:** 16.09kg (no pedals)
- FRAME & FORK:** Chrome-moly steel frame with 44mm head tube, 100mm bottom bracket, 177mm OLN dropouts, fittings for rack/mudguard, 3 bottles. Chrome-moly fork, 150mm OLN, with triple bosses & fittings for rack & mudguard.
- WHEELS:** 26x3.8in Surly Nate tyres, Surly My Other Brother Darryl 80mm rims, Formula 150x15mm front hub, Formula 177x12mm rear, 32x3 spokes.
- TRANSMISSION:** no pedals, 175mm Sram X5 chainset, 34-22 Truvativ chainrings, Sram GXP bottom bracket, KMC X10 chain, Microshift H100 11-36 10-speed cassette. Sram X5 shifters and derailleurs. 20 ratios, 18-89in.
- BRAKING:** Tektro 520 levers, Hayes MX Comp mechanical discs, 160mm rotors
- STEERING & SEATING:** 755mm Primatex SM handlebar, 80mm HL stem, Cane Creek Ten headset. Velo VL-2155 saddle, 30.9x410mm HL seatpost.

ison-distribution.com



SINGULAR PUFFIN

- PRICE:** ~£1750 (as tested), £600 f&f
- SIZES:** M (tested), L, XL
- WEIGHT:** 15.25kg (26x3.8, no pedals)
- FRAME & FORK:** Butted chrome-moly frame with tapered head tube, 100mm eccentric bottom bracket, 170mm OLN dropouts, fittings for rack/mudguard and two bottles. Reynolds 520 Singular Puffin Touring fork, 135mm OLN, with triple bosses, and fittings for rack and mudguard.
- WHEELS:** 26x3.8in Surly Nate tyres, Surly Rolling Darryl 80mm rims, Hope Fatso hubs, 32x3 spokes
- TRANSMISSION:** no pedals, 175mm Surly Mr Whirly chainset, 30T On-One Ringmaster chainering, Shimano SM-BB70 bottom bracket, Sram PC1051 chain, Shimano CS-M771 11-36 10-speed cassette. Shimano Deore XT shifter and derailleur. 10 ratios, 24-79in.
- BRAKING:** Deore XT hydraulic discs, 203mm f, 180mm r
- STEERING & SEATING:** 720mm USE Atom Flatline carbon bar, Magnum 50mm stem, Cane Creek Forty headset. Fizik saddle, 27.2mm aluminium seatpost.

singularcycles.com