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Bring on the Rain: Hard Shells

JULIE ELLISON · JUN 3, 2011

Testing a waterproof shell during a typically dry Colorado winter is like bringing your trad rack on a family vacation to Disneyland: pointless and futile. Ergo, we sent these seven shells from *Climbing* HQ in Boulder to testers across the country, from unpredictable Vermont to the soggy South and up to the waterlogged Pacific Northwest. When the sun insisted on shining, we went to extremes and stood in the shower or high-pressure car washes to gauge the full effect of these shells' waterproof membranes and treatments.

The seven shells featured here, each weighing less than a pound, are all new for spring 2011, and they will be on store racks and in catalogs by the time you're reading this. Notable this year: Several of the jackets incorporate stretchy materials that offer more of the feel of a soft shell, but with a hard shell's foul-weather protection. We've also included a rundown of three brand spankin' new waterproof-breathable fabrics that will be introduced in outdoor clothing this fall. (See sidebar on page 29.) Meanwhile, you won't go wrong with any of these jackets.

GOLITE MALPAIS \$250 7.4 oz. (m's L)[golite.com](#)

Lightest

As the lightest jacket in our review—and it's really light for a full-protection, three-layer jacket—this shell has a fairly slim profile and no pit zips, and the zippers and drawstrings are minimalist. This no-frills approach was most problematic in the hood, which was on the small side and finicky to adjust, with a closure that couldn't be operated while wearing winter gloves. (A white spot on our tester's face after a high-altitude ski tour vividly demonstrated the effects of this drawback.) On the other hand, one tester complimented the easy-adjusting wrist cuff, which is cut so it extends over the top of the hand for additional protection. This parka's light weight and compressibility make it a no-brainer to throw in the bottom of your cragging pack, and despite no pit zips, the jacket breathed really well with its polyurethane Trinity membrane. After months of heavy use, the fabric seemed to wet through more than other shells we tested, but it still offered plenty of protection from those inevitable afternoon thunderstorms.

SIERRA DESIGNS JIVE \$279 15 oz. (m's L)[sierradesigns.com](#)

Sturdiest

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At 12,000 feet in Rocky Mountain National Park, with 40+ mph winds and driving snow, this jacket felt completely windproof over just a base layer. And the 2.5-layer Cocona Xcelerator fabric proved fully waterproof, keeping our tester warm and dry during a winter day in Oregon (read: 30°F and wet, wet, wet). Large pit zips kept high-output activities pleasant, and the fabric stood up to rock abrasion during several months of intense use, making it a top contender for durability. The Jive's hood was large enough to accommodate a helmet, and its cinch was in just the right place for easy adjustments. One tester appreciated how the jacket zipped up to her nose for full protection, with soft fleece at the top to avoid irritation. The biggest drawback of this shell is it only has high chest pockets on both sides: good for wearing under a harness or backpack waist belt, but not so good if you're a pocket person. Our tester said, "I kept trying to slide my hands in because I like to hike with my hands in my pockets, but there was nothing there. Bummer."

MARMOT HYPER \$200 11.8 oz. (m's M)marmot.com

Stretchy Minimalist

Although at first glance this jacket appears light enough to be a windbreaker, it's fully waterproof. It's definitely a minimalist's dream, with just enough to keep the wearer happy but no extra frills. (Our testers suggested that a heavier shell might be more appropriate for activities with a serious wind factor, like skiing or alpine climbing.) This was one of the stretchiest jackets in the review, but the two-way adjustable hood is not quite big enough to fit well over a helmet, nor does it quite shield your face from sideways rain. The cut in the shoulders—Marmot calls it Angel-Wing Movement—lets you flail your arms as much as you like without the jacket riding up: great for climbers. The ventilation of this jacket's MemBrain 2.5-layer fabric is decent despite no pit zips. Hiking uphill in Routt National Forest, Colorado, a tester found the jacket collected some moisture on the inside, but not enough to wet base layers. Two zippered hand pockets on the front also operated as mesh-covered vents, though any sort of hip belt or harness negates that benefit.

THE NORTH FACE LEONIDAS \$199 11 oz. (m's M)thenorthface.com

Most Comfortable

Over the course of steady use through the fall and winter, this jacket's 2.5-layer, soft and stretchy HyVent nylon fabric never wetted through. Although one tester felt it wasn't burly enough to serve as an alpine jacket, the Leonidas was a perfect fit (literally) for anything below tree line, and it's light enough to be packed on just about any climbing day as an emergency shell. The hood has a laminated brim and elasticized band that helps it move with the wearer's head, an excellent feature for climbers and belayers who are constantly looking up. The pockets were conveniently located, high enough that you can tuck the jacket into a harness and still get at your lip balm, but low enough that it's comfortable to hike with your hands in them. A lined chin guard and pit zips round out the features.

WATERPROOF AND BREATHABLE

It's what every climber wants in a jacket—a shield from weather that won't leave you sweat-soaked inside. Gore-Tex set the standard 30 years ago with the invention of membrane-based, waterproof-breathable fabrics, but Gore-Tex has always been more waterproof than breathable, relying exclusively on body heat to push moisture from inside to outside. Now Gore says it can do better, while Polartec and [Mountain Hardwear](#) dish up their own alternatives that use airflow as well as body heat to keep you dry inside and out. Look for all of the new tech at your local retailer this fall. We've begun testing individual jackets using these materials, and will provide reviews during the coming year.

POLARTEC NEOSHELL (polartec.com) Made from a continuous fiber extruded into a web-like structure, Neoshell claims two to five times the airflow of other waterproof breathables. It not only uses transpiration to move moisture (as your body heats up, it pushes moisture out through the membrane), but also convection or airflow. The membrane lets an imperceptible amount of air flow in and out of the jacket—the buzzword is “air permeable.” You won’t feel wind blowing through your shell, but the airflow helps clear moisture from inside. Neoshell’s web-like membrane is attached with pinhead-sized glue dots to the outer fabrics, minimizing the glue layer that can block moisture from escaping. Many three-layer Neoshell jackets are pit-zip free. *Companies using Neoshell: Westcomb, Rab, and [Marmot](http://marmot.com), among others*

GORE-TEX ACTIVE SHELL (gore-tex.com) Three-layer Active Shell uses an ePTFE membrane that’s half the weight and half the thickness of other Gore-Tex membranes. It’s dot-glued to an ultralight nylon face fabric and then pressure-laminated to a stretch-polyester tricot back without glue—eliminating weight and an evaporation-constraining layer of polyurethane adhesive. The thinner membrane makes it more breathable.

For now, Active Shell is only available in ultra-lightweight garments, like biking and running clothes. It’s not durable enough for high-abrasion uses because of its more fragile face and back fabrics. But it’s as waterproof as any other Gore garment, and carries Gore’s “Guaranteed to Keep You Dry” promise. Active Shell jackets use pit zips for maximum venting. *Companies using Active Shell: Arc’teryx, Mammut, Millet, and others*

MOUNTAIN HARDWEAR DRY Q (mountainhardwear.com) Dry Q is not a single membrane, but a new design concept that uses various combinations of membranes and materials. The proprietary [Mountain Hardwear](http://mountainhardwear.com) technology is used in 2-, 2.5-, and 3-layer jackets. Dry Q Elite is intended for alpine climbing and snow sports; Active is for movement sports like running; and Core is more all-around. Dry Q claims the same level of waterproofing as Gore-Tex, but with much more breathability. Like Neoshell, it uses airflow as well as body heat to clear moisture from the inside of a garment. *Companies using Dry Q: [Mountain Hardwear](http://mountainhardwear.com) exclusively*

MILLET SWITCH STRETCH \$159.90 14 oz. (m’s M)milletusa.com

Best Value

We sent this jacket to the Pacific Northwest where three testers tried it out while bushwhacking and mixed climbing in harsh conditions. Possibly the most notable aspect of this jacket is the stretchy and supple material, compared to the stiffer fabrics on many hard shells. The Dryedge All Weather 2.5-layer fabric proved just as waterproof as any other shell in the test, and the jacket is equipped with zip vents under the arms. One tester commented that it was “reasonably breathable on the approach—for a hard shell—though I did have to vent.” The Switch Stretch packed up small but didn’t have a chest-pocket alternative to its two zipped front pockets—much to the dismay of our harness-wearing testers. This jacket really shined in the fit category—our testers ranged from 5-foot- 8 to 6-foot-2, and all complimented the fit and cut of the sleeves and torso length. The only real fit problem was the hood, which had limited mobility when it was up; one tester believed it was just too small to wear comfortably with a helmet.

PATAGONIA TORRENTSHELL PULLOVER \$99 10.1 oz. (m’s M)patagonia.com

Simplest

As the only pullover in our review, the Torrentshell presented the usual trade-off versus a field of full-zip shells: the awkward on-and-off maneuvering and the limited options for venting. But a pullover also means lower cost and less weight, and our tester found this one fit and breathed so well (thanks in part to a generous zip and Velcro opening at the neck) that he “tended to just put it on and leave it on, which makes the pullover aspect less of a hassle.” The jacket never bunched around the arms or waist, and the hood fit great. The proprietary 2.5-layer H2No barrier ranked very high in our testing, with zero leakage or wet-through. The jacket also stayed comfy through high-output activities like mountain biking and scary, sweat-inducing trad climbing. This is one of the simplest jackets in the review, with only a single internal zip chest pocket—bummer for those who like to use pockets, but great for fitting under a harness.

MOUNTAIN HARDWEAR STRETCH COHESION JACKET \$170 13 oz. (m's L)

mountainhardwear.com

Weatherproof

An alpine shell made with Hardwear's Ark stretch nylon fabric and Conduit membrane, this jacket maintains supple flexibility but tested completely waterproof. One tester complimented the light weight and significant increase in breathability over other hard shell jackets he's worn. (As a former gear editor for

Climbing

, you can trust he's worn plenty of hard shells!) One feature that Mountain Hardwear celebrates is the roll-away Ergo hood, which can be tucked into the collar—some might like it; others might feel like our tester, who suggested it was a bit “gimmicky” and a waste of weight and fabric. The cut on this jacket was a bit short in the sleeves and torso—it rode up in the waist and sleeves when testers raised their arms overhead, but climbers with a shorter torso might find the fit perfect. The hood worked nicely with a helmet, and had a great closure system for climbing. A micro-chamois-lined chin guard eliminates face chafing and rounds out the package.

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