

Ultralight Insights -- What's New and Exciting in Ultralight Backpacking

Welcome! Ultralight backpacking is my passion, and keeping up on new technologies, gear, and techniques relevant to UL backpacking is what floats my boat. I'm always looking for the lightest, most functional backpacking kit, and report my impressions and field testing results here. For hikers wanting to keep up on the latest and greatest ultralight backpacking gear, this is a good place to hang out. Also check out my website Southwest Ultralight Backpacking on useful techniques and backcountry etiquette -- food for thought for hikers wanting to lighten their load and their impacts.

My goal for Ultralight Insights is to understand, test, and report on new technologies and gear of interest to lightweight and ultralight backpackers. It's a passion after all, so we just plain enjoy talking about it. Please leave comments, respond to my questions, ask their own questions, and correct me if I get something wrong. Happy hiking! Will

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Wednesday, February 24, 2016

GEAR REVIEW: Mishmi Takin Garamba Jacket

This new company designed the most breathable hardshell jacket to be found.

By Will Rietveld

Mishmi Takin is a new outdoor brand coming to market. I met its founder Kapil Dev Singh at the Winter 2016 Outdoor Retailer trade show and found a very interesting story. Kapil is an MIT trained immigrant from India. An avid hiker, Kapil was unable to find gear that performed in the hot and humid tropics of his native Himalayas or the West African forests. So, he created Mishmi Takin, a company committed to designing high performance gear for climatic conditions often overlooked by major brands. The company is named after a rare goat-antelope found in the remote Eastern Himalayas, and their products are named after national parks in India and Africa.



The Garamba Jacket I tested is their lightest hardshell jacket constructed of 2.5-layer air permeable eVent DVLite (Direct Venting Lite) fabric. It's the only air-permeable jacket I know of that has pit zips, plus several other features to enhance ventilation.

Specifications and Features

Manufacturer	Mishi Takin (www.mishmitakin.com)
Product	Garamba Jacket (men's and women's versions available)
Fabric	40 denier air permeable eVent DVLite 2.5-layer (1000 mm waterproofness, 18,000 g/m2 breathability)

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Weight	14.2 oz (men's Large)
Features	2.5-layer eVent DVLite fabric, 2 high mesh lined core vent pockets with water-resistant zippers, full-height water-resistant YKK Aquaguard Vislon zipper with storm flap behind, 14-inch pit zips with 2 pulls and storm flap, attached hood with stiffened brim and 3-way adjustment, asymmetric cuffs with Velcro tab closure, dropped tail with 2-way adjustable hem drawcord, small inside mesh pocket, laser cut vent holes at chin and top of back
MSRP	\$275

Description

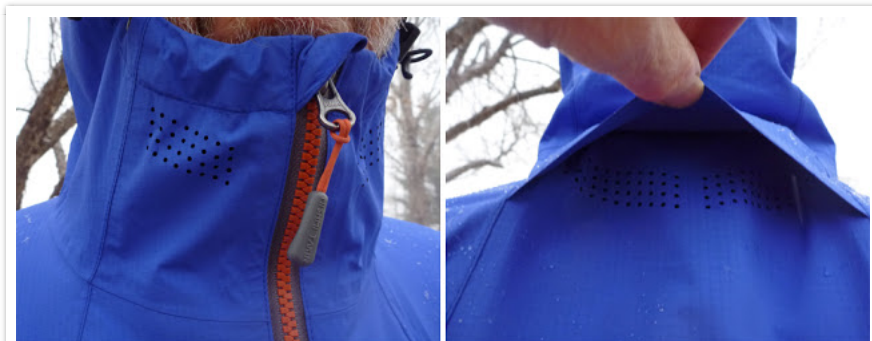
The Garamba Jacket is designed for maximum breathability through a combination of highly breathable fabric plus seven ventilation features. It's best described as a versatile hardshell jacket for aerobic activities and trekking in more humid conditions – any situation where maximum breathability is needed. It's not necessarily a mountaineering jacket, but it would serve that purpose with reasonable care. Applications include running, hiking, aerobic skiing, biking, and light mountaineering.

The jacket's fabric is the most breathable currently available – 2.5-layer eVent DVLite. In my publications on [testing air permeable waterproof-breathable fabric technologies](#) I found eVent fabric to be the most breathable, better than Gore-Tex and NeoShell. So the fabric used in the Garamba is cutting edge.

Contrary to the claims of fabric manufacturers, under heavy exertion (like running or hiking uphill carrying a backpack) no waterproof-breathable shell fabric provides enough breathability to keep up with perspiration, so the jacket will eventually steam up inside. Supplemental ventilation is necessary to maintain comfort. The Garamba Jacket has the most ventilation features I have ever seen in an air-permeable jacket – front zipper, pit zips, cuffs, hem, core vents, and laser cut vents at the chin and upper back.



The Garamba is the only air permeable hardshell jacket that I know of that has pit zips (left). Core vents (right) are mesh-lined hand pockets that ventilate the torso area when the pockets are unzipped. The pockets are located high so a pack hipbelt doesn't cover them.



Laser cut perforations in the chin area (left) and center of the back (right) behind the hood add extra ventilation.

Field Testing

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Snowshoeing at 12,500 feet in Southwestern Colorado. I wore the Garamba Jacket on 22 outings in early 2016 while hiking trail running, cross-country skiing, skate skiing, backcountry skiing, snowshoeing, and one 4-day hut trip. Temperatures ranged from -10 to 50F in a range of weather conditions.

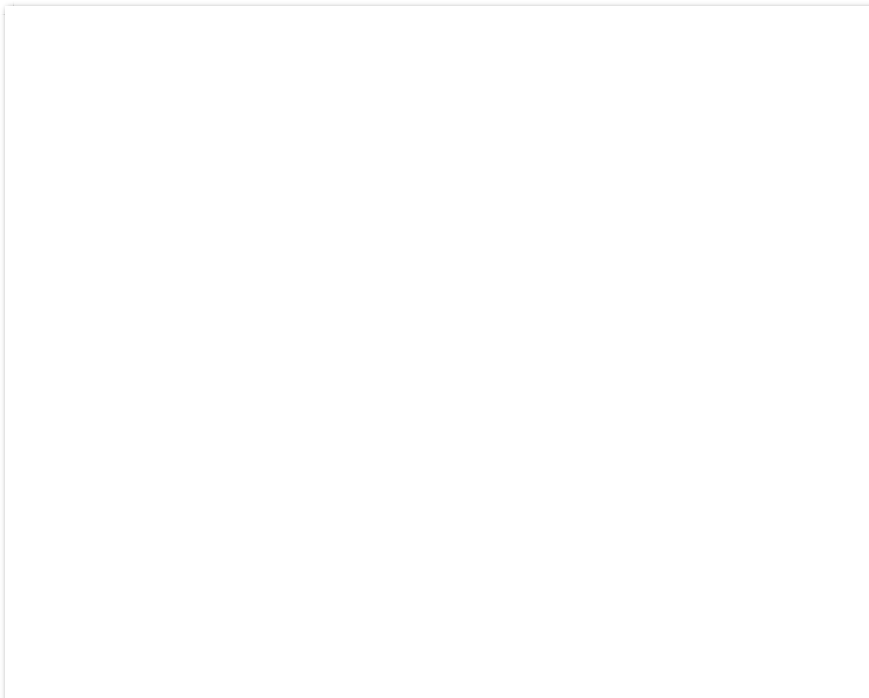
My first impression of the Garamba Jacket is its good fit and soft hand. I found the fit to be just right for me (6 feet/170 pounds), with enough room inside for layering over a lightweight down jacket. It feels like a windshell jacket. It isn't stiff like many hardshells but functions like a hardshell for snow sports, as well as a rain and wind shell for the rest of the year.

I like the front YKK Aquaguard zipper, which is easier to zip compared to a typical water-resistant zipper. While a conventional water-resistant zipper adds to the stiffness of a typical hardshell jacket and requires two hands to operate the zipper (one to hold the bottom of the jacket and the other to grasp the zipper pull), the Aquaguard (to a large extent) can be operated with one hand and contributes to the jacket's suppleness.

On me, the top of the zipper comes up to the bottom of my mouth and does not cover my mouth, which makes it easy to breathe with the zipper up and hood on. Other jackets cover my mouth, which I find uncomfortable when I am hiking or skiing hard.

So, how breathable is it? The Garamba's eVent DVIite waterproof-breathable fabric is remarkable in terms of its comfort range; the best I have experienced. I was able to wear the jacket over a midweight baselayer and hike or ski hard in 15 to 50F temperatures without so much as unzipping the jacket. When hiking uphill carrying a pack, it gets down to how far you can go before steaming up inside (which means that sweat production is surpassing the capacity of the jacket's fabric to transmit water vapor it to the outside). The eVent DVIite fabric allows you to go a lot further before reaching that stage, or it may not happen at all if you are hiking at a moderate pace, its overcast, temperatures are cooler, or its windy.

To extend the comfort range even more, the Garamba has numerous ventilation options; how much do they contribute to comfort? The short answer is they all add up.





By far, opening the front zipper provides the most ventilation.

However, when it's raining, it is often hard to open the front zipper very much for ventilation. In that case the other ventilation features become more important. These include: loose cuff openings, hem open at the bottom of the jacket, core vents via the hand pockets, pit zips, and perforations at the chin and top of the back. Individually they don't provide as much ventilation as the front zipper, but their effects add up. Ventilation is assisted by vapor pressure (from sweating) that builds up inside the jacket which is seeking an exit to the outside. The extra ventilation features provide a way for it to get out.





The Garamba stayed dry and warm inside while hiking in a wet snowstorm. The hood adjusts to fit around the head without blocking vision.

Assessment

Waterproof-breathable jacket technologies are hyped a lot, so buyer expectations are high. The reality is most jackets are waterproof as claimed but breathability is limited. There is a limit to breathability because waterproofness, windproofness, and breathability need to be balanced. There is a limit on how much breathability can be increased without compromising windproofness and waterproofness. Certainly you don't want an exceptionally breathable shell jacket that the wind blows through and rain penetrates. There are many occasions when we count on a hardshell jacket for protection from the elements.

Manufacturers are extending the limits to attain dryness and comfort in hardshells. In that context, the Mishmi Takin Garamba Jacket is as cutting edge as it gets. It employs a combination of the most breathable air permeable shell fabric available (eVent DVLite 2.5-layer) with numerous ventilation features to create what can be claimed to be the most breathable hardshell jacket available. For that it merits an A+.

However, the added features do add a little more weight. The Garamba weighs 14.2 ounces, which is about 2-4 ounces heavier than comparable jackets with fewer ventilation features. The Montane Featherlite Shell Jacket, also made of eVent DVS, weighs just 10.45 ounces in size Large, but it doesn't have pit zips, an Aquaguard front zipper, and a back vent. And it costs \$399, \$124 more than the Garamba, so the Garamba is a good value.


To sum up, the Mishmi Takin Garamba Jacket is the most breathable hardshell jacket currently available, its cutting edge, and it's reasonably priced.

Posted by Will Rietveld at 2:28 PM



Labels: Gear Reviews

2 comments:

 **Unknown** October 26, 2016 at 8:13 AM
Is this product available yet?

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Kapil December 31, 2016 at 10:44 PM

Hi, I am Kapil from Mishmi Takin. Happy new year. I just saw your comment. Yes, the product is now available through our website - <https://mishmitakin.com>

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