



Rolando Garibotti grew up in Bariloche, in northern Patagonia, spent much of his adult life in North America and for the last ten years splits his time between the Dolomites and El Chalten. Together with Dörte Pietron he is the author of the guidebook to the Chalten Massif.



rime mushrooms & ice-axe wings

The rime that forms on certain Patagonia summits is one of the most unique features the area has to offer. It builds into large “mushroom” like formations on the upwind side of mountain summits and ridges and on windward rock faces, often overhanging on all aspects. It forms when the terrain is engulfed in clouds and strong winds blow super-cooled cloud droplets onto sub-freezing surfaces. Rime mushrooms are particularly scary to climb, because they have the consistency of cotton candy, so not only it is hard to get any purchase to move upward, but it is particularly hard to protect oneself adequately.

b by Rolando Garibotti

In the summer of 2005, Stefano Azzali, a mechanical engineer from Mantova, Italy, met with Ermanno Salvaterra at the Dodici Apostoli hut in the Brenta Massif. Stefano is a climber and mountaineer who teaches at a technical university, runs a welding shop and in his spare time makes custom ice-tools. During that meeting Ermanno told him that he was planning to return to Cerro Torre and needed something to get more purchase while climbing the rime mushrooms. He envisioned a metal plate above the ice-axe pick. They sat down and, in Stefano’s Moleskine notebook made a tentative sketch of two L-shape plates that would attach to the head and pick of the ice-tool, “ice-axe wings.”

Jorge Ackermann on the last pitch of the “Via dei Ragni”, a 50 meter tall wall of rime. Photo: Rolando Garibotti

S Stefano & Ermanno

For a few years Stefano had been making custom mixed-climbing-tools for Mauro Bolle, at the time was one of the best mixed climbers around, under the brand name Bubuclimb. The tools that Ermanno wanted had to be better suited for ice climbing, so as a first step Stefano set out to design a new ice-tool. This took several weeks. As the date of Ermanno’s trip approached, Stefano had yet to put together the tools and “wings”.



The original drawing that Stefano Azzali and Ermanno Salvaterra made when they first discussed making a pair of “wings” in the Dodici Apostoli hut.

Ermanno Salvaterra using the wings high up on Cerro Torre, during the first ascent of “El Arca”, 2005. Photo Rolando Garibotti.



He was busy with a metallurgic course in Genova and had little spare time, so he called Ermanno to tell him he was not going to make it. Ermanno was bummed, so much so that Stefano decided to do all he could to make it happen. He called the various suppliers and urged them to deliver the carbon fiber, titanium and steel he needed, explaining to them that this was an opportunity not to be missed. On his return from Genova, and with Ermanno’s trip barely two days away, he picked up all the supplies and, in one long day, put them together.

Three weeks later, Ermanno, Alessandro Beltrami and I, climbed Cerro Torre from the north using those ice-tools and wings. The wings were quite useful, not only did they provide added purchase but also they made for more efficient digging when making a half-pipe or tunnel, some of the strategies used to climb rime. That first design wasn’t perfect, the wing was too close to the tip of the pick and the angle was too steep. The following year Stefano corrected the design and devised an ingenious way to attach the wings that did not require screws. Both the 2005 and 2006 models were made out of titanium.

In late 2005, barely a month after our ascent of Cerro Torre, Bruno Sourzac, an excellent ice-climber known for free-soloing Beyond Good and Evil on Aguille des Pelerins, arrived in El Chalten to attempt the Via dei Ragni. He also had in hand a pair of “ice-axe wings.” Both him, Stefano and Ermanno had come up with the idea at around the same time.

Stefano Azzali’s wings, which he first designed in 2005.



Jorge Ackermann using the tools in the Via dei Ragni. Photo: Rolando Garibotti

BD's version of the wings, made by Bill Belcourt and Joe Skrivan in 2007. **Petzl wings** made in 2014 based on Bruno Sourzac's 2005 design.



b Bruno

Bruno had spent several seasons in Patagonia during the late 1990s, and was quite familiar with rime. In 1997, during an attempt on the Via dei Ragni, he took a 15-meter fall when the picks of his ice-tools sliced through the rime. He remembers that event vividly:

“The first few meters go well, then it gets steeper, overhanging even, I have a hard time getting much purchase from my tools, but I press on. The pace gets slower, I try in vain to get a decent placement, and all of a sudden I am airborne. I fly and land on the ground, in deep enough snow to walk away unhurt.”

Bruno is not easily dissuaded, so he tried again and this time pushed on. Later that day he reached the base of the last pitch, more sustained and demanding than the pitch where he had fallen. So still shaky from the previous fall he decided to call it quits. A few days later he found himself on another steep rime mushroom, this time on Aguja Standhardt where it took him over an hour to climb the last six meters. It was then that he realized that he needed to come up with a better tool for this kind of climbing, something akin to a pick-axe.

Nine years went by until he returned to try the Via dei Ragni, but when the plan was hatched he set out to devise a tool attachment that would provide more purchase on rime. An engineer at Petzl helped him out.

First they tried with a wide, tubular pick, but tests on the Aguille du Midi cornice proved inconclusive. Next they discussed side attachments and soon they arrived to a similar design to Stefano's, even though they had no knowledge of it. The Aguille du Midi cornice was impressed, never had a biped climbed it with such ease. A few weeks later, high on Cerro Torre, Bruno cruised the rime pitches with comparative ease.

W Wings on loan

In late 2006, North-american climber Jack Tackle saw Stefano's wings, took a photo and asked Bill Belcourt, head designer for Black Diamond at the time, to make a pair to fit BD tools. Bill, and Jo Skrivan sawed and hammered a first design, then laser cut and bent a finished product. Since the market is too small to make them commercially, they made a couple dozen pairs and passed them around to friends. In 2014, and with Bruno's help, Petzl developed their own design, largely based on Bruno's 2005 model but with an improved attachment system. Pairs of both of these are available in El Chalten for rent in the shop Viento Oeste, as are a number of home-made pairs.

The telephone, color photography, typewriters, evolution, decimal fractions, calculus, and many other innovative ideas were conceived by more than one party, at around the same time. “Ice-axe wings”, which in the last decade have become a mandatory item

for climbing rime, are a good example of “simultaneous invention”. Although we want to believe that discoveries come from “eureka” moments, it appears in fact that they are in the air. Once a certain level of interest is leveled to any one thing, the right tool for the job or the right explanation, comes forward from several places at once. Thanks to Stefano, Ermanno and Bruno, now the rime mushrooms are a little less scary and take a little less time.



Rime mushrooms cover the upper 150 meters of the west face of Cerro Torre. The Via dei Ragni climbs up close to the left ridge. Photo: Damian Llabres