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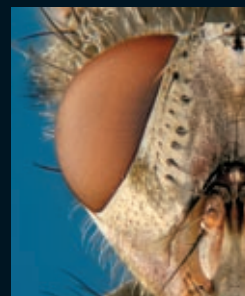
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STORY Peter Otway



# Explosive force

Not many people survive being on top of an erupting volcano. But one New Zealand volcanologist has a great tale for his grandkids.



**MOUNT RUAPEHU IS AN EXCITING PLACE** to be, with its hot crater-lake bubbling away and snowfields all around.

On 8 May 1971, I was one of a team of four surveying and monitoring the crater of Ruapehu, New Zealand's highest volcano and one of its most active. My aim was to see if I could detect any inflation in the crater – the very small expansion of the rim thought to occur before eruptions.

Increased seismic activity, the warming lake and some small eruptions hinted that the mountain might be about to blow. But because there'd been only one large eruption in the past 26 years, I calculated there was only a remote chance of another while our team from the Department of Science and Industrial Research (DSIR) was there.

Our first survey station was a safe location from which to make observations. Then we were taken by helicopter to a point called Pyramid Peak, a very sharp protrusion on the east of the crater rim. We felt extremely exposed to the crater, with the lake on one side and a ravine on the other.

When we had landed on this peak, I said to Marshal Gebbie, the local motel manager who'd been recruited as an assistant the night before, "In the highly unlikely event of a big eruption, don't run, because we've got nowhere to run to. All we can do is just hang on, cover our heads with our packs and try to sit it out."

The Pyramid Peak survey took nearly three hours to complete. I had packed everything up and we were waiting for the helicopter to pick us up when suddenly the crater-lake began to heave. A column of hot, dirty water rose out of the lake like a giant geyser, right in front of us.

As I snapped a photo (facing page), colossal jets of black water and boulders exploded through the steam, sailing straight up, high over our heads, with red-hot volcanic bombs bursting out of the jets in all directions. Then we were hit by a shockwave, this tremendous booming sound rebounding off the peaks all around. We discovered later that this slug of material was actually travelling beyond the speed of sound.


I felt like a leaf in a storm, overwhelmed by the monster about to engulf us. I thought, "Ruapehu, you devil, you got me this time."

When the shockwave hit us, we instinctively ducked. A moment later, a mass of debris came flying over our ridge but, luckily, because it was such a sharp ridge, the full force of it shot over our heads. We were immediately drenched in water which became increasingly hot. "My God," I thought, "I'm going to be scalded to death."

The force of the water was so great it was pushing me down the slope. I managed to grab my survey mark, which was concreted into the ground. With the other hand I was holding my pack over my head. Somehow, I managed to hang on there.

At the same time, the air was becoming so thick with ash and acid that I felt as if I was filling up with it and asphyxiating. I put my nose under my anorak and filtered it out to some extent.

Next, there was a whistling, thudding sound going on all around. Those enormous exploding rocks I had seen sailing over our heads were on



**Opposite, left:** Vulcanologist Peter Otway, plying his trade inside the rim of Mount Ruapehu. **Opposite, top:** Aerial view into the mountain's crater. **Opposite, bottom:** Otway leaves his skis and scope – tools of his trade – alongside the crater's edge. **This page:** Otway had time to snap exploding Mt Ruapehu before being overwhelmed by the eruption.

their way down again. So now I thought that at least death would be quick – that I'd be hit by one of these things and that would be it.

Then it all stopped.

I was rubbing the ash out of my eyes when it went off again. It seemed to go through the same sequence again, and then shut off again, returning to a dead, eerie calm. I'd survived once again.

Just as it was finishing, this great gale of cold fresh air sprang up, blowing from the opposite direction, which cleared the air – it was marvellous to be able to breathe again. I again wiped the ash from my eyes and there was Marshal, standing two metres away, doing the same thing. We gave each other a great bear hug.

While we were pondering our next move, our helicopter pilot Otto Gram miraculously appeared over the horizon, making a cautious inspection of the blackened mountain top. We were unaware of his dramatic radio message exclaiming: "My God. I've just lost four scientists in a colossal eruption. I'm going back to flying tourists!"

Then he spotted our two groups clawing their way out of the mud and made a beeline for the most vulnerable – Marshal and me. The other two members of the party had been standing across

**"I felt like a leaf in a storm, overwhelmed by the monster about to engulf us. I thought, 'Ruapehu, you devil, you got me this time'."**

the crater from us. They were lucky: the wind blew most of the eruption debris away from them.

We'd been expecting Otto at the time of the eruption. Had he been uncharacteristically on time, his helicopter would have been shot down by the

eruption. He told us later that the acid dripping from our clothes had drilled little holes into the aluminium floor of his chopper. When we landed, we jumped fully clothed under a fire hose and afterwards each had a long, hot shower. We were still coughing and spluttering a bit, but were otherwise unharmed.

Our series of near-death experiences had lasted less than four minutes. I guess, looking back on it, we were exceptionally lucky not to have started the trend of volcanologists dying in eruptions.

When, a few days later, I did the calculations from the survey data, I discovered there had been a definite expansion of the crater rim. It was a modest 25 mm, but it was very useful to know there was at least a small signal before an eruption of such magnitude. 📌

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**PETER OTWAY** spoke to Kim Griggs, a science journalist in Wellington, New Zealand, and contributing editor to *Cosmos*. He still visits the crater-lake of Mount Ruapehu, but these days only on skis.