

JOHAN REINHARD

INCA MUMMIES ON ANDEAN PEAKS



WHEN MY FLIGHT LANDED IN AREQUIPA, PERU, in late August 1995, I thought my work was over for the summer. I had located Inca ruins in Bolivia and eastern Peru that had made it one of my best field seasons ever, and I planned only a quick visit to Arequipa before returning home to the US.

Most of the ruins I had found that summer were located on mountain summits at over 5,000 m (16,400 ft). A new field of archaeology has recently developed called 'high-altitude archaeology', and its focus is on the Inca culture of 500 years ago – the only society known to make offerings on the summits of peaks over 6,000 m (19,685 ft) high. I had spent the previous fifteen years searching for Inca sites in the Andes, climbing over a hundred mountains in the process. Yet much work remained before we could ascertain the locations of all the Inca sites, let alone understand why they had built them on top of some of the world's highest mountains.

Searching for Inca artifacts exposed after the summit ridge had collapsed on Ampato, in 1997: Jimmy Bouroncle (right) belays Orlando Jaen while he examines the slope near the Inca burial site on Ampato's summit.

Discovery of the frozen Inca mummy known as the 'Ice Maiden' near the summit of Ampato in 1995. We found the Ice Maiden's mummy bundle lying in the open amidst ice pinnacles after it had fallen nearly 60 m (200 ft) from Ampato's summit.



I had called ahead to arrange to meet a friend of mine in Arequipa, the archaeologist José Antonio Chávez. We had worked on several mountain summits during the 1980s, but had not been to a peak together since 1991. He was as keen as I was on our continuing with excavations of high-altitude sites, and we immediately began listing the mountains we hoped to investigate the following year, in 1996.

Several of the peaks close to Arequipa had Inca sites on them, but those bordering the Colca Canyon, twice as deep as the Grand Canyon, especially attracted my interest. The inhabitants of the Colca Canyon had worshipped mountains long before the arrival of the Incas, particularly Hualca Hualca, Sabancaya and Ampato, the last being the highest in the region at 6,312 m (20,708 ft). Paradoxically, I thought that Ampato was the peak least likely to produce anything on its summit as it was permanently covered in ice and snow. However, I wanted to photograph its neighbour, Sabancaya, because it was still active – indeed it had been erupting daily for several years. Ampato was perfectly positioned for this photography, and before long my old climbing assistant Miguel Zarate and I were standing on its summit.

To our surprise, its ridge top that had previously been 10 m (33 ft) wide now measured barely 1 m (3 ft) across, a large section having recently collapsed. Within minutes we were stunned to find Inca statues sticking out of the exposed slope where a platform had been built five centuries previously. It was clear to us that artifacts must have fallen inside the crater when the ridge collapsed, and while later searching the area we spotted what looked like a mummy bundle lying on top of the ice. I had been to dozens of sites on mountain summits over the years, but I had never come across a mummy bundle on a mountain, let alone one lying out in the open.

'Maybe it's a climber's backpack', said Miguel. 'Maybe it's a climber', I replied, only half-joking. As we drew closer to the bundle, my pulse quick-

ened. Given the other items we had found, it seemed certain that it would contain something of significance to the Incas. Miguel moved it on its side for a better grip, and as

he did so it turned in his hands. Suddenly, time seemed to stop. We were looking straight into the face of an Inca.

I soon realized that the mummy's face must have become exposed after its cloth covering had ripped open during the bundle's fall down the gully. The face was thus completely dried out, and our hopes of a frozen body evaporated. But when we tried to lift the bundle we were surprised

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at how heavy it was – close to 45 kg (100 lb). The thought struck me that there wasn't enough ice to make it so heavy, and I felt a surge of adrenaline as I realized what this meant.

Few frozen mummies had been found anywhere in the Andes and none in Peru, close to the heart of the Inca empire. Aside from the scientific value of its clothing and any artifacts with it, the mummy's intact body tissues and organs would allow complex DNA and pathological studies to be undertaken that had never before been performed on an Inca mummy. Our accidental discovery would therefore provide information unique in our knowledge of the Incas.

My mind raced with the implications. If we left the mummy behind, the sun and volcanic ash would damage it further. Obtaining an archaeological permit could take weeks, if not months, as could finding the funding to organize a scientific expedition – which would take us into the snow season. Nor could we save time by flying in with a helicopter; most helicopters could not land safely at the altitude even of our base camp.

It would have been impossible for us to lug the mummy on our backs to the closest town of Cabanaconde in a single day, but we could make it if one of the donkeys we had waiting in our base camp carried it. We could pack the mummy in ice, wrap it in the insulated pads we used to sleep on and return to town the way we had come. The pads would protect the

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mummy from the sun and most of the trip across the plateau would be in the chilly temperatures at 4,300 m (14,108 ft). I was aware there was no telephone in Cabanaconde and no freezer would be available to store

the mummy. However, I knew there was a bus leaving the same evening we would arrive there, which would travel through the night, arriving in Arequipa at six the next morning. We could have the mummy in a freezer soon after sunrise.

The alternatives were discouraging. It was impossible to bury the mummy in the rocky, frozen ground. Covering it with ice could only be a temporary solution, and the warm weather of the coming months meant that the mummy would suffer more from exposure. Even in the best conditions it would continue to deteriorate.

There was still one problem: when I tried to pick up the mummy, it was so heavy Miguel had to help pull me to my feet. 'I'll be lucky to make it to the crater rim', I told him. Although it was a relatively horizontal hike

to reach it, I had to climb around strips of ice that zigzagged vertically up and down along the bottom of the slope. An ascent of just 15 m (50 ft) required an effort that left me exhausted. After repeated falls I was bruised and panting, and I cursed myself for not bringing crampons. Once at the rim and heading downwards, instead of getting easier things got worse, and at times dangerous. Part of the slope inclined at 50 degrees, which would seem nearly vertical to a non-climber. Meanwhile, the batteries in our headlamps were giving out and falling rocks whizzed by us in the dark. Cutting footholds with his ice axe immediately below, Miguel pleaded with me to leave the mummy behind. I eventually agreed, and we left it firmly lodged among ice pinnacles at 6,000 m (19,685 ft). Without the weight, we quickly crossed the slope and descended to our tent in the dark, collapsing inside too exhausted even to eat.



Right above Excavating the Inca burial site on Ampato's summit in 1997. Jimmy Bouroncle (left), archaeologist José Antonio Chávez and Orlando Jaen (right) excavate what remains of the Inca burial site that had been destroyed when the summit ridge collapsed.



Right Archaeologist José Antonio Chávez (left) and Arcadio Mamani carefully clean dirt from pottery vessels surrounding the mummy bundle of an Inca female found in a burial site at 5,800 m (19,030 ft) on Ampato in 1997.

The next morning dawned clear. I returned to carry the mummy down, while Miguel set off down a steep scree slope. Before long we were reunited with our donkeys and on our way. By the time we reached Cabanaconde, we had been walking for over thirteen hours with only a ten-minute stop to share a tin of sardines. Later that night (and unbeknownst to the passengers) a plastic-covered bundle was placed in the luggage hold of a bus. Hours later, the mummy, still with ice attached, reached Arequipa, where she remains frozen to the present day.

Over the next few years I returned with three expeditions to Ampato, and we recovered three more mummies at an Inca site at 5,800 m (19,028 ft). Although each was unique in its way, none was as well preserved as the mummy that became famous as the Ice Maiden. Thanks to her discovery, I was able to obtain funding and undertake several expeditions in the coming years, culminating in one to Llullaillaco, a 6,739-m

(22,110-ft) high volcano on the border between Argentina and Chile. It seemed only appropriate that we found three frozen Inca mummies – the best preserved in the world – at the world’s highest archaeological

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ical site. At the same time, we recovered over twenty clothed statues, nearly doubling the number previously known. Perhaps just as importantly for archaeology, all were excavated in undisturbed contexts. Llullaillaco had provided us with some of the most important Inca finds ever made.

The reactions of scientists from many disciplines, not to mention the general public, made me wonder: is there anything from the past that can compare with the uniqueness, complexity and the unlimited knowledge



The Inca mummy from Ampato known as the Ice Maiden in the Catholic University’s laboratory in Arequipa, Peru, 1995. The Ice Maiden is seen here with her outer mantle removed.

Below left A gold Inca female statue wearing a red headdress (left) was found with an older girl, while a gold, male statue (right) was found with a boy in the burial site on Llullaillaco’s summit in 1999.

Below right Examining the cloth that covered the face of a young female mummy found on the summit of Llullaillaco in 1999. The girl’s head cloth had been damaged by lightning, exposing her face and a silver plaque on her forehead.



provided by frozen mummies? After all, they are not only extremely rare, they will never stop adding to our knowledge in future, since technology is constantly evolving.

The sense of accomplishment I felt from my work in the Andes extended well beyond the archaeological discoveries. While still in my teens, I had set out to study anthropology and acquire expeditionary ‘tools’ to help make my mark as an explorer-anthropologist. In the Andes I had been able to combine scientific disciplines such as archaeology and ethnography with everything from cinematography to mountaineering and scuba diving. I had never imagined that this would lead to decades of research in the region, but I gradually realized that the discovery of mountain mummies was only possible thanks to a path I had chosen while still a boy and now stood as a metaphor for all that I had set out to accomplish with my life.

Johan Reinhard (American, b. 1943), is an Explorer-in-Residence at the National Geographic Society. His research has focused on the sacred beliefs and cultural practices of mountain peoples, especially in the Andes and the Himalaya, and on preserving the cultural patrimony of indigenous peoples. Museums have been built in three countries to exhibit the archeological finds made during his expeditions. In 1995 and 1999 Time selected his finds as among ‘the world’s ten most important scientific discoveries’. He has been the recipient of several awards, including the Rolex Award for Enterprise and the Explorers Medal of the Explorers Club.