



Photo: Courtesy of Dr. Constanza Ceruti

**Books**

- Frozen Girl* by David Getz; illustrations by Peter McCarty, New York : H. Holt, 1998.
- Discovering the Inca Ice Maiden: My Adventures on Ampato* by Johan Reinhard, National Geographic Society, 1998.
- National Geographic Investigates: Ancient Inca: Archaeology Unlocks the Secrets of the Inca's Past* by Beth Gruber; Johan Reinhard, Washington, DC : National Geographic, 2007.
- Cumbres Sagradas del Noroeste Argentino: Avances En Arqueologia de Alta Montaña y Etnoarqueologia de Santuarios de Altura Andinos* by Maria Constanza Ceruti and Maria Constanza Ceruti, 1999.
- Women Explorers (Women Who Dare)* by Sharon M. Hannon, Pomegranate Communications 2007.
- The Incas* by Terence N. D'Altroy, Blackwell Publishing Limited, 2003.
- Written in Bones: How Human Remains Unlock the Secrets of the Dead* by Paul Bahn, Firefly Books, 2003.
- Outside and Inside Mummies* by Sandra Markle Walker, Books for Young Readers, 2005.

Ok, you hear the word mummy and you think of a King Tut or a scary movie about a stiff-legged walking Egyptian bundle of dirty bandages. Just for the record, there are a lot of other types of mummies that have been intentionally, or accidentally processed in sand, tar, mud, freeze-dried in a cave, or sacrificed in a bog. Even the recently discovered mammoth in Siberia is considered a mummy. Not to be mistaken for a fossil or skeleton, which have no remaining flesh, organs or muscles preserved, a mummy is simply a preserved old dead body (animal or human). - To learn more about mummies go to - <http://library.thinkquest.org/J003409/>

**Websites**

- <http://www.nationalgeographic.com/emerging/constanzaCeruti.html>
- <http://www.wingsworldquest.org> - Explorers archive
- [www.crystalinks.com/incan.html](http://www.crystalinks.com/incan.html) - Incan Empire
- <http://www.42explore2.com/inca.htm>
- <http://www.blueplanetbiomes.org/andes.htm> - all about the andes range

**Word Of Advice For Future Explorers**

The world is full of wonders and life is a precious opportunity to discover them. My advice for young people is that it is very important to study hard and become educated in order to face the challenges of adult life. Opportunities always come if you follow your heart and you are well prepared !



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# The Art of Exploration

EXTRAORDINARY EXPLORERS AND CREATORS INSPIRE US ALL TO REACH OUR OWN POTENTIAL



• mummy • archaeology • archaeological site • artifact • catalogue • excavate • in situ • ice axe •

## Dr. Constanza Ceruti, High Altitude Archaeologist

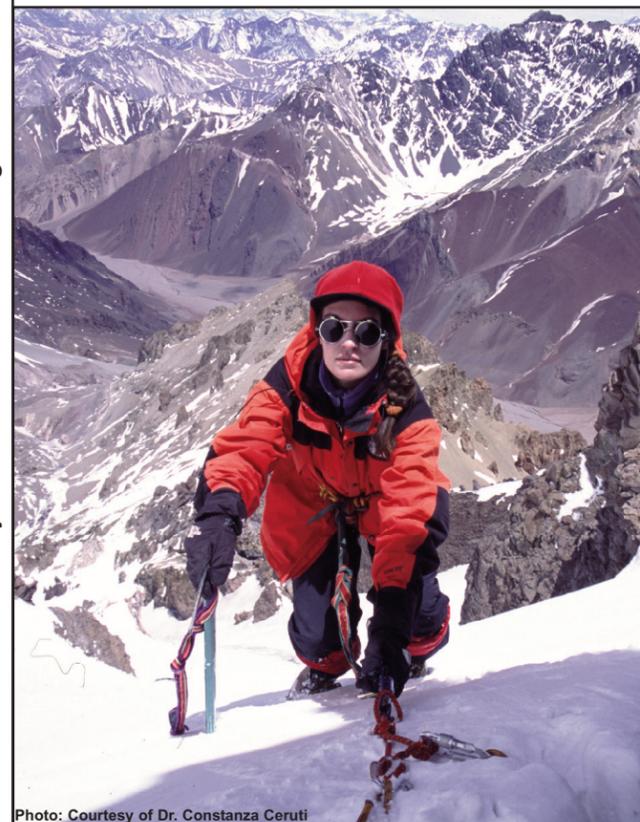


Photo: Courtesy of Dr. Constanza Ceruti

Dr. Constanza Ceruti, an Argentinian archaeologist, is the only female high altitude archaeologist in the world. She has climbed over 100 mountains above 16,500 ft. in the Andes to search for Incan mountaintop ceremonial sites. On the summit of the volcano Llullaillaco (22,100 feet), she discovered three frozen Incan sacrificial mummies buried with gold and silver statues, making this the highest archaeological site on earth. She is a professor of Inca Archaeology and director of the Institute of High Mountain Research at Catholic University of Salta. She has received multiple high honors for her academic, mountaineering and exploration achievements, including the prestigious 2007 Wings WorldQuest Women of Discovery Award for Courage.

Archaeology is the scientific study of peoples of the past... their culture and their relationship with their environment. The purpose of archaeology is to understand how humans in the past interacted with their environment, and to preserve this history for present and future learning.

I was born and raised in Buenos Aires, the capital of Argentina. My parents had thousands of books and I would spend most of my time after school reading and learning about the ancient civilizations. I dreamt of

becoming an archaeologist and of living and working near the mountains, sharing the traditional lifestyle of the native people. I had a chance to make this dream come true after I graduated from college when I moved to the village of Tilcara in the Andes of Northern Argentina.

**Anthropology is the science that deals with the origins, physical and cultural development, biological characteristics, and social customs and beliefs of humankind.**

In 1996, after six years of studies, I graduated as an anthropologist with an expertise in Archaeology. I got interested in the field of high altitude archaeology because of my love of mountains and ancient civilizations. I was specially fascinated by the frozen mummies of the Incas. I owe my inspiration to the pioneers in the study of Inca mountaintop shrines: an Argentine archaeologist, Dr. Juan Schobinger, as well as Dr. Johan Reinhard, who is an explorer of the National Geographic Society.

I have climbed over 100 mountains above 16,500 feet searching for archaeological sites in the Andes. I have written dozens of scientific publications about my discoveries and six books. I am very proud to say that I was twice on the summit of Aconcagua (6.962 meters above sea level), which is the highest mountain in the western hemisphere.



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Photo: Courtesy of Dr. Constanza Ceruti

My most famous discovery occurred in 1999-2000 when I was project co-director in four of Johan Reinhard's archaeological expeditions to the mountains of Argentina funded by the National Geographic Society. On the summit of volcano Lulllaillaco (22,100 feet) - the site of the highest archaeological work ever undertaken - Dr. Reinhard and I discovered three of the best preserved mummies in the world. Now I am exploring peaks above 20,000 feet in the mountains of La Rioja, in the northwest of Argentina. I am also learning about the rituals in the Andean native societies who still worship the mountains as sacred. I have studied mummies and climbed mountains in Nepal, Himalayas, India, Egypt, Turkey, Greece, Greenland, Australia, Polynesia, United States, Italy, France, and Mexico.

**"When you are privileged to see a mummy face-to-face, it's no longer just an archaeological find, it's like meeting somebody—a bridge to the past." Dr. Constanza Ceruti**

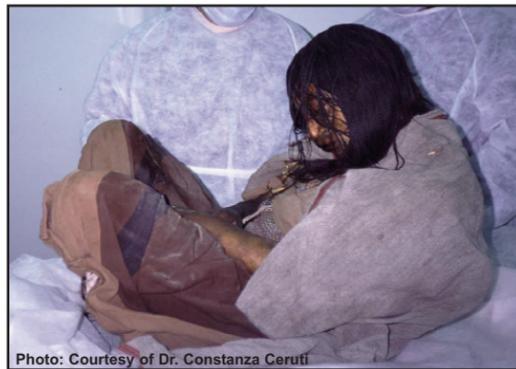


Photo: Courtesy of Dr. Constanza Ceruti



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**The ice of the snowcapped peaks has always been a precious source of water to make life possible in the Andes. The Quechuas fear that once the ice is gone, the Lord of the Star of Snow will no longer listen to their prayers. In the glacial heart of the Andes, the impact of global warming reaches beyond the imaginable, says Dr. Ceruti. (Quechuas - several ethnic groups, including Inca, that live in South America and speak the Quechua language)**



Machu Picchu, Peru

**Facts**

The Andes is South America's longest mountain range forming a continuous chain of highland along the western coast of South America. It is over 7,000 km (4,400 miles) long and 500 km (300 miles) wide. The Andes mountain range is the highest mountain range outside Asia, with the highest peak, Aconcagua, rising to 6,962 m (22,841 ft) above sea level. The summit of Mount Chimborazo in the Ecuadorean Andes is the point on the Earth's surface most distant from its center, because of the equatorial bulge. The Andes is not as high as the Himalayas, but is more than twice as long.

**Lulllaillaco Sacred Mountain**

For hundreds of years the people of the Andes thought of the high mountains as sacred because the glaciers and snow on the peaks provided life sustaining water to the arid lands far below. The Incan people believed that sacrificed children could take messages to the mountain spirits to ask for the good health of the Inca leader and for a plentiful supply of water to ensure the fertility of the llama herds and the abundance of the crops.

In Quechua, the language of the Incas, the name of this sacred mountain, Lulllaillaco, means "that lies about water, or hides the water". Lulllaillaco is the only mountain in the area to have a permanent ice field on its high slopes and, at 18,000 feet, there is a hidden lake. About five hundred years ago people sacrificed three children: a six year old girl, the fifteen year old maiden, and a seven year old boy. Constanza Ceruti and her team unearthed their frozen mummies. They are some of the three best preserved mummies ever discovered and look as if they had just died. Ceruti recalled, "when we found the mummies, I remember a profound silence falling over the group. It is so humbling to look into the eyes of another human being from half a millennium ago."

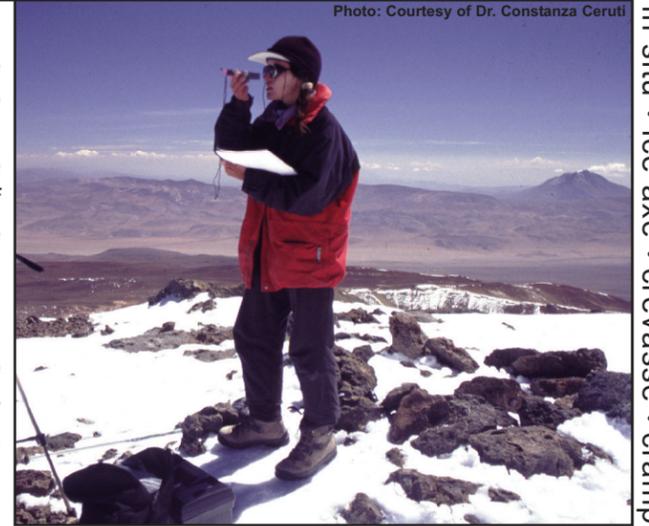


Photo: Courtesy of Dr. Constanza Ceruti

**"These mountains are so remote," she said. "Not only am I often the first archaeologist on the site but the first modern person to arrive since the Incas. It's amazing to enter a sacred place where I know the last human footsteps were those of Inca priests."**



Ceruti climbs and surveys as many mountain peaks as she can because the ancient sites are threatened by humans and climate change. Looters are searching for them, too, and destroying the sites searching for gold and silver. Global warming is melting the ice. Ceruti joined the annual pilgrimage of the Star of Snow and witnessed the devastating effect the retreating glaciers have on the religious life of the Andes. Every year during the month of June about 70,000 people gather at the glacier Sinacara at the foot of a snowcapped peak Qolque Punku, or the Silver Gate. The glaciers that come down from Qolque Punku are ritually climbed during the festivity, in search of sacred ice that is revered for its healing properties. Young men called ukukus or "bear-men" climb up to the glaciers at night, braving the freezing temperatures, the crevasses, and the fear of the ghosts of the condemned souls, in order to retrieve the sacred ice that will bring health and fertility to their households.

Traditionally, the bear-men would extract large chunks of ice - as big as they could carry on their backs - and return to their home communities, where the ice would be distributed among the villagers as a powerful material symbol of the blessings from the Apus. But sadly, things have started to change in the last few years, and global warming is to be blamed. Now the bear men descending the glaciers of Qolque Punku are coming down the mountain empty-handed because taking the sacred ice is no longer permitted; pilgrims are only allowed to collect melted ice in small water bottles that they can take home as substitute relics. Still pilgrims, including children, climb up the lower sections of the glaciers in daylight to light candles on the ice. Bare footed, knelling on the snow, they may stay for hours watching the candles burn.

**"For me, studying these sacred summits is a life commitment. There's something about being up here that is phenomenal-scientifically, culturally, and spiritually."**