

discovery of tuberculosis in a Chiribaya mummy  
www.geocities.com/Athens/Olympus/4932/eng\_idx1.html – A short page  
from Sonia Guillen at Centro Mallqui with some interesting pictures.

## Other Resources

### For students:

Boehm, David A. Peru in Pictures. Lerner, 1997.  
Buell, Janet. Ice Maiden of the Andes. Twenty-First Century Books,  
1997. (Though not specifically about the Chiribaya mummies, this is an  
intriguing look at another recently discovered South American  
mummy).  
Falconer, Kieran. Peru (Cultures of the World). Benchmark, 1996.  
Getz, David. Frozen Girl. H. Holt, 1998. (see the note to the book by  
Janet Buell)  
King, David C. Peru: Lost Cities, Found Hopes (Exploring Cultures of  
the World). Benchmark, 1997

### For adults:

Bankes, George. Peru Before Pizarro. Phaidon, 1977  
Bruhns, Karen Olson. Ancient South America (Cambridge World  
Archaeology). Cambridge Univ. Press, 1994.  
Buikstra, Jane E., ed. Prehistoric Tuberculosis in the Americas.  
Northwestern University Archeological Program, 1981.  
Davies, Nigel. The Ancient Kingdoms of Peru. Penguin, 1998.  
Lanning, Edward P. Peru before the Incas. Prentice-Hall, 1967.  
Lumbreras, Luis G. The Peoples and Cultures of Ancient Peru.  
Smithsonian Institution Press, 1974.  
Mason, John Alden. The Ancient Civilizations of Peru. Penguin Books,  
1968.  
Rice, Don S., et. al., eds. Ecology, Settlement, and History In the  
Osmore Drainage, Peru. B.A.R., 1989.  
Von Hagen, Victor W. The Desert Kingdoms of Peru. Weidenfeld and  
Nicolson, 1965.

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P R E S E N T S

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## MUMMIES AND PYRAMIDS: EGYPT AND BEYOND

Pyramids and mummies—for nearly everyone, the words evoke images of ancient Egypt. And yet those intriguing cultural artifacts are by no means unique to the Land of the Pharaohs. As *Mummies and Pyramids: Egypt and Beyond* vividly demonstrates, mummies and pyramids are to be found in the Americas. Indeed, the oldest mummies in the world—and some of the most sophisticated anywhere—come not from the Nile Valley but from the Atacama Desert in Chile. As archaeologists have begun uncovering the mysteries of the New World pyramids and mummies, they have brought to light heretofore underappreciated or misunderstood cultures—societies whose creations and customs inspire awe, shock, and wonder.

## THE DESERT MUMMIES OF PERU

The ancient people known as the Chiribaya, who lived in what is now Southern Peru, represent one of the least known of the ancient people of the Americas—even to the modern inhabitants of the land in which they lived. But slowly archaeologists are piecing together clues about this ancient people's past. They're doing this by removing from the desert's barren slopes the Chiribaya's mummified remains—and in their case, speed is as important as science. Archaeologists are often a step behind looters searching for treasure.

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## Secrets of the Desert

Virtually nothing remains of the buildings that housed the Chiribaya, an ancient South American people whose culture flourished in southern Peru some 1,000 years ago. With great ingenuity, the Chiribaya created a thriving society in one of the harshest environments in the world—the Atacama Desert, a place so dry that in some areas rainfall has never been recorded. And yet the very severity of the climate has proved a boon to anthropologists who study these intriguing people; the aridity of the desert, it turns out, has enabled the preservation of hundreds of mummified bodies—mummies not deliberately created but produced naturally by the sand. These bodies, carefully examined using state-of-the-art techniques, reveal a vibrant people, one who fashioned beautiful artifacts, buried their dead with reverence, and lived in a world of color, music, and love.

## Vocabulary

**bioanthropology** – The study of biological material recovered from archaeological sites.

**carbon-14 dating** – A method of dating objects by measuring the decay of radioactive carbon-14. Used to date Chiribaya remains.

**Chiribaya** – Ancient South American people who flourished in the Ilo River Valley of southern Peru between A.D. 950 and 1450.

**coca** – A South American shrub that produces coca leaves, which are the source of cocaine, an addictive drug that induces euphoria. Coca was a sacred plant among the Chiribaya, who used the leaves in rituals. Coca leaves have been found inside Chiribaya mummies.

**endoscope** – A flexible metal tube with a light and a minuscule camera lens at the end that is used in medical procedures to visualize the interior of a hollow organ. Used to examine the interiors of Chiribaya mummies.

**llama** – A South American mammal related to the camel. Used in the Andes as a pack animal and source of wool.

**pre-Columbian** – The name given to the period before the arrival of Columbus and the Spanish in the Americas in 1492.

**tuberculosis** – A communicable disease characterized by symptoms that primarily affect the lungs. Discovered in the Chiribaya mummies.

## Important People

**Beckett, Ronald** – Chairman of the department of Cardiopulmonary Sciences and Diagnostic Imaging and co-director of the Bioanthropology Research Institute at Quinnipiac University. He

pioneered techniques for X-raying mummies in the field and used them to study the Chiribaya.

**Buikstra, Jane** – Professor of anthropology at the University of Mexico and member of an international research team that studies the Chiribaya and is based at the Centro Mallqui Research Complex in Peru.

**Carpio, Gerardo** – Field director of the research team at the Centro Mallqui Research Complex.

**Conlogue, Jerry** – Co-director of the Bioanthropology Research Institute at Quinnipiac College.

**Guillen, Sonia** – Anthropologist who studies the Chiribaya culture; director of the Bioanthropology Foundation in Peru and president of the Peruvian Association of Biological Anthropologists.

**Walker, Roxie** – Member of the Centro Mallqui research team that studies the Chiribaya.

## Important Places

**Alta** – Chiribaya burial site near Baja.

**Atacama Desert** – One of the driest places in the world, a desert that extends 600 miles from southern Peru through northern Chile.

**Baja** – Site in southern Peru where archaeologists are uncovering Chiribaya burials. Nearby is the Centro Mallqui Research Complex, which houses remains of the Chiribaya.

**El Descanso** – A Chiribaya burial site near Baja.

**Ilo River** – River in southern Peru, site of the Chiribaya culture.

**Osmore River** – Another name for the Ilo River, which is also known as the Moquega River.

## Important Dates

**900–1450** – Date of the Chiribaya culture.

**1350–1450** – Approximate date of the death of the Chiribaya mummy as determined by carbon-14 analysis of the coca leaves within it.

**1532** – The Spanish arrive in Peru.

## Things to Think About

• As Sonia Guillen explains in the episode, archaeologists try not just to recover artifacts and human remains, but also to reconstruct human activity and rituals. How do the discoveries that anthropologists make enable them to do that? What inferences and conclusions are they able to draw by examining such things as the contents of tombs and the

position and condition of the bodies?

• One of the greatest problems confronting the anthropologists who study the Chiribaya is the action of looters who find the tombs and remove the treasures. Since these artifacts are not destroyed but are eventually sold, what harm do looters do? What are some ways that looting can be discouraged?

• The Chiribaya wore hats decorated with feathers from tropical birds that may have come from more than 300 miles away. What does that tell you about the level of their society? How do you think they were able to obtain such items?

• Archaeologists who study the Chiribaya find not only the mummified remains of humans, but also of llamas, which indicates that the Chiribaya had an extremely high regard for these animals. Why do you think that was so? In what way were llamas so important to the Chiribaya? What other ancient peoples can you think of that relied heavily on certain types of animals?

• In the episode, Sonia Guillen says, “There’s something we can learn from these people that a thousand years ago, from this very tiny oasis, could get enough resources not only to survive, but to live peacefully and surrounded by color, by art, by music, by love.” In what way does the study of a vanished society, such as the Chiribaya, enable us to learn things that can help us today?

## Internet Resources

[discoverychannel.discoveryeuropa.com/features/desertmummies/latest\\_roman.html](http://discoverychannel.discoveryeuropa.com/features/desertmummies/latest_roman.html) – From the Discovery Channel, a site specifically on “The Desert Mummies of Peru.”

[www.bioanthro.ac.in/](http://www.bioanthro.ac.in/) – A site (still under construction) from the Bioanthropology Foundation, which established and maintains Centro Mallqui.

[www.howstuffworks.com/carbon-14.htm](http://www.howstuffworks.com/carbon-14.htm) – An interesting page on “How Carbon-14 Dating Works.”

[www.sscnet.ucla.edu/ia/people/stanish/BARI989-2/](http://www.sscnet.ucla.edu/ia/people/stanish/BARI989-2/) – A scholarly paper entitled “Ecology, Settlement and History in the Osmore Drainage, Peru.”

[members.aol.com/OwenBruce/pots1.htm](http://members.aol.com/OwenBruce/pots1.htm) – Excellent pictures of Chiribaya ceramics.

[members.aol.com/contisuyo/VirtualMuseoE.html](http://members.aol.com/contisuyo/VirtualMuseoE.html) – A page from the Museo Contisuyo in Moquega, Peru, that contains some information on the Chiribaya, with pictures.

[perso.cybercable.fr/donnet/News67.htm](http://perso.cybercable.fr/donnet/News67.htm) – A page on “Exceptional Mummies in the Country of the Inca,” with information on Sonia Guillen’s Chiribaya research.

[www.time.com/time/magazine/archive/1994/940328/940328.science.html](http://www.time.com/time/magazine/archive/1994/940328/940328.science.html) – A good article from Time magazine on the importance of the