

Skeleton Crew

Excavating & Preserving the Past in Chile

By Patricia A. Martinelli '78

Patricia A. Martinelli '78 is employed as Historic Preservation Specialist for Batsto Village, a nationally recognized historic site. Martinelli is pursuing her master of arts degree in professional studies through Thomas Edison State College.

After 12 years spent excavating burial grounds and prehistoric communities in her native Chile, Rowan Professor Maria Rosado earned the confidence of the Chilean government and the opportunity to invite a Rowan undergraduate to join her work team in the Andes. In one extraordinary extracurricular month last summer, a seasoned scholar and an enthusiastic student illustrated together the best of what a Rowan education offers.

Her friends call her “The Bones Lady.” They tease that she is more comfortable working with the dead than the living. But Maria Rosado doesn’t mind their good-humored digs. “Some people think I’m a little bit morbid, that I love to be around dead people all the time,” Rosado acknowledged. “But it’s the information the skeletons provide that’s important. They’re travelers from the past and they deserve every respect.”

An assistant professor of geography/anthropology at Rowan, The Bones Lady gained her nickname after she began spending summers in her native Chile, cataloguing and studying the collections of skeletal remains in the Museo Arqueologico de La Serena and the Museo del Limari. Since 1988, Rosado has enthusiastically volunteered part of each summer to perform research at each museum into Chile’s rich, ethnically diverse past.

Although in the minority as a female professional, Rosado’s solid, long-standing relationship with her South American colleagues recently earned her a position as an adjunct investigator. As a result, she no longer must have a formal invitation to conduct the research but is simply made welcome when she returns—an extraordinary reception not offered to many Americans.

In an unprecedented arrangement with

Rosado, the Chilean government permitted her to bring a Rowan undergraduate to assist with her work. Heather Schiffer, a senior geography major/anthropology minor, volunteered, even paying her own way. What inspired Schiffer to give up the comforts of home to travel to South America? “I have always been intrigued by ancient cultures, partially because of Dr. Rosado’s classes and also through my own research and travel. I thought immersing myself in a new culture while learning about an ancient one would be a unique learning experience,” she said. “So, I quit my management job of six years, left behind my husband of less than a year, and went on the adventure of a lifetime.”

Before starting on her adventure, Schiffer underwent a crash course in some of the more pragmatic aspects of archaeology. Under Rosado’s direction, she worked



A Diaguita grave yields a fairly well-preserved skeleton which Rosado’s team tags before collection.

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with a box of bones, some articulated, some not, to learn some basic skills in recording and osteology—how to tag and recognize the different bones. Schiffer also studied Spanish and read books assigned by Rosado not only about their work but about the country they would live in for one month. “Although I have traveled frequently, this was the first time I stayed in one place with the people who live there instead of in a hotel,” she said.

Schiffer soon discovered how important Rosado’s research is in Chile. Rosado, one of a small number of anthropologists who specialize in paleopathology, the study of ancient diseases, is especially welcome in Chile for her expertise in identifying patterns of diseases and their frequencies among ancient civilizations. By studying bones, the Rowan professor can uncover a number of different biological factors that have affected humans through time. Not only can she determine whether an individual has suffered any serious diseases, she can ascertain that person’s sex and how well she or he ate. These are all important statistics that she plans to incorporate into her research project, “Archaeology in Chile:

Paleopathology of a Diaguita-Inca Cemetery from Puclaro, Chile’s Semi-arid North.”

In classes at Rowan, Rosado’s lectures about her work in Chile help illustrate the importance of understanding the culture and biological adaptations of the western Chilean populations. She hopes that the data she compiles will help explain the effect that farming had on the nutrition and health of prehistoric populations in the region. Chilean anthropologists today want to know whether nutrition and health improved when farming was introduced into past cultures or if the reverse was true because the food supply became limited to what was grown. Rosado knows that piecing together such parts of the past

will provide valuable information to Chileans on the way current living conditions developed.

Stretching approximately 3,999 miles along the west coast of South America from Arica to Cape Horn, Chile is only slightly larger than the state of Texas, with a total land area of about 292,000 miles. Roughly 110 miles wide and interrupted north to south by the Andes Mountains, its terrain includes the heights of the Andes to semi-arid desert. Rosado and Schiffer stayed in La Serena, the remote seaside resort where they boarded with Rosado’s family and friends.

Knowing the rigors of fieldwork at excavation sites and in museum laboratories, Rosado was delighted with her



In a Rowan lab, Schiffer studied skeletal models with Rosado to prepare for her fieldwork in Chile.

student’s enthusiasm for the work. In Chile, the two women frequently spent 10-hour days in the lab, cataloguing skeletal remains and documenting other evidence from archaeological excavation sites. Unfortunately, the rains that drench the country once every four or five years picked that summer to appear, literally washing away the opportunity to dig at a site in the Andes Mountains. Adjusting to the change in plans, they made limited visits to the site just to survey and photograph it and collect samples of anything already exposed, then worked mostly in the museum.

Rosado’s respect for her prehistoric subject matters affects everything about her work, and she was reassured that

Schiffer had the needed maturity to be trusted with the human remains. “You have to have a sense of reverence for the remains to work with them,” Rosado said. “When you hold them, there is a sense of gravity, that after thousands of years they could turn to dust in your hands.”

While Rosado primarily focused on the skeletal collections that date back anywhere from 500 to 3,000 years, Schiffer divided her time between assisting Rosado and researching the artifacts in the museum’s collection, some of which dated back approximately 7,000 years. Among her other responsibilities, Schiffer cleaned, assembled and tagged the bones and determined the sex of a skeleton, using appropriate registry procedures.

Although she has been working in Chile for more than 10 years, Rosado’s zeal for her project has not faded. Every discovery only raises more questions that she is determined to answer. Schiffer became equally fascinated with the work as she assembled skeletal fragments to form the bodies of ancient tribespeople. She respectfully cleaned the smallest bones and placed them like puzzle pieces with larger ones until a whole form began to take shape. “I observed the consequences of both proper and improper conservation and

preservation procedures, which can have monumental influence on future research,” Schiffer said. “I enjoyed conserving and preserving the skeletal remains enough to consider a career in aqua-archeological preservation.”

While Schiffer’s limited Spanish occasionally proved a stumbling block, Rosado was usually on hand to translate. When her professor wasn’t available, Schiffer improvised. Besides keeping a notebook of Spanish terms, Schiffer and a Chilean coworker communicated via computer—he typed in Spanish, which a software program translated into English; she would respond in reverse. In some cases, Schiffer drew a picture or mimed what she needed to know.



In the lab in Museo del Limari, Ovalle, Schiffer cleaned and tagged remains to be kept in the museum collection.

Everyone was impressed by Schiffer's eagerness to learn and interact. "In the museum, she taught them English and they taught her Spanish," Rosado said.

According to Rosado, the Chilean government is conscientious about protecting the past. Although construction and other development are going on in the region, all work ceases when a discovery is made. "A lot of the stuff that is found is found by agriculturalists and people who are building homes," Rosado said. At Puclaro, a recently constructed dam will cause water to rise over one of the sites designated for excavation, so Rosado and her colleagues have only one year to gather remains.

To promote awareness of archaeological discoveries, the government regularly hosts seminars that are open to the public. Rosado and Schiffer attended a session held at a local senior citizens' community center where archaeologists displayed different artifacts and explained their historical value. "That's a very important thing that they're doing—reaching out to the community," said Rosado, who has lectured at a number of seminars during previous visits. Rosado has also given museum tours for children and lectured to more than a hundred of Chile's police detectives to enhance their forensic education.

In addition, the government is interested in attracting scholars from other countries to exchange ideas and infor-

mation with the staff at different museums. Rosado's own contributions began as part of the requirement for her doctoral degree in anthropology from Rutgers University. Although she was excited by the work, it was difficult being away from her husband, Victor, and her son, James, for months at a time. But Victor encouraged her interest and persuaded her to continue working in the country where she was born, even after she obtained her degree. Now 15, James has joined the excursions in recent years and helps with basic tasks.

June might sound like an ideal time for an extended stay in Chile but it's the middle of winter in South America. "It rained severely the day before we arrived in La Serena," Rosado said. The prohibitive cost of kerosene and electricity used to run space heaters meant their hosts rarely used such luxuries, but Schiffer kept a positive attitude and adjusted. "People just put up with it," Rosado said. "They sleep in layers of clothing."

Despite sacrificing heat in their residences, the Rowan team's hosts had other modern conveniences available. "Some of the homes had computers in them, so we were able to e-mail family and friends in the U.S.," Schiffer said. During her time there, Schiffer created a detailed travelogue of letters and sketches that served as a basis for a presentation she gave upon her return to Rowan.

Although they worked long days,

Rosado and her son occasionally took Schiffer sightseeing. They took a day trip to the Andes Mountains, and another to The Enchanted Valley to see unusual, natural rock formations. One of Schiffer's favorite memories was a boat trip they took into the harbor on a rare, sunlit day. "We got a fisherman to take us out to a rock where sea lions were," she recalled. "It was amazing. At first, the sea lions weren't doing anything but then we started calling to them and they answered us."

Their explorations gave Schiffer a tourist's view of Chile but she was equally eager to learn about everyday life in their small resort town. According to Rosado, "She got a taste of the place, a taste of the food but, most of all, I think she got a taste of the friendship people wanted to establish." Schiffer agreed. "The people were very generous," she said.

Rosado has already started organizing next summer's trip and Schiffer plans to be one of her assistants, along with senior Stacey Lodge, another geography major/anthropology minor. In the interim, Schiffer will brush up on her Spanish and study more about Chile's ancient cultures. Rosado is delighted that Schiffer plans to return. "Heather was the first student I brought—she was the guinea pig," Rosado said. "I know she made a good impression and that's important. The museum officials at La Serena are eager to have more students come here and get the same experience."

"I'm really excited about the prospect of going back," Schiffer said. "As a seasoned traveler, this was a totally unique experience. I now have a better appreciation for the dedication and infectious passion that Dr. Rosado has for understanding the past through skeletal remains. The memories will last me a lifetime. I will be forever grateful." ■