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A Path With Heart - ASL in Chiapas

In June, MEC proudly launched a new experiment in travel. High school students from the American School of London came to Chiapas with a willingness to experience the realities of life that most travelers shun. The students wanted to do more than observe. They were committed to lending a hand by performing a needed community service. Being an exceptionally sociable lot, they were also intent on making friends.

Anita Smart of The Pathways Project coordinated service activities with Yashalum, a Maya grassroots organization that provides scholarships and dormitory space for rural students wishing to attend the regional high school located in the mountain town of Yajalon. In this beautiful but impoverished coffee-growing area, Yashalum also sponsors organic agriculture projects and builds Larena stoves, which are designed to alleviate the chronic lung diseases caused by household cooking fires. The goals of ASL and Yashalum were a perfect fit.

The ASL students spent two long days laboring in the hot sun, mixing cement, carrying cinder blocks, and hauling water from nearby streams. To put the finishing touches on the stove tops, the girls danced on the wet cement, packing it down with their bare feet. During breaks, they played with the local children. In gratitude for their work, the women of the hamlet prepared a chicken soup. As one of the students commented, “It was the first time seeing a chicken running around, chased, caught, killed, cooked, and eaten in a few hours’ time.” In the evenings, the English- and Maya-speaking students overcame the language barrier by playing basketball and soccer and challenging one another to a hilarious break-dancing contest. No one could equal the amazing dancer from Yashalum. The following day all the student traveled to Tonina, and at their first thrilling sight of an ancient Maya ruin, they climbed the height of the great pyramid together.

During their two-week journey, ASL stu-Continued on page 8
Welcome to the 13th edition of ArchaeoMaya! A MEC benchmark indeed worth celebrating. This summer featured eight travel courses, more than we had in our entire first year of existence. Read all about them in this edition of ArchaeoMaya.

One of the biggest pieces of news this summer is the announcement that MEC will be assuming the publication of “Mayan Calendar.” The calendar promises to be a great new way for us to share our discoveries with the public while at the same time supporting our ongoing research. Read more about the switch over on page 8 of this issue.

Personally, the Chautauqua courses in Peru were the highlight of my summer. Cuzco, Machu Picchu, and the Sacred Valley were beyond my expectations, both in beauty and inspiration. The amount of research still to be done there challenges the mind and spirit.

This summer marked our first journey to Peru, but certainly not our last. I’ve begun to think that Maya Exploration Center might be too narrow a name for our organization!

Although we have several travel courses coming up, including one study abroad course for students of Midland College, this Fall will largely be devoted to writing, thinking, and planning for 2008. A number of research papers and grant proposals are on the “to do” list, and we’re happy to have the time. After all, research as well as education is part of MEC’s mission.

Readers of this newsletter can expect some new website features and services from MEC in the coming year. If this summer was any indication, 2008 will be a year in which we take our public outreach programs to a new level. Thanks to all who have supported us in this truly grassroots education and research effort.

Sincerely,

Letter from the Director

A Teotihuacan Armed Invasion?

In the August editions of Archaeology Magazine and National Geographic, new theories of Teotihuacan’s relationship with the ancient Maya have been presented as facts. Citing evidence at Waka (El Perú), Tikal, and Uaxactun, the articles say that an army of Teotihuacanos, led by a great war captain named S’iyah K’ak’, “Fire Born,” marched down from central Mexico to subdue and dominate the lowland Maya of Peten in the late fourth century. While hieroglyphic texts mention the arrival of S’iyah K’ak’, and contemporary executions of Maya royalty support the idea of political intrigue, inferring that a conquering army arrived is thought by many scholars to be pushing the envelope. A Teotihuacan army would have been armed with vast amounts of the signature green obsidian mined from their quarries, but to date less than a shoe box full has been found in the entire Maya region. Be that as it may, archaeology is driven by the creation and testing of hypotheses. This controversial hypothesis of Teotihuacan’s armed invasion is one that can and will be tested in the field over the next few years.

A Teotihuacan Armed Invasion?
Three MEC Study Abroad Courses in May

**AIMS Community College in the Yucatan – May 12-18**

Anthropology professor Roger DeWitt, a regular participant in Dr. Barnhart’s Chautauqua courses, decided to bring his students along this year on a field trip to the Yucatan. Evening lectures by Christopher Powell provided a thorough grounding in ancient Maya civilization. Adventures during the week included bike-riding through the ruins of Coba, exploring Chichen Itza, and climbing the acropolis at Ek Balam. A stay in Valladolid gave the class the opportunity to observe life in a modern Maya community. There was just enough time for a swim in the cenotes and a quick study of tourist culture in Playa del Carmen. The course was enjoyed by all, and Dr. DeWitt plans to bring another group of Colorado students to Mexico in 2008.

**MSSU in Chiapas – May 16-23**

For the fourth year in a row, Professors Sam Claussen and Conrad Gubera led their Missouri students to Chiapas for a week-long immersion in Maya culture. This year they traveled in a wide loop throughout the state, starting in the steamy lowland jungle of Palenque and ending in the chilly mountains surrounding San Cristóbal de Las Casas. Along the way, they visited the great archaeological sites of Tonina and Chinkultik. Once in the highlands, the sociology majors got their long-awaited wish – to spend time among the living Maya. With Chip Morris and Carol Karasik as their guides, they gained an in-depth perspective on the traditional societies of Chamula and Zacacantan, visiting the churches, shrines, and private homes of weavers, shamans, and religious officials. On the final day of the course, they boated through one of Mexico’s greatest natural wonders, the Sumidero Canyon. All in all, a fascinating educational pilgrimage for the students of Missouri Southern State University.

**Millersville University in the Yucatan – May 19-25**

For the second year, Professor Ximena Catepillan brought her math class down to the Yucatan. Christopher Powell was their instructor, and the subject was one of his favorites – Maya mathematics. Powell’s evening lectures laid the foundations, while architectural studies at the ruins of Coba, Chichen Itza, and Ek Balam revealed the subtle application of ancient geometric principles. Back in Playa del Carmen for their last day, the students tested their knowledge in a friendly game of “Maya Quiz Bowl.” Over a traditional Maya dinner, everyone discussed how much they had learned during the week. Millersville’s third travel course is already scheduled for the same time and place next year.

**Pillars of the Classic Maya : Palenque to Tikal A MEC Thanksgiving Tour November 17-25, 2007**

This eight day tour will take you between two of the major capitals of the Ancient Maya world, Palenque and Tikal. Running over the Thanksgiving Holiday week, the journey will begin with Palenque in Southern Mexico and make its way through ruins, rain forests, and indigenous towns to the border. Crossing the Usumacinta River into Guatemala, you’ll arrive to the island of Flores in time to settle in and watch the beautiful sunset over Lake Peten. Thanksgiving is the following day, and the group will dine on wild turkey, Maya style! The entire next day will be dedicated to exploring and learning about Tikal’s vast metropolis. Along the journey back to Mexico, you’ll visit the remote ruins of Yaxchilan, accessible only by boat. This tour will be led by Archaeologist Christopher Powell. To learn more, log on to: [www.mayaexploration.org/tours.php](http://www.mayaexploration.org/tours.php)
The sciences and mathematics of the New World are our chief passions, and communicating our findings is among our main goals. The annual summer Chautauqua program, sponsored by the National Science Foundation, is the perfect opportunity for us to realize our mission. In the true spirit of the program, we get to share information with top professors in the field and do a little research along the way. The scholars who accompany us year after year have bonded together and become a traveling summer community of dedicated colleagues and friends. Led by Dr. Ed Barnhart, this summer’s courses were the most rewarding.

Ancient Inca Mathematics and Culture in Peru – June 9-23

Interest in the ancient civilizations of Mesoamerica has always run high, but this year, when Ed Barnhart offered a travel course to Peru, the response was overwhelming. Professors eager to learn about Inca mathematics and culture filled the rolls within two days. As the waiting list grew, it was decided to offer a second session, to be held one week later. In all, 44 professors joined Ed Barnhart and Christopher Powell for seven days of study and travel in the Andes. By the third day everyone was up for serious walking, starting at the heart of the heart of the Inca Empire, the Coricancha, or “Golden Enclosure.” Once the principle temple of Cuzco, the structure now stands within the precincts of a Spanish church and monastery. The Coricancha’s temple walls were so strong that the Spanish decided to build around it rather than raze it. Another colossal structure, Sascahuaman, still commands a barren slope on the northern edge of Cuzco. As the group walked beneath its monolithic walls, they marveled at the immense, 100-ton stone blocks that form this gray, impenetrable fortress. How were the stones moved there and so perfectly fitted? The answer remains one of the great mysteries of the ancient world.

At dawn the next day the group departed for Machu Picchu. Winding down the deep canyons of the Sacred Valley, the train slowly descended to 8000 feet and the dense rainforest that sheltered the ruins for centuries. Being at Machu Picchu near the solstice gave participants the rare opportunity to record the site’s solar alignments at sunrise and sunset. In addition, they took measurements of forty major structures. Analysis of the city’s geometric design and layout will be conducted this fall.

Leaving Machu Picchu after an unforgettable two-
day stay, the group continued traveling through the Sacred Valley to the massive Inca fortress of Ollantaytambo. Once again, participants marveled at the immense building blocks of the fortress walls. According to local legend, it was water, not stone, that warded off the Spanish. As the enemy approached, the Inca brilliantly diverted the waters rushing through their irrigation canals and flooded the advancing Spanish army.

At the final dinner that night, discussions were lively. As often happens, the conversation turned to the question of where the course should be held next year. A unanimous show of hands made it decisively clear – Lake Titicaca.

Plants and Animals of the Ancient Maya World, Quintana Roo, Mexico – July 7-13

A few weeks later, and a half a continent away, half a dozen earthbound scientists set off to explore the exceptional flora and fauna of Quintana Roo’s flat and waterless terrain. As blue Caribbean waves lapped the shore of Puerto Morelos, just south of Cancun, Ed Barnhart presented an introductory lecture on the importance of plants and animals in ancient and modern Maya culture. With that, the group was ready to head for the wild interior. First they visited the vast ruins of Coba, shrouded in dense jungle. The same pristine forest is home to the nearby Spider Monkey Sanctuary of Punta Laguna. The following day they made their way south to Tihosuco, the birthplace of the 19th century Caste Wars. The rebellions were caused by the separation of Maya corn farmers from their ancestral lands. Forced to labor on giant sisal plantations, the people eventually rose up against their Spanish masters, inspired by the words of a talking tree in the shape of a cross. Carlos Chan Espinosa, Director of the local Caste War Museum, led the group on a personal tour. Several women, dressed in flowery huipils, gave a weaving demonstration and later explained the uses of medicinal herbs. For lunch, participants were invited into a thatch-roofed home for a meal of tamales, bean soup, and chaya, the world’s most vitamin-rich vegetable.

Leaving behind the modern Maya communities, the group traveled back in time to visit the archaeological sites of Chichen Itza and Ek Balam. The rampant images of serpents, jaguars, and birds, plump fruits and swirling vines, revealed the central role that nature played in ancient Maya myth and religion. As Ed Barnhart explained, throughout the Maya creation story, Popol Vuh, the miraculous deeds of the Hero Twins could not have been achieved without the aid of magical animals and plants.

Returning to Puerto Morelos, participants spent the final day visiting the Crococun regional zoo, where they reluctantly held juvenile crocodiles and fed surprisingly competitive deer. That afternoon they toured Puerto Morelos’ 64-hectare Botanical Gardens, the largest in Latin America. The group’s Maya guide was a proverbial font of knowledge, reeling off the names of every plant and its medicinal uses. His tour of the gardens was a perfect way to end the course – with a clear demonstration that a deep understanding of their environment is still alive and well among the Maya people of Quintana Roo.
Chautauqua Courses (Cont.)

Maya Archaeoastronomy in the Yucatan – July 15-22

This summer’s Chautauqua course on Maya archaeoastronomy revolved around a new theme – zenith passage. Zenith passage is the day when the Sun passes directly overhead and casts no shadow, an event that only happens in the tropics. Yet the date of zenith passage changes with latitude. In the Yucatan, the July zenith passage moves steadily south, day by day. And day by day our group of astronomers, chemists, and mathematicians “chased” the passage of the sun from site to site. MEC research associates Alonso Mendez and Carol Karasik, who have been at the forefront of our zenith passage studies, were there for the week to help guide and enlighten course participants.

The group first caught the zenith at the ruins of Dzibilchaltun, just north of Merida. There, local archaeoastronomers Daniel Ayala and Felipe Chan Chi explained how the Temple of the Seven Dolls functions as an astronomical observatory. Then, at high noon (one p.m. daylight savings time), the group gathered around a monumental stela and watched its shadow disappear.

That afternoon, participants had the special pleasure of being invited for a lavish lunch and lecture at the home of Sid Hollander, the man who created “Bars and Dots,” the first software program used to correlate the Maya calendar with our own. Just as Sid finished explaining the mathematics behind calendar correlations, torrential rains came pouring down, sending everyone scurrying for the van.

The group witnessed the next zenith passage at Chichen Itza. At one p.m. on July 18th, participants walked completely around the huge pyramid of El Castillo and saw with their own eyes that, yes, indeed, all four sides lay in blazing sunlight. Chichen Itza had just been named one of the “New Seven Wonders of the World,” mainly because of the solar equinox event when the shadow of a snake descends the northern balustrade of El Castillo. The pyramid is now renowned as an ancient solar clock. Despite the massive increase in tourism, Site Director Eduardo Perez graciously found time to accompany the group to the city’s ancient observatory, El Caracol, for sunset observations.

Our intrepid archaeoastronomers moved ever south, tracking the zenith passage. Next observation point: the ruins of Uxmal. As they spent the morning admiring the ancient city’s elegant urban plan and discussing the alignment of the Governor’s Palace to Venus, the noonday shadows were slowly disappearing. Circling the monolith that stands in front of the Temple of the Magician, the group saw the waning shadows vanish completely at one p.m., accurately marking the passage of the zenith sun.

Due homage was paid to other celestial bodies. Back in Merida, Ed Barnhart gave a lecture on the Venus Pages of the Dresden Codex. On the final day of the course, between visits to the Regional Anthropology Museum and the new planetarium, Spanish epigrapher and astronomer Juan Ignacio Cases presented his groundbreaking research on the Maya Lunar Series. Though some members of the audience got lost in the hieroglyphics, everyone understood that Cases has found a window into the occult methodologies of ancient Maya astronomy. Between brilliant guest speakers, romantic ruins, and breathlessly chasing the zenith, this summer’s Chautauqua course on Maya archaeoastronomy was filled with non-stop discoveries.
What’s in a Knot? The Ancient Inca Khipu

When Pizarro and his army arrived in Peru in 1531, they immediately encountered *khipus*. As the soldiers emptied the royal storehouses of food and supplies, a khipu keeper, or *khipukamayuc*, stood at the door, holding in his hands a cluster of knotted strings that hung from a simple cord, and as the reserved dwindled, he carefully untied the knots in one strand and tied new knots in another. The Spaniards developed a healthy respect for these strangely accurate recording devices. Through the use of khipus, the Inca had achieved the seemingly impossible task of administering an empire of over 10 million people. After the Conquest, khipus continued to play an essential role in the Spanish assessment of the empire’s resources and wealth. Of course, the viceroy had to rely on the khipukamayuc who read them aloud for transcription, because no Spaniard ever learned to read a khipu. After collecting as much information as they could, the Third Council of Peru declared them pagan objects and in 1581 consigned them to the flames. Knowledge of how to read them soon disappeared.

More than three centuries after the last khipukamayuc died, interest in the khipu reawakened when, in the 1920s, Leland Locke discovered that the khipus he had been studying in museum collections tallied numbers using a base-10 counting system. Although he proved that khipus were accounting tools, he had no idea what they quantified. Influenced by commentary in colonial documents, Locke concluded they were mnemonic devices and that their subject matter was known only to their makers.

Scholars who examined the Spanish chronicles more thoroughly were convinced that the knots recorded more than mathematics. According to the Guaman de Poma chronicle, khipu “letters” were carried by relay runners across the vast Inca empire to Cuzco, where they were read by the court khipukamayuc. And reportedly, the royal storehouses contained khipus that recorded centuries of Inca history. Apparently, khipus were more than accounting tools and mnemonic devices.

The khipu, according to current theory, was a fully elaborated writing system. Khipus are constructed in a variety of ways, with three different knot types, a spectrum of string color combinations, variations in the spacing of the strings along the primary cord, and various possibilities for attaching subsidiary strings. Marcia and Robert Ascher’s study of the individual design elements in over 200 khipus provides a better understanding of their mechanics and lends credence to the theory that khipus have all the complexities of a writing system.

Today’s leading scholar, Dr. Gary Urton of Harvard University, has expanded the Ascher’s sample set to over 400 khipus and has added new characteristics. His Khipu Database Project continues to grow as Urton gains access to private khipu collections and new archaeological data. Urton contends that because a third of the khipus in his database do not follow standard Inca math rules, they are not numerical in content. Perhaps his computer analysis and pattern recognition software may tease out the non-mathematical content eventually.

While Urton supports the premise that verbal language is encoded within the khipu, Frank Solomon has proposed another theory. To Solomon, the khipu is an example of semisography, a system of symbols, like musical notes or a circuit diagram, that are unrelated to language but are readable by memorizing the set of symbols and syntax rules. Solomon’s suggestion seems perfectly suited to the administrative needs of the multilingual Inca Empire. A semisographic system would also explain why so many early chronicles describe khipu reading as mnemonic.

Except for numerical data, the khipu system remains undeciphered. Such was the case with Maya hieroglyphics. Early scholars grasped the numbers and dates, but nearly a century passed before epigraphers finally cracked the textual code. Locke revealed the rules of khipu number systems in the 1920s, and if the pace of research follows that of Maya script, we can expect a breakthrough in this generation.

To learn more about khipus and Urton’s work on what may be the world’s most unique writing system, log on to www.khipukamayuc.fas.harvard.edu.
Chichen Itza Named “New World Wonder”

On July 7, 2007 an organization called New 7Wonders Foundation announced the results of their global contest to select seven new “wonders of the world.” The winners were chosen by popular vote, with the general public nominating their favorites via the internet. In the end, Chichen Itza’s El Castillo Pyramid was picked as one of the new seven, sharing the honor with the Great Wall of China, Taj Mahal, the Roman Coloseum, Petra, Machu Picchu, and Brazil’s Christ the Redeemer monument. Among the notable sites named as “runner ups” were the Acropolis, Easter Island, and Angkor, Cambodia.

The stated purpose of the contest was to promote, preserve, and protect world heritage sites by creating greater public awareness. Toward that end, 50 percent of the net revenue raised by the project was pledged to worldwide restoration efforts. Chichen Itza’s new status has definitely attracted increased public attention. While a normal summer day in 2007 drew 2000-3000 people to the site, weekend attendance in July surpassed 11,000 visitors. To date, no donations from the New7Wonders Foundation have been publicly announced to help Chichen Itza with its growing needs for improved security and conservation.

MEC To Assume Mayan Calendar

Mayan Calendar, the only annual wall calendar that displays Maya hieroglyphic dates along with modern Christian calendar dates, is entering its 20th year of production. Its creator and distributor, Jeff Chouinard, began selling them to a handful of people in 1989, using his own black and white photos and glyphs drawn by Barbara Fash. Now the full-color, glossy paper calendars are enjoyed by thousands of Maya enthusiasts. Every year has a theme, illustrated by each month’s photo and eloquently explained on the calendar’s inside front page.

Now, after a katun of designing and publishing Mayan Calendar, Chouinard has decided to retire. Business was never Chouinard’s primary focus. The calendars were his way of spreading knowledge about Maya Civilization. Wanting to see that mission continued, he contacted Maya Exploration Center. After a few discussions and a lot of generosity on Chouinard’s part, MEC agreed to take on the task of producing Mayan Calendar. MEC will be reselling the 2008 Mayan Calendar, but the 2009 edition will be our first year of autonomous publication. Work on its design has already begun, and a new feature called “This Day in Maya History” will be added. MEC’s first calendar theme, not surprisingly, will be Ancient Maya Astronomy.

THE 2008 MAYAN CALENDARS ARE IN!

A $25 donation to Maya Exploration Center gets a 2008 Mayan Calendar shipped to your door. Simply send a check to our offices in Austin, Texas or donate through our secure online credit card system at: www.mayaexploration.org/support_donate.php

A Path With Heart (cont. from page 1)

Students also visited traditional Maya communities in the highlands and tropical rainforest. While spending time in the Lacandon village of Lacanja, the students worked with the local potters. At the Fiesta of St. John the Baptist in Chamula, amid skyrocketets, brass bands, incense smoke, and flaming candles, they witnessed the spiritual intensity of a centuries-old celebration. As they toured the archaeological sites of Palenque, Bonampak, and Yaxchilan, they acquired a profound understanding of “the deep and intricate roots of the Mayan people.”

“How has it been? Incredible. Exciting. Amazing. We have been exposed to a country so far from our own, and we are all eager for more. Traveling through the market with Alonso was surreal. He helped us buy a bag of toasted wood ants, which tasted like sunflower seeds. Then he treated us to a presentation on Mayan architecture. The amount of knowledge that we gained cannot be matched, and we will still be learning more tomorrow.”
MEC FALL TOUR

Day of the Dead in Highlands Chiapas

October 28 - November 4, 2007

This one week adventure will take you to one of the places in the world where Maya cultural traditions still thrive – the Highlands of Chiapas. Home base for the tour will be San Cristobal de Las Casas, the beautiful colonial city situated at the heart of a network of traditional Maya villages. After a few days of exploring San Cristobal itself, outer villages of the network, and the ancient Maya ruins of Tenam Puente, the Day of the Dead will spent in the close in villages of Chamula and Zinacantan. On the trip’s final day, a boat will take you up Sumidero Canyon, one of the state’s most treasured natural wonders. The guides for this tour will be Artist/Archaeoastronomer Alonso Mendez, who was born and raised in the area, and Anthropological Author Carol Karasik. Both are eminent scholars in the fields of ancient and modern Maya cultural studies. To learn more, log on to: www.mayaexploration.org/tours.php

Thanks to Everyone Who Donated to MEC This Summer

Colleen Christianson • Harold Green • Bruce and Kathryn Walker • Richard Schoyen • Cathi Considine
Richard Paschal • The American School of London • Melanie McDonough

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