



# ARCHAEO MAYA

The Newsletter of Maya Exploration Center

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## MEC Maps Plazas in San Cristobal de las Casas

This June, the MEC mapping team departed from Pre-Columbian soil and moved into the present. At the invitation of Miguel Méndez Toporek, an architecture student at the Mesoamerican University, Ed Barnhart, Alonso Méndez, and Jim Eckhardt brought MEC's survey equipment up to San Cristóbal de Las Casas, a bustling colonial city in the Chiapas highlands. Their goal was to create a new map of San Cristóbal's three main plazas. A unique feature of this city, the adjacent plazas were originally designed as a broad public expanse. Today a busy downtown street cuts right through the middle, separating the cathedral plaza from the main park and the grounds of city hall. Miguel Méndez and his partner, Edi Adolfo Jiménez Gordillo, would like to see things return to the way they were. As part of their proposal to redirect traffic flow and assure better use of the public space, they needed exact elevations and accurate park details, the kind of expertise MEC can provide.

Under the direction of Jim Eckhardt, the mapping took two weeks to complete. The first morning, at the crack of dawn, the crew was out on the plaza establishing their traverse points before heavy traffic began. But then disaster struck. The batteries for both laser theodolites had died in Palenque's humid environment. While Ed spent the day on the phone calling parts companies in Dallas, Alonso came up with an immediate solution. Noticing the screws on



*The MEC crew surveying in San Cristobal's Plazas*

the back of the batteries, he opened them up to find standard rechargeable cells inside. A short trip to a local electrician and a few hours later they had rebuilt the batteries with parts from San Cristóbal's new Radio Shack. To everyone's surprise, batteries that used to last for four hours were now running for twelve hours without recharging!

Working in a restless city was as challenging as working in the jungle. Crowds were always getting in the way, until a pack of plaza dogs came to the rescue and formed a protective perimeter around the equipment. Local police also helped out, moving parked cars and clearing view corridors for difficult shots. After capturing the side streets and the parking garage under the cathedral plaza, the project ended successfully in July, with Miguel and Edi having the data they needed to complete their proposal. The Urban Planning Office of San Cristóbal was delighted with the results and plans to place MEC/Mesoamerican University benchmarks at the site.



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## Letter from the Director

What a busy summer! As, I've mentioned before, its getting difficult to report all of a quarter's activities in a single newsletter.



Since the last edition, MEC staff and research associates have taught five travel courses, one for MSSU, another for Millersville University, and three for NSF's Chautauqua Program. In addition, we mapped the central plazas of San Cristóbal de Las Casas. All of this and more are featured in this edition of ArchaeoMaya.

At the end of a long summer of travel, teaching, and research, I've just submitted my proposals for next summer's Chautauqua courses, which will be held in Yucatán, Quintana Roo, and, for the first time, Peru. Now I'm hard at work preparing the logistics for our Fall educational programs. Among them are guest lectures at Indiana University of Pennsylvania and University of Cincinnati as well as travel courses

during Day of the Dead. Also this Fall, MEC is helping to organize a NASA-supported educational conference in Palenque.

As we approach the last quarter of 2006, I'm proud to report that MEC and its team members are doing better than ever. The word of our travel courses is spreading and requests for more programs are coming in every month. Our ties with important institutions like National Science Foundation, NASA, and the Mathematical Association of America are growing stronger. Each of us is receiving independent offers to teach, write, and participate in documentary films. MEC still needs much more public support before we can reach our goal of building a public education center in Palenque, but as our list of accomplishments grows, I feel confident that the funding will come. Thanks to all of you who support us through your interest and program participation. Please enjoy this edition of ArchaeoMaya!

Sincerely,

## Halach Winik Party in Palenque

Every year the tour company Halach Winik hosts an annual 4<sup>th</sup> of July party for archaeologists from Yucatán and adjacent states. Each year the festivities take place in a different location, and for 2006, they asked MEC to help organize the event in Palenque. The large gathering was held on the grounds of El Panchan's new Hotel El Jaguar and the Restaurant Pomodoro. But first, there were academic events. On Saturday evening, Felipe Chan Chi presented his latest research on the archaeoastronomy of Dzibilchaltun and Christopher Powell discussed his newest discoveries in Maya geometry. The next morning Ed, Alonso, and Christopher led the archaeologists on a tour of Palenque's ruins. By Sunday afternoon it was time for a party. The event included barbeque, beer, three bands, and a fire-dancing show. With 60 people in attendance, Halach Winik had once again created a great opportunity for Maya archaeologists to meet their colleagues and make new friends.

## Millersville University in Quintana Roo



*Millersville University Students on a pyramid in the Ruins of Cobá*

For Millersville University in northern central Pennsylvania, a study abroad course offered by the Mathematics Department was unheard of. Nevertheless, Professor Xiména Catepillan worked tirelessly to convince her administration that a trip to Mexico was a needed complement to her course, "The Mathematics of Non-Western Cultures." Winning the day, and even arranging a number of university-funded scholarships, Xiména arrived in Playa del Carmen last May with sixteen students ready to learn about Maya mathematics. Professor Eliana Rojas of the University of Connecticut came along to evaluate the MEC course as part of her study on teaching mathematics from a multi-cultural perspective.

Ed Barnhart and Christopher Powell gave introductory talks on Maya culture before getting down to teaching the Maya calendar and numerical system. After the students learned to count bars and dots in their sleep, they traveled to Cobá and climbed the tallest pyramid in the Yucatán. Then it was on to Chichen Itzá, where site archaeologist Eduardo Pérez led a tour of the newly excavated Temple of the Phalluses and El Caracol, the city's ancient astronomical observatory. That night Christopher gave a slide-show presentation on Maya astronomy. The following day the group visited the ruins of Ek Balam. There the past came alive as local Maya expert Juan Canul read the

hieroglyphs in his own language and recounted the history of the city's great kings. Atop the White Reading House Temple, he told the story of its discovery and then explained the characters and scenes depicted on its elaborate stucco façade.

Students spent their last day relaxing on the beach at Playa del Carmen. Though sunburned and weary, they later competed in a friendly "Maya Quiz Bowl." They had learned their lessons well. Professor Rojas was impressed by how thoroughly the course engaged students and expressed her interest in developing other programs with MEC. Back in Millersville, Professor Catepillan received high praises. Plans to repeat the course on an annual basis are now set.

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## Earth and Stars: NSF Chautauqua Summer Courses

For the last four years, Dr. Ed Barnhart has been an instructor for National Science Foundation's Chautauqua College Faculty Development Program. This summer he taught three travel courses for NSF, one in Oaxaca and two in Guatemala. A total of 57 college professors signed up, making 2006 the busiest Chautauqua year ever. Thanks to the expert help of Alonso Méndez, Christopher Powell, and Carol Karasik, the courses provided rich experiences for all.

"Ethnobotany in the Valley of Oaxaca" was held in late June. As it happened, the course coincided with a massive teacher protest. Over 40,000 strikers took over the downtown area, barricading major streets and occupying the central plaza. The protestors were peaceful, however, and learning about their plight turned out to be an important aspect of the course.



*Ethnobotany Group at the Oaxaca Ethnobotanical Gardens*

Calm prevailed as the band of botanists explored the city's food markets, visited chocolate shops, savored the famous Oaxacan cuisine – and tasted a few crickets. Local *curandero* Laurencio Nuñez Lopez gave a lively talk on medicinal plants. Dr. Carlos Rincon lectured on ancient Zapotec farming methods. Touring the Oaxaca Valley, course members visited the rug weavers of Teotitlan del Valle, a hacienda that brews mezcal liquor from the leaves of maguey, and a farm that cultivates the fuzzy white insects that produce red cochineal dye. Everyone basked in the glorious shade of the 800-year-old Tule Tree, said to have the largest diameter of any organism in the world. Visits to the ruins of Monte Albán and Mitla were also part of the week's adventures. The course ended with a tour of Oaxaca's great Ethnobotanical Gardens. The chief engineer led them down paths lined with

wild corn, giant cacti, fine specimens from Oaxaca's varied ecological zones, and as enthusiasm grew, the usual one-hour tour turned into a three-hour mini-conference! Participants returned home with a cornucopia of new information for their classes and fond memories of Oaxaca.



*Archaeoastronomy Group on a Tikal Venus Platform*

For the second Chautauqua course, twenty-four college professors flew to the rain forests of northern Guatemala to learn about ancient Maya astronomy. Being mid-July and the rainy season, the clouds rolled in every evening. Talks by Ed Barnhart and Christopher Powell compensated for the lack of star glazing opportunities.

The course began on the island of Flores with tales of its former glory as Noj Peten, the 17<sup>th</sup> century capital of the Itza Maya. Under hazy skies, they searched for solar alignments between the island and the ruins of Tayasal across Lake Peten. The next day featured a visit to Uaxactun, where archaeologists discovered the first solar observatory complex in the 1940s. "Do you want to see the equinox temples?" the children from the nearby village asked. Knowledge of the astronomical function of the temples had apparently spread beyond the academic realm. But did local villagers acquire their information from scholars or from their own careful observations? Their careful pruning to keep the temple's view of the eastern horizon seemed to indicate the latter.

After spending the night at Tikal National Park's Jaguar Inn, course members rose at 5 A.M. to climb

## Chautauqua 2006 Cont.

Temple IV before dawn. Heavy clouds obscured the sunrise. They spent the rest of the day touring Tikal, talking about the solar alignments of the temples, and visiting the city's Teotihuacan inspired "Venus Platforms."

Two remote sites with known solar orientations were also on the itinerary. When the group arrived at Yaxha, they were surprised to find a crew of 200 excavators busily liberating multiple temples at the site. At Siebal, they had the main temple that marked the solstice all to themselves. While walking the jungle trails, they learned about the city's remarkable resilience after the "Maya collapse." When the group returned to Flores that final evening, fortune smiled and the stars appeared ever so briefly over the calm waters of Lake Peten.

"Maya Mathematics in the Highlands of Guatemala" was a fascinating departure from Dr. Barnhart's usual focus on the ancients. This year's course concentrated on a subject that Christopher Powell has been studying for years: the surviving mathematical traditions of the living Maya people. The *Tzolk'in*, the sacred 260-day Maya calendar, and its initiated priests, the



*Maya Mathematics Group at the El Baul Stone Head*  
"daykeepers," were central to the week's theme.

The morning after they arrived in the beautiful colonial town of Antigua, the group participated in a ceremony led by a daykeeper, the *Ah Kin*. The day was auspicious: 8 *Batz'*, the Maya New Year. As incense filled the air, the daykeeper began the count, "8 Monkey." And then he chanted the name of each day in the 260-

day calendar. At the end of the over two hour ceremony, the group knew that had not been at some tourist spectacle, but rather a real and sincere homage to the days of the Maya calendar.

The following morning they ventured across the Pacific Slope to the remote archaeological site of El Baul. The bus bumped along dirt roads, the driver got lost, and the ruts petered out in the sugar cane fields. Continuing on foot to the top of a high temple mound, they came upon a monumental stone head, blackened by millennia of ceremonial fires. A freshly sacrificed burned chicken lay upon the huge stone. The invisible bond between the ancient and modern Maya was palpable. Back on the bus that afternoon, the group sank into quiet contemplation as they drove past smoking volcanoes toward Lake Atitlan.

The next day they crossed the lake through mist and rain, whiteness all around, until the church steeple and houses of Santiago Atitlan rose like a dream from the fog. After visiting the 16<sup>th</sup> century church, the group was invited to the home of a religious official. Inside sat the image of the popular Maya saint Maximon, and before him sat a group of supplicants offering cigars, liquor, flowers, and prayers. The atmosphere was oddly comforting and familiar. As Christopher explained that night, the Maya of Santiago Atitlan continue to use the geometric proportions of the ancient temples in the design of their houses, and the proportions are spiritually satisfying because they derive from the natural world.

The course ended with a trip to Chichicastenango, the celebrated town where the Maya creation myth, Popol Vuh, was written down in the 17<sup>th</sup> century. Arriving for Thursday market, course participants spent the morning roaming through the vast labyrinth of stalls selling fruits, vegetables, and fine Guatemalan textiles. In the afternoon, Kakchiquel Maya guide Juan Patal Majzul, explained the use of the sacred calendar in divination and the significance of the various day name-number combinations. That evening, everyone gathered around the fireplace at Hotel Santo Tomas to hear Ed recount the story of the Popol Vuh.

Early the next morning, the group climbed to the hilltop shrine of Pascual Abaj where a young Maya girl explained the purpose of the altars and the meaning of the Quiché Maya day names. The graciousness of the Maya people and the beauty of their surviving traditions lingered long after the trip was over.



## News from Palenque

### New Palenque Director

Once again the position of INAH Site Director of Palenque, Bonampak, and Yaxchilan has changed hands. This June, Director Roberto Martínez Aguilar stepped down and Elizabeth Flores Torruco assumed the position. Having served as an administrative assistant to the last five site directors, Lic. Flores was an excellent choice. Decisive and well respected by her colleagues, she is well suited for handling the current explosive increase in Palenque's tourism. MEC team members have enjoyed a good relationship with Lic. Flores, and the prospects for continuing their research at Palenque look better than ever.

### Palenque Town Goes Modern

Last May, Burger King opened for business on Palenque's main street. Now construction is underway on a new Chedraui supermarket complex. After years as a sleepy backwater, the town is growing fast and the corporate world has taken notice. Though sad in some respects, this first wave of commercialism should create jobs and give the local economy a much-needed boost. For those worried about encroachment on the ancient city, fear not. The ruins are safely protected within their national park, eight kilometers away from Chedraui and the Big Whopper.

## MSSU in the Yucatan

For the third year in a row, Professors Conrad Gubera and Sam Clausen brought fourteen students from Missouri Southern State University down to Mexico for a MEC study abroad course in late May. This year's destinations were the Maya ruins of Yucatán. Although the professors were reluctant to move the course from Chiapas, where their previous experiences had gone so well, this study trip turned out to be their favorite to date.



*MSSU and Chan Chi in the Temple of the Seven Dolls*

Led by Ed Barnhart and Alonso Méndez, the course started off with a tour of colonial Merida, followed by lectures on the Pre-Columbian history of the region. The next day, students traveled to Dzibilchaltun and met archaeoastronomers Felipe Chan Chi and Daniel Ayala. The two researchers, seated in front of a high-speed laptop inside the Temple of the Seven Dolls, showed breathtaking photos that proved the temple was, and still is, an astronomical observatory. After a swim in the nearby *cenote*, the class enjoyed a traditional Yucatecan lunch at the home of Sid Hollander. Afterwards, Sid, who created one of the first Maya calendar software programs, gave a fascinating presentation

on the mathematical underpinnings of the Maya calendrical system.

The following morning the class was ready to take in the art and architecture of Chichen Itzá. With site archaeologist Eduardo Pérez as their guide, they visited the recently excavated temples, saw the new friezes, and examined artifacts in the on-site ceramics laboratory. From there the tour moved on to Mayapan, the once powerful city that supplanted Chichen Itzá in the 13<sup>th</sup> century. The

grand plazas were deserted and the group had the city all to themselves. Later, in the town of Mani, the students stood in the dusty 16<sup>th</sup> century churchyard where Friar Diego de Landa had burned thousands of Maya books. Traveling deeper into the heart of the Yucatán, the group explored Loltun Cave, whose ancient inhabitants left painted handprints on the walls 10,000 years ago. The day ended

with a unique 20<sup>th</sup> century art form: a dazzling sound and light show at the ruins of Uxmal.

The morning tour of Uxmal's splendid architecture sparked intense discussions about site orientation, Maya city planning, and use of public space. Their distinguished guide, chief site archaeologist Pepe Huchim, later presented each student with a book on Maya astronomy, published by NASA. That afternoon, at the ruins of Oxkintok, students helped document the geometric proportions of two temples, a solid contribution to MEC's ongoing research. It was an incredible week, with everyone promising to return next year.

## In Memoriam: Kathryn Jossierand



With a heavy heart, MEC reports that on July 18, 2006, during a visit to Palenque, Dr. Kathryn Jossierand passed away suddenly of a cerebral brain hemorrhage. Just two weeks before, at MEC's Halach Winik party, she had been in good health and humor. News of her death is a shock for the entire academic community. Kathryn was widely acknowledged as one of the major contributors in the initial struggle to crack the Maya hieroglyphs.

Born, raised, and educated in Louisiana, she obtained her Ph.D. from Tulane in 1983. In 1991, after years of fieldwork and teaching in Mexico, she accepted a position in the Anthropology Department at Florida State University. She and her husband Nick Hopkins were an exemplary team of linguists, working first on Mixtec languages, then Yucatec Maya, and ultimately making their greatest contributions in the study of Chol Maya. Among their many publications are a Chol dictionary and associated linguistic database. Maya linguistics naturally led them to study Maya hieroglyphs, and eventually to become authorities in that field as well.

Kathryn's latest work was ethnological, tracking the migration patterns of Chol speakers. She and Nick were doing the associated fieldwork when she suddenly passed in Palenque at the age of 63. Her friends and colleagues will sorely miss her.

### Upcoming Tours

**Day of the Dead in the Highlands of Chiapas, October 28 - November 4, 2006**  
**Cacao and the Ancient Maya of Southern Mexico, February 12-23, 2007**

Learn the details and sign up at [www.mayaexploration.org/tours.php](http://www.mayaexploration.org/tours.php)

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