

Machu Picchu- June solstice sunrise



PERU



COLOMBIA

Equator

ECUADOR

QUITO

Tumbes

Piura

Chiclayo

Trujillo

Caraz

Chimbote

Sechin

LIMA

Reserva Nacional
de Paracas

South
Coast

Pisco

Ica

Nazca

Arequipa

Arica

Reserva
Nacional
Pacaya-
Samiria

Cajamarca

Iquitos

Yarinacocha

Huascarán 6768m

Huaraz

Parque Nacional
Huascarán

Huancayo

Macchu Picchu

Cuzco

Andes

Puno

Taqui

Lake
Titicaca

LA PAZ

Tacna

CHILE

BRAZIL

BOLIVIA

PACIFIC
OCEAN

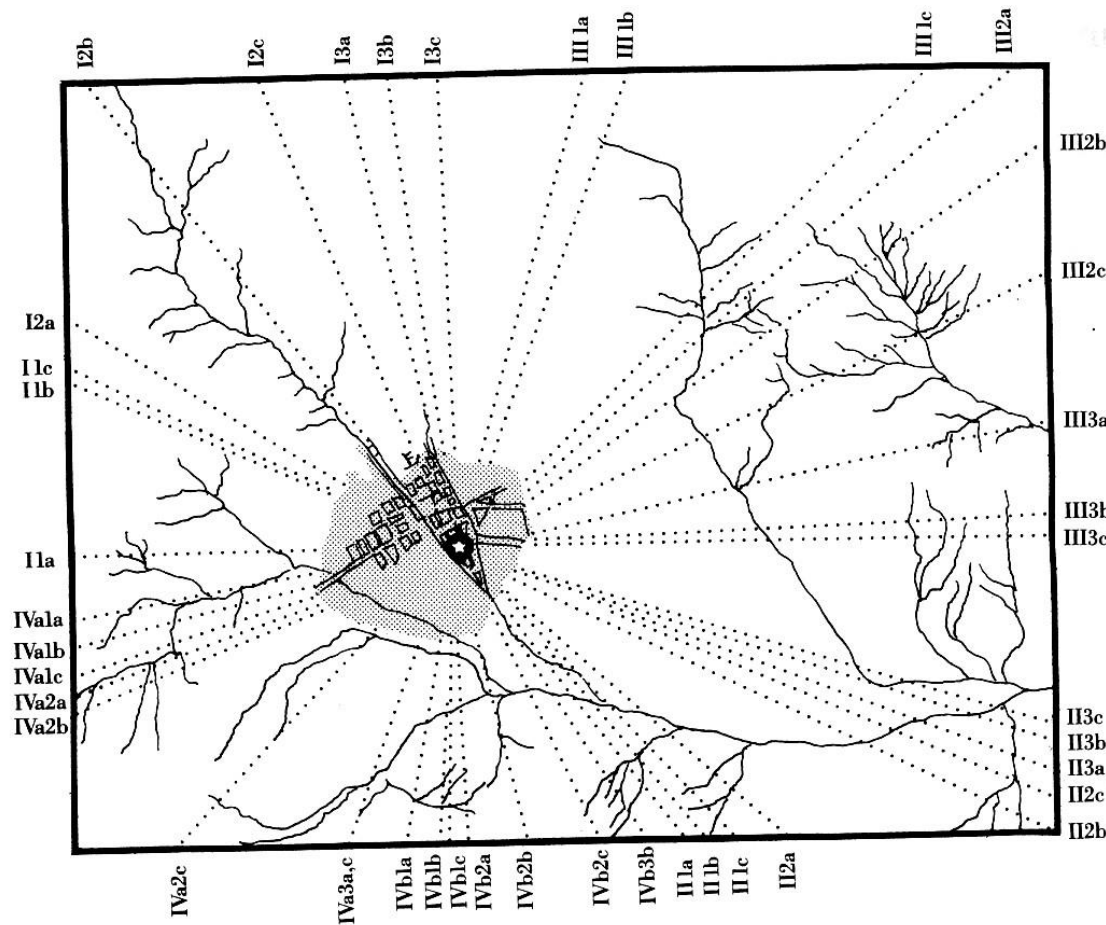
0 400 km

0 250 miles

Ceque System of Cusco:

328 Huacas-

A walk-through calendar



Coricancha of Cusco: Center of the Inca Cosmos



CEQUES OF CUSCO

- 41 CEQUES radiating out of the Coricancha-
“the center of the Inca cosmos”
- 12 *sidearal* lunar months = 12×27.3 days
=328 days
- Each huaca honored one day of the year
- 37 days missing when the Pleiades was not visible
- Time would start with the heliacal rising of the Pledies

Huaca



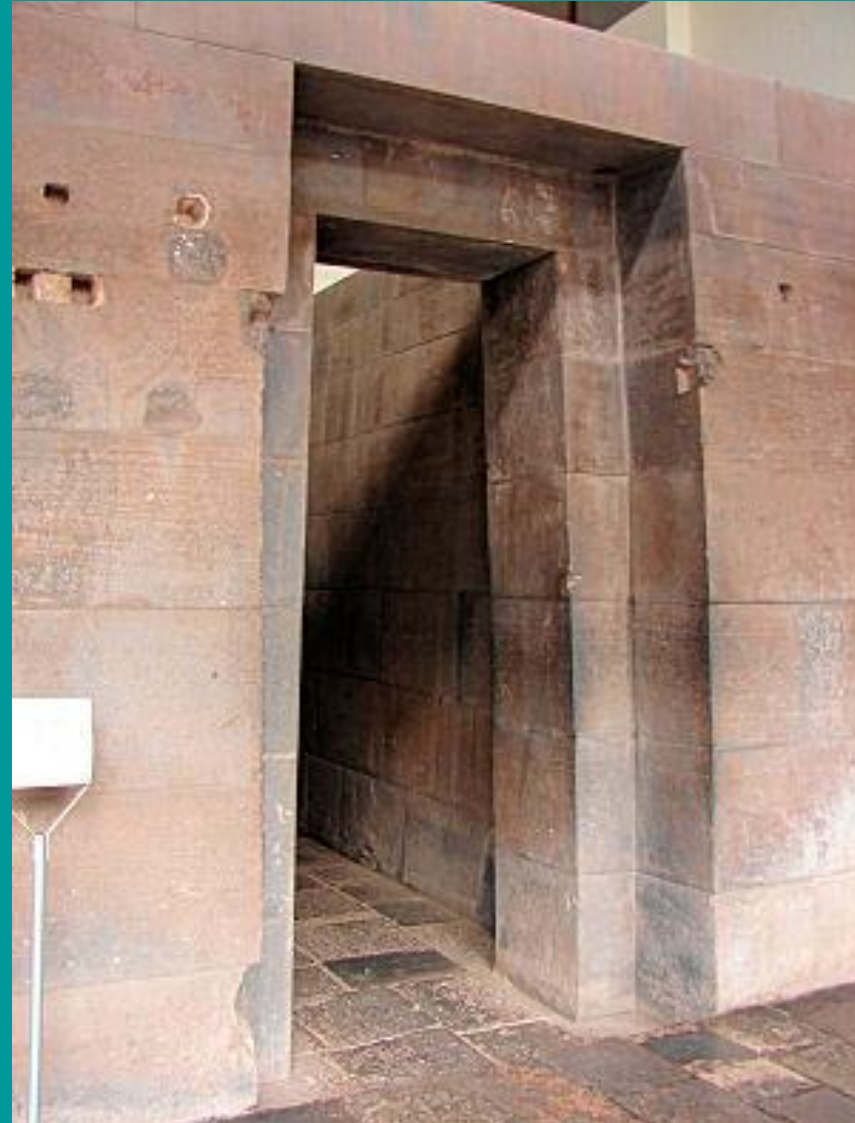
Cusco: Coricancha- the center of the Inca cosmos, covered with gold plate



Double Jamb Doorway of the Coricancha

Meanings of double-jamb doors:

1. Entry into a sacred realm
2. Entry into a royal residence
3. Portal for the Sun to enter at solstice





Moray: water offerings to Pachamama and passage to the Lower worlds



Moray: June Solstice Sunrise





6:40 am.









6:54 am.

Sondor: Inverted Moray- An Inca sculptured mountain- passage to the upper world



Sondor: Stairway to the Zenith Sun





Urubamba- grandson of Pachacuti- Huayna Capac



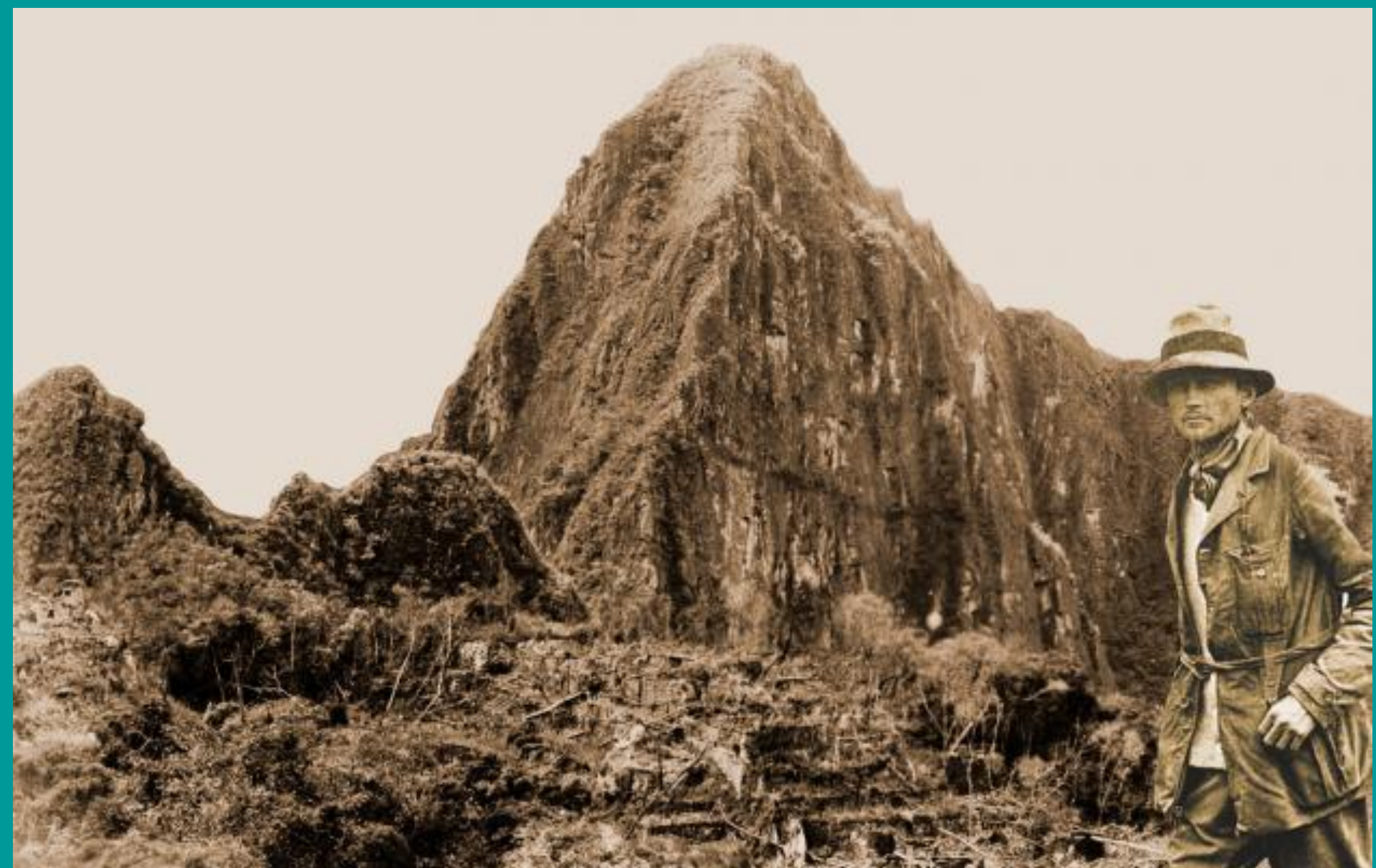
Urubamba: white rock in center of plaza,
observing position for June solstice



Urabamba Towers



Discovery of Machu Picchu: Hiram Bingham

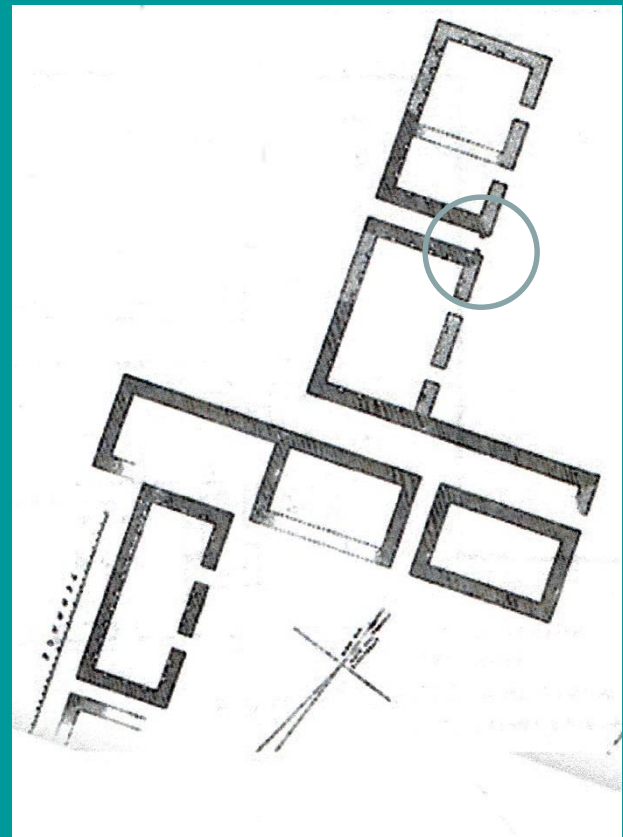




276



- After locating Machu Picchu, in July 1911 Hiram Bingham returned a year later and was led to Llactapata (high town) by local farmers in 1912. In one day he made a remarkably precise map of the major structure.
- Later he could not remember the location of Llactapata.
- With its double-jamb doorway, it was an intriguing site, lost for some 90 years





June
Solstice
Sunrise

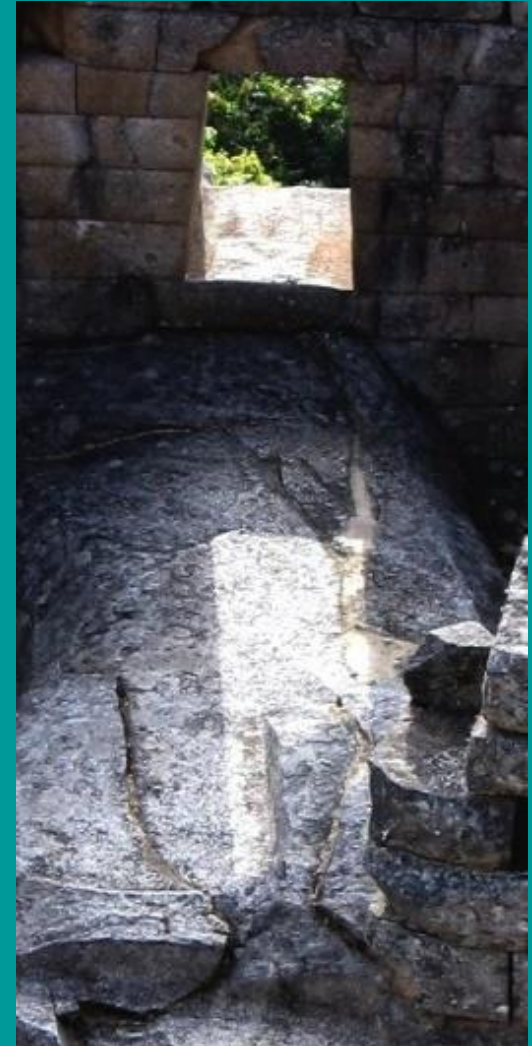


December
Solstice
Sunset

Machu Picchu: Main Gate & Huayna Picchu



The Torreón: June solstice

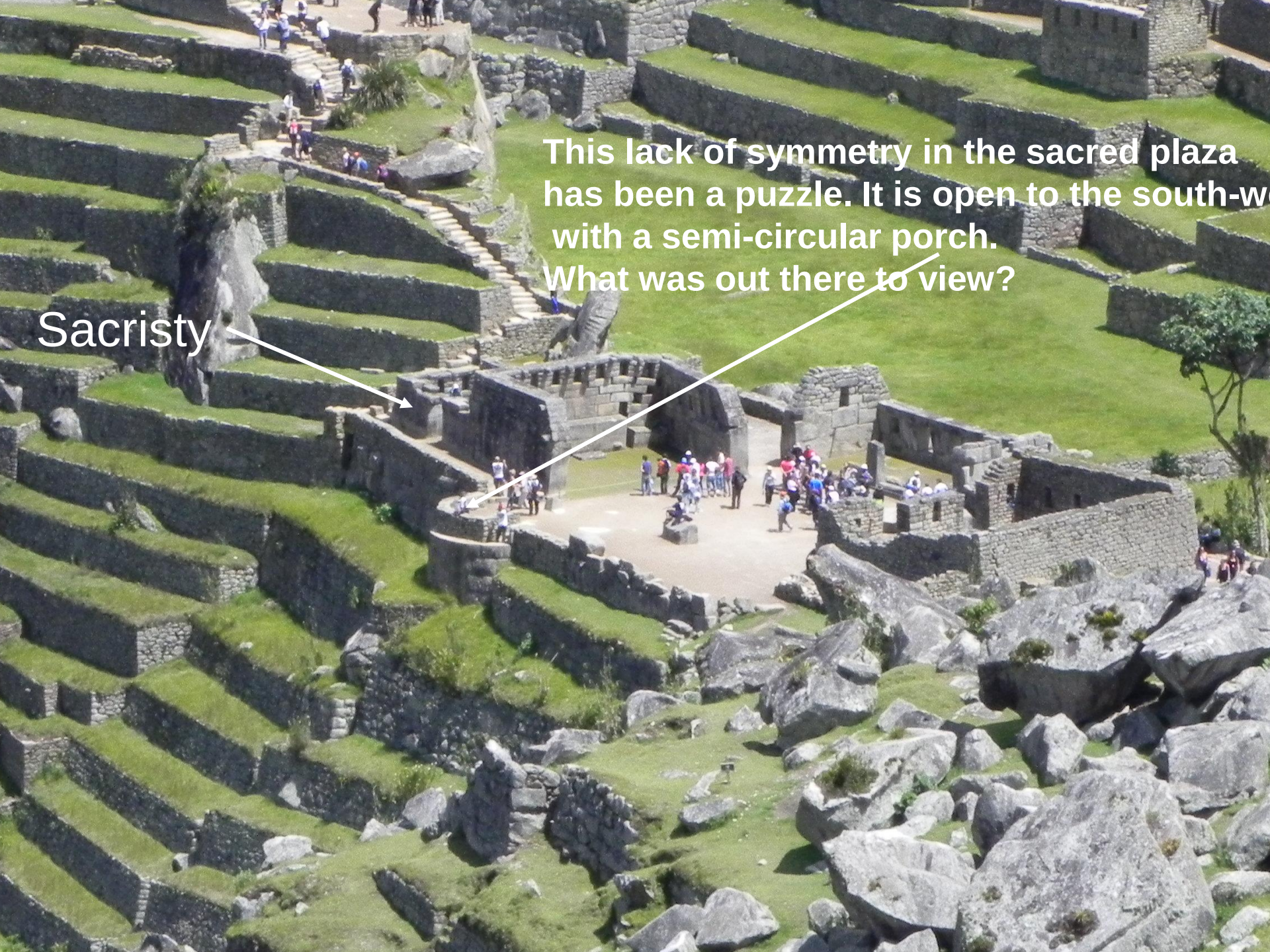




Temple of the Condor, Machu Picchu

Anti-zenith sunrise





This lack of symmetry in the sacred plaza has been a puzzle. It is open to the south-w with a semi-circular porch. What was out there to view?

Sacristy

The Sacristy Open to the Southwest



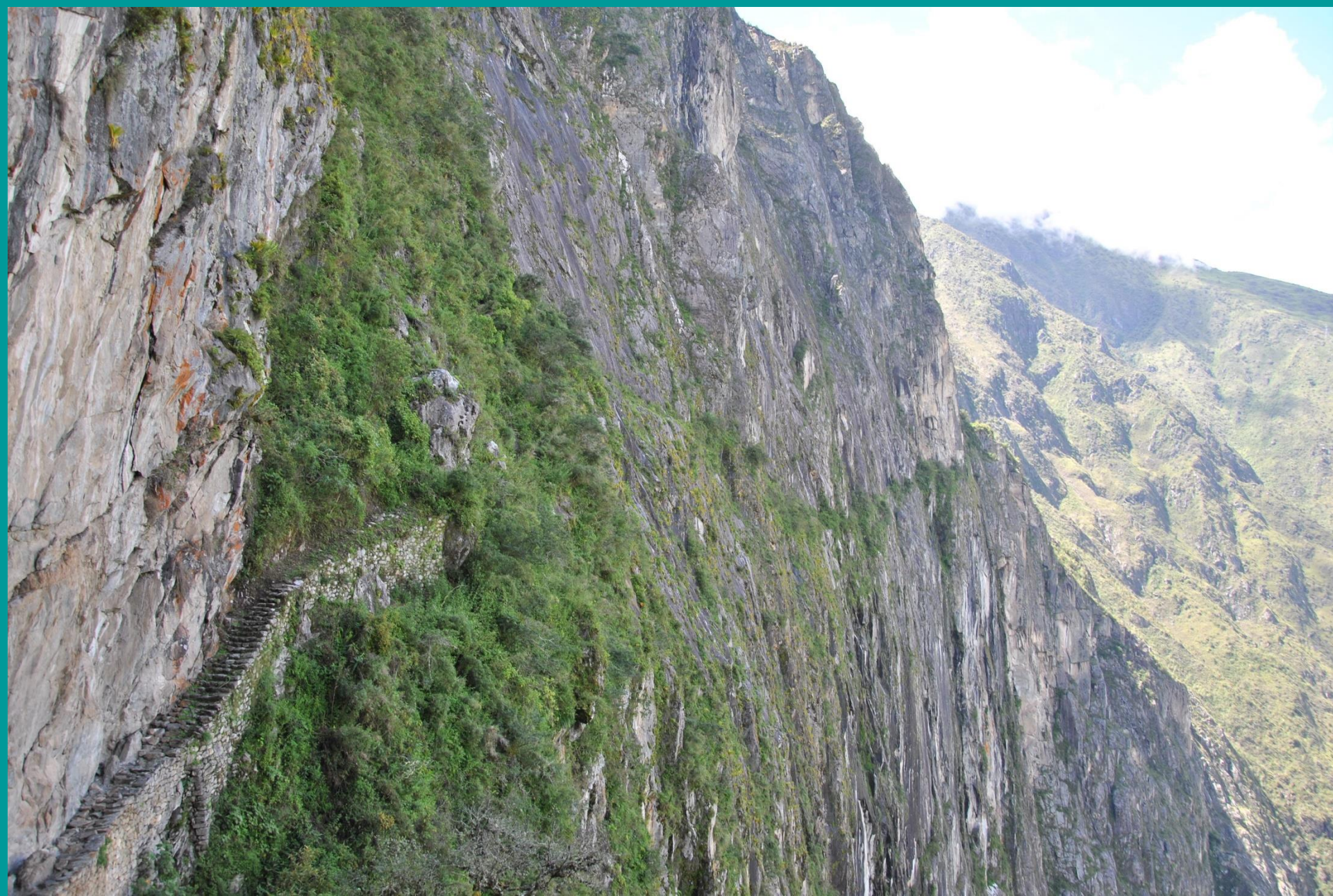
Sitting on the bench, the view
outward was to December solstice sunset
and what else?



Where does the
drawbridge trail after the drawbridge go?







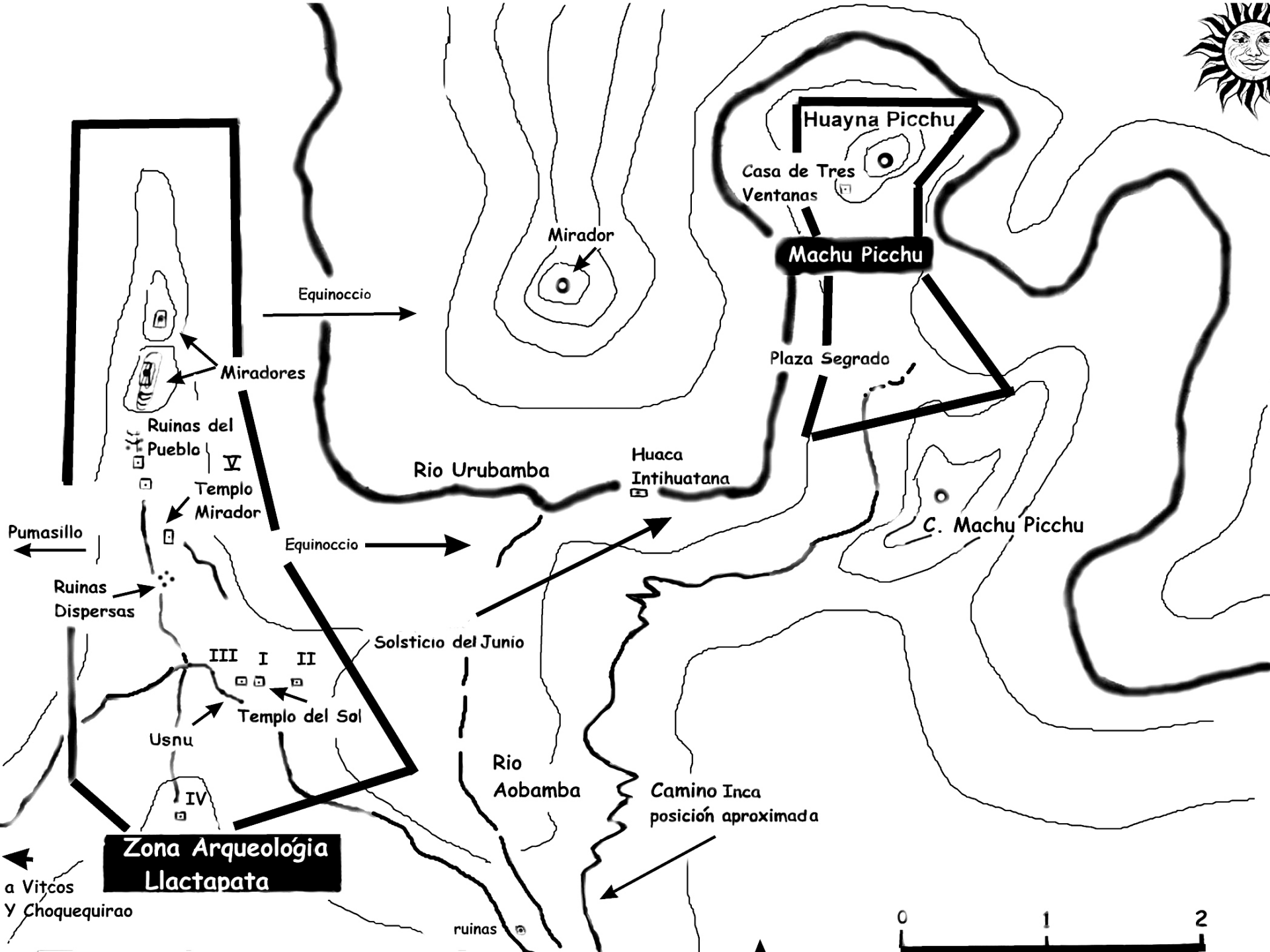
The Llactapata Ridge



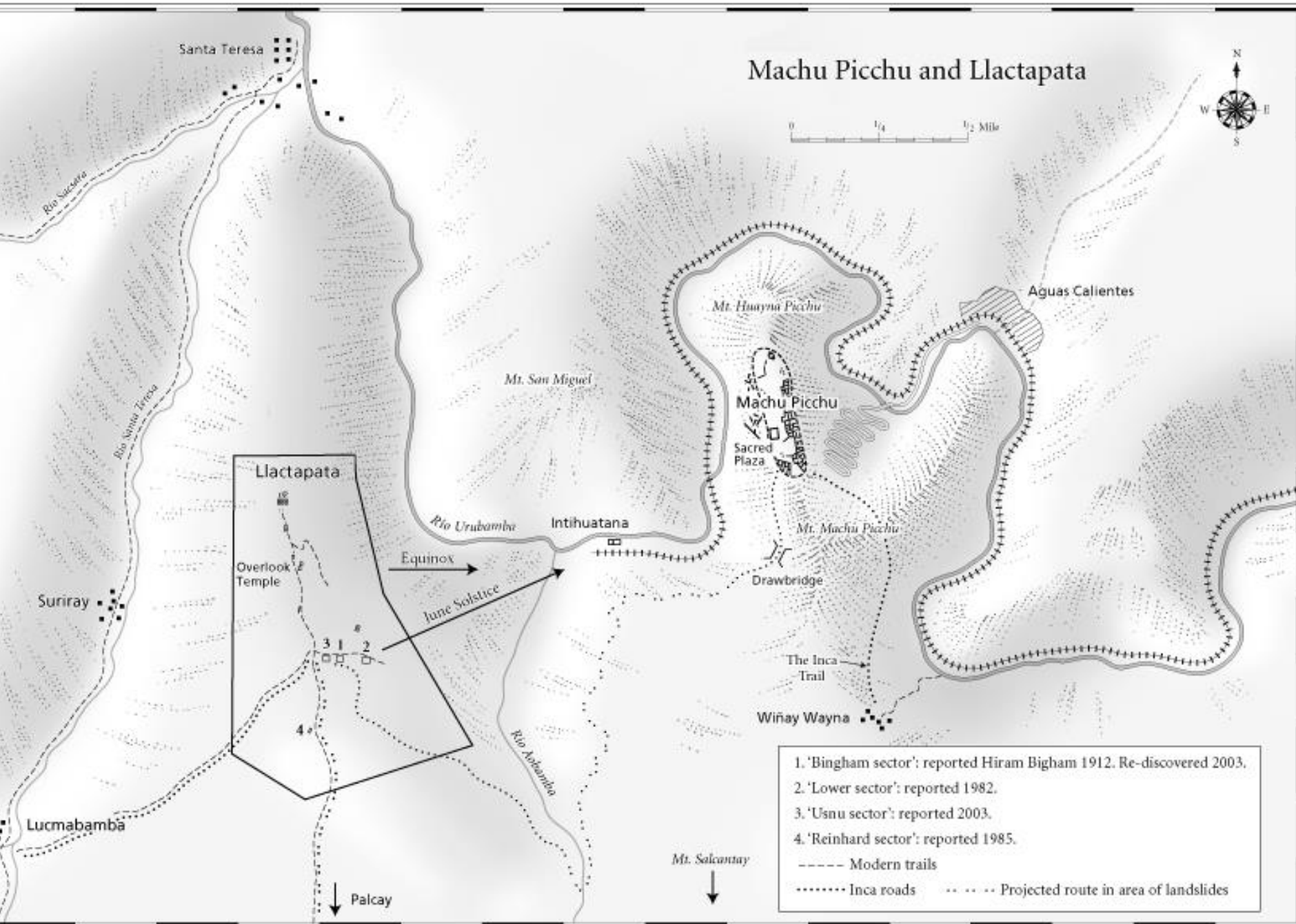
Thermal Infra-red Search for Llactapata

- 12 micron detector
- Overflew Choquequirao and Llactapata
- Search for rock walls heated by sun:
warmer than surrounding soil
- Found Choquequirao
- Rain forest too thick over Llactapata





Machu Picchu and Llactapata



Machu Picchu Sacred Plaza

Inca trail from Machu Picchu
to Llactapata





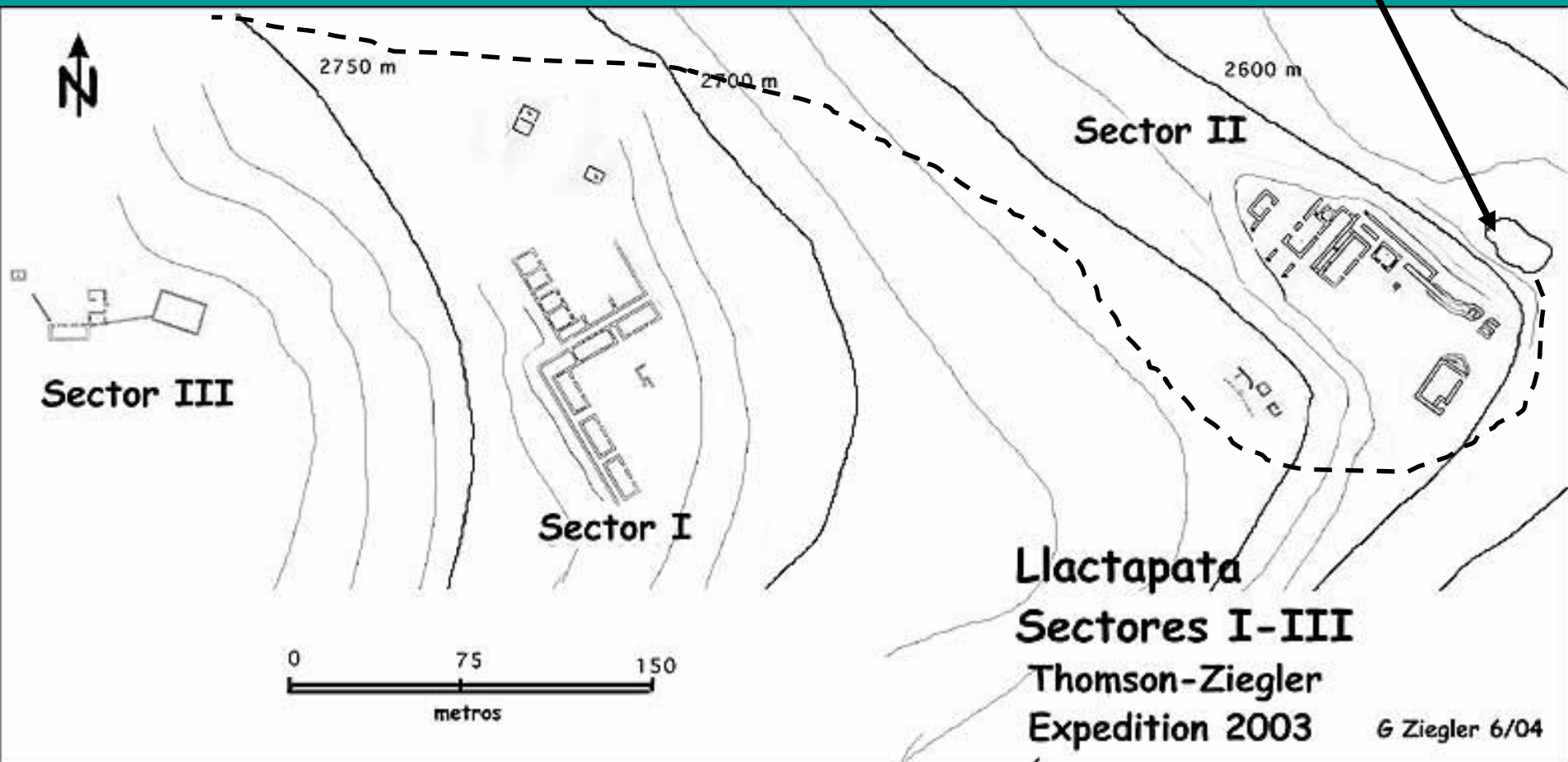








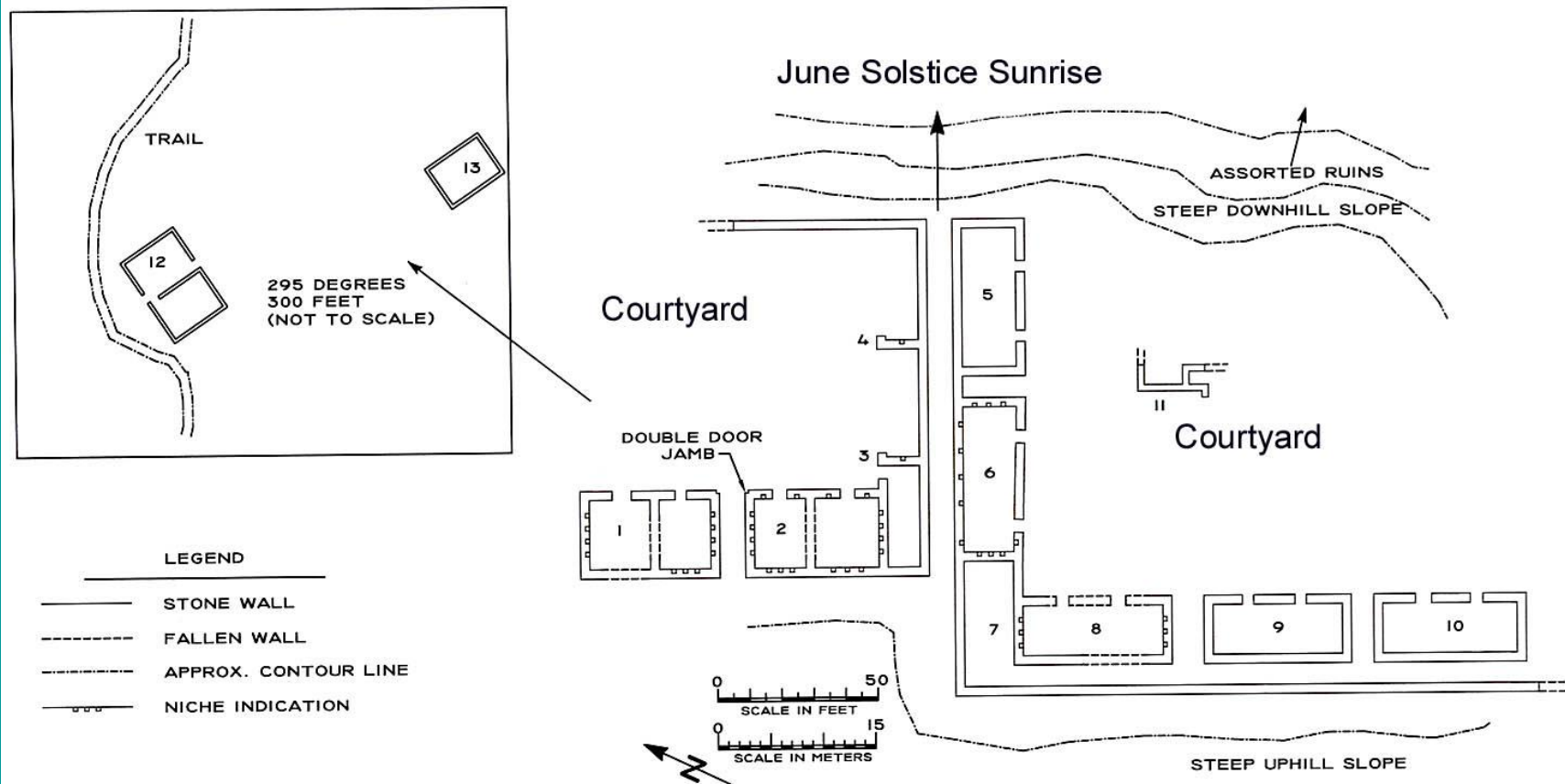
- We camped here in 2000 without a clue!







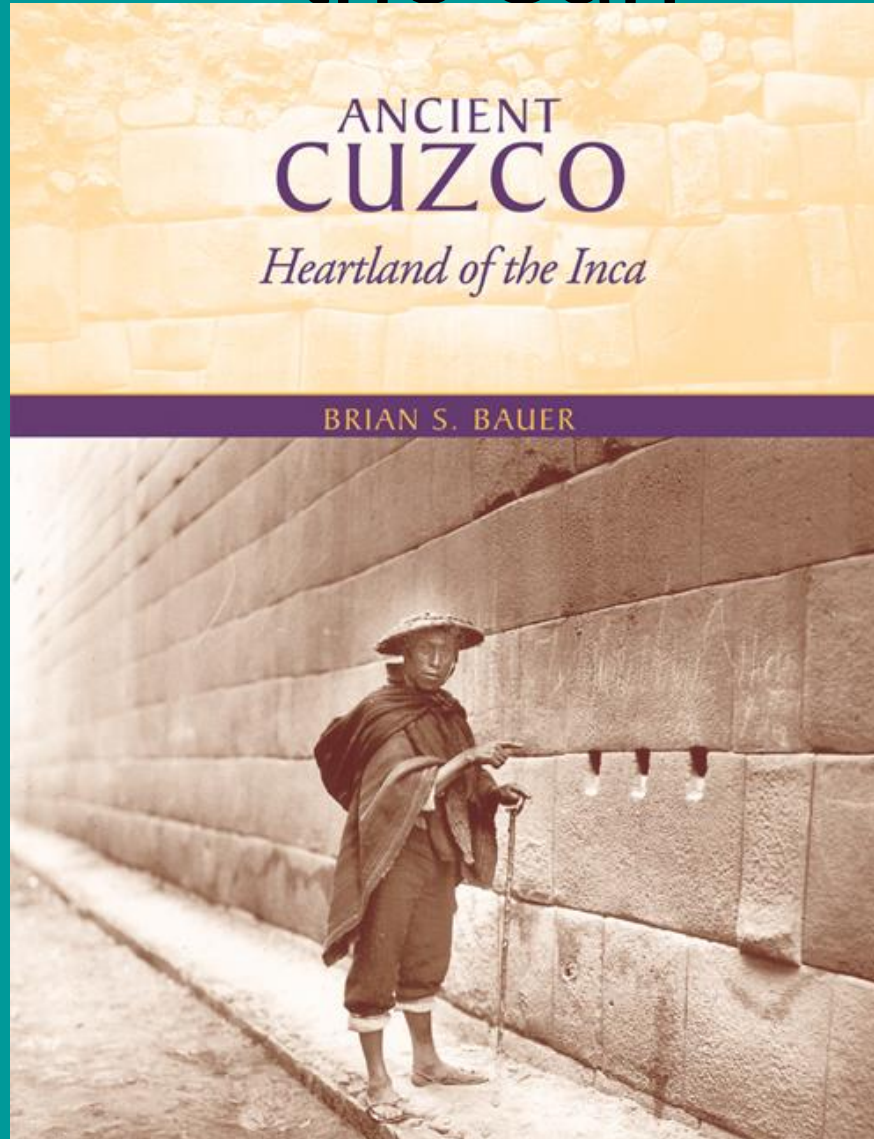
“Sun Temple” at Llactapata- Identical to the Coricancha



Llactapata: Water channel leading toward Machu Picchu



Coricancha- Water offering to the sun





Sunken Corridor







June solstice at Machu Picchu



June solstice: 30 minutes earlier at Llactapata

