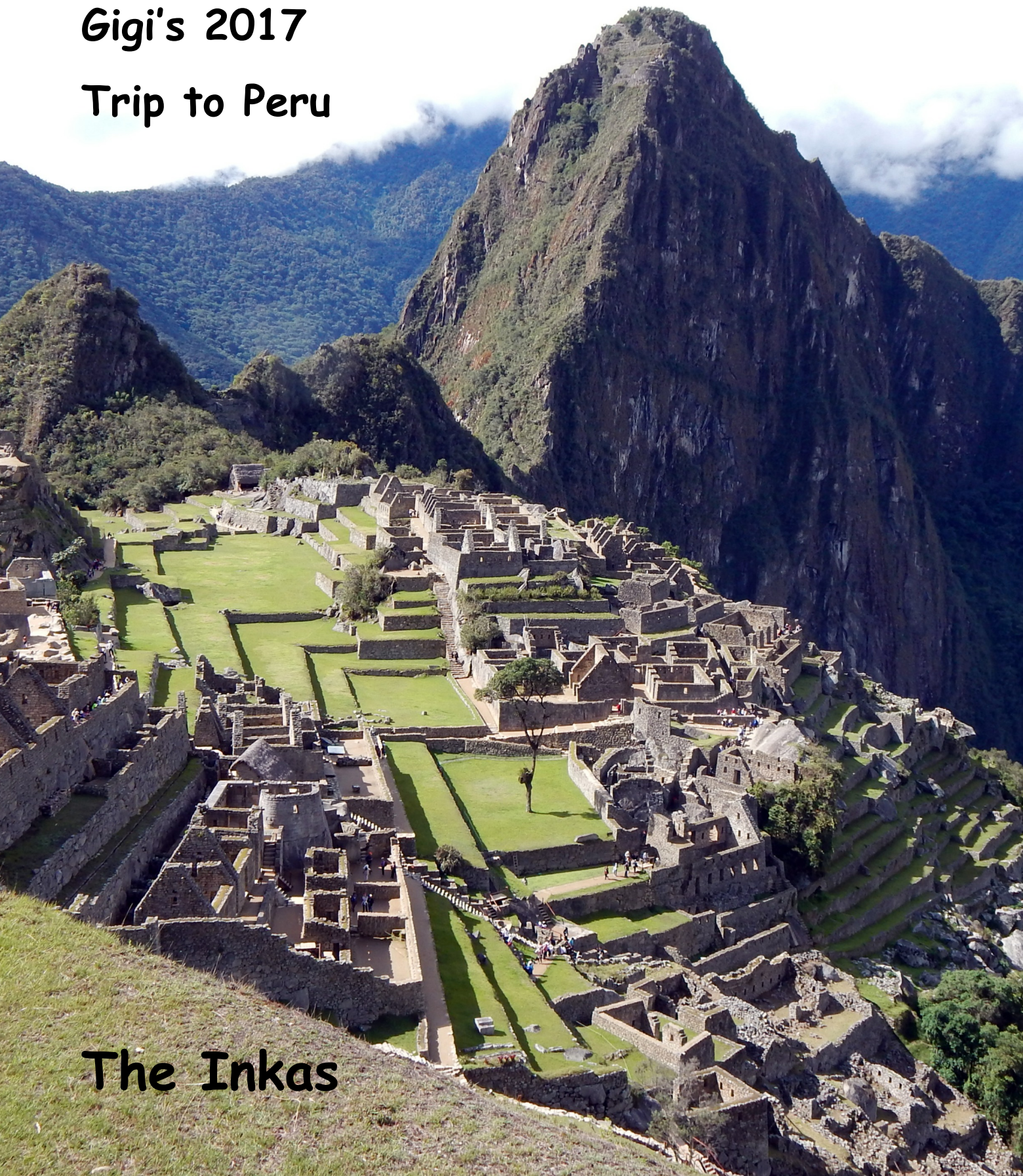


**Gigi's 2017
Trip to Peru**



The Inkas

SACSAYHUAMAN



Our first tour of Inca (they spell it Inka and not Inka in Peru) and pre-Inca architecture was at Sacsayhuaman in Cusco.

The Sacsayhuaman ('Royal Eagle') fortress-temple complex is at the northern edge of the former Inca capital Cuzco. Built during the reign of Pachacuti (1438-1471 AD) and his successors, its massive, well-built walls remain today as a testimony not only to Inca power but also the skills of Inca architects and their approach to blending their monumental structures



In the terraced ruins above you can see the double walls used to stabilize the hill during earthquakes.



The big multi-ton stones were quarried from across this field, about a quarter mile away and moved to their current location.

The Inkas were master stonemasons. The blocks were quarried and shaped using nothing more than harder stones and bronze tools. They did not have iron yet. Marks on the stone blocks indicate that they were mostly pounded into shape rather than cut. Blocks were

moved using ropes, logs, poles, levers, and earthen ramps (telltale marks can still be seen on some blocks) covered with lard or some other slippery substance, and some stones still have nodes protruding from them or indentations which were used to help workers grip the stone.

The fine cutting and setting of the blocks on site was so precise that mortar was not necessary.

Experimental archaeology has demonstrated that it was much quicker than scholars had previously thought to prepare and dress the stones used by the Inkas. Even so, it would have taken many months to produce a single wall. The Inkas also ensured that their blocks interlocked and the walls were sloped to maximize their resistance to earthquake damage. Time has proven their efficiency as 500 years of earthquakes have done remarkably little damage to Inka structures left in their complete state. The conquerors did dismantle much of the stone. (Wikipedia)



You can see the grooves worn by larger stones rolled over this area to move them.



The picture above gives you an idea of how large some of the blocks were that were moved to create this fort.



This natural entrance leads to a cool natural cave that the Inka's retrofitted with silver reflectors to bring in bright light. They did surgeries in this clean bright room. This was documented by Spanish monks.

To the right is our tour group. Mostly we are all textile artists but the group included a few painters and writers as well.



CUSCO



Cusco is a big city of $\frac{1}{2}$ a million people. They say the original layout of the city was that of a puma with Sacsayhuaman the head. But it would be difficult to see today as the city has grown so much. Much of the city is sitting on Inka and pre-Inka ruins. Stones were taken from Sacsayhuaman to build the Catholic Churches. The red dot is where our hotel just to the left of the plaza where the Tinkuy conference was.



This wall was built by the Inkas and is in the center in Cusco. Look how tight the blocks are stacked with nothing holding them together. It has survived through 500 years of major earthquakes. See how this wall is used for a current building.

MACHU PICHU



Hear I am at the Sun Gate (Inti Punku). It is one of the most important archeological constructions around the Machu Picchu site. The Sun Gate was once the main entrance to Machu Picchu, it was the primary approach from the capitol city of Cusco to the southeast. All of the cities of ruins we went to had one gate that would have restricted who could enter the area. You can see how far it is from Machu Picchu.





Not all the Inka structures were built to perfection. This picture shows the contrast between the soldiers' barracks on the left and the queen's quarters on the right. The stone on the queen's dwelling is very smooth and beautiful.



There are many ancient Inka and pre-Inka ruins all over Peru. On our wonderful train ride from Cusco to Machu Picchu we would see many. This one would have held grains and other supplies as well as be used for testing the growth of crops in that area.



The terraces in the picture below were not chopped into the hill. Earthquake resistant walls were built and filled with top soil for farming. Terraces like these were used to test new crops. This is how domestication of potatoes were done. Wild potatoes are poisonous.

The Inka did not always have to move stone from one area to another. The site of Machu Picchu has plenty of stone. Here you can see how the Inka used the existing stone and carved it into what they needed. See the steps? Look how they reinforced the existing granite with more blocks in the picture above.



The ruins were interesting but the mountains, flora and rainbows were beautiful.

More pictures from Machu Picchu





MORAY



In the hills near Moray, a small town in the Peruvian Andes, deep depressions in the land were terraced by the ancient Inka civilization that once ruled this region. Modern scholars agree that the hillsides were engineered to serve as agricultural experiment stations.

Air temperatures from the rim to the bottom of each basin can differ by more than 20 degrees, suggesting that crops were planted on each level to see how temperatures affected growth. A complex irrigation system backs up this theory. (Bing)

We saw three different sets of these rings, each at a different elevation.

Unusually heavy rains in 2009-2010 did damage.



OLLANTAYTAMBO



Ollantayambo, a former Inka administrative center and gateway to the Antisuyo (the Amazon corner of the Inka Empire), sits at the northern end of the Sacred Valley. At the time of the Spanish invasion and conquest of Peru Ollantayambo served as the last stronghold for Inka Manco Yupanqui, leader of the Inka resistance at the time. Nowadays the Ollantayambo ruins and town are an important and popular tourist attraction in the Sacred Valley. The town's primary attraction is the Ollantayambo Fortress on the outskirts of the settlement in a section known as the Temple Hill. (Theonlyperuguide.com)

Like many of the Inka structures, the ruins are very steep and the terraces below were used for farming. I climbed to the top of this one but it took me much longer to get down. This ruin is at about 12,500 feet above sea level where Machu Picchu is at about 9,000 feet.



This wall might not look impressive but it was moved here from across the valley. It is also not yet complete. The Spaniards overran the Inka before this site was finished.



You cannot see the fine detail on the wall in the pictures on the left but the picture below shows the Sun/Star image that is being chiseled into the rock.

The rectangular protrusions on the wall were used to move the stone. They were to be removed upon completion of the wall. This will give you an idea of how much stone had to be chiseled away.





Like the large wall on the previous page, these stones are not complete and have not yet been set in place. They are set correctly to be hoisted into their final position. Archeologists have measured and these stones would slide into place perfectly.



Once this site was cleaned of debris, the irrigation system put in by the Inkas began to run again.



One of the Beautiful Ceremonial Fountains at the Base of the Ollantaytambo Ruins.

This fountain also began to flow as soon as the irrigations systems were cleaned up.



This area was going to be a Sun Temple.

More pictures from Ollantaytambo





Temple of Water



TIPÓN



It consists of wide agricultural terraces irrigated by a network of water channels fed by a natural spring. Several surrounding ruins have been excavated, and many more are visible below the soil. (Wikipedia)

No erosion occurred here. It was another well irrigated farming area for what is believed to be for testing crops.



INKA PISAC



Inca Pisac ruins guard the entrance to the Sacred Valley





You can see that this wall was built by more than just the Inka. Note the rougher bricks on the bottom and the really unstable bricks on top of the wall.



This alcove would be manned by a soldier. Can you see the little window that the guard could see out from?



Our Tour Group



The Second Vice President of Peru came to our conference. She is on the right. On the left is the governor of the province of Cusco.



When we were not in a city and out at a community center we ate together family style. The tour guides brought a chef, cook and everything needed to make us a hot lunch.









For Keegan

Christmas 2017

With Love from Gigi

