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NATURAL HISTORY

THE JOURNAL OF THE AMERICAN MUSEUM

DEVOTED TO NATURAL HISTORY,
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THROUGH THE MUSEUM

Lumholtz, Carl.

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THE GOLDEN AGE OF PERU

BY
HAMILTON BELL

This article serves as an introduction to the high period of Peruvian culture, which terminated suddenly with the Spanish conquest. In a subsequent issue of *NATURAL HISTORY* Dr. P. E. Goddard will give an account of the gold utensils and precious ornaments of the period antedating the conquest that have come into the possession of the American Museum. The acquisition of the splendid Peruvian collection, including in addition to the objects of gold, interesting textiles, characteristic pottery, and other mementos of the ancient culture, is due, in the first place, to various benefactors, beginning with Henry Villard in 1892 and including the late Frederic A. Juilliard, and in the second place, to the explorer and scholar, Adolph F. Bandelier.

GOLD, in the Ancient World, has from the earliest times held the first place in the scale of values. The Golden Age was to the Greek the *sumum bonum* of existence. The Christian can imagine no bourn more desirable than the Heavenly City—Jerusalem the Golden. The earliest heroic adventure was the quest of the Golden Fleece. The highest praise that could be given to anything was to call it golden. When currency became a necessity, it was first coined, in Lydia, of gold, which thus became the standard for the world. In the civilization of the Mediterranean gold became the symbol of all wealth and the object of general greed.

Gold was known to the natives of Peru long before the Spanish conquest early in the sixteenth century. It was in use on the coast, in the north among the Chimu and in the south in the Nazca region, before these countries were conquered by the Inca. At present it is impossible to establish earlier dates which are reliable. To the Peruvians gold was a material easily worked, plastic, and imperishable, well adapted for works of utility and art. It seems never to have been employed as currency and probably not even in barter; it was therefore set aside, at least in the Inca period, for use in the temples and palaces.

It was largely this difference in attitude toward the metal which amazed and overwhelmed the Spanish explorers. In Spain the use of gold as currency and for hoarding greatly restricted its employment in the arts. In Peru it was used for the arts only. Just what is

the truth about the abundance of gold in Peru and the uses to which it was put is difficult to determine. There are many narratives of the period of the conquest and of the following century but these have never been critically treated. Some of the statements are quite improbable while others, which seem incredible, are so circumstantial and well supported that there is no valid reason for setting them aside.

Among the best authorities is the Inca, Garcilasso de la Vega. He was born in 1540 at Cuzco, the son of a noble Spaniard, a companion of Pizarro, and of an Inca princess of the royal house, a first cousin of the king, Atahualpa, who was so treacherously murdered by the Spaniards. He spent the first twenty years of his life in Peru, travelled extensively throughout the empire, and recorded what he had heard at first hand from his Inca relatives and the numerous survivors of the conquest, whose language was his own; his narrative is fascinating in its simplicity and frank differentiation of what he had seen and what he had been told. It carries conviction of his honesty and veracity.

His statements are supported by many other contemporary authorities; among whom we may cite as peculiarly worthy of belief, Francisco de Xeres, secretary to Francisco Pizarro, with whom he set sail from Spain in 1530; he went with Pizarro to Cajamarca and was present at the capture and execution of Atahualpa. He describes in detail the Inca's treasure and the huge portion of it which, according to the ruler's promise, was brought together for his ransom; he

further narrates de Soto's journey to Cuzco, the capital, and Hernando Pizarro's trip to Pachacamac and Jauja, with the treasures they found in those places. He returned to Seville in 1534 and in the same year printed his narrative.

His own share in the work is recounted by Hernando Pizarro in a letter to "The magnificent Lords, the Judges of the Royal Audience of his Majesty, who reside in the City of Santo Domingo," which is dated November, 1533, when Pizarro was on his journey home to Spain with the king's and his personal share of the loot. In further confirmation we have the official report of the notary, Pedro Sancho, giving a full list of the names of those who shared in the ransom of Atahualpa together with the amount of gold and silver each received. There are other confirmatory records.

From Francisco de Xeres we learn that after Pizarro had massacred two thousand of the friendly and unsuspecting Peruvians and seized the person of their king, the monarch, realizing that the Spaniards were, as Cortez said, suffering from a disease which gold alone could cure, offered in order to ransom himself and his family to collect as much of the precious metal as would fill the room in which he was confined, 36 x 25 feet, as high as he could reach on its walls, probably over seven feet. This proposal was accepted, and messengers were sent to all parts of the kingdom to collect the treasure. The monarch fulfilled his promise faithfully; the ransom in question, when melted down for distribution, amounted to 3,933,000 ducats of gold and 372,670 of silver, a total of \$17,000,000 or more in American coinage. When he found that this vast sum would not save him, the Inca offered an additional amount for his life. The conquerors, however, seeing how easily the first supply had been obtained, doubtless felt that the rest could be garnered without his help, and fearing a popular rising in behalf of the unfortunate monarch, murdered him.

An idea of the lavish use of gold under the Incas may be gained from Garcilasso's account of the Temple of the Sun at Cuzco. He says: "It is now the church of the divine Santo Domingo. As I have not the exact length and breadth, I do not give it here." From other authorities we learn that the precinct was about five hundred feet square. It was built of masonry, so well that the remains of its stone walls excite the admiration of all travelers to this day. Garcilasso says it was very lofty. "All the four walls of the temple were covered from roof to floor with plates and slabs of gold. In the side where we should look for the high altar, they placed a figure of the Sun, made of a plate of gold of a thickness double that of the other plates which covered the walls. The figure was made with a circular face and rays of fire issuing from it. . . . It was so large as to occupy the whole of one side of the temple from one wall to the other. . . . This figure of the Sun, when the Spaniards entered the city, fell to the lot of a noble knight, one of the first conquerors, named Mancio Serra de Leguisamo, whom I knew, and who was alive when I went to Spain." He goes on to tell how this knight gambled away this splendid loot at one sitting; and commenting on this one man's share, he says an idea may be formed of the magnitude of the treasure which was found in this one city and temple.

"On either side of the image of the Sun were the bodies of the dead kings, arranged according to priority, as children of that Sun, and embalmed so as to appear as if they were alive, although the process is not known. They were seated on chairs of gold, placed upon the golden slabs on which they had been used to sit. . . . The Indians hid these bodies with the rest of the treasure, most of which has not been brought to light up to the present time. In the year 1559 the licentiate Polo discovered five of the bodies, three of kings and

two of queens [and Garcilasso saw them].

“The principal door of the temple looked to the north, as it does now, and there were other smaller doors for the service of the temple. They were all coated with plates of gold. Outside the temple, on the upper part of the walls, a cornice of gold, consisting of a plate more than a yard wide, ran round the whole building, like a crown.

“Beyond the temple was a cloister with four sides, one of which was the wall of the temple [this was probably the court or precinct five hundred feet square]. All round the upper part of this cloister there was a cornice, consisting of a plate of gold more than a yard wide, forming a crown to the cloister. In place of this gold the Spaniards caused a cornice of white plaster to be put up, of the same width, in memory of the former one and I left it there in the walls, which were still standing. One of the halls was dedicated to the Moon, the wife of the Sun. . . . The whole of it, with the doorways, was covered with plates of silver. . . . The image, like that of the Sun, represented a woman’s face on a plate of silver. . . . Another of these halls . . . was dedicated to the planet Venus and the seven Pleiades and to all the other stars. . . . This hall was covered with silver like that of the Moon, and the doorway was of silver. The whole roof was strewn with stars, great and small. . . . The other hall was dedicated to lightning, thunder, and the thunderbolts . . . and the hall was lined with gold. . . . Another hall, which was the fourth, was dedicated to the rainbow, for they had ascertained that it proceeded from the Sun; and the King’s Incas therefore adopted it as their device and blazon, as descendants of the Sun. This hall was all covered with gold. On one side of it, on the plates of gold, a rainbow was very naturally painted. . . .

“The fifth and last hall was set apart

for the high priest and for the other priests who assisted in the services of the temple, all of whom were Incas of the blood royal. . . . This hall, like the others, was also plated with gold from floor to ceiling. . . .

Of the five images the Spaniards secured three, which still remain in their ancient positions. They only lost the benches of gold and silver and the images of the moon and stars, which had been pulled out of the ground.

“Against the walls of these temples, looking towards the cloisters, on the outside, were four porches of masonry. . . . The mouldings round the corners and along the inner parts of the porches were inlaid with plates of gold, as well as the walls and even the floors. At the corners of the mouldings were many settings of fine stones, emeralds and turquoises, but there were neither diamonds nor rubies in that land. . . . In two of these porches, built against a side facing to the east, I remember having seen many holes in the mouldings. . . . I heard the Indians and ministers of the temples say these were the places in which the precious stones were fixed in the heathen times. The porches and all the doorways opening on the cloister, which were twelve in number, were inlaid with plates and slabs of gold . . . except those of the temples to the Moon and Stars . . . which had their doorways of silver.

“There were within the edifice five fountains of water. . . . The pipes were of gold, and some of the pillars were of stone, and others were jars of gold and silver. . . .

“The garden which now supplies the convent with vegetables, was in the time of the Incas a garden of gold and silver, such as they also had in the royal palaces. It contained many herbs and flowers of different kinds, many small plants, many large trees, many large and small animals both wild and domestic, and creeping things, such as serpents, lizards, and toads, as well as shells, butter-

flies, and birds, each in its natural position. There was also a large field of maize, the grain they call Qumua, pulse, and fruit trees with their fruit; all made of gold and silver. There were also in the building billets of wood, imitated in gold and silver, and great figures of men, women, and children, as well as granaries, called *pirua*, all for the ornamenting and the majesty of the house of the Sun, their god.

"Every year, on the occasion of the principal festivals, new objects of gold and silver were presented to the temple, so that its wealth continued to increase; for all the silversmiths, dedicated to the service of the Sun, had no other business than to make these things.

"There was also a vast quantity of pots, vases, and jars in the temple. In fine, there was in that edifice no article of any kind which was not made of gold and silver, even down to the spades and hoes for use in the garden. Hence, with good reason, they called the temple of the Sun and the building attached to it *Ccuricancha*, which means a 'court of gold.'

"In imitation of this temple of the city of Cuzco, others were made in the provinces, of many of which and of the house of the Select Virgins, Pedro de Cieza de Leon makes mention . . . though he does not mention all the temples. . . .

"Each *Curaca* (chief) was bound to adorn the temple in his district, in proportion to his wealth in gold and silver, as well as to serve and honor his God as to show respect to his king, who was a child of the Sun, so that all these temples of the provinces vied with that of Cuzco in their platings of gold and silver."

Regarding the temple on the island of Titicaca, in the lake of that name, on which the Sun placed his children, the first two legendary Incas, Garcilasso quotes Father Blas Valera to the effect that the Indians told him that there was so much gold and silver heaped up in it

that another temple might have been built of the accumulation without recourse to any other materials. "But," says he, "as soon as the Indians heard of the invasion of their country by the Spaniards, and that they were seizing all the treasure they could find, they threw the whole into the lake."

There were usually fifteen hundred Virgins of the Sun, of necessity legitimate, and of the blood royal, but no rule limited their number; they had for attendants five hundred virgins, and all dwelt together in a convent, into which no one but the queen might penetrate. "All the furniture," says our chronicler, "down to the pots, pans, and jars, were of gold and silver; they had also a garden of gold and silver, like that in the temple of the Sun."

"There were many others like this convent in other parts of the kingdom."

The royal palaces, which were scattered over the vast empire, were walled and adorned with the precious metals within and without. "They did not have tapestries for the walls, for they were covered with gold and silver." Connected with the palaces were golden gardens like those in the temples of the Sun. All the vessels, large and small, for the whole service of the palace, including the kitchen, were of gold and silver. The baths, with the pipes for bringing the water, were of the same precious metals. The Inca usually sat on a stool of solid gold, a *tercia* in height, which was placed on a great square board of gold.

These things were in each royal lodging so that the Inca might not be under the necessity of carrying them about with him. When he died, his palace was left in statu quo, sacred to his memory. All his personal vases, jars, basins, kitchen service of gold and silver, and all his clothes and jewels were buried with him, and his successor began an accumulation anew.

There may be some exaggerations in these accounts, but that gold was freely

used for the decoration of temples, for the overlaying of the thrones of the Incas, and for the household utensils of their palaces can hardly be doubted.

The most incredible story of all is that of the golden chain or rather cable which Huayna Ccapac, the last of the great Incas, had made at the birth of his son, Huascar (*huasca*, without the sounding of the final r, means a cable; the Quichua language had no word for chain).¹ The Incas held a stately ceremonial dance in which as many as two hundred or three hundred men and even more participated, grasping hands. On the occasion in question Huayna Ccapac thought to increase the splendor of the function by having the dancers hold instead the golden chain. Says Garcilasso, "I had a special account of this from the old Inca who was my mother's uncle, Paullu Inca before mentioned. I asked him what was the length of the chain, and he told me it was twice the width and length of the great square at Cuzco." He goes at some length and with great detail into the dimensions of this square, which he knew intimately, and concludes that "the chain must have been three hundred fifty paces long, which is equal to seven hundred feet. When I asked touching its thickness, he raised his right arm and, putting out the thumb, said that each link was of that thickness." This chain was concealed on the approach of the Spaniards so that it has never been found; Garcilasso says that it was commonly reported that

the Indians threw it into the lake of Urcos, about six leagues south of Cuzco, together with much of the treasure of that city. He gives an entertaining account of the vain endeavors of the Spaniards to drain that lake in 1557.

Unless we are to understand that the chain was merely gilded or contained golden insets, the amount of metal required for its construction hardly allows the story to be accepted. These early published stories of hidden gold and the many still current in Peru must be considered largely as legendary, imaginings prompted by desire. The fact that the golden treasures were concentrated in the palaces and temples made it easy for the Spaniards to gather them up and we may be sure they did not cease their efforts until they were no longer repaid by success. North of Peru, in Ecuador, Colombia, and Costa Rica, objects of gold were commonly buried with the dead and it is still possible to recover them. The location of graves and the digging of the treasure is a regular occupation in many localities. A small percentage of the graves of Peru still yield gold ornaments but not in commercially paying quantities. But this does not discourage either the dreams or the attempts to secure sudden wealth by finding the great Inca treasures.

The conflicts between the civilizations of the Mediterranean and the Andes resulted in the nearly complete destruction of the latter. With it the use of gold in art diminished and now the local interest is not in the skill and beauty displayed by the ancients but in the intrinsic value of the metals or what may be secured for them in exchange.

¹"There appears to be no truth in the story about a golden cable having been made to celebrate his birth. The story was invented to account for the name. There had long been a cable covered with plates of gold, in use for the performance of dances during the great festivals." (*The Incas of Peru*, p. 241, by Sir Clements R. Markham.)

HOW DIAMONDS ARE POLISHED

BY

H. P. WHITLOCK *

SUPPOSE you were taking a walk somewhere in the middle of South Africa and, happening to glance down, saw at your feet a small, angular, irregular object, clear like glass but with a surface that looked as though it had been smeared with oil. You would probably kick it aside and proceed on your way; and yet this insignificant-looking thing might easily be a diamond of great value.

Diamonds as they are found in the rough state are not impressive. They have none of the magical flashes of light which in the finished stone make them unique among the noble family of gems. It is in polishing that a goodly part of the price of a diamond is acquired; for the art of turning a rough diamond into a glittering brilliant is a long process requiring a superlative degree of skill. There is no better way to appreciate this than to follow the diamond from the mine to the jeweler and see for ourselves just what happens to it.

When the diamonds are taken out of the mine, not by any means are all of them clear and colorless, as a self-respecting diamond should be; indeed only about 25 per cent of the stones found are without some faint color. Of the remainder about one third are of a light shade of color, such as violet, yellow, or brown, and are known as "off-color" stones. The remainder, roughly one half of the total find, are more or less deeply colored and are consequently of no value for jewelry although still usable for diamond cutting and polishing or for facings for rock drills. So we find that at the beginning of its travels the diamond is introduced to the sorter. The sorter is a kind of super-expert on diamonds whose eye has been trained through years of practice to detect the slightest variations in the color of dia-

monds and to find flaws in the stones with an ease which is little less than uncanny. Safeguarded behind a heavy metal screen, the diamond appraiser sits with a pile of rough stones before him, judging each stone and assigning it to its proper heap.

The first consideration in sorting diamonds is the adaptability of the stone for cutting. Let us assume that the stone whose travels we are following is sorted into the grade known as "close goods," comprising complete, flawless crystals from which fair-sized brilliants can be cut or, to use the trade term, "made." These usually have eight sides or faces, triangular in shape. Next comes a resorting of the "close goods" into eight grades, ranging from blue-white, which comprises the stones of finest quality, to yellow and brown, which are so badly off-color as to be unfit for gems. If our stone has passed the critical test of the sorter and has been placed in one of the higher grades, it is weighed, wrapped up in a parcel with others of its kind, a price per carat is assigned to it, and it is sold to a diamond dealer, and ultimately finds its way to the workshop of the diamond polisher. Here, at the hands of a highly skilled workman, it is destined to be turned into a gem fit to grace beauty or proclaim opulence.

Most of this work is done in Holland, and especially in Amsterdam, which since the fifteenth century has been famous for this industry, in reality an art, but there are, nevertheless, a number of shops in operation right here in our city of New York. Like many other operators who depend for their success on a high degree of manual skill the diamond cutter has few tools, and these are relatively primitive and have changed little since the days of Louis de Bequem, who

* Curator, Department of Mineralogy, American Museum

