One of the oldest fountains in South America, Lima, Peru. University of Washington Libraries, Special Collections, UW 35936.

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ANDEAN STATES: COLOMBIA, ECUADOR, PERU, AND BOLIVIA, MARCH 1923

"Jenson's Travels," March 2, 1923[1]

ON BOARD THE SS SANTA LUISA, OFF THE COAST OF SOUTH AMERICA

Thursday, March 1. Elder Page and I left Panama at 11:00 a.m. and traveled in a hack[2] to Pier 18 at Balboa, where we waited all day for the Grace steamer *Santa Luisa* to come through the canal from the Colón side, she being held up in the Gatun Lake owing to the unusually heavy traffic of steamers passing through that day in the opposite direction; but at last she reached the sea level earlier than previously announced, and some of us, who had gone out for supper, came near getting left; in fact, this would have happened if the tender, which took us out to the ship, had not waited for us.[3]

Soon, however, we caught up with the vessel, which was steaming slowly from the mouth of the canal out into the bay, and at 9:00 p.m. we were all on board and sailing once more on the broad face of the Pacific Ocean. In going out we passed both the Pacific and the Atlantic Fleet of the United States Navy lying at anchor in Panama Bay, and never before have I seen so many warships collected together in one place. To behold these magnificent vessels all lit up with electric lights in the darkness of the night made an impression not soon to be forgotten. The two fleets had been ordered to meet in the Panama Bay to engage conjointly in naval demonstrations.[4]

Before leaving Balboa we had the privilege of boarding the US warship *California* (the admiral ship of the Pacific Fleet) and were shown through by a polite attendant. The flagship *Maryland* of the Atlantic Fleet was also lying at anchor in one of the Balboa docks.

Friday, March 2. As we arose this morning from a good night's rest on board the *Santa Luisa*, no land was in sight, but the weather was fine and the sea calm. When the usual nautical observations were taken at noon, we were in latitude 3°20′ N and longitude 80°6′ W. We had made 218 miles since leaving Balboa last night and were now sailing in a southwesterly direction not far from the coast of the United States of Colombia.[5]

Republic of Colombia

Colombia is the most northerly of the South American republics. It lies adjacent to Panama, which was formerly one of its departments. In area, Colombia is twelve times the size of the state of New York and more than twice the great state

1. Jenson, "Jenson's Travels," *Deseret News*, June 2, 1923, 8.
2. A *hack* was a rented horse for casual riding and transportation. See Stevenson and Lindberg, *New Oxford American Dictionary*, 780.
3. Jenson wrote: "We were told that the *Santa Luisa* would not arrive at Balboa until 8:30 in the evening, so I took a hack together with a Mr. McBride, a botanist, in the cool of the evening, while Elder Page stayed with our valises which we had taken on board the tender, which was to take us out to the steamer when it arrived. But in the meantime, the steamer got through sooner than expected, and though we returned at 8:15 we delayed the departure of the launch ten minutes, and there was danger of us being left. It was on Brother Page's request that the tender waited." See Jenson diary, March 1, 1923, 293.
4. Upon seeing the large naval fleet, Jenson wrote, "The United States of America is certainly a power in the world." See Jenson diary, March 1, 1923, 294.
5. Present-day Columbia was referred to as the United States of Columbia from 1863 to 1886, when the country was renamed the Republic of Columbia. See *Geographical Dictionary*, 268.

of Texas. Its length exceeds the distance from Chicago to the Gulf of Mexico; its width is equal to the distance from St. Louis to New York. Colombia is the only South American republic with a coastline on both oceans. It has sixty-four miles on the Caribbean side and 468 miles on the Pacific side. It is a country of great extremes, is in the main mountainous, and is famous for its beautiful scenery. The area of the republic is 443,378 square miles, and its population is about six million.

The chief river in Colombia is the Magdalena, which by many of the Latter-day Saints is believed to be the River Sidon spoken of in the Book of Mormon.[6] The Magdalena is the commercial artery of Colombia, flowing from south to north in the great valley lying between the ranges of the Central Andes and the Eastern Andes. The river is 1,020 miles in length and is navigable for about 932 miles. It consists of two parts, the upper and the lower, divided by the rapids of Honda.

About 170 miles from its source it is joined by the Neboa, and here navigation on the upper Magdalena begins and continues for more than a hundred miles to the rapids of Honda. These break navigation for twenty miles and were once the cause of much expense because all goods destined for the plateau and the capital Bogotá had to be carried around them on muleback. Now a short railway provides for the easier passage of goods and passengers from the steamer above the rapids to the steamer below them.

River Traffic

Isaac Bowman, in his excellent book on South America, writes: "The traffic of the lower Magdalena is carried on chiefly by means of stern and side-wheel steamers. During the dry season, when the river is low and all steamer traffic is stopped or delayed, people go down the river on *champans*, a kind of large canoe covered over at one end and worked by a crew of fifteen or eighteen men. In addition there are rafts of bamboo, which go downstream only. When these reach the port for which they are bound, the logs and the rafts, as well as the goods floated down upon them, are sold, and the owners start back overland or return by boat for a new cargo. The river steamers carry all kinds of goods, since almost all the supplies for the cities and people of the plateau must come up the great river.

"Imported fuel is so expensive that the Magdalena steamers burn wood. [. . .] Two or three times a day the steamers on the Magdalena run up to the bank and take on fuel. [. . .] To add to the delay of the traveler, the steamers find the currents and the shoals so difficult to navigate that they tie up to the bank at nightfall and wait until daylight to continue the voyage. When the water of the river is at moderate height, steamers can be navigated night and day as far as La Gloria, 282 miles above Barranquilla. The river journey is also varied

6. The River Sidon was a prominent waterway mentioned throughout the Book of Mormon. It ran northward to the sea and was used to perform baptisms among the Nephite faithful. The largest Nephite cities were built along the banks of the river, including Gideon, Manti, and Zarahemla. By the time of Jenson's 1923 trip to Central and South America, students of the Book of Mormon agreed that the Magdalena River in present-day Colombia was the River Sidon in the Book of Mormon. This was "confirmed" by Joel Ricks Jr. (1874–1940), a Latter-day Saint who traveled to Colombia in 1903 and 1908 to study Book of Mormon lands. See Reynolds, *Dictionary of the Book of Mormon*, 339–40. See also page 13 in the introduction to this volume.

at times by the grounding of the steamer upon some shallow sandbar, from which it is freed only by much patient labor on the part of pilot and captain.

"The swampy lowlands of the lower valley of the Magdalena have almost no people on account of the widespread floods, the unhealthful climate, the great heat, and the abundant vegetation. [. . .] In these sweltering plains and stifling valleys, the white man does not find life attractive. If he goes there it is to stay for a short time only and for purposes of business or adventure or exploration. The white man and the Indian live on the uplands; on the hot and unhealthful lowlands pure-blooded Negroes are almost the only inhabitants. The few Indians that live in the lowlands are still in a state of rudest savagery. The naked tribes of the Opon Territory, almost within sight from the Magdalena steamers, still roam about in the dense forests, killing birds and other animals with bow and arrow."[7]

An Advanced People

In the northern part of South America, the most highly developed peoples are found, not in the hot lowlands but on the cool highlands. The Indians of the plateau of Colombia, in contrast to their savage brothers, lead a very advanced type of life. They have paved roads, which cross gorges by means of light suspension bridges. Long before the discovery of America by Columbus, they erected shrines to their gods; were skillful weavers, dyers, and potters; and even had a form of money used in trade.[8]

Bogotá, the capital of Colombia, with a population of 144,000, is the garden spot of the republic. It is in a basin about seventy miles long and thirty miles wide at an altitude of 8,680 feet, 745 miles inland from the seaport town of Barranquilla, which is built near the point where the Magdalena River enters the Caribbean Sea. Near the western edge of the basin plain all the streams unite to form the river Funza, or Bogotá, one of the principal tributaries of the upper Magdalena. Just before reaching the edge of the plain the river falls over the perpendicular cliff into a deep gorge 410 feet below, the Falls of Tequendama. The city of Bogotá is built at the foot of two high peaks that reach almost to the limit of perpetual snow. The streets of the city run eastward up the lower slopes of the mountains and are crossed at right angles by those running north and south. Above the city are the terraced slopes and overshadowing peaks of Guadeloupe and Monserrate, upon whose topmost peaks two massive Catholic cathedrals have been built.[9]

"Jenson's Travels," March 4, 1923[10]

ON BOARD THE SS SANTA LUISA, OFF THE COAST OF ECUADOR, SOUTH AMERICA

Saturday, March 3. The day was fine and pleasant and all well on board the *Santa Luisa*.[11] About 11:00 a.m. we

7. Bowman, *South America*, 303–6.
8. See Bowman, *South America*, 307.
9. See Bowman, *South America*, 310–12.
10. Jenson, "Jenson's Travels," *Deseret News*, June 9, 1923, 6.
11. The day before Jenson suffered a painful toothache. He wrote, "I was

crossed the equator, and the copy of the ship's log posted up at noon read as follows: latitude 0°20′ S, longitude 81°05′ W, distance run in twenty-four hours, 340 miles. Our position was about due west of Quito, the capital of Ecuador, and about 1:00 p.m. we passed the island of La Plata, off the Ecuador coast. It is said that the buccaneer Henry Morgan, after attacking Old Panama, buried on that island some of the treasures he had taken.

In the afternoon old Neptune[12] appeared on board our ship, accompanied by his wife and usual courtiers, and held court.[13] Several of the passengers, both men and women, were initiated into the "Order of the Bath," or into the kingdom of which Neptune holds sway. The initiation ceremonies caused considerable merriment but no ill feeling, as no one was taken by force, which has been the case on other vessels in times past when crossing the equator. Hence, Brother Page, who had not crossed the line before, escaped the somewhat rough handling by His Majesty's attendants,[14] and I, of course, was lawfully excused because I had crossed it twice before.[15] In the evening, certificates, signed by Neptune, were with great solemnity issued to all who had been initiated into the "Domain of His Aquatic Majesty." The document reads as follows:

Neptune's Certificate

ORDER OF THE BATH

TO ALL SAILORS AROUND THE WORLD
GREETINGS

Be It Remembered that on this, the third day of March, in the year Nineteen Hundred and twenty-three, there has appeared within the limits of our Royal Domain the U. S. ship, "Santa Luisa," Captain George S. Dexter, Commander, bound Southward to Valparaíso, and

Be It Therefore Understood that the said Vessel and the Officers and Crew thereof have entered our Royal Kingdom and have been inspected and passed upon by My Royal Self and also by the officers of My Royal Staff, and,

Be It Known by all ye Landlubbers, Park Statues, Loafers, Prohibition Agents, Beachcombers, Politicians and others who

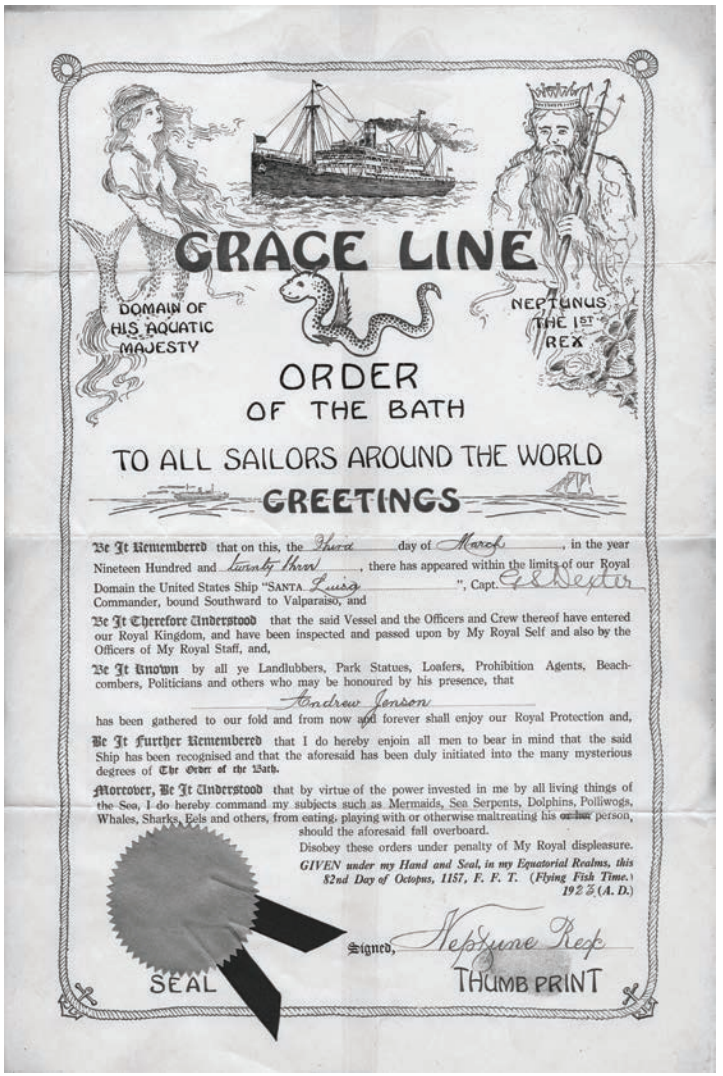
suffering all day with toothache and sought the advice of the ship's doctor who gave me some alcohol to rub my cheek with and suggested that I use a rubber bottle filled with hot water to lay up against my cheek. I did so at night, but it was past midnight before I could get any sleep." See Jenson diary, March 2, 1923, 294.

12. Neptune was the Roman god of fresh water. He was identified with Poseidon, the Greek god of the sea. See "Neptune" in Leeming, *Oxford Companion to World Mythology*, 283.

13. King Neptune's Court was an initiation ritual for first-timers crossing the equator. In the nineteenth and early twentieth century, the line-crossing ceremony was often boisterous and even dangerous, as men were lathered, shaved, and pushed into tanks of water or thrown overboard. A certificate of completion was given to participants, who became the "Sons of Neptune." See Ketting, "Crossing the Line," in Hattendorf, *Oxford Encyclopedia of Maritime History*, 1:517–18.

14. Jenson suggests that Page did not participate in the equator-crossing ritual, but Page came home with a certificate of completion. See Thomas P. Page Scrapbook, Church History Library.

15. As mentioned in chapter 1, Jenson crossed the equator twice while traveling around the world on special assignment for the Church, 1895–97. See Neilson and Moffatt, *Tales from the World Tour*, 91, 282. See also Jenson, *Autobiography*, 490–511.



Andrew Jenson's "Neptune" certificate for crossing the equator, 1923. Church History Library.

may be honored by his presence that Andrew Jenson has been gathered to our fold and from now and for ever shall enjoy our Royal Protection and,

Be It Further Remembered that I hereby enjoin all men to bear in mind that the said Ship has been recognised and that the aforesaid has been duly initiated into the many mysterious degrees of The Order of the Bath.

Moreover, Be It Understood that by virtue of the power invested in me by all living things of the Sea, I do hereby command my subjects such as Mermaids, Sea Serpents, Dolphins, Polliwogs, Whales, Sharks, Eels and others, from eating, playing with or otherwise maltreating his ~~or her~~ person, should the aforesaid fall overboard.

Disobey these orders under penalty of My Royal displeasure.

Given under my Hand and Seal, in my Equatorial Realms, this 82nd day of Octopus, 1157, F. F. T. (Flying Fish Time.)
1923 (A. D.)

Signed, Neptune Rex

Thumb Print. (Seal)

Ecuador is, as its name indicates, the land of the equator, and it also has the distinction of containing more volcanoes for its size than any other country in South America. The land is very irregular, owing to the large amount of volcanic material poured out upon the surface everywhere. Upon the central plateau there is an avenue of volcanoes, in which there are still active craters, which occasionally emit mud and lava and destroy hundreds of people who dwell in the valleys at their feet. There have also been destructive earthquakes, as, for instance, in 1868, when whole towns and villages were destroyed and fifty thousand people lost their lives.

Among the giant volcanoes of Ecuador none lifts its head so high as lofty Chimborazo does, the top of which is more than twenty thousand feet above the sea.

Street scene in Guayaquil, Ecuador, ca. 1910. Library of Congress.

Various Boundary Lines

Ecuador is not only one of the smallest republics in South America, but it is also the only country whose size varies so much from year to year, according to the claims of its neighbors—Colombia and Peru—that it ultimately may be twice as large or only half as large as its people think it is. Ecuador once in a while amuses the world by publishing a map of the country with boundaries that take in as generous slices of neighboring states as the humor of the mapmaker may lead him to include. If a student of geography should compare an official map of Ecuador with a map of Ecuador published in Peru or Colombia, an astonishing difference would be seen.

There are only about 230,000 white people in Ecuador, and even among these there are some who carry Indian or Negro blood in their veins. Including Indians, Negroes, and half-breeds, there are in all Ecuador at the present time perhaps 1.5 million. The Indians of Ecuador belong to two distinct groups. Upon the western plateau and in the higher valleys are the salt-eating and semi-Christian Indians who live chiefly by agriculture, are peaceful and industrious, and have a settled mode of life. Then there are the real wild tribes that eat no salt; have no religion, or a very simple one; live in a savage way; recognize no man's authority; and are treacherous and warlike. These wild Indians live upon the plains of the eastern part of the country, the forested western edge of the great Amazon Basin, and they are in some respects the most interesting of all the native people of Ecuador. They lead a semi-nomadic life, sometimes collecting in their settlements and sometimes following

Bananas being rafted down a tributary of the Guyas River, Ecuador, ca. 1905. Library of Congress.

the trails of the wild animals, which move in all directions. When they reach a place where the hunting is good they build sheds, open on all sides, with several palm-fiber hammocks strung crosswise therein. These serve them only a few months at the longest, for the game soon becomes scarce as the hunters scour the forest roundabout, and abandoning the old campsite, they move to a new one.

A Native Garment

The only covering worn by men and women alike is a long bark shirt, made in a single piece and called a *llachama*. To make such a shirt, a moderate-sized tree of the right kind is cut down, and the bark is pounded until it is broken off, and the interior, fibrous bark, loosened from the wood, forms a good natural cloth. It is removed from the trunk of the tree without being cut, so that it is in a single piece and needs only armholes cut into it.

Some of the Indians of the Napo Valley make the blowgun, an instrument used by only a few tribes in the world and dreaded by all their enemies. It is as formidable to the white man with his modern high-power rifle as it is to the savage, for it is both deadly and silent. Not a sound may be heard to indicate whence came the deadly arrow so skillfully blown by some Indian hidden in the brush or bamboo. The gun, about eight feet long, is made of straight bamboo. A joint of bamboo serves as a quiver; the arrow is a slender stick almost a foot long with a very sharp point dipped in poison that soon paralyzes its victim. It is blown with astonishing skill and has great penetration at short distances.

One of the strange and curious sights to be seen among the Zaparo Indians is an American sewing machine, in an Indian hut, operated by an almost-nude Indian woman making calico dresses for her children. Traders have brought in many of the white men's goods but none that seems more strangely out of place than a sewing machine in the hut of a forest Indian. These machines are used even by those Indians who eat with their fingers and who squat upon the earthen floors of their dirty huts.

A Great Contrast

There is a great contrast between the life of the plains of eastern Ecuador. Here are the lofty *páramos*, or high, bleak, and almost-deserted plateaus, which extend northward into Colombia. The heavy mists, the clouds, and the rains of the *páramos* are so penetrating that they cause great discomfort, and it sometimes happens that both whites and Indians when overtaken by bad weather become numbed and perish. On these *páramos* there is not even a shrub, much less a human habitation, to afford food or protection. With the exception of the half-wild cattle, one might travel for weeks without seeing any large animal. Upon the eastern edge of Ecuador one finds again the rank vegetation that is the mark of tropical heat and seasonal wetness. The banks of the Guayas River, for instance, are crowded with trees and shrubs, and everywhere are signs of regular rains. Animal life is abundant; the flat savannas bordering the stream are covered with a bright green carpet and shrubbery, and the bushes have a rich covering of leaves and flowers.

Ecuador is the land of palms and fruits, grazing cattle, and plantations of cacao, sugar, and rice, but only of a very little manufacturing. The chief manufactured article is the Panama hat. The name "Panama hat" is rather misleading, for it is not made in Panama at all but in Ecuador, Colombia, and northern Peru. The hats are generally shipped by way of the Isthmus of Panama, and it was there that for a long time they were bought and sold. But today it is chiefly at Guayaquil, as well as in northern Peru, that they are brought for sale. The plant that supplies the straw out of which Panama hats are made is called *planta de Toquilla*. It grows wild in the low, damp forests and is cultivated on some of the plantations.

Whole plantations in Ecuador are devoted to the growth of cacao so widely used as a drink by the people of the temperate lands; and another important industry is the raising and exportation of "vegetable ivory," a nut from which buttons are made.

Ecuador's Capital

Between the flat, hot, moist plains of Ecuador and the forested western fringe in which most of Ecuador's plantations are found is the mountainous part of the country. Here, too, are the high plateaus and valleys in which a great part of the natives and almost all the whites live. No white man stays on the coast except to transact business, to wait for the next steamer, or to see the country. The lowlands and the lowland cities are extremely hot and unhealthful and are infested by flies and mosquitoes. On the other hand, the climate of the plateau is cool and healthful the year round.

Upon the cool and pleasant plateau are the chief cities of Ecuador, of which Quito, the capital, is the largest. Quito has about fifty thousand inhabitants and stands more than nine thousand feet above the sea, under the shadow of the volcano Pichincha. It has fine churches (including a cathedral, and convents), which appear in painful contrast to the mean, squalid native houses built almost in their shadow. In that quaint old city one may still see the most striking contrasts of old and new. The native Indians still follow the old ways of life: they build their mud-walled houses on the old designs, use the llama to some extent, till their farms with the most simple wooden plows, and live in almost every way like the Indians of four hundred years ago. Until a few years ago, Quito was connected with the outside world only by stagecoach and mule caravan; now there is a railway to Guayaquil, the chief seaport of Ecuador.[16]

"Jenson's Travels," March 5, 1923[17]

ON BOARD THE SANTA LUISA, OFF THE COAST OF PERU, SOUTH AMERICA

Sunday, March 4. Early in the morning, the good ship *Santa Luisa* passed Cape Blanco in Peru and at about 7:00 a.m. cast anchor in the open roadstead off the little seaport town of Talara, the shipping point for the exportation of oil from wells owned by the Standard Oil Company of the United States. Here six of our passengers landed, and others came on board. From our anchorage off Talara we had our first glimpse of the Andes Mountains in the distance, but the coastlands looked very barren and desolate. Not a tree or shrub of any kind was in sight.

After continuing our voyage at 9:30 a.m., we soon rounded Parinas Point, the most westerly point of South America, and in the afternoon we cast anchor off Paita. As soon as the necessary business on the part of the ship's officers was attended to, we were again on our way down the coast of Peru and continued all night.

Elder Page and I had become known to our fellow passengers as Mormon elders, and we had several interesting conversations with some of them, thus having opportunities to explain some of the principles of the gospel and to refer to the moral standard and general activities of the Latter-day Saints. One of our tablemates was a grandson of the late George Francis Train,[18] who was known in his day as a staunch defender of the Saints and a close friend of President Brigham Young.

Paita, which we passed today, is the first important port of call for vessels southward bound along the ocean border

16. At the end of the day, Jenson wrote, "My toothache left me about noon, for which I felt very thankful." See Jenson diary, March 3, 1923, 295.
17. Jenson, "Jenson's Travels," *Deseret News*, June 16, 1923, 6.
18. George Francis Train (1829–1904) was an American businessman, a founder and director of the Union Pacific Railway, and a friend to the Latter-day Saints. He wrote a gracious poem entitled "The Death of Brigham Young," which was published in the *Buffalo Agitator* and later in the *Deseret News* (October 17, 1877). See Bitton, "George Francis Train and Brigham Young," 1–17.

of the desert. It is a typical desert port lying in a bend of the Peruvian coast and is built at the foot of the bluffs that border the shore. A railway leads eastward out of the town, and there seemed to be an air of business and importance about the place quite foreign to the sterile desert in which it is situated. One looks in vain for any sign of vegetation, yet there are fine vegetables in the market booths, while large quantities of rice and cotton are shipped abroad. The query is: where are these products grown? If the traveler will get into a railway car and travel a few hours across the lifeless plain of sand, he will arrive at Piura, one of the most interesting cities in South America; it has thirteen thousand inhabitants and is sixty miles from Paita. Upon this city and surroundings depends almost the entire prosperity of the port of Paita.

Welcoming a River

Up and down the valley of the Piura River are the plantations and farms of the people, with irrigation ditches leading the water of the river out upon the fields where rice, sugarcane, and, especially, cotton are grown. Without irrigation all would be dry and barren. What the Nile is to Egypt, what the Indus and the Ganges are to the people of India, so in a smaller way is the Piura to the people of northwestern Peru. It is not surprising, therefore, that the people of Piura have a great feast day on account of the river. Once a year, when the mountain snows are being melted and the summer rains return, the sources of the Piura are fed with precious water. The river gradually rises as the flood moves downstream, spreading over and enriching the valley bottom and feeding the irrigation ditches that in turn water the fields. Long before the flood arrives the people ask every traveler from upstream where the river is and how fast the flood is coming, and in this way they learn when the river will arrive. On the day when the beneficent river is due, the people at Piura—men, women, and children—march upstream in a body to welcome the river. This is the great fiesta, or feast day, of the year. With fife and drum they escort the river down to the main bridge of the town, some miles below Piura.

One of the products of the Piura Valley is cotton, and Piura cotton is noted among the best cotton in the world; it commands twice as great a price as ordinary cotton grown in the United States or India. A great deal of sugarcane is also grown in the Piura Valley, and it is not all used in making sugar and molasses. Some of it is eaten raw, or rather sucked after chewing for the natural sweet sap it contains. Some of it is bound into bundles and taken on the backs of burros, or mules, across the desert to many other towns where it is not produced and there sold as a delicacy.

A Barren Coast

Monday, March 5. When I looked out through the porthole of my stateroom on board the *Santa Luisa* this morning, we were still sailing close to the desert shore of Peru, and at 8:00 a.m. anchor was cast off the seaport of Salaverry, a town of three thousand inhabitants situated at the foot of a volcanic zone and an elevated stretch of desert sand. We resumed our voyage at 3:30 p.m. A masquerade ball was given on board the ship in the evening, at which a little Texan girl, dressed and

equipped like a Texas Ranger, sustained her chosen character best of all.[19]

The port of Salaverry is like most of the other ports on the desert coast of Peru, except Callao. The largest and best of them all is little more than an open roadstead. If this were a stormy sea like that off the coast of southern Chile or the eastern coast of the United States, Salaverry would be one of the most dangerous ports in the world. Marines find scarcely any natural protection for hundreds of miles along this coast. There are no deep bays or sheltering promontories, almost no islands behind which ships can seek shelter and outride a storm, and but few lighthouses. But only a few storms ruffle the surface of the Pacific in the latitudes of the coast of Peru or northern Chile. It is a serene and beautiful tropical sea. The only motion of its water is a smooth and constant roll, increasing in size as the shore is approached. Salaverry, with a population of three thousand, is the port for Trujillo, a city of twenty-two thousand inhabitants which is situated inland on the Moche River about nine miles from Salaverry.

South America has the southernmost people in the world—namely, the Yahgans and Onas (Indians) of Tierra del Fuego—and the southernmost city in the world, namely, Punta Arenas. It also has the loftiest navigable lake (Titicaca), the largest river (the Amazon), and one of the longest deserts, the so-called West Coast Desert. The length of this desert exceeds 1,600 miles, a distance as great as the distance from Chicago to Salt Lake City. Yet its width is in a few places more and in most places less than a hundred miles. This South American west-coast desert owes its origin to the mountains and the winds. The lofty Andes shut off the moist southeast trade winds, or break them up into a complex system of shifting winds that follow the trend of cross valleys and ridges. Furthermore, the moisture of the trades is deposited on the eastern slopes of the Andes, and the westward-moving air descends upon the coastal region so dry that no rain can fall from it. The eastern slopes are therefore clothed with dense forests; the western slopes are so dry as to support no vegetation at all or only low shrubs, thin grasses, and cacti. But the desert receives the equivalent of a slight rainfall from the almost-constant mist that hangs like a cloud over the edge of land and sea. Water particles from the mist cover are collected upon the leaves and systems of plants, and a small quantity is also absorbed by the soil. From these slender sources enough moisture is derived to support grasses upon which feed a considerable number of mules, donkeys, goats, and even cattle.

The Trail Island

In such a dry desert as that on the west coast of South America, it is difficult to travel any distance from the railroads that tap the larger valleys, the nitrate fields, and the mines. The traveler

19. The weather cooled down by nighttime, and "it became expedient to put on heavier clothing than those [Jenson and Page] had donned for the tropics." See Jenson diary, March 5, 1923, 297.

must carry all his food or depend upon the very uncertain supply, which can be found in small, scantily watered oases on the way. Most travelers have with them an Indian guide who knows the way from one campsite to another. If darkness overtakes them too far from a village and they do not wish to travel all night, they camp in some sheltered spot and sleep on the bare ground. The trails in the desert are in many places covered with sand and are difficult to find, so signs of the way called *signos del camino* are erected. These are nothing more than heaps of stones piled beside the trail and are so large as never to be obscured by sand. Some of them are of great size, each traveler adding a stone or two that he may have a safe journey. If the *signos* are on a mountain pass, the Indians sometimes leave beside them small offerings to their deities—such as a candle or a piece of meat or some wool—to bring good luck.

Of all the interesting features of the west coast of South America, perhaps none is more lasting in the mind of the traveler than the startling suddenness with which he comes upon the coastal desert in sailing south from Ecuador. The last port at which the steamer touches before reaching the desert is Guayaquil. There may be seen every sign of abundant and timely rains. The hillslopes behind the city are green with foliage, and there is abundant pasturage for the cattle and mules. Outside the town and the banks of the Guayas River are deeply fringed with dense tropical vegetation. The next morning the scene has changed completely, for in a single night one has passed the boundary line between the desert and the tropical landscape. At the northern end of the great coast desert of South America there are practically no streams, for the region is nearly rainless; there is so little vegetation that at a distance the landscape seems bare and yellow; in place of herds of cattle as at Guayaquil, one sees here only a few small flocks of scrawny goats that somehow pick a scanty living from the dry and extremely tough vegetation that survives the desert dryness.[20]

"Jenson's Travels," March 6, 1923[21]

LIMA, PERU

Tuesday, March 6. After sailing for some time in sight of the Peruvian coast, we arrived in the Bay of Callao about 11:00 a.m. Here were anchored a number of steamers, large and small, and many sailing vessels hailing from nearly all parts of the world. There was also a motley multitude of launches and shore boats, some of them for hire, and after having our passports and doctor's certificates examined, the passengers were permitted to go ashore; thus, for the first time in my life, I enjoyed the privilege of placing my feet on South American soil.

We landed at Callao about 3:00 p.m., and soon afterwards we jumped on a streetcar which took us eight miles inland to

20. See Bowman, *South America*, 84–97.
21. Jenson, "Jenson's Travels," *Deseret News*, June 23, 1923, 6.

Lima, the capital of Peru. Here Elder Page and I put up for the night at Hotel Gran. We were busy the remainder of the day and evening visiting places of interest in Lima.[22]

As we rode up in the streetcar from Callao, we accidentally fell into conversation with a gentleman[23] who spoke English and who proved to be a son-in-law of Alfred W. McCune, Esq., of Salt Lake City. This was a real godsend to us, for he at once took us in charge and conducted us to the offices of the Cerro de Pasco Mining Company in Lima,[24] where we were introduced to Dr. Alejandro Puente, to whom I had a letter of introduction from Mr. McCune. The doctor received us very kindly and endeavored to arrange an audience for us with His Excellency Augusto B. Leguia,[25] the president of the Republic of Peru. Such an audience would have taken place late the following day, but as we could not stop over without missing our steamer, Dr. Puente obtained a letter of introduction for me to the *prefectos*[26] of Arequipa and Cuzco, etc. These I afterwards used to some advantage. I also (through the recommendation of Mr. McCune) received from the Honorable Alberto Salomon,[27] Peruvian minister of foreign affairs, letters of introduction to high local officials in the interior of Peru.

Former Metropolis

Lima, originally an inland city, has, by suburban extension, practically joined hands with the seacoast city of Callao; and by railroad, tramcars, and motor roads these two cities have almost become one city, extending from the blue Pacific into the arms of the foothills of the Andes ten miles away. For three hundred years this city was the metropolis of South America, and, according to a certain quotation, it was "the center of a viceregal court, whose splendor and gaiety vied with that of the royalty of Spain itself."[28]

22. Jenson later "purchased picture cards and attended a picture show in the evening." The picture cards were postcard-sized portraits of various types of indigenous groups of people from around the world, including the "Patagonians" of southern South America. See Jenson diary, March 6, 1923, 298.
23. Reginald Graham "Rex" Trower (1881–1944) married Elizabeth Claridge McCune (1891–1967), the daughter of Albert W. McCune, on January 28, 1918. See Jenson diary, March 6, 1923, 298. See also "Obituaries," *Salt Lake Tribune*, July 3, 1967, 19.
24. Jenson wrote: "This wonderful meeting made matters easy for us, as Mr. Trower showed us around to other places in the city as well—a help much appreciated by us who did not understand Spanish." See Jenson diary, March 6, 1923, 298.
25. Augusto Bernardino Leguía (1863–1932) was the sixty-fifth (1908–12) and sixty-ninth (1919–30) president of Peru. He was known for resolving land disputes with Bolivia and Brazil, improving public health practice, and spearheading rapid industrialization in Peru. He was eventually forced out of office by the military after becoming unpopular during the Great Depression. See Wright, *Dictionary of World History*, 498.
26. *Prefecto* is a Spanish term for "civil governor." See Gooch and Paredes, *Cassell's Spanish Dictionary*, 483.
27. Alberto Salomon y Osorio (1877–1959) was the minister of foreign affairs of Peru, 1920–24. He had also been Minister of Justice (1915–20), member of Parliament (1911–24), and professor of finance at University of Lima. He authored *Peru: Potentialities of Economic Development* (Lima, Peru: C. F. Southwell, 1920). See Benvenutto, *Parlamentarios del Perú Contemporáneo, 1904–1921*, 1:154–57.
28. See Martin, *South America from a Surgeon's Point of View*, 29.

Harbor at Payta, Peru. University of Washington Libraries, Special Collections, UW 35934.

Street scene, Lima, Peru. University of Washington Libraries, Special Collections, UW 35937.

Cathedral in Lima, Peru. University of Washington Libraries, Special Collections, UW 35935.

Route from Mollendo to Arequipa, Peru. University of Washington Libraries, Special Collections, UW 35938.

In 1532, just forty years after the discovery of America, Francisco Pizarro,[29] with 310 soldiers, landed in Peru and soon afterwards overturned the empire of the Incas. In 1533 he founded the city of Lima.[30] From his military encampment sprang up palaces and a vice-regal court, churches and institutions of learning, and from this center the Spanish viceroys ruled the country now forming the republics of Peru, Chile, Bolivia, and Ecuador. Here, too, was the seat of the most important dependency of the Church of Rome in America. At the end of the sixteenth century, the city had a population of 14,637; and after another century it had 140,000, while it now has a total of 250,000. The palaces of its early days are in some instances the tenement houses of today, but a sufficient number of these palatial buildings remain in good repair to preserve some evidence of the charm of the old city.

In recent years the process of modernization has been proceeding rapidly at Lima. On the principal thoroughfares, paving has replaced the old cobblestones, and motorcars, trucks, and omnibuses have driven the two-horse carriages and the two-wheeled burro carts from the streets and highway. A paved boulevard system between Lima and Miraflores, one of the most populous outlying suburbs, is being built, and at the present time the water supply system of Lima and adjoining suburbs is being renovated.

Churches and Monuments

Lima stands three hundred feet above sea level in a wide, flat valley surrounded by the foothills of the Andes. The valley is divided by the Rímac River, the waters of which are used for irrigating the gardens and parks of the city and the outlying valley lands. The city is built in the chessboard system of intersecting streets, with occasional plazas in the approved Spanish colonial style. The Plaza de Armas is the principal square of the city; it is surrounded by portals or arcades, having the government palace (Palacio de Pizarro), the cathedral, the municipal building, the new archbishop's palace, etc., fronting on it. There are sixty-seven churches in Lima. The most historic and interesting of these is the famous cathedral, reminiscent of Seville, Spain,[31] and (next in importance to that of Mexico)[32] acknowledged to be the finest in South America. It was founded in AD 1535 by Francisco Pizarro, whose mummified body is shown sealed in a glass vault built in one of the chapels of the cathedral. Among the many

29. Francisco Pizarro (ca. 1475–1541) was a Spanish explorer, conqueror of the Incan empire, and founder of Lima, Peru. A mummified body, once falsely believed to be Pizarro, has been on display in the Basilica Cathedral of Lima for centuries. See Bicheno, "Pizarro, Francisco," in Holmes, *Oxford Companion to Military History*, 715–16.

30. See Martin, *South America from a Surgeon's Point of View*, 33.

31. Originally known as the Congregational Mosque, the Seville Cathedral was consecrated in 1248 after the reconquest of the city by Ferdinand III of Castile and León. It was rebuilt to its present state in 1420. See Bloom and Blair, eds., *Grove Encyclopedia of Islamic Art and Architecture*, 198.

32. Designed by Claudio de Arciniega (ca. 1520–93), the Mexico City Cathedral was erected with stones from the ruins of ancient Aztec architecture beginning in 1572. Part of the building continues to slowly sink in the mud of Lake Texcoco. The cathedral on the Zócalo plaza is one of the historic hallmarks of Mexico. See Caistor, *Mexico City*, 48–53.

monuments in Lima are the splendid equestrian statue of San Martín[33] on the Plaza San Martín, the equestrian statue of Bolívar[34] in the Parque de la Inquisición; and the Dos de Mayo monument[35] with its four figures grouped about the base, representing Peru, Ecuador, Bolivia, and Chile, etc.

The port of Callao contains about fifty thousand inhabitants. It has a fine and extensive bay with safe anchorage for any amount of shipping, protected from south winds by the peninsula of La Punta and the islands of San Lorenzo and El Frontón. The first building of Callao was erected in 1537. There are a number of beautiful residential suburbs near Lima and Callao and several favorite seaside resorts.

33. José de San Martín (1778–1850) was an important figure in the independence movement of South America, joining the revolutionaries in Buenos Aires in 1812. He was particularly known for helping liberate Chile (1816–19) and Peru (1820–24). For unknown reasons, he resigned all political and military authority in 1824 and spent the rest of his life quietly in Europe. See Bicheno, "San Martín, José de," in Holmes, *Oxford Companion to Military History*, 804.
34. Simón Bolívar (1783–1830) was an important general in the independence movement of South America. He primarily waged war with the Spanish royalists in the region of present-day Venezuela and Colombia (1811–21) and helped liberate Peru in 1824. The country of Bolivia was named after him in 1825. See Bicheno, "Bolívar, FM Simón," in Holmes, *Oxford Companion to Military History*, 140–41.
35. Dos de Mayo is a plaza in the center of Lima, Peru, and was built to commemorate the Battle of Callao (1866) between the Spanish military and several allied countries in South America, particularly Peru. At the center of the plaza is a monument with statues of four females, personifying Peru and the supporting countries in the military conflict—Bolivia, Chile, and Ecuador. It was made by Edmond Guillaume (1826–94) and Louis-Leon Gugnot (1835–94) in 1874. See Higgins, *Lima*, 105.

The Highest Railway

The visitor to Peru will find it most interesting to make a trip of 138 miles over the highest railway in the world. Here the standard-gauge Central Peruvian Railway climbs from sea level at Callao to Pierce de Andes through the Calera Tunnel at an elevation of 15,655 feet, dropping thence down to La Oroya on the Atlantic slope (12,180 feet above sea level). There are 106 miles of steady 4 percent grade, sixty tunnels, thirteen switchbacks, sixty-seven bridges, including the so-called Infiernillo (Little Hell)—spanning a deep gorge between vertical faces, the train emerging from one tunnel only to dash into that opposite—and the famous V switches at Viso. The Morococha branch crosses the range at the great elevation of 15,865 feet. Such magnificent scenery or experience in a day's travel can perhaps not be enjoyed anywhere else in the whole world. Orchards and market gardens, sugar plantations, Inca ruins, mines, and smelters are passed en route.

At La Oroya, connection is made with the Cerro de Pasco Railroad to Junín, Cerro de Pasco, and Goyllarisquizga, the highest stretch of railway line in the world. This is the railroad with which Alfred W. McCune was so prominently connected. The Cerro de Pasco mines are owned and operated by Americans; the very latest machinery is used, and the best and most skillful engineers are employed in working these mines, which are very rich. The high cost of transportation over a difficult road, the importation of machinery from distant countries, and the scarcity of workmen combine to make their operation expensive. To all these difficulties is

added the effects of high altitude upon the workmen. At this great elevation (14,280 feet), the atmosphere is so thin that a person at each breath draws in only half as much air as at sea level. The effect is frequently soroche, or mountain sickness, marked by headache, dizziness, and nausea. Some people become accustomed in a certain degree to the climate, and others cannot remain, even for a week. But the metals found there in such abundance are wanted in the world's shops and factories, and, in spite of all these difficulties, men find it profitable to work the mines. Each year large quantities of copper and silver are produced, besides smaller amounts of tin and gold.[36]

Marvel of Engineering

Under the caption "The Highest Mountain Railway in the World," Isaiah Bowman writes: "At Lima we become aware of the second great industrial interest in Peru. Next to agriculture in wealth-producing power is the mining industry. The mines of Peru are rich and numerous, and it is at Lima that the business of the mines centers. From here, too, are exported the products of Cerro de Pasco, one of the richest and most famous mines in Peru. To reach these mines from Lima one passes over what is perhaps the most remarkable railroad in the world—the celebrated Oroya Line. Its construction was one of the great engineering feats of the nineteenth century, and a journey over it is a novelty in railway travel. The train climbs slowly up the Rímac Valley, and from the cars one looks out over beautiful irrigated orchards, gardens, and farms. Soon the train enters the mountains, the grade steepens, the irrigated farms disappear, and bare rock and mountain slope come into view. The mountains become more and more rugged; the train rumbles over bridges, roars through tunnels almost without number, climbs wormlike along steep mountainsides (where one may look down thousands of feet into the adjacent valleys), and at last reaches an elevation of 15,585 feet, the highest point on any railway in the world. Profound chasms and inaccessible mountain peaks succeed each other so rapidly in the view that it is with difficulty one realizes that man is able to conquer such a wilderness of rock. Its builder, Henry P. Meiggs, has been called the king of railway constructors, and a ride over the Oroya Railway convinces that he well deserves the title."[37]

"Jenson's Travels," March 9, 1923[38]

AREQUIPA, PERU

Wednesday, March 7. Continuing our sightseeing in Lima, Elder Page and I visited the historic cathedral on the Plaza de Armas (where we were shown the bones or mummified remains of Pizarro, the conqueror of Peru) and many other places of interest, including the national museum, where large collections from the Inca and the Inca prehistoric periods

36. See Bowman, *South America*, 108.

37. Bowman, *South America*, 107–8.

38. Jenson, "Jenson's Travels," *Deseret News*, June 30, 1923, 4.

had, as a matter of course, special interest to us as Book of Mormon students.

We also called on the editors of the *West Coast Leader*, the only English newspaper published in South America between Panama and Valparaíso. One of the editors, Nelson Rounsevell,[39] has written a series of interesting articles on Peru, of which he kindly gave us a copy with permission to use whatever we wished of the same in our correspondence to the *Deseret News*. The *West Coast Leader* seems to be a paper of influence and several interesting annuals treating on Peruvian history and present conditions have been issued from the press of the *Leader*.

We returned to the steamer at Callao late in the afternoon, and about sundown the *Santa Luisa* weighed anchor and continued the voyage southward. Quite a number of our English-speaking fellow passengers had left the steamer at Callao, and their staterooms were now filled mostly with Peruvians and other Spanish-speaking travelers. After passing the barren but picturesque island of San Lorenzo, we were once more upon the broad face of the Pacific Ocean.[40]

Along the Barren Coast

Thursday, March 8. Early in the morning, our ship having sailed 130 miles from Callao during the night, anchor was cast off the seaport of Pisco, a town of four thousand inhabitants, situated on Pisco Bay, Peru. Here we remained until about 8:00 a.m., when our voyage was resumed, and soon we found ourselves sailing between the mainland on our left and some barren, yet interesting, islands on our right. The weather was cool and pleasant, but a heavy mist hung over the land so that the coast range of the Andes was hardly visible. The coast was still a barren, continuous desert. Only at such points where a creek or river empties into the ocean and where irrigation is resorted to was anything green in sight. In the evening we had an interesting conversation with Captain [George S.] Dexter, who gave us pointers on navigation, and we, in return, gave him some insight to the religion and morals of the Latter-day Saints. Captain Dexter is a Nova Scotian by birth, forty years old, and a well-informed gentleman on many things pertaining to world affairs generally.

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39. Nelson Phelps Rounsevell (1877–1949) was an American reporter and writer for several Central and South American newspapers, including the *West Coast Leader* (1912–25) and the *Panama American* (1925–35). He was known to have run away from home at age thirteen and became a self-described "rambler, gambler, and publisher." See Rounsevell, *Life Story of "N.R."*

40. Earlier in the day, Jenson and Page tried meeting with the president of Peru and other government officials, but they were unsuccessful. Jenson wrote: "We called on Dr. Alejandro Puente, who received us very kindly and immediately set to work to obtain audience for us with His Excellency Augusto B. Leguía, the president of the Republic of Peru. He saw the president who in the midst of some special meetings with representatives of Central American republics could not see us 'till the next day' (which of course would be too late for us). But he dictated letters of introduction to the *prefecto* of Cuzco and Arequipa, which Dr. Puente gave me as we called on him again at noon. I also called to see the Honorable Alberto Salomon, Peruvian minister of foreign affair, but I failed to make proper connections with him, so he afterwards sent a special messenger on board the *Santa Luisa* with letters of introduction to the *prefectos* of Cuzco and Arequipa and another officer at Mollendo." See Jenson diary, March 7, 1923, 298–99.

View of Arequipa and Mount Misti, Peru, ca. 1905. Library of Congress.

Leaving the Equator

Friday, March 9. Arising about sunrise we found the *Santa Luisa* making headway close to the Peruvian coast, the desert hills here being much higher than they are farther north. The sky was clear, but every day as we get farther away from the equator the weather gets cooler and more pleasant. About 11:00 the ship cast anchor off Mollendo, and about an hour later we landed at that port, being hoisted in a chair from the launch (which brought us away from the ship) to the top of the high seawall. After attending to mail matters and taking a walk through the town (containing about ten thousand inhabitants), we boarded a South Peruvian Railway train and traveled 107 miles inland (through a veritable desert) to Arequipa, an interesting town of fifty-five thousand inhabitants, where we put up at a hotel.[41] As our experience in traveling from Mollendo to Arequipa was very much the same as that of Mr. Rounsevell, who made it a short time before, we cull the following from his narrative:

"We were prepared for a long, tiresome, and monotonous trip from Mollendo to Arequipa and were more than pleasantly surprised at the ever-changing panorama of sea, mountain, and plateau which are traversed in the 107 miles of the journey. From the sea, in sight of miles of fertile valley, and on up to snowcapped peaks, the scene changes so rapidly that it is hard to realize that one is seeing it all from the same car window on the same afternoon. [. . .]

"Our train pulled out at 1:00 p.m. exactly on time and incidentally continued on schedule to the end of the journey. The coaches are as clean, comfortable, and roomy as the day coaches on any of the North American lines, and although they are built entirely in Arequipa, they are almost exact patterns of United States standard day coaches. For nearly fourteen miles the line is laid on the sandy sea beach, the endless deep blue sea on the right and the seemingly endless brown-and-grey foothills on the left. [. . .]

A Steady Climb

"As soon as the sea is left behind, a steady climb begins, winding in and out and around the foothills, toward every point of the compass but always up. Soon the Tambo Valley comes into view on the right and miles of fields of alfalfa, sugarcane, and cotton, contrast with the barren, naked slopes on the left. Looking down into that beautiful valley is like a glimpse of Eden from Sahara. Eden could have been no more beautiful than Tambo Valley, and Sahara can be no more devoid of vegetation than the foothills of the Andes on this rainless coast. At every station along the line is a little oasis that is irrigated by the surplus water from the railway tanks, and these little specs,[42] whether on the steep mountainsides or on the desert

41. Jenson and Page stayed at the Quinta Bates Home, a bed-and-breakfast-type hotel at 604 Jerusalem Street in Arequipa. They stayed there for four days "in order to become used to the high altitude." The first couple of nights, Jenson and Page did not enjoy "sound slumbers." See Jenson diary, March 9, 1923, 300.

42. Referring to a spectacle, an interesting or eye-catching object or phenomenon.

plains of the plateaus, are veritable tropical gardens, bearing vivid testimony to the fertility of the soil and the ideal climatic conditions which, given water, would enable these millions of acres of hillside and plateau to supply the world with cotton, sugar, grain, and fruit. Cotton plants—twelve or more feet high and with blossoms and mature bolls on the same bush throughout the year—are to be seen in several of these gardens. Cotton, corn, figs, cane, and roses grow side by side in a state of luxuriance which is unbelievable when one looks at the desolately barren surrounding country.

Unique Sand Dunes

"The sand dunes in the vicinity of La Joya, on the broad, level plateau about halfway between Mollendo and Arequipa, are unique in formation, in appearance, and in their regular migratory journey across the desert. The main formation of the plateau is a coarse, brownish lava sand which appears too heavy to be blown around. Scattered irregularly, here and there, are curious crescent-shaped dunes of a light grey, ash-colored sand, all of a perfect crescent shape, varying in size—ranging from thirty to one hundred feet across and from six to fifteen feet high—and with the points of the crescent on the leeward side. The formation could not be more perfect if designed by draughtsmen and shaped by human agency. The explanation of why the dunes creep across the desert in a northerly course at the even rate of twenty to sixty feet per year is because the wind is constantly in this one direction and the sand is slowly blown up the convex side and drifts down into the hollow side of the crescent; thus, this slow movement marks the years with almost the same accuracy that an hourglass marks the hours. One has to look but half a mile to see the spot where the dune was fifty years ago when the Southern Railway was being built, and by looking five miles back one sees where it was in the days when the Indian runners were crossing this plain, bearing messages to and from the Inca at Cuzco. [. . .]

"Clinging to the steep mountain sides then following across the plains paralleling is the eight-inch water line which supplies the locomotives and stations along the way, and finally the city of Mollendo, with water from near Arequipa. Laying this water line a distance of 107 miles from an altitude of more than seven thousand feet to sea level was an engineering feat of no mean proportions in itself, but the water line was as necessary to the railway traversing this waterless waste as the rails and ties were. [. . .]

Grandeur of the Andes

"Occasional glimpses of the Pacific were to be had at intervals, almost until Mount Misti came into view, and then for the first time came a vivid realization of the real grandeur of the Andes. On these rainless slopes is preserved all the original colorings of the mineral-laden peaks—not the bright hues of the rainbow, but all the soft shades and gentle hues which make these grand old mountainsides look soft and velvety with a blending of shades, always in harmony and restful

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See Stevenson and Lindberg, *Oxford American Dictionary*, 1677.

to the eye. The setting sun brightened the scene and added a brilliance and richness to the coloring which is indescribable, turning the quiet yellows into the richest gold and the soft brick shades almost to crimson, which, topped off with the glistening, snowcapped heights, made an array of color beyond the limitation of any human hand.

"Just when one is sure nothing can be added to the wondrous color scene stretching from the mountain height to canyon depth, the deep narrow valley of the Río Chile comes into view, carpeted with the greenest green that ever eye beheld. Perpendicular canyon sides, of the richest yellow, wall this green valley in a frame of gold, surrounded and surmounted by the folds of the mammoth mountainsides like hangings of rich tapestry, hung with tassels of glistening silver on glacier peaks, making of the whole a picture which long lingers in the memory as one of the wonder pictures of the world. As the last shafts of sunlight disappeared and the shades of evening replaced the gorgeous hues, the wish was unanimous that we might tarry here a few days for the mere pleasure of seeing again and again the beauties of a sunset over the valley of the Río Chile, which flows by Arequipa and on into the fertile Camaná Valley. [. . .]

"Soon the glistening lights of Arequipa informed us that this part of our journey was nearly at an end. We feel justified in saying that no other half-day's railway ride in the world is more enjoyable or more worthwhile to the lover of ocean,valley, and mountain scenery than this 107-mile trip from Mollendo to Arequipa."[43]

"Jenson's Travels," March 12, 1923[44]

AREQUIPA, PERU

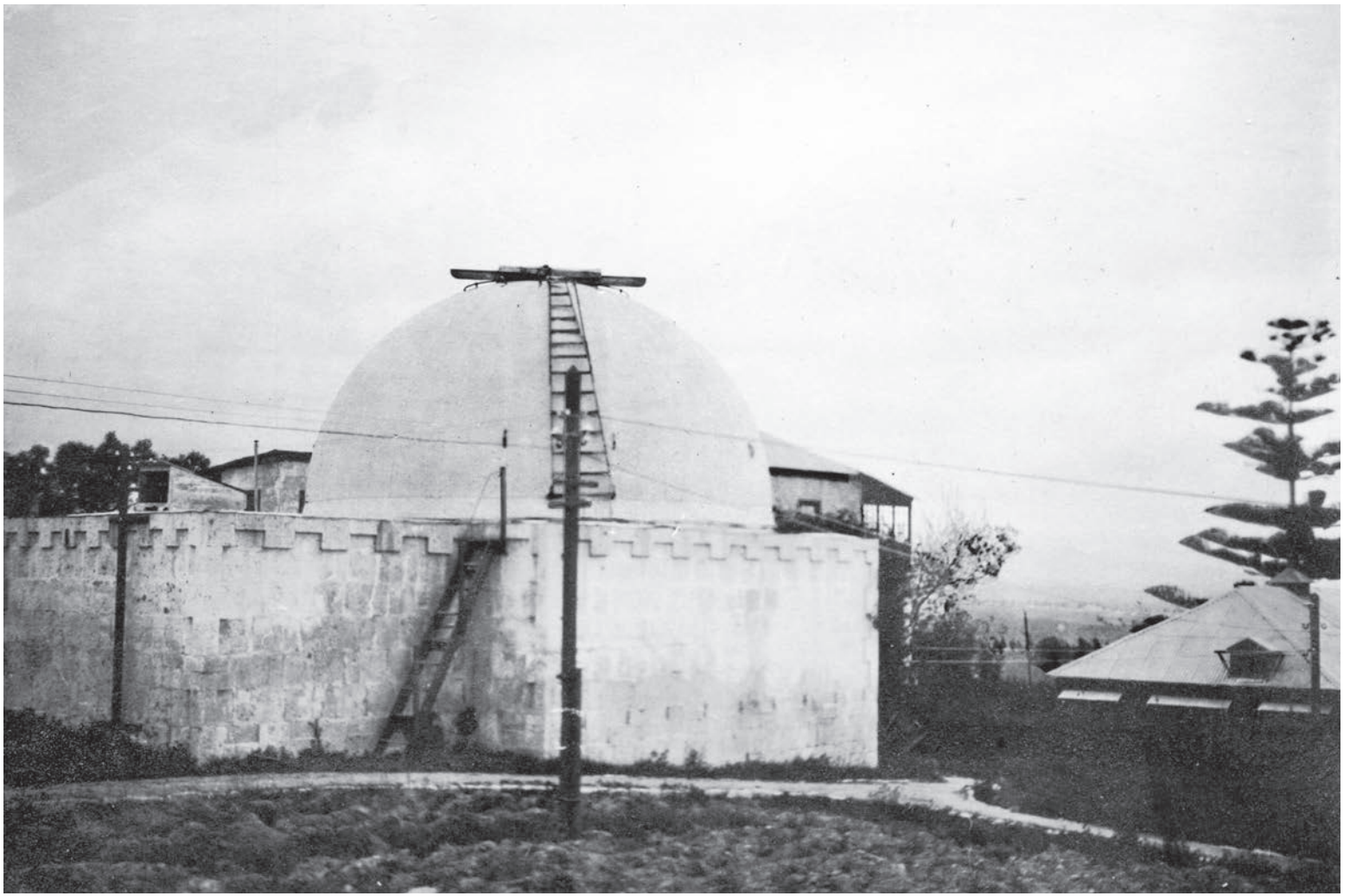
Saturday, March 10. Elder Page and I spent the forenoon visiting cathedrals, churches, government buildings, etc., at Arequipa. We also waited on Dr. Juan Manuel de la Torre, the *prefecto* of the department of Arequipa, to whom the president of Peru had given me a letter of introduction. As the *prefecto* could not speak English and as we could not speak Spanish, we had to converse through an English-speaking Peruvian. The *prefecto* was a pleasant middle-aged gentleman, rather corpulent, and was anxious to render us what aid he could in our historical research, and he gave me a special personal letter of introduction to the *prefecto* of Cuzco.

Sunday, March 11. Together with four other Americans, fellow travelers, we crossed the Chile River and walked up through the village of Yanahuara to the Harvard University Observatory,[45] which is situated on a high plateau not far from the foot of the lofty Mount Misti (18,960 feet high). From the observatory site a splendid view is had of Arequipa and the

43. Nelson Rounsevell, "Vacation Trip in the South Mollendo to Arequipa," *West Coast Leader*, November 1, 1922, 1, 15.
44. Jenson, "Jenson's Travels," *Deseret News*, July 7, 1923, 8.
45. The Harvard College Observatory–Boyden Station was an astronomical research facility in Arequipa, Peru, from 1888 to 1927. The observatory was funded by Uriah Atherton Boyden (1804–79), an inventor and engineer from Boston, Massachusetts, and the location was selected because of the elevation, remoteness, and cloudless skies of southern Peru. See Curtis, *Between the Andes and the Ocean*, 238.

Plaza in Arequipa, Peru. University of Washington Libraries, Special Collections, UW 35940.

Street scene in Arequipa, Peru. University of Washington Libraries, Special Collections, UW 35939.



Harvard Observatory, Arequipa, Peru. University of Washington Libraries, Special Collections, UW 35941.

entire basin in which the city is situated. Professor Bailey,[46] who is in charge of the observatory, received us very courteously and showed us his great telescopes and other astronomical instruments while giving us most intelligent explanations. Through one of the powerful telescopes, we could plainly see a monument erected by Professor Bailey and his helps on the top of Mount Misti, where the professor years ago spent several nights making scientific observations. Our visit with Professor Bailey was most interesting.

First Glimpse of Llamas

In the afternoon, we visited the famous Jesus Springs, a mineral bathing resort on the side of a mountain, a few miles from Arequipa. On this trip we saw the first llamas on our journey. We expect to see large herds of these animals when we get up to a still higher altitude.

Arequipa is a city of sixty thousand inhabitants and is, in point of population, the second city in Peru. We found the atmosphere here cold and invigorating, notwithstanding the fact that the town is situated in the tropics; it is 7,750 feet above sea level. Mr. Rounsevell, in his descriptive articles, writes the following about Arequipa: "In Lima, there is a prevailing impression among both Peruvians and foreigners that everything of importance in Peru is centered in and about Lima—that all the wealth and culture of Peru is to be found in the capital city. The fallacy of this impression is fully realized at first sight of Arequipa, the metropolis of southern Peru, the wholesale distributing center for that great expanse of mountain, pampas,[47] and *montaña*,[48] which was once the heart of the Inca Empire and is still the heart of Peru.

"The city as viewed from the train entering at 7:00 p.m. in the winter months is a panorama of glittering electric lights, which give a very cheerful and pleasing first impression. On alighting from the train and passing through the station, which is one of the most modern in Peru, one is astonished at the lineup of waiting automobiles and the clanging of streetcar bells. A short ride by streetcar or auto brings the traveler to the Plaza de Armas in the center of the city. The stranger rubs his eyes in astonishment and looks around at the modern stores, the cathedral, and the busy crowds of well-dressed people and says, 'This can't be Arequipa; this must be Lima.' In fact, the plazas and surrounding buildings in both cities are so nearly alike that they must have been designed and constructed by the same people at the same period as twin cities."[49]

46. Solon Irving Bailey (1854–1931) was a prominent American astronomer from Boston, Massachusetts. He chose the site of and oversaw the work at the Boyden Station in Arequipa, Peru, 1888–1927. He was known for the discovery and study of RR Lyrae variable stars. See McGown, "Bailey, Solon Irving," in Hockey and Bracher, *Biographical Encyclopedia of Astronomers*, 80–81.

47. Pampas are vast grassy plains in temperate parts of South America. See *Geographical Dictionary*, 897.

48. Montaña is the forested eastern slope of the Andes Mountains. See *Geographical Dictionary*, 762.

49. Nelson Rounsevell, "Vacation Trip in the South," *West Coast Leader*, November 8, 1922, 1, 7.

Gradual Ascent

Most travelers bound for the mountainous interior of Peru and Bolivia spend a few days at Arequipa on their way up in order to become accustomed to the climate and higher altitudes by degrees, and so we decided to do likewise, for which precaution we subsequently felt grateful. A number of people have lost their lives by suddenly rushing up from sea level to the lofty heights of the Andes. We spent four nights and three days at Arequipa.

Monday, March 12. As I looked out of my bedroom window this morning, I witnessed a most beautiful sunrise. Old "King Sol"[50] arose in splendor in the cloudless sky from behind a summit adjacent to Mount Misti, which stands immediately east of Arequipa. Later in the day heavy clouds gathered on the mountains, on which there was considerable precipitation, but no rain fell in the town or valley.[51]

Peru, of which Arequipa is an important town, is bounded on the north by Ecuador and Colombia, on the east by Brazil and Bolivia, on the south by Bolivia and Chile, and on the west by the Pacific Ocean. The coastline is about 1,400 miles long. The area is variously estimated at from 460,000 to 722,000 square miles. The population is estimated at about five million, but there has been no official census taken in Peru since 1876. Peru may be divided roughly into three zones. The first includes the western lowlands, in which are the Pacific ports—the cities of Lima, Trujillo, Mollendo, etc. Here is much agricultural wealth and important petroleum fields, though most of the zone is desert. This zone is from twenty to 120 miles wide. The plateaus lying between the central and western Andes, from four thousand to fourteen thousand feet above sea level, form the second zone. Here are some beautiful fertile valleys and important cities and mining districts, including Arequipa, Cuzco, Huancayo, Cerro de Pasco, and Morococha.

Undeveloped Section

The third zone comprises the eastern slopes of the Andes, falling toward the Amazon River Basin. This section is thinly populated and largely undeveloped. The chief port for this great area is Iquitos, which is located about 2,300 miles from the mouth of the Amazon in the heart of the rubber district. Peru has about four thousand miles of navigable rivers for vessels of from eight to twenty feet draft. The upper Amazon, with its numerous tributaries, forms the extensive water system of eastern Peru, being navigable in its entire length over three thousand miles. The principal lake of Peru is Lake Titicaca, on the Bolivian boundary, being the highest navigable lake in the world. There are many other lakes in Peru.

The climate in Peru is much influenced by altitude. In the main, the climate is semitropical along the Pacific coast, cool all the year round in the interior on the plateaus, and torrid in the eastern Amazon district. Along the Pacific coast

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50. *Sol* is the Spanish word for "sun." See Gooch and Paredes, *Cassell's Spanish Dictionary*, 545.
51. Jenson and Page visited the railway station and purchased tickets to La Paz, via Cuzco. They also exchanged some of their American dollars for Peruvian libras and soles. See Jenson diary, March 12, 1923, 303.

there is practically no rain, but the climate is moderated by the Humboldt Current.[52] It is difficult to divide the seasons in Peru, for in certain sections there is no rainfall, while in others, such as the Amazon River district, rains are frequent throughout the year, with but slight changes in temperature. The chief factors are the trade winds from the Atlantic and the difference in altitude. The climate from three thousand to nine thousand feet altitude is temperate and healthful. Where the seasons are regulated by latitude, they are the opposite of those in the United States, the hottest months being January and February.

Agricultural Products

The chief agricultural products of Peru are sugar, cotton, rubber, rice, cacao, yucca (cassava), medicinal plants, coffee, hides, and skins. The sugar plantations are mainly in the irrigated sections west of the mountains.

Peru, from the earliest days, has been famous as a producer of minerals. Copper is the most important metal. Gold is produced in various fields, and the most important silver mines are operated by an Anglo-French company. Coal is produced near Goyllarisquizga and in other places. Other minerals are tungsten, lead, iron, mercury, bismuth, vanadium, antimony, and nickel. Marble is also quarried. The chief oil fields are located in the northern provinces.

The inhabitants of Peru, in addition to the small ruling white class, are mostly cholos, or mountain Indians, and mestizos, those of mixed blood. Among the poorer classes of the cities there is considerable Negro blood and also Oriental blood, both Chinese and Japanese. At the present time the poorer classes of Peru in the cities are mostly mestizos, and in the interior they are pure Indians, sometimes with a slight mixture of white blood of the Spanish stock. There are also growing colonies of Italians, Chinese, and Japanese.

Spanish National Language

The national language of Peru is Spanish. Among the Indian population, however, there are many native dialects, the Quechua being the most common.

The unit of the Peruvian money system is the libra, equivalent to one English pound sterling, or a little less than five dollars in US money. The libra is divided into ten soles, and one sol equals 100 centavos. Since the Great War, paper money is in circulation, and the paper sol is at present only worth about forty cents in US money. The metric system is the legal system for weights and measures.

The total mileage of railroads in Peru is about two thousand miles, which is entirely inadequate to the area of the country. Most of the railways are owned by British capitalists, which, indeed, is the case in most of the South American republics. One British engineer told me that

52. The Humboldt Current, also known as the Peru Coastal Current, is a cold ocean current that flows northwest from southern Chile to northern Peru. See *Geographical Dictionary*, 921.

England owned 90 percent of all the railways in South America. In Peru only one railway is owned and controlled by American capital. For some reason or other the capitalists of the United States have been very backward in starting commercial enterprises in South America, while the English and Germans and other nationalities have during several generations been closely connected with all kinds of trade and business ventures.

"Jenson's Travels," March 14, 1923[53]

CUZCO, PERU

Tuesday, March 13. Early in the morning, we left our temporary home in Arequipa, Peru; went to the railway station by streetcar; boarded the train; and left the Arequipa station at 7:30 a.m. on our long mountain journey farther inland.

As we proceeded up a heavy grade, we beheld on both sides of the track beautiful fields and gardens as long as irrigation continued, but as soon as the upper irrigating canals were crossed we found ourselves on what we in Utah would call "badlands," a barren desert country in the foothills of the Andes Mountains. As we climbed still higher and crossed or followed small creeks up through the canyons, there were a few small strips of cultivated land, representing veritable oases in the desert. After traveling forty-four miles, we had reached an altitude of twelve thousand feet, and at 2:30 p.m. we crossed the summit of the Andes at an elevation of 14,688 feet above the level of the sea. That is as near heaven as I ever expect to get in this life.

On our journey we passed in close proximity to some of the snow-covered peaks of the Andes. On the summit, where we crossed the mountains, we were higher than the snow limit on some of the lofty peaks seen near our line of travel. The descent on the east side of the mountains (where the water drains into Lake Titicaca) was quite steep, and we soon reached two large bodies of water and lower down came out upon the high plateaus (here called pampas), where herds of llamas, alpacas, and sheep were seen in every direction.

Altitude Affects Breathing

At last we reached Juliaca, a railway junction situated on a river, 12,550 feet above sea level and 180 miles from Arequipa. Here we put up for the night at a hotel where both beds and food were only accepted by us because there was nothing better to be had in the place. Here we experienced a peculiar feeling of exhaustion and felt more or less difficulty in breathing because of the high altitude, and some of our fellow travelers suffered with mountain fever, the so-called soroche, all night. In order to make breathing easier, we were advised to place so much under our heads in the nature of pillows that we could practically spend the night in a semi–sitting up position; but even in doing that we only slept a little. There had been cases in this altitude where people had to be hurried out of the country, or taken down to a lower altitude, in order to save

53. Jenson, "Jenson's Travels," *Deseret News*, July 14, 1923, 8.

their lives.[54] The following details of a journey similar to ours are from the pen of Mr. Rounsevell:

"The early-morning scene from the train, as it winds its way up the valley out of Arequipa, is one of enchanting interest and majestic beauty. In the foreground are fertile irrigated fields of alfalfa, wheat, and other grains. The disappearing city, so cozily situated at the base of El Misti, is a last reminder of the modern civilization which came with the building of the Southern Railway and which has replaced the primitive conditions existing for centuries in this formerly isolated territory.

Up among High Peaks

"El Misti towers eighteen thousand feet above the sea and almost two miles higher than the city, whilst to the right Pichu-Pichu is only a thousand feet lower; and to the left, most magnificent of all, is that glacier-capped monarch Chachani, with its glistening top nearly twenty thousand feet up in the sky. When the traveler is told that his destination lies beyond these giants of the Andes, he wonders where and how the train is going to pick its course up these steep canyons and make its way to the other side—a problem which must have seriously puzzled the engineers whose task it was to lay out the route. How well they succeeded is the marvel of all who pass over the line. With but one tunnel, few bridges, and no switchbacks, the ascent is made by almost even grade, and the divide is crossed at Crucero Alto, the highest point reached by the Southern Railway.

"At seasonable hours the train stops twenty-five minutes at meal stations. The mountain air whets the appetite and adds a keenness to one's hunger; the meals served are excellent and seem to improve with every stop.

"Passing over this summit is a real test of one's physical fitness. The heart quickens its pace, and the lungs have a kind of vacant feeling; and one becomes decidedly aware of the unusual strain to which these organs are being put.

"The first mountain lakes are to be seen soon after crossing the divide, and the mountainsides and canyons are covered with flocks of grazing sheep, llamas, alpacas, and occasionally vicuñas. The two largest lakes in sight from the train are Laguna Lagunillas and Laguna Soracocha. These two lakes are very pretty, and both are in sight at the same time from opposite sides of the train, which winds along their edges for nearly an hour. Wild ducks and other mountain waterfowl make good hunting. As the descent continues, streams become more plentiful. Soon signs of cultivation appear, and little by little the scene changes in a few hours from desolate mountain peaks to fertile pampas, from uninhabited slopes to a fairly populous agricultural community.

Industrious Womenfolk

"The land of probably the most industrious womenfolk in the world has now been reached. Tending the flocks and cultivating the fields or harvesting the crops, the Indian women are always in evidence, generally with baby on back and one or more trudging by her side, dressed in the quaint, brightly colored costume

54. Jenson wrote of their journey, "During the day, as we traveled along, we saw numerous herds of llamas and alpacas, and a number of Indian villages and ranches where the habits and industries of the inhabitants were very interesting for us." See Jenson diary, March 13, 1923, 304.

Llamas in Cuzco, Peru. University of Washington Libraries, Special Collections, UW 35944.

typical of the Peruvian pampas and *montaña*; and whenever the hands are not engaged in other work, they are busily engaged in spinning, knitting, or weaving the coarse woolen garments of family wear. Idle men are sometimes seen lounging around the stations, but never idle women anywhere.

"The entire party was tired and glad when Juliaca was reached at end of the eleven-hour ride. The altitude is a little trying until one gets accustomed to the change from sea-level atmospheric conditions, and the air is sharp and chilly after sundown, and for the first time the need for the heavy woolen underwear and overcoats, which travelers are advised to take with them, is appreciated."[55]

Wednesday, March 14. After partaking of a very poor breakfast at Juliaca, we boarded the semiweekly train bound for Cuzco and rolled out of Juliaca at 8:20 a.m. Our course was northward up the river Pucará and its tributaries until we reached the summit of the mountains (14,153 feet above sea level) at Santa Raya, ninety-nine miles from Juliaca. This summit divides the waters draining into Lake Titicaca and those flowing into the Atlantic Ocean through the great Amazon River. From the summit, where we again were up to the limit of perpetual snow, we descended very rapidly following the headwaters of the Río Vilcanota (one of the tributaries of the Amazon), and about sundown we reached Huambutio, which is situated at the junction of the Christanay and Vilcanota Rivers, at an altitude of ten thousand feet. Thence, we traveled up grade along the Christanay River thirty miles to Cuzco, where we arrived after dark, having traveled 210 miles from Juliaca. We were met at the station by a colored man who took us to Hotel Colon, where we secured lodging and board at a reasonable price.[56] We had now traveled 506 miles inland by rail since we left Mollenda on the Pacific coast on the ninth instant. Mr. Rounsevell, who preceded us on this trip from Juliaca to Cuzco, writes:

On the Divide

"In the first one hundred miles north from Juliaca, the train goes up and up, till it again reaches above fourteen thousand feet—this time on the divide from which the water flows one way back into Lake Titicaca, and the other way, ahead of us, down into the Amazon and on to the Atlantic. This hundred miles has been cultivated in every available spot, through fertile mountain valley and broad pampas, being well watered by numberless mountain streams which spring from the glacier-topped ranges on either side. The cultivation is most primitive, practically all being done by hand with crude implements. Occasionally plowing is done by oxen yoked to wooden plows. Seemingly countless flocks of sheep, llamas, and alpacas are met with, always attended by the Indian woman herdess. Scattered herds of

55. Nelson Rounsevell, "A Vacation Trip in the South Arequipa to Cuzco," *West Coast Leader*, November 15, 1922, 1, 11.

56. Jenson and Page "agreed to pay five soles a night, about $2.30 a day for room and three meals a day." See Jenson diary, March 14, 1923, 305.

cattle, a few horses, and occasional bunches of hogs indicate the diversity of agriculture and stock raising which flourishes in this high altitude. [. . .]

"After the summit is passed at La Raya, the descent is rapid—almost too rapid it seems to the passenger who is looking out of the window and watching the engine wind and twist its way around the short curves as it follows the crooked course of the ever-widening stream down the narrow mountain canyon. There are frequent thrills as the shrieking whistle and the suddenly grinding brakes tell the story of how frantically the engineer is trying to stop the train before it runs over some Indian driving his pack mule on the right-of-way or some herder attempting to cross the track with his flocks. Nowhere on the line is the right-of-way fenced or guarded, and it is only the diligence of herders and the watchfulness of the engineers, which prevent accidents to the animals. [. . .]

The Valley Widens

"As the line travels down the Cuzco side of the divide, the valley widens, fields become greener, habitations look more livable, towns are more frequent, and cultivation is more general, reaching higher and higher up the steep mountainsides. The countless piles of stones that have been picked up—occupying in many fields a larger area than remains to cultivate—bear mute testimony to the patience and industry of the Indians who for generations have cultivated these slopes. [. . .]

"At Maragnani the traveler is astonished to see a large, modern woolen mill, where the fleeces from the thousand flocks of the mountainside are carded, spun, and woven by modern machinery into fabrics of a fineness of quality which enables them to find their way to the markets of the world. The persistence and stubbornness of the Indian in refusing to yield to the advance of civilization is evidenced by the scores of women who were seated or standing around the wall which encloses the mill, all busily spinning away with their little hand tops, in diligent competition with the thousands of machine spindles inside which make more yarn in a day than they could spin in a lifetime. Their competition, however, is not as vain as it would appear to be, for the handspun and handwoven rugs and blankets are claimed to be superior in wearing quality to the machine-made and are sold at a lower price than is possible for the mills to make them at. [. . .]

"Inca ruins occasionally come into view from the train windows, and there are evidences everywhere that one is in a land of ancient civilization and that the present inhabitants have progressed but little. Every little pueblo has its church, every prominent hilltop is mounted with a cross, open outdoor shrines are scattered here and there, and every hut and habitation is adorned on the rooftop with a small cross—indicative of the fact that the descendants of the race which once worshipped the sun and obeyed the mandates of the 'Children of the Sun' are now completely under the domination of the religion of the conquerors."[57]

57. Nelson Rounsevell, "Vacation Trip in the South Arequipa to Cuzco," *West Coast Leader*, November 15, 1922, 10.

"Jenson's Travels," March 15, 1923[58]

CUZCO, PERU

Thursday, March 15. With the Negro, Mr. Wilson, as guide, we visited the cathedral and a number of Catholic churches in Cuzco, among others the Santo Domingo church, which is built upon the ruins of the ancient Inca Temple of the Sun.[59]

In one of the churches and adjoining nunnery, a German-speaking nun took great pains to explain to us how Indian children were educated and instructed in domestic art in one of the schools. Among the students in this institution we noticed some very bright and intelligent-looking Indian children. During the day I called on the *prefecto* (governor) of the Cuzco District, to whom I carried letters of introduction from the president of the republic and the minister of the interior. The *prefecto* received me kindly, but as I could not speak Spanish, our conversation was carried on through an interpreter.[60] We also called on Dr. Albert A. Giesecke,[61] a graduate of the University of Pennsylvania who, although a Protestant, has charge of the Catholic University of Cuzco; and without becoming a citizen of Peru, he was (as a citizen of the United States) elected mayor, or *alcalde*, of Cuzco and served in that capacity until quite recently. Dr. Giesecke, who is a very kind and democratic gentleman in his deportment, took us through the very interesting museum, in which there was a large collection of relics from the prehistoric-Inca and Inca periods, and, with the doctor's intelligent explanations, we certainly had a very enjoyable visit. The doctor has collected a very valuable library on Peru, both Spanish and English.[62]

Interesting City

Cuzco is in many respects the most interesting city in South America, first because of the numerous Inca ruins and second because it is a genuine Spanish city from the colonial days, scarcely touched by later civilization. Many of its buildings are three hundred years old, and its narrow streets paved with

58. Jenson, "Jenson's Travels," *Deseret News*, July 21, 1923, 6.
59. The Temple of the Sun in Cuzco, also known as the Coricancha, or the "Golden Enclosure," was one of the most highly revered Incan temples. It was dedicated to Inti, the Incan god of the sun, prior to being destroyed by Spanish conquistadors. See Niles, "Cuzco," in Fagan, *Oxford Companion to Archaeology*, 163–64.
60. Mr. Wilson, their guide, acted as interpreter. See Jenson diary, March 15, 1923, 305.
61. Albert Anthony Giesecke (1883–1968) was a professor of economics at the University of Pennsylvania until he was asked to serve in the Ministry of Education of Peru in 1909. Eventually Augusto Leguía, president of Peru, asked Giesecke to serve as Rector of the National University of Cuzco, which he did from 1910 to 1943. He also served as a city councilman (1912–23) and as mayor (1920–23) of Cuzco. He also helped in the discovery of Machu Picchu, 1911–12. See Gade, "Albert A. Giesecke," 27–32.
62. Of the museum, Jenson wrote: "We saw a number of mummified Incas, much Inca pottery and weapons of war, numerous skulls, utensils, tools, images, etc. which will enable us to understand Inca history better than ever before. There was also a large collection of very old Spanish and Latin books, some pictures and some three interesting bronze statues—one representing a nude Inca prisoner or slave with her hands tied behind her and two Inca chieftains." See Jenson diary, March 15, 1923, 306.

cobblestones are still about the same as when the city was originally built.[63]

Isaiah Bowman in his *South America* devotes an entire chapter to "The Inca Kings and People." He writes:

> "Upon the high plateaus of Peru and Bolivia one sees today a most interesting race of Indians. Their ancestors were subjects of that great Inca Empire whose wise laws, deep religion, splendid palaces, and fine aqueducts are among the wonders of the world. Even today the plateau Indian in his bright-colored blanket and cap, with his quick trot, his mysterious silence, and his grave looks, is an interesting creature.[64] What must he have been in the days before the coming of the Spaniards? Now his spirit is broken by misuse, and he is awed by the powerful white man whom he serves. In the days of the Inca Empire, he was a soldier of the army of the king. He fought and won great battles; made long, dangerous marches; and tamed even the grim mountain slopes for his flocks of llamas and the silver of his splendid temples.

Partly Civilized

"The early Spanish explorers found to their surprise that parts of the New World were peopled by Indians who were not wild and savage but were partly civilized. In Peru, as well as in Mexico, there was found a great Indian nation with laws, government, taxes, well-drilled armies, great forts and temples, and elaborate religion. It is peculiar to both the Mexican Indians and those of Peru that their great civilization was developed upon a high tableland, or plateau.

"We shall understand this fact if we remember that upon the wet lowlands in the tropics, where great heat is the rule, man finds progress all but impossible. The intense heat, as well as the dense vegetation, prevents man from developing into the intelligent race type that is found in the cooler zones, in which France, England, the United States, Chile, and other progressing countries are located. There is one exception to this rule. Even in the tropics a cool climate may be found where there are mountains and plateaus. In fact, if one only goes high enough, he may find mountain peaks with perpetual snow and ice upon them. Chimborazo at Quito rises twenty-one thousand feet above the sea. Its snowcapped summit may be seen from Guayaquil itself, one of the hottest cities in the world. The cold of high elevations even in tropical regions may be as intense as the heat of the lowlands.

"Between these extremes, if only one will seek the right altitude, a moderate temperature may always be found, neither so

63. In the afternoon, Jenson and Page wrote and sent postcards home to family in Utah. Page sent one to his daughter, Maude Page Butterfield. Of Cuzco, he wrote: "This was the most important place in America for ruins of temples and buildings of the Inca Indians before the coming of the Spanish to America. This picture [is] of some fine carvings in a Catholic church here." See Jenson diary, March 15, 1923, 306. See also Thomas P. Page Scrapbook, Church History Library.

64. Of Cuzco, Page wrote: "The people are about nine-tenths Indian and are of two distinct races, the Quichua and the Amaras. The Quichuas being a fairly light race of medium stature, and the Amaras a large almost black race with very coarse features." Thomas Phillips Page Biographical Sketch, 8, Church History Library.

hot as to prevent man's development nor so cold as to drive him away. This intermediate level is situated between seven thousand and twelve thousand feet. If the amount of land between those elevations in a given region is small, few people can occupy it, and there will not be offered a chance for growth; if the amount is large, there will be room for spacious fields, wide pastures, great cities, and many people. In these there will be room for a nation and a chance for civilization to develop.

Climate a Factor

"It requires but little study of the map to show how much of Peru and Bolivia lies in this favored height, where cool weather, clear skies, and water for irrigation may be found. It was very natural, therefore, that the Indians who dwelt there should be more progressive than their neighbors in the tropical jungles of the Amazon Valley. They were more alert mentally. They built great cities and towns, among them Cuzco, the capital of the Inca Empire, and this the hunter in the forest never does. They lived by farming chiefly, with some grazing; hence, there were more people in a given area than can be found in a forest where men hunt and fish over wide spaces for a living. Life in such a highland region may be easy but never so easy as to make man lazy; it is hard, but never so hard as to discourage men and turn them into savages or prevent them from becoming anything more than savages. We must conclude, then, that it is in large part the climate upon these highlands that resulted in the rise of the great empire of the Incas, which stretched for hundreds of miles from Ecuador to Chile and from the eastern edge of the Andes Mountains to the Pacific coast.

"The Inca Indians were remarkable in many ways but perhaps most of all for the way in which they adapted themselves to the country in which they lived. It is so dry upon the tableland where they dwelt that, although some grass and potatoes will grow without irrigation, the best crops can be grown only where water is applied to the land.[65] The Inca kings were very intelligent men and taught their people how best to conduct the water along canals to their fields of millet and corn. They taught them industry and skill.

Labor Dignified

"Every year the king himself went into a field near Cuzco and guided the plow to show his subjects how necessary it was to work and how important were the farms upon which the people had to depend for food. Of course, after that no man felt ashamed to plow or to do other work in the fields, for the king himself, in sight of all the people of Cuzco, had plowed a furrow and worked with his hands and soiled his feet with earth. This dignified labor; it made men want to do what the king had done, and it made them proud of their work. Another thing these kings did that was of great help to the people—they sent intelligent men through the land to find out for what products each part was best suited. If they found a spot where ignorant people were growing potatoes and where corn would grow much better, they made them grow corn instead and then exchange what

65. According to Page, the land was "so dry for long distances [that] rain never falls, and the people and their forefathers before them, have [never] seen rain." Thomas Phillips Page Biographical Sketch, 8, Church History Library.

they did not need for potatoes grown somewhere else. In this way they organized their subjects into a great family in which each group worked for the good of all the people. If the crops failed in one place on account of the lack of water, the people whose crops were good had to give up a part of their harvest to the poor.

"The kings also helped trade. They urged the people of the mountains to visit the people of the valleys and plains and exchange the wool and meat of their flocks for the dried fruit and grain of the farms in the valleys. They were very careful in taxing the people to make them pay only what was fair and what they could easily get. [. . .] The men who grew potatoes sent a part of their crop as a tribute to Cuzco, those who kept flocks of llamas sent wool, and those who grew corn sent corn. In this way the taxes were easily collected, for no man felt his tax a burden. The kings even taught their subjects to be clean in person and in their towns, and they sometimes punished them for disobedience in regard to cleanliness.[66]

Many Kinds of Religion

"The different families, or tribes, of Indians in North and South America had a great many kinds of religion. Each religion or belief had certain features that grew out of the kind of place in which it was known and practiced. Like all the other Indians, the Incas had their own religion. They regarded it very highly and paid a great deal of attention to its rites. The great central object of worship was the sun, which was regarded as the source of all life, the giver of all benefits, the caretaker of the world. This is a very natural sort of belief to an ignorant Indian. On the night of June 21, the shortest and often the coldest day of the year in the southern hemisphere, many of the Indians of today still follow one of the old Inca customs. They build fires [. . .] on every important hilltop and mountain in the country. They say that they do this to bring back the sun, which is then farthest north, and also to prevent the stones and earth from becoming so cold as to crack from the frost.

"The custom is a pretty one, and the night is made extremely picturesque by the fires gleaming on all the hilltops round about. It reminds one of the games the Eskimos play and the sacred rites they observe to bring back the sun to their cold northern lands. Small wonder, then, that the Incas worshiped the sun as the giver of light and warmth. Its light beautifies the earth; it gave life to the growing plants and warmth to man after the cold night. To one who has experienced the night temperature on the high plateaus, it seems not at all strange that those Indians should regard the sun with awe and should even build up a religion based on the worship of the sun.

"Many of the forms of the Inca Indian's religion are of great interest and even beauty. Some of their prayers are framed in very simple language and express deep faith that their petitions to the sun will be answered. Many of these prayers have been written and preserved for us by an Inca Indian (Garcilasso de

66. Of the Incan descendants, Page wrote: "These people are particularly industrious; but are very dirty. The story told about the Aymara ladies will give some idea of conditions: They say that when a lady gets a new dress, she puts it on over the old one, and keeps the former dresses on and allows them to rot off." Thomas Phillips Page Biographical Sketch, 8, Church History Library.

la Vega)[67] who lived in Peru at the time of the Spanish conquest. He was educated in Spain, and when he became old, he wrote out in Spanish the history of his people. The book is now printed in English also and is one of the most interesting stories of the world. [. . .]

Objects of Worship

"In their prayers one finds reverence for all the important things relating to daily life and common food. The Incas worshiped all mountain passes as places where, the hardest part of the journey ended, one might rest before beginning the descent. Even the Christian Indians today frequently worship at shrines built on mountain passes. The Inca Indian also worshiped the wind and running water. On this dry and cool plateau plants need, besides soil, two things in favorable amounts—namely, water and sunlight. The precious water, led carefully out over the fields and gardens, was an object of great importance and, therefore, of worship. The lightning and the thunder were the voices of unseen spirits and were feared. So also the Inca Indian feared to go up into the highest places of the mountains, for the mountain sickness which troubled him there made him believe that the lofty places were peopled by evil spirits which, being angry at man's intrusion, drove him out of their home with sickness and pain."[68]

Isaiah Bowman recommends Prescott's *Conquest of Peru* as one of the most fascinating stories of history, for in this work the great American historian tells in a simple way the story of the Inca life and religion and the Temple of the Sun in Cuzco, the capital of the Incas, where the kings dwelt and where all the people came once a year to attend a great feast in honor of the sun.

Among the most interesting ruins in Cuzco is a stone (a part of the former royal palace), which has twelve angles or corners, and into each of these is fitted other stones with perfect nicety. So accurately have the different sides of each stone been trimmed that it is impossible in many places to insert the point of a needle between two faces in contact with each other.[69] This is the more remarkable when we consider the tools with which these men worked. They were not acquainted with the use of steel but employed a chisel and ax and a hammer made of impure copper. Pure copper is soft and cannot, in its natural state, be used in making a cutting tool. But these Indians knew how to take impure copper and treat so as to make a kind of bronze often wrongly described as "tempered copper."

67. Garcilaso de la Vega (1539–1616), also known as "El Inca," was a sixteenth- and seventeenth-century Spanish writer and historian whose mother was of Incan nobility and whose father was a Spanish citizen. He is known for two of his works, *Comentarios Reales de los Incas* (Royal Commentaries of the Incas) and *La Florida del Inca* (The Florida of the Inca). See Campbell, *Oxford Dictionary of the Renaissance*, 315.

68. See Bowman, *South America*, 161–75.

69. Of the Incan ruins in Cuzco, Page noted that the "large stones [were] put together without mortar, but joined so nicely that a sheet of paper could not be put between the joints." Thomas Phillips Page Biographical Sketch, 8, Church History Library.

Immense Stones

"Another very remarkable thing about the old buildings of the Incas," writes Mr. Bowman, "is the great size of many of the stones one finds on the walls. One of these stones, found in the great fort wall of Sacsayhuamán,[70] near Cuzco, is about fourteen feet high and has been estimated to weigh a hundred tons. We should find such a stone exceedingly hard to move even with all the large hoisting machinery that we can command. To the men of ancient Cuzco, who had no such machinery, the task must have been incredibly difficult."

Even the streets of old Cuzco were paved by the industrious Incas. From the quarries about the city, paving blocks were gathered and laid down in regular fashion, just as we pave a city today. To supply the city with water, a long aqueduct was built, several miles of it consisting of a tunnel cut part of the way through solid rock. The fact that these old canals and tunnels still exist speaks well for the ancient builders, who seem to have built as the Romans built, "not for years, but for centuries; not for men, but for gods."

The Inca kings also ordered roads to be built to the four parts of the empire. They were made very carefully, as was the rule in everything. In places they were cut in rock; in still other places they were graded and smoothed. Through the desert, where shifting sands made road building expensive and where the sand quickly covers a roadway, they erected poles and piles of stones as signs of the way—*signos del camino*, as they are called in Spanish today. The chief defect of these highways may be seen at stream crossings, where the traveler looks in vain for a bridge. Although the Incas were familiar with the keystone, they never learned the secret of employing it in the making of a stone arch which might serve for a bridge.

Travel of Kings

Upon the imperial highways the kings themselves journeyed to see the different parts of the empire and to become acquainted with the people so that they might rule more justly, somewhat in the spirit in which the president of the United States now travels about. The Inca king desired to let the people know that he was interested in the welfare of all kinds of men in all parts of the country, and he even went to the seat of war when it became necessary to encourage the armies to better fighting.

Nearly all the Inca kings attempted to extend the boundaries of their empire by war and conquest. At the time of the coming of the Spaniards, about 1535, a vast extent of country was governed from Cuzco.

On the north the Spaniards found the Quitos, a race of Indians almost as remarkable for their great temples, their religion, and their intelligence as the Incas on the south.

These fought with great courage and successfully resisted all attempts on the part of the Incas to conquer their country. Into central Chile the Inca kings sent some of their best

70. Sacsahuáman was a cyclopean fortress situated atop a hill overlooking Cuzco and the surrounding valley. Some believe the Incan capital of Cuzco was laid out in the shape of a puma, a sacred animal to the Incas, and the Sacsahuáman fortress formed the puma's head. See Fagan, *Oxford Companion to Archaeology*, 163–64.

armies for the conquest of the Araucanians, a fierce and warlike people. But here again they met with a resistance so strong that they had to stop fighting and content themselves with the northern part of Chile, the arid region now known as Atacama. Although fine armies were sent eastward to conquer the Indians of the tropical forests and the plains, and though forts and roads were built in that direction for the same purpose, the Incas were never able to extend their empire very far eastward—not because the Indians of the plains fought better than the Inca armies but because the unhealthful country itself was their worst enemy. Malarial fever, and many other tropical diseases as well, broke out among the soldiers; they could not withstand the stinging insects which are found in great numbers in the plains; the climate is exceedingly hot and the air so damp that the heat is felt much more than in a dry country; and the forest itself is marked by tangled undergrowth, trackless expanses, and dangerous animals. It is easy to see, therefore, that the Inca Empire had its boundaries determined as much by the nature of the country as by the kind of people who resisted the armies of Cuzco.

Opposing Religions

In those valleys in which the people fought against the Incas, they did so chiefly because they did not like the Inca religion. The Incas demanded that all conquered people should worship the sun or be punished; but, said the people of the coastal valleys, even a fool could see that the sun was an object to be hated and feared, not worshiped and loved. For did it not wither their corn and dry up their fields and burn the earth? No, as for them, they were not going to accept a religion in which they had to worship the sun. Rather would they keep their old religion, in which they worshiped water and fish, the one because it gave life to the earth, the other because it supplied food to the people.

The reason for this strong difference of opinion is easy to see. The Inca religion grew up on the plateau where it is so cold that the sun is desired and loved, while the people in the low coast valleys lived in a hot country where the sun's effects are often destructive to crops. At last the difficulty was overcome by a compromise. The people of the coast were allowed still to worship water and fish, if they chose, but they must also build temples to the sun and worship in them. Thus, there grew up along the coast a most curious mixture of Inca and Yunca religion, one part consisting of what the people wanted to believe and the other part of what they had to believe.

It is nevertheless a remarkable fact that many people eagerly accepted the Inca rule. This was due entirely to the fine system of irrigation which the Incas always established in a conquered province and to the good and wise laws they always made. It was really better to belong to the empire and to be protected and ruled by a wise king than to be continually at war with quarrelsome neighbors. There was also something splendid in the religion of the Incas. Its rites and ceremonies were grand and impressive, its prayers were about food and water and the sun, and all these things pleased the people for whom life held few pleasures except the commonest and to whom the chief concern was the getting of their daily bread, fairly wrung from a stubborn earth.

Skeleton of Inca slave at the Sacsayhuaman ruins in Lima, Peru. University of Washington Libraries, Special Collections, UW 35946.

A Complete Change

With the arrival of the Spaniards in Peru, writes Isaiah Bowman, a complete change was brought about in the life and religion of the people within the empire of the Incas. The Spaniards easily took possession of Cuzco, for they had firearms, while the Indians had only the simplest kinds of arms—stones and knives. The last king of the Incas, Atahualpa, was tried and cruelly put to death. Some of the temples were later torn down and the spaces between the stones searched for gold; the altars were despoiled of all their ornaments of gold and silver, the people robbed for their possessions, and other wrongs inflicted. Men and boys were compelled to work like slaves in the silver and gold mines in order that the inhuman thirst for wealth on the part of the Spaniards might be gratified. At last a better spirit came to rule among them, and the Indians were given some rights; they were no longer compelled to work in the mines; property could not be stolen from them, and they could no longer be abused and whipped.

With all these changes came a change in the religion of the Indians. They no longer worshipped in the temples of their fathers. Priests from Spain established the Catholic religion and built great churches and cathedrals, some of them being erected on the ruins of former Inca temples. In place of the rites and ceremonies of the Inca worship of the sun came the prayers, the processions, and the solemn music of the Christian religion as practiced by the Catholic Church. Today the ancient religion is in many places no longer even a memory. If one steps into a cathedral in La Paz or Lima or Cochabamba, he finds within it many Indian worshipers whose god is no longer the sun, and who join in prayers not so much for rain and full streams as for the faith, hope, and love of the Christian religion.

"Jenson's Travels," March 16, 1923[71]

CUZCO, PERU

Friday, March 16. The weather during the past night and morning was quite stormy in Cuzco, and it continued to rain off and on all day. It was the first precipitation we had been exposed to since our arrival in South America. Elder Page, who was sick with soroche, spent part of the day in bed, while I joined other travelers who hired horses on which we rode to the top of a hill standing out in bold relief immediately back of and about seven hundred feet above the city. Describing the circumstances of this hill and near the top of the same are the remnants of the main Inca fortifications. There are three main walls, one above the other, the construction of which calls forth wonder and admiration, for the immense stones are so accurately cut and so nicely joined together that it almost puts all modern masonry and wall building in the background. The first question that suggests itself to the traveler, on viewing these massive structures, is: Who built these walls, and when and under what conditions were they constructed? The student of and believer in the Book of Mormon[72] naturally

71. Jenson, "Jenson's Travels," *Deseret News*, July 28, 1923, 7.
72. After visiting Inca ruins, Jenson wrote, "What I have seen in Cuzco will cause me to study the Book of Mormon more thoroughly hereafter." See Jenson diary, March 16, 1923, 307.

brings to mind the walled cities of the Nephites described in the Book of Mormon and only regrets that that sacred volume does not contain more accurate and detailed information concerning the geographical location of the old Nephite cities.[73] The question also arises: Who were the Inca? It seems consistent to suppose that they were descendants of Nephites, as well as Lamanites,[74] for it must be remembered that the Nephites were not all killed by the Lamanites in the great exterminating battles which took place between the Nephites and the Lamanites.[75] On the other hand, if the Incas are descendants of the Lamanites, then the roving and nomadic natures of these people must have changed somewhat from laziness and indolence to habits of thrift and industry after the days of Moroni.[76]

Mr. Rounsevell writes interestingly about Cuzco and the Inca ruins, and some of the following items are culled from his narrative:

Cuzco and Inca Ruins

"Cuzco, the scene of the greatest of all national dramas—the rise and fall of the ancient Inca Empire—has for nearly three centuries been the center of interest for students of civilization, writers of history, archeologists, and searchers after treasure and adventure; it is an inland city situated in a most remote and inaccessible valley far up in the Andes, built centuries ago in such a substantial manner that the ruthless attacks of conquerors, revolutionists, invaders, and treasure hunters have failed to destroy the wonderful handiwork of a civilization that flourished for centuries before Columbus discovered America. Probably few cities in the world have clung so persistently to their ancient customs and fought so tenaciously the advance of civilization as Cuzco has. [. . .]

"Interest in Cuzco begins in one's first glance at the curious, quaint old building which houses the best hotel. Here are seen the mammoth walls of solid stone, four to six feet thick; the old stone stairway, worn smooth and hollowed out by the tramping feet of no one knows how many generations; the narrow

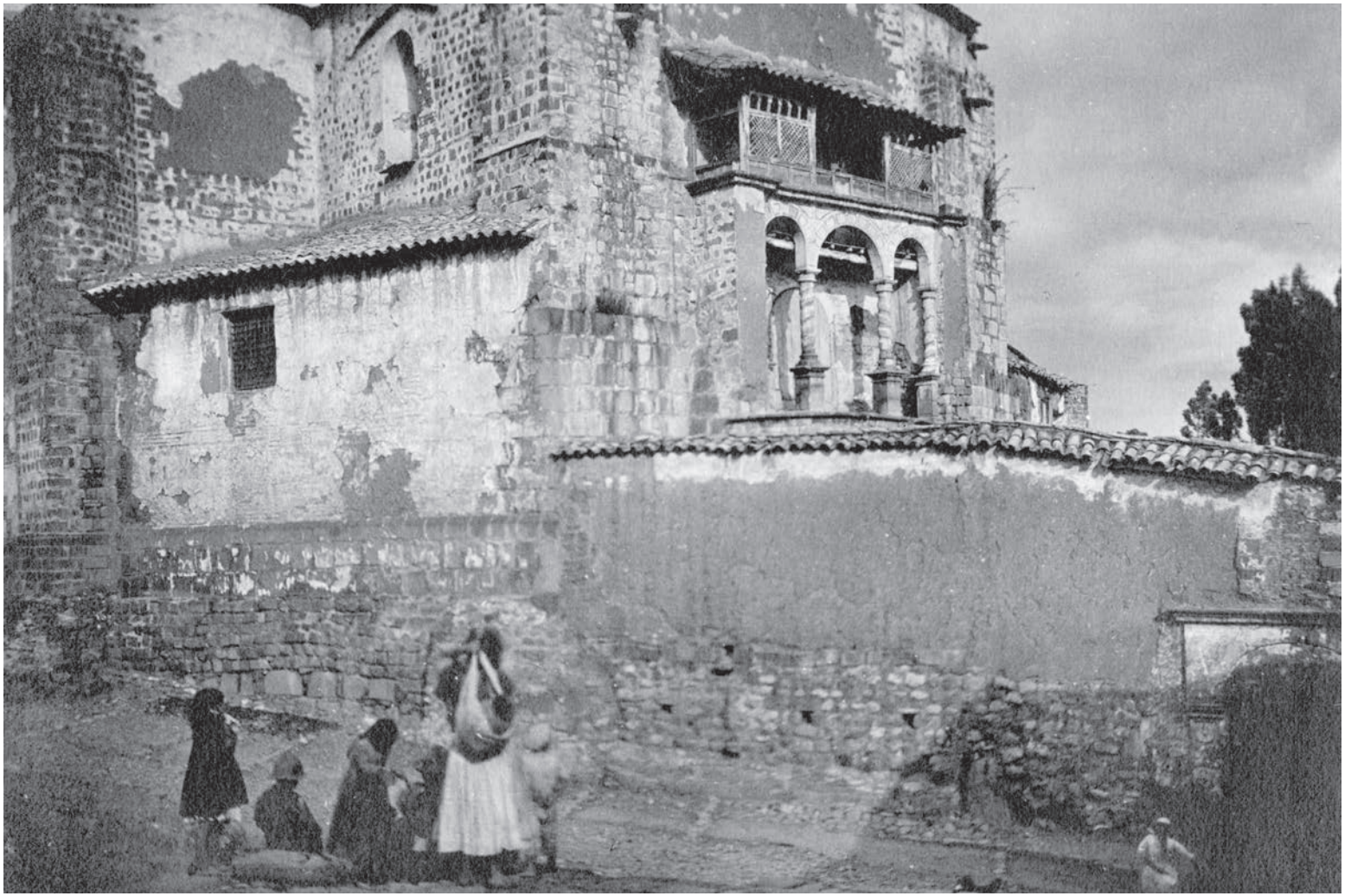
73. By the time of Jenson's 1923 trip to Central and South America, interest in Book of Mormon geography had heightened, and a number of Latter-day Saints had published their own proposed maps of Book of Mormon geography. Perhaps the most notable map was made by Joel Ricks, who took trips to Central and South America in 1903 and 1908 to personally study ancient Aztec, Inca, and Maya ruins. When Jenson left in 1923, Ricks's published map was being used "largely in all Sunday Schools of the Church." See Ricks, *Helps to the Study of the Book of Mormon*. See also Ricks to McKay, March 28, 1919, MS 2857, box 1, folder 7, L. Tom Perry Special Collections, Harold B. Lee Library, Brigham Young University, Provo, Utah.

74. More recent scholarship on the Book of Mormon has also produced maps of South America as Book of Mormon lands. John L. Sorenson compiles and annotates the various maps of Book of Mormon lands put forward by Latter-day Saint scholars since the 1830s in *The Geography of Book of Mormon Events: A Sourcebook* (Provo, UT: FARMS, 1992). See page 14 of the introduction of this volume.

75. The final chapters of the Book of Mormon recount the fierce wars between the Nephites and Lamanites, including a destructive battle in the land of Cumorah around AD 385. Almost every Nephite was killed except for "a few who had escaped into the south countries." See Mormon 6:11–15. See also Reynolds, *Dictionary of the Book of Mormon*, 108–9.

76. Moroni, the son of Mormon, was a prophet and military leader and the author of the final book in the Book of Mormon. He was later resurrected and delivered the gold plates to the Prophet Joseph Smith in 1827. See Reynolds, *Dictionary of the Book of Mormon*, 250–51.

Street scene in Cuzco, Peru. University of Washington Libraries, Special Collections, UW 35942.



Temple of the Sun, Cuzco, Peru. University of Washington Libraries, Special Collections, UW 35943.

Cathedral and plaza, Cuzco, Peru. University of Washington Libraries, Special Collections, UW 35945.

balcony overlooking the narrow street, etc. Up and down this street rulers and monarchs have gone—some to the throne and some to the execution block; victorious armies have marched to celebration, and defeated armies have retreated to destruction; countless millions of gold have passed beneath this balcony to adorn palace and worship place, only to be ruthlessly torn down and carried away to ransom a monarch and become pawns in the hands of gamblers and the booty of brigands and pirates; and today the trudging feet of mixed descendants of both the early inhabitant and the intruder are traversing this same street clothed in much the same manner, but bearing different burdens and on different errands than their ancestors. Monarchs, there are no more; the armies of today are mere handfuls of peace officers; and the countless gold of former centuries has been replaced by gilt decorations and silver soles. Gone is the glamour, the pomp, and the glory of Cuzco, but the sentiment and the human interest will remain as long as the mammoth monuments of stone stand to pay mute tribute to the civilization under which were quarried, carved, and wrought these structures which have endured time, element, and invasion.

Streets Are Narrow

"Narrow streets and cobblestone pavements have defied the advance of modern transportation. Wagons and carts are almost unknown, and trucks are but seldom seen. Freight and merchandise of all kinds is transported in and about the city on the backs of men, mules, and llamas. The burden which barefooted Indians are able to carry on their backs up and down these steep, rough streets is almost unbelievable and the price at which they do it so low that no gasoline- or horse-propelled vehicle can compete with them. Great sacks of grain, bundles of corrugated iron, heavy trunks, immense boxes of merchandise, sacks of cement, kegs of nails, and cases of beer are among the things which are carried with seemingly as little difficulty as an ordinary man would display in handling a suitcase. It is said that some of the strongest Indians carry as much as four hundred pounds each trip in and from the freight house. Ice, although not badly needed in the cool air of this altitude, is quite common and may be had in most of the better restaurants and bars. Instead of the expensive artificial plant of modern cities and the well-known ice wagon of civilization, the Indian supplies the need with prompt, regular delivery at a lower price than is paid in North American cities, his method being to tramp high up on the glacier-capped peaks beyond the city and carry large cakes of natural ice down the steep slopes in the cool, almost-freezing air of the night for early morning delivery in the city. The monstrous moving vans of North American cities which transport the entire furnishings of a house at one trip could not here compete with the Indian, who for a few centavos ropes the chairs and beds and tables together and hoists the ungainly burden upon his back and trudges away with the delivery, perhaps not as quickly as, but probably with less damage to the furniture than, the modern van. The women are burden carriers, too—the burden being generally one or more babies, mostly tightly wrapped in a blanket on the shoulders; but the great number which are carried in a no-less-conspicuous, but more natural, manner is a guarantee that the coming generation in Cuzco will not be lacking in burden carriers to replace

those we see wearily wearing their lives away in doing the work of beasts of burden and in living under conditions which are but little advanced beyond the normal life of the animals which they replace in carrying of burdens.

An Historic Fortress

"[. . .] The fortress of Sacsayhuamán is located immediately back of the city on a hill about seven hundred feet above the town, and part of it is in plain view from almost any point in the city. A forty-minute walk brings the sightseer to the foot of these ancient fortifications. An early morning climb to the point would be immensely worthwhile merely for the wonderful view of city and valley spread out in picturesque beauty as far as the eye can reach—in the foreground, the city itself, with its bright red tile roofs glistening in the sun, with here and there bright patches of gaily painted walls and just enough green trees and shrubbery to complete the most unusual and enchanting color scheme. Across the canyon are the remains of a stone aqueduct, built in culvert form, three rows of arches high. This aqueduct was, centuries ago, one of the principal sources of water supply for the city, and as an evidence of the progress that has been made backwards, it is interesting to note that in the Incaic days when Cuzco was a city of more than two hundred thousand population, the water was so well conserved and distributed in stone aqueducts and ditches that there was ample to supply all the needs of the city, irrigation included, whereas today, with only about one-eighth the inhabitants, the supply is scarcely adequate. The fortress itself is properly classed among the wonders of the world. It circumvented the entire hilltop with three series of stone walls built of great blocks of flint-like stone, some of which are twenty-five feet high and more than twelve feet thick, all securely and perfectly cut and fitting with an exact nicety.

"In front of the main wall of the fortress is a broad, level space—today being grazed by sheep—which was perhaps in those unknown, bygone days the parade ground for the vast armies of the monarch who reigned in the time when this great wall was in reality a fortress. On the opposite side of this level space a series of seats has been carved in the solid rock ledge known as the 'Inca's Throne,' from whence who knows what deeds of valor and sacrifice have been witnessed. Immediately back of this is the 'sliding-rock' of 'Rodadero' said to be a national glacier formation, of perfectly rounded, slippery grooves at an easy slope fifty or more feet in length where one may take a thrilling slide to the ground below. A little further on, at the other end of the 'Parade ground,' is another large rock, about thirty feet high and fifty in diameter, in which a winding flight of stairs about two feet wide is perfectly carved from base to top. The top of this rock and its sides are carved full of very comfortable seats and chairs with backs, like a great reviewing stand. [. . .]

"To the north of Cuzco, within a radius of a few miles, are the remains of an Inca palace, another fortress, the ancient reservoir of the Incas, also many caves, stone carvings, and interesting ruins of different kinds, and within a day's horseback ride are so many ruins and relics that it would take weeks to make any kind of complete examination of these remnants of a past civilization. [. . .]

Has Many Churches

"Cuzco has more cathedrals, churches, monasteries, nunneries, and edifices of a religious type than any city of the New World of its size, nearly all constructed during the colonial period out of material procured by wrecking the Inca structures. The stone workmanship of that period is very commonplace, as compared with the work which remains of the partially wrecked and ruined structures, and the different periods of construction can be very readily identified by the character of architecture and workmanship, the oldest being decidedly the best and gradually deteriorating and that of the present century being the clumsiest and flimsiest of all. The 'Temple of the Sun,' located almost in the heart of the city but a few blocks from the main plaza, stands as a most vivid monument of its builders. The mechanical and architectural perfection of this piece of circular stonework is probably without equal in all the world, and no description or photograph can do justice to the exact nicety of the cutting of each stone. A skilled cabinetmaker of this day, working in hardwood with the best of tools, could not exceed the delicate fineness of the joints between these perfectly cut stones, which even centuries of earthquakes have not disturbed by a hair's breadth—except for one crack, which ruptured the slabs of granite in a diagonal course with scarcely any injury to the intersecting joints so perfect are the joints broken and the courses bound together. Except for the ruthless destruction by the hand of man, it is possible that the sun will still shine gloriously on this temple wall for centuries after the civilization which conquered and supplanted its builders shall have perished and been forgotten. [. . .]

"On almost every street in Cuzco are the remnants of Inca or pre-Incaic walls, arches, and doorways. The city itself was surrounded by the great wall, enough of which remains to make it possible to trace its course from end to end. Many streets are lined on either side by walls of most perfect stonework, now serving no better purpose than to be used as foundations for rude adobe structures which shelter, in poverty and filth, the descendants of the mighty ones which built them. [. . .]

"There are many surprises in store for the stranger in Cuzco, unless he has read a great deal more than the average traveler, or has conversed with people well acquainted with the facts in history of the city. It is said that one of the first printing presses ever operated in the Western Hemisphere was set up in Cuzco. Another is that one of the oldest universities in Latin America is the University of Cuzco, established in 1692 on the site of the palace of one of the Inca rulers in a building, which was at one time the residence of Hernando Pizarro and later housed in a Jesuit monastery. The university is, of course, a Catholic institution."[77]

There is probably no place on the western continent where a month or two can be more profitably, pleasantly, or interestingly spent in sightseeing than in the vicinity of Cuzco. Books which may be profitably read in connection with, and preferably prior to, a visit to Cuzco are *Travels and Explorations in the Lands of the Incas*, by Squier[78]; *Across South America*,

77. Nelson Rounsevell, "Vacation Trip in the South Cuzco," *West Coast Leader*, November 22, 1922, 6–7.
78. E. George Squire, *Peru: Incidents of Travel and Exploration in the Land of the Incas* (New York: Harper and Brothers, 1877).

by Bingham[79]; *Along the Andes and down the Amazon*, by Mozans[80]; *The Incas of Peru*, by Markham[81]; *Staircase Farms of the Ancients*, by Cook[82]; *Impressions and Observations of a Trip around South America*, by James Bryce[83]; and *South of Panama*, by E. A. Ross.[84]

"Jenson's Travels," March 17, 1923[85]

PUNO, PERU

Saturday, March 17. After spending another night at Cuzco,[86] we arose earlier than usual in the morning and made ready to resume our journey.[87] We boarded the mule tramway cars, which took us to the railway station, and at 8:00 a.m. we said goodbye to Cuzco and were soon speeding on our way, seated in comfortable railway cars, down the beautiful valley through which the Río Christancy winds its way to the lower country.

We enjoyed our daylight ride down that valley very much and became intensely interested in the quaint Indian villages and irrigated farms, which abounded everywhere. The cultivation was not confined to the valley but extended far up on the mountain slopes wherever water could be had for irrigation. We had missed these sights when we went up the valley three days before, because of the darkness of the night. The same kind of scenery greeted the eye as we traveled up the Vilcanota River; but after reaching the higher altitude, cultivated farms became less numerous, and instead of farms and gardens we witnessed immense herds of llamas, alpacas, sheep, cattle, horses, etc. But as we descended from the summit of the mountains on the south we soon reached the open pampas, where the farming population again held full sway.

79. Hiram Bingham, *Across South America: An Account of a Journey from Buenos Aires to Lima by Way of Potosí, with Notes on Brazil, Argentina, Bolivia, Chile, and Peru* (New York: Houghton Mifflin, 1911).
80. H. J. Mozans, *Along the Andes and Down the Amazon* (New York: D. Appleton, 1911).
81. Clements Markham, *The Incas of Peru* (New York: E. P. Dutton, 1912).
82. Orator Fuller Cook, *Staircase Farms of the Ancients: Astounding Farming Skill of Ancient Peruvians, Who Were among the Most Industrious and Highly Organized People in History* (Washington, DC: National Geographic Society, 1916).
83. James Bryce, *South America: Observations and Impressions* (New York: Macmillan, 1920).
84. Edward Allsworth Ross, *South of Panama* (New York: Century, 1915).
85. Jenson, "Jenson's Travels," *Deseret News*, August 4, 1923, 4.
86. The hotel manager tried overcharging Jenson and Page by about ten soles. Jenson wrote: "It is a general rule throughout South America to charge English-speaking people about double price for everything. One of our fellow travelers, who could speak Spanish, got through much cheaper than we did at the hotels and elsewhere. A man who cannot speak Spanish experiences all kinds of inconveniences in traveling in South and Central America and finds himself fleeced everywhere." See Jenson diary, March 16, 1923, 307.
87. Regarding the night of March 16, Jenson wrote, "I dreamt that I had a pleasant conversation with President [Heber J.] Grant and calling on my family in spirit, though I understood in my dream that my body was in South America." Jenson diary, March 17, 1923, 307. Jenson's trip to Central and South America was never fully endorsed by President Heber J. Grant, and when Jenson asked for approval to take such leave from his labors in the Church Historian's Office, Grant responded with ambiguous partial approval. Grant would later question Jenson's Central and South American trip and object to Jenson returning to Salt Lake City via the overland Mormon Trail. However, this dream of Jenson having a "pleasant conversation with President Grant" shows a sense of reconciliation between the two, who did not see eye to eye on historical matters.

At every station where the train stopped there were usually great throngs of men and women offering for sale fruit and homemade articles of clothing, shoes, hats, shawls, etc.

Divers Tribes

The Indians of Peru are mostly descendants of the divers tribes, which formed a homogeneous nation under the rule of the Incas at the time of the Spanish conquest. Of the two distinct general types, the coastal tribes, occupying the fertile river valleys, are engaged on plantations in domestic service or in minor industries of their own, while the sierra, or mountain, tribes are agriculturists, miners, stockbreeders, and packers. In addition there are tribes of wild Indians in the mountain region, or eastern forests, who were never subjugated by the Incas and are still practically independent. The number of these is variously estimated as being between 130,000 and 300,000, comprising about 120 tribes differing widely in habits and customs. Some are communal and are attached to the soil; others are hunters or fishermen of nomadic character, while there is a still more intractable element, having no intercourse with the whites.

Best Type Physically

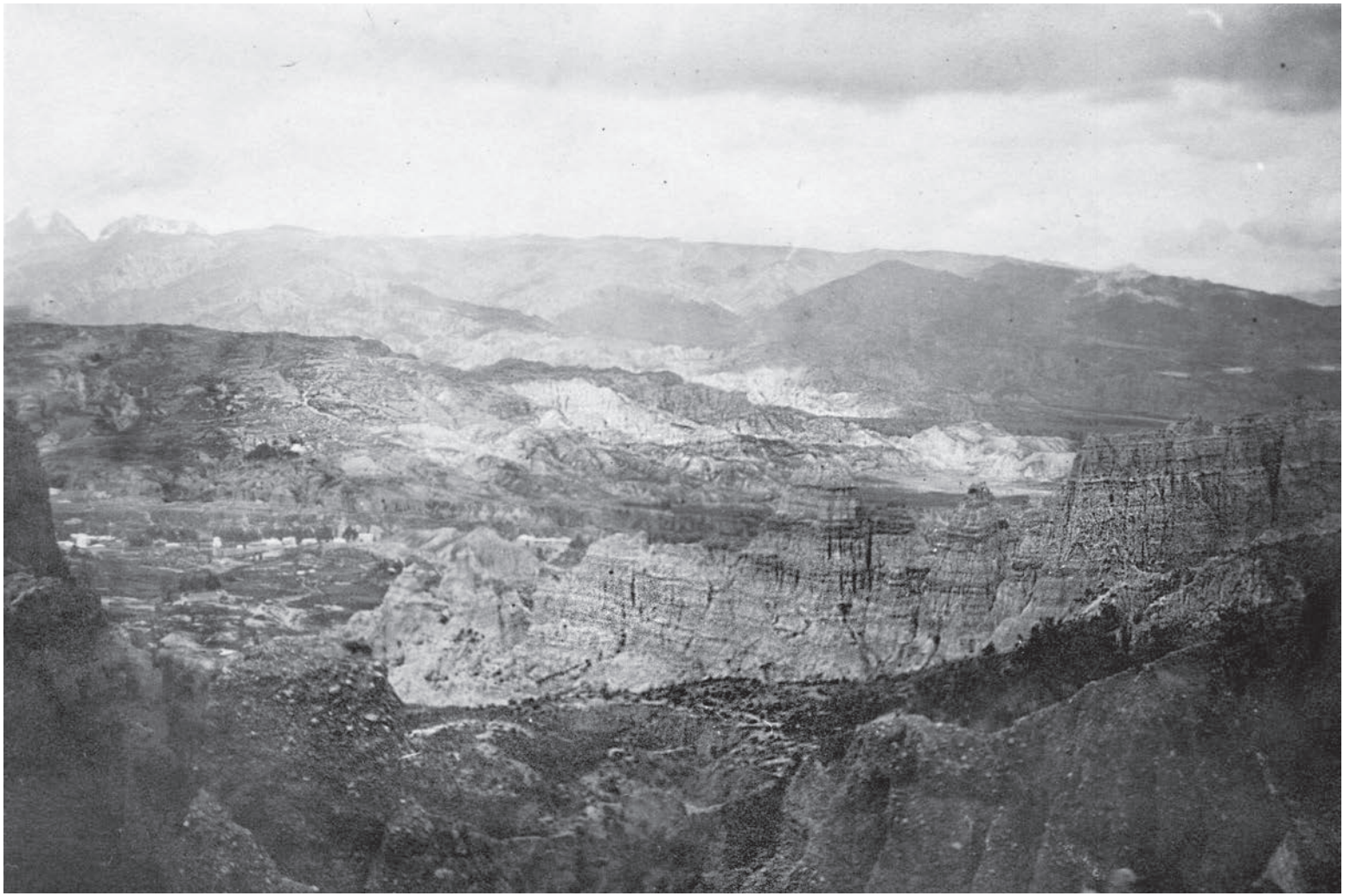
The Indians of the sierra are the best type physically and the more numerous. They belong principally to the Quechua and Aymara families, the former inhabiting areas north of Cuzco and the latter the Titicaca Basin and the mountain ranges towards Bolivia. These Indians are known as Choles, while the tribes of the forest interior are called variously Chunchos, Barbaros, Salvages, or simply Indians. The Chunchos, being expert boatmen and fishers, are a useful element and furnish almost the only labor for the collection of rubber. The Choles probably number over 1.75 million and form the major part of the upland population; practically all the industries of this region depend on them for labor. They are Hispanized and worship in the Roman Catholic faith. Many of the Choles are small landholders, and they are protected by the government in order that their holdings may not be alienated. They also make good shepherds and engage in the breeding and domestication of the llamas. In 1876 the Indians were estimated to form 68 percent of the total population of Peru, but since then the percentage has fallen, owing to the high death rate among the mountain tribes.

We arrived at Juliaca at 6:00 p.m. Here we changed cars and then traveled thirty miles farther to Puno, a town of eleven thousand inhabitants situated on the shore of Lake Titicaca, where we boarded the splendid steamer *Inca* after having our passes viséed by the Bolivian consul. About 11:00 p.m., after partaking of a good supper on board the *Inca*, we sailed from the Puno mole[89] bound for Bolivia. The following is from the pen of Nelson Rounsevell:

Curious Sensation

"It is a curious sensation, after traveling for several days on the Southern Railway in the high altitudes of the Andes, to alight from the train on the shores of Lake Titicaca and see docked at the pier a vessel which has all the appearance and nearly the size

88. A *mole* is a pier, walkway, or breakwater formed by masonry, stones, and earth. See Stevenson and Lindberg, *Oxford American Dictionary*, 1126.



Mountains surrounding La Paz, Bolivia. University of Washington Libraries, Special Collections, UW 35947.

Porters carrying trunks in a street in La Paz, Bolivia, ca. 1905. Library of Congress.

of an ocean liner. It is a sensation as if one had been dreaming and had suddenly awakened in a most unexpected place. To see a ship of the proportions and size of the *Inca* anchored near the top of the Andes is like meeting with a New York skyscraper in the midst of a vacant prairie, or a palm tree in the Arctic, or an iceberg in Panama Bay. It gives one a peculiar topsy-turvy feeling which is hard to dispel.

"Baggage and passports are examined by the Bolivian officials before travelers board the ship, but it is a very cursory examination and almost anything seems to get by. The ship sails as soon after the arrival of the train as the passengers and baggage can be transferred and the formalities complied with, which on the direct steamers is about sundown, giving the traveler time before dinner to get comfortably established and to see something of Puno Bay and to give the phantom ship the once-over. The staterooms are quite roomy and fully as comfortable and well equipped as the average seagoing passenger ship. The *Inca* was built at Hull in 1905 by the Earle's Shipbuilding Company Ltd., and the official number on the brass plate is 489. She is 128 feet long and has a forty-six-foot beam, has quarters for eighty-six first-class passengers, and is rated for one thousand tons of cargo. Just how she ever sailed from Hull to the top of the Andes will ever be a mystery to the landsman, unfamiliar with seagoing affairs. The engineers and mechanics who piloted her up over the railway piecemeal and reassembled and made her seaworthy on Lake Titicaca certainly accomplished quite a remarkable feat. Still more remarkable must have been the voyage of the *Yapura*, the oldest of the Titicaca fleet, which has been navigating the lake since 1861. She came all the way from the sea on muleback and Indian back.

Cook Ranks High

"Next to the captain, the cook of the *Inca* ranks highest in the estimation of the passengers. To a hungry traveler, tired from the long day's ride from Cuzco or Arequipa, the dinner bell is a most welcome sound, and the meal served, far better than the most sanguine might anticipate. Several passengers spoke very highly of the excellence of the bar service also, and, from the songs, laughter, and gaiety which could be seen and heard in the dining room after dinner, it may reasonably be assumed that the wine is fully as exhilarating at 12,500 feet as it is at sea level.

"Lake Titicaca is not only the highest, but one of the most beautiful, bodies of navigable freshwater in the world. It is nearly one-third the size of Lake Ontario and is well up in the ranks among the larger bodies of freshwater. Situated at the central point of a vast basin on the western side of the main cordillera of the Andes—where that water might reasonably be supposed to flow into the Pacific, but so far as man knows it does not—the overflow from Titicaca is drained by the river Desaguadero into Lake Poopó, which has no visible outlet; and it is generally conceded that evaporation eventually returns all the water from this vast watershed to the heavens from which it came. The fish in Titicaca are of but one kind, and it is believed that sea-level varieties cannot be propagated at this altitude, as all efforts to stock the lake with other than the native habitant

have been in vain. They are all small in size, a specimen more than eight inches long being very rare; and they look like a cross between the chub and trout. They are quite plentiful, and the tables of the entire country from Cuzco to La Paz are supplied with their Friday meal and many others from the lake."[89]

"Jenson's Travels," March 18, 1923[90]

LA PAZ, BOLIVIA

Sunday, March 18. After enjoying a splendid rest on board the steamer *Inca* on Lake Titicaca, during the night we arrived at Guaqui, Bolivia, at 6:30 a.m., after viewing the beautiful sunrise from behind the snowcapped Andes Mountains. During the voyage of 120 miles from Puno to Guaqui, I made the acquaintance of Captain Santiago Guillermo Tynan (whose mother was a Swedish woman) and Mrs. C. V. Sampson, manager of the Guaqui and La Paz Railway, who both acted in a very gentlemanly manner towards us. Captain Tynan seemed to be proud of his Swedish mother, and when I told him that I was born in Denmark and could understand Swedish, he "opened on me" with all the Swedish words he had learned as a child; and when we left his comfortable steamer, his Swedish blood again asserted itself in the custom of shaking hands with all the passengers and wishing them a pleasant journey.

At Guaqui we boarded the train, which stood in waiting for us on the lakeshore, and at 8:00 a.m. we left Guaqui for La Paz, the capital of Bolivia, sixty miles away. After traveling about thirteen miles, we saw on our left the ruins of an Indian village, and at Tiahuanaco we saw from our car windows two or three fine and well-preserved Inca monoliths near the track. Near the city of Viacha (two thousand inhabitants) we saw hundreds of men, and women and children traveling on foot on the highway, carrying on their heads and backs heavy burdens of foodstuffs and homemade articles of wearing apparel to sell on the market. At El Alto (13,396 feet above sea level) we looked down upon the city of La Paz, 1,500 feet lower, and found the descent over a steep roadbed novel and interesting.

Sightseeing in La Paz

We arrived at the railway station at La Paz about noon and put up at a hotel, where I met Mr. Rene Hoffman-Bang, a Dane who had spent a number of years as an engineer in South America. In his pleasant company I visited the National Museum in La Paz and other points of interest, including the celebrated market which is believed to be one of the most interesting and unique in the world. In the evening I listened with interest to the music from the municipal band on the plaza and participated in the march, together with thousands of people, as the band played popular airs. In almost every city in Latin America it is

89. Nelson Rounsevell, "Vacation Trip in the South Lake Titicaca, Guaqui, La Paz," *West Coast Leader*, November 29, 1922, 1, 10.
90. Jenson, "Jenson's Travels," *Deseret News*, August 11, 1923, 7.

customary for the populace (especially the younger people) to march in a circle around or on the plazas, which usually form the center of the cities. Elder Page was suffering from an attack of mountain fever and had to spend part of the day in bed, he finding it quite difficult to breathe because of the high altitude.

La Paz is situated in a deep basin, about twelve thousand feet above sea level, but notwithstanding the altitude, the weather was pleasant. Heavy clouds, however, rested upon the main range of the Andes Mountains; hence, the top of the famous Illimani and the numerous other lofty mountain peaks could not be seen that day. Altogether the day of March 18, 1923, will be remembered as a red-letter day in my history. Sailing on a fine modern steamer twelve thousand feet above sea level and afterwards entering a most attractive capital city, with 110,000 inhabitants situated in the heart of the great Andes Mountains (at a higher altitude than that of any other capital city in the world), is something never to be forgotten.

Freaks of Vision

Mr. Nelson Rounsevell, writing about his journey from Lake Titicaca to La Paz, says:

> "Before sunrise, just as the first silver rays begin to light up the snowcapped range at the east of Lake Titicaca, is the correct time to rise on board the *Inca*. Nearly seventy-five miles of perpetual snow are then in sight in the distance, looking deceivingly near and but little above the level of the water. It is almost unbelievable that some of those peaks are more than twenty-two thousand feet high—nearly two miles above the lake. The freaks of vision are nowhere greater than at sunrise on Titicaca. Everything looks near in the clear, rare air of this mountain lake. It is like looking through a telescope and kaleidoscope combined. There are no possible color combinations which the slowly rising sun does not bring out as its first rays strike the glistening, silvery heights—the browns and grays and greens of mountainside and valley and the deep blue of the lake."[91]

Ancient Ruins

The Bolivian highlands to the south and east of Lake Titicaca have many remains and ruins of a civilization that was without doubt pre-Incaic and which are entirely prehistoric. The most important of these are on the plains of Tiahuanaco, thirteen miles from Guaqui. Many of these are in sight from the railway, including ruins of immense walls with doorways and archways, human figures and animals carved from solid rock, doorways and archways covered with carved images, and figures and designs, the significance of which no one has been able to discover. The size and extent of these ruins and the immense size of many of the stones make all conjecture as to their origin futile, as there are no known quarries of similar rock within many miles, and it is beyond the possibilities that such immense stones were ever moved long distances and placed in position by mere man power.

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91. Nelson Rounsevell, "Vacation Trip in the South Lake Titicaca, Guaqui, La Paz," *West Coast Leader*, November 29, 1922, 10.

La Paz has steeper hills, better stores, more bootblacks, and a greater range of altitude than almost any other South American city. It is the terminal of three railways, and a fourth is under construction. Commercially, La Paz presents to the stranger a prosperous and busy aspect. It is not only the governmental but the commercial center of Bolivia—the wholesale distributing center for a vast territory rich in minerals, agriculture, fruit, cocoa, rubber, and livestock.

The following is from the pen of Isaiah Bowman:

A Wonderful Picture

"Perhaps there is no greater surprise in all South America than that which greets the traveler who for the first time sees La Paz. In approaching the city the train runs over a dry, treeless, and lofty plateau that stretches away mile upon mile north and south. Toward the east and on the rim of the plateau is a magnificent line of snowy peaks. Suddenly, as if by magic, the whole world appears changed. One arrives at the brink of a vast amphitheater with steep walls descending over a thousand feet to the city of La Paz. It is as if the city were in the bottom of a vast bowl and the traveler were on the rim of it. In the bright sunlight and clear sparkling air of the lofty plateau, the red-tiled roofs of the houses, the spires of the cathedrals, the green open plazas, the deep blue sky, and the majestic mountains with their mantle of snow form a truly wonderful picture."[92]

The most interesting place in La Paz is the great plaza in which the market is held and where all the Indian merchants of the town gather to buy and sell. The fruit and vegetable market is crowded with women squatting beside their baskets and piles of fruit. They are dressed in the bright red, blue, and yellow of which the Indians are so fond, and they wear curious little straw hats and ample shawls and skirts. Some of them go barefoot, even in the coldest weather, while others wear sandals. A few of the wealthiest and many of the cholos, or half-breeds, wear fancy imported high-heeled boots and colored laces of expensive material.

On the Market

Some of the articles found in the market are, of course, produced on the plateau. Thus, we find barley, meat, and wool from the flocks and fields of the plateau dweller. Here, also, are produced many varieties of potatoes that astonish the stranger. Besides the fruits and grains sold in all the plateau markets, there are blankets made by the Indian women from the wool of sheep and llamas, ropes of llama wool, skins from the cattle of the eastern basin and valleys, leather sandals worn by all the plateau Indians in place of shoes, ornaments of silver and tin, cloth from other countries, the bright-colored shawls so well liked by the Indian women, and many kinds of household utensils made of wood.

Nothing else in Bolivia is so wonderful as the great mountain range east of La Paz that may be seen from the streets of the city and for great distances out upon the plateau. It is the crowning range of all South America and one of the greatest scenic features of the world. Sorata on the north, Huayna Potosí in the middle, and Illimani on the south are the dominating peaks and reach altitudes from

92. Bowman, *South America*, 152–53.

Street scene in La Paz, Bolivia. University of Washington Libraries, Special Collections, UW 35948.

nineteen thousand to twenty-one thousand feet above the sea. Illimani is the highest of them all and overlooks La Paz. Its white snow-covered summit stands out boldly on clear days but is never completely exposed to view for a long time. Clouds gather about it almost continually, and snowstorms and mists enshroud its lofty peak almost every day in the year.

"Jenson's Travels," March 19, 1923[93]

[BOLIVIA]

Monday, March 19. Having rested comfortably during the night in La Paz, Bolivia, I spent nearly the whole day making arrangements for our railway journey back to the coast, the Chilean consul being determined to get a fee for viséing our passports when they had already been viséed by the Chilean consul in San Francisco.

In the evening we took a long streetcar ride to Obrajes, a resort situated in a canyon, about four miles below the center of La Paz, and then packed our valises preparatory to leaving La Paz in the morning. In the evening I consulted literature treating upon life and conditions in Bolivia.[94]

Bolivia, the third-largest country of South America, is bounded on the north and east by Brazil, on the south by Paraguay and Argentina, and on the west by Chile and Peru. The area of Bolivia is variously estimated at 473,560 to 704,195 square miles. The latter figure, if correct, would give Bolivia a surface fourteen times the size of the state of

93. Jenson, "Jenson's Travels," *Deseret News*, August 18, 1923, 7.
94. Jenson wrote: "We took leave of some of our traveling companions with whom we had been closely associated since we first met in Arequipa. They were a Mr. Westervelt and daughter from South Bend, Indiana, Abraham Smith and wife of Defiance 646 Washington Avenue, Ohio, and Jay C. Allen, a lawyer, and wife (Laura) of Seattle, Washington. A Mr. R. L. Oilar with whom we also had kept company had decided to travel with us to Antofagasta." See Jenson diary, March 19, 1923, 311.

New York, or nine times the size of Utah. The population is nearly three million. The chief physical feature of Bolivia is the vast central plateau over five hundred miles in length, at an average altitude of twelve thousand feet. This plateau lies between two great chains of the Andes, which traverse the country from north to south. It is in this region that the principal cities are located. Three of the highest peaks of the western hemisphere—Illampu, or Sorata (21,490 feet); Illimani (21,204 feet); and Sajama (21,047 feet)—are found in Bolivia.

Bolivia has a network of navigable rivers; its principal lake is Titicaca, having an area of four thousand square miles, situated at a height of twelve thousand feet above sea level. It is the highest steam-navigated lake in the world, where steamboats regularly ply. The difference in altitude between the lowlands of the Amazon level to the summit of Illampu is about twenty-three thousand feet. To appreciate the climate conditions of Bolivia, it would be consistent to apply the same terms as used in Mexico—namely, *tierra caliente*, *tierra templado*, and *tierra fria*, or hot, temperate, and cold regions.

The chief exports from Bolivia are tin ores, antimony, rubber, wolframites, bismuth, copper ore, silver ores, lead ores, lime, animals, hides, coca leaves, and wool. Agriculture is in a comparatively undeveloped state; the chief products are sugar, cotton, coffee, tobacco, cocoa, rice, wheat, barley, and potatoes, but the chief dependence of Bolivia is upon its mineral wealth. Bolivia is one of the world's chief sources of tin, the Bolivian tin mines being famous throughout the world.

Bolivian Population

The so-called cholos are the inhabitants of mixed blood, and they constitute an important element of the Bolivian population. They are a mixture of the Spaniard and the Indian and wear a peculiar and very picturesque dress, favoring very bright colors. The women are exceedingly shrewd and contribute greatly to the small shopkeeper class. The cholos also are important industrially, contributing to skilled labor. Between 40 and 50 percent of the population consists of Indians. They are of two races—namely, the Aymara and the Quechua. The Aymara is the principal agricultural laborer on the altiplano. Spanish is the official language of the Republic of Bolivia, and the country has a gold money standard. The boliviano is the unit in value, being equivalent to $0.389 United States currency. The metric system is the official standard for weights and measures.

Some of the following items on Bolivia are culled from Bowman's *South America*:[95]

The Indians of the lofty tableland of Bolivia live on farms far higher than those of any other group of people in the world. For this reason Bolivia is sometimes called "the Switzerland of South America," but it would be more nearly correct to call Switzerland "the Bolivia of Europe," for the elevations at which people live in Switzerland are far below those of Bolivia. Among the Alps the farms are in a few cases above six thousand feet; in Bolivia almost all of them are above that

95. See Bowman, *South America*, 128–29, 131–33, 136–40, 149–52.

height, and most of them are between seven thousand and twelve thousand feet. Indeed, one finds many farms at elevations well above thirteen thousand feet, while the stone huts of mountain shepherds have been found at 17,100 feet or just below snowline—the highest habitations in the world.

Mountain Wealth

The southwestern third of Bolivia contains all the highland, while the northeastern two-thirds are almost wholly tropical plains. In most countries the great part of the people live on the flat, fertile plains; they avoid the mountains. But in Bolivia there are almost no people on the plains, and in some places there is a dense population in the mountains. This is because the climate of the highlands is cool, while that of the plains is hot, and, further, because the mineral wealth of the country is in the highlands. If people wish silver, copper, and tin, they must go up into the mountains for them and to places at such great elevations that life is decidedly uncomfortable because of the cold and the mountain sickness. In the Nevados de Araca, the cold is intense, the ground is often covered with snow, and a frost occurs nearly every night. The strongest engineers cannot work long at this elevation, and after a few months they are obliged to go to lower places and rest.

The workmen are Indians who are accustomed to living at elevations from ten thousand to fifteen thousand feet; yet even they suffer from the effect of the rarefied air, and it is often with difficulty that enough laborers can be secured to operate the highest mines. One may gain a clear idea of the great heights at which the people of Bolivia dwell by noting that among the 151 important cities and towns four are above fourteen thousand feet elevation, twenty-six above thirteen thousand feet, seventy-three above twelve thousand feet, and seventy-seven, or more than half, are above eleven thousand feet. The highest town of all is Aullagas, which is at the incredibly lofty elevation of 15,700 feet above the level of the sea.

Irrigation Essential

The highland dweller of Bolivia, who depends upon the soil for a living, must learn the art of using water like his brother on the arid west coast in the desert of Atacama, for large parts of the tableland of Bolivia, while not so dry as the coast desert, are dry enough to require irrigation. From hundreds of mountain brooks and rivers the people turn water out over their fields and in many places transform the land into gardens.

The farmers in Bolivia in general live together in small villages and go out from them to till their farms and gardens, though one may see many isolated huts far from any village. Only a little wood is used in the houses, or even for furniture, because it is so very scarce on the arid plateau and must be brought over long distances and at such great expense that poor people can afford only small amounts. Even an ordinary ox whip with a plain wooden handle costs more than the well-braided lash of cowhide, cattle being numerous in parts of the plateau, but wood is a luxury. In the forested Juntas Valley of eastern Bolivia one may see Indians bringing cedar planks on their backs to Cochabamba, more than a week's journey on foot over a steep and difficult trail. The cedar is brought for making tables, chairs, and benches for the townspeople. In

some of the houses one sees many curious things used in place of wood. Reeds, bamboo, corn stalks, and even sugarcane are sometimes built into the roofs and walls. At times a giant cactus is cut down and its hard interior split into a kind of wood used in place of boards for the doorframes and thresholds of the houses.

Home Life

On the roof of the highland dweller's hut there is commonly a thick covering of grass and straw. The thickness of the roof covering is less to keep out the rain than the cold, for the rains are few in number and rarely heavy, while everywhere the night temperature is keen and the winter cold intense, especially in the higher villages. To keep out the cold, the house of the plateau villages of Bolivia are commonly without windows, the door is the only way by which light may enter, and the interiors are generally gloomy and dirty. When cooking is done the smoke is allowed to escape as best it may by the open door. As a result the walls and roof are blackened and the whole interior filled with smoke. Even fowls are sometimes kept in the houses and roost in the sleeping rooms of their owners.

When the plateau Indian wishes to build a house, he stirs mud and water, as if he were about to make a huge mud pile. Then he adds straw or grass, trampling the whole with his bare feet until it is thoroughly mixed. The wind and the sun are then allowed to dry the mud, which is first put into moulds. The great blocks of dried mud are used like stone or brick in building the walls of the house. The plateau has little wood. So when an Indian needs rafters for the roof or frames for the door of his house, he goes in search of cactus. From a dead trunk he strips off the spiny outer layer and exposes a thick, porous, and hollow inner layer, which is easily split into any desired shape. If cacti cannot be found, he must carry wood for long distances from the eastern forests.

Caring for Livestock

Ranged on all sides of the plateau villages are the corrals in which are kept at night the flocks of llamas, alpacas, and sheep that graze on the mountain pastures. The owners drive them out during the day and travel over the mountain valleys in search of food. In the most bleak and lofty situations, isolated corrals are built for those shepherds who take their flocks out for days at a time or for the caravans of llamas that engage in trade from place to place, carrying flour, wool, millet, barley, salt, and wool.

As the shepherd drives his sheep or llamas along, he clucks and whistles, and with a sling of twisted wood he throws stones at them to keep them going in the right direction. While wandering with his flock, he generally carries a bunch of wool on his arm or at his waist and spends his spare time industriously spinning the wool into yarn for the thick blankets, cap, stockings, and coat that he must wear to keep out the cold. It is a lonely life that the shepherd leads, often without shelter except the corner of some corral, without good food for days, and far from any village. But his flock is to him a great necessity; without it he would have neither meat nor clothing for his family.

Cold, and No Fire

One of the most serious defects of the great highlands of Bolivia is the lack of timber or the proper substitute for it. It is disappointing to find so little fuel in a land so cold at night. The traveler who visits Cuzco or La Paz in June or July (the southern winter) may find the weather very cold indeed, the people wearing overcoats in the houses, and Indians standing about shivering; yet there is no fire in the houses, no stoves or furnaces, no means at all for warmth or comfort.

There is little coal in Bolivia, and there is practically no wood within reach of the people of the plateau that can be used as fuel. Coal and refined oil, if used at all, must be brought from the United States, or coal may be imported from Wales or England but at such expense that few people can afford it.

In the absence of ordinary wood and with expensive coal and oil, some rather curious kinds of fuel are employed. First of all are the dry and resinous *tola* bushes. These are pulled up roots and all, piled into bundles, loaded upon animals, and brought—often for long distances— into the principal towns. Donkeys and llamas bearing the *tola* brush are driven right into the kitchens of houses and hotels, where their loads are removed. The *tola* makes a very hot and lasting fire, but the odor of the burning brush is disagreeably strong and fills the kitchen with blinding smoke and dirt.

Baking Bread

Instead of baking bread frequently in an oven as people in the United States do, many South Americans of the coastal region and the mountains bake it only once every week or two in an out-of-door dome-shaped oven. The lower part of such an oven is made of adobes and the upper part of a mass of mud rounded off into a smooth summit. Into this oven are piled brush and wood gathered from far and wide, and a great fire is built until the oven is thoroughly heated. When the fire has heated the oven it is raked out, the ashes are removed, and the loaves are then put in to bake. This is somewhat after the manner of the old-fashioned brick ovens in the United States years ago, and bread is still so baked in the Scandinavian countries today in many places.

Another source of fuel for the people of Bolivia is the moss that grows in lofty places in the mountains. It is found in masses, in some places three or four feet in diameter, and roughly resembles a huge mushroom. The fuel value of this moss is due to the amount of resin it contains, and as the amount of resin in it increases with the altitude, the Indians who make it their business to gather it often visit extremely high places. One may see them gather moss up near the limit of the mountain snows, sixteen thousand to seventeen thousand feet above sea level.

A great amount of llama dung, called *taquia*, is also gathered from the corrals and sold for fuel.[96] This reminds me of crossing the plains from the Missouri River to Utah in 1866, when we used the so-called buffalo chips.[97] The combination of *taquia* moss and *tola* brush is in many cases the only

96. See Bowman, *South America*, 152.

97. Jenson emigrated from Denmark to Utah in 1866, including a four-month overland journey by ox train from July to October. Overland travelers through the Great Basin often used buffalo chips, or dried buffalo dung, as fuel for heat and cooking in place of coal or wood. See Jenson, *Autobiography*, 17–27. See also Barber, *Canadian Oxford Dictionary*.

fuel employed at the mines far away from the railway and the seacoast, which emphasizes the general lack of fuel in Bolivia and the manner in which it hinders the development of the country.[98]

"Jenson's Travels," March 22, 1923[99]

ON BOARD THE SS SANTA TERESA, OFF THE COAST OF CHILE, SOUTH AMERICA

Tuesday, March 20. We arose early at our hotel in La Paz, Bolivia, took a light breakfast, hired a hack to take us to the Bolivian railway station, and started on our two-day journey from La Paz to the coast about 9:00 a.m. We found the climb to the highlands very interesting, and once on top we soon reached Viacha, where in the clear morning atmosphere we had a splendid view of Illimani—the great snow-capped mountain that rises to a height of 21,400 feet—east of La Paz. As we proceeded on our journey over the elevated *pampas*, or plains, we saw large herds of llamas and sheep grazing, in charge of both men and women herders.

The llama is the universal beast of burden among the plateau Indians of Peru and Bolivia and is a peculiar animal. It is half-camel, half-sheep in its general appearance. Its short body, cloven hoof, and stubby tail are very like those of the sheep, but it has long legs, a long neck, and a head like that of a camel. It is especially like the camel in its patient ways, stupid stare, and ludicrous face. When a traveler rides through a flock of llamas, some become curious and walk up and stare into one's face in a very funny way. If an attempt is made to drive them off, they spit in a half-scornful manner and with a very dignified air walk solemnly away. Many llamas that are driven in caravans are scrawny and mean looking, but those that are kept for their wool and meat and that are pastured in the watered oases have much beauty of color and grace.

Beast of Burden

Food is rarely carried for the llama even across the desert washes. The poor animal must hunt its own food, and this while it is carrying a burden and traveling over a hard trail. But its owner usually drives it along very slowly, generally not more than fifteen miles a day, and thus allows it to wander from bush to bush to pick a living on the way. Neither is it loaded with too great a burden. Although it will carry seventy-five pounds day after day if it can secure a good supply of food, it is seldom obliged to carry more than fifty pounds. The llama is an awkward animal to control, for it is always getting off the trail and will not heed an ordinary call, though it answers to the whistle of the Indian driver.

Closely related to the llamas are the alpacas, the vicuñas, and the guanacos of the plateau region of Bolivia and Peru. The alpaca is a domesticated animal and is found chiefly in southern and central Peru and western Bolivia. In general appearance it resembles the llama, though it has shorter legs, and both legs and body are covered with wool. It is never used

98. In the evening, Jenson wrote, "After my day's work, I felt very nervous and I spent a sleepless night at Hotel Pullman." See Jenson diary, March 19, 1923, 311.

99. Jenson, "Jenson's Travels," *Deseret News*, August 25, 1923, 6.

as a beast of burden but is kept in flocks that spend their time in grazing. Its flesh is used for food, but its chief service to the Indian owner is its fleece, which, if pure white, is especially valuable for both rugs and clothing. Alpaca wool is very fine and thick and is highly prized.

Indian Huntsmen

The Indians hunt the wild vicuña and guanaco with dogs and powerful rifles, for a person cannot get near these fleet beasts without a favorable wind and without being under cover of a screen of brush. In Bolivia these animals live in the loftiest valleys among the mountains during the summer, but in winter they come down to the lower pastures that are free from snow.

Toward noon, after leaving La Paz, we reached the little town of Ayopaya, and a short distance beyond we came to a river where the railway bridge had recently been washed out. Here a host of natives were engaged to carry freight and baggage across the river to the train waiting on the other side, while the passengers walked across on a temporarily constructed bridge. It took us more than two hours to make the transit. The train awaiting us had sleeping cars divided into apartments, or sections, each of which accommodated two passengers, there being an upper and a lower berth extending crosswise through the cars.[100]

Continuing the journey we passed through a country which reminded us very much of the deserts of western Utah and Nevada. We arrived in Oruro, a Bolivian city of thirty-one thousand inhabitants, in the evening.[101] Here we ate supper and remained several hours, or until 10:00 p.m., when we continued our journey and traveled all night.

Religious Activities

During the day we made the acquaintance of a Salvation Army[102] captain (a Swede by birth), who had charge of Salvation Army work in Bolivia, with headquarters in La Paz. He told us that about three hundred of his coworkers were laboring for the betterment of fallen mankind in South America and were doing successful reclaiming work in Bolivia, Chile, Argentina, Paraguay, Uruguay, and Brazil.[103] In all of these countries there was perfect religious liberty, and yet his people were in certain localities meeting with some opposition on the part of the Catholic clergy; but he cited several instances where the natives had defended the Salvation Army workers in public meetings and had even gone so far as to tell the priests that they lied. The captain felt somewhat disheartened because of

100. Jenson wrote: "Elder Page and I occupied one of the sections the following night, but found it too small and isolated for day travel, as the berths occupied nearly the entire space." See Jenson diary, March 20, 1923, 312.

101. In his diary, Jenson noted that the city of Oruro was situated near the Desaguadero River at about 12,122 feet high. See Jenson diary, March 20, 1923, 312.

102. The Salvation Army, founded in 1865, is a religious denomination celebrated for its charitable contributions around the world. It is organized by a military structure, with generals, majors, soldiers, and officers. See "Salvation Army" in Cross and Livingstone, *Oxford Dictionary of the Christian Church*, 1458.

103. After building schools for the deaf and blind in the various island nations of the Caribbean in the mid-1880s, the Salvation Army spread to South America, including Argentina (1890), Uruguay (1890), Guyana (1895), Chile (1909), Paraguay (1910), Peru (1910), and then Bolivia (1920). See Merritt, *Historical Dictionary of the Salvation Army*.

the great immorality that existed among the inhabitants of Bolivia and to which he said the Catholic clergy seemed to pay but very little heed.

Wednesday, March 21. Having spent a somewhat restless night on the train, caused partly by the high altitude (we being still about twelve thousand feet above sea level), we found ourselves in the morning traveling through highlands abounding with salt deserts and almost entirely uninhabited. During the night, we had passed Lake Poopó, in which (through the outlet Desaguadero) the waters of Lake Titicaca disappear, as Lake Poopó has no visible outlet.

Across a Desolate Land

About 8:00 a.m. we arrived at Uyuni, a town of five thousand inhabitants situated twelve thousand feet above sea level. Here we changed cars again, shifting from a middle-gauged to a narrow-gauged track,[104] and got better accommodations than those we had on the other train.[105] As we proceeded on our journey, the land became more desolate and forbidding with apparent endless salt marshes and snowcapped mountains in all directions. About 3:00 p.m. we crossed the boundary line between Bolivia and Chile and entered the town of Ollagüe in Chile. In the immediate vicinity of the town, on the boundary line between the two republics, stands the active volcano Ollagüe, rising about two thousand feet above the level of the surrounding pampas. We watched the smoke rising from the top of the crater, or snow-covered summit, with much interest for several hours as we passed by.

Soon after entering Chile, the train commenced to climb the eastern slopes of the coast range of the Andes, and, leaving the Borax Lake on our left, we reached the summit of the pass at Ascaton, where the elevation above sea level is 13,056 feet. At this point snow-covered mountain peaks were near us on either side of the road. Elder Page suffered severely from soroche while crossing the mountain, but strange enough, it did not affect me. He felt greatly relieved after we had descended a few thousand feet on the western slope, and we had a good night's rest on the train.[106]

On the Salt Plains

The great white salt plains of the high plateau of Bolivia, which we crossed this day, lie south of Lakes Titicaca and Poopó. Into them drain streams from a large area of the great interior

104. A narrow-gauged track is a railway narrower than what had been the optimal width of four feet, eight and a half inches. The narrow-gauge track became popular in Europe in the 1860s because of suitability, carrying power, and cost. They eventually spread to the United States in the 1870s and into South America in the 1910s. See Hilton, *American Narrow Gauge Railroads*, 3–20.

105. Jenson further noted, "[We] got better sleepers to ride in, that is the different sections had better accommodations for the passengers, two in each, as the berths, like the Pullman cars in the United States, were made up for the night, thus making them fit also for day travel." See Jenson diary, March 21, 1923, 313.

106. Page wrote that he "was hardly able to move." Earlier in their trip, Page "had to make some inquiries from the mother of a resident of Utah, who was taken down with [soroche], rushed on a train to a lower elevation, but who died on the train." As Jenson notes, Page did not suffer the same fate, the descent down the Andes Mountains to Bolivia having accelerated Page's recovery. Thomas Phillips Page Biographical Sketch, 9, Church History Library.

basin of the central Andes. During the wet season they are partially covered with water and are then all but impassable; they are very much akin to the salt desert in Utah lying west and southwest of the Great Salt Lake.[107] In the dry season these Bolivian salt plains may be crossed by any one of a dozen different trains.

Their white, dazzling surfaces stretch out for scores of miles as a perfectly smooth plain, reflecting the sunlight from thousands of salt crystals. From the plain a certain amount of salt is obtained that is shipped in small cakes to many parts of Bolivia; but its wide expanses are difficult to cross, and the great wastes furnish neither pasture nor wood for man's use.

The people living on the western border of the great salt plains of Bolivia are shut off from easy communication with the rest of the country. If they wish to reach the desert oasis on the west, they must cross the western Andes; if they wish to reach the people on the east, they must cross the salt plains, which are without food for man and beast.

Afraid of White Men

There, until a few years ago, white man had never been seen in some of their villages, and when the first caravan arrived, the people were afraid and ran away to hide. Late in the afternoon when they returned, they hid behind bushes and rocks and watched the strangers until sunset. In the dark they crept toward the tent pitched by the travelers, who had also built a fire, and at last one man ventured to speak. Then the strangers gave him money for the barley their mules had eaten and exchanged some of their biscuits for eggs and firewood, etc. Even to this day there is but little association between these people on the border of the salt desert and the other inhabitants of Bolivia.[108]

Thursday, March 22. While our train descended rapidly to a lower altitude on the west slope of the Andes, I awoke about 2:00 a.m., feeling myself breathing easily, and had occasion also to remove some of the covering of my berth, as I was feeling uncomfortably warm. What a change! The day before, I was shivering with cold with a heavy overcoat on. About 6:00 a.m. we were called by the porter, and an hour later we rolled into the city of Antofagasta. When we beheld the Pacific Ocean once more, I wondered if Balboa when he first saw it[109] was happier than we were as we stood upon its shore after our trying experiences on the pampas and mountains of Peru and Bolivia.

On our journey from Oruro to Antofagasta, I made the acquaintance of the Honorable Sven A. Juel Jorgensen, a native of Copenhagen, Denmark, who acts as Danish consul in Bolivia. It was quite a treat to meet and converse with a

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107. The Bonneville Salt Flats are a one-hundred-square-mile, uninhabited expanse of salt and other minerals, located west of the Great Salt Lake. See *Geographical Dictionary*, 158.

108. Page continued to struggle health-wise in the high altitudes. Jenson wrote: "In crossing this last mountain on our inland journey, Elder Page became quite ill, and it gave him much relief both physically and mentally when we found ourselves being carried down quite rapidly to a lower altitude." See Jenson diary, March 21, 1923, 313.

109. See page 125 of chapter 3 of this volume.

countryman of his standing so far away from old Denmark, and the pleasure seemed to be mutual.

Safely On Board

On our arrival at Antofagasta (a city of seventy-five thousand inhabitants), we hired an auto, which took us to the Grace Company's offices, near the wharf, where we at once arranged for passage to Valparaíso on the steamer *Santa Teresa*[110] (a sister ship of the *Santa Luisa*, on which we had traveled from Balboa to Mollendo), and after changing some of our American money into Chilean money and attending to other business matters at Antofagasta, we were taken by a rowboat out into the open roadstead, about half a mile, to the steamer, and at 11:00 a.m. we were safely on board. An hour later the gallant ship weighed anchor and sailed for Valparaíso, about six hundred miles farther down the Chilean coast. Oh, how we enjoyed the invigorating breezes of the Pacific Ocean once more after what we had experienced in the interior, and how we enjoyed the midday meal on board an American steamer after eating food cooked in Spanish-American style so long. The weather was cool and pleasant, and we were now in the South Temperate Zone,[111] Antofagasta being situated just south of the Tropic of Capricorn.[112] We were indeed fortunate in making such close connection with the *Santa Teresa*. Had we been a few hours later in arriving from the interior, we would have missed the steamer and been compelled to stop two weeks in Antofagasta waiting for the next steamer or take a long railway journey down the desert coast.[113]

110. The SS *Santa Teresa* was an American steamship, built in 1918 for use in World War I. In 1921, the Grace Steamship Line bought the vessel and turned it into a passenger ship to sail regularly between California, Panama, and the Pacific coast of South America, 1921–31. See Smith, *Passenger Ships of the World*, 467–71.

111. The South Temperate Zone is one of the earth's five latitude regions, located between the Tropic of Capricorn and the Antarctic Circle. See *Geographical Dictionary*, 1201.

112. The Tropic of Capricorn is an imaginary parallel line below the equator and is the most southern point at which the sun can shine directly overhead. See *Geographical Dictionary*, 1201.

113. Of the *Santa Teresa*, Jenson wrote, "At 11:00 a.m. we were safely on board the gallant ship which was so crowded with passengers that Brother Page and I had to take berths in the ship's hospital on the upper deck. There, however, we were quite comfortable, having the same accommodations otherwise as the first-class passengers." See Jenson diary, March 22, 1923, 315.