



Chapter 19

Welcome to the Southern Cone

Southern Cone Countries

Chile, Argentina, Paraguay, and Uruguay occupy the Southern Cone of South America. Chile lies on the western side of the towering southern Andes Mountains, which separate Chile from the other countries of the Southern Cone. The eastern slopes of the Andes lie in Argentina, the largest country of the region. North of Argentina is Paraguay and east of it is Uruguay. The Southern Cone of South America has the same major geographical regions from west to east as the Andean Republics do: a coastal plain along the Pacific Ocean, mountains to the east of the plain, and large lowlands to the east of the mountains.

The coastal plain lies entirely in Chile. It is wide in the north but becomes narrow in the south until finally it disappears where the mountains come right down to the sea.

The mountain region of the Southern Cone lies entirely in Chile and Argentina. In fact, Chile's geography is mostly mountainous, made up of the tall Andes Mountains. Much of the border between Chile and Argentina runs high in the peaks of the Andes. The highest peak, Mount Aconcagua (ä kōn kă' gwä), is in Argentina. It is the tallest peak in the Western Hemisphere. In the north,

the Andes are very wide. A high, wide mountain plateau like the Altiplano of Bolivia fills the northwest corner of Argentina. The Andes become narrower to the south.

The third region is the lowland plain east of the Andes. Chile's neighbors in the Southern Cone have mostly flat plains or gently rolling low hills. This lowland may be divided into three regions from north to south: the Gran Chaco in the north, the central Pampas (pam' pəz), and Patagonia at the southern tip of South America. The **Gran Chaco** (grän chä' kō) is a huge lowland of scrubby forests and savannas. Semi-tropical forests border the far north and east of the Chaco, where the Southern Cone countries share borders with Brazil. The Gran Chaco covers most of Paraguay and much of northern Argentina. Several rivers form in the north Chaco and flow south into the Río de la Plata estuary between Argentina and Uruguay.

Terms to Discover



Gran Chaco
Pampas
Patagonia
Atacama Desert
temperate rain forest

South of the Chaco is the **Pampas**, wide level prairies of fertile land. The Pampas lie in central Argentina and continue east into Uruguay. The population of the Southern Cone countries is concentrated in the Pampas region. Nearly seventy percent of all Argentines live there. Much of the southern Pampas is covered with large wheat farms, but other important crops are grown there too: corn, soybeans, barley, rice, and many others. In the north, where the Pampas is drier, the farms give way to sheep and cattle ranches.

Both the Chaco and the Pampas rise in elevation from east to west. At first, the rise is very gradual, so gentle that you would not notice the upward slope as you walked west. As you enter western Argentina, however, the land rises to the foothills of the Andes.

The southernmost region of the cone, and of South America, is **Patagonia**. Patagonia is higher than the Pampas and the terrain is more rugged. It is also much drier. Much of Patagonia may be described as cold desert, characterized by chilling winds and sparse vegetation. Few people live in Patagonia.

CHILE—Where the Land Ends

Chile (chil' ē) has been nicknamed the “Shoestring Republic.” It is one of the longest countries in the world, and it is ten times longer than it is wide. Chile’s geography is unlike the geography of most of the Southern Cone.

Many people believe the name *Chile* comes from an Indian word that means “where the land ends.” At many places along Chile’s coast, the land ends abruptly where the mountains plunge straight into the Pacific Ocean. Others think *Chile* may have come from an Indian word for snow. The country is so narrow that from almost anywhere in Chile you can see the lofty snow-covered mountains that run down the whole length of the country.



Countryside in Patagonia, Chile.

Vocabulary

epicenter: The place on the earth’s surface directly above the point where an earthquake begins.

tsunami: A giant wave caused by an earthquake in the ocean.

Section Activities

19.1 STUDY EXERCISES

1. Although the Southern Cone countries have the same major geographical regions from west to east as the Andean Republics—Pacific coastal plain, the Andes Mountains, and eastern lowlands—these regions do not appear in each country.
 - a. Which country includes all the Pacific coastal plain but no eastern lowlands?
 - b. Which country has mountains and eastern lowlands but no Pacific coastal plains?
 - c. Which countries are made only of eastern lowlands?
2. Briefly describe the three regions of the eastern lowlands of the cone countries.
 - a. The Gran Chaco
 - b. The Pampas
 - c. Patagonia



CLASS DISCUSSION

Some think that *Chile* comes from an Indian name that means “where the land ends.” Why is this a good name for Chile?

Chile—North, Central, and South

Geographers divide Chile into three regions from north to south. These regions differ from each other in climate and in land formations.

Northern Chile. The northern third of the country is mostly a vast desert stretching 1,000 miles (1,600 km) from north to south.

From east to west, this desert begins at the foot of the Andes and ends where the waves of the Pacific Ocean break on the desert sands. Chileans divide this desert region into two areas: the *Norte Grande* (nor' tā grān' de), the “great north,” and the *Norte Chico* (nor' tā chē' kō), the “little north.” In the *Norte Grande* is the **Atacama Desert**, one of the driest deserts in the world.

The Atacama Desert begins in the southern tip of Peru and stretches into Chile. This desert is the world's only source of natural sodium nitrate.



CHILE



CAPITAL Santiago

POPULATION 16,284,741 (2007 est.)

ETHNIC GROUPS White and Mestizo 95%,
Indian 3%, other 2%

LANGUAGES Spanish

CURRENCY Chilean peso (CLP)

MAIN EXPORTS copper, fruit,
fish, paper, chemicals

INTERESTING FACTS

- ✦ Some places in the Atacama Desert have not had any rain in centuries.
- ✦ In Chile's southern forests, some areas get 200 inches (500 cm) of rain in one year.
- ✦ Because of its dryness, U.S. astronauts used the Atacama Desert to train for moon landings.
- ✦ Chile has more than 2,000 volcanoes, including many active ones.
- ✦ Easter Island, 2,200 miles (3,540 km) off the coast of Chile was found on Easter Sunday. Now owned by Chile, it is famous for the large statues called *moai* (mō'ī). The statues, usually 12 to 20 feet (3-6 m) in height, were carved from volcanic rock. The largest statue, which is not finished, would have weighed about 270 tons and been 69 feet (21 m) tall.





Santiago, Chile's first permanent Spanish settlement, became the capital in 1818. In the early part of the twentieth century, it was the cultural center of Latin America.

Rainfall in the Atacama averages less than half an inch (1 cm) a year. Even so, the desert may not receive any rain for several years at a time. Only one river contains enough water to flow from the Andes across the *Norte Grande* into the Pacific Ocean. South of the *Norte Grande*, in the *Norte Chico*, more rain falls and grasses grow at wetter spots.

Central Chile. The second main region is the Central Valley of Chile. This valley begins just north of Chile's capital, Santiago, and continues for 600 miles (950 km) to the south. In many areas of the Central Valley, low mountains rise to the west, along the Pacific coast. The Central Valley must have seemed like home to early Spanish explorers. The climate is warm and dry in the summer. The winters are often damp and chilly, but the temperature is seldom far below freezing. This climate is much like the climate found around the Mediterranean Sea. Geographers

often call this type of climate a Mediterranean climate.

Over three-fourths of Chile's people live in the Central Valley, and Chile's largest cities are located here. One-third of the country's population lives in and around the capital city, Santiago. Other important cities of the valley are Chile's main seaport Valparaíso (val pə rā' sō), and Concepción (kōn sep syōn'), an agricultural center in the south of the Central Valley region.

The Central Valley is Chile's agricultural heartland. Several rivers flow from the Andes through the valley and into the ocean. The melting snows of the Andes are the main source of these short rivers that flow across central Chile. The rivers provide water for irrigation and water-power for hydroelectricity. Dams on these rivers produce over half of Chile's electricity.

Southern Chile. The southern region of Chile is 1,000 miles (1,600 km) long. It begins just south of Concepción and reaches to the tip of South America, where the frigid islands of Tierra del Fuego stretch toward Antarctica. In this cold, rainy region, the mountains come down to the sea, and there are very few lowland areas. Sometimes, southern Chile is called the Archipelago, because the land is broken up into hundreds of islands and fjords.

In the Archipelago is Chile's rain forest. Rain forests are usually located in tropical

regions. However, southern Chile has **temperate rain forests** of pine and other trees that grow very large because of the heavy rains. Many of these trees are valuable for lumber, but with few roads, it is difficult to do much logging. In winter, especially in the far south, heavy snow blankets the land.

Only two percent of Chileans live in the southern region, where the only large Chilean city is Punta Arenas (pun'tä ä re'näs), on the northern side of the Strait of Magellan. Punta Arenas has over 500,000 people, most of whom raise sheep or work in southern Chile's growing oil industry.

Southern Hemisphere Climates

The climates of these three regions of Chile are very similar to the climates on the west coast of North America. If the earth were folded at the equator, Chile would line up with western North America from



A rugged mountain in southern Chile.

northern Mexico all the way to southern Alaska. Northern Chile would match up with Baja California in Mexico. Baja California, like northern Chile, has a desert climate. Coastal California, which would line up with Central Chile, has a Mediterranean climate like Chile's Central Valley. The coastal regions of Oregon, Washington, British Columbia, and southern Alaska have cool, rainy climates, much like that of southern

Large numbers of sheep are raised in southern Chile where the land is not suitable for growing crops.



VOLCANOES, EARTHQUAKES, AND TSUNAMIS

Visitors to Chile are often impressed with the bright blue sky, the towering snow-capped Andes, and the rugged coastline. However, dangers lie beneath Chile's spectacular beauty. Like other countries on the west coast of South America, Chile is located in the Ring of Fire. Many Andean mountains are volcanoes. And frequent earthquakes shake the Chilean landscape.

An earth tremor takes place somewhere in Chile almost every day. People who live in the Central Valley feel tremors at least every couple of months. Occasionally, very destructive earthquakes strike. Six times in the twentieth century, earthquakes damaged Valparaíso, a seaport city on Chile's central coast. Another Chilean city, Concepción, has been completely destroyed by earthquakes four times since its founding in the sixteenth century.

During a single week in May 1960, a series of earthquakes struck throughout Chile, killing thousands of people. In the same year, six dormant volcanoes became active, and three new volcanoes formed. In one place, the earth sank 1,000 feet (304.8 m). The largest of the 1960 earthquakes was the most powerful earthquake recorded in modern time. Its **epicenter** was just off the coast of Chile.

This quake caused a giant wave of water to sweep inland, killing about five thousand people. Such a wave, caused by earthquakes and landslides under the ocean, is called a

tsunami (tsü nä' mē). *Tsunami* comes from two Japanese words meaning "harbor" and "wave." When tsunamis cross the open ocean, the water rises only a few feet. People on ships may not even notice that a tsunami has passed under them. But when the gigantic wave nears land, it can form a deadly wall of water over 100 feet (30 m) high, racing at over 100 miles per hour (160 kph).

The 1960 tsunami hit the coast of Chile near the earthquake's epicenter. About fourteen hours

later, a wave traveling away from Chile reached Hawaii in the middle of the Pacific Ocean and killed sixty-one people. Nine hours after hitting Hawaii, the wave struck Japan, thousands of miles from its starting place. In Japan, the tsunami killed one hundred fifty people.



Chile. Western Washington and British Columbia have temperate rain forests, just as Chile's Archipelago region does.

The seasons in Chile, like the seasons in other Southern Hemisphere countries, are reversed from the seasons in the Northern Hemisphere. Summer comes to Chile in December, January, and February, when the Northern Hemisphere experiences winter. Six months later, in June, July, and August, winter falls over the Southern Hemisphere as summer warms the Northern Hemisphere.

The reversed climate of the Southern

Hemisphere creates a special situation for Chile. During the Southern Hemisphere summer and autumn, when fruit is being harvested, the countries of the Northern Hemisphere are having winter and spring. Little fresh fruit is available in the United States, Canada, and Europe. Taking advantage of northern shortages, Chile ships much of its fruit to Northern Hemisphere countries. Likewise, Chile ships spring fruits like strawberries to the Northern Hemisphere during our autumn. Chile is South America's largest exporter of fruit.

Section Activities

19.2 STUDY EXERCISES

1. Describe the general geography and climate of each of these:
 - a. Northern Chile
 - b. Central Chile
 - c. Southern Chile
2. List two things that Chile's rivers provide.
3. Explain why the reversed climate of the Southern Hemisphere is a benefit to Chile.
4. Name three natural disasters that strike Chile.



CLASS DISCUSSION

Which section of Chile is most like the climate where you live?

Farming in Chile

The Central Valley is the heart of Chile's farming region. Central Chile has rainy winters and dry summers. In some countries, this would make farming difficult, but dry summers are important to central Chile. Farmers plant wheat in the mild, rainy winters. This wheat grows well and is ready to harvest in the early summer. Dry summer

weather makes it easy to get into the fields to harvest the wheat, Chile's most important crop.

Chileans also grow much fruit in the Central Valley. As in other regions with Mediterranean climates, farmers use irrigation in summer months to water such crops as citrus fruits, grapes, apples, pears, and olives.



Chile mines more copper than any other nation in the world.

Before the 1960s, most of Chile's farmland was divided into huge estates or farms called *fundos* (fün' dōs). The *fundos* were owned by only a few families. Farm workers, called *inquilinos* (ēn kē lē' nōs), lived on the *fundos* in small houses, often made of adobe with dirt floors. The *inquilinos* received small plots of land on which to grow food for their families.

In the 1960s, the government began to break up the *fundos* and to give the land to poor farmers. Some *inquilinos* still work on *fundos* today, but many *inquilinos* have moved to the southern part of the country and are trying to farm where the climate is harsher.

Farming in southern Chile is difficult because of the mountainous land, heavy rainfall, and cooler weather. Most farmers in the region are subsistence farmers and sell very little to others. In the far south, sheep raising is the main occupation of farmers. Sheep ranchers sell wool and also use mutton, the meat of sheep, for food. Many farmers raise a breed of sheep that grows a thick coat of wool for protection from the cold. These

sheep produce some of the finest wool in the world.

Chile exports large amounts of fruit and vegetables, mainly from the Central Valley. Chile also exports fish caught along the coast. Although Chile exports these products, it still imports some of its food because only six percent of its land can be farmed. Furthermore, Chileans do not farm all of the six percent that could be used.

Farming is not the only source of income for Chile. The Atacama Desert is an important source of minerals and metals. Chile is the world's leading producer of copper, possessing some of the world's largest deposits of that important metal. In 2001, copper made up forty percent of all Chile's exports. Copper is

Few plants grow in Chile's desert region in the north. However, rich mineral deposits there make it valuable to Chile's economy.



A Chilean legend tells of two prospectors searching for valuable minerals in the Atacama Desert. One night as they camped, they noticed that the earth around their campfire was sputtering and crackling and glowing with a strange blue light. They fled in fear to tell a priest about their eerie vision. The priest investigated and found that the dirt around the campfire contained nitrate of soda, which is used to make gunpowder.

When he had finished examining the dirt, the priest threw it into his garden. Weeks later, he noticed that the plants growing where he had thrown the desert soil were larger and healthier than the other plants in his garden. The nitrate of soda had provided nitrogen for the plants and improved their growth.

used to make wires to carry electricity and to manufacture motors and electromagnets.

The desert soil also contains large amounts of nitrate of soda. During the 1800s, scientists discovered that nitrate of soda was a nitrogen-rich fertilizer. Soon, companies began digging giant open-pit mines in the Atacama Desert. Because so little rain falls in the Atacama, nitrates are not dissolved and washed away by rain. Chilean miners do not need to dig very deep to find the nitrates. Consequently, Atacama soda mines are on the surface of the ground.

During the late 1800s and early 1900s, the nitrate business boomed, and Chile shipped nitrates to many other countries, especially to North America and Europe. However, in the 1920s, scientists discovered how to make nitrogen fertilizer from nitrogen in the air. It

became possible to produce nitrogen fertilizer anywhere in the world for far less than it cost to have it shipped from Chile.

Chile continues to sell some nitrates to other countries because some people prefer to use nitrogen from the soil. Much of this valuable mineral from the desert is used on farms in Chile, so that it still plays an important part in the country's agriculture.



Often small farmers in Chile cannot afford modern equipment.



Eight years of elementary education is mandatory in Chile. After eighth grade, many quit school to help their families earn a living.

The People of Chile

A tribe of Indians whom the Spanish called Araucanians once lived in the region we now call Chile. They called themselves the Mapuche (mä pü' che). Their villages dotted the Central Valley and the Andes. The Mapuche were among the fiercest of South America's native peoples. They resisted attacks by the Inca, who were able to conquer only the northern desert region of Chile.

The Spanish came to Chile in 1540 and immediately encountered the warlike Mapuche. A Spaniard named Pedro de Valdivia (väl də' vē ä) established several settlements in northern Chile. However, the Mapuche attacked them, destroying most of the villages and killing de Valdivia himself. The Indians'

resistance began a hundred-year battle for the heartland of Chile. No other indigenous South American people fought off the Spanish invaders so successfully.

Not until the late 1800s did the armies of Chile and Argentina finally conquer the Mapuche. After that, Europeans, mostly from Spain, settled the fertile Central Valley and forced the Indians into the barren southern part of the country. Today, about ninety-five percent of Chileans are mestizos and only three percent are pure Native Americans.

Over one million Mapuche live in Chile, most of them still in the south.

Chile received smaller numbers of European immigrants than other South American countries received. Most early



Seeking a better way of life, many people from poor, rural areas in Chile have migrated to urban areas.

immigrants were Spanish, but beginning in the late 1800s, Europeans came to Chile from such countries as France and England and especially Germany and Switzerland. The buildings of some southern Chilean towns display German influence.

Indian traits in Chile's mestizos are becoming less and less obvious, but the importance of their European heritage remains strong. Spanish is the major and official language, spoken by almost everyone. About eighty percent of Chileans are Roman Catholics. Chile's music and art preserve the people's Spanish heritage too.



An open-air market in Chile.

Section Activities

19.3 STUDY EXERCISES

1. Why are dry summers important to central Chile?
2. Some farming is done in southern Chile.
 - a. Why is crop farming harder in southern Chile?
 - b. What type of farming is done mostly in southern Chile instead of crop farming?
3. Name two sources of Chile's income that come from the northern desert.
4. Why did it take Europeans longer to settle the heartland of Chile?



CLASS DISCUSSION

From the story of Chile, give one example how science and technology can save money for some people but reduce the incomes of others.



BIBLICAL APPLICATION

Often when the Europeans came, they forced the Indians onto less productive land as they did the Mapuche. Read the story of Lot in Genesis 13 and 19 and 2 Peter 2:6-8. What often happens to people who selfishly choose what they think is best for themselves?