Civilizations of Africa

The Ancient World

THE ANCIENT WORLD

CIVILIZATIONS OF AFRICA

Volume 1

Set Contents

The Ancient World

Vol. 1 *Civilizations of Africa*

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The Ancient World

Civilizations of Africa

Volume 1

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Preface

Studying the world's history is like being an explorer who travels across centuries to unfamiliar lands. The traveler encounters ancient cultures and civilizations and, above all, has countless opportunities to examine both what was thought to be familiar and what was completely unknown.

The history of the ancient world, much like that of the modern era, is a series of interactions played out by familiar and unfamiliar characters upon a stage of equally diverse geography. Knowing how these interactions occurred and evolved, and how, at times, they were obstructed, is crucial to both the study of the past and an understanding of the present, in terms of both progress and conflict. The five volumes of *The Ancient World: Civilizations of Africa, Europe, the Americas, the Near East and Southwest Asia,* and *Asia and the Pacific* help readers step back in time, making familiar what was unknown.

The way we interact with others today—learning a world language and exploring another culture, for example—is not very different from how people in the ancient world interacted with each other. Geographical characteristics, however, played a much more dramatic role in governing the interactions among ancient peoples than they do in interactions among modern ones.

Humans have been on the move from the beginning. Paths they have taken and other peoples they have encountered have always been functions of the geographical opportunities or hindrances they have faced. From Africa, the first place where humans lived, populations began to migrate north into Europe and throughout Asia as the glaciers of the last Ice Age receded. In the South Pacific, people seeking fertile hunting and fishing grounds sailed from one island to another centuries before open sea travel was thought possible in the West. As a result of the Ice Age, a land bridge, known as Beringia, connected Eastern Siberia, Asia, and North America, a connection that the Bering Sea now covers. Beginning around 13,000 B.C.E. or even earlier, humans called Paleo-Indians, in search of food, crossed from Asia into what is now Alaska and from there moved farther south.

While populations spread across the globe at an early time, their growth was limited by a reliance on hunting and foraging for subsistence. In order for large civilizations to develop, humans had to learn how to manipulate their environment; the cultivation of crops became a necessity for survival. The earliest evidence of crop cultivation appeared in Jericho (an oasis in the Jordan Valley) around 8,000 years ago. From there, agriculture spread in all directions, giving rise to the greatest of the early civilizations, those of Egypt and Mesopotamia. These kingdoms rose along what is known as the Fertile Crescent, a region of rivers, oases, and arable coastland that stretches in a curve north from the Persian Gulf, across the northern reaches of modern-day Iraq, and south along the Levantine coast into the Nile Delta region of northern Egypt.

Although different civilizations have been, and continue to be, separated by distance and by variation in climate and topography, not to mention differences in languages, traditions, and belief systems, some elements of one culture's intellectual history closely resemble those elements in other cultures. The creation and flood narratives of the Old Testament, for example, exist alongside similar tales in the ancient cultures of the Middle East, the Mediterranean region, and Africa. Ancient stories about the creation of the world, genealogy, agricultural practices, and morality have been found to bear striking similarities all over the globe among groups of people who had little, if any, possibility of interacting.

With countless movements and human interactions obscured by time, distance, and varying perspectives, surveying the terrain of the ancient world may seem intimidating. As your guide, the volumes of this series provide a road map of the past. *The Ancient World* allows you to travel back in time to examine the origins of human history, how the environment shaped historical development, and how civilizations developed.

Articles are arranged alphabetically, and sidebar features expand the coverage: "Turning Points" discuss topics such as inventions that have propelled civilization forward; "Great Lives" reveal individuals whose extraordinary deeds shaped a people's history and culture; "Links in Time" connect the past to the present or one period to another; "Links to Place" draw some startling parallels in far-flung places; and "Ancient Weapons" reveal amazing early technology. May this journey offer you not only facts and data but also a deeper appreciation of the past and an understanding of its powerful connection to the present.

Sarolta A. Takács

The Cradle of Humanity

Welcome to *The Ancient World: Civilizations of Africa*. As you explore the pages of this volume, you will encounter the wonders and mysteries of an ancient land. Africa has been called the "cradle of humanity" by **archeologists** and historians because it is believed to be the place where, about 300,000 years ago, human beings first evolved from humanlike creatures, known as hominids. Africa was a very different place 300,000 years ago. Where there are now deserts, there were once vast grasslands, or savannahs, on which scientists believe the first humans emerged. So few trees grew on these ancient savannahs that some archeologists believe hominids actually began to walk upright so that their backs would not be exposed directly to the sun. When using *The Ancient World: Civilizations of Africa*, readers might keep in mind this vivid, prehistoric picture.

PREHISTORY

One hundred and fifty thousand years ago, Africa was the only place on earth occupied by modern humans. Until the 1950s, most archeologists believed that humans first evolved from their hominid ancestors somewhere in Asia. The husband and wife team of Louis and Mary Leakey, famous archeologists, believed otherwise, however, and worked tirelessly in the hot sun for decades in the Great Rift Valley in Tanzania to prove that they were right. Eventually, discoveries by the Leakeys, Donald Johanson, and others led to the theory that humanity originated in Africa and from there migrated around the world. These fascinating stories are told in the article on "Archeological Discoveries" in this volume.

In 1984, German anthropologist Günter Bräuer published his "Afro-European sapiens hypothesis," in which he concluded that humans evolved in East Africa; he then developed a model of how and where these first people migrated. Bräuer's thesis was supported by the research of geneticists who analyzed the **mitochondrial DNA** of people around the world and concluded that there were more mutations among Africans than any other group. From this, the researchers were able to confirm an African origin, or birth, for humanity. **Linguists**, meanwhile, have found that patterns of language diversification closely match patterns of genetic diversification, adding yet another layer of proof to the theory. There seems to be little room for doubt that the first mother of the human race was African.

THE LAND AND ITS PEOPLE

History is also geography. That is, what occurs over time in a particular place is deeply influenced by location—how high the mountains are, where sources of water can be found, where the trees grow. As you read through this volume, in entries on topics such as the "Nile River," the "Salt Trade," and "Olduvai Gorge," you will see clearly how the landscape of Africa helped shape its history and its people.

Africa is the second-largest continent in the world; at 11,699,000 square miles (30,300,270 sq km) in area it is smaller only than Asia. It is a land of tremendous contrasts. Its largest country, Sudan, covers 967,490 square miles (2,505,790 sq km); its smallest nation, the Seychelles, is a mere 4,363 square miles (11,300 sq km) in area. To put those numbers in perspective, America's largest state, Alaska, is 656,425 square miles (1,700,133 sq km)—and the Seychelles is about the size of Connecticut.

The geographic features of Africa are equally various and full of contrast and contradiction. Twenty-five percent of the continent is desert, including the Sahara, the largest non-arctic desert in the world; the Kalahari; and the Namib, one of the hottest and driest places on earth. At the edges of the desert is the African *sahel*, an Arabic word that means "border" or "edge." The sahel is primarily semi-arid grassland where rain is intermittent. Unfortunately, the deserts are rapidly overtaking the sahel, at the rate of about 100 miles (161 km) each year.

Stretching like a belt across the middle of the continent is the second largest tropical rainforest in the world, smaller only than the Amazon rainforest. Africa is also home to savannahs that extend along both coasts of the continent, south of the rainforests. The savannahs are home to much of the wildlife commonly associated with Africa: elephants, giraffes, lions, hyenas, zebras, hippos, cheetahs, and ostriches.

The geographic divisions of the continent and the extremes of land formation and climate have had significant effects on African history. The history of Africa as a whole, and of individual sections of the continent, is inextricably linked to the geography. Egypt and its history, for instance, are very different from the regions and history of Mauretania, Mali, and Libya. Nubia was close enough to Egypt to be conquered and to conquer Egypt in turn, but since it was very different geographically, Nubia had a very different history. Likewise, areas with port cities, convenient for foreign travel and trade, developed in ways that were different from more isolated, or out-of-the-way, places.

The major civilizations that arose in Africa tended to be located along the coasts, north of the tropical rainforests and to the east and west of the deserts. You can read about some of these coastal empires in this volume, in the articles on "Egypt," "Kush," "Nubia," "Axum," "Kongo," "Mali," "Ghana," and "Monomutapa." The center of the continent was only sparsely settled, and the ethnic groups that lived there had little contact with the outside world, leading ultimately to great differences and diversity in the continent's population as a whole.

EARLY PEOPLES AND CIVILIZATIONS

Also influenced by its surroundings, one of the world's earliest complex civilizations arose in Africa—that of Egypt, which endured from 3100 B.C.E. to C.E. 395. The valley of the great Nile River, the longest in the world and one of the few rivers to flow from south to north, provided the ideal setting for the growth of this amazing culture.

The ability to grow surplus food in the rich black soil of the Nile Valley required administrators to store and distribute seed and food, leading eventually to a complex **bureaucracy** and a stratified society led by pharaohs, kings who claimed to be the descendents of gods and who ordered the construction of huge pyramidal tombs as monuments to themselves. In the Great Pyramid at Giza alone, more than two million blocks of stone were used in building. You can read about some of the most famous Egyptian pharaohs in this volume, including Tutankhamen, Cheops, Akhenaten, Hatshepsut, and Cleopatra. The need to keep track of stored food and the complex system of canals and dykes that allowed Egypt to harness the annual flooding of the Nile also led to the development of the crucial skill of writing.

Egypt, however, was not the only great civilization to arise in Africa. South of Egypt was Nubia. Deeply influenced by its Egyptian neighbors, this great African civilization developed its own religion, government, and art, and, at one time, ruled over Egypt itself. Other, later kingdoms—each of which is discussed in an entry in this volume—arose in Ghana, Mali, Monomutapa, Kongo, Axum, and Great Zimbabwe.

The northern coast of the African continent was settled by the ancient Mediterranean powers of Phoenicia, Greece, and Rome, which at times vied with one another for control of the region. Carthage, initially founded by Phoenicians in about 800 B.C.E., battled both Greeks and Romans for control of various Mediterranean seaports. After hundreds of years and three wars, called the Punic Wars after the Roman word for Phoenicia, Rome destroyed Carthage in 146 B.C.E. and built a great Roman city—also called Carthage—in its place. Rome also took over the Phoenician city of Leptis Magna, and it too became a major city of the Roman Empire.

The Greeks founded several cities in Africa, including Cyrene, in what is now Libya, a city that was established in about 630 B.C.E. About 300 years later, Alexander III, the Great, conquered Egypt and founded the city of Alexandria, which was eventually conquered by Rome in 31 B.C.E. The dominant power in the struggle for control of northern Africa in ancient times was Rome, which dominated the region until the sixth century C.E., when much of North Africa was overtaken by Arab invaders. If you want to learn more about Greek, Roman, and Phoenician influences on Africa, read the articles in this volume on "Greek Colonies," "Carthage," "Libya," and "Alexandria."

EXCHANGE AND ENCOUNTER

Africa was also shaped profoundly by influences from Asia and the Middle East. From the time of the

Egyptian pharaohs, the Indian Ocean acted as a highway for commerce between Africa and the lands surrounding the Persian Gulf. By the first millennium C.E., this ocean route had become one of the main routes by which Muslim, Chinese, and Indonesian influences reached Africa.

Arab Conquest

It was during the lifetime of the prophet Muhammad that the first Muslims came to Africa. It is said that a small group escaping persecution in Mecca fled to Ethiopia in about C.E. 615. There they were granted protection and allowed to live undisturbed. Seven years after Muhammad's death in C.E. 632, the Muslim Arab general Amr ibn al-A'as invaded Egypt and began the military expansion of the Umayyad family, who came to rule the Mediterranean and Middle East from the Iberian Peninsula to Pakistan. As Islam spread west from Alexandria in Egypt, many Christians took refuge in parts of Ethiopia and Nubia.

In general, Muslim invaders and traders did not force the native populations to convert to Islam. The religion was tolerant of traditional African values and of polygamy, which made Islam a more appealing choice for most Africans than Christianity. Islam had a particularly powerful influence on northern Africa, as it imposed a more consistent social order and developed strong governments that weakened ethnic loyalties. From North Africa, beginning in about C.E. 700, Islam expanded into the Iberian Peninsula and what is now Portugal and Spain. Muslim traders also expanded south into sub-Saharan Africa, in search of gold and other trade routes.

The rulers of the Ghana Empire (C.E. 600–1200) and Malian Empire (C.E. 800–1500) were converts to Islam. Malian kings Mansa Musa and his brother Mansa Suleyman oversaw the construction of many mosques in Africa, built in a uniquely African style. The great city of Timbuktu became a center of Muslim learning. Trans-Saharan routes followed by salt and gold traders also helped the spread of Islam through portions of West Africa. You can read more about the influence of Islam in Africa in articles about "Ghana," "Mali," "Timbuktu," "Songhai," and the "Salt Trade."

Readers should remember, too, that throughout most of the Middle Ages, Islamic nations were considerably more modern than their Christian counterparts. At that time, Muslims were tolerant of other religions and were quite advanced in all forms of learning, especially mathematics and astronomy. Unquestionably, northern Africa benefited in many ways by years of Islamic rule.

Today there are an estimated 426 million Muslims in Africa, comprising approximately 48 percent of the population of 877 million. The religion continues to gain adherents and to exert a major influence on daily life on the continent.

Indian Basin Trade

Artifacts, including Ming Dynasty pottery from China and glass from Persia, were discovered at Great Zimbabwe, an ancient city in what is now the nation of Zimbabwe. These discoveries make it clear that there was an extensive trading network from China and Persia into Africa more than a thousand years ago, well before the arrival of Europeans. Double-ironed gongs made in the ancient Katanga province of the modern Democratic **Republic** of the Congo have also been found in Great Zimbabwe, indicating that this city was the nexus of trade extending from the interior of the continent across the Indian Ocean to the Middle East and East Asia.

Because the Indian Ocean is calmer than the Atlantic and Pacific, it was relatively easy for traders and even settlers to cross from Asia to Africa. The strong winds of monsoons allowed ships to sail west early in the season, wait until the winds changed, then return to the east. These climatological factors allowed people from Indonesia to settle in Madagascar off the east coast of Africa and contributed to the growth and development of East African nations.

In the early fifteenth century C.E., Chinese explorers sailed along the east coast of Africa and could even draw an accurate map of the west coast, suggesting that they might have circumnavigated the continent well before the Portuguese explorer Vasco Da Gama. In 1415, the emperor of China was

presented with a giraffe from Africa. A silk painting memorializes the occasion.

Because they left no written records, no one knows what happened to Great Zimbabwe or why this great trading center was deserted and allowed to fall into ruin.

EUROPEAN INTEREST

In 1472, Portuguese sailors arrived on the Gold Coast of Africa in modern Ghana, where they built El Mina ("the mine"), a city that contained the first buildings in Africa constructed with materials imported from Europe. Thus, Portugal became the first European nation to establish itself on the African continent.

For 200 years, from 1440 to 1640, the Portuguese had a monopoly on the slave trade. In that period, Portugal transported more than 4.5 million Africans, less than one-third of the approximately 15 million Africans who were eventually taken before slavery was abolished. Because the Portuguese had a major presence on the west coast of Africa, most of the slaves that were transported to the Americas came from that part of the continent.

The geography of the slave trade can be roughly depicted by a triangle connecting Europe to the west coast of Africa and Africa to the east coast of the Americas. From Europe came the goods to be traded for slaves; then slaves were transported to the Americas, where raw materials were loaded on the empty ships and brought back to Europe. In the eighteenth century C.E., the British also traded goods for slaves, transporting more than 2.5 million people across the Atlantic. You can read about the early years of the slave trade in an article in this volume entitled "Slavery."

The impact of the slave trade on Africa was devastating. The violence perpetrated by African traders on other Africans begat a legacy of violence that can still be seen today. The decimation of the population, too, has had a lingering impact, destroying some cultures and destabilizing others. An economic system based on slavery replaced the older traditional systems, making it more profitable to sell one's neighbor than trade with him.

AFRICA IN TRANSITION

The devastation of the slave trade was a prelude to the **subjugation** of modern Africa to European colonial rule. Throughout the nineteenth century, a host of European nations—England, France, Germany, Spain, Portugal, and Belgium—raced to establish control over Africa. Colonial powers removed wealth from Africa but did not reinvest in the continent. Profits were exported, leaving few funds for the construction of roads or for education or healthcare. Industrialization improved life for many in the Americas and Europe, but Africa was left behind.

Colonialism also left a legacy of ethnic strife in much of Africa, which persists to the present day. In establishing their African colonies, European powers drew boundaries that ignored ethnic loyalties and rivalries, and that cut across related language groups and already existing political organizations. As a result, the independent nations that eventually arose from these colonies have been plagued by internal divisions between historically hostile ethnic and linguistic groups forced to share a common state.

European imperialism not only left Africa without the infrastructure that might have allowed the continent to develop economically but also left a legacy of political violence. The colonial powers that allowed some form of self-rule tended to elevate "strong men" to positions of power they would never have attained without the backing of their European friends. The history of modern Africa is marred by the military rule of such men.

CONNECTIONS TO TODAY

Badly wounded by slavery and colonialism, Africa has also been slowed in its technological and economic progress by its very geography. Jared Diamond, in his Pulitzer Prize–winning work *Guns, Germs, and Steel* (1997), discusses why certain parts of the world developed technologically and economically while others lagged behind. Rejecting outright the idea that poorer nations are held back because their people are in some way inferior, he presents a variety of alternative explanations, many pertaining to the geography and the distribution of animal and plant life.

One geographic factor that resulted in a disadvantage on the African continent, according to Diamond, is the fact that it is oriented north-south rather than east-west, like Eurasia. It is this fact, says Diamond, that allowed Europeans to "engulf" Africa. He maintains that Europe's technological superiority arose ultimately from its ability to produce a surplus of food and adds that

> food production was delayed in sub-Saharan Africa (compared with Eurasia) by Africa's paucity of domesticatable native animal and plant species, its much smaller area suitable for indigenous food production, and its north-south axis, which retarded the spread of food production and inventions.

While other continents had cows and goats, which were easily domesticated, Africa had buffalo, zebra, rhinoceroses, and hippos. In addition, Africa had less biodiversity in plant life than Eurasia, making it much harder to feed large populations.

Perhaps the most important factor in inhibiting food production was Africa's north-south orientation. In Europe, a newly domesticated plant could easily be moved east or west and find a similar climate in which to thrive. In Africa, a newly domesticated plant had to succeed in many very different climate zones. Few could do so. According to Diamond,

> As one moves along a north-south axis, one traverses zones differing greatly in climate, habitat, rainfall, day length, and diseases of crops and livestock. Hence crops and animals domesticated in one part of Africa had great difficulty in moving to other parts.

Technology, says Diamond, was also impeded by the vast differences in geography, making it difficult for the spread of new ideas.

Thus, Africa today is clearly a product of both its history and its geography. It is a land of great natural beauty and wealth, and a place that provides a superior view of the human ability to adapt to nature's diverse environments. It is a land whose traditional cultures, while threatened, have much to teach the world about the importance of kinship and cooperation. At the same time, Africa faces enormous economic and political challenges, many of which are related to its past—especially its slave trade and colonialism—and many of which are connected to its geography.

Today Africa is home to more than 800 million people who live in 54 different countries and speak more than 800 different languages. Although there are only 54 nations, Africans are divided into literally thousands of ethnic groups, which helps explain some of the political unrest and warfare that has plagued the continent in modern times. National borders were drawn by colonial powers for their own purposes, often disregarding ethnic loyalties. Today, people who are labeled as countrymen may cherish centuries-old hatreds of one another, leading at times to bloody battles for power.

Ironically, Africa is a continent rich in natural resources, with vast stores of diamonds, gold, chromium, coal, and oil. Yet 21 of the 30 poorest countries in the world are located in Africa. While there is great wealth to be had and many have profited from Africa's natural resources, the vast majority of the population is impoverished, due primarily to the tremendous political unrest and the failure of democracy to flourish on the continent. Despite its long and rich history, Africa today is a continent in crisis. With the help of this encyclopedia, it is the hope of the writers and editors that readers will come to understand the history of this vast land and its people.

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Karen H. Meyers, Ph.D.

Map of Ancient Africa

ANCIENT AFRICA, CA. 2000 B.C.E.

So much of the history of Africa is related to its geography. It is a huge continent, large enough to hold the United States, China, and India, with room to spare. Moreover, because of its pronounced north-south orientation, the vast difference in temperature, rainfall, and soil from north to south prevented the easy dissemination of domesticated plants and animals, which in turn prevented the development of large, sophisticated civilizations south of the Sahara. Africa is the most tropical of all the continents, with fully half its total area below the equator, another factor that limited the development of complex societies in the southern portion of the continent. It is also the most arid of all the continents, which helps to explain why so many of its great civilizations grew up along its major rivers: Egypt and Kush along the Nile; Nok, Songhai, Ghana, Benin, and Mali along the Gambia; and Great Zimbabwe between the Zambia and Limpopo.

A

Agriculture

The peoples of ancient Africa developed techniques to domesticate animals and cultivate plants for food. Until the advent of agriculture, in about 6000 B.C.E., these ancient peoples lived in small hunter-gatherer societies that subsisted by killing game and collecting wild foods such as berries, fruit, or grains. Domestication of plants and animals gave humans much greater control over their food supply, which led to the growth of larger societies and the development of complex urban civilizations.

BEGINNINGS OF AGRICULTURE IN AFRICA

Evidence found at Nabta Playa, west of the Nile River in what is now the Sahara Desert, indicates that humans were cultivating sorghum, a tropical cereal grass, some 8,000 years ago. At that time, the Sahara was grassland. However, about 7,000 years ago, the region began to dry out and the people who lived there were forced to leave, scattering in all directions. Those who went east settled by the Nile River and continued to develop an agricultural economy.

Between 6000 and 1000 B.C.E., several other areas in Africa began to rely on agriculture, rather than hunting and gathering. These areas included parts of North Africa, the grasslands of West Africa, and the Ethiopian highlands.

Egyptian Agriculture

Because of extensive written records and tomb paintings, scholars know a great deal more about Egyptian and Nubian agricultural practices than they do about those of other ancient African cultures. Funerary paintings show farmers tilling the land, girls threshing wheat, and young men picking grapes—one can actually see some of the tools and methods used. Although irrigation became vital to the development of intensive farming along the Nile River, it was not until around 3500 B.C.E. that a system of canals, dikes, and sluices was constructed to store and disperse water. Before that time, people depended entirely on the annual flooding of the Nile, which left a rich, black deposit of silt along the shores of the river.

The Nile valley was under water from July through December, a season the Egyptians called *Aketo*. From December to March, a season called *Peleto*, the land drained and, when it was firm enough to walk on, farmers plowed the fields, sometimes with the aid of oxen. Plowing in Egypt was relatively simple work, since the flooding deposited the good soil on top; the only thing left to do was break it up. Farmers would then scatter seed by hand, after which goats and donkeys were brought in to walk the fields to tamp down the seeds so birds could not eat them.

Here a man uses a device called a *shadouf* to take water from the Nile River to irrigate his fields. This is the same tool that was used by the ancient Egyptians to perform this task. (Erich Lessing/Art Resource, NY)

The period from March to July, *Syumuu*, was harvest time. The grain was cut down with sickles and removed from the fields to the threshing area on the backs of donkeys. Threshing is the process by which the grain is separated from the chaff, or seedpod, and other inedible parts of the plant. This was done by placing the grain on the ground in a dry area and having donkeys or cows trample on it, separating out the grain. Then women used wooden pitchforks to toss the grain in the air, further separating the light chaff, which was blown away, from the heavier grain, which fell to the ground. Then the grain was stored.

Agriculture Outside Egypt

The Nile is not the only African river whose annual flooding provided rich soil for agriculture. The Niger River basin in West Africa also experiences a yearly inundation that makes it ideally suited for agriculture. West African rice, *oryza glaberrima*, flourishes on the banks of the river, as do millet and sorghum. When the river recedes after flooding, there is also ample grass for herds to graze.

The grasslands of Africa were uniquely suited to herding animals, and there is evidence that domesticated livestock were present in the Sahara region 9,000 years ago. With the domestication of animals and the invention of pottery to carry food and hold milk, mothers could feed babies cereal and cow's milk, shortening the time of nursing. Since nursing mothers tend not to conceive, nursing for shorter periods of time eventually led to increased populations, which in turn led to agricultural production. The more people there were, the more food was needed.

In the north, the earliest animals and plants to be domesticated were goats, sheep, cattle, wheat, barley, olives and dates, many of which came to Africa from Southwest Asia. In the grasslands to the west, millet, black-eyed peas, and okra were among the early crops. In Ethiopia, people grew a banana-like fruit—which may have come from Indonesia—millet, and coffee, as well as grains called *tef* and *enset*. In the area that is now Nigeria, yams, kola nuts, and palm nuts were cultivated. It is believed that cotton, sorghum, watermelon, kola nuts, and coffee all originally were domesticated in Africa.

GEOGRAPHICAL REGIONS AND WEATHER

Africa is a vast continent with many different regions and climates, which are suited for a variety of crops and different methods of agriculture. In general, the land and climate have been relatively stable for the past 2,000 years.

TURNING POINT

Irrigation

Although almost no rain falls in Egypt, the area surrounding the Nile River has been the source of agricultural plenty for thousands of years. This is because ancient Egyptians learned the basic principles of irrigation: how to control the annual flooding of the valley, how to direct water from its natural course to adjacent farmland, and how to trap and store floodwater for use during the dry season.

Early Egyptian farmers exploited a natural system of canals that extended from the Nile. They dredged the canals each year to keep them from clogging and built up levees to prevent overflow. As early as 5000 B.C.E., however, Egyptians began to build wider canals that extended at right angles from the river to draw water into adjacent fields. The result was the world's first irrigation system. Among the earliest official government positions mentioned in Egyptian documents is that of canal digger.

By the second millennium B.C.E., Egyptian engineers were building reservoirs in which water could be stored for use in the dry season. The first reservoir in the world, likely constructed during the Twelfth Dynasty (1991–1782 B.C.E.), was located at Al Fayyum, about 15 miles (24 km) west of the Nile in the desert. During flood season, this low-lying desert region would become a lake. Then, as irrigation was needed for farming, dikes were opened to allow water to flow into the fields.

In the sixteenth century B.C.E., Egyptian farmers invented a device called a *shaduf*, which allowed them to water fields at higher elevations, out of reach of both the natural flood levels and the canals. The shaduf functions on the same principle as a lever. It consists of a vertical pole and a horizontal pole attached to it that can move up and down. The short end of the horizontal pole, or boom, remains positioned over land; at the bottom is a heavy counterweight. The longer end, to which a bucket is attached, extends out over the river or other body of water. To operate the shaduf, the farmer uses a rope to lower the bucket into the water. Then, when the bucket is full, the farmer lets go of the rope and allows the counterweight to lift the bucket. With the ability to bring water to higher elevations—referred to as the science of **hydraulics**—the Egyptians were able to raise crops during winter and summer alike, substantially increasing their output and surplus grain. The latter, in turn, could be traded for other goods.

Around 325 B.C.E., the Egyptians developed the waterwheel, which substantially increased the amount of water that could be moved to higher elevations. A large wooden wheel with pottery jars fastened around its circumference could lift as much as 75,000 gallons (275,000 liters) of water in 12 hours.

The Sahara in the north and the Kalahari in the south are deserts in which few plants can grow. The coastal region of North Africa along the Mediterranean, called the Tell, has warm summers and rainy winters, with a climate and crops similar to those in countries such as Greece and Italy. This fertile land is bordered by mountains and arid plateaus to the south.

A region of grassy plains, or savannahs, called the *sahel*, borders the Sahara to the south and extends across the entire continent from east to west. *Sahel* is an Arabic word that means "coast"; it refers to the fact that the region forms a "coastline" between the desert and the dense tropical rainforests to the south.

Several aspects of African geography and climate are not conducive to large-scale agriculture. For example, crops tend to do better with a steady supply of water, but many parts of Africa experience a rainy season followed by a dry season. More than half of the African continent is too dry for successful cultivation; indeed, Africa includes about one-third of all

of the arid land in the world. Other parts of the continent are too wet and disease-ridden to allow for permanent settlement and the cultivation of crops. Africa's tropical regions are too densely forested for agriculture and are home to pests such as the tsetse fly, which carries a deadly disease called trypanosomiasis, or sleeping sickness; blackflies, whose bites cause a disease known as river blindness (onchocerciasis); and mosquitoes carrying malaria. In semitropical climates, however, yams, bananas, and plantains have been successfully cultivated.

TOOLS AND IMPLEMENTS

Ancient African farmers used a variety of tools to help plant and harvest their crops. Egyptian farmers had wooden hoes, which were made of two pieces of wood connected by a length of rope and which required the user to work bending down, a back-breaking effort. Early sickles were curved wooden implements fitted with flint blades, used to cut down stalks of wheat and other plants. Later sickles were made of copper, then bronze. Stone axes were used to fell trees, and wooden shovels were used to separate wheat from chaff.

One of the most important Egyptian farming tools was the calendar, which allowed Egyptian farmers to predict when the floods would come and when it was safe to plant seeds. The Egyptian calendar had 360 days, and three seasons made up of four months, each season corresponding to a phase of the Nile's inundation.

A STABLE SOCIETY

Agriculture had a profound impact on Egyptian civilization, as it has had on every civilization that cultivated crops. Farming provided a more abundant food supply than did hunting and gathering, which enabled the growth of population and the rise of cities. Because farmers were able to grow more than they needed to survive, some people could be freed from working the land to do other tasks—the beginning of professions such as carpentry and metalworking. Perhaps more importantly, the surplus of food allowed some individuals to engage in artistic pursuits such as painting, sculpture, and the crafting of jewelry and other forms of decoration.

In Egypt, many religious beliefs were tied to the annual inundation of the Nile, and priests were needed to intercede with the gods on behalf of the people to pray for the right amount of rain at the right time. A **monarchy** and government **bureaucracy** arose to keep records, manage surpluses, plan irrigation strategies, and allot seed to individual farmers. Writing was invented in order to keep records; early Egyptian **hieroglyphs** dating to over 5,000 years ago record deliveries of linen and oil. Agricultural surpluses could be traded for other commodities, spurring people to travel and explore farther and farther from home. In fact, much of what we associate with the very idea of civilization came about as a result of an agricultural economy.

See also: Egypt; Language and Writing; Nile River; Religion; Society; Technology and Inventions; Tools and Weapons.

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Akhenaten (also Akhenaton) (r. ca. 1353–1335 B.C.E.)

Egyptian pharaoh who established a **monotheistic** religion. Akhenaten, originally known as Amenhotep IV (R. CA. 1353–1335 B.C.E.), was the son of Amenhotep III and his wife Tiy. Upon his accession to the Egyptian throne, Amenhotep IV began the process of abolishing the **polytheistic** religion of his ancestors and substituting worship of one god—Aten, the sun disc—in its place.

In 1348 B.C.E., the fifth year of his reign, the pharaoh changed his name to Akhenaten, which means "servant of Aten." The following year, he moved his court from the capital of Thebes to a new city, Akhetaten, or the "Horizon of the Aten." The site is now known as Amarna.

In establishing the sun itself as the only and supreme deity, and himself as the only priest, Akhenaten substantially changed the practice of religion in Egypt from a polytheistic one to a monotheistic one. The central statement of the new religion, a poem entitled *Great Hymn to the Aten*, is thought to have been written by Akhenaten himself. In the early years of his reign, Akhenaten allowed what might be called freedom of religion, but he eventually began to forbid the worship of other deities and to channel all revenues from their temples to the worship of the one god, Aten.

During Akhenaten's reign, an entirely new style of art, now known as Amarna art, evolved. Previously, Egyptian art had been rigid and stylized. Now, a more naturalistic art form evolved as a result of the worship of a god who was identified with the sun, the giver of life and light. Among the most famous examples of Amarna art is the bust of Akhenaten's beautiful wife, Nefertiti.

One of the most interesting **artifacts** of the period is a statue of Akhenaten himself that portrays the pharaoh in a most unflattering light. Whereas previous monarchs were depicted as handsome and athletic, Akhenaten is shown as having an exaggeratedly long face, thick lips, almost feminine breasts, a pot belly, broad hips, large thighs, and very thin legs. Scholars have wondered if the portrayal is a result of the king's demand that he be depicted as he really looked, or if there were other motives for the almost surreal appearance of the king. University of Vermont Egyptologist Bob Brier, in his book *The Murder of Tutankhamen* (1999), speculates that Akhenaten might have had Marfan's syndrome, a genetic mutation that leads to nearly all of the odd characteristics portrayed in the sculpture. Interestingly, people with Marfan's syndrome are very sensitive to the cold, which may explain Akhenaten's love of the sun.

Upon his death, Akhenaten was succeeded briefly by Smenkhkare, who may have been Akhenaten's half brother or son, and then by Akhenaten's son-in-law, the eight-year-old Tutankhamen. As pharaoh, Tutankhamen completely repudiated Akhenaten's religion—which quickly fell out of favor with the populace—returned to the capital city of Thebes, and ordered the dismantling of all temples Akhenaten had built to honor Aten. Akhenaten was removed from his tomb and reburied elsewhere; his grave has not been found. Later, under the pharaoh Horemheb (r. 1321–1292 B.C.E.), the names of Akhenaten, Smenkhkare, and Tutankhamen were excised from the list of pharaohs, and it was not until the nineteenth century C.E. that **archeologists** uncovered evidence of the existence of these three men.

See also: Art and Architecture; Egypt; Religion.

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Aksum *See* Axum.

Alexander III, the Great *See* Alexandria.

Alexandria

Egyptian port city and ancient capital of Egypt, founded in 332 B.C.E. and named for the Macedonian conqueror Alexander III, the Great (r. 336–323 B.C.E.). Alexandria was one of the greatest cities in the ancient world, second only to Rome.

After conquering Egypt, Alexander founded a new capital city on a stretch of land between the Mediterranean Sea and Lake Mareotis at the site of Rhakotis, a fishing port. The Greek architect Dinocrates designed the new city, after Alexander himself had marked the outline. Alexander left Alexandria, never to return in his lifetime. He was buried there after his death in Babylon in 323 B.C.E.

After Alexander's death, his empire was divided among several rulers. One of Alexander's most trusted generals, Ptolemy I Soter, took control over Egypt upon Alexander's death and ruled as a satrap (a governor subordinate to the king of Persia). In 304 B.C.E., he declared himself king of Egypt, reigning until his death in 283 B.C.E. He founded the Ptolemaic dynasty of Egypt, the last member of which was the famous queen Cleopatra (r. 51–30 B.C.E.).

Ptolemy I envisioned Alexandria as the intellectual and cultural capital of the ancient world. Persuaded by the orator and philosopher Demetrius of Phaleron, he established a museum and the great library of Alexandria, which is reputed to have held between 400,000 and 700,000 parchment scrolls. The actual fate of the library is unknown, but it is thought that Julius Caesar burned it to the ground in 48 or 47 B.C.E.

Although it was built by his son Ptolemy II, the famous Lighthouse, or Pharos, of Alexandria was conceptualized by Ptolemy I. One of the Seven Wonders of the Ancient World, it was constructed about 270 B.C.E. and destroyed by two earthquakes in the fourteenth century C.E. The Pharos of Alexandria was estimated to have stood between 300 to 400 feet (90 to 120 m) high.

Alexandria became a Roman city following the battle of Actium in 31 B.C.E., in which Octavian (later Emperor Augustus Caesar) defeated the forces of Cleopatra and Marc Antony, her Roman lover and Octavian's rival for leader of the Roman state. The couple committed suicide and, with Cleopatra's death, the Ptolemaic dynasty ended. Alexandria remained under Roman control until C.E. 641.

Early in the seventh century C.E., the Eastern Roman Empire had begun to disintegrate. (The Western Roman Empire had fallen to Germanic tribes in C.E. 476.) In 617, Persian forces took Alexandria and held the city for five years, until it was conquered by the Arab general Amr ibn al-A'as in 642. However, the Muslim caliph Omar found Alexandria's location on the western bank of the Nile unsuitable for the capital city. As a result, the Arab conquerors established a new capital, al-Fostat, on the eastern bank. This later became the

RISE AND FALL OF ALEXANDRIA

332 B.C.E. City of Alexandria founded by the Macedonian conqueror, Alexander III, the Great

323 B.C.E. Alexander III, the Great, is buried in Alexandria

304–283 B.C.E. Reign of Ptolemy I Soter, who established Alexandria as his capital

CA. 270 B.C.E. Construction begins on the Lighthouse, or Pharos, of Alexandria, one of the Seven Wonders of the Ancient World

31 B.C.E. Alexandria conquered by Roman forces after the battle of Actium

C.E. 617–622 Persian forces conquer Alexandria and control the city

C.E. 622 Romans reconquer Alexandria

C.E. 642 Arab general Amr ibn al-A'as conquers Alexandria; city declines in importance until the nineteenth century C.E.

CA. C.E. 1400 Lighthouse, or Pharos, at Alexandria destroyed by earthquakes

modern city of Cairo. No longer important to its conquerors, Alexandria declined over the next 1,000 years. The city did not return to its former glory until after the construction of the Suez Canal in the nineteenth century C.E.

See also: Egypt.

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Animism

The belief that objects as well as people and animals possess souls or spirits; in essence, animism is a kind of pantheism, the belief that the creator is everywhere. Many traditional African religions, and especially those from hunter-gatherer societies, hold that people, animals, and natural objects all possess spirits to be treated with respect. In this worldview, people do not consider themselves superior to nature, but rather a part of it.

In animistic religions, people believe that to obtain the necessities of life, such as shelter, food, and clothing, certain **rituals** must be strictly observed. In the Democratic **Republic** of Congo, for example, people throw something red into a river to ensure a safe crossing. Some inhabitants of the forest regions in southern Africa sing songs of praise to the forest to celebrate its bounty and leave baskets of food to thank the forest spirits. The San of the Kalahari Desert pray to celestial spirits and to the moon. In prehistoric times, the San painted elaborate representations of animals on rock walls and cliffs in an attempt, anthropologists believe, to invoke the spirits of the creatures and ensure a successful hunt.

In many agricultural societies, people believe that the earth itself has a spirit to be celebrated and appeased. Among the Ashanti of Ghana, the

earth spirit is called Asase Yaa, Mother Thursday. In her honor, agricultural work is forbidden on Thursdays, and the first fruits and grains of the harvest are offered to her.

Animism also holds that evil spirits cause misfortune. When tragedies occur, people believe that it is important to consult a diviner—someone who claims to be able to discover hidden knowledge through contact with the supernatural—to find out what spirits have caused the catastrophe and determine how to appease them. Thus, in an animistic religion, there are no accidents; for every misfortune, there is a spiritual cause that must be uncovered and dealt with. In many traditional societies, even today, people do not accept the idea of death by natural causes. An outside force is believed to be the cause.

Another aspect of animism is the idea that the spirits of ancestors are always present. Such beliefs are sometimes referred to as ancestor worship, but the term does not accurately describe how traditional African religions regard the spirits of ancestors. According to traditional African beliefs, the dead are still present among the living and must be consulted when making major daily decisions. Traditional African masks often represent the spirits of ancestors, who are evoked in various ceremonies to aid in decision making.

Animistic religious beliefs help people deal with the practical problems of everyday life. Not only do they provide a way for people to understand and cope with tragedy and to celebrate life's bounties, they also help to enforce moral precepts. A belief in living spirits who are watching and involved in everyday lives may keep people from lying, stealing, murdering, and other actions that disrupt the fabric of a traditional society.

See also: Religion.

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Archeological Discoveries

The unearthing of fossils, ruins, and **artifacts** reveals what life was like in ancient Africa. While ancient Europe and Asia have been studied extensively, the rich archeological heritage of Africa (outside of Egypt) has yet to be fully explored.

Before Louis Leakey began his **excavations** in Olduvai Gorge in the Great Rift Valley in the 1950s, **archeologists** believed that *Homo sapiens* originated in Asia. However, thanks to Leakey, his wife Mary, his son Richard, and other pioneering scientists, new evidence is uncovered every day that Africa is indeed the "cradle of humanity" and that a great deal of human history took place exclusively there.

THE FOSSIL RECORD

Archeological discoveries in Africa not only have made it clear that humans first evolved there, but they also have forced major changes in how archeologists understand the process of human evolution. One of the earliest finds in this process was the "Taung Child," discovered in 1924 in the town of Taung in South Africa. Professor Raymond Dart of the University of the Witwatersrand in Johannesburg examined the skull of a young boy that was about 2.5 million years old. Dart realized that he was looking at a new species on the human family tree, a humanlike creature with a small brain, which he named *Australopithecus africanus*.

ARCHEOLOGICAL DISCOVERIES

C.E. 1870s European explorers discover the ruins of Giza

1922 Howard Carter discovers the tomb of Tutankhamen

1924 Raymond Dart discovers the "Taung Child"

1936–1939 Finds in Sterkfontein Caves in South Africa prove Taung is a new species

1940s Louis Leakey begins excavation in Olduvai Gorge in Tanzania

1960 Leakey and team discover *Homo habilis*, the oldest human ancestor ever found

1971 Archeologists rush to remove Nubian artifacts before the newly constructed Aswan Dam floods the area

1974 Donald Johanson discovers "Lucy," proving that walking upright preceded brain development

1970s Mary Leakey discovers 3.5-million-year-old footprints at Laetoli in Tanzania

1982 The ancient Roman city of Leptus Minor is declared a UNESCO World Heritage Site

1994 Tim White discovers *Ardipithecus ramidus*, a new bipedal hominid species

2001 Christopher Henshilwood discovers earliest known formal tools in Blombos Cave in South Africa

The most remarkable feature of the Taung Child is the position of the *foramen magnum* (the hole through which the spinal cord connects to the brain), which suggested that he was bipedal—that he walked on two feet. Until this point, scientists had assumed that humans walked upright as a result having larger brains. However, Dart was

GREAT LIVES

The Leakeys

Perhaps no family has had the impact on the study of human evolution as have the Leakeys. Louis Leakey, the patriarch of the family, was born and raised in Kenya. Interested in fossils from his youth, he came to believe that humans had first evolved in Africa. He began excavating in Olduvai Gorge in Tanzania in order to prove his hypothesis correct.

In 1936, Leakey met and married the much younger Mary Douglas Nicol, and she accompanied him in his work at Tanzania. Beginning in the 1950s, the Leakeys, working together, made many important finds, including an early primate fossil they named *Zinjanthropus* (now known as *Australopithecus boisei*).

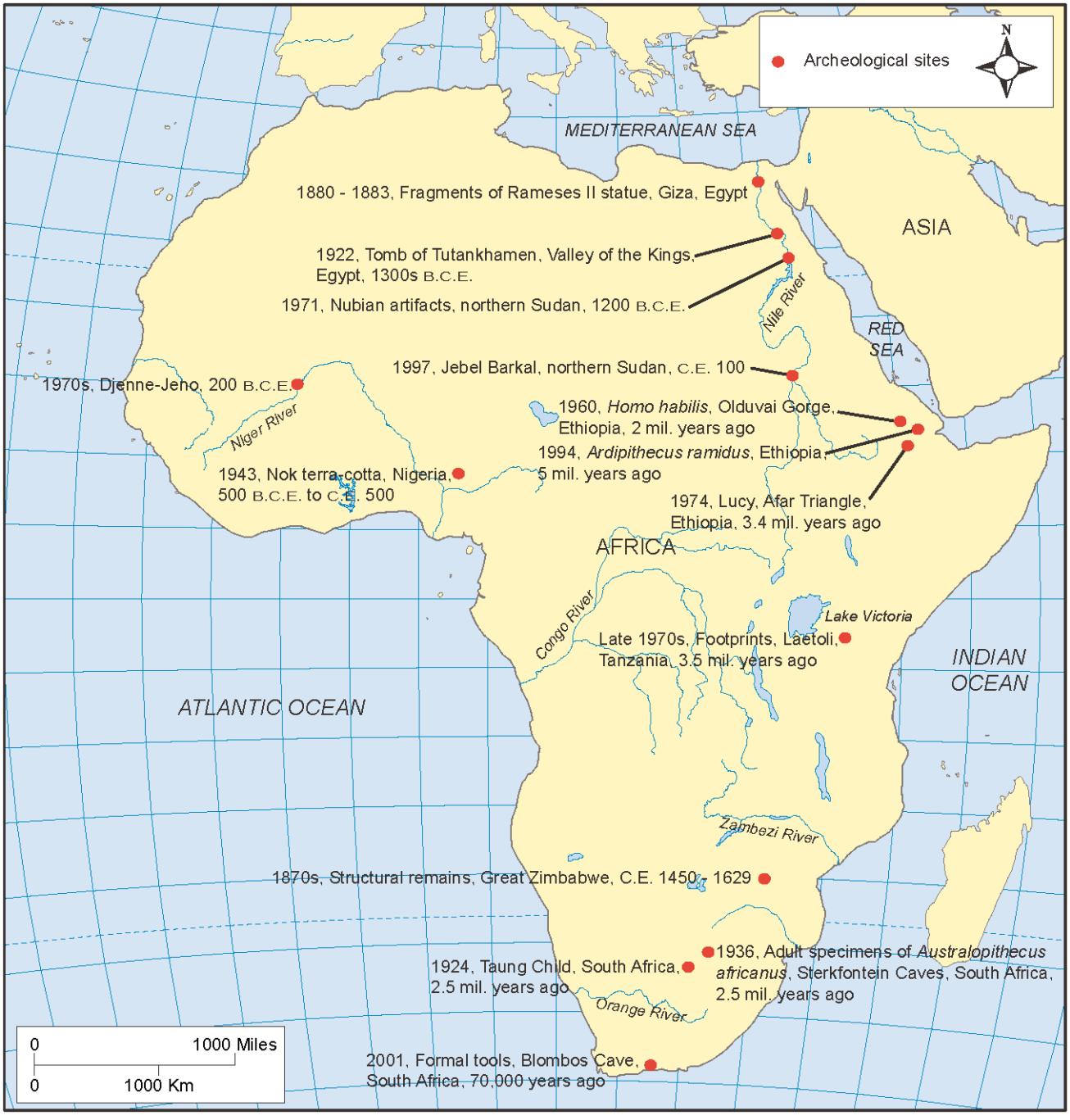
During the 1960s, the Leakeys and their son Jonathan found a skeleton they called *Homo habilis*, or "handy man," the earliest known primate that possessed human characteristics.

Louis became something of a celebrity and traveled the world promoting his ideas. He also attracted several protégés, including Diane Fossey, who studied mountain gorillas, and Jane Goodall, who studied chimpanzee behavior. Meanwhile, Mary continued to search for fossil remains. In 1978, she discovered a trail of human footprints in volcanic ash that was 3.5 million years old. These footprints belonged to the same species as the "Lucy" fossil discovered four years earlier by Donald Johanson.

In 1972, in the year of his father's death, the Leakey's other son, Richard, discovered the skull of a 1.6 million-year-old *Homo erectus*. In 1984 he found a nearly complete *Homo erectus* skeleton. Richard has since retired from fossil hunting, which he leaves to his wife, Meave, and his daughter, Louise, in favor of working in wildlife conservation. Mary Leakey died in 1996 at the age of 83.

MAJOR ARCHEOLOGICAL SITES

As this map shows, Africa, the birthplace of humankind, is rich in evidence of human history. In particular, eastern Africa has been the site of many important finds, especially along the Nile River and in Tanzania. With many areas still unexplored, the promise of future finds is great.



proposing that bipedalism preceded brain development and that it may have been one of the factors that led to increased brain size. The scientific community rejected Dart's theory for more than 20 years, and many archeologists insisted that Taung Child was really a chimpanzee. Finds of adult specimens with similar anatomy at South Africa's Sterkfontein Caves between 1936 and 1939, however, confirmed that Dart was correct in his hypothesis that Taung Child was a new species.

Beginning in the late 1940s, Louis and Mary Leakey began excavating in the Olduvai Gorge in present-day Tanzania. Louis Leakey was convinced that humans had evolved in Africa first, and he set out to find proof. After some false starts, in 1960 he and his team discovered the oldest species of the genus *Homo*. This was the first truly human ancestor discovered by archeologists. The specimens found prior to this time were ancestors of modern hominids (the biological family that includes both humans and great apes such as the gorilla and chimpanzee), but not of the genus *Homo*, which is composed of modern humans and their direct relatives. This creature, dubbed *Homo habilis* ("handy man"), was the link between *Australopithecus africanus* and *Homo erectus*, from whom *Homo sapiens* are descended. *Homo habilis* lived about two million years ago, demonstrating conclusively that the first humans evolved in Africa.

In 1974, American archeologist Donald Johanson found a fossil in an area of Ethiopia called the Afar Triangle that proved to be yet another hominid species. This creature, dubbed *Australopithecus afarensis*, was least a million and a half years older than the Taung Child and had a similarly small brain, yet it appeared to have been able to walk upright. During a celebration of the discovery, the Beatles' song "Lucy in the Sky with Diamonds" was playing, so the specimen was nicknamed Lucy.

In the late 1970s, at Laetoli in Tanzania, Mary Leakey discovered three sets of footprints belonging to two adults and a child. The footprints were attributed to contemporaries of Lucy some 3.5 million years ago. While Johanson believed that Lucy walked upright, this discovery provided documentation and demonstrated that hominoids, humanlike creatures, walked long before they made tools.

In 2001, in the Blombos Cave in South Africa, Norwegian archeologist Christopher Henshilwood discovered evidence of the earliest known formal tools (specialized tools that are symmetrical—made

TURNING POINT

The Discovery of Lucy

In 1974, a young **archeologist**, Donald Johanson, and his colleague, Tom Gray, were exploring near Hadar, Ethiopia, in northeast Africa. Johnson, who said he was feeling "lucky," left Gray and began looking in another area. Suddenly he noticed what appeared to be a hominid arm bone.

Three weeks of intensive work later, Johanson and his party realized that they had uncovered a fairly complete hominid skeleton. In camp that evening while the team celebrated the discovery, the Beatles' song "Lucy in the Sky with Diamonds" was playing in the background. Someone dubbed the skeleton "Lucy," and the name stuck.

Johanson and Tim White worked for five years to classify and date Lucy. In 1978, they determined that Lucy represented a new species, which they called *Australopithecus afarensis*, that had lived in Africa more than three million years ago. Lucy revolutionized thinking about human evolution because she was bipedal, yet had the small brain of a chimpanzee. Until the discovery of Lucy, most scientists believed that humans began to walk upright because their brains had evolved and become more complex. Few thought the process was the other way around. However, Lucy proved that walking upright led to the development of larger brains.

The death mask of the eighteen-year-old King Tutankhamen is perhaps the most recognizable of all ancient Egyptian artifacts. The mask, made of gold inlaid with colored glass, was crafted in about 1350 B.C.E. (Michael Melford/The Image Bank/Getty Images)

the same on both sides, like an arrowhead), dating to 70,000 years ago. Until this discovery, it was believed that such tools arose among humans only after they had left Africa.

EGYPTIAN AND NUBIAN ARCHEOLOGY

The study of the Egyptian past did not begin until the nineteenth century C.E., after the discovery and translation of the Rosetta Stone allowed **linguists** to decode **hieroglyphics**. British archeologist William Flinders Petrie (1853–1942) was among the best of the early Egyptologists; his careful methods helped to define the modern science and practice of archeology. He spent the years 1880 to 1883 excavating the Great Pyramid of Giza, and in 1884 he discovered fragments of a statue of Rameses II.

Another famous Egyptologist, Englishman Howard Carter, discovered King Tutankhamen's tomb in 1922 and spent the next 10 years cataloging its contents. Tomb robbers had stripped many other tombs, but King Tut's tomb was the first that had not been tampered with, making it one of the most important discoveries of the century, teaching historians much about the **material culture** of ancient Egypt.

Today, scientists continue to explore pyramids of both Nubia, the area to the south of Egypt, and Egypt itself using new technologies to extend their reach and enhance their understanding. DNA analysis, for example, has been used to determine the genealogy of Egyptian kings and queens, and computer programs can now be used to rapidly translate hieroglyphs. In October 2005, Egyptian Egyptologist Zahi Hawass announced that a robot would soon be sent into the Great Pyramid of Giza to explore two narrow shafts that may lead to yet undiscovered burial chambers, perhaps including the burial chamber of the pharaoh Khufu himself.

In 1971, construction of the Aswan High Dam along the Nile River in Egypt created an artificial lake. Before the lake was filled with water, archeologists rushed to locate as many as-yet-undiscovered remains of Nubian culture as possible, since much of the territory was soon to be underwater. This sort of rapid, large-scale process to recover artifacts is known as rescue or salvage archeology.

Fortunately, the salvage archeologists were able to learn a great deal about Nubian culture, preserve thousands of artifacts, and even move large monuments. The colossal temple of Rameses II at Abu Simbel was separated into more than 1,000 pieces, each weighing from seven to 30 tons (27 metric tons), and rebuilt on higher ground. Three thousand artifacts unearthed as a result of this project, including sculpture, pottery, carvings, amulets, jewelry,

paintings, and **papyri**, are now housed in the International Museum of Nubia. Despite their great efforts, however, the archeologists left unknown treasures at the bottom of the new lake.

In 1997, Timothy Kendall of Boston's Museum of Fine Arts uncovered a slab of stone in northern Sudan. He and his team continued to dig and uncovered a total of 25 pieces which, when were fitted together, revealed a beautiful picture: a blue sky, filled with stars, and crowned vultures flying into the distance. Kendall believes that these fragments may be part of the vaulted ceiling of a passageway that led into a temple carved into the mountain known as Gebel (or Jebel) Barkal. When looked at from a distance, Gebel Barkal resembles the head of a crowned pharaoh. It was here that both Nubian and Egyptian kings were crowned. The passage was destroyed by an earthquake between C.E. 100 and 200, a catastrophe that may prove beneficial to Kendall and posterity. If the temple has been sealed for more than 1,800 years, its treasures may still be intact.

DISCOVERIES IN SUB-SAHARAN AFRICA

Other major African structures that archeologists have explored include Great Zimbabwe, the remains of massive stone walls and enclosures that were first discovered by Europeans in the 1870s. Because of Europeans' belief that their culture was superior to any black African culture, many believed that Africans could not have built the structures. Unfortunately, much of what would have fascinated modern archeologists was utterly destroyed when a journalist, Richard Nicklin Hall, hired to preserve the site in 1902, stripped away and disposed of 12 feet (3.6 m) of archeological deposits while trying to prove that Arab peoples built the structures. Still, enough remained to allow modern scientists to conclude that Africans indeed built the site.

In 1943, tin miners in Nigeria found a terra-cotta head, which turned out to the oldest figurative sculpture found in sub-Saharan Africa. Since that time, many other figures and fragments have been discovered throughout Nigeria. The sculptures are now known as the Nok terra-cottas, after the small village where they were found. The Nok were a people who flourished in southeastern Nigeria from about 500 B.C.E. to C.E. 500.

STEALING AFRICA'S PAST

It has been estimated that artifacts stolen from Africa account for 10 percent of the $4.5 billion worldwide illicit trade in archeological finds. Among the objects on the black market are stone, terra-cotta, and brass sculptures, wooden grave markers, and masks. Africans themselves are involved in selling their own cultural heritage. Poor farmers in West Africa are easily persuaded to dig up23 and sell precious antique art objects, such as Nok terra-cotta heads. A yam farmer, for example, can earn $30 by selling a single artifact—twice the typical monthly wage.

A number of steps have been taken to curb this trade in cultural treasures. Mali has reduced illegal trade significantly using informants. It has also signed a treaty with the United States restricting the importation of certain artifacts. The thermoluminescence lab at Oxford University in the United Kingdom now refuses to date ceramics and terra-cotta artifacts unless accompanied by documents that confirm legal export. In Niger, archeologists are trying to make sure that villagers understand why it is important not to sell precious artifacts that are essential to an understanding of African history. Meanwhile, more and more precious objects are being taken out of Africa.

See also: Art and Architecture; Egypt; Great Zimbabwe; Libya; Mali; Nok People; Nubia.

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Art and Architecture

The painting, engraving, sculpture, and buildings of ancient Africa reflect how early African societies were organized. Ancient African art was seldom created merely for aesthetic enjoyment, or "art for art's sake." While a modern expert might appreciate the fine lines and exaggerated features of a mask crafted by the Igbo of Nigeria, for example, the Igbo themselves would see the mask primarily as an object with spiritual or religious significance.

This is not to suggest that ancient African artists did not appreciate beauty or work hard to ensure that their products were aesthetically pleasing. On the contrary, beauty was an integral part of what made the object sacred. Westerners also admire the many **utilitarian** objects fashioned by African **artisans**. Again, while beautiful, objects such as pottery or carved headrests were primarily intended to serve a particular function, and the beauty of the design was secondary.

EARLY PAINTING AND ENGRAVING

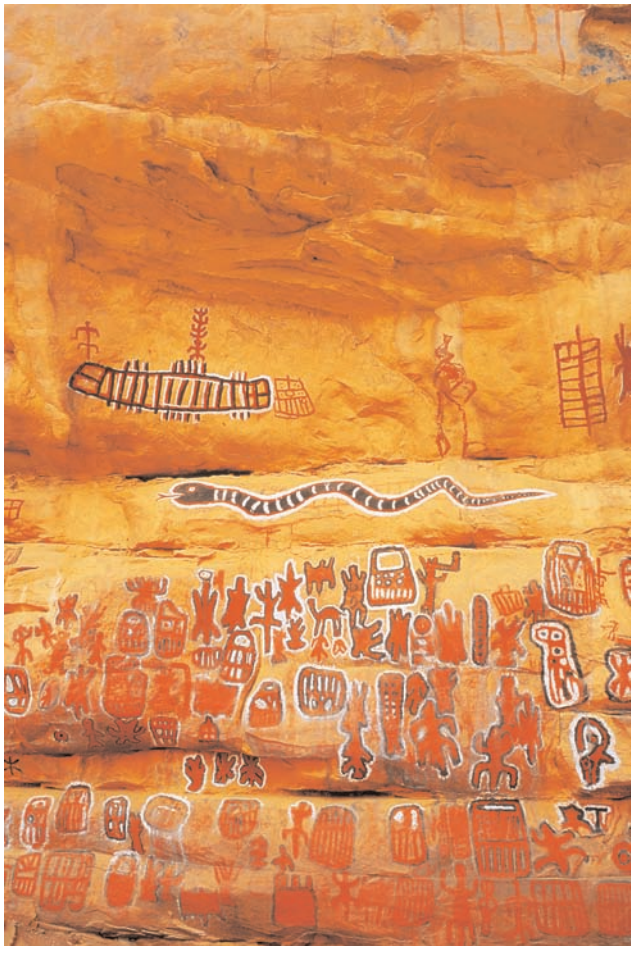
The earliest art found in Africa are small pieces of ochre rock engraved with geometric patterns found in the Blombos Cave in South Africa. **Radiocarbon dating** places these designs at between 70,000 and 100,000 years old, making them the oldest-known images ever discovered. The San of the Kalahari Desert were also prolific painters in **antiquity**; more than 50,000 sites containing rock paintings, or **petroglyphs**, and engravings have been found in southern Africa. As far back as 6000 B.C.E., nomadic peoples also painted on rock in the mountain ranges of the Sahara Desert. Many of these examples of early paintings are difficult to date, other than by noting the animals portrayed. One period, for example, is known as the Bubalus Period (6000 to 4000 B.C.E.) because art produced during that **era** often depicts a now-extinct buffalo of the same name.

Early artists made their paints by grinding pigments, usually red, yellow, black, and white, and mixing them with something that helped the paint adhere to the rocks—perhaps blood, urine, eggs, or plant sap. Paintings of hunting scenes are thought to be of spiritual or magical significance; perhaps the painters sought to capture the spirits of the animals or appease the spirits of those they had killed. Among the most interesting works are the rock paintings in uKhahlamba-Drakensberg Park of present-day Lesotho and South Africa. With 20,000 paintings dispersed over 500 sites, this is the largest group of rock paintings found south of the Sahara. Some of these, called "trance paintings," depict **shamans** as they transform into animals and travel to the world of spirits.

In addition to paintings, early African artists also engraved animals and geometric designs into rock, either in outline form or by scraping away the surface. In the deserts of Niger, **archeologists** have discovered a life-sized engraving of a giraffe that may be 9,000 years old. There are many paintings and engravings of giraffes throughout Africa, because this creature was thought to have magical powers.

ARCHITECTURE THROUGH THE AGES

Most early African architecture south of the Sahara has been lost because the materials used—wood, mud, grasses, animal skins, and reeds—are perishable and decay relatively quickly. Many traditional African groups probably build shelters today in much the same way they did thousands of years ago. Homes tend to be made of mud bricks with thatched roofs and center around a common area. The Dogon people of Mali are famous for their carved wooden doors, and many people decorate



Ancestors of today's Dogon people created these paintings, which were discovered in a cave near Songo Village in what is now the nation of Mali. The paintings depict ceremonial circumcisions. (Eric Meola/The Image Bank/Getty Images)

the exteriors of homes with geometric designs such as circles and zigzags.

The pyramids of Egypt, built perhaps as early as 3000 B.C.E. (scholars still heatedly debate the actual dates of construction), are among the most famous works of ancient architecture in the world. These structures, designed to ease the pharaoh's trip to the afterlife, may have been intended to symbolize the sun's rays, since the ancient Egyptians worshipped the sun god Ra and the sun disk Aten. The pyramids were once covered with highly polished limestone that made the pyramids sparkle in the sunlight, further reinforcing their solar symbolism. Deeply influenced by the Egyptians, Nubian kings also built pyramids for their own burial for 1,000 years after Egyptian burial practices had changed; in fact, there are twice as many Nubian pyramids still standing today than there are Egyptian ones.

The ancient Egyptians also built massive temples to honor their gods. These temples were not places for public worship but sacred sites to be entered only by kings and priests. Temples were enclosed in walls and tended to be rectangular, with the entrance facing the Nile River. The entrance led to an open court that in turn led to a pillared room, then to a sanctuary that housed a statue of the god to whom the temple was dedicated. The capitals of columns in the pillared room, called a hypostyle hall, were carved to resemble lotus and **papyrus**, plants that grew near the Nile. The stone floors were polished to look like water.

The largest ancient stone structure south of the Sahara is Great Zimbabwe, built continuously from C.E. 500 to 1400 by the Shona people. These beautiful stone walls and other structures were constructed of more than a million granite stones so precisely cut that no mortar was needed to hold the structure together. The walls were embellished with bricks set in geometric patterns, rounded gateways, turrets, and towers. Not much is known about the people who lived there since no written records exist.

In the thirteenth century C.E., Ethiopian Christians built magnificent churches hewn out of the volcanic rock of a plateau near the town of Lalibela. The largest, Bet Medhane Alem, is carved out of rock in the shape of a basilica, a rectangle divided into aisles by columns. The Bet Medhane Alem boasts 72 carved columns and is lit by high windows.

Northern Africa is home to many mosques, among the most famous of which is the Djingareyber Mosque in Timbuktu, Mali, built in C.E. 1327. Inspired by Arabic architecture, Djingareyber is nevertheless African in character because of the materials used and the way in which the building fits into its environment. The mosque is constructed of *banco*, earth mixed with straw and other fibrous materials. The thick mud walls keep the interior of the mosque cool even on the hottest days. It has three minarets and 25 rows of pillars. The outside walls are studded with palm tree

LINK IN TIME

Pyramids: Egyptian and Mayan

The ancient Egyptians were not the only people to have built pyramids. The Mayans, a **Mesoamerican** people, also constructed pyramids, thousands of years after the Egyptians. While the Egyptian pyramids were built beginning in about 3000 B.C.E., the Mayan structures were built beginning in about 700 B.C.E.

Mayan pyramids differed from Egyptian in several respects. The most obvious difference is that the Mayan pyramids had steps on all four sides, while most later Egyptian pyramids were smooth sided. Moreover, Mayan pyramids were of two kinds, those that could be climbed and those that were sacred and not to be touched. The sacred pyramids also had steps, but they were too narrow to climb.

A major difference between Egyptian and Mayan pyramids is that many Mayan pyramids had temples constructed at the top, and priests would ascend the stairs to conduct ceremonies. While the Egyptians believed that the pyramids helped pharaohs find their way to the afterlife, the Mayans believed that ascending the pyramids brought them closer to the gods. In the jungle, Mayan temples were often the only objects visible above the forest canopy and so served as landmarks as well. Thus, although Mayan pyramids also served as burial chambers, that was not their sole purpose.

trunks. These are used to climb the walls by masons and others who, to this day, replaster the mosque each year with mud after the spring rains.

SCULPTURE AND PAINTING

Egyptian sculpture and painting were, through most of their history, highly stylized. Egyptian artists treated their subjects in a standardized, idealized manner. Egyptian sculpture portrayed primarily kings, queens, and members of the nobility, and the subjects of the sculptures are found in only three poses: seated, standing, or kneeling. Egyptian sculpture is frontal, meaning that the subjects face straight ahead, never turning the head or body. The subjects of sculpture were usually idealized, the men young and muscular, the women equally young and beautiful. Older men were occasionally portrayed with fat bellies to emphasize their wealth.

Egyptian painting and sculpture were religious, rather than aesthetic. Paintings were used primarily in tombs to depict scenes intended to help the deceased in the afterlife, and sculptures either embodied gods or honored royalty. The stone used in Egyptian sculpture includes limestone, calcite, sandstone, quartzite, granite, and basalt. Like the Greeks, the Egyptians often painted sculptures in bright colors.

The typical style of Egyptian painting includes brightly colored people and objects, with no attempt to place figures in perspective; everything in the painting is on the same plane. Every person and object is drawn in its most characteristic view, with different views often mixed in the same drawing. For example, a person might be shown with the face in profile and the body facing front, with the feet in profile. Often artists would carve a drawing into stone then paint over the carved surface, creating a sculpturelike image called a **relief**. Artists used grids to sketch their figures, so that the proportions of forehead to face or shoulder to knee were always the same.

For about 20 years under the pharaoh Akhenaten (r. ca. 1353–1335 B.C.E), a time known as the Amarna Period after Akhenaten's capital city, Egyptian art became much less stylized and more realistic. For example, paintings portrayed people in much more natural and relaxed poses than did earlier Egyptian art. After Akhenaten's death, Egyptian artists returned to more formal and idealized depiction of their subjects.

Much ancient sub-Saharan art has been lost because it was carved from or painted on wood. Africa

The Kuba people are famous for their ceremonial masks, crafted of wood, raffia, shells, and beads. These masks were worn by dancers in reenactments of the history of the Kuba royal family. (The Bridgeman Art Library/Getty Images)

does not have a major tradition of painting, but there is a long history of sculpture. Among the most remarkable sculptures are those of the Nok people of Nigeria, whose sculptures are the oldest-known figurative works found south of the Sahara, dating back to 500 B.C.E. These sculptures, rendered in terra-cotta, or baked clay, are remarkable works of art whose original purpose is unknown.

Nok sculpture was made in much the same way as a lot of African pottery, by building up coils of clay. Then the figures were constructed with a subtractive technique, by carving away material not meant to be part of the finished product. What has survived are primarily heads that were once parts of larger figures, some of them life-sized. The heads are elongated and sport elaborate hairstyles and

jewelry. Some of the figures appear to depict people who are ill or deformed.

Masks are another great African sculptural tradition. African masks have spiritual significance and form an important part of a number of **rituals**. They may cover simply the face or the entire head; many masks are actually elaborate headdresses. They are made of many materials, but wood is used most often.

Other ancient African sculptural objects include ancestor figures and fetishes, objects believed to have magical powers. Many ancestor figures are realistic in style, in that they actually resemble the deceased; others are more abstract. Fetish figures may be made for protection or to do harm to another. Some fetish figures are made with hollow openings into which magic ingredients can be placed to increase the power of the sculpture.

The beauty and energy of African art have influenced many modern European and American artists. For example, the great twentieth-century artist Picasso was deeply influenced by African mask-making styles.

See also: Akhenaten; Culture and Traditions; Egypt; Great Zimbabwe; Nok People; Nubia; Religion.

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Atlas Mountains

Mountainous area in the northwestern corner of Africa, spanning the modern nations of Morocco and Algeria. The mountains, which today are home to millions of Berbers, are divided into five regions: the Middle Atlas, the High Atlas, and the Anti Atlas, all of which are in Morocco, as well as the Saharan Atlas and the Tell, which are in Algeria. They extend for approximately 1,500 miles (2,400 km) and are the northernmost of all of Africa's mountains.

The Atlas Mountains, which are actually part of the same range as the Alps of Europe, were formed in two phases. The western Atlas mountains were formed first, while the eastern part was formed later, at about the same time as the Alps, which arose during the Oligocene and Miocene epochs (from 34 to 23 million years ago and from 23 to 5 million years ago, respectively).

For thousands of years, the peaks and valleys of the Atlas Mountains have been home to Berbers, who live in mud-brick houses and graze their flocks on the mountain sides. Today, Berber families live much as they once did, with no running water or electricity. They endure hot, dry summers and cold, snowy winters. Because of their isolation, living high in the mountains, they were never conquered by Arab invaders and never learned to speak Arabic. Even today, the government of Morocco does not levy taxes on the Berber people, and the Berbers do not receive government services.

The Atlas Mountains form the principal route between the Sahara and the coast of western Africa. Although the mountains are steep, there are many mountain passes through which traveled ancient caravans laden with gold, salt, ivory, and other luxury goods.

The Atlas Mountains are a rich source of agricultural and pastoral land as well as lush forests where

pine, cedar, oak, and cork trees grow; unfortunately, these vast forests are rapidly being cut down for timber. Beneath the ground, there are deposits of lead, zinc, iron, manganese, antimony, and phosphates, as well as gold and silver. In 2000, King Mohammed VI of Morocco announced the discovery of oil fields near the town of Talsint, 500 miles (800 km) southeast of Rabat, Morocco. Many Berbers fear that this discovery will bring an end to their ancient way of life, as the government prepares to drill on the lands where sheep graze and crops grow. If this happens, the Berbers will have no place to go. According to Hassan Ouzat, a professor at Morocco's Agadir University, "There is no longer any hinterland in North Africa where the Native culture can retreat. You can now say for the first time in history, native north African culture—symbolized by its language—is in grave danger of disappearing." If the Berbers do disappear, much history will be lost as well.

See also: Berbers.

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Axum (also Aksum)

In modern-day Ethiopia, an ancient kingdom that flourished in the fourth and fifth centuries C.E. This was the first indigenous literate civilization in sub-Saharan Africa.

Of the early history of the Axumite kingdom, little beyond legend is known. The most important of these stories is that of the Queen of Sheba. According to both the Christian Bible and local legend, the queen is supposed to have traveled to Jerusalem to meet King Solomon of Israel. Although the biblical story stops there, the legend maintains that the queen bore Solomon a son who became King Menelik, the founder of the Ethiopian Solomonic Dynasty. Ethiopians believe that Menelik brought the Ark of the Covenant, the chest that held the original stone tablets on which God inscribed the Ten Commandments, home with him from Jerusalem. The Ark, they believe, rests today in the tabernacle of St. Mary's, a sixteenth-century C.E. church built on the site of a fourth-century C.E. edifice in Axum.

It is known that the Axumite kingdom grew out of an amalgamation of Semitic and native African peoples. In the eighth century B.C.E., a group of Sabeans, from the kingdom of Saba in what is now Yemen, migrated to the plateau that later became the Axumite kingdom. John Reader, author of *Africa: A Biography of the Continent* (1998), notes that Axum had the unique advantage of being open to the Red Sea and important trade routes of the ancient world, yet isolated because of its location on a plateau surrounded by rugged cliffs on three sides. Thus, although Arab peoples played a part in its development, Axum transformed this influence into a truly native African culture.

By the first century C.E., Axum's port city of Adulis, located on the Red Sea, had become the gateway for Asians and Europeans to the riches of Africa. Axum exported ivory, rhinoceros horn, hippopotamus hides, gold, spices, and slaves, and imported luxury goods from China, India, and the Black Sea area for its growing upper class. Influenced by the Semitic language of the Sabeans, Axumites developed the only indigenous written sub-Saharan language, known as Ge'ez, which is still used today in the Ethiopian Orthodox church.

The Axumite people were skilled masons and metalworkers. Before their conversion to Christianity under King Ezana in the fourth century (making Ethiopia the first Christian state in the world), the Axumites worshiped the sun and moon. The most remarkable **artifacts** of their early religious beliefs are huge obelisks, called *stelae*, which were

probably used to mark graves and which also served as altars for animal sacrifice. These unique structures were carved to resemble multistoried buildings. The largest one, located in the Ethiopian city of Axum, exemplifies what Russian **archeologist** Y.M. Kobishchanov has called the Axumites' "mania for the gigantic." This structure, intricately carved to represent a 13-story building, weighs more than 700 tons (635 metric tons).

Several factors combined to destroy the Axumite civilization. The Axumites despoiled their environment. As the land was stripped of trees, the rainfall that had once been the source of Axum's agricultural bounty ran off the soil rather than nourishing it. The final blow came in the early eighth century C.E., when Arabs sacked the port city of Adulis, cutting Axum off from the Red Sea. Today Axum is a small town where heavy rains sometimes expose ancient gold and silver coins hidden under the sand.

See also: Agriculture; Art and Architecture; Language and Writing; Religion; Slavery.

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B

Bantu Migration

The movement of a group of people originating in modern Nigeria and Cameroon in West Africa throughout the southern portion of the continent beginning about 3000 B.C.E. Bantu is not the name of a particular ethnic group but a term that designates a language family and the people who speak it.

The term "Bantu" was coined by the German **linguist** Wilhelm Bleek and first used in his book *A Comparative Grammar of South African Languages* (1862). Bleek noted a similarity among languages spoken throughout the southern two-thirds of the African continent and theorized that they must all be part of a single language group. He dubbed the group Bantu because of the similarity in the word for "people" in a number of these languages. In Dualo, for example, the word is *bato*; in Herero it is *abandu*; in Kongo it is *bantu*; in Mongo it is *banto*; in Rwanda it is *abantu*; in Shona it is *wanhu*; and in Tio it is *baaru*. Today, as many as 100 million people in 400 different ethnic groups living in the southern part of the African continent speak a Bantu language.

LINGUISTIC EVIDENCE

Because Bantu languages are so widespread, historians, **archeologists**, and linguists have long wondered where the original language, or "mother tongue," originated and how languages related to it came to be spoken over such a wide area. In 1963 University of California linguist Joseph Greenberg advanced the theory that the speakers of the mother tongue originated in Nigeria and Cameroon in West Africa and from there spread southeast.

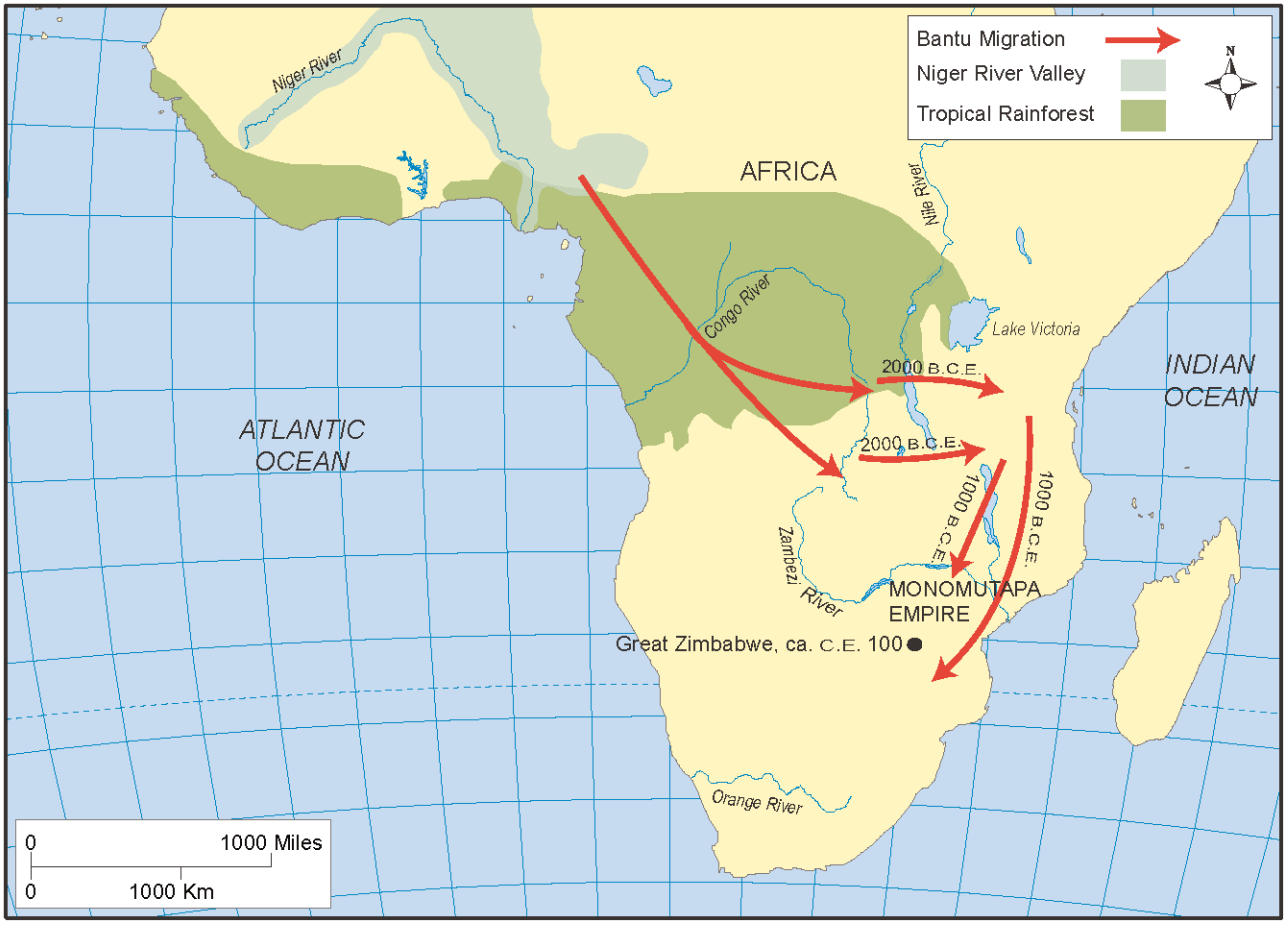
Malcolm Guthrie, a professor of Bantu and author of the four-volume *Comparative Bantu* (1967, 1970, 1971), disagreed with Greenberg. He felt that the language originated in Zambia and the Democratic **Republic** of the Congo in the south central part of the continent. Guthrie believed that the migration of the Bantu began there and spread in all directions from this central location.

Today, most linguists and historians accept a synthesis of these two theories. They believe that the original migration began, as Greenberg had suggested, in Nigeria and Cameroon and spread to Zambia, where the Bantu people stayed for up to 1,000 years. Then, in about 2000 B.C.E., they began to spread into Central Africa, an area that is largely rain forest. In about 1000 B.C.E., the Bantu began to move again into southern and eastern Africa. From there they moved farther east, then south into what is now Zimbabwe and South Africa. By C.E. 1000, the first major empire in sub-Saharan Africa had arisen, with its capital of Great Zimbabwe.

No one knows what prompted any of the series of migrations known collectively as the

BANTU MIGRATIONS, CA. 3000 B.C.E.- C.E. 800

Beginning in the Niger River valley, ancient Bantu-speaking people moved in several waves across the African continent. One group moved east to the headwaters of the Nile River, then south along the Congo and Zambezi rivers to the Orange River. Another moved due south along the west coast of the continent.



Bantu migration. Historians and archeologists surmise that a number of factors led to the various movements, including population expansion, resource depletion, climate change, and the search for more productive land.

OTHER EVIDENCE

The evidence for the Bantu migration is not derived solely from linguistics. Archeologists have also discovered pottery **artifacts** in eastern, southern, and western Africa that share similar characteristics in terms of both construction and decoration. Evidence of iron-working technology in southern Africa can also be used to track the migration. In fact, without evidence available from both linguistics and archeology, the story of the Bantu Migration would never have been known because Bantu languages had no written form until the modern period.

NATURE OF THE MIGRATION

Most historians believe that the Bantu migration was a slow process that did not involve military aggression. Rather, it seems, the Bantu speakers moved into an area and absorbed or merged with the original inhabitants. They had certain advantages over native populations in that they knew how

to work iron and had developed iron tools and weapons, although there is some debate over exactly when they acquired this skill. Some scholars believe that the Bantu learned iron working only around 800 B.C.E. and carried the knowledge with them as they moved south. Others believe that they possessed the technology much earlier.

In any event, because their migration was peaceful, the primary advantage the Bantu gained from their iron tools was in agricultural pursuits. They had domesticated millet and sorghum, and their tools allowed them to harvest the grain much more efficiently than indigenous groups that used stone tools. In addition to planting crops, the Bantu also herded cattle and sheep.

CHARACTERISTICS OF BANTU CULTURES

While Bantu-speaking cultures were and are to this day quite diverse, they shared certain values, social institutions, and styles of art. Bantu-speaking people tend to live in family groups in villages ruled by elders. People feel primary loyalty to members of their extended family, rather than to a far-distant king or other political entity. Among the virtues taught to children is respect for elders and the group as a whole, as well as a strong sense of the interdependence of all people in the community.

Bantu-speaking cultures have a long tradition of sculptural art. The Nok people of what is now Nigeria, remembered today primarily for their terra-cotta statues, were Bantu speakers. The bronze statuary of Benin was also crafted by Bantu speakers. Bantu musicians sing songs that tell stories, either about heroes of long ago or events of daily life. Unlike performers in Europe or America, however, Bantu singers would expect everyone to participate by drumming, clapping, or dancing. Thus, music, like many other aspects of life among Bantu speakers, is highly communal.

There is some evidence that Bantu-speaking people were once **matrilineal**; that is, inheritance was through the female line. While the culture gradually changed to a **patriarchal** one, common in Europe, many aspects of a **matriarchal** culture persisted. Kingship, for example, might pass not from father to son but to the queen's nephew. In the Monomutapa Empire in southern Africa, which was founded by Bantu speakers, the king had nine wives; of these, his sister was the most powerful and in charge of foreign affairs. Some of the wives, in fact, were not even women but men tied to the king by symbolic marriage. That practice harkened back to an earlier period when all the important posts were, in fact, held by women.

See also: Agriculture; Archeological Discoveries; Art and Architecture; Culture and Traditions; Great Zimbabwe; Language and Writing; Monomutapa Empire; Nok People.

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Benin

Founded by the Edo people, a kingdom that flourished from C.E. 1300 until the British destroyed it in C.E. 1897. Ancient Benin is located in what is now Nigeria. Benin was home to the slave turned abolitionist Olaudah Equiano (ca. C.E. 1745–1797) and is now famous for the beauty and sophistication of its bronze bas-**reliefs**, a form of sculpture that involves carving or etching away a surface, leaving a slightly raised image.

LINK IN TIME

The Interesting Life of Olaudah Equiano

Olaudah Equiano was born the son of an Edo chief in the kingdom of Benin in about C.E. 1745. In his autobiography, *The Interesting Narrative of the Life of Olaudah Equiano* (1789), Equiano provides a thorough description of life in the kingdom of Benin in the eighteenth century. When Equiano was about eleven years old, he and his sister were taken as slaves. At first, they were sold to neighboring **tribal** groups and treated fairly well. Eventually, however, Equiano was marched to the west coast of Africa and put aboard a slave ship bound for the Americas. Equiano describes the conditions aboard the ship, making it clear that the experience was a hell on earth:

> The stench of the hold . . . the closeness of the place, and the heat of the climate, added to the number in the ship, being so crowded that each had scarcely room to turn himself, almost suffocated us . . . the air soon became unfit for respiration, from a variety of loathsome smells and brought on a sickness among the slaves, of which many died. This deplorable situation was aggravated by the galling of the chains . . . and the filth of necessary tubs, into which the children often fell, and were almost suffocated. The shrieks of the women, and the groans of the dying, rendered it a scene of horror almost inconceivable.

Equiano was sold to Michael Pascal, an officer in the Royal Navy. Although his lot was hard, traveling with a naval officer gave Equiano many opportunities to learn and develop skills he never would have acquired on a plantation. Pascal even sent Equiano to school in London, where he learned to read and write.

Pascal sold Equiano to a sea captain, who took him to the Caribbean island of Montserrat, where Equiano was able to earn money as a gauger, a person who tests to be sure that weights and measures are accurate. By 1766, Equiano had earned enough money to buy his freedom. Equiano returned to London where he worked as a hairdresser for a time, before going back to the seafaring life for several years.

Equiano is remembered today for his autobiography and his work in the abolitionist movement. His book was a financial success and was instrumental in convincing the British to outlaw the slave trade in 1807. He died in 1797.

Benin was formed into a kingdom when several warring chiefdoms in the forestland of West Africa united in the twelfth or thirteenth century C.E. The people of Benin believe that they became united when Oranyan, a king of Ife in Yorubaland, came to Benin and fathered a child with a daughter of a local chief. That child, Eweka, became Benin's first king, or *oba*. **Archeologists** believe that Benin may have been founded on the ruins of an older civilization because in the country around Benin there are 10,000 miles (16,000 km) of walls, some of which were 30 feet (9 m) tall, that predate the fourteenth-century city.

At first, Benin was governed by the *uzama*, a group of hereditary chiefs headed by the oba. In the fifteenth century C.E., however, Oba Ewuare centralized governing power in the hands of the king by reducing the influence of the uzama. He further strengthened the power of the king by mandating primogeniture, the rule that the king should be succeeded by his son rather than chosen by the uzama. During his reign, Ewuare expanded the territory under the control of Benin, and built a system of walls and moats to protect his capital city. As he had hoped would be the case, Ewuare was succeeded by his son Ozolua, who also expanded Benin's territory, moving west into Yorubaland and east to the Niger River.

Although Ewuare strengthened the power of the king, he did not completely dismantle the older

system of governance. He allowed subordinate chiefs to rule their villages and districts, as long as they paid **tribute**, in the form of palm oil and yams, to the king. Ewuare also expanded the ranks of royalty, by granting titles to deserving young men, including commoners.

In C.E. 1486, Benin had its first contact with Europeans when Portuguese traders arrived on the coast of West Africa. Before long, the kingdom grew rich from trade in pepper, ivory, and cloth. Unlike the Yoruba kingdom of Ife just to the west, Benin did not at first allow its own people to be sold as slaves, though it did import slaves from other parts of Africa to sell to Portuguese merchants. Benin grew in wealth as the result of commerce with Europeans, and, as a result, kings and chiefs were able to support a growing group of artists and craftspeople. Expanding trade networks resulted in an influx of copper and brass, leading the metalworkers of Benin to refine their techniques for casting bronze and brass. Beautiful brass bas-reliefs lined the walls of the oba's palace. So rich with detail are the Benin bronzes that they provide an unusually vivid insight into court life in fifteenth- and sixteenth-century Benin. **Artisans** also made plaques of ivory, wood, and bronze, and life-size bronze heads of the kings and queens of Benin.

The kingdom of Benin grew in wealth through the sixteenth and seventeenth centuries C.E. but declined in the eighteenth century when power struggles within the court weakened the power of the oba. During the eighteenth century, Benin violated its own rule and began to sell its own people as slaves, and soon, slaves, rather than cloth, became the kingdom's major export. In about 1756, in fact, abolitionist and author Olaudah Equiano was kidnapped from his village in the kingdom of Benin and sold into slavery.

See also: Culture and Traditions; Myths and Epics; Slavery; Society; Yoruba.

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Berbers

Native, non-Arab **caucasoid** people of North Africa. The origin of the Berber people is unknown; some **archeologists** and **linguists**, however, believe that they may have migrated to northern Africa from southwest Asia in the third millennium B.C.E.

The name "Berber" comes from the Arabic, meaning one who does not speak Arabic; the Berbers' name for themselves is *imazighan* (singular *amizgh*), meaning "free people."

The history of the Berbers is often unclear since they never were a unified people and never possessed a stable political identity. Even today, many Berbers do not identify with a particular nation but with their own tribes or clans. In general, their history is one of conquests—by Egyptians, Greeks, Phoenicians, and Arabs. Complicating the study of this people is the fact that they speak many and varied dialects of a language called Tamazight, which does not have a written form. Over the centuries, Berbers have adopted the written languages and cultures of their conquerors, while continuing to speak their own language among themselves.

The homes in this Berber village in Morocco are made of mud and straw, a combination that, when it hardens, becomes a sturdy building material. In the hot desert climate of the region, the mud homes stay relatively cool. (Tariq Dajani/The Image Bank/Getty Images)

The Berbers comprise three major tribes, the Sanhaja, the Masmoda, and the Zenata. The Sanhaja are desert nomads who roamed the Sahara; the Masmoda are farmers who lived in the north, the west, and in the mountainous regions of North Africa in what is now Algeria and Morocco. The Zenata are horse-riding nomads who lived on the interior plateau of the region of the Sahara.

The Arab conquerors of northern Africa had the most lasting impact on the Berbers. Most Berbers converted to Islam in the early years of the eighth century C.E. When Islam split into two branches (Sunni and Shi'a), also in the eighth century C.E., Berbers adhered to the minority Shiite version and rejected the Sunni beliefs of their Arabic conquerors.

In the seventh century C.E., a Moorish army conquered much of Spain, which they called al-Andalus. *Moor* is a term that designated persons of mixed Arabic and Berber descent. The Spanish Moors evolved a unique culture, achieving a golden age during the caliphate of Córdoba from C.E. 929 to 1013. Religious tolerance and a flowering of learning including scientific inquiry, philosophy, and the arts marked the period. Civil wars beginning in 1009 destroyed the caliphate, and al-Andalus devolved into a number of independent city-states called *taifas*.

Members of the Berber Sanhaja tribe founded a Moroccan dynasty, called the Almoravides, in the eleventh century C.E. Under the leadership of Ibn Tashfin (d. 1106), who took the title *amir al-muslimin*, or "commander of the Muslims," the Almoravides conquered Morocco and the kingdom of Tlemcen in what is now Algeria. When the taifa kings in Spain asked the Almoravides for

help against the Castilian King Alfonso VI, the Almoravides not only conquered Alfonso, they took over the taifa kingdoms as well.

The Almoravides were succeeded in Morocco and in Spain by another dynasty, the Almohads, who were Berbers of the Masmoda tribe from the mountainous regions of North Africa. Both of these Berber groups were much less tolerant of Christians and Jews than the earlier rulers of al-Andulus had been. A third Moroccan dynasty, the Marīnids, was founded by nomadic Zenata Berbers in the late thirteenth century. The Castilian King Alfonso XI defeated this dynasty in 1340, effectively ending Moorish control of Spain.

Today Berbers form the majority of the populations of Morocco, Algeria, Mauritania, and Tunisia. Isolated Berber groups also can be found throughout North Africa.

See also: Carthage; Greek Colonies; Language and Writing; Religion.

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Caravans *See* Salt Trade.

Carthage

Ancient Phoenician city-state located in North Africa, in what is now Tunisia. The Phoenicians, a Semitic people who lived at the eastern end of the Mediterranean Sea, founded Carthage in the eighth century B.C.E.

The Phoenicians were great sailors and traders, and they are credited with inventing the first alphabet. Since they sailed the entire Mediterranean as far as the Iberian Peninsula (modern-day Spain and Portugal), they needed settlements where they could stop to reprovision their ships. These settlements served as markets for their cargoes as well. Carthage became the greatest of these outposts. When in 575 B.C.E. the Babylonian King Nebuchadnezzar captured the Phoenician capital of Tyre, Carthage became the chief city of the Phoenician empire, a series of coastal cities along the Mediterranean.

During the height of its power, Carthage fought many battles over its trading routes and outposts. Most important were the Sicilian Wars and the Punic Wars. From 480 to 307 B.C.E., Carthage was involved in three wars with Greek forces on the island of Sicily. Plagued by catastrophes, such as losses at sea that decimated their forces before they could even land in Sicily, the Carthaginians were unsuccessful in their attempts to drive the Greeks from their stronghold of Syracuse. By the end of the third war, the Carthaginians were confined to the southwest of the island.

More important were the Punic Wars, whose name derives from the Roman word for "Phoenician." These conflicts between Rome and Carthage began when the Mamertines, mercenary soldiers who had settled on Sicily, asked both Carthage and Rome for protection from Hiero II, the tyrant of Syracuse. While Rome hesitated, Carthage sent a garrison to Sicily. However, instead of protecting the Mamertines, the Carthaginians began negotiating with Hiero.

This worried the Romans, because Sicily lies strategically across the main east-west trade route in the Mediterranean. To secure control over Sicily, the Romans attacked the Carthaginians, thus launching the First Punic War (264–241 B.C.E.). Carthage ultimately was defeated and forced to pay heavy **tribute** to Rome.

In 218 B.C.E., the Carthaginian general Hannibal, who was stationed in Iberia, launched the Second Punic War with a bold invasion of Roman territory.

RISE OF CARTHAGENIAN RULE

814 B.C.E. Dido, a figure in Roman mythology who appears prominently in Virgil's *Aeneid*, is said to have founded Carthage after her brother murdered her husband

575 B.C.E. King Nebuchadnezzar captures Tyre; Carthage becomes the major city of the Phoenician empire

479–450 B.C.E. Carthage conquers most of Tunisia

470–307 B.C.E. Phoenicians battle in three separate wars with Greeks on the island of Sicily

264–241 B.C.E. Carthaginians and Romans fight the First Punic War; Carthage defeated and forced to pay tribute

218 B.C.E. Carthaginian general Hannibal crosses the Alps to attack Rome by land, beginning the Second Punic War

216 B.C.E. Hannibal defeats Rome in the Battle of Cannae

203 B.C.E. Hannibal defeated by Roman General Scipio at Zama

183 B.C.E. Hannibal commits suicide to escape the Romans

149 B.C.E. Cato persuades the Roman senate to attack the city of Carthage, initiating the Third Punic War

146 B.C.E. Romans attack and raze the city of Carthage

C.E. 200 Carthage, rebuilt, is the chief city of Roman Africa

Hannibal assembled an army estimated at 50,000 to 60,000 men accompanied by several dozen war elephants, crossing both the Pyrenees and Alps mountains to attack Rome by land. The Romans were completely unprepared, believing that a large military force could not successfully cross the mountains. Although Hannibal won most of the battles he fought against Rome, lack of supplies eventually forced him to return to North Africa. In 203 B.C.E., the Roman general Scipio defeated Hannibal on the plains of Zama near Carthage.

After two long and bitter wars and Hannibal's invasion, the Romans continued to hate Carthage. In 149 B.C.E., the Roman senator Marcus Cato persuaded the Senate to attack the city of Carthage itself, beginning the Third Punic War. Three years later, the Romans captured and razed the city, selling all its surviving occupants into slavery.

Despite the Romans' attempts to obliterate all traces of their hated rival, they eventually built a new city on the ruins of the old. In an ironic twist of history, by the second century C.E., Carthage was the chief city of the Roman province of Africa. It was destroyed by Muslim conquerors in the seventh century C.E.

See also: Language and Writing.

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Christianity *See* Kongo Empire; Religion.

Cleopatra *See* Egypt.

Culture and Traditions

Tracking the systems of values, behaviors, and customs that define the peoples of ancient Africa reveals what distinguishes each group and what kept them unified. Africa is the home to many different cultures and traditions, many of which were partially or completely destroyed by European colonists and missionaries during the eighteenth and nineteenth centuries.

More is known about ancient Egypt than about other African cultures because the Egyptians compiled detailed written histories. Few other African cultures developed written languages with which to preserve a record of their activities. Still, much about ancient cultures can be learned from oral history, and there are groups in Africa today that anthropologists believe live in much the same way as their forebears did. The cultural practices of these groups provide an insight into **patterns of continuity and change** in Africa.

FAMILY STRUCTURE AND SOCIETY

One of the most important aspects of culture is how families are conceptualized and structured. Variations in family organization throughout ancient Africa reflected local differences in cultural and social traditions.

The Egyptian Family

The family structure that arose in ancient Egypt was very much like that of the modern nuclear family—mother, father, and children living together in one home. Lineage, or the line of ancestors and descendents, was traced through both parents' families, much as they are in the West today. Although family ties were very important, Egyptians did not have kinship terms beyond "mother," "father," "daughter," and "son." The same word was used for "mother" and "grandmother," for example.

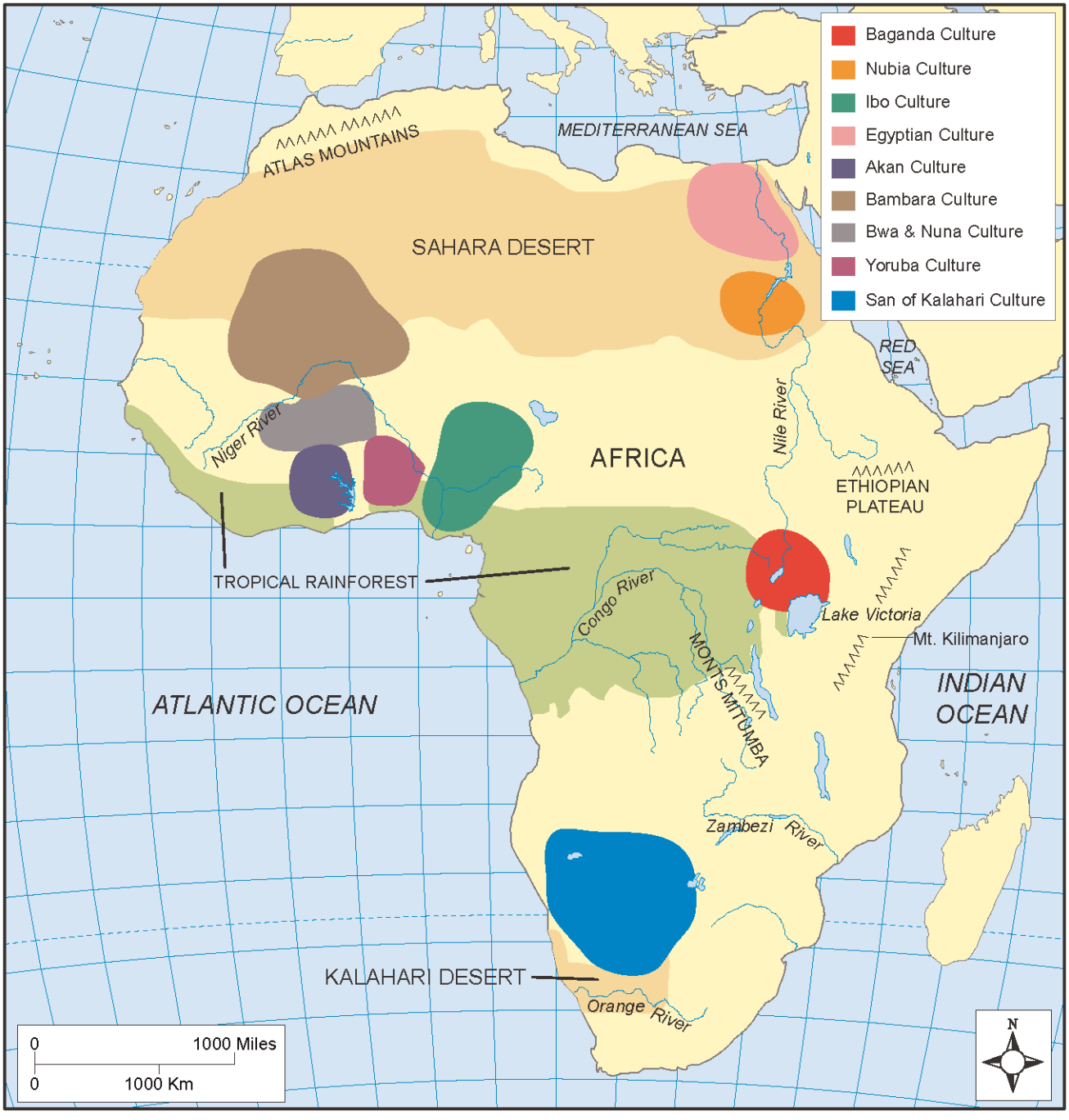
Women married young, usually as soon as they were sexually mature; their husbands were a few years older. Virginity in women was not considered a prerequisite to marriage, and marriage was not a religious ceremony. In fact, there was usually no ceremony involved at all; people simply moved in together. Divorce was equally easy and seemed to carry no social stigma, though it was not common.

Women were subordinate to men and expected to obey the wishes of their fathers and husbands. Still, Egyptian women had more rights than those from other ancient cultures and, in fact, more than many women worldwide until the nineteenth century. They could own and inherit property, make business deals, and represent themselves in court.

Except for the children of nobility, most children were educated at home. Girls learned how to cook and keep house, plant and harvest gardens, and care for children. Boys were apprenticed in a skill or trade, such as farming or metalworking, often to their fathers. Children were expected to respect their parents and to ensure that they received a proper burial at death.

INFLUENCE OF GEOGRAPHY ON THE RISE OF CIVILIZATION

Many major cultural areas of Africa correspond to noteworthy geographical features. Northern Africa, along the Mediterranean coast, is home to traditions that are very different from those found in the tropical rain forests of the Congo basin. The Sahara, too, has spawned a distinct way of life, as have the grasslands of the western Sudan.



Families Outside Egypt

Outside of Egypt, many different family structures existed and still exist in Africa. The Ibo of Nigeria, for example, have a **patrilineal** system of kinship as they probably did in ancient times. The Ibo live in villages in which all or nearly all the people are related through their fathers. Their society is also patrilocal, which means that when a woman marries, she leaves her parents' village and moves into her husband's.

The importance of extended family is reflected in Ibo kinship terms. The same term, *nna*, for example, is used to refer to a person's father and uncles; *nne* refers to both mothers and aunts. The terms for brother and sister (*nwa nne/nwa nna,* respectively) refer to cousins as well as siblings. Thus, an individual has many mothers and fathers and many siblings, emphasizing the importance of community and relationship.

The Ibo are **polygamous**, in that men may have more than one wife, a practice that was common throughout Africa before Christian missionaries arrived in the fifteenth century C.E. and condemned what they considered sinful behavior. To this day, among the Ibo, a man who has several wives and many children is particularly respected in his community.

The Akan of Ghana are a **matrilineal** society, in which inheritance is traced through the mother's line. Again, anthropologists make the assumption that these modern-day traditional societies are similar to ancient cultures in the region, about whom little is known because of the lack of a written language. The Akan are divided into clans, each of which claims to be descended from a single female ancestor. Land is considered the property of the ancestors of each clan and cannot be distributed outside the clan through inheritance or sale. Thus, inheritance usually goes not from father to son, as in a patrilineal society, but from mothers' brothers to sisters' sons.

Unlike the Ibo, most Akan continue to live with their birth families, even after marriage. Thus, everyone living in a single compound is related through their mothers. Husbands live nearby and may visit nightly; wives cook for their husbands, but they do not live with them.

Among the Baganda of Uganda, lineage is determined after birth. Mothers bring their children's umbilical cords to the clan chief and place them in a can filled with beer, milk, and water. If the cord floats, the children are accepted as legitimate; if not, they are disowned. Once a child is weaned, he or she no longer lives with biological parents. Boys live with their uncles, and girls live in the homes of married older brothers or uncles.

CULTURAL MORES AND TABOOS

Because of the importance of family and kin in Africa, customs and taboos are frequently determined by family and relationships. These cultural practices define and reinforce the cultural mores, or generally accepted values, of the group.

Customs and Mores

One widespread traditional African practice is the bride price, in which a man gives substantial gifts to a woman's family to seal the marriage. Among the Ibo, for example, the payment to the parents of the bride ensures the legitimacy of the children, including children born out of wedlock and those fathered by the husband with another woman. The bride price also helps to ensure that marriages stay together, because both families have a financial as well as personal interest in keeping their children together.

In many **primitive,** or traditional, African cultures, children are regarded as the reincarnation of ancestors, and children's names are chosen carefully to highlight this relationship. Among the Baganda, for example, the entire group, including the child to be named, gathers to hear the chief speak the names of ancestors, one after the other. When the child laughs, the name that has just been spoken is given to him or her, and the people believe that the spirit of that ancestor has been reborn in the child.

By contrast, the Yoruba do not believe that a child exists spiritually until he or she is named. While the mother gives the child physical life, the father provides the name, which often has a particular

The Dogon of Mali make large, elaborate, wooden masks that are worn at funerals to help usher the spirit of the dead person out of this world and into the world of the ancestors. (Eric Meola/Iconica/Getty Images)

meaning that is thought to influence the child's personality and future. For example, the name Ore means "goodness." In fact, most African names have a meaning and are chosen carefully and bestowed in elaborate ceremonies. While the names of American children have meanings (Elizabeth, for example, means "Gift of God"), most American parents do not believe that the name confers a magical power; many African families do.

Children in many traditional African cultures undergo initiation rites upon reaching puberty. For boys, these rites may involve circumcision; female circumcision is practiced less often. Ancient Egyptian documents suggest that circumcision was a rite of passage to adulthood in Egyptian society, though it is not known how widespread it was.

Ancient initiation rites are still practiced in traditional African societies. Even today, initiation rites often entail the removal of all children from a particular age group to a secret location. The children may undergo various tests to prove their strength, and in some cases injuries are inflicted to symbolize the change the child is expected to undergo. Some initiation rites even simulate death and rebirth.

Perhaps the most important element of the initiation rite is the instruction in religion, sexuality, and appropriate behavior that the children undergo. This aspect of the **ritual** is intended to ensure that, when the initiates return to the village as adults, they are able to be successful members of the community.

Because of the widespread belief that the spirit lives on after death, many important customs revolve around death and burial. Traditional African cultures such as the Ibo of Nigeria have many customs that are designed to ease the spirit into the afterlife or to make sure that the spirits of the dead are not angry. Some groups bury the dead in their own homes or within the family compound; others quickly move the body out of the communal area to a burial ground some distance away. As in Egypt, many traditional African groups buried the dead with objects they might need in the afterlife. In predynastic Egypt and other parts of Africa, including Nubia, kings were often buried with servants whose lives were sacrificed so they could continue to serve in the afterlife.

Taboos

Although the pharaohs regularly married their siblings, incest (sexual relations between close relatives) in ancient Egypt seems to have been confined to nobility. In traditional African cultures outside of Egypt, the incest taboo was among the most powerful. Because most residents of an Ibo village

LINK TO PLACE

Masks in Africa and the Americas

Humans have made masks since prehistoric times, and the wearing of masks has spiritual significance in many cultures. Sometimes masks are worn to represent the spirit of an ancestor or animal, to frighten away spirits, or to instill fear in others. Sometimes masks are worn to tell stories and to celebrate the values of a culture.

In Africa and the Americas, masks are an important part of funerary rites and **rituals** intended to appease the spirits of ancestors or to ask for their intercession with the gods. These masks may be highly individual, actually resembling a particular ancestor, or they may be more stylized. Among the Egyptians, the Aztecs, and the Incas, masks were also used to cover the faces of the dead to protect them from evil spirits.

Masks are also used to call forth or embody the spirits of animals, particularly those totems sacred to a particular tribe or group. The tribes of the northwest coast of America were particularly artful in their representation of such animals as the Raven, the Whale, the Bear, and the Thunderbird. Masks of these creatures were worn to tell the myths and stories important to the tribe and to invoke the spirits of the animals.

In Africa, the Bambara people of Mali wear antelope masks during fertility rites, because the antelope is associated with the growth of crops. The Bwa and Nuna of Burkina Faso craft masks to represent powerful animals such as the buffalo, the hawk, and the crocodile, and perform dances in the hope that the spirits of these animals will protect them.

Masks also have comic and festive uses, much like the masks worn at Mardi Gras celebrations and on Halloween. The Ibo of Nigeria have a number of comic masks, as do the Eskimo of North America. People wearing masks with exaggerated features act in a clownish fashion to make people laugh.

are related, for example, two individuals from the same village are forbidden to marry, even if they are known to be unrelated.

The Akan may not marry within their clan, but as most marriages are arranged in order to preserve systems of alliances within the larger social organization, leaders often encourage **cross-cousin marriages**. In a cross-cousin marriage, a man marries his mother's brother's daughter, a woman her father's sister's son. In rural areas of modern Egypt, in fact, the marriage of cousins from the father's side is still common. Among the San of the Kalahari, the incest taboo extends to anyone who has the same name, even if it is clear that individuals are not related.

Taboos against killing or eating certain animals are common. Many clans have totem animals that are sacred to the clan, and these may not be eaten. Among the Ashanti, for example, it is taboo to kill a leopard.

Other taboos in traditional African society are quite similar to the prohibitions of the Ten Commandments. Adultery is forbidden, as are murder, lying, stealing, and failing to respect elders and ancestors. In traditional societies, crime and sin are the same, since religion permeates all aspects of life.

See also: Animism; Egypt; Religion; Society.

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Egypt

One of the world's earliest civilized societies, an African culture that developed along the Nile River and endured for thousands of years. The Nile River was a magnet that drew people to its banks. Thanks to the annual flooding of the river and the rich soil that remained after the floods, agricultural settlements were founded there as early as 8,000 years ago. By the late fourth millennium B.C.E., these settlements grew into two of the most the complex cultures of Upper and Lower Egypt.

PERIODIZATION OF EGYPTIAN HISTORY

By 3100 B.C.E., Upper and Lower Egypt were united, legend has it, by the warrior king Menes (r. ca. 3100–3066 B.C.E.). Some historians believe that Menes may have been the same person as the pharaoh Narmer, who founded Egypt's First Dynasty. The period of ancient Egyptian history from the First to the Fourth Dynasties (ca. 3100–2755 B.C.E.) is referred to as the Early Dynastic Period. During this time, the capital city of Memphis was built, and Egyptians developed a calendar and **hieroglyphic** writing.

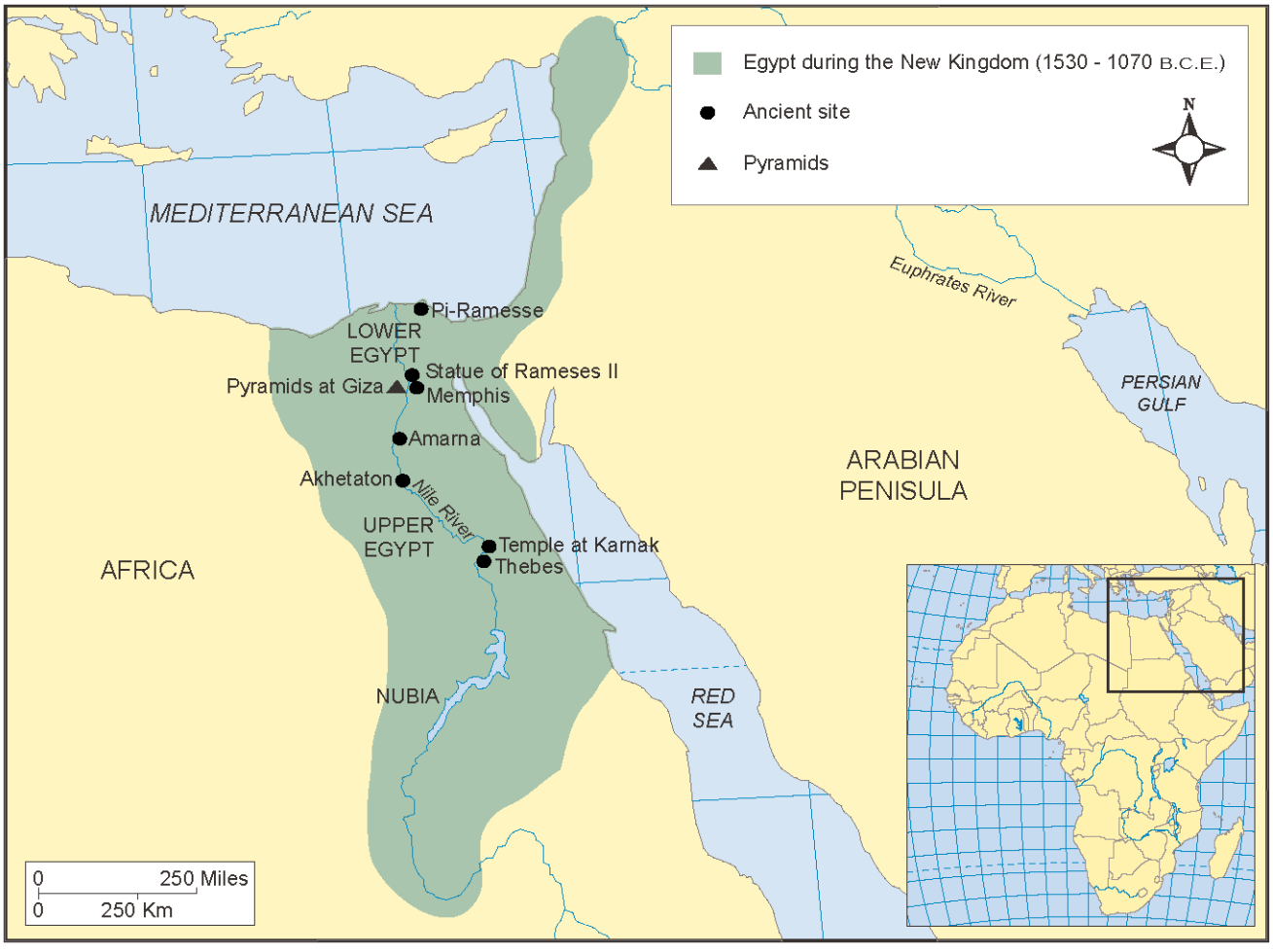
Historians divide the history of Egypt after the Early Dynastic Period into three broad **eras** of unity and stability, known as Kingdoms. These are separated by times of unrest and instability referred to as Intermediate Periods. Dividing history into eras in this fashion is known as **periodization.** The Old Kingdom (ca. 2680–2255 B.C.E.) and Middle Kingdom (ca. 2134–1786 B.C.E.) were separated by the First Intermediate Period. A Second Intermediate Period preceded the New Kingdom (ca. 1570–1070 B.C.E), which was followed by the Third Intermediate Period. The last two eras of ancient Egyptian history—the Late Period (715–322 B.C.E.) and the Greco-Roman Period (332 B.C.E. to C.E. 395)—were largely times of foreign rule.

OLD KINGDOM

The Old Kingdom was a time of great prosperity and innovation in Egypt. These years saw the construction of most of the Egyptian pyramids, including the largest, the Great Pyramid of Giza, built in about 2560 B.C.E. for the pharaoh Khufu. During this period, the Egyptians made great strides in sculpture, astronomy, navigation, and medicine. They also engaged in extensive trade throughout the Middle East. By the mid-twenty-third century B.C.E., however, a combination of factors, including economic stresses and drought that led to famine, brought an end to the Old Kingdom.

EGYPT, CA. 1530–1070 B.C.E.

This map illustrates the Egyptian Empire at its height, during the New Kingdom. The advanced cultures of Egypt grew along the rich soil near Lower Egypt and more southerly river areas such as Upper Egypt.



MIDDLE KINGDOM

For about 100 years, Egypt was ruled as a number of independent states until the pharaoh Mentuhotep (r. 2131–2074 B.C.E.) again united Upper and Lower Egypt and founded the Eleventh Dynasty. Mentuhotep and his successors expanded Egypt's territory into Nubia, as far south as the second cataract of the Nile River. The greatest of the pharaohs of the Middle Kingdom was Amenemhat III (r. 1976–1947 B.C.E), who ruled for 45 years. During this period, Egypt saw an increase in trade and a new level of creativity in the arts.

The Middle Kingdom came to an end when nomadic groups from Asia arrived during the Second Intermediate Period. Egyptians referred to the kings of these people as *hikau khausut*, or "rulers of foreign countries," a term the Greeks corrupted to Hyksos. The Hyksos, who succeeded in gaining control, ruled Egypt for about 100 years and introduced the horse-drawn chariot.

NEW KINGDOM

An Egyptian general, Ahmose, defeated the Hyksos around 1570 B.C.E. and established the Eighteenth

KINGDOMS OF ANCIENT EGYPT

3100 B.C.E. Upper and Lower Egypt united by the warrior king Menes

3100–2755 B.C.E. Early Dynastic Period of Egyptian history; divine kingship becomes established

CA. 2680–2255 B.C.E. Old Kingdom; richest and most creative period in Egyptian history; time of pyramid building

CA. 2255–2035 B.C.E. First Intermediate Period; a time of droughts and political unrest

CA. 2134–1786 B.C.E. Middle Kingdom; Egypt reunited under Mentuhotep

1786–1570 B.C.E. Second Intermediate Period; a Semitic people known as the Hyksos take control of the Nile Delta

1570 B.C.E. The Egyptian general Ahmose defeats the Hyksos and establishes the Eighteenth Dynasty

CA. 1570–1070 B.C.E. New Kingdom, a period of renewed prosperity

CA. 1350–1334 B.C.E. The rule of Akhenaten, who forbade the worship of any god but Aten

1070–715 B.C.E. Third Intermediate Period, a time of chaos

715–322 B.C.E. Late Period; Egypt suffers repeated attacks from Assyrians

525 B.C.E. Egypt conquered by Persia

332 B.C.E. Alexander III, the Great, conquers Egypt and founds the city of Alexandria

332 B.C.E.–C.E. 395 Greco-Roman Period; Egypt ruled by Greece until 30 B.C.E., when it is conquered by Rome

30 B.C.E. Death of Cleopatra, the last of the Ptolemaic rulers of Egypt

Dynasty, ushering in the New Kingdom. In addition to defeating the Hyksos, Ahmose also reconquered Nubia and parts of Syria. Among the notable pharaohs of this era was Amenhotep IV (r. ca. 1350–1334 B.C.E.), who changed his name to Akhenaten in honor of the god Aten, the sun disc, and forbade the worship of any other god. After his death, the pharaoh Tutankhamen reinstated worship of the old gods.

Following the death of Pharaoh Rameses XI (r. 1102–1073 B.C.E.), Egypt was again divided into two kingdoms. During this period, Nubian kings of the Twenty-fifth Dynasty ruled Egypt.

LATE PERIOD

Persia conquered Egypt in 525 B.C.E., and the once-great Egyptian nation became a province of the Persian Empire. During a brief period known as the Thirtieth Dynasty (380–343 B.C.E.), Egyptians overthrew Persian rule. However, the Persians reconquered the land in 343 B.C.E. and were particularly harsh on the native peoples. As a result, when the Macedonian king Alexander III, the Great (r. 336–323 B.C.E), conquered Egypt in 332 B.C.E., the people welcomed him as a liberator.

GRECO-ROMAN PERIOD

Alexander died shortly after he conquered Egypt and founded what was to become the great city of Alexandria. One of his generals, Ptolemy I Soter, stayed in Egypt as governor and eventually declared himself king (r. 323–283 B.C.E.). The Ptolemaic dynasty ruled Egypt for more than 250 years; the last ruler of that dynasty was Cleopatra VII (r. 51–30 B.C.E.).

After Cleopatra's death in 30 B.C.E., Egypt came under Roman rule. By the late fifth century C.E., Rome had been overrun by invading Germanic

The Great Pyramid of Khufu, the only one of the Seven Wonders of the Ancient World to survive to the present day, is on the right side of the image. The other two pyramids were built for pharaohs Menkaure and Khafre. (Kenneth Garrett/National Geographic/Getty Images)

GREAT LIVES

Cleopatra (69–30 B.C.E.)

Cleopatra VII (r. 51–30 B.C.E.) came to the throne of Egypt as a 17-year-old girl. Although she was not allowed to reign alone (her 12-year-old brother Ptolemy XIII served as her consort), Cleopatra ruled Egypt virtually unchecked. Eventually, Ptolemy's advisors convinced him to exile Cleopatra to Syria in 48 B.C.E.

Later that year, the Roman general Julius Caesar captured Alexandria and restored Cleopatra to her throne. Cleopatra became Caesar's lover, bearing him a son and securing her position as ruler of Egypt. She later accompanied him to Rome, but fled to Egypt following his assassination in 44 B.C.E. After Caesar's death, the Roman Empire was divided among Caesar's great-nephew Octavian, Marcus Lepidus, and Marc Antony.

In 42 B.C.E., Antony invited Cleopatra to meet him in Tarsus, in what is now Turkey, and he, too, took her as a lover and confidante. In time, Antony began to assume the manner of an Egyptian pharaoh, naming the couple's children as kings and queens and styling himself the "king of kings." Octavian, backed by the Roman public's outrage at Antony's behavior, declared war on Antony and Cleopatra. In 31 B.C.E., Octavian defeated Antony's forces off the shore of Actium in Greece. Antony committed suicide by falling on his sword. Cleopatra was captured by the Romans and later committed suicide as well.

GREAT LIVES

Hatshepsut (ca. 1540–1483 B.C.E.)

Hatshepsut was a woman who ruled Egypt for nearly twenty years (r. 1503–1483 B.C.E.), at a time when it was virtually unthinkable for a women to hold and maintain such power. She was born in the fifteenth century B.C.E., the daughter of Thutmose I and Ahmose. When her two brothers died, Hatshepsut was in line for the throne. When her father died, however, her father's son by a commoner acceded to the throne. Thutmose II ruled for only a few years, and most historians believe that his half-sister was the power behind the throne. Though she married Thutmose, as was the custom among pharaohs, she had no children by him. When Thutmose II died, his son by a commoner succeeded him, but because he was young, Hatshepsut ruled in his stead.

Hatshepsut was reportedly a beautiful and charismatic woman who ruled for 15 years. She held on to power by styling herself the daughter of the god Amen and by portraying herself in painting and sculpture, and even dressing, as a man. Hatshepsut consolidated her power by sending expeditions to Punt (a land somewhere in eastern Africa, the precise location of which is not known today) to bring back ivory, gold, and other treasures. She built a magnificent funerary temple in the Valley of the Kings and erected two obelisks of red granite, the largest built to that time.

Thutmose III rebelled in 1458 B.C.E., at which time Hatshepsut disappeared. It is believed that her nephew killed her. After her death, Thutmose III tried to erase her name from history. Everywhere he could, he had her name excised and his own inscribed, which was made easier since the sculptures and paintings he relabeled were of a man. He also had the granite obelisks encased in masonry to cover Hatshepsut's name.

tribes and Egypt was held by the remaining eastern portion of the Roman Empire, now called the Byzantine Empire after its capital city of Byzantium (modern Istanbul). Egypt remained under Byzantine control until being conquered by Muslim Arabs in the middle of the seventh century C.E.

See also: Agriculture; Akhenaten; Alexandria; Archeological Discoveries; Art and Architecture; Culture and Traditions; Giza; Kush; Language and Writing; Myths and Epics; Nile River; Nubia; Religion; Society.

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Ghana

Kingdom in West Africa that flourished between C.E. 800 and 1200, located in parts of present-day Mauritania and Mali. The people of this medieval kingdom called their land *Wagadou*, which means "land of herds."

LINK IN TIME

Ancient Ghana and Modern Ghana

The modern country of Ghana does not share territory, history, or even ethnicity with the ancient empire of Ghana. The nation of Ghana is located about 500 miles (800 km) southeast of the ancient empire. When the British colony of Gold Coast became a nation in 1957, it chose the name of Ghana to emphasize its ties with the ancient rulers.

In 1820, when the coastal areas of Ghana came under British control, the Ashanti Empire, a confederacy of smaller kingdoms that had united under the rule of Osei Tutu I in the late sixteenth century C.E., dominated the interior of the region. Legend has it that a golden stool (*sika'dwa*) came from the heavens and rested in the king's lap. The stool is still in existence and has come to symbolize the spirit of the Ashanti. All Ashanti rulers, called Asantehenes, are crowned on the stool.

The Ashanti had become rich and powerful by trading gold and slaves for firearms, which they used to expand their kingdom. They resented the British presence, which led to a series of conflicts, including an 1824 battle in which the Ashanti were victorious. By 1901, however, the British had absorbed the land into their colony. Ashanti leaders were exiled to the Seychelles Islands, but were allowed to return in the 1920s.

The modern nation of Ghana was founded in 1957, the first African nation to win independence from its European colonizers. The people voted to establish the new nation as a **republic** on July 1, 1960, and elected Kwame Nkrumah as the first premier. Nkrumah was deposed by a military coup in 1966. Between 1966 and 1981, Ghana suffered through seven major changes in government and tremendous instability. Today, however, Ghana is regarded as a stable democracy.

The current population of Ghana is about 17 million, of whom 1.5 million are Ashanti. The current Asantehene, whose rule is ceremonial, is Otomfuo Osei Tutu III, a businessman known in private life as Nana Kwaku Dua. The current president of Ghana, John Agyekum Kufuor, was elected in 2000 and reelected in 2004. His 2000 defeat of Jerry Rawlings, who had been Ghana's president continuously since 1981, was the first peaceful transition since the country's independence.

Ghana was a word used by the Cisse people of the region that meant "warrior-king"; Arab visitors mistook the king's title for the name of the country, and "Ghana" became widely used in the West.

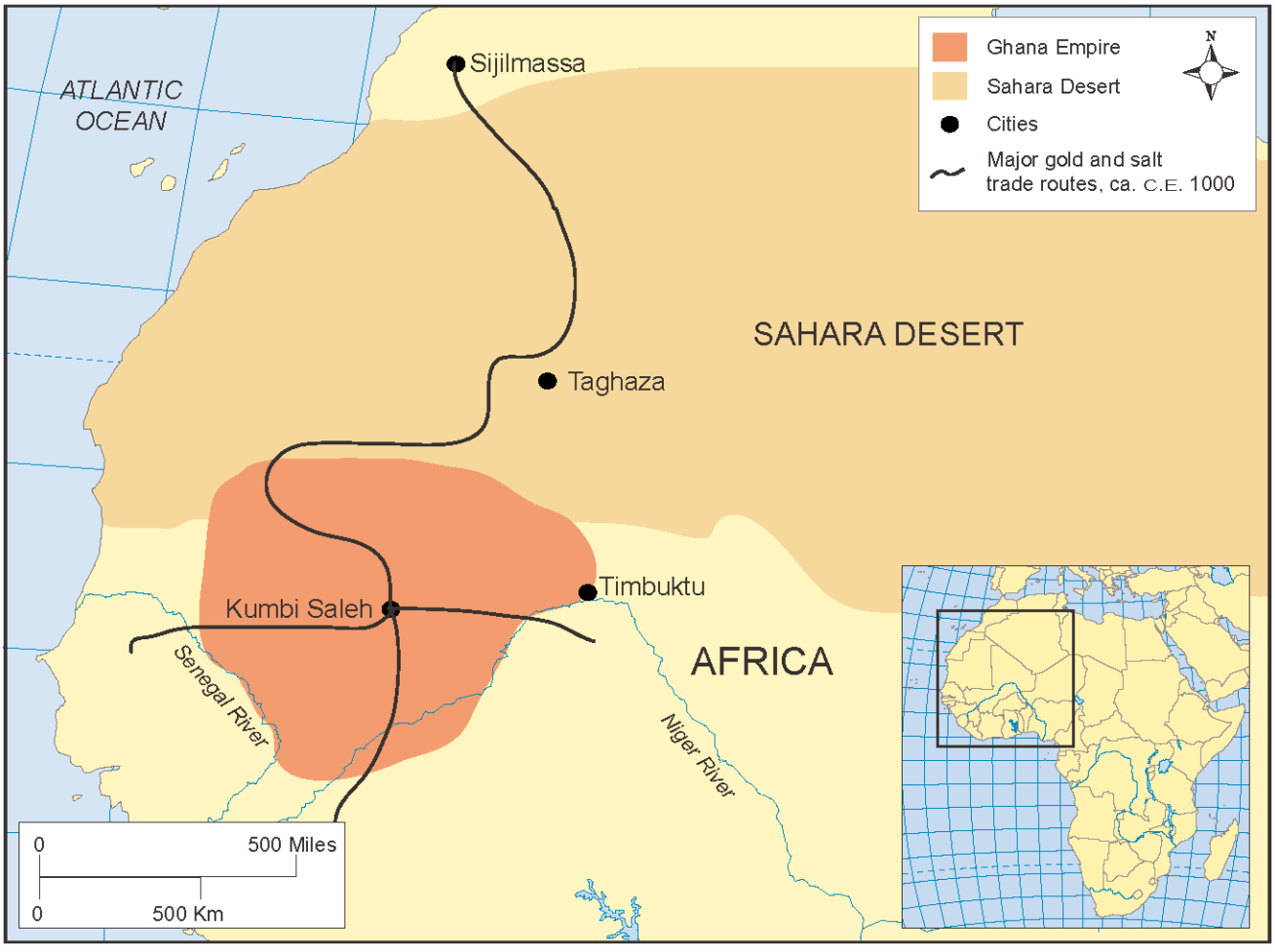
Oral tradition suggests that Ghana had existed well before Arab traders first wrote about it in the eighth century C.E. Some historians believe that Ghana may have existed 400 years earlier as a small kingdom called *Awkar*, populated by the Berber and Mandé peoples of northwestern Africa. With the introduction of the camel and other domestic animals by the Arabs, the empire of Ghana grew richer and more powerful. The use of camels provided efficient trans-Saharan trade, which in turn allowed gold-rich Ghana to establish a flourishing commercial economy. With the advent of large caravans that could carry goods across the Sahara, the Ghanaians traded gold and other goods, such as ivory and koala nuts, for salt and manufactured goods from Arab nations to the north.

Although people from many different ethnic groups formed the empire of Ghana, members of the Soninke people eventually dominated and built a capital city at Kumbi Salah, just on the edge of the Sahara. The empire expanded, controlling an increasing number of trade routes. Trans-Saharan travel was especially safe in the empire because of the strict security Ghana's centralized government provided.

In 1076, a Muslim dynasty from Morocco, the Almoravides, declared war on Ghana, disrupting

ANCIENT GHANA, CA. C.E. 1000

Ghana was the earliest empire of western Sudan. Because it controlled the trade routes from West Africa to Egypt and the Middle East, and because one of its most plentiful natural resources was gold, the region became fabulously wealthy. The name of the modern country of Ghana is derived from this ancient empire.



trade routes and creating economic hardship. In addition, Ghanaian cities had become overpopulated, the Sahara was expanding into previously fertile land, and outlying states began to rebel against Ghanaian rule. By the thirteenth century C.E., the Almoravides completely dominated the region. They were unable to successfully govern the area, however, which was eventually dominated by the Mali Empire.

See also: Berbers; Ghana; Mali; Salt Trade; Songhai Empire.

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Giza

Plateau located about seven miles (11.3 km) from Cairo, Egypt, at the edge of the Sahara Desert, that is the site of the Great Pyramid and the Sphinx, a huge sculpture that has the body of a lion and the face of a man, thought to be a pharaoh.

The Giza plateau was the ideal site for the construction of a necropolis, or cemetery, adjacent to the ancient Egyptian capital, Memphis. Because it was west of the Nile River, Giza faced the setting sun. This was an important characteristic for a burial site, as the Egyptians worshipped the sun god Amen. In addition, the plateau itself served as the source for most of the material used to build the great monuments. The plateau's proximity to the river also recommended it as a construction site, because the white limestone that originally covered the pyramids was transported 500 miles (800 km) up the Nile from Aswan.

Besides the Great Pyramid and the Sphinx, the plateau is home to two other pyramids—the Pyramid of Khafre and the Pyramid of Menkaura—and hundreds of mastabas, the oldest form of Egyptian tombs. Mastabas were graves lined with stones, mud bricks, or wood, and covered with rectangular buildings. *Mastaba* means "bench" in Arabic, and the graves do indeed resemble benches, especially when seen from a distance.

The Great Pyramid is the only one of the Seven Wonders of the Ancient World still in existence. It was built during the reign of the pharaoh Khufu (2551–2528 B.C.E.). The ancient Greek historian Herodotus claims that it took 20 years to build the pyramid, an estimate that modern scholars agree is probably correct.

The pyramid is an amazing feat of engineering. The four sides of the base each measures 755 feet (230 m), and the pyramid is 481 feet (146 m) tall, the height of a 50-story building. It was built with 2.5 million limestone blocks, each weighing 5,500 pounds (2,500 kg). Its sheer size and the precision with which it was constructed—with each side almost perfectly oriented to each of the four cardinal compass points—would be difficult to duplicate even with modern technology. All of the pyramids of Giza were once covered with white limestone, so that they glittered brightly in the sun. The limestone was stripped from the pyramids in C.E. 1356 by an Arab sultan in order to build mosques and fortresses in Cairo.

The purpose of the Great Pyramid remains a mystery. Some scholars believe that it, like other Egyptian pyramids, was intended as a pharaoh's tomb. Others dispute that claim, since this pyramid is so different from those intended as tombs. No body has ever been discovered in the Great Pyramid. Most of the structure is solid, with ascending and descending passageways leading to a grand gallery and two smaller rooms. The purpose of the grand gallery is unknown. Some **archeologists** believe that the pyramid may have been intended as a site for religious **rituals**, others think it might have been an astronomical observatory, but no one knows for sure.

See also: Art and Architecture; Egypt; Nile River; Religion.

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Great Zimbabwe

Ruins of a great city that flourished between C.E. 1000 and 1400, located on the Harare Plateau in the modern nation of Zimbabwe. Great Zimbabwe is the largest of more than 100 stone ruins that extend for many miles through southeastern Africa and was the center of a powerful and wealthy medieval state.

LINK IN TIME

European Finding of Great Zimbabwe (C.E. 1871)

The story of the European discovery of Great Zimbabwe is an unfortunate tale of narrow-mindedness and racism. Although Portuguese explorers heard stories of a fortress built of huge stones, there are no records of Europeans visiting Great Zimbabwe until 1871, when a German geologist, Carl Mauch, was led there by a party of Karanga tribesmen. After examining the ruins, Mauch concluded that a "civilized nation must once have lived there." By "civilized" he meant "white." One of Mauch's "proofs" for this theory was a wooden lintel that he thought was made of cedar. Thus, he concluded, the wood must have been brought from Lebanon by the Phoenicians—and Great Zimbabwe had been built by the Queen of Sheba. In fact, the wood was sandalwood, native to Africa.

Cecil Rhodes, a director of the British South African Company (BSA) and founder of the colonial nation that was to bear his name, Rhodesia, hired an antiquarian with no experience in African archeology, Theodore Bent, to investigate Great Zimbabwe. It was in Rhodes's interest to further the myth that the site was not of African origin, since he, like other European colonists, wanted to believe that Africans were incapable of governing themselves, much less building sophisticated stone cities. This myth helped justify the colonization of Africa and exploitation of the native peoples. Although Bent found many **artifacts** that were clearly African, he concluded that people "akin to the Phoenician and Egyptian" had built the structure.

Bent was followed by Richard Nicklin Hall, a journalist whose job it was to preserve the site but who decided to prove that the ruins were Arabic in origin. To do this, he removed what he called "the filth and decadence of Kaffir [African] occupation," disposing of 12 feet of stratified archeological deposits. Hall's actions were condemned by later **archeologists** because they lost, forever, invaluable data that could have helped scholars learn about the site and its occupants.

Hall was dismissed, and in 1905 the BSA brought in archeologist David Randall-MacIver, who concluded that the site was "unquestionably African in every detail." Despite his certainty, many Europeans who remained in Rhodesia did not believe him. It has only been since the end of colonial rule in Rhodesia in 1980 that true scholarly work has been undertaken without government interference. During the struggles of the native people against their colonial rulers in Rhodesia, Great Zimbabwe became a symbol of black liberation, leading the newly freed nation to take the name Zimbabwe in 1980.

Archeologists have dubbed this tower at Great Zimbabwe the "beehive" and believe it may have been a royal residence. The walls were built beginning in about C.E. 1250, and construction continued into the fifteenth century. (I Vanderharst/Robert Harding World Imagery/GettyImages)

What remains of Great Zimbabwe today are three major areas of ruins that extend over about 1,800 acres (730 hectares). The so-called Hill Complex comprises a number of stone walls built on top of a 260-foot-high (80-m-high) granite hill, including a massive stone obelisk. **Archeologists** believe the king may have lived and held court there, or that the area was a religious center.

Below the Hill Complex is a huge elliptical wall known as the Great Enclosure. Again, no one knows for certain what purpose the enclosure served, but there is speculation that it may have housed the king's most important wife or that it may have been a school, the center for religious **rituals**, a harem, or a royal court. Inside the Great Enclosure are more than 300 structures, including a shrine and a mysterious beehive-shaped tower that is believed to have been a workshop for fashioning gold objects. The Great Enclosure also contains a number of passageways. The third area is known as the Valley Complex; it housed the majority of the population of Great Zimbabwe, which archeologists now estimate to have been about 18,000 people at its peak.

The wall that surrounds the Great Enclosure is an amazing architectural accomplishment and is the largest ancient stone structure south of the Sahara Desert.

The wall winds sinuously for 800 feet (243 m) with no corners or right angles. It is 16 feet (4.8 m) thick and 32 feet (9.9 m) high, and was made from more than one million granite blocks hewn from the nearby cliffs. The local climatic combination of hot days and cold nights caused the granite to expand and contract. As a result, the granite split naturally into rectangular slabs that were fit together so neatly by the masons of Great Zimbabwe that no mortar was needed.

The culture that built Great Zimbabwe was not literate and thus left no written records. More remarkably, no oral tradition exists either. There seems to be substantial agreement that the Bantu-speaking Shona people built the city, although some have proposed other ethnic groups who live nearby.

Great Zimbabwe is, unusually for an ancient city, not built near a river, and the surrounding soil on the Harare plateau can be cultivated only with difficulty. Some scholars speculate that the city was built on this site to satisfy some religious purpose, perhaps to honor the Shona deity Mwari. Others have theorized that the city was built near a mine and served as a combination smelter, fort, gold storage facility, and temple. Astronomer Richard Wade of the Nkwe Ridge Observatory in South Africa has recently theorized that Great Zimbabwe may have been, like Stonehenge in England, an astronomical observatory.

Whatever its purpose, Great Zimbabwe was abandoned by C.E. 1500. No one knows why, but most historians speculate that overgrazing and drought led to famine, which in turn led the people to move to better land. It is also possible that, if Great Zimbabwe indeed housed a mine, the gold ran out. Yet the mystery remains; no one really knows why the people left.

See also: Archeological Discoveries; Art and Architecture; Bantu Migration; Language and Writing; Religion.

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Greek Colonies

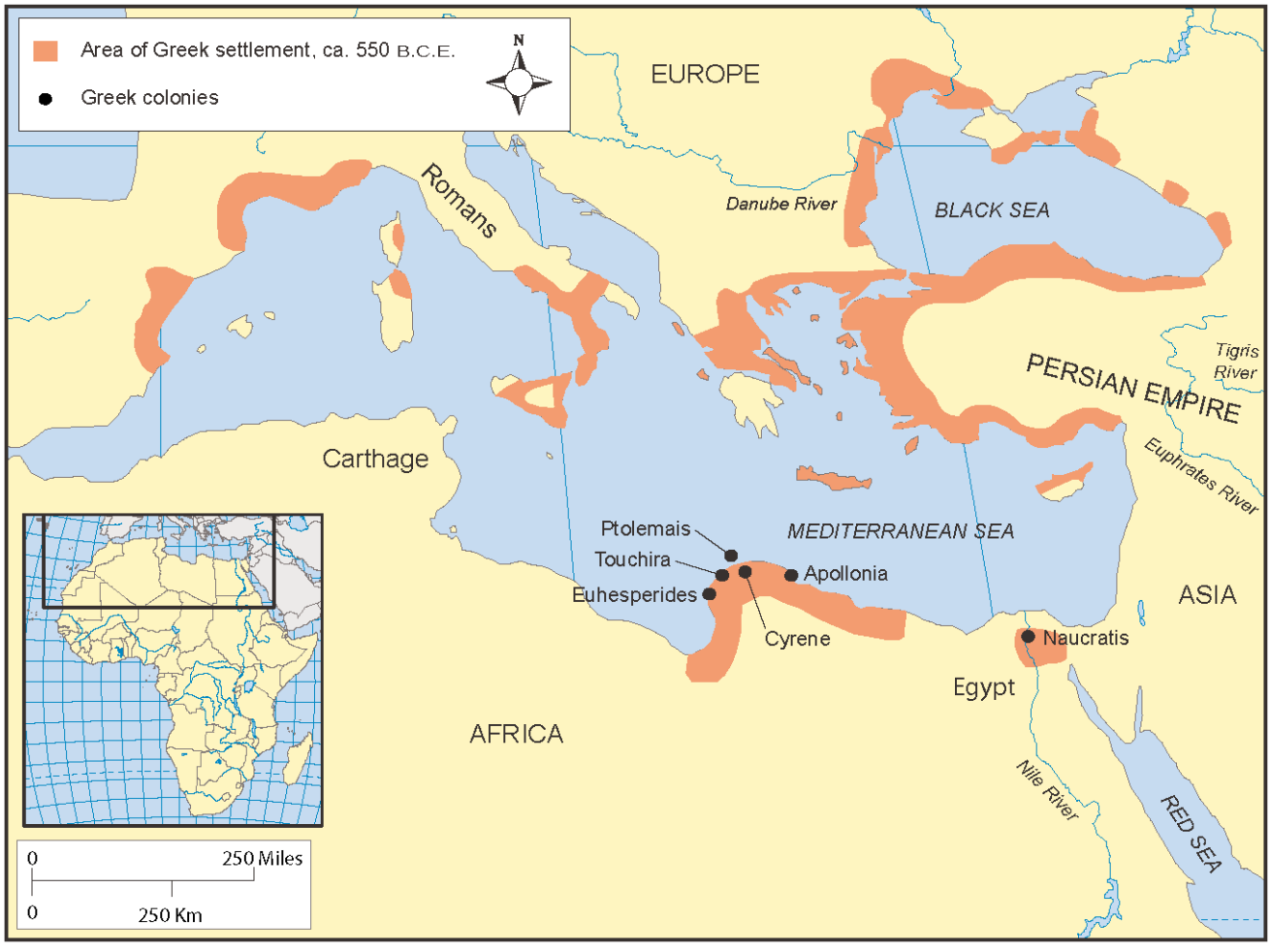
Settlements founded by the ancient Greeks along the Mediterranean coast, beginning in the seventh century B.C.E., including many in northern Africa. The Greeks founded colonies for a variety of reasons. Sometimes cities established colonies because they became too crowded and needed more land for their expanding populations. Civil unrest often led the losing faction to chose to settle elsewhere. Most often, however, colonies were established to make it easier for Greek cities to trade with foreign nations.

The Greeks established two kinds of colonies, called *apoikiai* and *emporia*. *Apoikiai* were intended to become city-states in their own right, whereas *emporia* were founded primarily as trading outposts. The establishment of a new colony was a solemn occasion that usually included consultation with an **oracle**. Those chosen to emigrate might include only certain classes of people, or one son would be sent from each family that had more than one. The emigrants might carry with them sacred fire from the public hearth to ignite a fire in the new city. Once settled, the migrants would maintain close ties with the parent city, adopting its laws and consulting it on important issues.

The most important Greek settlement in Africa was the city of Cyrene, which was founded around 630 B.C.E. in what is now Libya. Emigrants from the island of Thera, which had suffered devastat-

INDEPENDENT GREEK COLONIES

The northern coast of Africa, between Carthage and Egypt, was home to several ancient Greek colonies. Among the most important was the city of Cyrene, founded in 630 B.C.E. Although the colonists often maintained ties with their city of origin, Greek colonies were always independent from the founding city-state.



ing droughts, founded the city. Cyrene was ideally located, about 10 miles from the Mediterranean Sea, on a hillside. Terraces led down to its port, called Apollonia. The climate was pleasant, the land fertile, and Cyrene quickly became a wealthy and powerful city-state, founding other colonies, most notably Barca to the west in about 560 B.C.E. One of Cyrene's most important exports was the herb silphium, which was overharvested and is now extinct.

The native people of Libya resented the Greek settlers. During the reign of the Greek Aristoteles, also called Battus II (r. 583–560 B.C.E), new settlers from Thera came to Cyrene and were given land that had been taken from the Libyans. The Libyans asked Egypt to help them regain their land, but the Egyptian armies were defeated. The Cyreneans then made alliances with the Egyptians and their Persian conquerors in order to protect themselves from the Libyans. Eventually, however, Cyrene became part of the Egyptian empire of the Ptolemaic dynasty (323 to 30 B.C.E.) and then fell under Roman control. An earthquake in C.E. 365 destroyed the city.

Cyrene was home to the mathematician Theodorus; the poet Callimachus; and the scholar Eratosthenes, the first person to estimate the circumference of the Earth. It was also the home of Simon of Cyrene, noted in the New Testament for helping Jesus of Nazareth carry his cross.

See also: Libya.

Hannibal

See Carthage.

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Ibn Battuta (C.E. 1304–ca. 1377) (eebin bahtuta)

Islamic scholar who traveled more than 75,000 miles (120,000 km) and visited every country of the Dar al-Islam, or Islamic world, of the fourteenth century C.E. His fascination with the different peoples and places he encountered led him to compile a record of his travels. This work has served later scholars as a rich source of information about the **cultural history** and **social history** of the medieval Islamic world.

Born in Tangier, Morocco, Ibn Battuta was educated at the *madrassa*, or Islamic religious school, in Tangier. At the age of 21, he undertook the *hajj*, or pilgrimage, to the holy city of Mecca that is the duty of every devout Muslim.

Unlike most other pilgrims, Battuta did not return home after his trip to Mecca. Instead, he resolved to travel the entire Islamic world, which at the time stretched from Spain across North Africa, throughout Southwest Asia, and as far east as Indonesia. Battuta's travels lasted nearly 30 years. He traveled a greater distance than any other person before him and visited such far-flung places as Persia, Ethiopia, Zanzibar, India, China, Turkey, Russia, and Ceylon.

When Battuta returned to Morocco in 1354, the sultan ordered him to dictate his adventures to a young writer, Ibn Juzayy. The title of the book that resulted from this collaboration was *A Gift to Those Who Contemplate the Wonders of Cities and the Marvels of Traveling*, but it is often referred to today as *The Rihla*, which is an Arabic word akin to "travelogue."

Scholars today study Battuta's book because it provides information about everyday life in the fourteenth century C.E. that exists nowhere else. Of particular interest to those who study ancient Africa are two trips Battuta made, one down the eastern coast of the continent in 1331, and another through western Africa along the Niger River to the kingdom of Mali.

Battuta was a religious man who judged black Africans on the extent of their devotion to Islam. For example in Mombassa in what is now Kenya, Battuta describes the people as "trustworthy and righteous," and notes that "Their mosques are made of wood, expertly built. At every door of the mosques there are one or two wells." On the other hand, in Walata, in what is now Mauritania, he is offended that the women are "not modest in the presence of men," do not wear the veil, and take sexual partners outside marriage.

Battuta was an acute observer and gives vivid insights into daily life. He describes how people dressed, what they ate, and how they behaved. In Mali, he notes, there was little crime and people could travel with no fear of being robbed. He adds that the people "meticulously observed the times of the prayers and attendance at them." He disliked what he saw as immodesty among the women and the practice of eating animals that had not been slaughtered according to religious rules.

Little is known about Battuta's life after the publication of his book. Even the date of his death is uncertain. For nearly 400 years after his death, his book was little read. Scholars rediscovered his work in the nineteenth century C.E., and his reputation continues to grow even today.

See also: Mali; Mauretania; Religion.

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Islam

See Ibn Battuta; Religion.

Kinship

See Culture and Traditions.

Kongo Empire

Central Africa kingdom that reached the height of its power in the fifteenth century C.E., located in present-day Angola and parts of the **Republic** of the Congo and the Democratic Republic of the Congo. Kongo became the most important state in an extensive central African trade network. It grew rich from selling slaves, ivory, **textiles**, and pottery, as well as from the **tribute** it demanded from several smaller neighboring kingdoms.

Founded by Bantu-speaking people known as the Bakongo in the fourteenth century C.E., the Kongo Empire was divided into six states: Sonho, Bamba, Pemba, Batta, Fango, and Sundi. A governor appointed by the king administered each state. The area of the kingdom spanned more than 50,000 square miles (130,000 sq km).

Kongo was likely the first kingdom in western Africa to have contact with Europeans. A Portuguese explorer, Diogo Cão, arrived at the capital city of Mbanza-Kongo in 1483 and persuaded the *manikongo*, or king, Nzingu Kuwu, to exchange emissaries with Portugal. Soon after, the manikongo asked the Portuguese to send missionaries and military advisers to Kongo in exchange for ivory, copper, and the other riches of the area, which included diamonds.

Nzingu Kuwu converted to Christianity and took the name João I. By 1500, his eldest son, Nzingu Mbemba, had also converted to Christianity. After his father's death in 1505, Nzingu Mbemba seized the throne and ruled as King Afonso I (r. 1505–1543), changing the name of his capital city to São Salvador. Afonso's seizure of the throne was in keeping with European systems of inheritance, but in violation of local custom. When Afonso defeated his half brother, who claimed the throne, he attributed his victory to the intercession of the Virgin Mary and St. James, thus using Christianity to lend authority to his rule.

This brass crucifix, known as the Nkangi Kiditu Crucifix, is from the ancient Kingdom of the Kongo and depicts Christ as a black man. Portuguese traders were influential in converting the people of Kongo to Christianity. (Bildarchiv Preussischer Kulturbesitz/Art Resource, NY)

Christianity in Kongo took on a distinctive African character—some taught that Jesus was born in the Kongo, for example—and was easily incorporated into existing religious **ritual**. The Kikongo catechism (1555) was the earliest printed text in a Bantu language.

At first the alliance with the Portuguese was mutually beneficial. Trade flourished, and many new plants were imported into Kongo—including guava, lemon, orange, papaya, pawpaw, mango, kumquat, and pineapple—all of which did well in the tropical climate.

The slave trade, however, proved to be the undoing of Kongo. As the Portuguese expanded their empire in the Americas, they saw Kongo primarily as a source for slaves to work Portuguese plantations in Brazil. It is estimated that the Portuguese enslaved 10,000 people each year. By the 1520s, most of the missionaries who had come to Kongo had returned home, and the Portuguese who remained were primarily slave traders.

In 1526, Afonso wrote to Portuguese King João III, his "brother monarch," asking him to end the slave trade. He said, in part,

> [your people] in order to satisfy their voracious appetite, seize many of our people . . . And as soon as they are taken by the white men they are immediately ironed and branded with fire . . . so great, Sir, is the corruption and licentiousness that our country is being completely depopulated. That is why we beg of Your Highness to help and assist us in this matter . . . because it is our will that in these Kingdoms there should not be any trade of slaves nor outlet for them.

His request, however, was ignored. Over time, the empire was seriously weakened by the depletion of its population, making it vulnerable to attacks by internal factions and neighboring states.

Afonso's successors encountered years of unrest and civil war, which many scholars believe was fomented by the Portuguese in order to keep the rulers weak so the slave trade could continue unimpeded. Afonso's successor, Diogo I (r. 1545–1561), fought a violent civil war and was eventually replaced by a successor chosen by the Portuguese, Alvaro I (r. 1568–1587). Alvaro and his successor Alvaro II (r. 1587–1614) sought to increase their power and to confine Portuguese expansion to the southern parts of the territory. After the death of Alvaro II, however, the Portuguese governor of neighboring Angola attacked Kongo, capturing many slaves.

For the next 50 years, there were a series of conflicts between the Portuguese colonists and the kingdom of Kongo. Moreover, Kongo underwent a great deal of internal turmoil over succession to the throne, eventually leading to the disintegration of the kingdom. A visitor to Mbanza Kongo in 1678

LINK TO PLACE

Africa's First Roman Catholic Dynasty

When Diogo Cão came to Kongo in C.E. 1484, he invited some Kongolese to visit Portugal. When they returned to Kongo, the *manikongo*, or king, Nzingu Kuwu (r. ca. 1480–1505), was impressed by what they learned. He eventually converted to Christianity and took the Portuguese name João I. However, João soon recanted because Christianity forbad polygamy, and the king had many wives. His son, Nzingu Mbemba, converted to Catholicism, taking the name Afonso I, and remained a Catholic all his life. Thus began Africa's first Catholic dynasty. According to John Reader, in *Africa: A Biography of the Continent* (1998), Afonso was an intelligent man who genuinely believed in Christian **doctrine**. He also admired the European way of life and adopted Portuguese clothing and manners.

Catholicism was advantageous to Afonso partly because it facilitated his rise to power. Under the traditional system, he, as eldest son, would not have acceded to the throne. He adopted the Christian-European political ideology to support his rule and defeated his brother to win the throne in 1506.

All the kings who ruled Kongo for the next 150 years were Catholic. Like Afonso, later rulers wrote to kings and popes to beg for help to end the slave trade and eliminate Portuguese influence. Alvaro II wrote to Pope Paul V in 1613 complaining that he is "very badly treated by the Portuguese and the prelates," and notes that he hides the truth "so that the pagan kings may not be glad of it." But there was little help for Kongo from those they believed to be their spiritual brothers and sisters.

At the battle of Mbwila in 1665, the last member of the original Catholic dynasty, Antonio I, was defeated by Portuguese forces and decapitated. After his death, the once great empire disintegrated into a number of minor kingdoms.

noted that the city had been utterly destroyed and overrun by elephants.

See also: Bantu Migration; Religion.

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Kush

Ancient Nubian kingdom that flourished from 1700 B.C.E. through C.E. 350. Kush was a black African kingdom that influenced and was influenced by Egypt. Indeed, Kushite kings ruled Egypt itself for nearly 100 years.

The period during which Kushites dominated the region of Nubia (which lay just south of Egypt) can be divided into three phases, each referred to by the kingdom's capital city at the time: Kerma, Napata, and Meröe. The first city, Kerma, was the capital of a Nubian kingdom known as Yam, but by 1700 B.C.E., it had become the capital of the Kushite kingdom. The earliest structures built

there—including homes and palaces—were round, based on traditional African architecture. Later structures are rectangular, influenced by Egyptian architecture.

A cemetery to the south of the city reveals a great deal about Kushite culture. That Kush was a stratified society is illustrated by the differences between the tombs of ordinary people and those of the ruling class. The dead were buried in oval pits, about five feet (1.5 m) deep, with offerings buried with the dead—the elite with food, pottery, weapons, horses, and dogs; the common people with much less. In many of the larger graves, there are several skeletons, indicating that many people were buried along with members of their household. One tomb holds more than 300 servants who were sacrificed with their master.

Bodies were placed on wooden or stone beds in the fetal position, heads facing the rising sun to symbolize the idea of a new life after death. Kings' tombs often included huge stone boats, perhaps intended to ferry them to the next world. The burial mounds were covered with millions of black and white pebbles.

As part of an expansion effort, Egypt attacked Kush in 1950 B.C.E. and by 1425 B.C.E. dominated most of upper and lower Nubia. A great deal of Egypt's wealth came from Nubia. Gold, slaves, wood, resins, gemstones, skins, cattle, ivory, and exotic animals were imported into Egypt through Nubia. Nubians were brought to Egypt as slaves and served in the Egyptian military; young Nubian noblemen were raised in the Egyptian court. The Egyptians built hundreds of temples in Nubia and intermarried with the indigenous population. Nubians readily accepted Egyptian culture and religion.

One of the most important sites for worship of the Egyptian god Amen was in Nubia at Gebel (or Jebel) Barkal, a mountain near Napata from which projects a huge stone pinnacle. Recent **historical research** suggests that both Egyptians and Nubians regarded this site as one of the holiest in the entire empire, and that Egyptian pharaohs came to Nubia to be crowned. Gebel Barkal later became important to the Nubian pharaohs as a sign of their right to rule both Egypt and Nubia.

After the death of Pharaoh Rameses III in 1156 B.C.E., Egypt fragmented into several smaller kingdoms. As a result, between 1100 and 800 B.C.E., Nubia was free from Egyptian control. Little, however, is known about this period in Nubian history.

In the eighth century B.C.E, a new Kushite kingdom, centered in Napata, arose. The kingdom grew rich as a result of its dominance over trade routes from the south and its access to gold and precious gems. The ruling elite became thoroughly Egyptianized, perhaps through contact with Theban priests of Amen. The Kushite king Kashta (r. ca. 760–747 B.C.E) conquered all of northern Nubia and declared himself "King of Upper and Lower Egypt," although there is no evidence that he actually ever visited Egypt.

Kashta's son Piye, also known as Piankhy, succeeded in conquering Upper (southern) Egypt, and founded Egypt's Twenty-fifth Dynasty. Piye ruled both nations from Napata, but in the twenty-first year of his reign, he moved into Egypt to quell a rebellion fomented by kings of the Nile Delta. Uncharacteristically for a ruler of his day, Piye noted that he disliked bloodshed and forgave his enemies. Some historians speculate that these sentiments were characteristically Nubian.

The Kushite pharaohs ruled Egypt for nearly 100 years (760–671 B.C.E.). They are credited with orchestrating a renaissance of many Egyptian values and traditions that had been abandoned over the years. They revived the pyramid as the proper royal tomb; over the centuries, the Kushites built 228 pyramids, three times more than did the Egyptians, though of a slightly different design. They also built magnificent temples and sponsored a revival of painting and sculpture in the Egyptian style.

During the early seventh century B.C.E., an Assyrian army drove the Kushites out of Egypt. Although the Kushites reconquered Egypt in 663 B.C.E., within a year they again were defeated and forced to abandon the country. Nevertheless, Kushite kings continued to proclaim themselves pharaohs; they spoke the Egyptian language, used **hieroglyphic** writing, and worshipped Egyptian deities.

These pretensions may have angered later Egyptian kings. In any case, in 593 B.C.E., Psammeticus I of Egypt invaded Kush and sacked Napata. Little is known about Kushite culture after this period. Historians had once thought that the Kush moved their capital from Napata to Meröe during this time, but most now believe that Napata was never the capital—that it was, in fact, a religious center. Nevertheless, the period between 600–300 B.C.E. is often referred to as the Napatan period, and the period after 300 B.C.E.—when the Kushite kings began to be buried in Meröe—as the Merötic period.

In the interim, as is clear from archeological **excavations** of Meröe, Kushite culture began to shed many of its Egyptian characteristics and become more Africanized. Images of members of the royal family show that their costumes and headdresses were quite different from the Egyptian styles they had adopted earlier. Nubian deities were added to the **pantheon** of Egyptian gods, notably Apedemak, a lion-headed god who was regarded as the king's protector. Meröe even developed its own language, whose script has never been deciphered. Thus, much about the Kushite culture in Meröe is shrouded in mystery. Meröe flourished until 359 B.C.E., when it was destroyed by an attack of Axumites from Ethiopia.

See also: Archeological Discoveries; Axum; Egypt; Language and Writing; Nile River; Nubia; Religion.

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L

Language and Writing

Geneticists and other scholars suggest that the uniquely human ability to use written and spoken language may have originated in ancient Africa. In fact, all language may be descended from the so-called "click" languages spoken today.

Click languages are spoken in the Kalahari desert by several groups including the Ju'hoansi, and near Lake Eyasi in Tanzania, by the Hadzabe and the Sandawe. Each of the languages has four or five click sounds that are made by sucking the tongue down from the roof of the mouth, something akin to the English sound *tsk-tsk*. The upright bar in the word *Ju?'hoansi* indicates a click sound. The word, then, is pronounced *ju-twansi*, with the *tw* pronounced with a distinct click.

Many scholars believe that the landscape of Africa itself was a major force in the development of speech. They say that the origin of language lies in the kinds of adaptations that human ancestors developed in order to be able to survive in the savannahs of Africa. The African environment, it is believed, encouraged the development of the **physiological** characteristics that allowed spoken language to develop.

EMERGENCE OF WRITTEN LANGUAGE

Few of the groups speaking ancient African languages developed writing systems. In general, small **tribal** groups do not need writing, but larger, more complex groups do. Thus, as complex civilizations emerge, the need for writing grows. In ancient Egypt, for example, a huge government **bureaucracy** arose partly in order to manage the complex process of irrigating farm fields with floodwaters from the Nile. Eventually a system of writing was required to keep track of economic transactions, government information, and religious ideas.

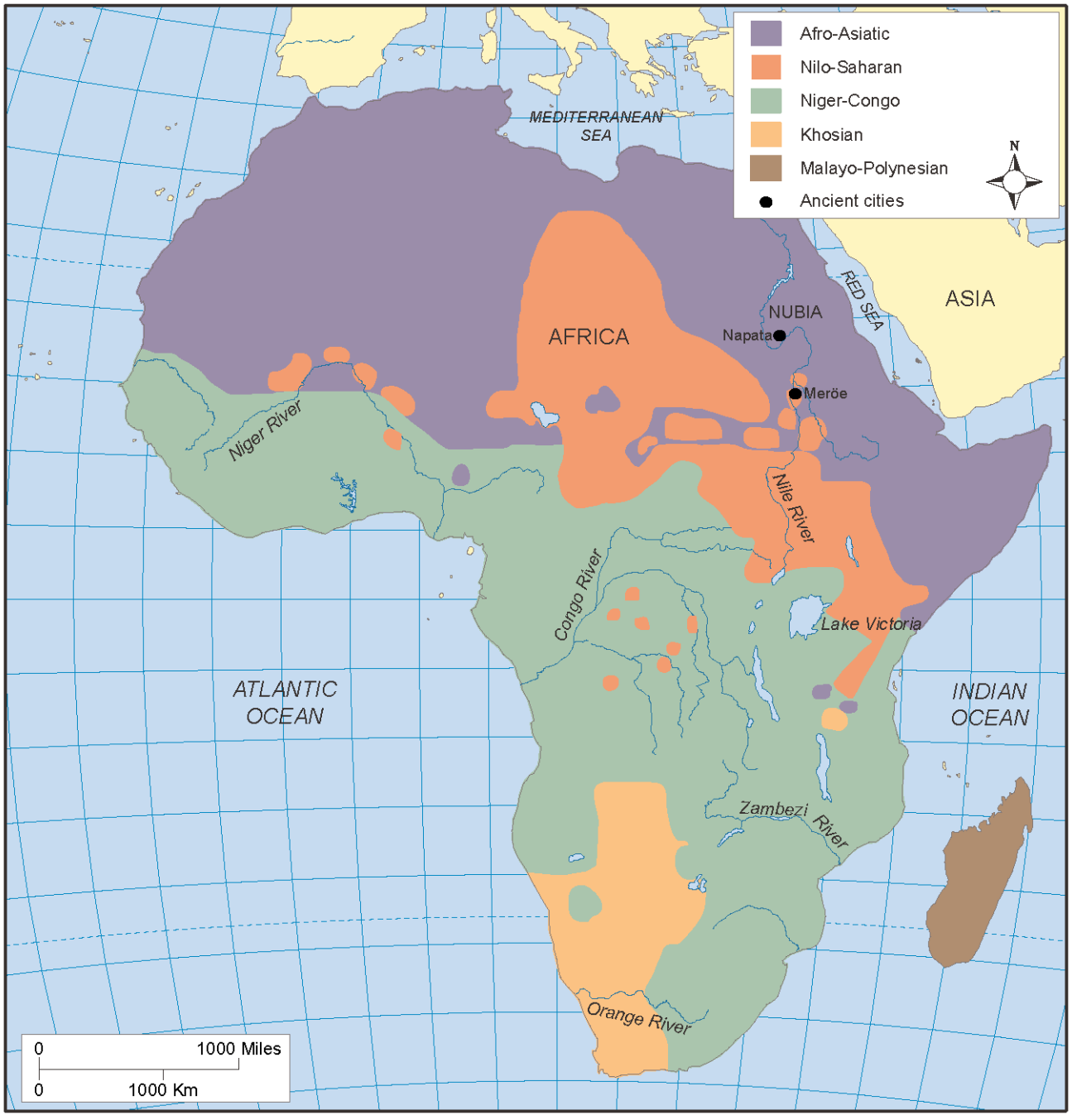
Many scholars believe that the first writing system, or **syllabary,** arose in Sumer, in what is now Iraq, about 3100 B.C.E. This writing system used a kind of script known as **cuneiform** because the characters were wedge-shaped. In C.E. 1998, however, Günter Dreyer, a German **archeologist** working in Egypt, announced that **hieroglyphs** found in Abydos, Egypt, might suggest that Egyptian was actually the first writing system, predating the Sumerian by as many as 300 years. Certainly, the Egyptians themselves never acknowledged borrowing from the Sumerians. They believed that their form of writing came to them as a gift from Thoth, the god of learning. The Egyptians called hieroglyphs *medu netjer*, "words of god."

Egyptian Hieroglyphics

Regardless of their origins, **glyphs** evolved along the same path as Sumerian writing. Both began by

MAJOR LINGUISTIC GROUPS

This map shows the major language families of ancient Africa. The largest families were Afro-Asiatic, with languages spoken along the northern coast of the continent, and Niger-Congo, spoken throughout the southern part of the continent.



using **pictograms** or **pictographs,** drawings that represent words. The hieroglyph for an eagle, for example, is a simplified drawing of an eagle. Pictograms are still commonly used in mass communication today; the stylized drawings of men and women on restroom doors are pictograms.

LINK IN TIME

The Rosetta Stone

In July 1799, French soldiers in Napoleon Bonaparte's army discovered the key to a centuries-old mystery. The soldiers, who had occupied northern Egypt, were defending the far-flung French Empire from the Ottoman Turks to the east. Near the town of Rosetta, they dug in the sand to fortify their defensive position. While digging, Lieutenant Pierre Bouchard, a young engineer who was also interested in archeology, came upon a large stone 4 feet (122 cm) high, 2.5 feet (76 cm) wide, and weighing 1,584 pounds (720 kilos).

Although parts of the stone had broken off, three **inscriptions** remained distinct. The soldiers could not decipher the top two inscriptions, one of which appeared to be written in **hieroglyphics**, but some of them read Greek and immediately recognized the third inscription near the bottom of the stone. It read: "This decree shall be inscribed on . . . hard rock in sacred characters, both native and Greek."

Hearing of this discovery, some **archeologists** believed that all three inscriptions contained the same message. The Rosetta Stone, it appeared, held the key to unlocking the mystery of Egyptian hieroglyphics. Before this time, archeologists did not know how to translate hieroglyphics.

Even with the possible clues on the Rosetta Stone, it took 23 years before French language scholar Jean-François Champollion completed the translation. The task was a daunting one because no one knew for sure if the three inscriptions were identical. After years of work, Champollion determined that the middle inscription was in **demotic**, a simplified form of hieroglyphs used by the common people of Egypt. Champollion succeeded where other scholars had not because he knew **Coptic**, a language descended from the ancient Egyptian. By noting similarities between the demotic and the Coptic, Champollion was able to prove that some of the hieroglyphs represented sounds, which enabled him to translate the hieroglyphs. Champollion's *Grammaire Égyptienne* (*Egyptian Grammar*) was published posthumously in 1841. The Rosetta Stone indeed solved the mystery.

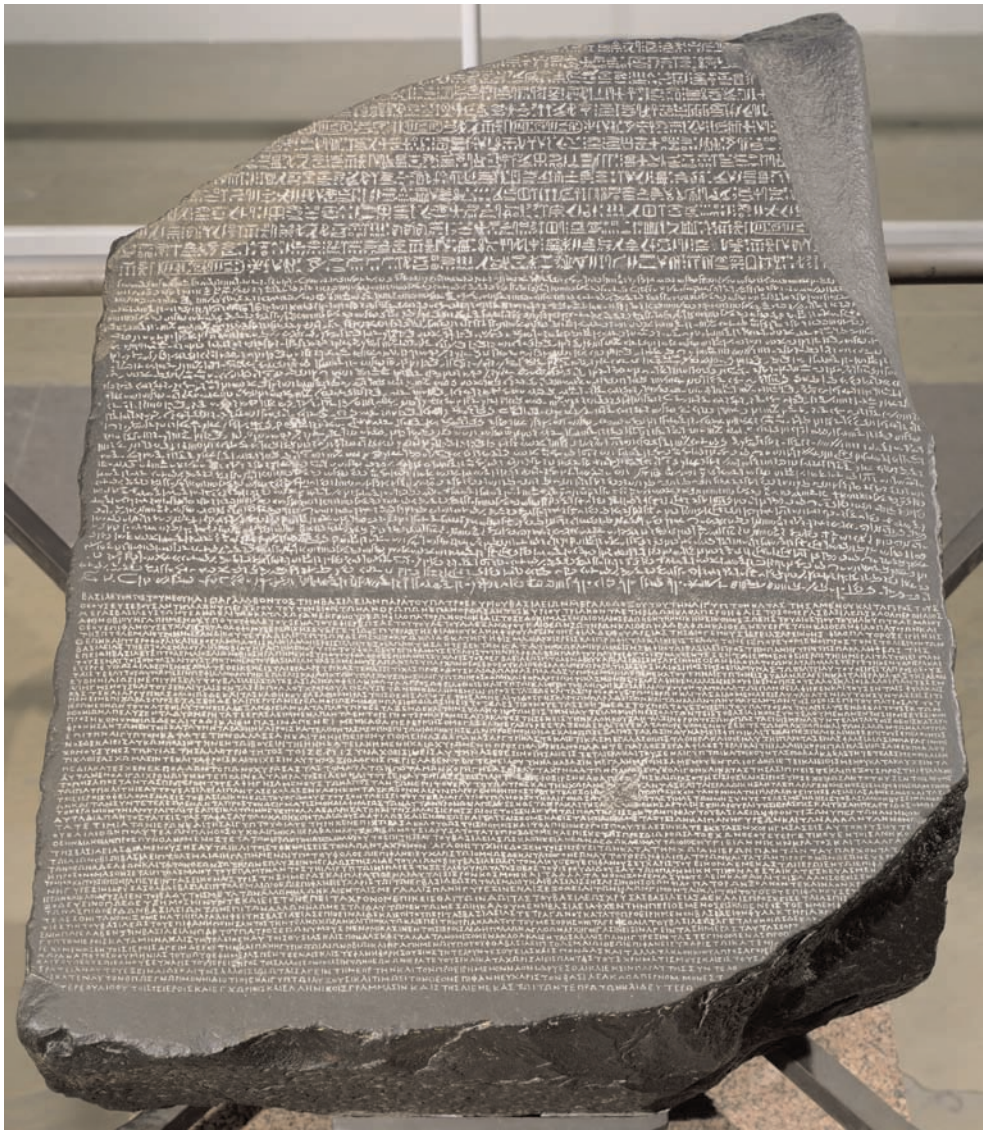
For many years the Rosetta Stone has been housed at the British Museum in London. In 2003, the Egyptian government demanded that the **artifact** be returned. To date, the British have not complied.

However, pictograms are of limited use because they cannot express complex ideas. The Egyptians thus developed **ideograms**, pictures that represent ideas. For example, the Egyptian hieroglyph of a musical instrument conveyed the idea of pleasure. Modern ideograms include a sign with a picture of a cigarette with a slash through it, universally understood to mean "no smoking."

Eventually, Egyptian **scribes** began to assign a sound to some pictograms. Such symbols are called **phonograms**. Most modern alphabets are made up entirely of phonograms. Phonograms give a language greater flexibility. For example, the use of phonograms allowed Egyptian scribes to write the names of foreign visitors, something they were unable to do before this innovation.

The Egyptians never standardized the direction of their script, and scribes sometimes wrote from left to right, sometimes from right to left, and sometimes vertically. To make matters more complicated, a scribe might write in several different directions in the same text. Fortunately, there was one standardized element: the first hieroglyph of each line faced in the direction in which the line was to be read.

Egyptian writing took a leap forward with the invention of **papyrus** between 3100 and 2900 B.C.E. Egyptian scribes found that fashioning hieroglyphs



The Rosetta Stone contains essentially the same text written in two different languages—Greek and Egyptian. The Egyptian text is written in two scripts: hieroglyphic and demotic. The Stone helped modern scholars learn to translate Egyptian hieroglyphics. (The Bridgeman Art Library/Getty Images)

with a reed pen on papyrus was much faster and easier than carving them into stone. Over time, they began to connect hieroglyphs much in the manner of our own cursive script.

This more **utilitarian** writing was known as **hieratic**, and over the years it came to resemble the hieroglyphs less and less. Egyptians believed that the hieroglyphs were sacred and had magical powers, and continued to carve them on temples and tombs. For other purposes, however, the hieratic script was much easier and quicker. In about 700 B.C.E., scribes developed an even simpler form of writing called **demotic**, from a Greek word that means "of the people."

Initially, only a very few Egyptians could read and write, and to be a scribe in Egyptian society was a great honor. As the writing became simpler, however, many more people learned to read and write, making it more difficult for scribes to earn a living. Many scribes became authors, publishing works of fiction and poetry.

Hieroglyphs continued to be used in Egypt until about the fourth century C.E. They survived many foreign conquests and were regarded even by Greek and Roman rulers as sacred and magical. The language finally died out and was replaced by **Coptic**, an Egyptian language written in Greek characters. Today, Coptic is used only in rites of the Coptic

Ancient Egyptian writing included more than 2,000 glyphs, or individual signs. Most of the glyphs resembled people, animals, or everyday objects. Note the often-used scarab or dung beetle near the bottom of the middle panel. (Jochem D. Wijnands/Taxi/Getty Images)

church. In the seventh century C.E., Arabic replaced Coptic as Egypt's language. By the fourth century C.E., no one alive could read Egyptian hieroglyphs. It was not until the nineteenth century C.E. that the discovery of the Rosetta Stone allowed scholars to translate hieroglyphs.

Merötic

To the south of Egypt along the Nile River lay another great African civilization in the region called Nubia. The Egyptians called these people the Kush. After a military defeat by the Assyrians in about 600 B.C.E., the Kushites moved their capital south from Napata to the island of Meröe, located near the border of modern Egypt and Sudan. Although this civilization rivaled Egypt's, and Kushites even ruled Egypt for a period, scholars have paid much less attention to Nubia than to Egypt. One possible reason for the lack of attention is that the written language of Meröe, called Merötic, is indecipherable. Merötic uses a script that is similar to Egyptian hieroglyphs, but it differs from Egyptian writing in that it is always read from right to left. Unless something like a Rosetta Stone is found for Merötic, this ancient language may remain forever a mystery.

Ge'ez

One other great ancient African civilization developed a written language: the Axum. The Axum flourished in the fourth and fifth centuries C.E. in what is now Ethiopia, along the east coast of Africa. The Axumite language was influenced by the Sabeans, who emigrated from Yemen in southern Arabia during the first millennium B.C.E. The original script, *boustrophedon*, literally means "as the ox turns in plowing" and indicates that lines of script are read alternately left to right, then right to left.

TURNING POINT

The Invention of Papyrus

Between 3100 and 2300 B.C.E., the Egyptians invented a technique for turning the reed of a plant called *Cyperus papyrus* into paper through a complex process of soaking and pounding. Workers harvested papyrus reeds that were about 10 to 15 feet tall and stripped them of their tough outer layer, then sliced the yellowish core into thin strips. Afterwards, they soaked the broadest strips from the center of the plant, pounded them thin, and arranged them side by side, with each strip overlapping the next. Another layer of strips then was placed on top of the first layer at right angles. Workers pounded the resulting **papyrus** sheet again and then weighted it down with a stone slab to dry for about a week.

After the sheet had dried, papermakers polished it with a shell or piece of ivory. The edges of the sheet were trimmed and the ends glued together to form a scroll. Usually, Egyptian papyrus scrolls unrolled to between six inches (15 cm) and 12 inches (30 cm) wide and 50 feet (15 m) long, although longer rolls have also been discovered.

The invention of papyrus enabled Egyptian **scribes** to write much more quickly. This led to a simplified script, called **demotic**, which greatly increased the number of manuscripts they could create.

The Ge'ez system of writing used 24 symbols but, like Egyptian, did not use vowels. Vowels were added when the Axumites converted to Christianity, sometime during the fourth century C.E. The earliest known inscriptions in Ge'ez were written in the third century C.E. It has not been used as a spoken language since the tenth century C.E., but it is still the official language of the Ethiopian Orthodox Church.

LANGUAGE AND WRITING

CA. 3400–3100 B.C.E. Earliest known writing systems arise in Sumer and Egypt

CA. 3100–2900 B.C.E. Invention of papyrus

CA. 700 B.C.E. Egyptians evolve a simpler form of writing called *demotic*

C.E. 300 Last use of hieroglyphic writing; earliest known inscription written in Ge'ez, a language used in what is now Ethiopia

C.E. 400 Vowels are used in the Ge'ez language for the first time

C.E. 1000 Ge'ez language dies out except for religious use

C.E. 1799 Rosetta Stone found by Pierre Bouchard

C.E. 1822–1824. Rosetta Stone deciphered by Jean-François Champollion

C.E. 1998 Earliest Egyptian inscriptions, dating from ca. 3400 B.C.E. found in Abydos by archeologist Günter Dreyer

C.E. 2003 Egyptians demand the return of the Rosetta Stone from the British

WHAT WE CAN LEARN FROM ANCIENT LANGUAGES

Scholars who study the development of language can be thought of as archeologists of words. They study **cognates**, or words that are similar from one language to the next, to determine families of languages and to determine when certain words entered languages. For example, studies of African languages have allowed scholars to determine such things as when people first learned how to plant crops or work with metal. By comparing the word for "iron" in several African languages, for example, **linguists** can figure out which language coined the term, which in turn can lead to an

understanding of when the word was first used. As one language borrowed words from another, scholars can trace the history of contact among different peoples. Language, when studied along with physical **artifacts**, is a rich source of information about ancient civilizations.

See also: Axum; Egypt; Kush; Nubia.

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Libya

Term used by the ancient Greeks to refer to most of North Africa and the Berber tribespeople who inhabited the region. In ancient times, the name *Libya* referred to all of Northern Africa west of Egypt, including what are today the countries of Libya, Algeria, Tunisia, Morocco, and parts of Mauritania.

In the eighth millennium B.C.E., the people living in the coastal areas of North Africa knew how to domesticate animals and grow crops. In prehistoric times, the Sahara was a savannah that had plenty of rainfall, abundant game, and rich pastureland. The nomadic inhabitants of this area hunted wild game and herded domestic animals. Around 2000 B.C.E., however, the land began to dry up and become the desert it is today.

In about 3000 B.C.E., a group of people migrated to northern Africa, perhaps from southwestern Asia. They called themselves *imazighan*, which means "free people." Arab conquerors who came in C.E. 643 called them Berbers (meaning "not Arab"), which is how they are usually referred to today.

Ancient Libya consisted of three major regions: Tripolitania, Cyrenaica, and the Fezzan. Cyrenaica was located in the eastern portion of Libya, and Tripolitania to the west; the Fezzan were the desert regions to the south. The Phoenicians, an ancient civilization of the Middle East, colonized Tripolitania as early as the twelfth century B.C.E. By the fifth century B.C.E. the region was dominated by the great Phoenician city of Carthage in north Africa. Phoenician settlements along the coast included Oea (now known as Tripoli), Labdah (Leptis Magna), and Sabratah. This area became known as Tripolis, or "three cities," and later Tripolitania.

The ancient Greeks colonized Cyrenaica and founded the central city of Cyrene. The Greeks also founded Barce, Euesperides, Teuchira, and Apollonia. Together with Cyrene, these cities were known as the Pentapolis, or "five cities."

During the period of Phoenician and Greek colonization, the Fezzan was home to a people known as Garamantes, who held sway over a chain of oases and controlled the routes traveled by desert caravans from the interior of the region to the coasts. Horse breeders and cattle herders, the Garamantes also developed methods to irrigate their land using underground stone channels called *foggares*.

The Romans conquered Tripolitania and Cyrenaica in the second century B.C.E. While Rome never conquered the Fezzan, it did develop trade and military alliances with the local peoples in the first century C.E. Rome ruled Libya for more than 500 years, during which the region remained prosperous and at peace.

In C.E. 429, the Vandals, a Germanic tribe, crossed into Libya from Spain and made Carthage their capital. From there, they launched attacks on Italy, sacking Rome in 455. In 533, the Byzantine general Belisarius reconquered North Africa for the Roman Empire. The Arab general Amr ibn al-A'as conquered Cyrenaica in 642; two years later, he conquered Tripolitania, bringing the entire coastal region under Arab control. In 663, General Uqba bin Nafi invaded the Fezzan, consolidating Arab rule. Arab soldiers did not bring families with them; instead, they married indigenous women, thus bringing Arab culture to the native peoples.

Over the next several centuries, Libya was ruled by a number of Arab and Berber dynasties. The Berber Almohad dynasty conquered much of Spain and retained a presence there until 1492. In the sixteenth century C.E., Libya became a part of the Ottoman Empire.

See also: Berbers; Carthage; Greek Colonies; Religion.

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Makeda *See* Sheba, Queen of.

Mali

Ancient West African kingdom, located along the Niger River, from the Atlantic coast to the great bend of the river near Timbuktu. Mali flourished from the thirteenth to the fifteenth centuries C.E.

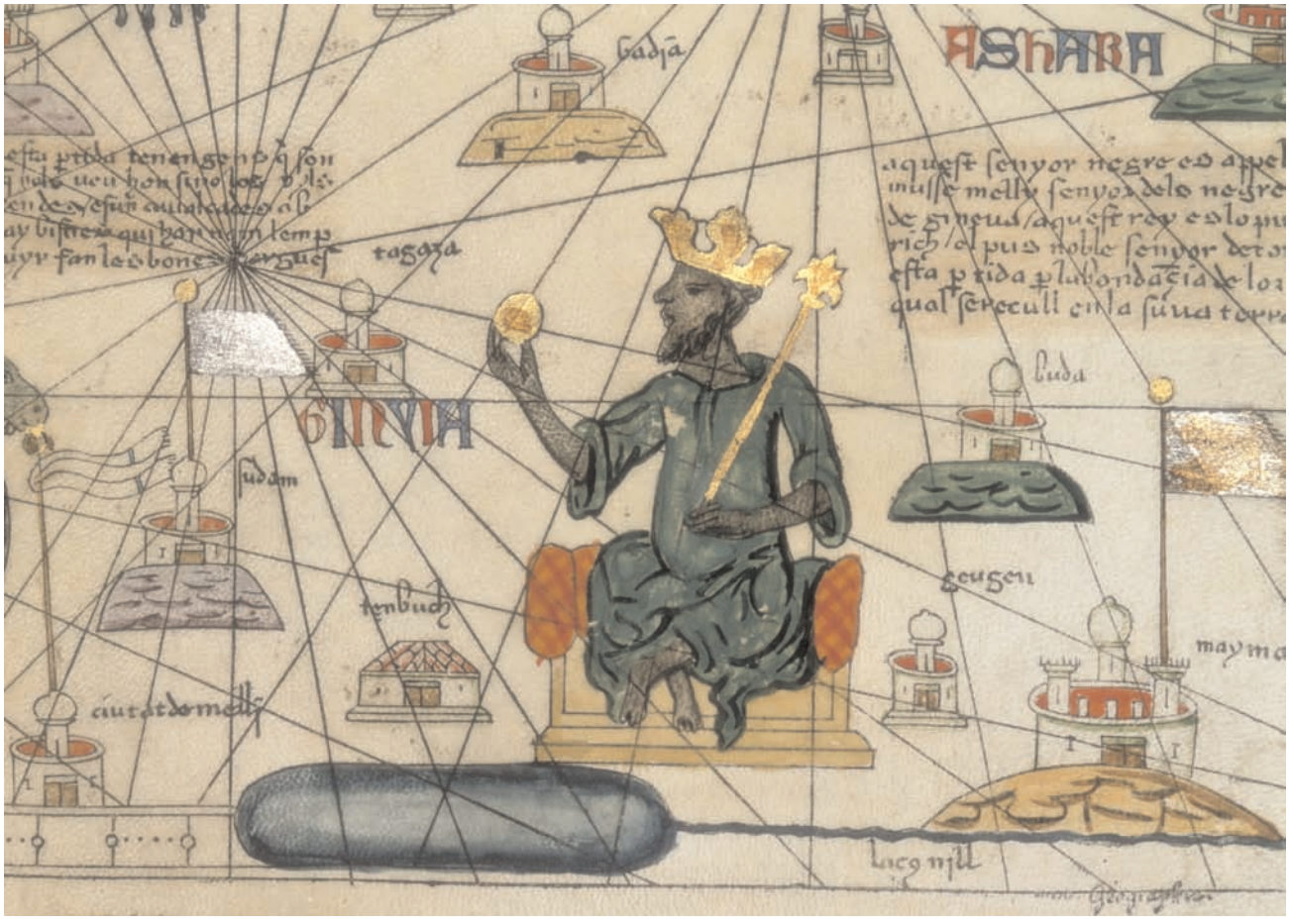
During the twelfth century C.E., the Sosso people of Guinea, led by their king, Sumanguru, took over some of the original territory of Ghana. Among those groups who came under Sumanguru's rule were the Mandinka, who lived in the small state of Mali, just south of Ghana.

According to the *Sundiata*, Mali's national epic, a young man of the same name was one of 12 sons of a Mandinka king. When Sumanguru came into power, he had most of the royal family killed, but he spared Sundiata (whose name means "the hungering lion") because he was frail and weak and could neither walk nor speak. Later, with the assistance of a blacksmith who made braces for his legs, Sundiata grew into a great magician and leader. In about 1240, according to the tale, Sundiata led a successful rebellion against Sumanguru, founding the empire of Mali. Sundiata ruled the Mali Empire until 1255.

The wealth of the Mali Empire was legendary. At the height of its power in the fourteenth century C.E., Mali was the source of more than half the world's gold. It controlled the entire trans-Saharan caravan trade in gold as well as salt. The annual flooding of the Niger Delta also provided Mali with extensive tracts of fertile land. The use of slave labor allowed Mali to grow surplus food, an important factor in holding the empire together.

Mali's greatest Mansa, or emperor, was Mansa Kankan Musa I, who ruled from 1312 to 1337. Musa was either Sundiata's grandson or grandnephew. He came to the throne after his predecessor, Abu Bakar II, gathered a fleet of ships and set off to cross the Atlantic Ocean never to return. According to Musa himself, Abu Bakar "got ready 2,000 ships, 1,000 for himself and the men whom he took with him, and 1,000 for water and provisions. He left me to deputize for him and embarked on the Atlantic Ocean with his men. That was the last we saw of him and those who were with him. And so I became king in my own right." Some scholars believe that some members of Abu Bakar's expedition might have made it across the Atlantic, because there is evidence of Mandinka language in Brazil.

Mansa Musa, a devout Muslim, is famous not only for the *hajj*, or pilgrimage, he took to Mecca in 1234—



This detail from a C.E. fourteenth-century Spanish map of North Africa depicts Mansa Musa, a king of ancient Mali, seated on a throne and holding a gold nugget, which is symbolic of his great wealth. (HIP/Art Resource, NY)

traveling an immense distance with a huge entourage—but also for expanding the Mali Empire to include the great cities of Timbuktu, Gao, and Djenné, all of which are located in the modern country of Mali. Mansa Musa doubled the size of the empire by bringing a number of smaller city-states under his rule. During the fourteenth century C.E., Mali was larger than Western Europe, stretching about 1,000 miles (1,600 km) from east to west. Mansa Musa is also remembered for his generosity in building great mosques, universities, and libraries. Under his rule, Mali became famous throughout the world for both its wealth and as a center of Islamic scholarship.

Mansa Musa died in 1337 and was succeeded by his son Maghan (r. 1337–1341). As it turned out, Mansa Musa's successors were ineffective and unable to keep the vast empire together. Several small kingdoms that had been conquered by earlier rulers began to break away. Eventually the kingdom of Songhai, which had once been ruled by Mali, took over the caravan routes and established an empire in the same geographical area. Songhai flourished from the fifteenth to the sixteenth centuries C.E.

See also: Ghana; Ibn Battuta; Salt Trade; Songhai Empire.

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GREAT LIVES

Mansa Musa

Mansa Musa is famous not only for his contributions to the growth and stability of the Mali Empire and for his support of Islamic scholarship, but also for his pilgrimage to Mecca, perhaps one of the most spectacular caravans in history. When Musa left Timbuktu in C.E. 1324, his entourage included 60,000 servants, 14,000 of whom were slaves dressed in the finest brocades and Persian silks. His caravan included 80 camels, each carrying 300 pounds (136 kg) of gold dust. The troupe was preceded by 500 slaves, each carrying a solid gold staff weighing six pounds (2.7 kg). It is said that wherever he stopped on Fridays, the Muslim day of communal prayer, he donated money to build a mosque. Along the way he took a detour to Cairo, where he visited al-Malik an-Nasir, a great sultan. He gave away so much gold that he actually devalued the Egyptian currency for a period of time. Musa spent so much that it is said he had to borrow money for his return trip from Mecca.

While in Mecca, Musa met the architect of the great Moorish city in Granada, Spain, Abu-Ishaq Ibrahim-es-Saheli. Musa persuaded Ibrahim-es-Saheli to return with him to Mali and commissioned him to build the Malian royal palace and the Djinga-reyber Mosque in Timbuktu, as well as mosques in Djenné and Gao. Ibrahim-es-Saheli introduced a new building technique, the use of mud bricks, in the construction of these mosques.

Musa literally put Mali on the map. The story of his wealth and generosity traveled throughout the Muslim world and from there across Europe. Mali first appeared on European maps in 1349. On one map drawn in 1375, Musa is depicted on his throne holding up a nugget of gold.

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Mansa Musa *See* Mali.

Mauretania

In North Africa, an ancient Berber kingdom in what is now Morocco and Algeria, which later became a Roman province. Berbers are an ethnic group that lived throughout northwestern Africa. Ancient Mauretania does not coincide with the modern country of Mauritania, which is located to the south and west of the ancient Roman province.

The first Roman colony in Africa, Africa Vetus, was built near the ruins of the Phoenician city of Carthage in North Africa. The Carthaginians were great enemies of the Roman Empire, and the two powers fought three wars, called the Punic Wars. When the Romans defeated the Carthaginians in the Third Punic War in 146 B.C.E, they established Africa Vetus. The rest of the territory that had been

under Carthaginian rule, called Numidia, remained in the hands of the Numidian king, Massinissa. Although Massinissa was under Roman domination, he was allowed a great deal of freedom. Upon his death in 148 B.C.E., however, the Roman rulers carved his territory into several smaller kingdoms.

Thirty years later, a Numidian prince, Jugurtha, tried to bring these smaller kingdoms back together under his rule. In the process, he attacked the Roman city of Cirta in Numidia and killed many Roman settlers, causing Rome to retaliate. Jugurtha was defeated and executed in 106 B.C.E., and the Romans installed his father-in-law, King Bocchus of Mauretania, to rule the lands that had been under Jurgurtha's control. This effectively brought all of North Africa under Roman rule.

In 49 B.C.E., Juba I, king of Numidia, now a Roman province just to the west of Mauretania, sided with Metellus Scipio against Julius Caesar in his quest for control of the Roman Empire. When Caesar defeated Scipio at the Battle of Thapsus in 46 B.C.E., Juba took his own life. Nevertheless, his son, Juba II, who had been educated in Rome, returned to Africa and was appointed king of Mauretania by Emperor Augustus, in about 25 B.C.E. Juba reigned for only two years and was succeeded by his son, Ptolemy I, who reigned until his murder at the orders of the emperor Caligula in 40 B.C.E. Ptolemy was the last king of Mauretania, which then became a Roman province.

During his reign from C.E. 41 to 54, the Roman Emperor Claudius divided Roman Africa into several provinces. He split Mauretania into Mauretania Tingitana (the area of present-day Morocco) and Mauretania Caesariensis (the area of present-day Algeria). The other provinces were Numidia and Africa Proconsularis, which included Africa Vetus.

The North African provinces, including Mauretania, were an important part of the Roman Empire. The region was known as the granary of the empire because it produced more than a million tons of grain each year. Mauretania also produced olives, marble, wine, timber, and livestock.

In the fifth century C.E., Germanic tribes known as Vandals overran Roman Africa, and Mauretania was destroyed.

See also: Berbers; Carthage; Libya.

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Monomutapa Empire (also Mutapa, Munhumutapa, Monomotapa)

An extended area in southeastern Africa that flourished during the fifteenth century C.E. Its territory stretched from the Zambezi River to the Limpopo River, and from the Kalahari Desert to the Indian Ocean. Today, this area comprises the countries of Zambia, Zimbabwe, and Mozambique, and the Transvaal region of South Africa.

In about C.E. 1420, a number of Shona kings declared independence from the Rozwi Clan of Great Zimbabwe. One of these kings, Mutota, conducted a major military campaign that won him a large and very rich territory and the title *Mwene Mutapa*, which means "master soldier" or "master pillager."

This title was passed down to his successors. (The term *Monomutapa* was coined by the Portuguese and is probably a corruption of Mwene Mutapa.) The people of Monomutapa believed that only their king could communicate with the spirits, giving him ultimate authority over all aspects of life. His power was enhanced by a royal fire that burned during the king's reign and was extinguished at his death, to be relit only when a successor took the throne. Subordinate rulers also carried fire as a symbol of unity, relighting their torches from the royal fire once a year.

The Monomutapa Empire greatly expanded existing caravan routes from the African interior to the Indian Ocean. Its rulers became rich by trading gold, copper, and ivory for Indian cloth, Chinese silk, and Persian pottery. The immense wealth of the Mutapa and his successors is underscored by the words of fifteenth-century C.E. Portuguese historian Jodo de Barros, who said of the king's palace, "The floors, ceiling, beams, and rafters are all either gilt or plated with gold."

Despite efforts to keep the huge empire united under one ruler, many forces combined to destroy Monomutapa, including interference by Portuguese explorers who wanted access to the region's wealth. By the early 1500s, the empire split, and a rival people, the Changamire, took over the southern portion. By the end of the century, much of the gold was panned out and trade in precious metals was replaced by the slave trade. Monomutapa was further weakened by internal disputes and rebellions. By the late 1600s, Monomutapa was conquered by the Portuguese.

See also: Great Zimbabwe; Slavery.

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Myths and Epics

The myths told and cherished by ancient African peoples are sacred tales that attempt to explain how natural phenomena and humanity came to be. They also clarify the relationships among humans and their deities. Epics are long stories about great heroes and great deeds.

Many adherents of African traditional religions believe in their myths in same way that many Christians believe the stories of the Bible.

Like mythic figures, African epic heroes often embody those characteristics that are most valued by the particular culture. In some cases the events described in epics have a historical basis. For example, although greatly embellished with magical events, the African epic *Sundiata* is based on the life of a real king of Mali.

MYTHOLOGY

African mythology is as diverse as Africa itself, but there are certain themes that seem to repeat across the continent. Many myths describe the separation or emergence of land from water. The Egyptians believed that the world began as an ocean they called Nun or Nu. Ra, the sun god, appeared as an egg bobbing on the surface of the waters. He emerged and created four children, Shu, Geb, Tefnut, and Nut. Shu was the god of air, Tefnut the goddess of moisture; together they formed the atmosphere. Geb became the earth. Standing upon her, Shu and Tefnut raised up Nut, the sky.

Similarly, the Yoruba of Nigeria believe that in the beginning there was only water and sky. The Creator, Olorun or Oldumare, ruled the sky, and the goddess Olokun ruled below. A third deity, Obatala, asked Olorun for permission to create earth. Obatala

LINK TO PLACE

African and American Flood Myths

The story of the Great Flood in the Hebrew Bible is only one of many such stories told in cultures all over the world, some of which share similarities with the biblical version. A myth told by the Maasai of East Africa, for example, features Tumbainot (a righteous man), his two wives, and six sons. God decides to punish the rest of humankind, who are all sinners. He warns Tumbainot and tells him to build a wooden boat. When the rains cease, Tumbainot sends forth a dove, then a vulture, to determine if it is safe to disembark. As the family steps off the boat, they see four rainbows.

A similar story is told by the Ojibwa tribe of North America, though with some interesting variations. It begins, "There came a time when the harmonious way of life did not continue." The Creator, Gitchie Manido, decides to purify the earth by water. Waynaboozhoo, the spirit of the people, is saved by floating on a log. Animals who survived the flood join him on the raft. Rather than send a bird to search for dry land, Waynaboozhoo and his companions attempt to dive to the bottom to bring land to the surface. Many animals try but none can reach bottom except Muskrat, who loses his life in the process. Before he dies, Muskrat is able to make it back to the raft with a bit of earth in his paw. Waynaboozhoo places the earth on Turtle's back. The earth grows, and those who were saved dance on Turtle's back. Stories about animals diving and the land being placed on the back of a turtle are repeated in many Native American cultures.

There is almost infinite variety in the stories recounted by native peoples, but the image of a flood that purifies the earth and washes away sin is prominent in both African and Native American mythology.

pours sand from a snail's shell then drops a hen upon the sand, who scratches the sand and scatters it to form the earth.

The Boshongo, a Bantu-speaking group from Central Africa, believe that the creator Bumba had a stomachache, which led him to vomit up the sun. The sun dried the water, and the land emerged.

The Mandé-speaking people of Mali believe in a version of the "cosmic egg" myth. The creator, Mangala, plants the seeds of twins in a womb. One of the twins, Pemba, escapes from the egg, steals a portion of the placenta, and throws it down. This becomes earth.

Creation of Humankind

Many myths also recount how humans came to be. In the Mandé myth alluded to above, Mangala castrates and kills Pemba's brother, Farro, in order to try to save his creation from Pemba's interference. Mangala then resurrects Farro as the first human. In the Yoruba story of how humans came to be after Obatala creates the earth, Obatala decides to shape some companions from clay, but he drinks too much palm wine and creates some people with deformities. The next day he regrets his mistake and vows to protect his imperfect creations. He becomes the protector of all humankind, but he particularly cherishes those with disabilities. Several African myths tell not only how humans were created but also how different races came into being. A West African myth explains that two spirits came to live on earth. They were lonely and decided to make children from clay. They baked the children in fire, leaving some in the flames longer than others. Thus, people of different colors came to be. The Shilluks of the Sudan believe that the creator walked the earth making humans of clay. The people he created assumed the color of the clay from which they were formed—white in some places, red in others, and black in yet others.

Sin and Death

Many African myths tell of a fall from grace in which humans commit sin, become subject to mortality, and are banished to a fallen world. Like Eve in the Book of Genesis, a woman is often the original sinner. For example, the Akan people of Ghana tell the story of an old woman who drives the supreme being away by her incessant pounding of yams. A myth of the Kantana from central Nigeria tells of a woman who angers the supreme being by stealing fire. Also like the Hebrew Bible, African mythology is replete with myths about a flood that was sent by the supreme being as a punishment for sin.

Another frequent theme of myths everywhere is what happens after death. The Yoruba idea of the soul is similar to the Egyptian concept. Egyptians believed that the soul had three parts: the *ankh*, which is the characteristic of the soul that makes it immortal—the "breath" of the soul; the *ba*, which is the part of the soul that leaves the body after death; and the *ka*, or a person's double. Death was often referred to as joining one's ka. The Yoruba likewise believe that people are comprised of three spirits: *emi*, the life force; *ojiji*, which, like the ka, awaits the person after death; and the *ori*, or a guardian spirit.

Trickster Stories

Many African myths, including some creation myths, feature trickster figures. These are gods or spirits, often in animal form, that symbolize the human tendency toward mischief and jokes, as well as the desire to flout authority. Tricksters are sometimes portrayed as small animals who, through cunning, outwit much larger and stronger creatures. Among the most famous of these is Anansi the spider, whose stories are told by the Ashanti of West Africa. In one story, Anansi causes a fight between two friends by wearing a hat that is red on one side and white on the other. The friends argue about the hat's color until Anansi shows up to explain the trick. The only time Anansi was outsmarted was the time he got stuck to the legs of a girl made of wax; this story is the model for the Uncle Remus tale of the tar baby, a story popularized by the American writer Joel Chandler Harris in the late nineteenth century C.E.

EPICS

In sub-Saharan Africa, most people were not literate until the nineteenth century C.E.; thus, history, religion, and literature all had to be transmitted orally. To this day in many parts of the continent, storytellers, called *griots* in West Africa, are important figures who provide the cement that holds communities together by reciting the tales that help define the culture. These stories include folktales, proverbs, legends, and epics.

Epic tales tend to portray that which is regarded as most heroic and noble by the cultures in which they arise, often depicting battles between the forces of good and evil. Africa has many such epics, the most famous of which is *The Sundiata*, or *The Lion King*, the story of the first king of Mali (ca. C.E. 1210–1260). (The 1994 Disney movie and the Broadway show of the same name are based on a version of this epic.) The story is grounded to some extent on historical fact, but it also contains many magical elements.

In the tale, a Mandinka king, Naré Maghann Konaté, is told that he will have a son by an ugly woman, and that the son will become a great king. Thus, when Konaté meets a hunchbacked woman named Sogolon, he marries her. Sogolon gives birth to a son, Sundiata, who is so weak that he cannot walk until he is 10 years old. After his father's death, Sundiata and his mother are driven into exile by his father's first wife. She hates Sundiata because she fears the throne will go to him instead of to her own son. During his exile, Sundiata gains strength and becomes a mighty warrior. When Mali is attacked by the evil sorcerer Soumaoro Kanté, Sundiata returns to Mali and defeats Soumaoro in battle. He goes on to become Mali's greatest king.

The modern Senegalese griot Mamadou Kouyaté begins his telling of *Sundiata* with these words: "I teach kings the history of their ancestors so that the lives of the ancients might serve them as an example,

for the world is old, but the future springs from the past." Kouyaté's statement is a good summary of the function of the epic: to teach members of a culture the best, most heroic way to live.

A less well-known epic of the Nyanga people, who live in what is now the Democratic **Republic** of the Congo, is called *Mwindo*. Mwindo is the son of a great chief who told his wives that all of his children must be daughters so that he would not have to pay a bride price for his son to marry. His favorite wife, however, had a son, who, the minute he was born, leapt up, danced, and sang:

> I am Mwindo
> the one born walking,
> the one born talking.
> My father does not want me.
> But what can he do against me?

Like Sundiata, Mwindo leaves his village and grows up far away in the village of his aunt. Then Mwindo vows to fight his father for the kingship, but they are eventually reconciled. Along with many positive traits, Mwindo has many faults. He is boastful, arrogant, and at times ruthless. As he matures, however, he learns to be moderate, generous, and kind; that is, he comes to embody those virtues most admired in his culture.

In *The African Epic Controversy* (2002), M.M. Mulokozi notes that the heroes of African epics share several characteristics that differentiate them from heroes from other cultures. These include their use of magic to defeat enemies and their reliance on "group support." As Mulokozi explains it, "Heroes win because they enjoy the support of their communities or followers." In African society, kinship ties and a sense of community are crucial factors in maintaining the social order, so it is not surprising that its heroes are not loners like those so common in Western epics—who defy the wishes of the group.

See also: Culture and Traditions; Mali; Religion; Society.

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Nile River

River in northeastern Africa that flows north from Lake Victoria through Sudan, Ethiopia, and Egypt, leading to the Mediterranean Sea. At 4,160 miles (6,700 km) long the Nile is the longest river in the world. The Nile Valley was the site of the earliest civilization in Africa—that of Egypt—as well as other notable ancient kingdoms such as Nubia.

The importance of the Nile River to ancient African civilizations, and especially to the Egyptians, cannot be overstated. Each year the Nile overflows its banks and, when the water recedes, the sediment it deposits leaves a rich soil for growing crops. This annual inundation makes the Nile Valley an ideal environment for the kind of intensive agriculture needed to support a large population.

A river usually floods because of heavy rains or the melting of winter snows in the mountains from which the river arises. However, the Nile inundation occurs without rainfall in the immediate area. Instead, it is caused by heavy rainfall to the south in the Ethiopian highlands. When the rains fall on the Ethiopian plateau in the summer, the runoff creates flooding hundreds of miles downriver during the months of June through September.

Surrounded as it is by desert on both sides, the Nile must have seemed a sacred oasis to the ancient Egyptians, with the flooding coming as a gift from the gods. Although the Egyptians associated the Nile, which they called the Iteru, with life and fertility, they did not worship the river as a god. Rather, they worshipped the god Hapi, who personified the flooding itself.

Around 5000 B.C.E., the people who came to be known as the Egyptians began to settle on the shores of the Nile. By 3100 B.C.E., Egyptian rulers had unified the peoples living along the banks of the river into the world's first true nation state. Many of the advances associated with Egyptian civilization—the development of **hieroglyphics**, irrigation techniques, canal building, agricultural advances, even government **bureaucracy**—had to do with managing the annual inundation of the river to ensure adequate food for everyone.

Of course, the Nile provided more than good soil on which to grow crops; the ancient Egyptians ate fish from the river and hunted waterfowl. They harvested the **papyrus** that grew on the riverbanks to make paper, writing instruments, furniture, and boats. They also used the river for transportation. The ease of travel up and down the long watercourse helped to unify the peoples living on its banks into one nation. The Egyptians also used the river for elaborate funeral processions and to transport the stone with which they built their pyramids, temples, and towns. The river helped the growth of trade, and the delta provided protection from invaders who might want to attack Egypt from the Mediterranean.

LINK TO PLACE

Searching for the Source of the Nile

The Greek geographer Ptolemy said, in C.E. 150, that the source of the Nile River was in central Africa, in two lakes flanked by the "mountains of the moon." From that time until the middle of the nineteenth century C.E., nothing more was known about the source of this great river. Its mystery was protected by swampland, the threat of malaria and other tropical diseases, and fierce native inhabitants who were not particularly hospitable to visitors.

In 1856, England's Royal Geographical Society decided to finance an expedition to find the source of the Nile. They selected Sir Richard Burton to head the group, and he selected John Speke to accompany him. Both men had military experience, both had undertaken adventurous trips before, and Burton was an extraordinary **linguist**.

In 1857, the expedition left Bombay, India, and landed at Zanzibar on the east coast of Africa. The two men, along with 36 porters, 10 slaves, four drivers, and a group of Iranian soldiers, departed for the interior. The trip became a horrible ordeal; Burton and Speke were overcome with fever, supplies were wasted and stolen, and many members of the group deserted. By the time the expedition reached Lake Tanganyika, Burton wanted to turn back. Speke, however, continued northward with a small group and discovered Lake Victoria on August 3, 1858. On their return to England, Speke took credit for discovering the source of the Nile. In 2006, however, three explorers, using a Global Positioning System (GPS), traced the Nile to what they believe is its actual source in Rwanda—making the river more than 100 miles (167 km) longer than once was thought.

Another great culture—that of Nubia, just to the south of Egypt—also grew up along the Nile River. Although the banks of the Nile are more narrow to the south, making farming much more difficult, Nubia was rich in gold, ivory, and ebony.

See also: Agriculture; Egypt; Language and Writing; Nubia; Religion; Technology and Inventions.

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Nok People

A people who lived on the Jos Plateau in ancient southeastern Nigeria from about 500 B.C.E. to C.E 500. The Nok, who are admired primarily for their fine terra-cotta sculptures, appear to have been the first organized society in sub-Saharan Africa.

The name "Nok" comes from the town in Nigeria where the first **artifacts** of the culture—pottery shards—were found in C.E. 1943. Unfortunately, no **archeologists** were present at the initial find to preserve the evidence, so it was impossible to date the pottery with any degree of accuracy. Later discoveries at Taruga and Samun Dukiya in Nigeria, however, allowed scholars to date the pottery using

Although the Nok people are primarily known for their huge terra-cotta head sculptures, they also crafted seated figures such as this one, which probably originated near the ancient city of Katsina Ala, in central Nigeria. (Erich Lessing/Art Resource, NY)

thermoluminescence and **radio-carbon dating**. The majority of pieces were from the period 500 to 200 B.C.E., making them the oldest sculptures ever discovered south of the Sahara Desert.

Little is known about the Nok because they left no written records. There is evidence, however, that they planted crops and smelted iron, in addition to making the clay sculptures for which they are most famous. The sculptures indicate that the Nok adorned themselves with beads, nose rings, and bracelets made of stone and tin.

The terra-cotta sculptures are evidence that the Nok were extraordinarily sophisticated artists and **artisans**. The very fact that the pottery has survived for thousands of years is testament to the quality of the workmanship. Although the smooth surfaces have long since worn off, so that the sculptures are now pocked and coarsely grained, and most of the figures are missing parts, the pottery must have been well made to have endured so long.

The sculptures were constructed by coiling the clay, leaving a hollow center. Once the clay was coiled, the Nok carved the figure rather than sculpting it, suggesting that they may have originally perfected the technique in wood.

While some of the figures are small, many are life-sized. Though the faces are stylized and share many common characteristics, they are nevertheless clearly individualized. Unlike many other cultures, the Nok made figures of people who were ill with such diseases as elephantiasis, a disease characterized by gross enlargement of the limbs.

All of the figures share several common characteristics. The eyes are similar, often triangular or semicircular, and the eyebrows are wide, balancing the width of the lips. The figures' pupils, ears, noses, and mouths are pierced through, as by a reed. The hairstyles and costumes are extremely elaborate, and the figures are adorned with beads around their necks and waists. Finally, though elongated, the faces are realistic and individualized. Although scholars have no way of knowing how the figures were used, many speculate that the Nok were ancestor worshipers and that the figures represented ancestors and deities.

It is unclear what happened to the Nok people after C.E. 500, but some scholars note similarities between their terra-cotta sculptures and later Yoruba art. This has led to speculation that the Yoruba are the modern descendents of the Nok.

See also: Archeological Discoveries; Art and Architecture.

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Nubia

Kingdom lying to the south of ancient Egypt, an area that extends more than 700 miles (1,126 km) from the first cataract of the Nile River, near present-day Aswan, to the sixth cataract, near modern Khartoum.

The name *Nubia* is confusing because it is a relatively late term that was never used to describe the region during the time that the ancient kingdom existed. It may have derived from a people called Nobades, nomads who occupied lands along the Nile, and was probably not used until the Middle Ages. Today, *Nubian* may refer to those who speak dialects of the Nubian language or even to all of black Africa.

The earliest Egyptians called Nubia *Ta-Seti*, meaning "land of the bow," in reference to the Nubians' expertise with the bow and arrow. Beginning around 2000 B.C.E., Egyptians began to call the region Kush (sometimes spelled Cush, Kas, or Kos). When Kush is mentioned in Egyptian texts, the name is usually paired with the words for "vile" or "bad," indicating the Egyptian attitude toward a people who were sometimes their enemies, sometimes trading partners, and sometimes vassals. The term *Kush* also refers to a kingdom that arose in Nubia in 1700 B.C.E. and existed through various phases until C.E. 350.

A, B, AND C GROUP CULTURES

People have lived in the region known as Nubia for thousands of years. By 3500 B.C.E., two related cultures lived in Nubia: one in Upper Nubia (the southern area of the region); the other in Lower Nubia (the northern area). The A- and B-group people, known only as A-group by **archeologists**, left no written record. What is known about them comes from **excavation** of gravesites. Interestingly, many Egyptian **artifacts** can be found among the tombs, indicating that the two cultures had contact from as early as 5000 B.C.E. The A-group probably served as a trading link between Egypt and the lands to the south. Between 3500 and 3100 B.C.E., Egyptians attacked Nubia repeatedly; after 3100 B.C.E., there is no further trace of the A-group.

A new culture emerged in upper Nubia around 2300 B.C.E. Again, because this culture left no written record, archeologists do not know what the people of the region called themselves. This people, referred to by archeologists as C-group, left behind cemeteries filled with low, round tombs.

EGYPTIAN CONQUEST

Egypt conquered lower Nubia in about 1950 B.C.E. and remained in control until about 1700 B.C.E. Meanwhile, a people centered in the city of Kerma in upper Nubia, known as Kushites, grew in power. When Egypt withdrew from Nubia during the period of Hyksos rule (1700–1600 B.C.E.), Kushites solidified their hold on both upper and lower Nubia. The region was then conquered again, however, and came under Egyptian control from 1550 to 1100 B.C.E. Kushites adopted Egyptian religion, culture, and language and served in the Egyptian military.

KUSHITE KINGDOM

Not much is known about Nubian history during the period from about 1100 B.C.E. to the emergence of a new Kushite kingdom around 750 B.C.E. This realm was centered in Napata, a city south of Kerma. The

RISE OF NUBIA

3500–3100 B.C.E. "A-group" people occupy Nubia; earliest known inhabitants

2300–1550 B.C.E. "C-group" people occupy Nubia and build low, round tombs

CA. 2000 B.C.E. Egyptians begin to refer to the region as "Kush"

1950–1100 B.C.E. Egypt dominates Nubia

747–200 B.C.E. New Kushite kingdom emerges with Napata as its capital

712–765 B.C.E. Kushite kings found Egypt's Twenty-fifth Dynasty

CA. 650 B.C.E Kushites forced out of Egypt, settle in Nubia

200 B.C.E.–C.E. 350 Kushites establish kingdom in Nubia with its capital in Meröe

C.E. 350 Collapse of the Kushite kingdom

C.E. 527–565 Nubia converts to Christianity under the rule of the emperor Justinian

CA. C.E. 1300 Most Nubians are converted to Islam

C.E. 1913–1924 American Egyptologist George Reisner excavates sites in Nubia

C.E. 1942 University of Chicago professors Keith Seele and Georg Steindorff publish a history of Egypt that acknowledges Nubians were black

Kushite kings of this **era** eventually conquered Egypt and founded its Twenty-fifth Dynasty (712–657 B.C.E.).

Driven out of Egypt in 650 B.C.E., the Kushites retreated into Nubia and eventually made the city of Meröe their capital in about 200 B.C.E. Meröe, a great city and the heart of a thriving African civilization, was influenced by Egypt but deeply rooted in black African culture. The city endured until about C.E. 350, when it was captured and destroyed by an Axumite army from Ethiopia.

LATER YEARS

After the collapse of the Kushite kingdom, a group known as the Nobades established a state in upper Nubia, while another people, the Blemmyes (Bedja), established themselves in lower Nubia. The Nobades, like the Kushites, were profoundly influenced by Egyptian religion, art, and culture. The Blemmyes also worshipped Egyptian deities, but adopted Greek imperial titles for their rulers.

The people of Nubia were converted to Christianity during the reign of the Roman emperor Justinian (C.E. 527–565). The Christian identity of the region was threatened by the spread of Islam throughout northern and eastern Africa in the mid-seventh century C.E., but the Nubians resisted conversion for centuries. They made treaties with Arab rulers in Egypt and coexisted peacefully with their Islamic rulers. By the fourteenth century C.E., however, most Nubians had converted to Islam as part of a gradual and peaceful process that was facilitated by intermarriage between Nubians and Arab traders and merchants.

While archeologists have long studied Egyptian culture, Nubian culture had been largely ignored until the early twentieth century C.E. The first archeologists who engaged in **historical inquiry** of the region assumed, as they had with the massive stone ruins of Great Zimbabwe, that the magnificent temples and tombs of Nubia could not have been constructed by black Africans. The American Egyptologist George Reisner, for example, excavated many major Nubian sites between 1913 and 1924 and established a solid basis for understanding Nubian culture, but he insisted that black Africans could not have built the monuments. He also denied that pharaohs of the Twenty-fifth Egyptian Dynasty, who were Nubian, were African.

In 1942, University of Chicago scholars Keith Seele and Georg Steindorff published a history of

Egypt that acknowledged that the Nubians were black, but suggested that this dynasty marked a low point in Egyptian history. It was not until the 1970s that the true nature of the Nubian accomplishment, which parallels that of Egypt, was recognized and celebrated.

See also: Archeological Discoveries; Egypt; Great Zimbabwe; Kush; Nile River; Religion.

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Olduvai Gorge (also Oldupai)

A part of the Great Rift Valley in present-day northern Tanzania, and one of the most important sites for the archeological study of the evolution of human beings. The gorge is sometimes called the "cradle of humankind" because it contains large quantities of fossilized remains from the earliest known period of human evolution, and it well may be the place where *Homo sapiens* first evolved from humanoid ancestors.

Located on the Serengeti Plain, the gorge is nearly 30 miles (48 km) long and about 300 feet (90 m) deep. Olduvai was once a large lake whose shores were periodically covered with volcanic ash, resulting in ideal conditions for preserving human and animal remains. About a million and a half years ago, seismic activity caused the lake to drain. Then, about a half a million years ago, an earthquake diverted a stream that began to shape the dry lakebed into a gorge. The resulting geological formation revealed seven distinct layers of sediment, the lowest of which dates back about 2.5 million years.

Archeologists have studied the fossilized remains at Olduvai since a German entomologist, Professor Wilhelm Kattwinkel, arrived there in C.E. 1911. The most significant discoveries have been made by the Leakey family: Louis, his wife Mary, and their sons Richard and Jonathan.

Mary Leakey is credited with one of the most important finds in and around Olduvai. In 1959, while Louis was ill with the flu, Mary came upon a skull that turned out to be the first of its kind ever found, a humanlike creature that lived more than 1.75 million years ago. The Leakeys dubbed the fossil *Zinjanthropus*, and nicknamed it "nutcracker man" for the huge grinding molars that must have been used to eat a diet of coarse vegetation. *Zinjanthropus* has since been reclassified as a relative of *Australopithecus*, an extinct humanlike creature that had a small brain and walked on two legs, and is now called *Australopithecus boise*.

In 1960, the Leakey's eldest son, Jonathan, stumbled upon another skull that turned out to be the first example of *Homo habilis*, or "handy man." *Homo habilis* is older than *Zinjanthropus* and may have been the first humanlike creature to use tools. The Leakeys also discovered a stone circle that may have been the foundation of a hut made of branches. It is the earliest known human-made structure, dating back 1.8 million years.

In addition to human fossils, Olduvai has yielded evidence of more than 150 species of extinct animals, including prehistoric elephants, huge ostriches, giant horned sheep, and many birds, fish, and reptiles. Still revealing rich fossil finds, Olduvai Gorge is today visited by 450,000 tourists each year and is the site of a small museum that recounts the history of the archeological discoveries made there.

See also: Archeological Discoveries; Paleobiology.

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Paleobiology

Literally, the study of ancient life. Paleobiologists study the fossilized remains of living creatures, including **artifacts** as large as dinosaur bones and as small as microscopic bacteria.

Many of the world's most significant paleobiological finds have been uncovered in Africa, particularly East Africa. While nineteenth-century C.E. scientists focused their attention on Europe and Asia, believing that life originated there, it has become clear since that time that Africa is the actual "cradle of humanity," the place where human life began.

One of the most significant finds occurred in Hadar, Ethiopia, in 1974 when **archeologists** Donald Johanson and Tom Gray came upon the fossilized remains of a female hominid, or humanlike, creature. They classified her as *Australopithecus afarensis* and named her Lucy. She was about 25 years old, stood three feet, eight inches (1.34 m) tall, and was bipedal (walked on two legs). Most remarkably, Lucy lived an estimated 3.2 million years ago, making her the oldest-known member of the human family tree at the time.

In 1976, at Laetoli, an archeological site in Tanzania, members of an expedition led by the paleontologist Mary Leakey found fossilized footprints of an upright hominid that were eventually dated at 3.6 million years old. Until this discovery, the oldest-known hominid footprints were just tens of thousands of years old. The side-by-side prints extended for about 80 feet (24 m) and then disappeared. One set of prints was larger than the other, suggesting a mother and child. An amazing set of coincidences preserved the trail. Ash from a volcanic eruption covered the land, and then rainfall turned the ash into a substance very much like cement. When the pair walked, their steps remained imprinted on the surface, eventually turning to stone.

Another major site in East Africa, explored for many years by members of the Leakey family, is Olduvai Gorge in the Great Rift Valley in Tanzania. There the Leakeys have discovered tools and fossils that date from three million years ago. These include the skull of *Homo habilis*, or "handy man," the first known species of the genus *Homo*, dating from 2.5 to 1.8 million years ago.

In December 1998, the oldest complete hominid skeleton was discovered in the Sterkfontein caves near Johannesburg, South Africa. This skeleton has been dated at between 3.2 and 3.5 million years old. Before this discovery, the oldest complete skeleton was that of a *Homo erectus* found in Kenya and dated at 1.5 million years.

Paleobiologists, anthropological geneticists, and others who search for clues to the evolution of *Homo sapiens* believe that the great savannahs of Africa, the temperate grasslands that stretched for

thousands of miles and were home to wildlife of all kinds, formed the ideal environment for the emergence of humankind. Many recent archeological discoveries seem to substantiate that belief.

See also: Archeological Discoveries; Olduvai Gorge.

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Phoenicians

See Carthage.

Ptolemy

See Alexandria.

Punic Wars

See Carthage.

Pyramids

See Art and Architecture.

Queen of Sheba

See Sheba, Queen of.

Religion

Ancient Africans held strong beliefs concerning the nature of the supernatural or sacred, the meaning of human existence, and proper moral conduct and values. Scholars know much about ancient Egyptian religion and about the rise of Christianity and Islam in Africa because these faiths left ample written records.

Conversely, traditional African religions left no written records because most of the cultures in which they were practiced were not literate. In order to study the beliefs of these peoples, scholars must rely on oral information that has been handed down from generation to generation. Studies of those who practice traditional African religions today also offer important insights into their ancient counterparts.

MAJOR RELIGIONS AND BELIEFS

All religions can be classified as either **monotheistic** or **polytheistic**. Monotheistic religions, such as Islam and Christianity, are based on belief in a single supreme being; those who practice polytheistic religions worship multiple deities. Most traditional African religions, including the religions of Egypt and Nubia, were polytheistic.

Religions of Egypt and Nubia

Most of what is known today about the ancient Egyptians relates in one way or another to their religious beliefs, especially those having to do with life after death. The elaborate process of mummification and the construction of pyramids, for example, both derived from the Egyptian notions of the afterlife. They believed that the body was necessary for the afterlife and did what they could to preserve it intact, including mummifying it and sealing it in a tomb.

Egyptians believed in four key concepts—*Ma'at*, *ankh*, *ba*, and *ka*—along with a number of gods. Ma'at was the idea of justice and order. Symbolized by a feather, Ma'at was placed on a scale as a counterbalance to the heart of a dead person. If the heart was heavier than the feather, it was thought to be weighted down by evil. The evil heart was devoured by the god Ammit, consigning the evildoer to an eternity of nothingness. Persons with good hearts, however, joined the god Osiris in the afterlife.

The ankh was the Egyptian symbol of everlasting life, depicted as a cross in which the top vertical arm forms a loop. This symbol appears throughout Egyptian tombs, often held in the hands of the gods to demonstrate their power over life and death. The ankh was believed to be one of three parts of the human soul. The second part is the *ba*, represented by a bird. Ba is the totality of immortal forces in a

This painting, from the tomb of Sennedjem and his wife, shows the pair facing a court of the gods, which is comprised of a dozen Egyptian deities who will decide the fate of the couple. (The Bridgeman Art Library/Getty Images)

person. The third part of the soul is the *ka*, which is more difficult to define. It is depicted as a twin or double, and death is referred to as joining one's ka.

The Egyptians practiced mummification because they believed that the body and all elements of the soul had to be preserved in order for the deceased to survive in the afterlife. Various **artifacts** found in elaborate tombs, including clothing, perfume, jewelry, statues of servants, even boats and artificial limbs, were left in the expectation that the items would be used in the afterlife. Sculptures, paintings, and **inscriptions** on the tomb walls depicted everyday life, which in turn suggested that these scenes of happiness might continue for eternity.

The major Egyptian gods changed over the centuries and in some cases merged, a process known as syncretism, in which the characteristics of two gods would combine to form a new deity. The most significant example in the Egyptian **pantheon** was Amen-Ra. Amen (also Amun, Amon) was associated with holiness, and his name means "hidden." He was originally a god of Thebes and was often represented as a ram. Later he became associated with the sun god Ra (or Re). Combined, the two gods were regarded as the creator and father of all gods.

The pharaoh played a central role in Egyptian religion. He was the chief priest, the most important mediator between the people and the gods, and the son of the god Ra. It was the pharaoh who guaranteed the orderly progression of the seasons, the annual inundation of the Nile River, and the safety of his people. Thus, the pyramids were not only tombs but also religious monuments. They were built both to honor the pharaohs and to ensure the transition of the king to the afterlife. Ian Shaw, in *The Oxford History of Egypt* (2000), claims that the reasons behind the construction of these magnificent edifices are not mysterious. "It was . . . in everybody's interests to safeguard the king's position and status after his death as much as in his lifetime."

The kingdom to the south of Egypt, Nubia or Kush, was deeply influenced by Egyptian religions and honored many of the same gods. Nubian kings ruled Egypt during the Twenty-fifth Dynasty (712–765 B.C.E.), but afterward they retreated from

their capital at Napata to a new capital farther south at Meröe. Here, their religion continued to evolve without direct influence from Egypt. Among the Nubians, the traditional African lion god of war, Apedemak, became more popular than Amen. He was depicted sometimes as a lion but most often as a person with a lion's head.

Islam and Christianity

Christianity reached Egypt and the Roman provinces of North Africa soon after the death of Jesus of Nazareth, around C.E. 30. Egypt became a center for the study and dissemination of Christian theology and philosophy. However, the Roman rulers of Egypt did not readily accept this new religion. In 284, the emperor Diocletian executed so many Christians that the Coptic Church dates its calendar from that date in order to memorialize the martyrdom.

In the fourth century C.E., Christianity reached Axum, now known as Ethiopia. The faith took hold in Ethiopia thanks to a young Christian named Frumentius who served as an advisor to the youthful King Ezanus, who converted to Christianity as soon as he was old enough to rule on his own. Since that time, Ethiopia has been home to a large number of Coptic Christians. A mysterious group of Ethiopian Jews, who refer to themselves as Beta Israel, live alongside their Christian neighbors but are often subject to persecution.

Although Christianity flourished in parts of Africa, Islam was much more successful in finding converts. This process began not long after the death of the prophet Muhammad in C.E. 632. The continent's earliest Islamic converts lived along the northern coast of Africa in the area now occupied by Egypt, Liberia, Algeria, and Morocco. Later, Arab

LINK TO PLACE

Ethiopian Jews

Although the Jewish people are not often associated with Africa, from the ninth to the seventeenth centuries C.E., a black Jewish community in Ethiopia numbered a half million souls. Referred to by Christians as *Falasha*, meaning "aliens" or "exiles," Africa's black Jews called themselves Beta Israel, or House of Israel. Other Jews around the world were largely unaware of their existence until the twentieth century C.E.

The origins of this community are unknown, but several legends attempt to account for them. The Ethiopian national epic, or *Kebra Negast*, claims that the members of Beta Israel are descended directly from King Solomon of Israel and Makeda, the Queen of Sheba. According to this account, Makeda visited Solomon in Israel and returned to Ethiopia pregnant with his son. Another story suggests that Ethiopian Jews are the descendants of the tribe of Dan, which left Israel in order to avoid civil war. Both of these stories place the origin of Beta Israel around the ninth century B.C.E.

Subject to persecution and military attack beginning in the thirteenth century C.E., Beta Israel suffered a devastating defeat at the hands of Ethiopian Christians backed by Portuguese allies in 1624. Many thousands were killed, and others were enslaved. Those who remained were not allowed to own land. In 1736, a Scottish explorer, James Bruce, encountered Beta Israel while on an expedition to find the source of the Nile. At that time, he estimated their number at only about 10,000.

After the founding of the modern state of Israel in 1948, many attempts were made to help Ethiopian Jews emigrate to Israel. As a result of efforts conducted between 1977 and 1999, more than 70,000 found their way to the Jewish homeland. By 1999, although there were more than 70,000 Ethiopian Jews living in Israel, another 18,000 were believed to remain in Ethiopia, living under conditions of extreme poverty and persecution.

traders traveling the caravan routes through the Sahara Desert brought their religion with them to West Africa and to the interior of the continent—to Mali and the Sudan. They intermarried with native populations and began a gradual process of conversion.

Islam tended to be more popular with Africans than Christianity because it allowed more than one wife, a practice that was in keeping with traditional African customs. Although Islam is monotheistic, it recognizes jinn, invisible spiritual beings. Many African converts felt that these spirits were similar to the nature spirits and ancestral spirits of their traditional religions.

MINOR RELIGIONS AND BELIEFS

Traditional African religions, because they tend to be practiced by clans and **tribal** groups, have never had the large numbers of adherents claimed by traditional religions. They nevertheless have had a major influence on African history and culture.

Different as each one is from the other, there are certain characteristics that traditional African religions have in common. One basic similarity is that each provides rules for everyday living, including taboos (forbidden behavior). Most of these rules reflect values that are considered central to harmonious life in small, closely knit communities and are similar to ethical systems the world over: one must not steal, lie, or murder; one must revere parents and elders and provide hospitality to those in need.

Other rules are more particular and may seem odd or unusual. For example, in some groups, menstruating women must not appear in public; some clans have totem animals or plants that may not be eaten. A Baganda clan of what is now Uganda whose name means "mushroom" (Butiko) may not eat a certain kind of mushroom.

Another common characteristic of African traditional religions is animism, the belief that all things are inhabited by a spirit and that spirits are part of the everyday world. Thus, for example, among the Pygmies, a tribe that lived throughout equatorial Africa, hunters may leave gifts for the spirits or gods of the forest in order to ensure a successful hunt.

More important to African religions are the spirits of the ancestors. Although this practice often is mistakenly called "ancestor worship," it does not involve treating ancestors as gods or deities. For practitioners of traditional religions, the spirits of ancestors are directly present and still part of the community. They are consulted in daily decisions, and community members often leave gifts and food for them at small shrines containing **effigies** of the ancestors. Among the Akan of Ghana, for example, the stool of a king is blackened upon his death and installed in a shrine with those of others of his lineage.

Although most traditional African religions are polytheistic, most also feature belief in a supreme being who created the world but then withdrew because of evildoing by humans. Few traditional religions actually worship a creator; shrines and sacrifices typically are dedicated to lesser deities and ancestral spirits.

The status of the king in traditional African religions is similar to that of the pharaoh in Egyptian religion. That is, the king is regarded as having mystical powers to intercede with the gods and is considered the descendent or incarnation of deities. This is true among the religions of other sub-Saharan peoples such as the Ashanti and the Yoruba of West Africa, and the Lovedu of South Africa.

Rituals are also a central feature of traditional religions, including initiation rituals, naming rituals, harvest celebrations, and marriage rituals. These are methods by which people merge the everyday world with that of spirits. Initiation rituals are especially important in that they teach young men (and sometimes young women) how to be adults within the community, an event that includes instruction in religion.

INFLUENCES TODAY

Today, only about 20 percent of Africans practice traditional religions. The majority religion is Islam, but Christianity is growing rapidly. The growth of Christianity in twentieth century C.E. has been called "the fourth great age of Christian expansion." Before long, scholars estimate, one of every five Christians in the world will reside in Africa.

See also: Alexandria; Animism; Axum; Culture and Traditions; Egypt; Ghana; Kush; Sheba, Queen of; Society.

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Rome

See Carthage.

Rosetta Stone

See Language and Writing.

S

Sahara

The world's largest non-polar desert. The very existence of the Sahara has played a major role in the cultural and political history of the African continent. Because the Sahara extends from the Atlantic Ocean to the Red Sea, this great desert bisects Africa, creating a sharp divide between the Mediterranean coast and the southern part of the continent, usually referred to as "sub-Saharan Africa."

Without the Sahara, whose name means "desert" in Arabic, Africa would have had a quite different history. Armies that came by sea to conquer the lands of Africa were often stopped by the desert from proceeding into the heart of the continent, allowing central African cultures to remain relatively isolated until the nineteenth century C.E. Food crops that were domesticated along the Mediterranean coast or in the Nile Delta could not easily survive in the desert, so the development of intensive agricultural societies in the southern part of the continent was blocked by this almost impenetrable barrier.

The Sahara today is about 3.5 million square miles (9.1 million sq km) in area—about the size of the continental United States—and is divided into eleven countries: Algeria, Chad, Egypt, Libya, Mali, Mauritania, Morocco, Niger, Sudan, Tunisia, and Western Sahara. The landscape of the Sahara consists of large sand dunes known as *ergs*, plains of sand called *regs*, and high rocky plateaus called *hamadas*. *Wadis* are depressions in the land that occasionally fill with water. There are also salt-filled depressions called *chotts*.

Although rainfall in the Sahara is only about 3 to 5 inches (7.5 to 12.5 cm) per year, this desert was not always as dry as it is today and has undergone much variation in rainfall over the past 100,000 years. However, the climate has remained fairly consistent for the past 2,000 years, except for a period from the sixteenth to the eighteenth century C.E., known as the "Little **Ice Age**," during which the climate was quite a bit wetter. The average air temperatures have also varied quite a bit over the centuries, but today they range from an extreme high of 136°F (58°C) to a low of below freezing.

Because the Sahara is such a harsh environment, few people have ever lived there. Among those who do are Berbers, Bedoins, Nubians, and the Touareg. The Touareg are perhaps best known for leading caravans across the desert, carrying luxury goods such as salt, pepper, gold, and ivory from cities, such as Timbuktu, at the southern edge of the Sahara, to the Mediterranean coast. The Touareg also traded in slaves from the fifteenth through the nineteenth centuries C.E. Known as the "blue men of the desert" because of

their robes dyed indigo blue, the Touareg have long lived a nomadic existence in one of the world's least hospitable environments.

Today, the Sahara appears to be growing. In a process known as "desertification," this dry ocean of sand seems to be devouring the land to its south, a strip of semi-arid land known as the *Sahel*, from the Arabic for "edge" or "border." Scientists estimate that the Sahara is expanding southward at the rate of 3 to 6 miles (5 to 9.5 km) a year. One of the major causes of this problem is ecological damage done to the land by humans, as they farm and graze their animals in the Sahel—a delicate ecosystem that cannot support the demands the human population makes on it. While this loss of arable land to desert can be slowed by the use of organic farming methods, it will take a major effort to assist the farmers of the African Sahel, who live too close to the edge of starvation to be able to make many of the changes that will be needed, such as leaving fields fallow and avoiding the use of pesticides and chemicals.

The Sahara is not the only one of the world's deserts that is threatening to take over the neighboring land. Some scientists fear that as much as 35 percent of the earth's land may be at risk of becoming desert unless steps are taken to preserve fragile environments.

See also: Agriculture; Berbers; Egypt; Libya; Nubia; Salt Trade; Slavery; Timbuktu.

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Salt Trade

The production and transportation of salt in ancient Africa had a significant impact on the development of caravan routes and on the cultures along those routes. Today salt is plentiful and cheap. It is so readily available and so much a part of our diet that few people realize how crucial it is to maintaining human life, how scarce it was once thought to be, and how important it was to trade and commerce in ancient Africa.

The earliest humans, who lived by hunting and gathering, got the salt they needed from the meat they consumed. Even today, Maasai cattle herders of East Africa drink animal blood in order to get the necessary salt. Early humans may have also found salt by following animals to salt licks or brine springs. However, once cultures began to domesticate animals and raise crops, people needed to add salt to their diets and to the diets of the animals they domesticated. In addition to its function in preserving human life, salt has also been used for thousands of years to preserve food so that it can be kept for long periods of time without spoiling.

Because salt was so essential to life, many cultures invested it with spiritual significance. In societies all over the world, salt is a symbol of permanence and long life, as well as fertility. In ancient Egypt, a kind of salt called *natron* was required for the mummification process. The Egyptians also used salt as a cosmetic, a cleaning product, a way to drive off evil spirits, and a preservative. In parts of Africa, according to Mark Kurlansky in *Salt: A World History* (2002), people believed that evil spirits shed their skin at night and traveled as balls of fire. To destroy the spirits, one had to find and salt their skin.

Although it is now clear that almost no place on earth is without salt, this knowledge came only with the advent of modern drilling techniques. In ancient times, salt was deemed difficult to find. Because it was so important to life, it was naturally valuable.

LINK IN TIME

Ancient and Modern Salt Production

Salt is essential to both human and animal life. For most of human history, salt was a highly valuable commodity because it was believed that underground salt deposits were extremely rare and extracting salt from seawater was a laborious process. Modern geological methods, however, have revealed that salt is one of the most plentiful minerals on earth, making it very inexpensive. There is so much salt on earth because much of the land was once covered with ocean water, which left underground salt deposits.

Ancient people produced salt mainly by evaporating of seawater. Typically, the water was stored in shallow basins and warmed by sunlight. As the water evaporated, the salt it contained was left behind. Salt obtained in this way was often called bay salt.

The development of vacuum evaporation in the late nineteenth century C.E. revolutionized salt making. This method involves placing supersaturated brine (saltwater) in enclosed vessels and boiling the solution under a partial vacuum. The ancient method of basin (or pan) evaporation continued to be used, however, because that method produced coarse grains of salt. Only in 1948 did scientists figure out how to produce coarse-grained salt through vacuum evaporation.

Roman soldiers were even paid part of their wages in salt, which is the origin of the word "salary," from the Latin word *sel*, meaning "salt."

Because salt is heavy and bulky it was often formed into pillars or mined in 200-pound (90-kg) blocks. Transporting it from places where it was plentiful to places where it was thought to be scarce was a problem in the ancient world. Most often, raw salt was transported by ship. Even more frequently, salt was used to preserve meat and fish, and the preserved flesh was shipped instead.

On the African continent, the Sahara Desert contained many sources of salt in dry lakebeds. However, until the first camels arrived in Africa in about C.E. 300, transporting salt to West African kingdoms—where there was plenty of gold but little salt—was slow and difficult. Domesticated in the Middle East as early as 5000 B.C.E., the camel's arrival in the Sahara revolutionized caravan travel.

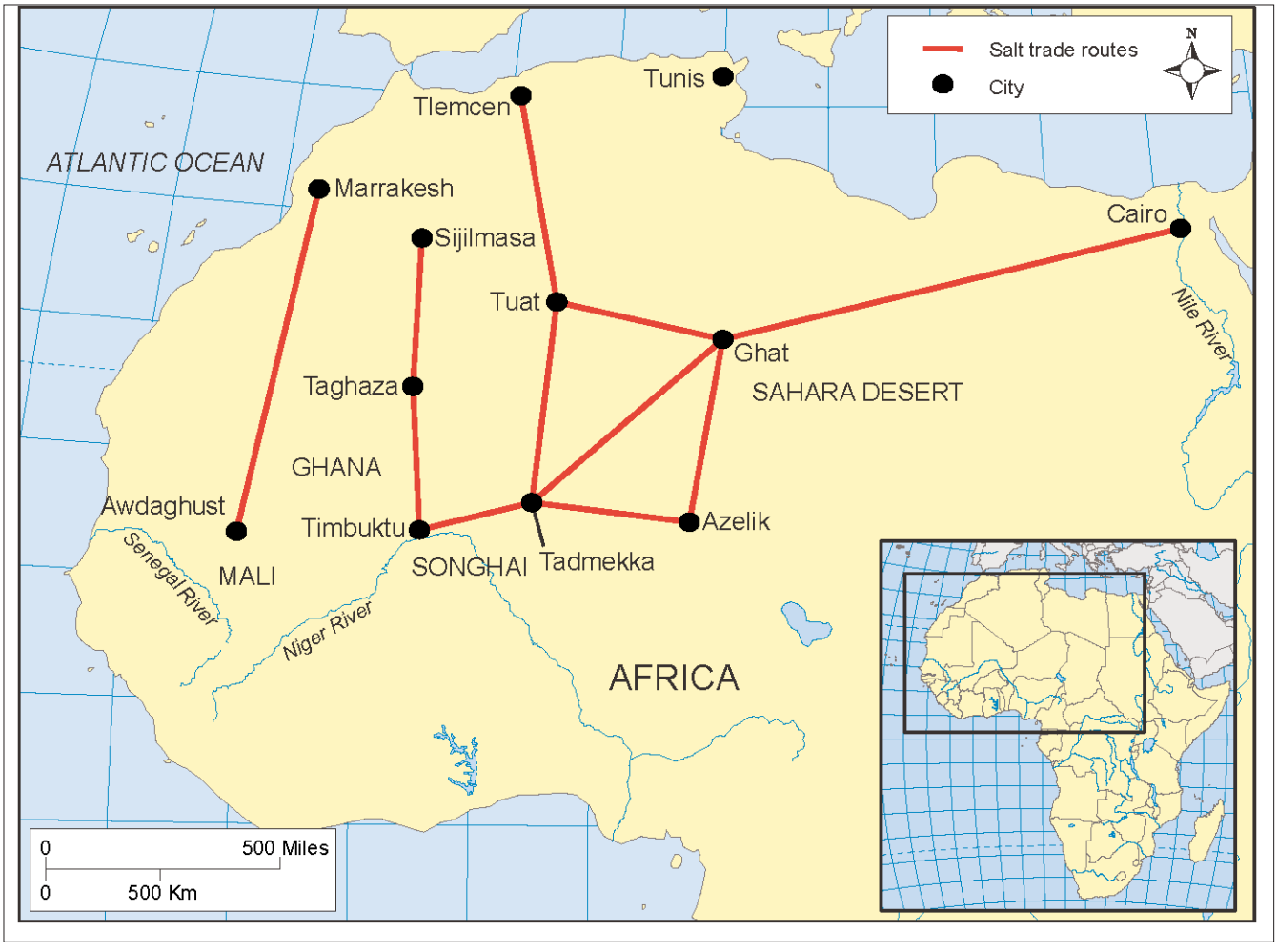
Caravans of as many as 40,000 camels began making the dangerous month-long trip from the saltworks at Taghaza to Timbuktu, located on the southern edge of the Sahara at the great bend of the Niger River. Timbuktu became a great city and trading center that has endured to this day because of its central location along the caravan routes. Several great African empires developed largely because of the caravan route, including those of Ghana, Mali, and Songhai. Their rulers taxed the caravans and in turn provided protection from thieves as the caravans moved through their lands. Other caravans traveled to Sijilmassa in northern Africa and Cairo in Egypt, linking the northern third of Africa from coast to coast.

Legend holds that salt was traded ounce for ounce for its weight in gold, but this is probably an exaggeration, even though salt was quite valuable. This story probably arose from observers who watched the process of silent bartering used by Arab and African traders. Traders would pile their store of salt on the ground and walk away. Then other traders would stack gold near the salt. The first traders returned, and if the amount of gold was deemed sufficient, they would take it and leave the salt. It is doubtful that the piles were of equal weight or indeed that weight had anything to do with the transaction—but it probably appeared to observers that the piles were equal.

One of the major sources of salt was the desert city of Taghaza, where slaves worked in dreadful conditions in the salt mines. Ibn Battuta, the Islamic scholar and travel writer, spent 10 days there on his way to visit the kingdom of Mali in C.E. 1352. Most of the city's buildings were made of salt,

ROUTES OF THE ANCIENT SALT TRADE

Salt has been mined in the Sahara for thousands of years. An essential component of the human diet, salt was a valuable commodity that was traded along routes that connected West Africa with North Africa. After the introduction of the camel by Romans in about C.E. 300, trade expanded rapidly.



which may conjure images of a beautiful, white crystal city. To the contrary, Taghaza's salt buildings were a drab gray, badly pitted by desert winds, with roofs made of camel skins. Battuta described Taghaza as "the most fly-ridden of places" and complained that even the water was salty. Moroccan forces destroyed Taghaza in the sixteenth century C.E., and Taoudenni replaced Taghaza as the area's leading producer of salt.

To this day, Berber Touareg tribesmen still cut blocks of salt from the earth in Taoudenni and still travel in caravans to Timbuktu to sell it, though for much less than it once brought.

See also: Berbers; Ghana; Ibn Battuta; Mali; Songhai Empire.

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Sheba, Queen of

Legendary African queen who is the subject of similar stories recorded in the Hebrew Bible, the Quran, and the *Kebra Negast*, or the Book of the Glory of the kings of Ethiopia. The location of the historical kingdom of Sheba remains a mystery, although many scholars speculate that the name refers to Saba, a kingdom in what is now Yemen. The extent of the Sabean kingdom is unknown, and it may have included modern Ethiopia as well.

According to the tale recounted in the Bible, the Queen of Sheba traveled to Jerusalem to meet the famed Hebrew king Solomon and "to prove him with hard questions." The Biblical account goes on to say that "she communed with him of all that was in her heart."

The story of Sheba and Solomon in the *Kebra Negast*, the thirteenth-century C.E. Ethiopian national epic, adds many details not found in the Biblical story. The *Kebra Nagast* claims that Sheba was an Ethiopian queen known as Makeda. According to

This Ethiopian miniature from the *History of Solomon and the Queen of Sheba* portrays King Solomon and the Queen of Sheba at a banquet. The queen is seated on a throne at the right-hand side of the painting and Solomon is on the far left. (Giraudon/Art Resource, NY)

this version of the story, the queen converted to Judaism and, when she left Solomon's court, she was pregnant with his child. Several months after her return to her capital city of Axum, she bore a son whom she named Ibn al-Hakim, or "son of the wise man." The son later changed his name to Menelek. When Menelek was 22 years old, he visited Solomon, who recognized his son immediately. Solomon wanted Menelek to succeed him to the throne of Israel, but the young man chose instead to return home to rule in his own land. Ethiopians believe that all their rulers since Menelek are descendants of Solomon, down to Haile Selassie (r. 1930–1936 and 1941–1974), the last emperor of Ethiopia.

The Ethiopian story of Sheba also recounts how the Ark of the Covenant came to Ethiopia. According to the Bible, the Ark was a wooden box constructed to hold the tablets on which the original Ten Commandments were inscribed. To the Jewish people, the Ark was the visible sign of God's presence among them. According to the Ethiopian legend, when Solomon ordered his counselors to send their oldest sons to Sheba to spread their religion among the people, the counselors rebelled and had the Ark taken to Ethiopia. Orthodox Ethiopian Christians believe the Ark still exists at St. Mary of Zion Church in Axum, tended by an aged priest, the only person allowed in its presence.

Whether or not there ever was a real Queen of Sheba, her legend lives on. She has been variously portrayed as a powerful woman, a seductress, a youthful scholar, and a wise leader. She has been the subject of hundreds of paintings and many operas. As the embodiment of all the aspects of femininity, the Queen of Sheba continues to fascinate.

See also: Axum; Myths and Epics; Religion.

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Slavery

When most people think of slavery, the first thing that comes to mind is the enslavement of Africans by people in the Americas. However, the practice of slavery dates back to ancient times, and many African cultures were involved actively in the slave trade.

Like many ancient cultures, the ancient Africans often enslaved captives taken during successful military campaigns. Conquered peoples were forced to pay **tribute** to their Egyptian rulers, often in the form of slaves. Egyptians themselves could be enslaved if unable to pay a debt, and some even accepted slavery as a way to escape poverty. Criminals might also be enslaved as punishment for their crimes.

Slaves might be sent to work in the dangerous mines in Nubia and the Sinai, where they died in great numbers. Some were forced to fight in the army. Others became domestic servants to individual families; in many cases, slaves were attached to large estates, in much the same way medieval serfs belonged to the lord of the manor on which they lived. Female slaves were valued for skills in weaving and other domestic chores; some were sold as concubines. During the pre-dynastic period in Egypt (5500–3100 B.C.E.), living slaves were entombed with their masters so they could continue serving them in the afterlife. In later **eras** of Egyptian history, *ushabtis*, or small statues representing servants of the deceased, were substituted for the slaves themselves.

Beginning in the seventh century C.E., Muslim slave traders took millions of slaves in Africa,

exporting them throughout the Islamic world, as far away as Turkey, Arabia, Persia, and India. Some male slaves would be castrated; these *eunuchs* were valued as confidants of their masters and given powerful positions. In some cases, entire Islamic armies were comprised of slaves. Arab slave traders often sold females slaves into harems or into domestic service. The Muslim holy book, the Quran, encouraged masters to free slaves when they died, and many did so.

Usually there was no racial component to enslavement of Africans by other Africans. Both the slave owner and the slave typically were black, although they were often members of different **tribal** groups. Thus, slaves in ancient Africa were not considered inherently inferior to their owners, and some eventually rose to positions of influence and power. Olaudah Equiano, who was enslaved in Africa and eventually brought to the Americas, provides valuable information about traditional African slave practices in his 1789 book *The Interesting Narrative of the Life of Olaudah Equiano*. According to Equiano, he and his family owned slaves, and his tribal group had to be on the alert against raiders who would steal into the village and kidnap children—as eventually occurred to Equiano himself. Equiano was kept as a slave in Africa for several months, and reports that his owners treated him like a member of the family.

See also: Egypt.

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Society

Among ancient African peoples, the family and gender structures, social classes, laws, and political systems reveal those ideas that served to unite each group of people. Sociologists often describe societies by reference to how they acquire the means to live. On the African continent in ancient times, for example, there were hunter-gatherer societies, nomadic societies, and pastoral societies, as well as simple and intensive agricultural societies.

Another way to classify societies is by political structure. From the simplest to the most complex, there are bands, tribes, chiefdoms, and state societies. All of these social forms existed in ancient Africa.

EARLY SOCIETAL STRUCTURE

Because most ancient African **tribal** cultures had no form of writing, little is known about how these people actually lived. However, there are still many tribal cultures in Africa, and scholars often speculate on ancient social life based on how people living in traditional cultures today live and work.

The first humans on the African continent lived in bands, small groups of related people with informal leadership. Bands do not have laws, and customs are transmitted orally. Most bands are hunter-gatherers, people who move from place to place following the animals they hunt. The San of the Kalahari Desert in southern Africa are an example of a band society, one of the few that still exists today.

Tribes are similar to bands but are much larger, comprising several families, organized by kinship. Like bands, tribes tend to be oral societies in which customs and taboos are conveyed orally. Leadership, however, is more formal, invested in the hands of chiefs or elders. Tribes may be nomadic or agricultural; members of agricultural tribes tend to own land in common and to be relatively egalitarian. Nomadic

This photograph shows a Masai warrior who has just undergone an initiation ceremony that included circumcision. The young man is now considered an adult in the tribe. (Tim Graham/Getty Images)

societies are also egalitarian and often **matriarchal**. Among the Touareg of the Sahara, for example, women choose their own husbands and sexual partners, and, in fact, may take lovers when their husbands are away. They own property and, in the case of divorce, get custody of the children.

Chiefdoms are more complex than tribes and less complex than states. Unlike tribes and bands, chiefdoms are characterized by a **hierarchical** class structure. There are usually two social classes, elite and commoner, and each individual is born into a particular class. Power is centralized, and

leaders tend to be male. The Ashanti of Ghana are an example of a chiefdom that existed in ancient times and still exists today. The chief, who is male, inherits through the mother's line.

Women in Tribal Cultures

According to South African law professor Gardiol van Niekerk, women in African tribes and chiefdoms were honored and played a key role in society. Power traditionally was determined by the needs of the society as a whole, with little regard to gender. Positions of power, according to van Niekerk, "were accorded in the interest of the collectivity and women in power roles did not cause any tension or disharmony." He notes that European colonialism had a very negative effect on the status of women in African society because colonial officials would deal only with male tribal leaders.

While women and men enjoyed roughly equal social status in many tribes, the sexes in other societies were treated quite unequally. For example, the Maasai of Kenya did not allow women to own property, divorce, or make important decisions.

Children in Tribal Cultures

In traditional African cultures, women are especially valued for their roles as mothers. This is as true today as it was in ancient times. Children learn their adult roles by working with and for their elders, helping in the fields and with the crops. Because harmony is so important in a small, collective society, a child's transition into adulthood is an especially important moment.

Many traditional societies still practice initiation rites to help children make the transition into adulthood. A major part of most rites is instruction, in which children learn the secrets of religion and how they are expected to behave as adults. The magical and religious quality of the process helps to underscore the importance of the transition and to ensure compliance. As a result, adolescent rebellion in traditional societies is rare.

Law

Most ancient African cultures did not have written codes of law. Generally the code of conduct was clear and known to all members of the tribe. While some taboos in traditional tribal societies were equivalent to the crimes in modern Western society (such as murder, theft, or rape), others, such as failure to respect parents and elders or lying, were not. Punishment in tribal societies is generally communal; someone who violates a taboo is likely to be ostracized or punished by the whole group.

EGYPTIAN SOCIETY: EMERGENCE OF THE STATE

In about 3100 B.C.E., Egypt became the first state in ancient Africa and one of the first in the world. A state is an organized community with clearly demarcated boundaries, a strong centralized government, and sovereignty—the quality of being independent of other states. States generally impose taxes on their citizens, and conflict is resolved by reference to law rather than by the decisions of individual leaders. States have more complicated economies than chiefdoms and tribes, and more specialization of labor. They also have a more complex social organization and multiple social classes, including an **aristocratic class**.

Egypt evolved into a state as a result of large-scale agriculture made possible by the annual inundation of the Nile River. The Egyptians exploited the Nile flood, developing irrigation techniques that allowed them to farm extensive tracts of land surrounding the river. This yielded regular food surpluses that freed a portion of the population to pursue activities unrelated to farming, such as metalworking, pottery, and medicine. Occupational specialization led to the appearance of social classes, as those who possessed specialized skills came to be considered more valuable to society than peasants or laborers. In addition, a sophisticated **bureaucracy** eventually evolved to govern this increasingly complex society.

Many sociologists compare the structure of Egyptian society to a pyramid. At the top were the gods. Just below them was the pharaoh, believed to be a god in human form. It was the pharaoh's duty to intercede with the gods on behalf of the people, to ensure the annual inundation of the Nile, and to protect the people from internal conflict and external invaders.

LINK TO PLACE

Initiation Rites: The Xhosa and the Lakota

Many traditional cultures have special rites to initiate young men and women into adulthood. Among the Xhosa of South Africa, post-pubescent boys are removed from the village and taken to a special initiation hut, where they are circumcised and kept in seclusion for three months. During this period, the boys are taught about their responsibilities and rights as adults. After bathing together in a **ritual** cleansing, they receive gifts of blankets and return home. The young men are greeted with a celebration that includes dancing and animal sacrifices.

The Lakota (also known as Sioux) of the western plains of the United States also practice an adolescent initiation rite, known as a vision quest. Young men usually undergo the rite, but women may also choose to participate. The vision quest is an individual initiation, not a group ritual such as that of the Xhosa. The purpose of the vision quest varies. Some people undertake a quest as a kind of prayer, asking for guidance in making decisions. Others, especially young people, seek to know what they should do with their lives or how they should live.

The rite begins with a young person bringing a pipe to an elder or holy man and asking for help in beginning his quest. On the day appointed for the quest, the seeker begins by purifying himself in a sweatlodge, a small hut in which ritual steam baths are undertaken. Then he spends up to four days alone praying and meditating. He may sleep upon a bed of sage leaves but may not eat or drink. The seeker prays to Wakan Tanka, the Lakota supreme being, for a message, which often comes in the form of an animal or bird. The seeker collects an object that relates to the vision—for example, a feather from a bird or the fur of an animal—and keeps it with him as a reminder of the experience. After this, the seeker returns home and tells the elder his vision.

Below the pharaoh in Egypt's social structure was his second-in-command—the vizier—who often interacted with the people in the pharaoh's place and did many of the day-to-day administrative tasks of running the kingdom. Below the vizier were the members of the nobility, including government officials who administered justice, collected taxes, and performed other administrative functions, and high priests, who conducted religious services and interpreted the wishes of various deities to the pharaoh and others.

On the next level of the pyramid were Egypt's professionals—priests, doctors, and engineers. Because the ability to read and write was both rare and essential to the conduct of daily affairs, **scribes** were high-status individuals, just below professionals on the social pyramid. Successively below the scribes were merchants, **artisans**, farmers, and soldiers. Below these groups were servants and slaves. Although Egypt was a highly stratified society, it was not rigid; individuals could rise in social class. For example, if soldiers were victorious in battle, they might be given gifts of land, which raised their class. In Egypt, it was possible to rise to the ranks of nobility.

Women and Children in Ancient Egypt

Egyptian society was largely **patriarchal**, in that the rulers were most often men, but it was much less so than many other ancient cultures. For example, the royal lineage was traced through the mother, so someone aspiring to become pharaoh had to marry a woman of the royal line. In Egypt, women could inherit a husband's or relative's estate, own land, run businesses, and work as perfume makers, professional mourners, acrobats, singers, musicians, or priestesses. Women could also buy, sell, and bequeath their own property as they chose;

make contracts; and appear in court on their own behalf. They could also disinherit anyone they chose.

Boys often inherited a trade from their fathers. If the father was a carpenter, it was likely that one or more of his sons would also become a carpenter. Boys were generally apprenticed to their fathers to learn a trade or craft. The sons of wealthier families were sent to school at about the age of seven, where they learned religion, reading, writing, and mathematics. Girls learned household management from their mothers, and were usually married fairly young—peasant girls as young as 12. Although most marriages were arranged, some girls could choose their own husbands.

Law

Egyptian society had a formal legal system and some laws were written down, but there was no complete legal code of conduct. Egyptian law was ruled by a belief in *Ma'at*, or equality and justice under the law for everyone except slaves. The pharaoh was the primary judge, though in practice he delegated this power to others. Anyone in a position of authority could serve as a judge, depending on the circumstances. Minor disputes were often settled by local elders.

Some cases were brought to **oracles** for decisions. Papers representing each side of a case might be placed on opposite sides of the street, in front of a statue of a god. If the statue leaned one way or the other (as interpreted by a priest), the case was decided. Interestingly, confession was the primary method of determining guilt. If a person refused to confess, he or she was generally set free. Punishment varied greatly. A thief might simply be asked to repay what he had taken, but more serious crimes might be punished by the cutting off a nose or hand, exile, or forced labor in the mines. The death penalty was carried out by impalement, drowning, or decapitation.

Although the Egyptians did not codify all of their laws, they did document court cases. This documentation is the primary source of contemporary knowledge about ancient Egyptian law.

Ancient African ways of living were quite varied, with some cultures having strong kinship ties and others weak ones. Even today, many Africans still define their identities by their membership in an extended family, not by what they do or where they live.

See also: Agriculture; Culture and Traditions; Egypt; Language and Writing; Religion.

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Songhai Empire (also Songhay)

One of the largest ancient African empires, covering a large area of the West African grasslands at its peak in the fifteenth and sixteenth centuries C.E. The empire extended from the capital city of Gao, located at the largest bend of the Niger River, through modern Nigeria, into parts of Mali, and as far west as the Atlantic coast.

Dominated from the ninth to the eleventh centuries C.E. by the empire of Ghana, and from the eleventh to the fifteenth centuries C.E. by Mali, the Sorko people of Songhai emerged as a major power

SONGHAI EMPIRE, C.E. 900–1600

CA. C.E. 900–1100 Songhai dominated by the kingdom of Ghana

C.E. 1464–1492 Rule of Sunni Ali, a great military leader who expanded the size of the empire

C.E. 1492 Sunni Ali succeeded by son, Sunni Baru

C.E. 1493 Sunni Baru overthrown by Mohammad Ture

C.E. 1493–1528 Rule of Mohammad Ture, who founded the Askiya dynasty; Golden Age of Songhai

C.E. 1496 Mohammad Ture made caliph of the Sudan

C.E. 1591 Ahmad al-Mansur, ruler of Morocco, conquers Songhai at the battle of Tondibi

under the leadership of Sunni (or Sonni) Ali (r. 1464–1492). Songhai grew wealthy through the export of gold, salt, and slaves.

Sunni Ali was a great military leader who substantially expanded the size of the empire, eventually dominating most of the land that had formed the Mali Empire. He also captured the city of Timbuktu, a center of Muslim learning, earning himself the eternal animosity of Islamic clerics, scholars, and soldiers. As a result of years of trade with Arab nations, many urban dwellers in Songhai were Muslim. Sunni Ali himself, however, practiced the traditional animistic religion of his ancestors.

Upon Sunni Ali's death, his son Sunni Baru succeeded him briefly before being overthrown by one of his father's generals, Mohammad Ture (r. 1493–1528). Ture founded the Askiya Dynasty and ushered in what has been called the golden age of Songhai. Ture was a devout Muslim who restored Timbuktu as a center of learning and built as many as 180 religious schools in that city alone. In 1496 the caliph of Egypt named Ture caliph of the entire Sudan, the Arab term for an area in sub-Saharan Africa that comprises present-day Mali, Chad, part of Nigeria, and Niger.

Ture was not only a successful conqueror who expanded Songhai to its greatest extent, but he was also an able administrator who successfully governed an empire of more than a half a million square miles (800,000 km). He created a professional **bureaucracy** that allowed well-educated people, regardless of social class, to find work in the government. This practice, a change from previous rulers who had relied almost exclusively on class as a prerequisite to government service, proved to be a major factor in his success.

Ture was overthrown by his son, Askiya Musa, in 1528. Over the next several decades, the empire suffered from civil unrest and drought. In 1591, Ahmad al-Mansur, the ruler of Morocco, invaded Songhai and was able to score a military victory over the weakened empire, partly because he possessed firearms. The Moroccans were never successful in dominating the former empire, however, which eventually degenerated into many small principalities.

See also: Ghana; Mali; Religion; Salt Trade; Timbuktu.

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Stone Circles

Ancient formations made of gigantic stones located in modern Senegal and Gambia. Although prehistoric stone circles are found throughout Europe, the most famous of which is Stonehenge in England, nowhere are there as many as in the 15,000-square- mile (38,850-sq-km) area between the Saloum and Gambia rivers in West Africa.

West Africa boasts more than 1,000 groups of stone circles. One of the largest groups is near the Bambian village of Wassu. Other sites include N'jai Kunda and Kerr Batch, all in modern Gambia.

The stones vary in appearance. Most are shaped like pillars, round with a flat top. Some are rectangular, some taper to a point, and others have cup-shaped hollows on top. The most unusual are known as lyre stones, because they resemble the musical instrument of that name. Lyre stones were formed by placing two large upright stones at an angle to one another, in the shape of a V.

Each circle is made up of 10 to 24 stones, the largest of which weighs up to 10 tons (9 metric tons). The stones range from 3.5 feet (1.1 m) to 8.5 feet (2.6 m) tall. All the stones in a particular circle are approximately the same size. The stones are made of laterite, a red clay that hardens when it is exposed to air, making it easy to quarry.

Laboratory tests indicate that the circles were built during the eighth century C.E., but who constructed them and for what purpose remain mysteries. One Islamic scholar has speculated that the stones mark graves. He believes that the V-shaped stones may indicate the grave of two relatives who died on the same day and that a small stone near a larger one may indicate the graves of a parent and child.

Archeoastronomers—those who study ancient sites that appear to have something to do with astronomy—believe that some of the stone circles may have been used for the observation of the stars and the development of calendars. This interpretation, if correct, would link these African **megaliths** with such places as England's Stonehenge, another collection of huge stones believed to have been used as an astronomical observatory at which early humans could mark each year's **solstices** and **equinoxes**.

See also: Archeological Discoveries.

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Sundiata

See Mali; Myths and Epics.

T

Technology and Inventions

Tools and methods to farm, build, make war, and cure disease all were developed on the African continent before C.E. 1500. Because the earliest known human species evolved in Africa, so did many of the earliest human technological advances.

In the history of science and technology, Africa looms large. Stone implements more than a million years old have been found in Africa, including hand axes, cleavers, scrapers, and **microlithic** tools. Ancient stone circles and rectangles discovered in Africa may have been foundations for shelters. In 2001, the earliest known "formal" tools (those with specific uses and symmetrical shapes) were discovered in South Africa's Blombos Cave. Archeologists have dated these tools to about 70,000 years ago.

SUB-SAHARAN TECHNOLOGY AND INVENTIONS

In addition to the earliest tools, the people of sub-Saharan Africa made many contributions to technology. In smelting iron, for example, sub-Saharan Africa was far ahead of other parts of the world. It was once thought that iron technology was imported to Africa, but a 1991 United Nations project, "Iron Roads in Africa," suggests that Africans developed iron working independently as many as 5,000 years ago, in what is now Nigeria, Niger, and Mali. In fact, African metal smiths first manufactured steel in the second century B.C.E., some 2,000 years before their counterparts in Europe and America.

Examples of ancient African technology encompass a variety of fields of knowledge. The Yoruba people of Nigeria developed a complicated number system on a base of 20. The oldest iron ore mine in the world, dated at around 40,000 years ago, has been discovered in Swaziland. Doctors in Mali performed cataract surgery in the fourteenth century C.E. Ancient myths told by the Dogon people of Mali recount stories of *po tolo*, their name for Sirius B, a white dwarf star. (A star becomes a white dwarf when it has used up all its nuclear fuel.) The knowledge of the Dogon is particularly remarkable because white dwarfs are not visible without a telescope. The people of Ethiopia were the first to grow coffee.

EGYPTIAN TECHNOLOGY AND INVENTIONS

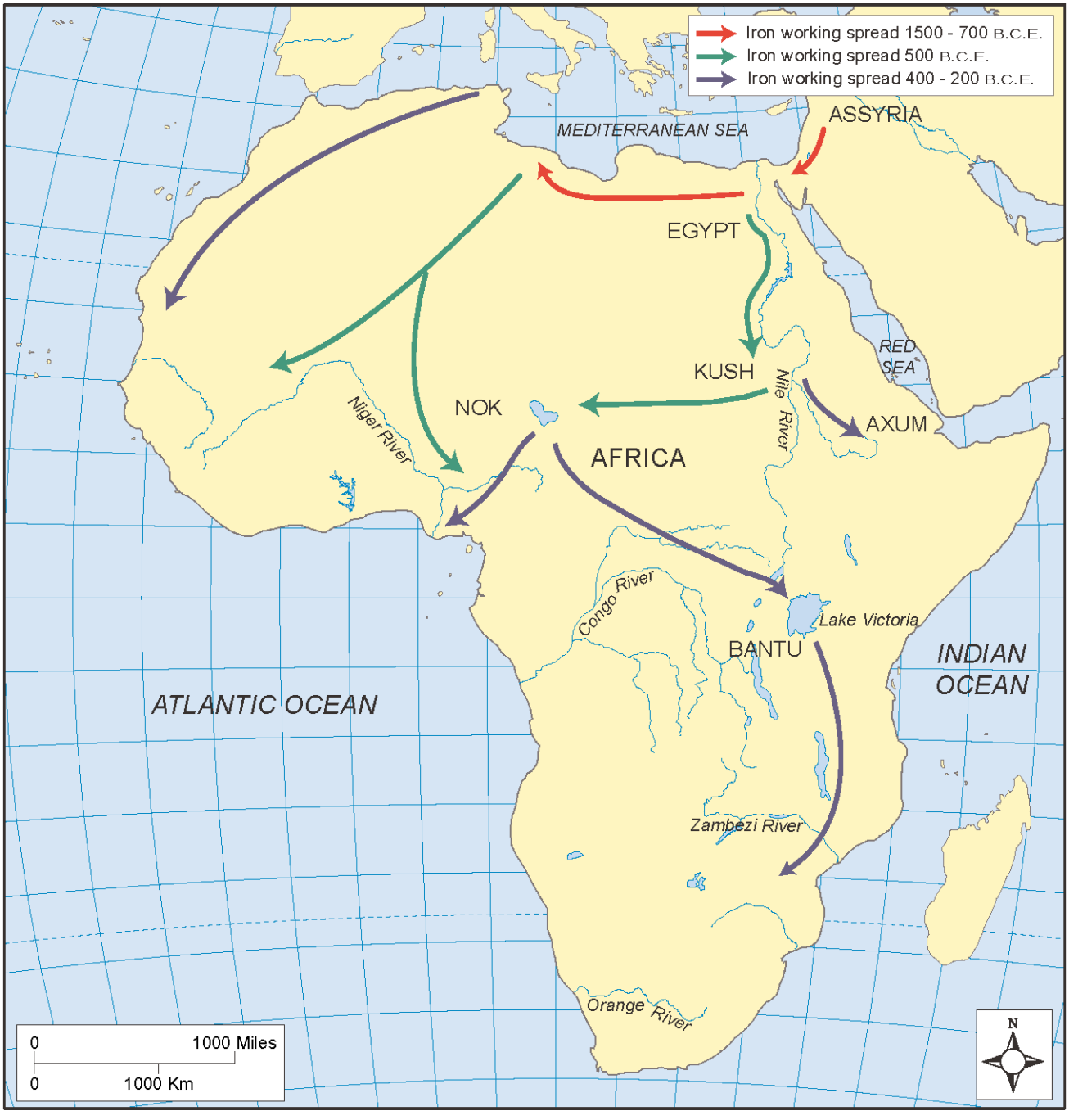
The ancient Egyptians were great innovators. Their inventions include paper, irrigation, timekeeping devices, locks, embalming, and beekeeping, among many other things.

Medicine

The Egyptians were excellent physicians. In the *Odyssey*, the ancient Greek poet Homer tells us that

THE SPREAD OF IRON WORKING, CA. 600 B.C.E.–C.E. 400

Iron-smelting technology was probably introduced into Africa from the Mediterranean and spread into western Africa, where the technology was widely practiced. Iron technology may have traveled from western Africa along with the migrating Bantu.



"In Egypt, the men are more skilled in Medicine than any of human kind."

Because of their belief in the importance of preserving the body, Egyptians invented the practice of

This artificial toe was found in the tomb of a Theban woman. Most ancient Egyptian artificial limbs were cosmetic, used to make the mummy whole before its journey to the afterlife. This toe, however, was functional. (Kenneth Garrett/National Geographic/Getty Images)

embalming. Since the process involved removing internal organs, Egyptian embalmers learned a great deal about human anatomy and were able to correctly identify the function of all the organs, except for the brain and heart. They believed that the heart was the source of knowledge, but that the brain served no purpose.

Much of what is known today about Egyptian medicine comes from a number of surviving papyri that discuss medical practices and techniques. Among the oldest of these codices is the Kahun Gynecology Papyrus, which dates to 1825 B.C.E. (The papyrus was discovered by British archeologist Flinders Petrie near the town of el Lahun. Petrie misheard the name of the town as "Kahun," and so named the papyrus Kahun.) It discusses how to diagnose a pregnancy, how to treat various ailments unique to women, and how to avoid conception—one technique involved a mixture of crocodile dung and fermented dough (the acidity of the dung made it an effective spermicide).

The most famous of the medical papyri is the Edwin Smith Papyrus, which was found in the tomb of a physician and describes a number of surgical procedures. The Smith Papyrus dates from 1550 B.C.E. and indicates that the Egyptians had extensive knowledge of how to treat bone fractures, perhaps derived from the injuries received by workers on the pyramids.

Another source for Egyptian medical knowledge, the Ebers Papyrus, was discovered in C.E. 1862 by archeologist Edwin Smith but was then sold in 1872 to the German Egyptologist Georg Ebers, for whom it is named. This 110-page medical treatise was written in 1534 B.C.E. It deals primarily with internal medicine, including the workings of the heart, about which the ancient Egyptians were quite knowledgeable, although they could not distinguish among blood vessels, nerves, and tendons. Therefore, they did not completely understand circulation. However, they did understand the function of blood vessels and the importance of taking the pulse.

The first surgical instruments were made in Egypt, including copper surgical blades and needles. A **relief** carved at the Kom Ombo temple about 100 B.C.E. shows a set of surgical instruments including a probe, forceps, saws, a retractor, a cautery (burning iron), bandages, a flask, scales, medicinal plants, a pair of shears, a sponge, scalpels, an instrument case, and cupping vessels used for blood letting, a common ancient medical practice.

Many herbal and mineral remedies used by Egyptian healers have been found to be very effective by modern doctors, even though the ancient

TECHNOLOGY AND INVENTIONS

2500 B.C.E. Sadd al Kafara, the first known dam in history, is constructed

2400 B.C.E. One of the earliest Egyptian canals is built at the First Cataract of the Nile by the pharaoh Pepi I—the first "Suez Canal"

CA. 2000 B.C.E. Egyptians invent the first clocks, which used water that dripped at a constant rate to tell time

1825 B.C.E. The Kahun Gynecology Papyrus, which details Egyptian medical knowledge about the female reproductive system, is written

1550 B.C.E. The Smith Papyrus is written, detailing Egyptian surgical techniques

1000 B.C.E. Earliest lock and key system invented by Egyptians

800 B.C.E. Earliest known sundial in use, an Egyptian shadow clock of green schist, which consisted of a base with a raised crosspiece; the shadow of the crosspiece on the base tells the time

610–595 B.C.E. Pharaoh Necho II extends an ancient version of the Suez Canal to the Gulf of Suez on the Red Sea

525–504 B.C.E. Persian rulers of Egypt re-dig the Suez Canal

290–270 B.C.E. Alexandria Lighthouse, or Pharos, one of the Seven Wonders of the Ancient World, is constructed in Egypt, on the Mediterranean coast

CA. 100 B.C.E. African smiths discover how to produce high temperatures in village furnaces; reliefs carved on Kom Ombo Temple show a set of Egyptian surgical instruments

CA. C.E. 1400 Doctors in Mali perform cataract surgery

doctors may not have understood the biological processes by which the remedies worked. Kohl, the black eye makeup favored by the Egyptians, in fact, not only reflected the sun's glare—the Egyptian equivalent of sunglasses—but it also protected the eyes from bacteria. Egyptian doctors typically applied yeast to wounds in order to prevent infections, but they did not understand why it worked. Modern doctors now know that yeast has an antibiotic effect.

Agricultural Innovations

Egyptians were also great innovators in irrigation and agricultural methods. They invented the plow and were the first people to dig canals and construct dams. The Sadd al Kafara is an Egyptian dam south of Cairo dating from 2500 B.C.E., parts of which still survive. It was 348 feet (106 m) long and 37 feet (11.3 m) high, with walls 78 feet (23.8 m) thick at the base. The dam formed a reservoir to provide drinking water for workers at a stone quarry.

Among the earliest canals ever built was constructed around 2400 B.C.E. under Pharaoh Pepi I, at the First Cataract of the Nile (near modern Aswan). This canal made it easier to transport granite down the river in large ships. It was 295 feet (90 m) long, 32 feet (9.75 m) wide, and 29 (8.8 m) feet deep. The first "Suez Canal," joining the Nile and the Red Sea, was dug by the ancient Egyptians during the thirteenth century B.C.E. While the Persians ruled Egypt (525 to 504 B.C.E.), King Darius I had the canal re-dug and proclaimed on a stele, "I gave the order to dig this canal from the

River Nile which is in Egypt to the sea which reaches Persia."

Egyptians also used canals to irrigate their fields and to distribute the annual floodwaters of the Nile where they were needed. In addition, they invented the *shaduf*, a device that lifted water to higher elevations. A later invention, the waterwheel, allowed workers to lift 75,000 gallons (280,000 L) of water in 12 hours.

Pyramids

The building of the pyramids is universally recognized as one of the most amazing feats of construction in the history of human civilization. It is said that the stones of the Great Pyramid at Giza fit together so perfectly that a razor blade cannot be inserted between them. However, construction of the pyramids required more than knowledge of building techniques; it also required knowledge of practical mathematics and astronomy. Mathematical knowledge allowed architects to calculate the precise angles of the sides, while astronomical knowledge was needed to orient the pyramids in the four cardinal directions.

Interestingly, the Egyptian number system itself was relatively cumbersome, as it was difficult to multiply and divide. While in the modern system of numbers, multiplying 372 by 100 is relatively easy, the Egyptian symbol for 100 was a coiled rope, and they did not have the concept of zero. In compensation, they developed a binary system which allowed them to multiply, but it was complicated. Even so, Egyptian mathematics worked well enough that modern mathematicians still marvel at the precision of a pyramid's angles.

Paper and Writing

One of the most important inventions in the history of the world came from Egypt: paper in the form of rolls of papyrus. Before the invention of paper in about 4000 B.C.E., most **hieroglyphs** were carved into stone, a slow process indeed. Using ink-dipped papyrus reeds, **scribes** could write more quickly on paper than on stone and began to run their hieroglyphs together. This eventually led to a simpler form of writing called **demotic**, which was easier to master and allowed more people to learn to read and write. (Still only about one percent of Egyptians were literate until the Ptolemaic **era**, 332–30 B.C.E.) In addition to transcribing sacred texts and keeping records, scribes began to write poetry and works of fiction.

Paper originally took the form of long scrolls, not sheets bound into books as we know them today. The first book in the modern sense of the word was discovered at Dakhla Oasis in western Egypt, dating from C.E. 375, but it was not made of paper. Rather, leaves of wood were bound together with cord.

Calendars and Timekeeping Devices

The Egyptians also invented a remarkably accurate calendar. Their first calendar was based on 12 lunar months of 30 days each, or a year of 360 days. However, the Egyptians noticed that the Dog Star (Sirius of the constellation Canis Major) in the Big Dipper (part of the constellation Ursa Major) rose next to the sun every 365 days, at about the same time that the Nile flooded. This led to their development in 4236 B.C.E of a solar calendar just one quarter of a day off from our current calendar.

The Babylonians and Egyptians invented the first timekeeping devices at about the same time, 2500 to 2000 B.C.E. These were simply obelisks that cast shadows and allowed people to determine whether it was before or after noon. One of the earliest known water clocks was found in the tomb of Amenhotep I, who was buried in 1500 B.C.E., and the earliest known sundial, dated at about 800 B.C.E., was also found in Egypt. An early astronomical tool, the *merkhet*, was invented by the Egyptians around 600 B.C.E. The merkhet uses a string with a weight suspended from it to measure a straight line. Using two merkhets, Egyptian astronomers could determine a straight north-south line by lining them up with the North Star.

One of the earliest known lock-and-key systems was invented in Egypt around 1000 B.C.E. The key is wooden with brass pins. Inside the lock was another series of brass pins that were lifted when the key was inserted.

The great Egyptian city of Alexandria was the technological center of the ancient world from its founding in 331 B.C.E. The oldest lighthouse in the world was constructed there between 290 and 270 B.C.E. Alexandria's library was the largest in the world and a center for the study of mathematics and astronomy. The third librarian of Alexandria, Eratosthenes, calculated the circumference of the earth to within one percent of its actual value.

Egyptians were innovators in many other fields, including cosmetics, dentistry, gardening, jewelry making, mapmaking, and urban planning. Altogether, the Egyptians' use of technology allowed them to live much more comfortable lives than those of many ancient peoples.

See also: Agriculture; Alexandria; Archeological Discoveries; Art and Architecture; Egypt; Language and Writing; Nile River; Tools and Weapons.

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Timbuktu (Tombouctou)

Located in western Africa on the Niger River, a city crucial to trans-Saharan trade and one that later became a center of Islamic learning.

The expression "from here to Timbuktu" suggests a mysterious far-away place, perhaps the place farthest away from ordinary life. As a result of hearing this phrase, some people may believe that Timbuktu is mythical. To the contrary, Timbuktu was for centuries a thriving trade crossroads and administrative and cultural center. The expression derives from a time when Europeans believed Timbuktu was a mysterious city of gold but inaccessible to explorers because of its location on the southern edge of the Sahara.

Berber-speaking Touareg nomads founded Timbuktu in the eleventh century C.E. as an outpost along the trans-Saharan trade route. At first, the Touaregs camped along the Niger River, but they soon found that they became ill because of frequent mosquito bites. They eventually moved about eight miles (13 km) inland and dug a well, which in time became the center of a great city that grew around it. There are two versions of the story about how Timbuktu got its name. In one version, the nomads left a woman named *Tin Abutut* ("lady with the big navel") to watch over the well and their goods while they traveled through the desert. According to another version of the story, the woman's name was Buktu, and *Tin Buktu* means "Buktu's well."

Regardless of how it got its name, Timbuktu quickly became a center for the gold and salt trade. Salt came from Taghaza in the north, gold from the Empire of Ghana to the southwest. Arab merchants brought their religion with them along the trade routes, and much of western Africa eventually converted to Islam.

After the decline of the Ghana Empire in the twelfth century C.E., Timbuktu was incorporated into the Empire of Mali under the great ruler Mansa Musa (r. 1312–1337). The tremendous wealth of the city, and Musa's devotion to Islam, drew merchants and scholars from all over the world. Musa made Timbuktu world famous when he traveled from there to Cairo and then to Mecca on a *hajj*, or pilgrimage, in 1324. Stories of his great wealth gave impetus to the European ideas about Timbuktu; a European map from 1375 showed Mansa Musa

This close-up of the Djingareyber Mosque in Timbuktu highlights the texture of the mud walls. The wooden projections on the tower function as handholds for those who must reapply the mud after each rainy season. (Ariadne Van Zandbergen/Lonely Planet Images/Getty Images)

seated on a throne in the center of western Africa holding a gold nugget.

Returning from Mecca with a number of Arab scholars, including Abu-Ishaq Ibrahim-es-Saheli, the architect of the Moorish city of Grenada, Musa began a building campaign in Timbuktu. Ibrahim-es-Saheli built Musa's palace there, as well as the Djingareyber Mosque, also known as the Great Mosque, and the Sankore Mosque, which became home to Sankore University. At its height as a center of Islamic scholarship, Timbuktu boasted three universities and 180 madrasahs, or schools for the teaching of the Quran. By the 1450s, Timbuktu had a population of 100,000, fully a quarter of which were scholars.

In 1468, Sunni Ali (r. 1464–1492), ruler of the Songhai Empire, invaded and conquered Timbuktu. Ali, though Muslim himself, did not support Islamic scholarship. His son, Sunni Baru, succeeded him to the throne, but soon was overthrown by one of Ali's generals, Mohammad Ture, who ruled under the name Askiya Mohammed (r. 1492–1528). Askiya Mohammad ushered in the golden age of Timbuktu. Unlike Sunni Ali, Askiya admired scholars so much that he consulted them often on ethical and legal matters. Leo Africanus, a geographer and writer from Granada who visited Timbuktu during the reign of Askiya, had this to say about the importance of learning in the city,

> In Timbuktu there are numerous judges, doctors and clerics, all receiving good salaries from the king. He pays great respect to men of learning. There is a big demand for books in manuscript, imported from Barbary. More profit is made from the book trade than from any line of business.

Many people believed that the African scholars of Sankore University were more learned than their Arabic counterparts from Morocco and Egypt, both considered important seats of Islamic learning.

In 1591, the Moroccan sultan El Mansur conquered Timbuktu. During his initial raids on the city, most of the scholars fled; many others were deported. Over the next 200 years, the city declined not only as a place of learning but also as a center of trade.

But the myth endured. Stories of Timbuktu had such allure in Europe that, during the nineteenth century C.E., the Geological Society of Paris offered 10,000 francs for the first European to find his way there. A number of European explorers tried and failed, but in 1828 a Frenchman named René Caillé finally completed the dangerous trip. He was profoundly disappointed by what he found: "a mass of ill-looking houses, built of earth." He added, "Nothing was to be seen in all directions, but immense quicksands of yellowish white color . . . the most

LINK TO PLACE

The Great Mosques

Timbuktu was home to three great medieval mosques that are still in existence today, though all three are buffeted by blowing desert sand that threatens to engulf them. The mosques were constructed of banco, mud mixed with straw, a choice of material that may explain their longevity. For more than 600 years, residents of Timbuktu have gathered every year before the rains come to prepare quantities of banco to repair the mosques' walls. The work is looked on as a religious duty and involves hundreds of people.

Djingareyber, the oldest of Timbuktu's three mosques, was commissioned by Mansa Musa and designed by the architect Abu-Ishaq Ibrahim-es-Saheli. Known as the Great Mosque, Djingareyber was completed in C.E. 1327. It has three courts, two minarets, and can accommodate more than 2,000 people at prayer.

The Sankore Mosque was built between 1325 and 1433, funded by a wealthy resident. Its most unusual characteristic is its large *mihrab* in the shape of a pyramid. A *mihrab* is a niche found in the wall of every mosque which indicates the direction of the holy city of Mecca, to which the devout turn when they pray.

Sidi Yahia Mosque was constructed in about C.E. 1400 by Sheik El Mokhtar Hamallah to honor the coming of a saint whose arrival had been foretold. Named in honor of the saint, Sidi Yahia—designated the mosque's imam, or leader of prayers—about 40 years after its construction, the mosque has a room for winter prayers with three rows of pillars and an outer courtyard for use in the summer.

profound silence prevailed." Today, Timbuktu is an impoverished town with a population of only about 30,000 people.

See also: Berbers; Ghana; Mali; Salt Trade; Songhai Empire.

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Tombouctou

See Timbuktu.

Tools and Weapons

Implements used for work and warfare in ancient Africa shaped the course of civilization. Ancient African tools and weapons reflect the particular needs and lifestyles of the people who designed them.

EARLY TOOLS

Humankind's earliest known tools were made of stone and have been found in Africa. Anthropologists call the earliest stone implements "opportu-

These bronze tools were used by ancient Egyptian woodworkers. Discovered in Thebes, they date from about 1300 B.C.E. (British Museum/HIP/Art Resource, NY)

nistic tools"; that is, hominids, or humanlike creatures, simply picked up a rock that had sharp edges and used it to cut and scrape. Then, about 2.4 million years ago, during the **Paleolithic Period**, people began to use round hammerlike stones to chip away at other stones in order to create sharp edges. The most commonly used stone for the creation of sharp edges was flint, which tends to flake easily. The resulting tools were used to strip the hides off animal carcasses, cut the stems of plants, or dig tubers and insects from the earth.

About 1.5 million years ago, more sophisticated tools appeared in Central Africa. At this time, an entire stone, rather than just one edge, was shaped, and tools with cutting edges on both sides were first created. About a million years ago, a tool called a hand axe made its debut. Hand axes were large, sharp blades with no handle and were used for butchering or chopping down trees.

Homo sapiens are believed to have originated in Africa about 200,000 to 250,000 years ago. Although these early creatures resembled modern humans in physical characteristics, they did not engage in formal tool making, the production of rather intricate tools with standard shapes and specialized functions. This process was believed to have occurred in Europe about 35,000 years ago. In C.E. 2001, however, the discovery in South Africa of 28 intricate bone tools that are at least 70,000 years old revolutionized ideas about when and where humans first began to make formal tools. It may be that the first tools were made in Africa much earlier than scholars once thought.

ANCIENT WEAPONS

Throwing Knives

African throwing knives are common cultural **artifacts**, ancient examples of which have been uncovered throughout a large part of what is now Central Africa, from the Sudan to Gabon to the Congo Basin. They are used even today by several different ethnic groups, including the Bangui, the Kuba, and the Mangbetu. These knives are made of forged iron and are from 1.5 to 2.5 feet (45 to 75 cm) long. They are shaped roughly like a lower-case "f," though some of the knives have more than two blades. Many of the knives are quite beautiful, not only because of their sinuous curves but also because of the sometimes intricate geometrical designs incised on the blades. The handles of the knives are usually made of woven fiber or hide.

Members of ancient African tribes such as the Buganda of Central Africa carried three or four of these knives, either slung over the shoulder or attached to the inside of a large shield. Throwing knives are primarily intended to wound the legs of an opponent or his horse, and the design ensures that the knife will do damage no matter what its angle of impact, because most have at least three cutting edges. According to art professor Pat R. McNaughton in his article "The Throwing Knife in African History," "A properly thrown knife could sever a leg at twenty meters (65 feet) and be thrown with accuracy to 50 meters (164 feet). The maximum range was 100 meters (328 feet)."

The knives were designed as much to terrify as to wound. Their highly polished surfaces reflected sunlight so they flashed as they hurtled toward their targets. The spinning motion resulted in a low whirring noise.

The knives had uses off the battlefield as well. The ruling elite often used versions that were more elaborate as symbols of power. In many places in Central Africa, they were even used as currency.

The first tools for farming were invented in about 8000 B.C.E. **Archeologists** have found many ancient Egyptian paintings on the walls of tombs that depict farm tools and how they were used. To make a sickle, ancient Egyptians joined two pieces of wood in a crescent shape, then inserted serrated flint teeth along the inside edge. The Egyptians also had simple wooden ploughs and hoes that were made by joining two sticks with a piece of rope. The handle of the hoe was short, forcing the hoer to bend over during the process. Egyptians also made wooden rakes, scoops, and mallets. In about 1600 B.C.E., Egyptians invented the *shaduf*, a bucket tied to a pivoting pole, used in irrigation. Irrigation allowed Egyptian society to exploit the annual flooding of the Nile, which in turn allowed them to grow surplus crops, which then allowed for the development of Egyptian civilization.

Probably the first metal to be worked in Egypt was copper, from which were made needles, saws, scissors, arrow tips, and knives. Before that time, cutting and sewing were done with stone or bone tools, which were much harder to shape than copper and therefore much less precise. By the Fourth Dynasty (2575–2467 B.C.E.), the Egyptians made tools of bronze, which was a great improvement over copper because bronze is much sturdier. The Egyptians did not learn to smelt iron until about the seventh century B.C.E.

Egyptian weaponry consisted of scimitars, knives, bows and arrows, swords, spears, battle axes, and maces. A few Egyptian soldiers wore body armor of leather covered with metal scales, but armor was not common because of the hot, dry climate. After the Hyksos dynasties (1630–1520 B.C.E.), the Egyptians also used chariots. In a typical battle, bowmen would begin the attack, followed by

infantry wielding battle axes and swords. Spear-carrying charioteers were most often used to attack the enemy as they were fleeing. Egyptian foot soldiers also carried shields, the size of which was determined by what weapons the enemy used. Shields as tall as a person were not easily maneuvered but served as excellent protection against arrows. Smaller shields provided a good defense against swords and axes. These new weapons helped the Egyptians defend their kingdom and conqueror new lands.

Iron came earlier to other parts of Africa. Archeologists long believed that the technology for smelting iron was brought to Africa from Asia, but **artifacts** uncovered by archeologists suggest that the technology was developed independently in eastern Niger in about 2500 B.C.E. African blacksmiths made iron tools, including broadswords, throwing knives, axes, adzes, spears, and hoes.

Much of the ironwork of ancient Africa is remarkably beautiful; today, knives and swords are often exhibited in art museums. It was common to make ceremonial weapons that were never intended to be used. So important was iron to Africa that many groups used iron objects as currency. In fact, hoe blades were often used as part of bride price, the gifts given to a bride's family before a wedding. Iron also symbolically represented the authority of kings and chiefs, who often controlled the sources of iron and the smelting furnaces.

In addition to iron weaponry and farm tools, African craftspeople also made elaborately decorated shields of wood, wicker, and the hides of such animals as elephant, buffalo, hippopotamus, rhinoceros, and giraffe. The Zande people of the western Sudan carried large shields made of wicker, behind which they carried up to four throwing knives. The patterns woven into the shields allowed warriors to recognize their comrades even in the dark. The Nguni of South Africa carried warrior-sized shields made of cowhide, interwoven with different colored strips of hide. The Dinka of the southern Sudan carried wooden objects that looked like bows but were actually used like shields to deflect attacks. Shields, like iron weapons, were objects that attested to the status of the owner and were prized by the warriors who carried them.

See also: Agriculture; Archeological Discoveries; Egypt; Technology and Inventions.

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Yoruba

A people who today live primarily in southwestern Nigeria and who founded a number of ancient forest kingdoms, including the Oyo and Ife. In fact, ancient Yorubaland was divided into more than 25 city-states. **Archeologists** believe that the Yoruba have lived in this part of Africa since prehistoric times. Many of the slaves who were captured and brought to the Americas were Yoruba; as a result, evidence of Yoruba culture and traditions can still be found in modern Brazil, Trinidad, Cuba, and Haiti, particularly in the religion known as Santería.

The Yoruba believe that the world began in Ife, a city that they still regard as sacred and that is to this day a major center of Yoruba culture. Their creation myth tells how the creator, Olodumare, dispatched his son, Olduduwa, to earth carrying a lump of soil, pieces of iron, and a chicken. It was in Ife that Olduduwa placed the iron, which he then covered with soil, and allowed the chicken to scatter the soil to create farmland. From Ife, the Yoruba believe, the sons of Olduduwa went forth to found all the other kingdoms of the earth.

It is not surprising that the Yoruba believe they were present at the creation, for they are an ancient people. **Linguists** have noted that the language of the Yoruba became distinct from that of their neighbors more than 5,000 years ago, and there is evidence that the Yoruba had iron tools more than 2,000 years ago, making them among the first people on the African continent to learn to work with iron. The city of Ife has been occupied for more than 1,400 years; in fact, it is among the oldest cities in the forestland of west Africa.

The Yoruba have long been an urban people. Typically, they lived in cities surrounded on all sides by farmland. Because the land occupied by the Yoruba was densely forested, they had to be able to fell large trees to claim the land for agriculture, a task for which iron tools would have been necessary. In addition to ironworking and agriculture, the Yoruba were masters at working in terra-cotta and bronze. The Nok terra-cottas, huge clay heads that were sculpted between 500 to 200 B.C.E., were probably made by ancestors of the Yoruba, and the tradition of making huge heads continued for hundreds of years. Craftsmen of Ife made lifelike and sometimes life-sized heads of both terra-cotta and bronze from the twelfth through the fourteenth century C.E. Archeologists believe that the heads represent dead kings, or *oni*. Many of the faces are decorated with vertical lines, perhaps representing **ritual** scarification. Many of the heads wear beaded crowns and beaded necklaces.

By the seventeenth century C.E., the kingdom of Oyo came to dominate all of Yorubaland. Oyo had

LINK IN TIME

Santería

Santería, or La Regla Lucimi, is a belief system that arose in Cuba from an intermingling of Catholic and ancient native Yoruba beliefs. Thus, Santería is a syncretic religion. "Syncretic" refers to anything that is created from the melding of disparate elements.

When slaves were brought to the Caribbean in the sixteenth and seventeenth centuries C.E., many were nominally converted to Catholicism. However, the newly converted did not abandon the belief system they brought with them and developed a new religion that combined elements of both native beliefs and Catholicism. African elements in Santería include *orisha*, beings who represent aspects of the creator, Olodumare, who, the Yoruba believe, remains aloof from the daily life of humans. Orisha also represent and are represented by various aspects of nature; one may see manifestations of Orisha in rivers, stones, or lightning. They are similar to saints or guardian angels in the Christian belief system, but are less remote than angels and saints, and more directly involved in everyday existence. When slaves had to hide their real religious beliefs from their masters, they continued to worship the Orisha in the guise of Christian saints. In fact the term "Santería" was first used by the Spanish to describe the religion of the slaves, and it was intended as derogatory. "Santería" refers to what the Spanish saw as excessive devotion to the saints, not realizing that the people were actually devoted to the Orisha.

Another African aspect of Santería as it is practiced today is animal sacrifice. Over the past half century, many Cuban immigrants have brought Santería with them into American cities, and many who do not share their beliefs are offended by the killing of animals. However, adherents of Santería point out that the priests are trained in humane methods of sacrifice—and the victims are most frequently chickens, who are then cooked and eaten as part of the **ritual**.

Another important African influence in Santería can be seen in trance possessions. Drumming and wild dancing help adherents of Santería fall into deep trances, during which time they communicate with and seek guidance from deities and ancestors.

Because Santería seems strange and mysterious to many people, it is often portrayed on television and movies as bloody and terrifying, and it is linked in many people's minds to witchcraft, voodoo, and Satanism. But, in fact, the guiding principle of Santería, *ashe*, is a force for energy, growth, and harmony

an advantage over other Yoruba city-states because they imported horses from the north and used them to dominate their neighbors. Oyo merchants traded extensively with Europeans and, sadly, sold people from conquered neighboring city-states in return for cloth and other goods. Between 1680 and 1730, Oyo sold 20,000 people into bondage each year. Ironically, Oyo collapsed after the British ended the slave trade in 1807. Because the British were no longer trading in slaves, the price of a slave became so low that anyone could own one. This led to a huge enslaved population. In 1823 Afonja, a military commander, fomented a successful revolution in Oyo by recruiting slaves to his cause. After the revolution, Oyo collapsed and all of Yorubaland was plunged into long and violent warfare.

See also: Agriculture; Benin; Myths and Epics; Nok People; Religion; Technology and Inventions; Tools and Weapons.

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Glossary

The following words and terms, including those in "The Historian's Tools," also appear in context in boldface type throughout this volume.

The Historian's Tools

These terms and concepts are commonly used or referred to by historians and other researchers and writers to analyze the past.

cause-and-effect relationships A paradigm for understanding historical events where one result or condition is the direct consequence of a preceding event or condition

chronological thinking Developing a clear sense of historical time—past, present, and future

cultural history See history, cultural

economic history See history, economic

era A period of time usually marked by a characteristic circumstance or event

historical inquiry A methodical approach to historical understanding that involves asking a question, gathering information, exploring hypotheses, and establishing conclusions

historical interpretation/analysis An approach to studying history that involves applying a set of questions to a set of data in order to understand how things change over time

historical research An investigation into an era or event using primary sources (records made during the period in question) and secondary sources (information gathered after the period in question)

historical understanding Knowledge of a moment, person, event, or pattern in history that links that information to a larger context

history of science and technology Study of the evolution of scientific discoveries and technological advancements

history, cultural An analysis of history in terms of a people's culture, or way of life, including patterns of human work and thought

history, economic An analysis of history in terms of the production, distribution, and consumption of goods

history, political an analysis of history in terms of the methods used to govern a group of people

history, social An analysis of history in terms of the personal relationships between people and groups

patterns of continuity and change A paradigm for understanding historical events in terms of institutions, culture, or other social behavior that either remains consistent or shows marked differences over time

periodization Dividing history into distinct eras

political history See history, political

radio-carbon dating A test for determining the approximate age of an object or artifact by measuring that object's number of carbon 14 atoms

social history See history, social

Key Terms Found in A to Z Entries

antiquity The ancient past, particularly referring to the history of the Western world before the fall of the Roman Empire in C.E. 476

archeologist A scientist who studies prehistoric peoples and their cultures

aristocratic class The governing group of a society in which the status is usually inherited

artifact In archeology, any material object made by humans, especially a tool, weapon, or ornament

artisan A skilled craftsperson or worker who practices a trade or handicraft

bureaucracy A form of government that is characterized by standard procedures, formal division of responsibility, and relatively impersonal relationships

caucasoid A term used to describe the race of humans from Europe, North Africa, and the Middle East

cognate A word that is related to or shares a similar origin with another word; the English word *milk* and the German word *milch* are cognates

Coptic The language of the Copts, an Afro-Asiatic people, which is used today as the language of the Coptic Church

cross-cousin marriage A marriage between first cousins; while cross-cousin marriage is forbidden in some cultures, some African cultures encourage the practice

cuneiform Literally "wedge-shaped"; refers to the wedge-shaped writing of the Sumerians, Assyrians, Persians, and other Middle Eastern people

demotic A simplified form of Egyptian hieroglyphics

doctrine A set of principles presented for acceptance or belief, such as by a religious, political, or philosophical group

effigy A representation of a person or animal; often a crude image of a despised person

equinox Literally "equal night"; an astronomical term referring to the two days each year in which daylight and darkness are approximately equal; usually March 21 (spring equinox) and September 21 (autumnal equinox)

excavation Literally "digging"; the primary technique used by archeologists to uncover evidence of prehistoric or ancient life

genetics The study of the biology of heredity, the qualities passed from one organism to another through reproduction

glyph A symbol that represents a word or a sound in a written language

hieratic A cursive form of Egyptian hieroglyphs

hieroglyph A pictorial symbol used to express a word or sound; refers primarily to Egyptian writing but is also used to refer to the Mayan and Aztec writing systems

ideogram A symbol representing an object, such as the abstract pictures of men and women that identify restrooms

inscription Writing carved or engraved on a surface such as a coin, tablet, or stone monument

linguist A person who studies human speech, especially a particular language or means of communication

material culture Term used by archeologists to refer to the objects used by a particular group of people, including tools, weaponry, jewelry, houses, and items for burial practices

matriarchal A type of society ruled by female leaders

matrilineal A social system in which descent is traced through the mother's line

megalith A large structure made of stone; term used particularly to describe enormous circles, tombs, and other stone constructions of Bronze Age Europe

Mesoamerica A region extending from Central Mexico to Costa Rica that was home to several great pre-Colombian civilizations

microlithic Literally "small stones"; describes small tools made by early humans

mitochondrial DNA A form of DNA found outside the nucleus of the cell; mitochondrial DNA does not change much from parent to offspring and can be used by scientists to trace relationships back hundreds of generations

monarchy Form of government in which a state is headed by a single hereditary ruler

monotheistic Referring to belief in a single deity

oracle A shrine, or religious figure serving at that shrine, consulted for religious purposes, particularly for giving advice or foretelling the future

Paleolithic Period Also called the "Old Stone" Age, from the Greek, the period in human development from about 450,000 to 10,000 B.C.E., beginning with the use of the earliest stone tools and ending with the adoption of the bow and flint tools; historians further classify the era as the Lower Paleolithic Period (about 450,000 to 100,000 B.C.E. to 100,000 B.C.E.; Middle Paleolithic Period (100,000 to 40,000 B.C.E.); and Upper Paleolithic Perod (40,000 to 10,000 B.C.E)

pantheistic Believing in a supreme creator whose presence is everywhere

pantheon All the gods of a people, or a temple dedicated to all the gods of a people

papyrus Paper made from reeds; invented by the Egyptians

patriarchal A type of society ruled by male leaders, where men typically possess primary religious, political, and domestic authority

patrilineal A social system in which descent is traced through the father's line

petroglyph (see also: **glyphs**) A symbolic figure engraved or painted on a stone surface

phonogram A written symbol that stands for a sound; the letters of the English alphabet are phonograms

physiological Pertaining to the science of the function of living organisms

pictogram A picture standing for whole words, part of the syllabary system of writing

pictograph A pictorial representation of a word or idea

polygamous referring to a social arrangement in which a person may take more than one spouse

polytheistic Referring to belief in a number of deities who are often representations of natural forces, such as the rain or the wind

primitive Pertaining to an earlier, simpler state; may particularly refer to early stages in the development of human culture before the development of writing

relief A type of sculpture where raised figures project partially from a flat surface, giving the appearance of dimension

republic Political system in which the head of state is not a monarch and in which the supreme power lies in a body of citizens who are entitled to vote for representatives responsible to them

ritual An act or procedure following a set order or form; often contains a ceremonial or religious importance

scribe An ancient profession; someone who could read and write, in a time when most people could not

shaman Sometimes referred to as a "medicine man"; someone who acts as a link between the material and spiritual world

solstice An astronomical term referring to days when the earth is at the nearest and farthest distance from the sun; usually June 21 (summer solstice) and December 21 (winter solstice)

subjugation Condition in which one person or group is made subservient or obedient to another person or group

syllabary A writing system consisting of symbols representing vowels and consonants, as well as logograms or pictograms that stand for whole words

textiles Items made of cloth or fabric, or the fibers used to weave a fabric

tribal Referring to groups of indigenous people, especially among preliterate people, who formed a close community

tribute A payment from one nation or group to another, usually to acknowledge submission

utilitarian Having a useful function

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