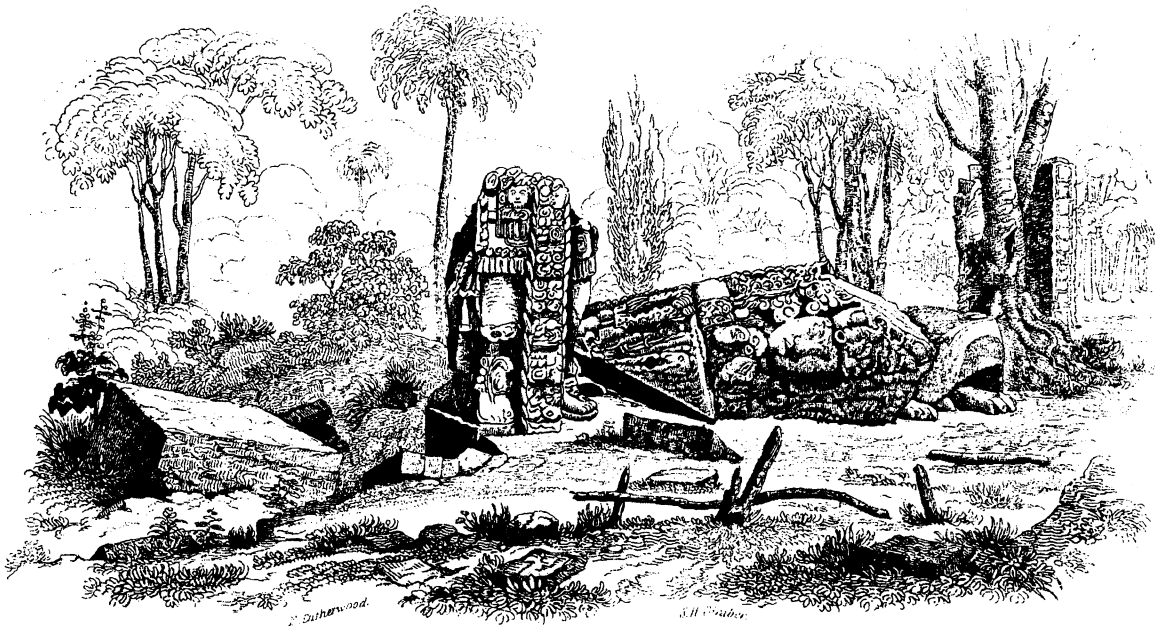
Chapter 1
Origins and Development of Mesoamerican Civilization

> At daylight the clouds still hung over the forest; as the sun rose they cleared away. . . . The branches of the trees were dripping wet, and the ground very muddy. Trudging once more over the district which contained the principal monuments, we were startled by the immensity of the work before us. . . . The woods were so dense that it was almost hopeless to think of penetrating them. . . . It is impossible to describe the interest with which I explored these ruins. The ground was entirely new; there were no guide-books or guides; the whole was a virgin soil. . . . We stopped to cut away branches and vines which concealed the face of a monument. The beauty of the sculpture, the solemn stillness of monkeys and the chattering of parrots, the desolation of the city, and the mystery that hung over it, all created an interest higher, if possible, than I had ever felt among the ruins of the Old World. (Stephens 1841:1:117–120)

With these words the nineteenth-century explorer John L. Stephens described his initial reaction to the ruined Mayan city of Copán. Stephens and his fellow traveler, artist Frederick Catherwood, were the first explorers to describe the lost cities of the Mayas to American and European audiences. These spectacular ruins, which had lain abandoned in the jungle for almost a millennium, excited the public's imagination (Figure 1.1), and a number of far-fetched theories arose attributing the construction of the cities to the ancient Greeks, Egyptians, Lost Tribes of Israel, and even refugees from the mythical continent of Atlantis (see the discussion of some of these "theories" in the Introduction). Against these popular notions, Stephens had the correct explanation from the start:

> We are not warranted in going back to any ancient nation of the Old World for the builders of these cities. . . . There are strong reasons to believe them the creation of the same races who inhabited the country at the time of the Spanish conquest, or of some not very distant progenitors. (Stephens 1843:1:50).

These ancestral Mayan peoples and their contemporaries throughout Mesoamerica not only built the ancient cities discovered by Stephens and Catherwood, but they also forged a distinctive civilization whose legacy survives throughout Mesoamer-



FALLEN IDOL.

Figure 1.1 Ruins of the Classic Period Mayan city of Copán, Honduras, as captured in an 1843 engraving by artist Frederick Catherwood. Reprinted with permission of Dover Publications (*Incidents of Travel in Central America, Chiapas and Yucatan, Vol. I.* New York 1969, p. 154).

ica today. The antecedents of Mesoamerican culture can be traced back to the Pleistocene Ice Age over 10,000 years ago, when the first hunters and gatherers arrived in Central America. Sometime between 5000 and 3000 B.C., during the Archaic period, the descendants of the earliest inhabitants brought about what was probably the single most important innovation in Mesoamerican history, the domestication of maize or corn. The initial impact of maize cultivation was minimal, but after several thousand years, the crop had improved and people depended on the triad of maize, beans, and squash to fulfill most of their subsistence needs. The process of plant domestication was slow and uneven across Mesoamerica, and in most regions sedentary villages emerged before full agricultural dependence.

The Formative period (1800 B.C.–A.D. 200) saw the origin of Mesoamerica as a distinctive cultural entity. Widely scattered peoples speaking a variety of languages were united as Mesoamericans during the Early Formative (1800–900 B.C.) on the basis of sedentism, the use of ceramics, and of the construction of large-scale monumental facilities. During the Middle Formative (900–400 B.C.), people became dependent on agriculture, the earliest pyramids were built, and many societies developed complex social and political hierarchies. In the Late Formative (400 B.C.–A.D. 200), the first cities and states emerged in the New World. The following Classic period (A.D. 200–800) was characterized by the growth of cities and states. Mesoamerican societies became more complex, and they developed sophisticated writing, calendars, urban planning, state-sponsored cults, and other hallmarks of civilization. The final episodes of the pre-Columbian past, the Epiclassic/Terminal Classic and Postclassic periods

(A.D. 800–1519), saw a continuation of these patterns of social complexity. The large and powerful theocratic states of the Classic period, however, gave way to a majority of smaller, more secular and commercially oriented city-states (Figure 1.2).

Mesoamerica in 1519 had a distinctive cultural heritage shared by many diverse peoples. In this chapter we review the history of pre-Columbian Mesoamerica, starting with the arrival of Pleistocene hunters and ending with the era that followed the decline of the Classic civilizations. In Chapter 2 we focus on the Late Postclassic period, the last three centuries preceding the arrival of Europeans in 1519, and in Chapter 3 we turn to an examination of the ways that Mesoamerica was organized as an integrated world-system in the sixteenth century.

EARLY INHABITANTS OF MESOAMERICA.

Paleo-Indian and Archaic Hunter-Gatherers.

The earliest people to inhabit Mesoamerica arrived at the end of the Pleistocene epoch (also known as the Ice Age,) sometime between 30,000 and 10,000 years ago. Until recently, archaeologists thought that all of the early migrants walked to the New world over a land bridge called "Beringia" that linked Siberia and Alaska. Beringia was exposed when enormous glaciers were formed, causing sea levels to drop. New evidence has led some archaeologists to propose that early migrants may also have traveled from Asia to the Americas by boat along the Pacific coast (see Meltzer 2004 for a review of new evidence). At the end of the Pleistocene, glaciers that had covered much of North America melted, leading to a rise in sea levels and dramatic changes in vegetation, landforms, and surface water. One consequence of these changes was the extinction of many Pleistocene animals (including mammoths and mastodons) and modifications of the habits and ranges of many others. These changes had important effects on the new settlers.

These early settlers, using an elaborate stone tool technology, adapted to the varied late Pleistocene environments of the New World. Some populations traveled the length of the American continents as far as southern Chile. Archaeological sites from this time period represent the remains of hunting, butchering, quarrying, or temporary campsites of mobile hunter-gatherers. The most extensively studied Mexican sites were excavated by José Luis Lorenzo and Lorena Mirambell. El Cedral (in the Mexican state of San Luis Potosí) was a campsite at a freshwater spring in which stone and bone tools were found around a hearth. Tlapacoya, in the Valley of Mexico, was a settlement at the edge of a lake with remains of stone tools, animal bones, and hearths (Figure 1.3). At the site of Monte Verde in Chile, Thomas Dillehay has reported the earliest securely documented human occupation in the New World that is 13,000 years old. The diverse plant and animal remains recovered from this site indicate that the occupants had an intimate knowledge of their environment. Monte Verde is also the site of the first house in the Americas; its waterlogged condition helped to preserve compartments of wooden house foundations. A deeper occupation zone at Monte Verde that potentially dates to 33,000 B.P. is under further investigation, and it may provide evidence of much earlier human occupation.

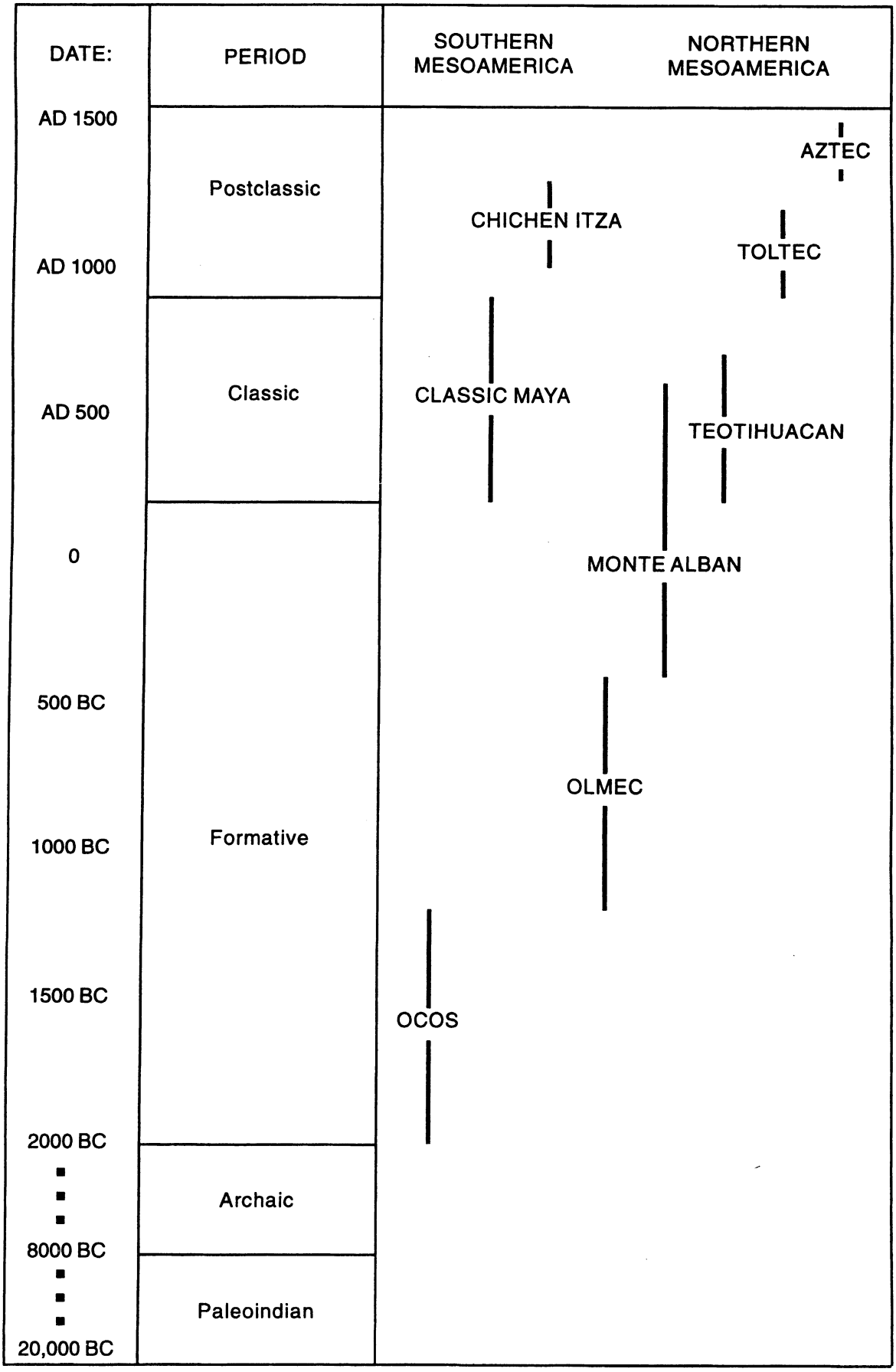


Figure 1.2 Pre-Hispanic chronology of Mesoamerica.

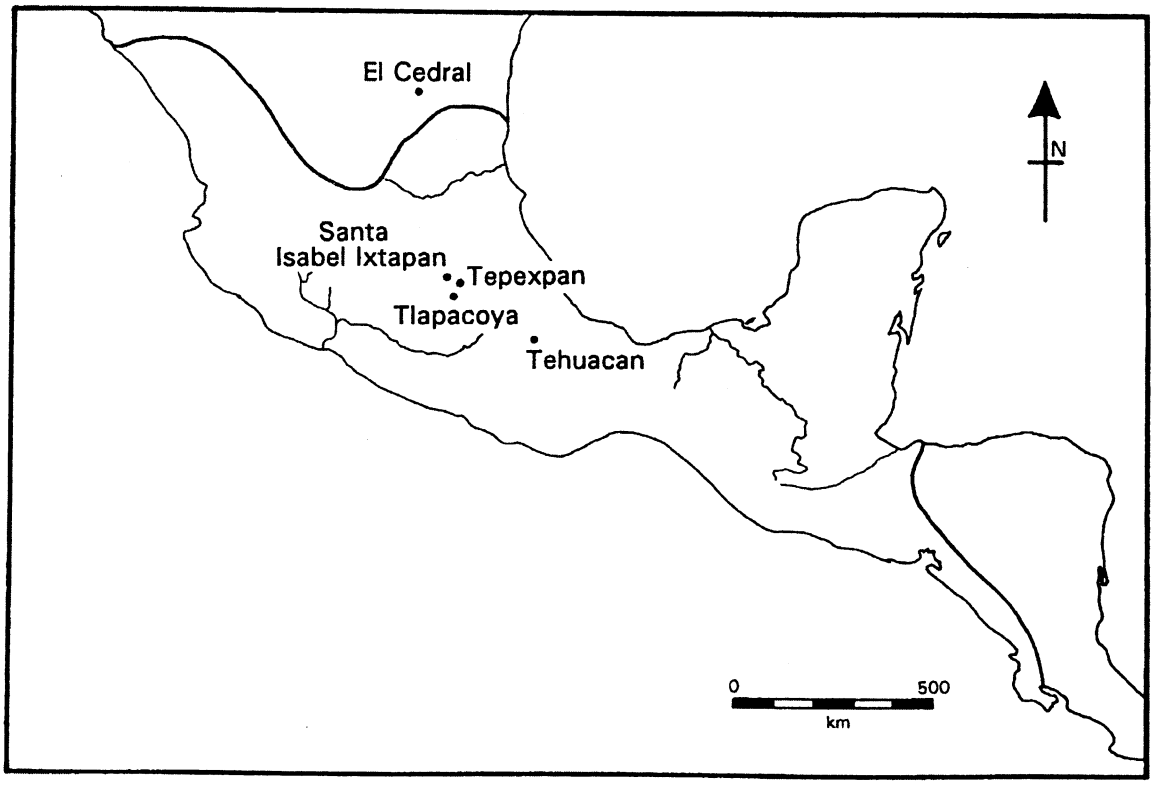


Figure 1.3 Locations of major Paleo-Indian and Archaic Period sites.

The latter part of the Pleistocene epoch saw the spread of the mammoth-hunting Clovis culture throughout North America and northern Middle America. Like Clovis sites in the United States, those in Middle America illustrate the proficiency of these ancient hunters, who used well-made stone tools to kill and butcher huge mammoths. The site of Santa Isabel Iztapan in the Valley of Mexico consists of the remains of two butchered mammoths together with the stone tools used to process them; the site is dated to sometime between 9000–7000 B.C. At nearby Tepexpan, a complete female skeleton dating to around the same time was preserved (although the excavation report called her "Tepexpan man"!).

The post-Pleistocene environmental changes after 9000 B.C.—rising sea levels, changing vegetation, and extinction of mammoths and other species—forced the Paleo-Indian peoples to modify their diets and activities, leading to an increased reliance upon plant foods. An important result of these modifications was the domestication of food plants, which led eventually to the start of farming in Middle America.

Plant Domestication.

Domestication is the process by which wild plants evolve into domesticated crops as humans select for traits that will make the plants more useful. Domesticated crops have a different genetic makeup than that of their wild ancestors, and generally can-

not survive in the wild. Independent episodes of domestication took place in several parts of the world in the aftermath of the Pleistocene, including Middle America, the Near East, sub-Saharan Africa, southeast Asia, north China, the Andes, and the Amazon basin. Plant domestication in Middle America was particularly significant not only because it established a pattern for the development of later Mesoamerican cultures, but also because some of the resulting crops are among the most important food crops in the world today.

Domestication of Mesoamerican plants took place during the Archaic period. The earliest domesticate was squash, documented in the Valley of Oaxaca at 8000 B.C. and it was not for thousands of years after this that maize and beans were domesticated. Instead, chile peppers, bottle gourds (used as containers), amaranth, and avocados were the next early domesticates (see Table 1.1).

The earliest remains of maize are from Oaxaca and Tehuacán around 3400 B.C., by which time the crop (*Zea mays*) had evolved fully from its wild ancestor teosinte (*Zea mexicanus*) through processes of cultural selection and genetic mutation. The nutritional quality of maize was great, and when combined with beans it produces a complete protein. This combination was the basis of the Mesoamerican diet from early times until the present (see Box 1.1). In contrast to its variety of domesticated plants, Middle America was the home to very few species of domesticated animals. Only dogs, turkeys, and possibly bees, all used for food, were domesticated in the area.

Table 1.1 Mesoamerican Domesticated Plants

COMMON NAME	SCIENTIFIC NAME	COMMON NAME	SCIENTIFIC NAME
Grains		papaya	*Carica papaya*
maize	*Zea mays*	tuna cactus	*Opuntia*
beans	*Phaseolus (four species)*	mamey	*Calocarpum mammosum*
amaranth	*Amaranthus cruentus*	chicosapote	*Achras sapote*
sunflower	*Helianthus annuus*	Mexican cherry	*Prunus capuli*
chía	*Salvia hispanica*	hog plum	*Spondias mombin*
Tuber Plants		guava	*Psidium guajava*
jícama	*Pachyrrhizus erosus*	vanilla	*Vanilla planifolia*
Vegetables		Fiber Plants	
squash	*Cucurbita (four species)*	agaves	*Agaves (at least five species)*
tomato	*Lycopersicon esculetum*	Condiment Plants	
husk tomato	*Physalis xiocarpa*	chile pepper	*Capsicum (various species)*
chayote	*Sechium edule*	Dye Plants	
Fruits		indigo	*Indigofera suffruticosa*
avocado	*Persia americana*	Ceremonial Plants	
cacao (chocolate)	*Theobroma cacao*	copal	*Protium copal*

Note: Adapted from West and Augelli (1989:220).

Box 1.1 Maize

Why was maize so important to the ancient Mesoamericans, and why does it continue to be the primary food in modern Mesoamerica? The answer lies in a combination of the plant's nutritional qualities and the lack of domesticated animals in ancient Mesoamerica. In most areas of the world, traditional diets provide most of their calories through high-carbohydrate, low-protein, staple grains, but most rely on domesticated animals like cattle or pigs for their protein. This dietary strategy would not work well in Mesoamerica because of the paucity of domesticated animals (only turkeys and dogs were available). In order to meet their protein needs, Mesoamericans domesticated maize and then developed methods of preparing and serving the food to turn it into an adequate and complete source of protein.

Maize has high concentrations of most of the essential amino acids that the human body needs to synthesize proteins, but two are lacking and one is chemically bound and not readily available. In order to supply the missing amino acids, Mesoamericans eat beans with their tortillas (or other forms of maize); beans have high concentrations of the missing nutrients. To free the chemically bound acid, Mesoamericans soak their maize in an alkali solution (normally made by simply adding powdered lime—calcium carbonate—to water) before grinding the kernels. These two practices are deeply ingrained cultural traits that not only produce delicious meals but also ensure that maize provides adequate protein for human needs. The Mesoamerican diet, from Formative times until the present, is one of the few traditional world cuisines that can provide adequate protein without heavy supplements of meat or other animal protein sources.

Given the nutritional and cultural importance of maize, it is not surprising that Mesoamerican peoples long ago devised many different ways of serving the food. Tortillas, flat maize cakes roasted on a clay griddle, have been the most prevalent form of maize from the Classic period to the present day. In addition to being flavorful and easy to eat, tortillas have the advantage of portability—they can be cooked ahead of time and then carried to eat later, in the field or on the road. Tamales are balls of coarse maize dough steamed in large pots, often with chile or meat filling. This was probably the major way maize was eaten before the invention of the tortilla. Atole, a thin gruel of finely ground maize, often flavored with fruit or sugar, is a popular breakfast food; pozole, a soup made with large maize kernels (hominy), is a common evening food. Maize is also eaten fresh on the cob, but this method does not involve alkali soaking and therefore does not provide the nutritional benefits of the other maize foods.

The methods of tortilla preparation, well-documented in ethnographic accounts of modern traditional behavior, have probably changed little in 2,000 years. The ears of maize are typically left to dry on the plants. In the fall, the dried maize is harvested and then shelled; it is stored sometimes on the cob and sometimes as dried kernels. To prepare tortillas, the dried kernels are soaked in the alkali solution in a clay pot and then are ground by hand on a stone mill or metate. The moist ground flour or dough is then patted into shape by hand, and the tortillas are cooked on a clay griddle and stored in a basket or wrapped in cloth. Maize grinding stones are common artifacts at Mesoamerican archaeological sites, and clay griddles are typically either absent (at early sites) or ubiquitous (at later sites). This traditional method of food preparation is quite arduous; grinding the maize to make several dozen tortillas for the daily meals of a family of six requires four to five hours of physical labor. The domestic activities and schedules of women in traditional Mesoamerican societies are thus heavily conditioned by the requirements of maize grinding.

Although maize and the other food crops were available quite early, a fully agricultural economy did not develop in the region until the Middle Formative after 900 B.C. The hunter-gatherers of the Archaic period continued their nomadic lifestyle for several thousand years after the appearance of domesticates, merely adding these crops to their repertoire of wild resources. These groups had no pottery and used stone tools for land clearing and cultivation (Figure 1.4).

Sedentism emerged in some of the most productive coastal environments in Mesoamerica during the Late Archaic (3000–1800 B.C.) when reliance on marine fauna provided reliable resources on which to subsist. These sedentary villagers, along with their successors in the subsequent Early Formative, experimented with maize and developed more productive varieties. Because of its high sugar content, early uses of maize may have been for making beer or other alcoholic drinks. Today, much of the industrially produced sugar (in the form of fructose) is from corn.

The Beginnings of Village Life.

During the last 2,000 years of the Archaic period, peoples throughout Middle America gradually adopted a more sedentary lifestyle. The expansion of sedentism was one of the most far-reaching changes in ancient human history (in Middle America and elsewhere), as it set the scene for an agricultural way of life and the later evolution of cities and states. Over the same period, other important changes were taking place; populations were growing, people were becoming more and more dependent

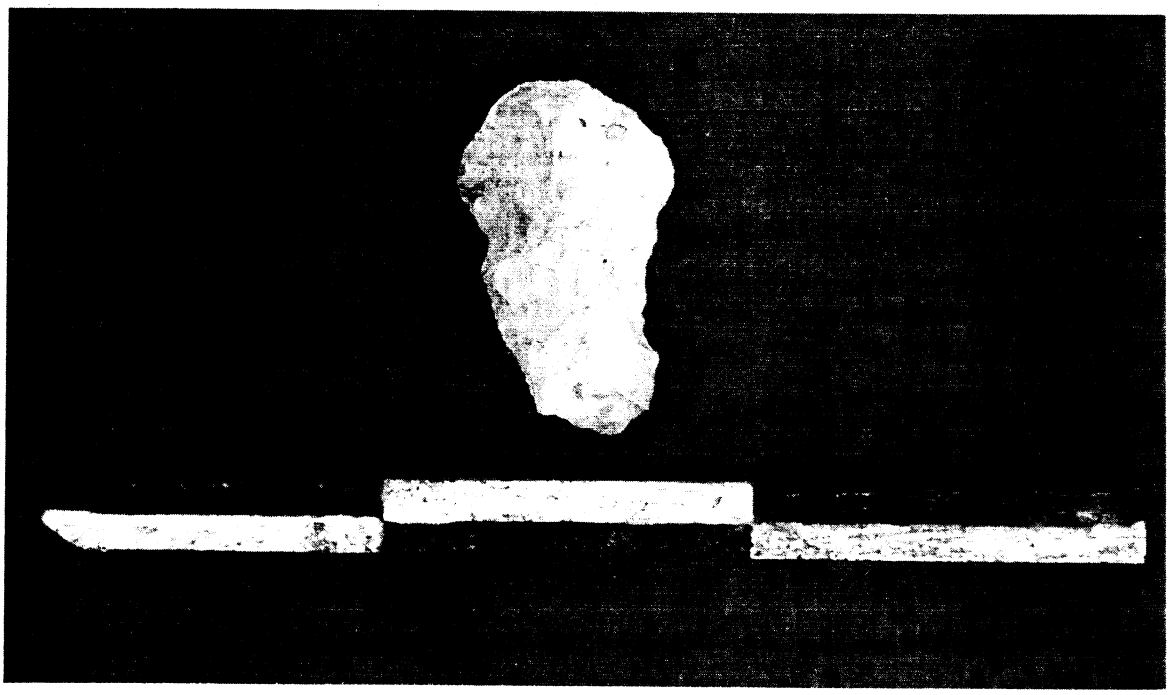


Figure 1.4 Constricted adze from Caye Coco, Belize. Such tools were used during the second millennium B.C. by Late Archaic semisedentary gardening populations. Photo by M. Masson.

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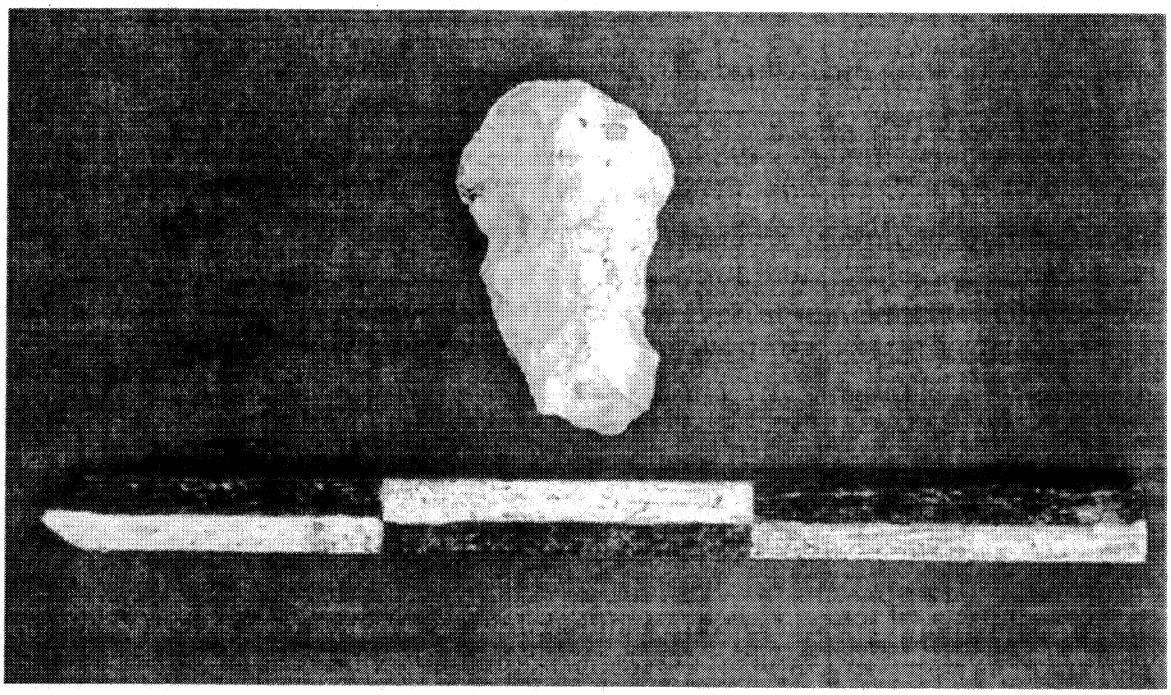

Figure 1.4 Constricted adze from Caye Coco, Belize. Such tools were used during the second millennium B.C. by Late Archaic semisedentary gardening populations. Photo by M. Masson.

on domesticated plants, and villagers began storing food. Archaeologists believe that these changes were all linked.

The earliest evidence in the region for possible sedentism comes from lowland zones: the Pacific Coast, the Gulf Coast, and the Caribbean coast of Belize. A clay housefloor dating to between 3500 and 3100 B.C. has been found in a shell midden at the site of Tlacuachero in Chiapas. In coastal Veracruz, a preceramic village may have existed as early as 3000 B.C. at the site of Palo Hueco, and the remains of late Archaic camps have been found in northern Belize.

Other possible early village sites are found in certain regions of the highlands where environmental conditions existed that enabled people to become sedentary prior to dependence on agriculture. One such area is the Basin of Mexico, where villages may have existed along the shores of lakes and lagoons. Elsewhere in the highlands, in the Tehuacán Valley and in Oaxaca, evidence for sedentism also dates to the late Archaic period.

We know very little about these earliest villages. There does not appear to have been much variation among houses within villages, and within the various subregions there is no evidence of a hierarchy of communities. The general consensus among archaeologists is that the earliest Middle American villages were egalitarian and autonomous. Even though some of the earliest settlements were based on exploitation of wild resources in lowland zones, by the end of the Archaic period, populations in lowland as well as in highland areas were increasingly dependent upon cultivated plants, particularly maize and root crops. By around 1800 B.C., the village farming tradition was firmly in place in many parts of the region.

MESOAMERICA DEFINES ITSELF: THE FORMATIVE PERIOD.

The 2,000 years of the Formative period (1800 B.C.–A.D. 200) were a time of rapid and far-reaching cultural change throughout Middle America. Archaeologists usually divide this time span into three subperiods. The Early Formative period (1800–900 B.C.) saw the initial settlement of most areas of the region by sedentary peoples. In a few areas, early villages grew in size and complexity to reach the form of social organization known as the chiefdom. During the latter part of this period, a complex polity emerged on the Gulf Coast of Mexico at San Lorenzo, and a shared political and religious iconography spread throughout several regions.

The succeeding Middle Formative period (900–400 B.C.) is notable for three main historical developments: (1) complex chiefdoms and incipient states emerged in many parts of Middle America; (2) the first pyramid mounds were built, and (3) an adaptation completely dependent on agriculture and based on maize, beans, and squash, spread to most parts of Mesoamerica. In the Late Formative period (400 B.C.–A.D. 200), many Middle Formative polities collapsed, to be replaced by larger and more complex societies, the first fully developed Mesoamerican states. Formative period sites are shown in Figure 1.5.

The Legacy of Mesoamerica

History and Culture of a Native American Civilization

Second Edition

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