2. The Physical and Cultural Setting

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The village and site of Chalcatzingo are located in the center of the valley of the Río Amatzinac-Tenango* near the eastern border of the state of Morelos, approximately 70 km southeast of Chalco and 100 km southeast of Mexico City (Fig. 2.1). Access today to the village and archaeological zone is not difficult (Fig. 2.2). Mexico's Highway 160, running between Cuautla, Morelos, and Izúcar de Matamoros, Puebla, is a major auto route south to Oaxaca. This highway passes only 2.5 km (1.5 miles) north of the site, and from here the site, at the foot of the two massive stone peaks dominating the landscape to the south of the highway, is visible. A secondary paved road running south to Atotonilco and Tepalcingo provides access to the road into the village. Recently an all-weather road has been constructed to the base of the site itself.

The research presented in this book analyzes Chalcatzingo's relationships on various regional levels: Mesoamerica, the Gulf Coast, central Mexico, and the Amatzinac Valley. As an introduction to Chalcatzingo's physical and cultural setting, the state of Morelos and the Amatzinac Valley are briefly described in terms of their physiography, topography, climate, hydrology, soils and vegetation, and geologic resources. The chapter concludes with a description of the modern village of Chalcatzingo and the archaeological site.

MORELOS

The region which is today the state of Morelos coincides fairly closely with areas controlled (at the time of the Spanish conquest) by two major provinces, Cuauhnahuac (western Morelos) and Huaxtepec (central and eastern Morelos) (Barlow 1949:75–81). The actual political situation within this region in 1519 was far more complex, with central and eastern Morelos composed of a number of independent *señoríos* tributary to Cuauhnahuac or Huaxtepec (and ultimately to the Aztec Triple Alliance) (Gerhard 1970). Chalcatzingo, in the southeast, was part of an area known as Tlalnahuac, of the *señorío* of Yacapichtlan (Yecapixtla) (Gerhard 1970:38–39; Barreto M. 1975).

The *cabecera* (main town) of the province of Cuauhnahuac is today the city of Cuernavaca, the state's capital and largest population center. Secondary population centers in the state today include Jojutla (in southern Morelos, once part of the western province of Cuauhnahuac) and Cuautla (prehispanic Cuauhtlan, part of the province of Huaxtepec) in central Morelos. Cuernavaca, Jojutla, and Cuautla serve as market centers for their respective areas of this agriculturally oriented state.

Morelos lies to the south of the Valley of Mexico, and is separated from that physiographic province by the Sierra de Ajusco mountains. This east-west trending mountain mass is part of a Quaternary volcanic chain which stretches from west Mexico, across central Mexico, into northern Veracruz. The volcanic chain contains a number of extinct and dormant volcanos, of which one, Parícutin in west Mexico, was active in 1943. Two of Mexico's largest volcanos, Ixtaccihuatl (5,300 m; 17,400') and Popocatepetl (5,400 m; 17,700') form the eastern end of the Sierra de Ajusco. Both are inactive, although steam is occasionally seen venting from the crater of Popocatepetl. There is good evidence to indicate that significant vulcanism occurred in the Sierra de Ajusco during the Formative period, with lava flows covering sites such as Copilco and Cuicuilco in the Valley of Mexico, as well as settlements near Cuernavaca (Grove 1967:33–34). Such volcanic activity not only would have caused population displacements, but probably also would have affected local belief systems.

The northern border of Morelos runs along the crest of the Sierra, generally at altitudes of over 3,000 m (9,800'), but the mountains drop precipitously nearly 1,500 m to the long, sloping alluvial plains that characterize much of the state. North-south running groups of hills divide Morelos into western (prehispanic Cuauhnahuac), central, and eastern regions (these latter two essentially equivalent to the province of Huaxtepec). The long alluvial plains of each of these regions follow the state's major rivers, the Río Xochitepec in the west, the Río Yautepec and Río Cuautla in central Morelos, and the Río Amatzinac in the east. All of these rivers are tributaries of the Río Balsas of Guerrero. The Balsas drainage, covering a tremendous area of west and central Mexico, is Mexico's largest. Most of Morelos has a natural abundance of water. Some rivers begin as small streams in the Sierra de Ajusco but are greatly enhanced by water from the state's many natural springs. Such springs are obvious focal points for settlements, and the springs at Gualupita (today suburban Cuernavaca), Huaxtepec, Cuautla, and Xochimilcatzingo (among many) were the locations of prehispanic villages. However, many of the springs are now being developed into recreation areas or incorporated into vacation communities, and the prehispanic remains are being destroyed.

Morelos also has an abundance of highly fertile alluvial soils along its river valleys. Agricultural potential is further enhanced by high humidity in the valley bottoms. These factors plus a subtropical climate, elevations ranging from about 1,000 to 1,500 m, and good yearly rain-

* In its northern portions, this river is termed the Amatzinac; south of Chalcatzingo, it is called the Tenango. In this book, the former term will be used exclusively.

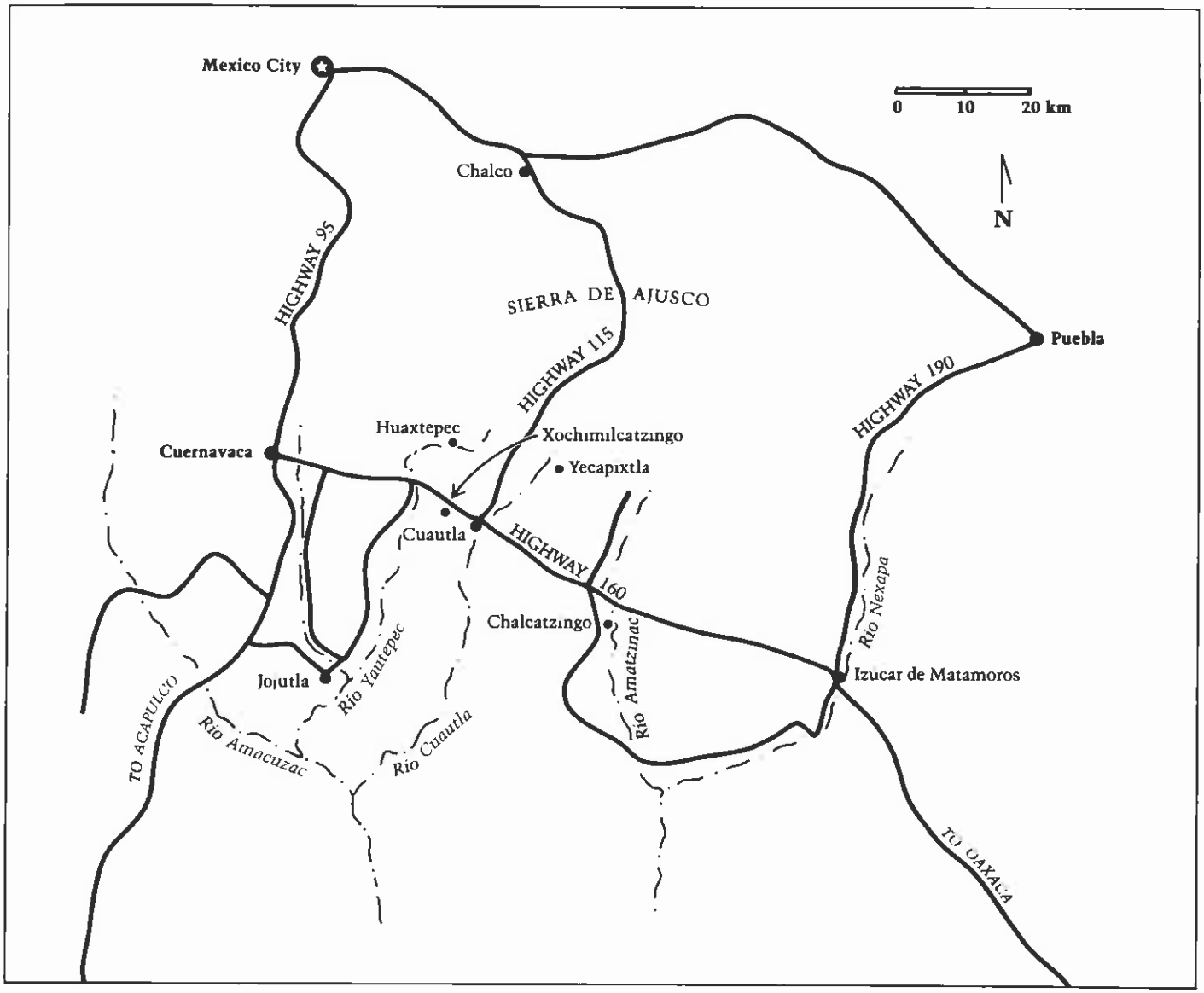

Figure 2.1. Morelos and western Puebla, showing major cities and roads and the location of Chalcatzingo.

falls, have combined to make Morelos an important agricultural region for nearly three thousand years. Although direct archaeological evidence is scarce, it is probable that irrigation of river valley lands was begun during the Formative period. Postclassic irrigation systems are known for the Río Amatzinac valley area north of Chalcatzingo (Armillas 1949; Palerm 1954).

Ethnohistoric tribute lists (Barlow 1949:75–81; *Codex Mendoza* 1978) suggest that major agricultural products in Morelos included maize, beans, chia, *huauhtli* (amaranth), and cotton (given in tribute as already woven garments). Today, with international markets influencing Mexico's economy, tomatoes compete with sugarcane for the fertile river bottom lands, and onions, melons, and rice are gaining in popularity as cash crops. Maize and beans are subsistence crops grown on a household basis. Chia and *huauhtli* are no longer grown in any significant quantity, and cotton is raised in only a few areas in southern Morelos.

Sugarcane was introduced into Morelos soon after the Spanish conquest. Production was under the control of a limited number of haciendas, and by the late nineteenth century this crop dominated the state's best agricultural lands. This situation was the major cause of the 1910 Revolución del Sur led by Emiliano Zapata. The revolution devastated Morelos. Federal armies burned numerous villages suspected of *zapatista* sympathies and forcibly resettled their inhabitants. Cultural continuities which may have existed between the colonial or prehispanic past and the present were virtually wiped out because so much and so many perished. Population loss due to death or migration has been replaced by post-revolution immigration from other states. In central and eastern Morelos the immigrants appear to have come principally from Guerrero and Puebla.

THE RÍO AMATZINAC VALLEY

The valley of the Río Amatzinac (Fig. 2.2) can be considered as an isolated topographic unit, and as such it formed a significant physiographic unit of analysis for the Chalcatzingo project. Approximately 50 km (31 miles) long and with a maximum width of 15 km (9 miles), the valley is bounded on the north by the foothills of Popocatepetl, on the east and south by the hills of the state of Puebla, and on the west by hills and a sparsely populated plain extending westward to the lush valley of the Río Cuautla.

When one attempts to delimit Chalcatzingo's local interaction area, the valley likewise appears as the logical unit, surrounded as it is by lightly inhabited areas of low agricultural potential which today yield no indications of any greater prehispanic settlement densities. The archaeological data recovered during our project confirm this supposition for the Middle Formative period. Certain artifacts, such as Peralta Orange ceramics and C8 figurines, occur in greatest abundance in Middle Formative sites in the valley, but are lacking or have a restricted distribution outside of the valley.

The valley, composed of alluvial and underlying pyroclastic deposits derived from Popocatepetl, is relatively flat with few features of high relief but is marked by numerous deep barrancas in the north and central parts. The dominating topographic features are three large granodiorite rock masses in the center of the valley, each rising over 300 m above the flat valley floor. These ancient intrusions today are landmarks and are visible from many parts of Morelos. The northernmost massif is the Cerro Jantetelco, which rises nearly 500 m above the valley floor. The southernmost of the three, 10 km further south, is the Cerro Tenango. Midway between these mountains are the twin peaks of the Cerro Delgado and Cerro Chalcatzingo (or Cerro Gordo). These two mountains are an integral part of the Chalcatzingo archaeological zone.

Eastern Morelos and the Amatzinac Valley are drier than the more western parts of the state and lack the breadbasket aspects of those areas. Moreover, the Amatzinac offers little easily accessible water and no significant expanse of alluvial bottomland except in the southern area of the valley. Throughout the northern and central valley the river is deeply etched through the alluvium and

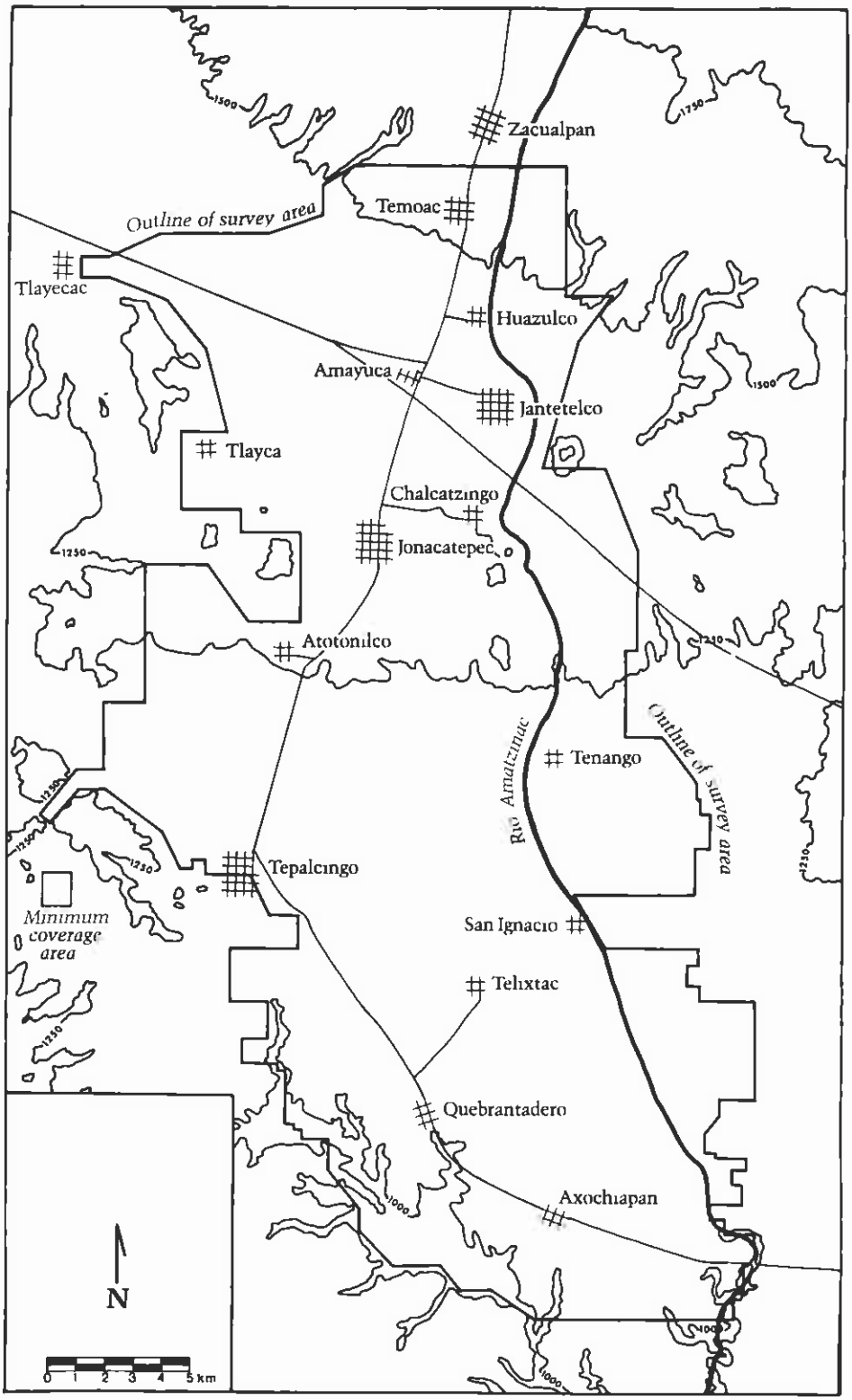

Figure 2.2. The Amatzinac Valley, showing modern roads and major towns.

underlying pyroclastics. The steep-sided barranca cut by the river averages 20–30 m in depth and about the same dimensions in width. It is not until near San Ignacio (Fig. 2.2) that the river emerges onto a broader valley floor. From San Ignacio until the river's junction with the Río Nexapa at the Puebla border, there are good expanses of alluvial bottomland. Nevertheless, for reasons given below, the northern valley is the most agriculturally productive.

Soil, vegetation, areas of natural humidity, rainfall, and access to water for irrigation are highly variable within the valley, but there is a general north to south trend in terms of decreasing agricultural potential. The agricultural potential obviously affected settlement patterns in the valley's prehispanic past, just as it does today. According to 1960 census data, only fourteen valley towns had populations greater than 1,000, and only four of these fourteen had populations exceeding 2,000. Today those figures must be considerably greater, but the general pattern remains similar. Of the fourteen towns, five are in the northern valley, four in the central valley, and five in the southern valley. That 64 percent of the population is in the northern and central valley area is significant, for it is the north-central region that has better soils and more abundant water supplies. This is essentially the area of the Pithecellobium Woodland vegetation zone (see below and Chapter 3).

The settlement pattern today differs between the northern and southern valley. In the north, both modern and prehistoric towns are situated near the center of the valley, whereas in the south, with few exceptions, the major towns today are located along the perimeter. This modern southern pattern does not mirror prehistoric patterns. The factors related to the settlement pattern are discussed briefly below and in greater detail in Chapter 21.

Almost the entire valley falls within the *tierra templada*, or temperate zone, a zone usually defined as lying between 1,000 and 2,000 m in elevation and with average temperatures of 15–20° C (59–68° F). The valley (and Morelos in general) lies in a transitional position between the cool *tierra fría* uplands of the Valley of Mexico and Sierra de Ajusco, and the hot and dry *tierra caliente* mountains of southwestern Puebla and southeastern Guerrero. In terms of the Koppen classification, the valley north of the 1,250 m contour (Fig. 2.2) is within the Cw climate zone (temperate humid with summer rains), and the region to the south is within the Aw zone (hot subhumid with summer rains) (Mosiño 1974:118–120; Vivó Escoto 1964:205–211).

Precipitation decreases from north to south in the valley. Only the valley's extreme north receives more than 1,000 mm (39.4") of rain yearly. The recording station in the northern valley at Zacualpan shows an average yearly precipitation of 1,126 mm. Of this quantity, 944 mm or about 84 percent falls during the rainy season (June to October). The mean annual temperature at that recording station is 19.7° C (67.5° F).

In contrast, the station at Tepalcingo in the southern valley receives an average yearly rainfall of only 848 mm (33.4"), of which 90 percent falls during the rainy season. In 1972 only 479.5 mm of rain fell at Tepalcingo during the entire year, and 81 percent of this was during the June to October rainy period. The following year, 1973, 819.5 mm fell at Tepalcingo, all of it during the rainy season. The annual mean temperature at Tepalcingo is 23.6° C (74.5° F).

An additional contrast between northern and southern sections of the valley can be seen in the annual evaporation rates. Zacualpan's annual rate is 1,696 mm, while Tepalcingo's is 2,096.6 mm. This latter evaporation rate is more than double the amount of rainfall received during the rainy season.

Rainfall, evaporation, and temperature are all significant factors in terms of agricultural productivity. Their fluctuations in the southern valley bring about moisture stress in the crops. Such fluctuations are not as severe in the northern valley, an area which today, as during at least the Postclassic, also benefits from the leveling influence of irrigation.

The Río Amatzinac is the valley's main river. The Río Frío, which runs through the western valley to join with the Río Tepalcingo, is relatively minor. The small Río de las Palmas in the east is likewise of secondary importance. The Río Nexapa borders the survey area in the far southeastern portion of the valley. Only two major springs occur in the valley, one at Atotonilco in the west, the other at Ixtlala in the southeast. Minor springs occur at or near various archaeological sites in the northern and central valley, including Las Pilas (Martínez Donjuan 1979:15) and Chalcatzingo.

Complicating the hydrography today are remnants of prehispanic and colonial irrigation systems, as well as systems constructed during this century. One such system brings water from near Cuautla (almost 22 km to the west) to irrigate land near Tenango and Atotonilco. Discharge from this recent system enters the barrancas in the southern valley, creating a greater flow of water in these streams than is normal.

No formal soil studies have been published for the valley. Therefore, the soils will be treated in terms of the two-part classification used today by farmers in the area, *tierra negra* and *tierra amarilla*. This classification is described in Chapter 26.

The ecological research carried out by the Chalcatzingo Project has defined eight major vegetation zones within the valley (Bugé 1978:57–69). These zones and their corresponding soils have significant relationships to the settlement history of the valley. They are listed here and described in detail in the following chapter: Upland Forest, Pithecellobium Woodland, Barranca, Huizache Grassland, River Bottomland, Interior Valley Cerros, Cuajiotal, and Tetlaleras.

The geology of the Amatzinac Valley is not complex (Fries 1966). The majority of the region is alluvial plain, with source material deriving from the slopes of Popocatepetl. Where the barrancas have cut through this stratified Pleistocene volcanic alluvium, they have exposed pyroclastics containing a wide size range of igneous rocks and boulders. These have provided an almost limitless source of material for grinding stones and building purposes.

Our investigations discovered veins of iron-rich deposits in the barranca of the Río Amatzinac immediately to the north of Tetla. At least two small cave-like excavations along this vein, one of which has prehispanic remains, indicate that these veins were probably mined for their red pigment in prehispanic times. This area has the highest concentration of iron oxide (Fe_2O_3) of the twenty-eight localities in Morelos sampled by Carl Fries (1966: Table 1, sample F63-85).

The hills marking the western valley border contain mines of hematite, magnetite, and limonite (yellow ochre) (Instituto Geológico de México 1923a:92; Velasco 1890:22–23, 90), and mining of some of the sources is still carried out intermittently on a minor scale today. The first iron smelter established by the Spanish in Mexico was located at the

Rancho Tepoxtitlan, just a few kilometers west of Tlacotepec in the northern valley. Ore for this smelter came from the Galván mine on the Cerro Cacalote, in the southern valley (Velasco 1890: 22, 90). Several of the iron ore sources were located and sampled by our project (Chapter 23).

No known obsidian deposits occur on the slopes of Popocatepetl or within the valley. The nearest known source is Otumba, in the Teotihuacan valley, 115 km to the north. One chert source was found by the project survey crew in the southern valley (Appendix H:RAS-108).

Various sources mention the presence of kaolinite clay near the southern base of the Cerro Chalcatzingo (Instituto Geológico de México 1923a:92; Mazari 1921; Velasco 1890:23), but despite numerous efforts, we have yet to locate and sample this source. It was apparently last exploited in the 1920's. Villagers and officials in Chalcatzingo and Jonacatepec were unaware of the kaolinite, and the only person in the area today who remembers the source is over ninety years old and unable to take us there. A second, smaller source, on the east side of the Cerro Chalcatzingo, was sampled by Grove in 1976. A possible kaolin deposit in the extreme west of the valley near Tlayecac was, according to informants in Tlayecac, sampled by geologists within the past decade. We were unable to locate this deposit.

CHALCATZINGO

The Modern Village

The village which lends its name to the archaeological zone of Chalcatzingo is situated west of the barranca of the Río Amatzinac and to the northwest of the site (Fig. 2.3). It is not located adjacent to any easily accessible surface water source. The village is some distance north of the small spring located at the foot of the archaeological site, and the village center is nearly 0.5 km west of the barranca. It is only recently that the village has expanded eastward toward the barranca. Easy access to the river, deep in the barranca, is possible in one location directly east of the village plaza. Our research into site locations (Chapter 21) suggests that some other sites are located at points along the river where the river and barranca can be crossed.

The name Chalcatzingo is Nahuatl, and has been translated as "area of the esteemed Chalcas" (Piña Chan 1955:6). There are however equally viable spellings such as Chalcacingo and Chalcatzinco, as well as several alternative translations of the word. For example, the *-zingo* (or *-cinco*) suffix is a diminutive and the name can thus be translated as "little place of the Chalca," a translation which some scholars have taken to suggest that Chalcatzingo had been tributary at some time during the Postclassic period to the town of Chalco in the southeastern Valley of Mexico. Ethnohistoric documents indicate periodic conquest and subjugation of towns in Morelos by Valley of Mexico city-states, including Chalco, so such a translation is not without some merit. However, archaeological evidence for a Late Postclassic settlement of any appreciable size in the immediate vicinity of the archaeological zone or modern village is lacking.

With such a lack of archaeological evidence in mind, alternative translations must be considered. For instance, the *-zinco* suffix is not merely a diminutive but also a reverential suffix, and the word can be read as "the revered place of the Chalca." Such a translation has no implications of a Late Postclassic habitation nor of tribute payments. Arguments supporting the possible sacred nature of the site and its hills appear in Grove 1972b and in Chapters 10 and 27 in this book. The word Chalco likewise has various translations and need not refer to a specific town, for it derives from *chalchihuitl*, a word which can mean both "jade" and "sacred water." If the latter meaning is used, Chalcacingo may be rendered as "the revered place of sacred water," a translation more befitting the sacred nature of the site's rock carvings and particularly Monument 1, "El Rey" (Chapters 9, 10). If the suffix is really *-tzinco*, an ending meaning "at the base of," the name can be read as "at the base of (or below) the place of sacred water," again a translation more in keeping with the nature of the archaeological zone and the present village at the foot of the mountain and its sacred carvings. In fact it is quite probable that the various alternative translations for the word are not in conflict nor coincidental, but were purposely intended for their double meanings.

Chalcatzingo's economy is based upon plow agriculture. Crops generally planted are those common to most of Mesoamerica: maize, beans, and squash, as well as some cash crops (see Chapter 26) planted primarily on *ejido* (communal) land. *Ejido* lands include the terraced fields of the Formative period archaeological zone and the archaeological zone of Tetla (see below). The *ejido* land of the archaeological zone is highly prized and is held by a limited number of older villagers and their descendants. Many of the younger village men desiring *ejido* must settle for land east of the barranca. The only consistently irrigated land lies alongside the spring at the base of the archaeological zone and is privately owned. A small dam and simple gravity flow canal make up the irrigation system (Fig. 2.4).

Chalcatzingo's population was estimated at about two thousand individuals by village authorities in 1974. Most villagers live in substantial one- or two-room houses constructed of adobe brick, which can have either sloping, flat, or thatched roofs. As is common in much of Mexico, the houses present a blank wall to the street and face inward onto a walled yard area. Cooking is normally done in a separate small building which contains a raised cooking platform (*tlecuil*). While the government has installed a basic water system to provide water to faucets at the corner of every village block, many of the village's older homes have their own wells. Typical of nearly every house lot in the village is the *cuexcomate* (Fig. 26.3), a style of granary with a limited distribution in Morelos, Puebla, and Veracruz.

While substantial adobe brick houses are today in the majority in the village, thatched huts with cane and branch (wattle) walls often occur on the same house lots, or in marginal areas of the village. This latter house type reflects the older construction style, not only in Chalcatzingo but throughout much of Morelos, western Puebla, and northern Guerrero. Status today, however, is reflected in adobe brick houses.

The village is too small to have a market area, and the nearest market is Jonacatepec, 3 km to the southwest. However, most villagers prefer to travel to Cuautla, 25 km to the west, where a large public market and numerous stores provide far more facilities. Several small family "window" stores and a recent CONASUPO store provide basic essentials to the villagers. Meat is purchased either outside the village or from villagers who slaughter animals occasionally. Some villagers still depend upon hunting to supplement their families' diets, although today only rabbits and

Figure 2.3. Aerial view of Chalcatzingo, showing the modern village, the Amatzinac barranca, and other geographic features mentioned in the book.

small birds occur locally in any quantity. Deer were apparently more common in the past but are no longer found in the immediate region.

As noted briefly in the general discussion of Morelos, the revolution which began in 1910 permanently altered the way of life in rural Morelos. Chalcatzingo had strong *zapatista* allegiances. In times of severe federal harassment, the caves of the Cerro Delgado served to hide villagers, corn supplies, and even local rebels. The *cerros* also provided commanding views of much of eastern Morelos. In 1913, as a consequence of the town's *zapatista* sympathies, the federal government temporarily but forcibly resettled the people of Chalcatzingo in nearby Jonacatepec (Morayta 1980:56–57).

Nahuatl appears to have been commonly spoken in Chalcatzingo at the time of the revolution. By 1974, although the villagers spoke Spanish entirely, those in their sixties or older could speak Nahuatl (although they seldom did), those in their late forties and fifties could understand Nahuatl, and younger villagers neither understood nor showed any interest in the language. This suggests that soon after the disruption caused by the revolution, and as eastern Morelos became linked by roads to other areas, Spanish quickly superseded Nahuatl.

Governance of the village is in the hands of the *ayudante municipal* and his

Figure 2.4. Modern gravity-fed water system below the site.

Figure 2.5. The Tetla area, showing hill with pyramids (*center*) and the Cerro Jantetelco (*background*). Cleared area in foreground is *ejido* land which is plowed and planted regularly.

suplente. *Ejido* lands are administered by the *comisario ejidal* and his *suplente*. These positions are elective. Decision-making and elections are carried out by town meetings of all adult males. Each male over eighteen is required to participate in village work projects and *vigilancia* (patrolling the village at night). Work duties rotate around the village, and this rotation provided the basic pattern through which workers were hired on our project (see Chapter 1). Although the communal labor *tequio* system still prevails at Chalcatzingo, there is at present no civil-religious hierarchy. Today institutional religion plays a minor role in village life. A priest visits the village only irregularly, and while three churches were once active, two now stand in ruins.

The Archaeological Zone

The Cerro Delgado and its larger companion, the Cerro Chalcatzingo, essentially mark the center of the Chalcatzingo archaeological zone, a zone minimally encompassing Early to Late Formative and Late Classic to Middle Postclassic occupations and associated structures. These occupations vary in size and spatial distribution. The Formative period zone, for which the site is best known, consists of a series of artificial terraces created from the long, low hill slope that extends northwestward from the *cerros*.

The point of demarcation between the steep, rocky talus slopes of the Cerro Chalcatzingo and the long, flat expanses of the terraced fields is easily noted on Figure 1.2 at the 1,020 m contour. From here the terraces extend northward about 400 m in three long, decreasing steps. A drop of about 30 m (ca. 98.5′) occurs over this distance. At the foot of the lowest terrace a flat expanse continues northward another 100 m to the *barranquilla*, a small spring-fed stream which for most intents and purposes marks the northern limit of significant occupation (some exceptions will be noted in Chapter 4). Because artifact scatters continue (in greatly reduced amounts) north of the *barranquilla*, the site's northern boundary is vague, yet the western boundary is quite sharp and distinct above the 995 m contour line.

The majority of the terraces are Formative period constructions. A few, however, may constitute Late Classic rebuilding atop Formative terraces. Exact dating and further discussion of terrace building are found in Chapters 4 and 6.

The terraces are now utilized for agricultural purposes and are part of the village *ejido* land; field boundaries generally follow terrace boundaries. The presence of Cantera phase house foundations in the modern plow zone indicates that after many centuries of erosion and deposition, the present ground surface level is essentially the same as that during the Middle Formative occupation of the terraces. The result is that house floors and house foundations have usually been destroyed by plowing. Farmers have also removed boulders or stones in their fields which have interfered with their plowing and farming, or have taken them for building activities. A number of stone wall features have been destroyed in this manner, and the same fate may have befallen stelae, as will be documented later.

The first archaeological features normally seen by visitors hiking up the terrace slopes onto the site consist of a Late Classic plaza with two mounds and a nearby ball court. These lie at the north end of the site's uppermost large terrace (T-1). Chalcatzingo's famous bas-reliefs occur on the face of the Cerro Chalcatzingo and on a line of boulders on the *cerro*'s talus slopes. Relatively simple paintings are found on rock faces just below the saddle connecting the two *cerros*, and caves high on the upper slopes of the Cerro Delgado contain paintings as well as artifactual material (Chapter 12).

Besides the main Formative period zone on the western slopes of the *cerros*, occupation continues northward around the Cerro Delgado onto its eastern slopes as well. This occupation, dating primarily to Late Classic through Middle Postclassic, is designated Tetla (from the Nahuatl: "rocky place"; see Figs. 2.3, 2.5). It extends to the *barranca* of the Río Amatzinac. Tetla's surviving constructions include many small and several large terraces, a ceremonial zone with a number of large mounds, and a ball court (Chapter 24). Excavations of a residence at Tetla are described in Chapter 25. In contrast to the western (main) zone of Chalcatzingo, Tetla's original terraces and fields are broken up by many recent stone wall lines.

An aged villager informed us that when he was a child, before the revolution, the upper terraces of the main site area had numerous stone "*ídolos*." Today, of course, these no longer remain. Many have been removed by collectors or villagers, but it should also be noted that Chalcatzingo is continually "mined" for stone. It is an understatement to say that the terraced agricultural fields of the site are rocky. A rock count conducted by Grove on five different terraces (T-2, T-11, T-21, T-31, and T-37) found 2–10 stones over 20 cm in diameter per m^2, with total stones (all sizes) varying from 6 to 40 per m^2.

The site average is 15 stones per m^2. Of these, often up to 80 percent are not the local granodiorite from the *cerros*, as one would expect, but river-rounded igneous cobbles brought up to the site by past inhabitants. If stone counts could be made over the site, a correlation between building (or other) activity and stone might be found to exist. However, these stones also provide an abundant source for villagers desiring stones today for a number of purposes (e.g., wall building, house foundations, fill material). Ground stone artifacts and occasional faced stone blocks make their way into village construction in this manner.

A second form of mining is directed at the granodiorite of the hill itself. The natural stone (*cantera*) from the *cerro* and site area was utilized by the site's prehispanic occupants for construction and monuments (see Chapter 11, MCR-12; and Chapter 23), but there are no data at present to indicate that it was also traded or exchanged with other sites in the valley. This *cantera* "mining" continued during the hacienda period, and it is our understanding (without any serious petrological analysis) that the ex-hacienda Santa Clara (Monte Falco) is constructed with *cantera* from Chalcatzingo. Some houses in the village of Chalcatzingo have doorways framed with blocks of *cantera*, and the mining of *cantera* has apparently diminished significantly only since the 1950's.

Most of the mining has not concentrated on the *cerros* but instead has been directed toward large boulders or small outcrops on the talus slopes or along the edges of some terraces (terraces were usually shaped so that very large boulders were avoided). These stones have been scarred by drill holes and shattered by dynamite. The fragments of this mining activity have been hauled away. Regrettably, at least one stone of archaeological interest (MCR-25, Chapter 11) has been badly damaged by mining.

RESUMEN DEL CAPÍTULO 2

Chalcatzingo está situado cerca del centro del valle del Río Amatzinac. En el tiempo de la conquista española, Chalcatzingo estaba incluído en el área conocida como Tlalnáhuac, parte del señorío de Yacapichtlan. Sistemas de riego post-clásico han sido reportados en la parte norte del valle.

El valle empieza en las laderas al sur del volcán Popocatepetl. Las tierras anchas y planas del valle están constituidas por sedimentos volcaniclásticos y las cortan barrancas profundas y abruptas. El valle está situado en tierra templada. La lluvia, humedad, y calidad del suelo aumentan de sur a norte; por lo tanto, el potencial agrícola es mayor en la parte norte del valle. Esta situación se refleja tanto en los patrones antiguos como modernos de asentamiento.

La configuración plana del valle se ve interrumpida por tres cerros rocosos y altos. De estas tres masas rocosas, la central se compone de los picos gemelos, el Cerro Chalcatzingo y el Cerro Delgado. La zona arqueológica de Chalcatzingo yace al pie de estos cerros, y la población moderna se localiza cerca de un kilometro hacia el nor-poniente. El sitio arqueológico se presenta como una serie de terrazas hechas por el hombre las cuales forman parte hoy día de las tierras del ejido de la población. Las esculturas en bajorrelieve que han dado fama a Chalcatzingo se encuentran en el Cerro Chalcatzingo, en tanto que los demás monumentos se han descubierto en las terrazas. Datos que evidencian el poblamiento prehispánico se extienden a lo largo de los lados norte y oriente del Cerro Delgado, dentro de un área hoy conocida como Tetla.