

INTRODUCTION

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“In that guardianía [Mani], near a mission-town called Telchac, a very populous city once existed called Mayapan in which (as if it were a court) all the ciciques and lords of the province of Maya resided and there they came with their tribute” (see part 1, p. 49). So wrote Fray Antonio de Ciudad Real, who visited the already crumbling remains of the city nearly 400 years ago. He had previously explained that the true name of the land and province that was called Yucatan was Maya. In the less colorful speech of today we say that the ruins of Mayapan are located 2 kilometers south of the village of Telchaquillo (i.e. Telchac), some 40 kilometers south-southeast of Merida, the capital of Yucatan (see frontispiece); and for more exact geographical data we turn to the map of the ruins (see back cover pocket) for latitude and longitude and elevation above sea level. To complete the thought in Ciudad Real’s statement, moreover, we add that, in the closing centuries of aboriginal Maya civilization, before those people were conquered by the Spanish, the city of Mayapan was the seat of what was apparently a centralized government exerting control over much of northern Yucatan. It is this ancient capital, possibly the first, and certainly the last, great Maya city, in the sense of a large urban population, that is the subject of this book.

The natural setting of the Yucatan peninsula—its physiography, climate, and flora and fauna—has been described so often there seems little reason to take up that subject in any detail here. (See *Enciclopedia Yucatanense*, 1944-47, vol. 1; Hatt and others, 1953, pp. 7-14; Lundell, 1934; Morley, 1956, chap. 1 and p. 449; Roys, R. L., 1931, and 1943, chap. 1; Shattuck and others, 1933, chap. 1; Tozzer, 1957, 11:1-4. Other references are given in all these works. Also see Current Report 41 for pre-Columbian fauna at Mayapan.) Suffice it to say that the region of Mayapan is eminently typical of the western half of the Yucatan plain north of the low hills known as the serranía or Puuc. The monotonously level land that rises from the north coast toward the south at the rate only of about 1 meter in every 5 kilometers presents an incredibly stony surface of limestone bedrock that is often sharply broken by low hillocks or ridges a few meters in height and by natural sinks, many of which reach the ever-present underground water table. The topographic map of Mayapan (see back cover pocket) shows an excellent example of the land surface, and the area of the map could be extended a good many kilometers in any direction without exhibiting a notable change in the topography. Soil is so sparse that one often has the impression of viewing more rock than earth.

The annual rainfall, which occurs mainly from May to October and which varies considerably from year to year, averages about 1 meter in the region of Mayapan. Mean monthly temperatures range from about 71° F. to 82° F., but minimum temperatures in the low 40’s, occurring during January and February, and maximum temperatures of 105° F. or above, usually in March, April, or May, are not uncommon. Present-day vegetation, which is interrupted by large cleared areas for henequen plantations and by numerous smaller cultivated fields, chiefly planted to maize, is a dry scrub forest, entirely secondary in nature, thorny, difficult of passage, offering limited shade, and generally inhospitable to one accustomed to the vegetation of a more temperate climate.

To make this rocky, shadeless plain even less friendly to the use of man, there is almost no surface water. In the region we are describing, the western half of the northern plain, there are no rivers and no lakes. There are a few natural ponds, known as *aguadas*, and a number of small basins in the native rock, known as *sartenejas*, but many of the former, and virtually all the latter, are without water during the dry season. Fortunate for the ancient inhabitants of this land, indeed imperative to sustain them before the use of iron enabled man to excavate wells through the native rock, is the existence of numerous natural sinks, or cenotes, that penetrate to the underground water table. And in this respect the terrain within the limits of Mayapan is not altogether typical of the region. In an area of a little over 4 square kilometers there are at least 26 cenotes, 19 of which give access to water. Although these sinks are very common in the northwest plain, it is highly unlikely that many areas of comparable size have any such concentration as this. The site was, then, highly suitable for a concentrated population, as far as water was concerned.

There is probably no ancient Maya city that is more frequently mentioned in the native literature and early Spanish writings than Mayapan. The meaning of the name, "the standard, or banner, of the Maya," is given us by Landa (see part 1, p. 57). Unlike so many Maya ruins, which carry descriptive names of relatively recent date, given for the most part by local people who have long since forgotten the old original names, the identity of Mayapan has persisted in the mind of man from its founding to the present day. Throughout the early literature, which is so ably discussed in part 1 of this volume, the city is pictured as the most important center of Yucatecan Maya civilization before the coming of the Spanish. One might expect, then, that a place so celebrated would receive early and concentrated attention by the archaeologist. Owing, probably, to the extraordinary disrepair, the comparatively small size of the ceremonial and civic buildings, and the general drabness of the ruins, this was not the case, and intensive study did not come about until a decade ago, when Carnegie Institution began the work described in this volume and in the companion publications mentioned in the Preface. Some exploration and minor excavations had, however, preceded our work.

When one looks to the history of archaeological exploration at some Maya ruin, and particularly in Yucatan, it is amazing how often he must start with the name of John L. Stephens. And Mayapan is no exception. Stephens (1843, 1:130-41) spent a day at the ruins late in 1841. He describes the more striking features of the ceremonial center of the site and illustrates the principal pyramid (Str. Q-162), the large round building (Str. Q-152), and some fallen pieces of sculpture. He also reports the existence of the great wall surrounding the city, although he did not see it. The main value of his account today is the description and illustration of the large round building, which has since fallen and is now a pile of rubble.

Some twenty years later, in 1865, Brasseur de Bourbourg (1866, pp. 234-49) visited Mayapan, spending nine days in the ruins. Brasseur was conversant with the Landa text, and he constantly attempted to fit what he saw to Landa's historical account and description of Mayapan. He saw and described the city wall, giving a sketch plan of one of the major gateways. In the central group of ruins, he repeated much of Stephens' work, describing and illustrating the principal pyramid, or Temple of Kukulcan, and the large round building, which was still standing. In respect to the former, he made the perceptive observation that the plan of the temple atop the pyramid was probably the same as that of the Castillo at Chichen Itza. He found, probably in the court in front of the pyramid, and illustrated, a monument that has since become known as Stela 1 and that is now at the near-by hacienda of Xanchakan. Brasseur's report is mainly useful at present in amplifying the Stephens description and illustration of the now fallen round building and in identifying Stela 1 as surely having come from Mayapan.

In 1881 Augustus Le Plongeon (1882) made a short stay at Mayapan. By that time the large round building had fallen, as the result, we are told, of being struck by lightning in 1867, and Stela 1 had been moved to Xcanchakan. He had with him the mayordomo of Rancho San Joaquin, who had been with Brasseur and who showed Le Plongeon the spot where the stela was found. Unfortunately, Le Plongeon's description of that location (*ibid.*, p. 253) creates an impossible situation, and we shall never be certain of the original site of the monument. Both Brasseur's and Le Plongeon's insistence, however, that the finding of the stela followed Landa's account of stones of this sort being in the plaza of the city, as well as other details of their writings, would seem to place it in the court north of the great pyramid (Str. Q-162) and most probably somewhat east of the stairway on that side of the pyramid, where a number of other monuments have been found.

Almost forty years went by before any archaeologist again visited Mayapan and wrote about it. In 1918, Morley (1918, pp. 274-75) and Gann (1924, pp. 202-206) briefly inspected the site. They saw, and followed for a short distance, the city wall that Brasseur had seen fifty years before, but their chief contribution was Morley's reading of the date 10 Ahau on the stela at Xcanchakan, which at that time he called Stela 9. Using the then current Morley-Spinden correlation of the Maya and Christian calendars, he assigned this date the position 12.4.0.0.0 in the Maya calendar, or A.D. 1438 (see also Morley, 1920, pp. 574-75).

The late T. A. Willard (1933, pp. 365-73) published a short account of Mayapan which consists mainly of quoting Stephens' description of the ruins. It is not clear from his writing whether he visited the site or not. His inclusion in the book of photographs of the principal pyramid and of some serpent columns at the entrance of a temple (Str. Q-143) presupposes that he was there, but the pictures may not be his own. The only value of his description is the illustration which shows an architectural feature, the serpent column, well known in the Maya-Toltec buildings at Chichen Itza.

In the winter of 1936 Lawrence Roys spent a day at the ruins of Mayapan and, among other things, made a careful examination of the masonry of the few vaults that remain standing. Although the conclusions he arrived at in a subsequent article (L. Roys, 1941), in which he illustrates a vault section (Str. R-97), need emendation in the light of today's greater knowledge, nevertheless this was the first detailed study of any example of Mayapan masonry.

The first archaeological survey of Mayapan that was at all comprehensive was carried out in 1938 by R. T. Patton at the instigation of Morley (1938, pp. 141-42) and under the sponsorship of Carnegie Institution. The primary objective of the work was the mapping of the wall around the city and of the main ceremonial and civic center of the site. The resulting maps, which were never published, were of great assistance to Jones in making his detailed topographic map of the ruins (Current Report 1). Aside from establishing the size of the area encompassed by the city wall, the careful search of the site necessitated by the mapping brought forth a large amount of previously unknown, or only vaguely known, information. The general character of the wall, of its entrances, and of the civic and religious architectural remains was ascertained. This gave considerable insight into the period of the visible ruins and made possible comparisons with remains in other areas. Visiting the site while Patton was there, Morley (*ibid.*), now using the Goodman-Martínez-Thompson correlation, changed his reading of the date of Stela 1 (Xcanchakan) to A.D. 1185, and read the dates of two other stelae (5 and 6) as A.D. 1244 and A.D. 1283.

Excavation, other than of the most minor sort, and none of it reported upon, had not been practiced at Mayapan during the various visits of archaeologists referred to above. In 1942, however, the late G. W. Brainerd (1942, pp. 254-55), in connection with a general ceramic survey of the Yucatan peninsula for Carnegie Institution, spent two weeks at the site putting down strati-

graphic trenches for pottery. The result of this work, final publication of which was unavoidably delayed for many years (Brainerd, 1958), was quite clearly to place the time of occupation of the site in the sequent phases of pre-Columbia Maya civilization. Knowledge previously derived from a none too trustworthy native history and from rather superficial archaeological examination of the ruins was now reliably confirmed by ceramic stratigraphy. Near the end of Brainerd's stay at Mayapan he was joined by E. W. Andrews (1942, pp. 261-63), who remained there for a month carrying on architectural studies. The brief notices concerning this work that have appeared (Andrews, *ibid.*, and 1943, pp. 81-82) serve to confirm and somewhat to amplify the results of Patton's survey.

So much for earlier archaeological exploration of the ruins of Mayapan. Let us now turn to the recent work of Carnegie Institution. In preceding pages there have been frequent references to the native literature and early Spanish accounts of the history of Mayapan. This is the subject of part 1 of the present volume, where Roys translates, analyzes, and interprets these early records. He believes, it will be found, that the native chronicles, which give much attention to events in the history of Mayapan, are primarily a history of the Itza. Not attempting to decide whence the Itza originally came, Roys points out both Maya and highland Mexican cultural affinities and suggests the possibility of a Gulf Coast origin. The Cocom, who play so large a part in the early Spanish accounts of Mayapan, he believes, were descendants of, or in any case identified themselves with, the Itza.

Following the chronicles back in time, Roys sees three great episodes of Itza history in the Yucatan peninsula, each occupying approximately a katun round of 256 years. The first, lasting from about A.D. 950 to 1200, finds the Itza settled in Chakanputun, which Roys takes to be the region of present-day Champoton. Parenthetically, it may be mentioned that the identification of Chakanputun as Champoton is not a certainty. Around A.D. 1200, or shortly before, the Itza are driven out of Chakanputun, an event that marks the end of the first episode and the beginning of the second. Migrating to the region of Lake Peten, and thence up the east coast of Yucatan, a part of them, the so-called "remainder of the Itza," "discover" Chichen Itza early in the thirteenth century, possibly in Katun 4 Ahau (A.D. 1224-1244). After a stay there of some years Mayapan is "founded" in Katun 13 Ahau (A.D. 1263-1283), the implication being that some of the Itza remain in Chichen Itza. Around A.D. 1380 there is a revolt at Mayapan, and Roys considers that this event very likely marks the beginning of the Cocom rule at that city. Finally, in Katun 8 Ahau (A.D. 1441-1461), the Cocom government is overthrown at the instigation of the Xiu, a foreign group, latecomers to Yucatan who have briefly been living in the old ruins of Uxmal. Mayapan is presumably abandoned, possibly in the year 1446, and certainly ceases to exist as the seat of centralized government. In the same Katun 8 Ahau a group of Itza living in or around Chichen Itza migrate to the region of Lake Peten. These events, the fall of Mayapan and the departure of the Itza from Chichen Itza, mark the end of the second episode of Itza history in the Yucatan peninsula. The third and final episode is the residence of those people on Lake Peten until they were conquered by the Spanish in 1697, just when a new, and to the Itza always fateful, Katun 8 Ahau was to begin. Northern Yucatan, in the meantime, with the fall of Mayapan and the end of centralized government, was divided into a number of independent, and often warring, states, which were conquered by the Spanish in the middle of the sixteenth century.

The foregoing, in briefest outline, is Roys' interpretation of what the native literature and early Spanish writers have to say of the people who founded Mayapan and of events that have a more or less direct bearing on the history of that city. Needless to say, he goes into much detail about Mayapan as the principal seat of authority in the peninsula, and, in order to bring this history into focus, he discusses the early hegemony of Chichen Itza under the Toltec. All this raises the problem of chronology and of how the findings of archaeology fit his historical reconstructions which are based primarily on literary sources.

In the introduction to part 1, Roys explains that the Christian dates he uses in his study are according to the Goodman-Martínez-Thompson correlation of the Maya and Christian calendars, adding that katun ending dates are three years earlier according to the Spinden correlation. He further explains that he equates the date A.D. 889 with the Maya Initial Series date 10.3.0.0.0, but that the Spinden correlation makes that date about A.D. 630. The effect of this ending of the Initial Series, or Classic, period 259 years earlier is, of course, to extend the length of the following post-Classic period, which terminates with the Spanish Conquest, by that number of years. A fact that is so well known to students of Maya history that Roys does not feel it necessary to mention it is that any particular katun ending can reoccur every 256 years. For example, a Katun 13 Ahau, such as that which presumably witnessed the founding of Mayapan, can refer to the period A.D. 1263-1283 or the years A.D. 1007-1027 in the Goodman-Martínez-Thompson correlation, or three years earlier for each of these periods in the Spinden correlation.

The preceding remarks are simply to indicate some of the varying possibilities in the interpretation of the Maya hieroglyphic and historical records. In our discussion of the chronology of post-Classic Yucatan we shall have occasion later on to refer to such alternative possibilities.

The recently published work of the late G. W. Brainerd (1958) arranges the aboriginal history of Yucatan in a sequence of cultural stages derived primarily from ceramic studies. Through no fault of Brainerd's, the ceramic remains with which he had to work could not always be separated on the basis of a clear-cut stratigraphy, but by and large there is no reason to doubt the order of the sequent stages as he has arranged them. These are, from early to late, the Formative, Regional, Florescent, Mexican, and Post-Conquest. The Formative and Mexican stages he divides into Early, Middle, and Late substages. It is the Mexican stage, which covers a time often referred to as the post-Classic period, that primarily concerns us here, but we must also give some attention to the Florescent. In briefest outline these stages and substages are characteristically represented by the following remains:

1. Florescent. The fully developed architecture of the sites of Uxmal, Kabah, Sayil, and Labna in the Puuc region. The common slipped pottery is Florescent Medium Slateware; the chief imported ware is Z Fine Orange. To judge from the pottery, the purely Maya type buildings at Chichen Itza are somewhat earlier in this stage than the great architecture of the Puuc sites.

2. Early Mexican. The Maya-Toltec buildings at Chichen Itza. The common slipped pottery is Mexican Medium Slateware; the chief imported wares are X Fine Orange and Tohil Plumbate.

3. Middle Mexican. Mainly post-architectural at Chichen Itza; beginning of building at Mayapan. The common slipped pottery is Coarse Slateware (Black-on-cream).

4. Late Mexican. The fully developed architecture of Mayapan. The common slipped pottery is Coarse Redware (Mayapan Redware); the chief imported ware is Mayapan Fine Orange (V Fine Orange). Figurine (effigy) censers occur in great profusion late in this substage.

It has been mentioned above that the ceramic material with which Brainerd had to work was not always derived from clear-cut stratigraphic conditions. This lack is particularly critical in determining the relative chronological positions of the Florescent stage and the Early Mexican substage. Brainerd was well aware of this and considered the possibility of an overlap of these stages. Although he comes to the conclusion that there was little or no overlap, it is just as well we keep in mind that the data on this point are not clear and there is the definite possibility that the late culture of the Puuc region and that of Maya-Toltec Chichen Itza for a time existed coevally. Another matter worth recording is that our recent work in Yucatan has made it amply clear that a major break in cultural tradition, as witnessed by a sharp degeneration of the quality of the remains,

came about at the end of Maya-Toltec times. This event tends to be obscured in being marked only by the passage from one substage to another (Early Mexican-Middle Mexican) in Brainerd's arrangement of cultural stages. It does not affect the sequence or the relative chronology, but it may have implications concerning history.

Before going on to the problem of a more precise chronology than can be gained from the study of ceramic remains, let us comment briefly on the archaeological findings at Mayapan and on how these fit the Brainerd scheme of cultural stages in Yucatan. Unfortunately, the final analysis of the pottery has not yet been completed, but we are familiar with the results in broad outline if not in detail. Both from Brainerd's work and from that of Carnegie Institution we know that man has lived in, or camped at, or at least passed through, the site of Mayapan from Formative times to the present. We know this from trifling amounts of pottery from the Formative and Regional stages and a larger, but still relatively small, amount of Florescent and Early Mexican pottery. There are also a goodly number of building stones, either lying loose or re-used in later constructions, that give every indication of being of the Florescent, and probably late Florescent, stage. Not a single Florescent or Early Mexican building, however, has been found, and it seemingly was not until at least Middle Mexican times or even later that any structure that now survives was erected. It was also apparently not until the end of Middle Mexican or the beginning of Late Mexican times that pottery was made and used in quantity.

Owing to the trifling amount of Early Mexican pottery found by Brainerd, he postulates a virtual abandonment of the site between Florescent and Middle Mexican times. R. E. Smith, whose study of Mayapan pottery is now in progress, informs the writer that the much larger body of material with which he has been able to work shows about an equal proportion of Florescent Medium Slateware and Early Mexican Medium Slateware, the two combined amounting to less than 2 per cent of all pottery from the site. Smith's findings thus would indicate a minor occupation throughout Florescent and Early Mexican times.

Whether or not Mayapan was occupied during the Middle Mexican substage is a moot point. Coarse Slateware is found in small amounts—a little over 1 per cent of all pottery—but it is invariably mixed with Coarse Redware. What may be indicated is a transition from the Middle Mexican to the Late Mexican substage. Finally, it was the Late Mexican substage that saw Mayapan in full flower, with most of the architecture being erected and the pottery being made at that time. At some point during this great period of Mayapan, effigy, or figurine, censers began to be manufactured in great quantities, and they continued to be made until the fall of the city and very probably up to the arrival of the Spanish.

In attempting to date his cultural stages Brainerd turns to the hieroglyphic records and the native literature. He favors the Goodman-Martínez-Thompson correlation of the Maya and Christian calendars, as does Roys, and rather closely follows the historical reconstructions of J. E. S. Thompson (1941; 1945) from the end of the Florescent stage to the Spanish Conquest. This results in the following:

End of Florescent stage. 10.3.0.0.0-10.8.0.0.0, A.D. 889-987.

Early Mexican substage. Katun 4 Ahau, ending at 10.8.0.0.0, A.D. 987—during which katun Itza settle at Chichen Itza—to Katun 10 Ahau, ending at 10.18.0.0.0, A.D. 1185.

Middle Mexican substage. Katun 10 Ahau, ending at 10.18.0.0.0, A.D. 1185—with Itza leaving Chichen Itza in Katun 8 Ahau (A.D. 1185-1204)—to Katun 13 Ahau, ending at 11.3.0.0.0, A.D. 1283.

Late Mexican substage. Katun 13 Ahau, ending at 11.3.0.0.0, A.D. 1283—with fall of Mayapan in Katun 8 Ahau (A.D. 1441-1461)—to Spanish Conquest, A.D. 1540.

Let us now compare the foregoing chronological scheme and historical outline with that given by Roys in part 1 of this volume. Broadly speaking, the chronology does not differ greatly. The

time of Toltec dominance at Chichen Itza (Early Mexican substage) is approximately the same, and the great period at Mayapan (Late Mexican substage) is the same. When we come to historical detail, however, there are major differences. Katun 4 Ahau, when the Itza settle at Chichen Itza, is placed at A.D. 968-987 by Thompson and Brainerd, who identify the Itza as a people of Toltec culture. Roys places this event a katun round later, at A.D. 1224-1244, after the Toltec regime was over. The Katun 8 Ahau that marks the departure of the Itza from Chichen Itza is placed by Thompson and Brainerd at A.D. 1185-1204, whereas Roys places this event in A.D. 1441-1461, the katun which witnessed the overthrow of Mayapan. What this amounts to, in summary, is that Roys does not think that the Itza brought about the Maya-Toltec culture of Chichen Itza—an opinion shared by Tozzer (1957) in his study of that site (but see Thompson, 1959)—but were a later people who reached northern Yucatan after the great period of that city, in other words during Brainerd's Middle Mexican substage, and when, as we have seen, there was a pronounced degeneration of culture.

It may have been noticed in our comparison of the Roys historical reconstruction with the Thompson-Brainerd scheme that we have until now avoided mention of this Middle Mexican substage. Dealing with the archaeological remains, Brainerd sees this substage as consisting of the remnants of, or inheritance from, an expiring Maya-Toltec culture at Chichen Itza and the beginnings of what developed into the culture of the great period at Mayapan. Roys, approaching the matter from the historical point of view, gives attention to certain events of this time at Chichen Itza and elsewhere in Yucatan, events which he attributes to the Itza, but does not turn to Mayapan until its reputed "founding" in the Katun 13 Ahau that marks the beginning of Brainerd's Late Mexican substage, or the great period of the city. Landa tells us, it will be remembered, that a certain Kukulcan left Chichen Itza and established another city, which he called Mayapan. Roys interprets this as a group of Itza going from Chichen Itza to Mayapan, and in the chronicles he finds that this event occurred in a Katun 13 Ahau, which he believes ended in A.D. 1283. The hieroglyphic records, on the other hand, if we make the dubious assumption that the stelae at Mayapan record katun endings and that they mark contemporary events at that city, show that the city must have been occupied at least as early as A.D. 1244 (Brainerd, 1958, p. 22). Using all available evidence, Brainerd concludes that the major occupation of Mayapan began sometime before that date, possibly around A.D. 1200, and before the official "founding" of the city as suggested by Roys. We of course know that there had been minor settlement of the site in even earlier times, but the occupation to which we are referring marked the beginning, as amply witnessed by the archaeological remains, of Mayapan as a center of importance.

We have noted considerable differences between Roys' and Brainerd's arrangements of historical events. Brainerd coordinates these events with his archaeological findings. It is interesting to attempt to do the same with Roys' historical scheme. In the first place, it will be remembered that this history, according to Roys, is essentially a history of the Itza, and it begins in any detail only after the exodus of the Toltec from Chichen Itza, or at least after their fall from power. Before that time we merely note the Itza as living in Chakanputun. After A.D. 1200, just about the end of the Toltec regime, when civilization had pretty well gone to pot, we find the Itza raiding in northern Yucatan, and in Katun 4 Ahau (A.D. 1224-1244) they settle at Chichen Itza. This event, which shortly follows the Toltec rule, must fall in Brainerd's Middle Mexican substage, the characteristic pottery of which is the Coarse Slateware (Black-on-cream) that is found in minor quantities at Chichen Itza immediately following the Maya-Toltec Mexican Medium Slateware.

The next event in Roys' history is the "founding" of Mayapan by a group of Itza from Chichen Itza in Katun 13 Ahau (A.D. 1263-1283). It will be remembered that the start of the principal occupation of Mayapan is marked by the presence of Coarse Slateware. What we should like to know is the time of the first occurrence of this pottery at that site. As has already been mentioned, Brainerd

believes that this happened early in the thirteenth century, some years before the "founding" of the city as determined by Roys. Although Brainerd's use of dates on stelae at Mayapan is open to question (see part 2, p. 135), a fact recognized by him, there is some evidence from our recent work that the site may have started as a relatively small religious center and only later have taken on the size and importance that went with the establishment of a capital city (see part 2, p. 133, and part 3, p. 264). We cannot be certain with our present knowledge just when the principal occupation of Mayapan began. We know that this occurred during a time characterized by the manufacture of Coarse Slateware (Middle Mexican substage), but whether it was at the end of that period, presumably in the katun that marks the traditional founding of the city, or several katuns earlier, must for the present remain an open question. Could we be certain that there was a Middle Mexican settlement here before the "founding" of the city, it would be tempting to see this as an Itza colony. Roys suggests, in correspondence with the writer, that during the Itza raids into northern Yucatan beginning in Katun 8 Ahau (A.D. 1185-1204) they may well have established a base at a place near Mayapan called Saclactun, a name associated with Mayapan in the native literature (see part 1). A situation of this sort would throw some light on why the site of Mayapan was selected for the new capital.

It has been indicated earlier that the great period of Mayapan, from its "founding" in Katun 13 Ahau (A.D. 1263-1283) to its fall in Katun 8 Ahau (A.D. 1441-1461), when the city was the capital of northern Yucatan, precisely coincides with Brainerd's Late Mexican substage, to which he assigns the vast preponderance of the remains at Mayapan. There is nothing in our recent findings, moreover, that would change this situation, so long as we accept the Roys and Brainerd chronology. Well along in this period, around the end of Katun 3 Ahau and the beginning of Katun 1 Ahau (A.D. 1382), Roys believes (see part 1) that there was a revolt at Mayapan, that new lords, possibly another faction of the Itza that called themselves Cocom, took over, and that shortly thereafter, in Katun 1 Ahau (A.D. 1382-1401), Mexican mercenary troops, the Canul, were brought to Mayapan from Tabasco. Also well along in this period, possibly about the time of the above happenings, there came into use small stone sculptures, known as altar figures, one of which carried the dates 4 Ahau, 13 Ahau, 1 Ahau, and also there began to be made tremendous numbers of effigy censers that portrayed a number of Mexican deities and that, along with the altar figures, were associated with new religious practices (see part 4, pp. 334 and 428, and Current Report 40). One wonders if the Cocom, or more probably the Canul, were not in some measure responsible for these changing religious forms.

In the preceding discussion of the documentary history and its archaeological background we have had occasion to refer to a number of dates in the Christian calendar. All these have followed the Goodman-Martínez-Thompson correlation of the Maya and Christian calendars. This is because both Brainerd, who mainly follows Thompson's ideas of Maya history, and Roys accept that correlation. Since the preparation of Brainerd's (1958) book, which was published posthumously, a number of archaeological dates determined by the radiocarbon method have appeared, and some of them, if taken uncritically, would seem to favor the Spinden correlation and the longer post-Classic period (Mexican stage) that is called for by that correlation (see p. 5). There are, for example, to mention times and places that particularly concern us here, two specimens (Y-627, Gro-613) taken from typical Florescent style buildings at Uxmal that are dated A.D. 570 ± 50 and A.D. 650 ± 100. There is a specimen (Y-626) from a typical Early Mexican substage building at Chichen Itza that is dated A.D. 800 ± 70. A specimen (Gro-452) from Mayapan that presumably marks a very early time in the principal period of occupation of that city, possibly at the transition from the Middle Mexican to the Late Mexican substage, is dated A.D. 1015 ± 95. Two specimens (Gro-1166 and Gro-450) from Mayapan that come from buildings apparently built relatively late in the history of the city are dated A.D. 1315 ± 55 and A.D. 1360 ± 90. These last Late Mexican substage dates contribute nothing to the problem of correlating the Maya and Christian calendars but simply confirm the historical sources that

place the great period of Mayapan during the *fourteenth and early fifteenth centuries after Christ*. (See Deevey, Gralenski, and Hoffren, 1959; de Vries, Barendsen, and Waterbolk, 1958; de Vries and Waterbolk, 1958, for radiocarbon dates cited above. Note de Vries and Waterbolk, 1958, p. 1551, for correction in Groningen dates. Dates are rounded off to nearest five-year ending.)

Accepting these dates at face value, for the moment, it is obvious that the Florescent stage specimens from Uxmal suggest the Spinden correlation. Brainerd believes that the Florescent stage lasted from about 9.14.0.0.0 to about 10.8.0.0.0 in the Maya calendar, or A.D. 711-987 by the Goodman-Martínez-Thompson correlation, and A.D. 452-728 by the Spinden correlation. Thompson (1945) thinks that the Puuc, or Florescent, style of architecture may have begun some eighty or ninety years earlier than the time suggested by Brainerd. As there is no reason to believe, however, that even the early date at Uxmal, which comes from the earliest known of a series of superimposed structures in the Adivino pyramid (see Ruz, 1956, fig. 2), is representative of a particularly primitive style of Florescent architecture, the Spinden correlation is still indicated.

The Early Mexican substage is set by Brainerd at 10.8.0.0.0 to 10.18.0.0.0 in the Maya calendar, or A.D. 987-1185 and A.D. 728-925 by the respective correlations. Thompson thinks this period may have lasted twenty years longer, but in any event the radiocarbon date from Chichen Itza suggests the Spinden correlation, as long as we follow the Brainerd-Thompson idea that there was no overlap of the Florescent and Early Mexican stages. Should we see an overlap here, a possibility that has been mentioned earlier, an overlap that carries the Early Mexican substage backward in time rather than bringing the Florescent stage forward, the Chichen Itza date just might be made to fit the Goodman-Martínez-Thompson correlation.

The early Mayapan date that presumably marks the beginning of the principal occupation of the city appears to be from the end of the Middle Mexican and the beginning of the Late Mexican substage which Brainerd places at 11.2.0.0.0 to 11.3.0.0.0 in the Maya calendar, or A.D. 1263-1283 and A.D. 1004-1023 by the two correlations. Again the earlier correlation is indicated. If, moreover, we are to assume that the "founding" of Mayapan in Katun 13 Ahau falls anywhere near the beginning of the principal occupation of the site, this early Mayapan date suggests the introduction of another katun round of 256 years into the Roys chronology with Katun 13 Ahau falling in A.D. 1007-1027 or A.D. 1004-1023, depending on whether the point of departure for the katun count is that of Thompson or of Spinden. The effect of this would be approximately to double the life of Mayapan suggested by Roys, Brainerd, and Thompson, and the prolongation of the post-Classic period, or Mexican stage, made necessary by the Spinden correlation would thus occur mainly in the Late Mexican substage. Possibly it should be explained that the cultural stages we refer to here have little to do with Spinden's ideas of Maya history, which differ widely from those of Roys, Brainerd, and Thompson. What we are attempting is to fit the historical and cultural reconstructions of the latter three to the chronology of the Spinden correlation.

There is some basis in the documentary sources for a longer Mexican stage. Landa says, "after they had lived in that city [Mayapan] for more than five hundred years, they abandoned it and left it in solitude. . ." (see part 1, p. 59). This places the beginning of Mayapan in the tenth century. Although one might argue Landa had reference to a Florescent or Early Mexican settlement at Mayapan, the context certainly suggests that he is referring to the late and principal occupation of the city. In the *Relación de Chunhuhub* (see part 1, p. 52), we read, "It is not a thousand years that they have worshipped idols, because the lords of Chichen Itza and their vassals, they give to understand, were not idolaters," and the *Relación de Quinacama and Muxuppipp* (see part 1, p. 55) "tells of the introduction of idolatry by 'Quetzalquat' and the Mexicans about 800 years previously." In contradiction to these statements, and preferred by Roys (see part 1, pp. 29 and 38), is the remark by Sánchez de Aguilar that the Maya had been

subjects of the Mexicans (i.e., the Toltec) 600 years before the arrival of the Spaniards, or since the middle of the tenth century.

It has been mentioned that the radiocarbon dates we have cited were selected because they deal with that part of the history of northern Yucatan that has particularly concerned us. There are, of course, other radiocarbon dates from the lowland Maya area, some of which have direct bearing on the correlation question, and there are dates from the Maya highlands and from elsewhere in Middle America that in one way or another may be brought into the problem. (Besides the sources cited above, see Barker and Mackey, 1959; Crane and Griffin, 1959; Kulp, Feely, and Tryon, 1951; Libby, 1954. Also see Münnich, Östlund, and de Vries, 1958, for correction of Chicago dates.) The list as a whole offers little comfort to the proponent of any correlation, for the dates range from those suggesting a correlation earlier than that of Spinden's to one later than that of Thompson's.

The fact of the matter is that it is open to question whether the radiocarbon method of dating in its present state of development is sufficiently exact to solve the problem of correlating the Maya and Christian calendars, or to deal very adequately with what appears to be the potentially rather precise chronology contained in the native records and early Spanish accounts concerning pre-Columbian Yucatan. The inherent uncertainties, the chances of errors, the yet to be resolved corrections have been stated by competent authority (e.g., Johnson and others, 1951; Broecker and Kulp, 1956; de Vries, 1958; Broecker and Olson, 1959; Deevey, Gralenski, and Hoffren, 1959, p. 166; Broecker, Olson, and Bird, 1959), and it behooves the archaeologist to understand these limitations and to be highly critical in his use of radiocarbon dates, not to mention being extremely selective in choosing samples for testing that are quite secure in his own chronological sequence or at least in their archaeological associations. Happily, this method of dating has made progress toward greater exactitude during the decade it has been in use, and there is hope that it will be a tool of increasing importance to those fields of archaeology that deal with relatively recent times. It has already accomplished the important result of reopening the Maya correlation question, which was in a fair way to become a closed-door situation a few years ago.

In regard to the specific problems of the chronology of Mayapan and of Mexican stage Yucatan, we do not think that the chronology advanced by Roys, Thompson, and Brainerd should at present be discarded because of certain radiocarbon dates. Parenthetically, any revision such as that indicated by the radiocarbon date from Chichen Itza would necessitate a change in existing ideas about Toltec chronology in the valley of Mexico and of certain phases of chronology elsewhere in Middle America. We do consider, on the other hand, that the dates cited from Uxmal, Chichen Itza, and Mayapan, which are consistent within themselves, are of sufficient importance to dictate that we carefully watch for future developments in the radiocarbon method of dating (see particularly de Vries, 1958; Broecker and Olson, 1959; Broecker, Olson, and Bird, 1959).

We have spent some pages discussing the history and the general archaeological background of Mayapan and post-Classic Yucatan, or the Mexican stage according to Brainerd's terminology. In doing so we have given particular attention to chronology, and we have to some extent compared Roys' ideas with those of other writers on the subject. Our discussion has been somewhat diffuse, and possibly we should pull the loose strings together. Roys' ideas of history, which are outlined on page 4, and which will be found in detail in part 1 of this volume, are based primarily on documentary sources. His interpretation of the early Spanish writings and native records, which differs in several respects from the ideas of Thompson and Brainerd (see pp. 6-7), seems to this writer eminently reasonable, and in no essential respect is it in conflict with the archaeological evidence. A relatively minor addition to Roys' history is the possibility that the principal occupation of Mayapan began several decades before the "founding" of the city by Kukulcan. A thought that must remain purely speculative in the light of our present knowledge

is that an Itza settlement existed at Mayapan before the establishment of the capital, a circumstance that might in part explain the selection of the site by Kukulcan and his Itza followers.

Thanks to the work of R. L. Roys (1957), we know a fair amount about the political geography of northern Yucatan at the time of the Spanish Conquest, when the country was divided into some sixteen native states or provinces. We do not know, however, how closely these provinces corresponded to the divisions of the former joint government of Mayapan, and there is considerable uncertainty about the geographical extent of the hegemony of the capital. Gaspar Antonio Chi and Cogolludo imply that the whole country was under the rule of that government, which seems to be something of an exaggeration. Roys sets forth the documentary evidence on this subject in part 1 of this volume. In brief, he believes that Mayapan probably exerted control over the native provinces that extended from Ah Canul on the west to Cupul, Tazes (Tases), and Cochuah on the east, with at least friendly relations with, if not control over, Uaymil and Chetumal to the southeast (see part 1, map). Chikinchel on the north coast seems to have been outside the Mayapan orbit, and there is nothing to indicate that Ecab was under that jurisdiction, although it is vaguely connected with the Itza in earlier times. The island of Cozumel is clearly associated with Mayapan, but just when and in what manner is not clear. Canpech and Chanputun, the latter the legendary home of the Itza at an earlier time, if we are correct in interpreting Chakanputun as Champoton, do not seem to have come under the power of the Mayapan government.

It may be of some interest at this point to mention what is known of the distribution of archaeological remains similar, or at least comparable, to those at Mayapan. Although materials of this sort can hardly be expected to determine political boundaries, they reflect trade and cultural exchange and give us some idea of the area in which Mayapan may have been an influence. Parts 2, 3, and 4 of this volume give much attention to indications of trade and cultural influences between Mayapan and other areas. The studies by Berlin (1956) on Tabasco and by Sanders (1960) on Quintana Roo relate the findings in those regions to those at Mayapan. R. E. Smith's monograph on the pottery, now in preparation (see Preface), will continue this procedure, and all these studies refer to earlier work along such lines. Here we shall simply outline the geographical areas that may in one way or another be associated with Mayapan on the basis of the archaeological remains, leaving the detailed exposition of such associations to the above-mentioned reports.

From what we now know of the archaeology of northern Yucatan and adjacent areas, the ruins along the coast of Quintana Roo and on the offshore islands, from the region of Cape Catoche to Chetumal Bay (see frontispiece), in the ancient provinces of Ecab, Cozumel, and Uaymil, are most closely comparable to the remains at Mayapan. Not only is there a greater range of cultural traits similar to Mayapan there than elsewhere, as well as instances of trade between the two regions, but it is the one sizable area in which remains of this sort are known to be widespread. The little that we know of the interior of Quintana Roo, only a handful of sites being represented in the provinces of Ecab and Cochuah, suggests that this cultural area carries inland, but how extensively we do not know. South of Chetumal Bay, in the old province of Chetumal in northern British Honduras, which also is archaeologically little known, there are indications of somewhat similar remains. As this eastern culture appears to be more deeply rooted in time and to have more direct continuities with earlier forms than the Mayapan equivalent, it is probable that the origin of a good part of what is typical of that city is to be sought for in Quintana Roo.

At Chichen Itza, in the province of Cupul, a considerable amount of pottery typical of that of the major period at Mayapan has been found under conditions suggesting that the great civic and religious buildings of the old Maya-Toltec city were no longer in use and may even have been

falling into ruin. It is not surprising, then, that there are few remains of buildings at Chichen Itza that are characteristic of Mayapan. Conversely, however, the early religious architecture of Mayapan, particularly those buildings given over to the cult of Kukulcan, seems to have been inspired by the Maya-Toltec architecture of Chichen Itza.

Closer to Mayapan in the provinces of Mani and Chakan, minor excavations and surface collecting have produced pottery of Mayapan type at a number of sites but few building remains except in the immediate neighborhood of that city. Intensive excavation is now being carried on at Dzibilchaltun in the province of Cehpech, and we understand that remains characteristic of Mayapan are present in some quantity, but we have no detailed information on this situation.

That part of the west coast of the peninsula that lay in the old province of Ah Canul is archaeologically little known but for the island of Jaina and for collectors' pieces reputedly from the island of Piedra and the ruins of Huaymil. We know of no remains of the sort that interest us here from that region. At Champoton, in the province of Chanputun, on the other hand, there have been found pottery and a few other objects that suggest a culture similar to that at Mayapan. Lastly, in central Peten, in the old Itza province, at Lake Yaxha, Lake Peten, and Tikal, and at Barton Ramie on the Belize River in British Honduras, there have been recent finds that may prove in some sense to be related to the culture of Mayapan, but too little is known to say more than that.

The broad area outlined, albeit very spottily, by the foregoing distribution of archaeological remains is approximately that referred to by the native chronicles in reciting the history of the Itza. It is also the general area of Yucatec Maya speech, at least at the time of the arrival of the Spanish. We shall shortly refer to the relations of Mayapan with a wider world, but for the moment let us discuss what might be thought of as the homeland of the lowland Maya in this late period of aboriginal history.

In the first place, to borrow a phrase from statistics, we are impressed by the "weighted" nature of our sample. The distributions we have outlined largely reflect the particular locations and areas where archaeological work has gone on. There is, however, one major exception to this. The so-called Puuc region, including and lying south of the range of hills known by that name, has been relatively well explored. Only the barest traces of the late culture comparable to that at Mayapan have been found, and it seems that this area was largely abandoned at this time. There is fair reason to believe, on the other hand, that the entire northern plain and the coastal regions as far south as Chetumal Bay on the east and Champoton on the west will yield late remains more or less similar to those at Mayapan once there is adequate archaeological exploration. Whether this will prove to be so or not, the obvious trade between Mayapan and the coast, as witnessed by a considerable amount of material of marine origin at the site (see part 4 and Current Report 41) and the unquestionable trade in salt, shows that the city was in cultural contact with coastal areas, and presumably with the northwest or west coasts, as a product like fish, and very likely salt, would probably be brought from as near by as possible. We cannot be certain that the ruins in British Honduras and the recent finds in the Peten will prove to be of the same time as those at Mayapan. We know that the Chetumal Bay area was on the route of trade between northern Yucatan, British Honduras, and farther south, which suggests that the region south of the bay may have been within the same cultural sphere as Mayapan. In the matter of central Peten, on the other hand, the existence there of a group of Itza until the end of the seventeenth century leaves the dating of late remains open to much uncertainty.

Another point that emerges from the distribution of the archaeological remains, and what we know of their relative chronology, is how well, in broad outline, they fit the situation implied by the documentary history. It will be remembered that the Itza left Chakanputun toward the end of the twelfth century, moved to the region of Lake Peten, "discovered" Bacalar near Chetumal

Bay, continued up the east coast of the peninsula, and settled at Chichen Itza within the space of about forty years. Some forty years later Mayapan is "founded," and around the middle of the fifteenth century, at the time of the fall of the joint government at Mayapan, some of the Itza return to Lake Peten. Too little is known of the recently discovered remains in the region of Lake Peten to guess whether they might represent the passage of the Itza on their way north or the much longer occupation several centuries later. The movement of these people from the east coast to Chichen Itza and from there to Mayapan, however, quite accurately parallels the flow of culture as suggested by the archaeological remains.

We do not think that much can be inferred from the archaeology in regard to political geography. It is amply clear that trade and culture can cross political boundaries, even hostile boundaries. The relative homogeneity of the late culture of the ancient province of Ecab certainly in no way conflicts with the idea of its being a political entity. There was certainly much cultural exchange between this province and Mayapan, and presumably most of the country west of Ecab, but whether the latter was under the suzerainty of Mayapan there is no telling. The same holds true of Cozumel. We know virtually nothing of the archaeology of the supposedly hostile province of Chikinchel. The similarity of the late culture of Uaymil, and possibly of Chetumal, to that of Ecab and of Mayapan has been pointed out, but again political affiliation cannot be assumed from this. We have hazarded the guess that all the northern plain and a considerable stretch of the west coast will produce remains of the same general character as those from Mayapan, but until this is proved or disproved, further speculation is not merited. There is, however, one last bit of archaeological evidence bearing on the political geography. The virtual absence of remains in any way associated with Mayapan from the region of the Puuc seems clearly to remove this area from having been a part of the Mayapan confederacy. It appears to all intents and purposes to have been abandoned at that late date.

A little way back we referred to the relations of Mayapan with a wider world than the stage upon which Itza history was enacted or the area of Yucatec Maya speech. Roys mentions the well established trade from northern Yucatan through the region of Chetumal Bay that seemingly took men of Mayapan at least to the north coast of Honduras. Other avenues of trade are seen in the archaeological remains. One of the best documented is that from extreme western Campeche and eastern Tabasco to northern Yucatan. This is witnessed by the principal trade ware at Mayapan and in Quintana Roo, a pottery known as V Fine Orange, the place of origin of which has been determined by Berlin (1956) as being the area mentioned above. Whether this trade moved primarily by water or land we cannot at present say. The relations of Mayapan with this southwestern region, however, are nicely confirmed by Landa's statement (see part 1) that the Cocom brought mercenary troops from Xicalango into the city. With the completion of R. E. Smith's study of the pottery of Mayapan (see Preface), other ceramic wares that indicate trade with distant regions may be identified, but for the present we shall content ourselves with the mention of V Fine Orange.

The environment of the northern Yucatan plain lends itself particularly to the identification of materials other than pottery that are of foreign origin. The native limestone bears nodules of flint, and there are of course deposits of clay, but few other rocks or minerals that seem to have been of use to art and industry are known to be native to northern Yucatan. There is also no metal. Imported objects, or at least objects of foreign materials, are thus relatively easily recognized. This is a subject that is presented in part 4 of this volume.

Unfortunately, the study of artifacts other than those of pottery has by no means kept pace with the study of the ceramics and of the architectural and sculptural remains in Middle America. This is probably true for a variety of reasons, but at any rate the lack of comparative material

and the very slight knowledge of the geology of the area make work of this sort particularly difficult. In spite of this handicap part 4 is illuminating in showing the extent of trade and, parenthetically, is highly suggestive of what could be learned of the life of the people from their tools and utensils. We find that implements of lava, sandstone, schist, and granitic stone at Mayapan probably were not articles of regular trade but had drifted in piecemeal and sporadically. The same is true also of the none too plentiful examples of jade and occasional pieces of basalt, rock crystal, quartzite, and iron pyrites. Greenstone celts, on the other hand, seem to represent an established trade with the Guatemala highlands, either directly or by intermediary coastal ports. Obsidian, almost entirely of the gray variety, was brought to Mayapan in large quantities, seemingly as raw material to be worked into final form by local craftsmen. The almost complete absence of green obsidian, quite common at Maya-Toltec Chichen Itza, and presumably coming from the Mexican highlands, suggests that the obsidian trade, like the trade in greenstone celts, was with Guatemala. This is slightly puzzling, as green obsidian was in use in Tabasco at this time and we know of the well established trade in V Fine Orange between that region and Mayapan. Metal seems to have reached Mayapan by indirect trade, some of it from quite long distances. We do not know enough yet about the distribution of ores, techniques of manufacture, and styles of handicraft to place the source of most objects of this material with any certainty. The few examples of gold that were found at Mayapan suggest an origin as far south as lower Central America or even beyond. The most likely sources of the copper are Honduras and Oaxaca.

Besides the more conventional products of commerce and travel, of which, unfortunately, we have only the imperishable materials, there are the less tangible evidences of communication with relatively distant areas. This matter of cultural exchange, within a more restricted region and in more intensive form, was of course implicit in our review of areas with archaeological remains similar to those at Mayapan. Part 4 is replete with comparisons of artifacts found at Mayapan with those from other regions, some as distant as Nicaragua and Jalisco. In our present state of knowledge it is impossible to say whether many of these likenesses are significant, but when similar studies are made of the remains of other places, some of the comparisons will become meaningful.

The bow and arrow at Mayapan, as witnessed by the presence of arrowheads, is clearly the introduction of a foreign trait. Historically, this is attributed to the Mexican mercenary troops reputedly brought to Mayapan from Tabasco. The small sculptures known as altar figures and the effigy censers that occur in such quantities at Mayapan are not old Maya traits. A number of the gods portrayed on the censers are non-Maya and seemingly of Mexican origin (see Current Report 40). The temples shown in a wall painting at Mayapan are a mixture of the Maya architectural style with a style reminiscent of the Aztec. A few sculptures bear the mark of Aztec art. Broadly speaking, there is a distinct overlay of foreign culture, not always specific but broadly "Mexican" in character, at Mayapan. This does not of necessity imply direct communication with the valley of Mexico. Indeed, there are indications that these influences came secondarily from some such intermediate regions as Tabasco and Vera Cruz, not to mention the near-by area of Quintana Roo, the remains of which also exhibit much that is Mexican in flavor. In sum and total we find, as evidenced by objects of trade and by foreign cultural traits, that Mayapan was in touch, often through intermediary peoples, with a number of quite distant regions. The inhabitants of the city must have been aware of a world much larger than the ancient homeland of the northern Maya.

In the preceding discussion, which has tended to look at Mayapan as a part of the larger scene, one may have gained the impression that all trade, all currents of culture, flowed into the city and only governmental authority issued forth. As a matter of fact that is very much the way the situation appears in our present state of knowledge, although a better understanding of some other communities of this time in northern Yucatan might alter the picture. Still, when one thinks of Mayapan as an urban capital, dependent on the provinces for its support, the picture is not altogether unreal,

and it is in no way in conflict with Landa's statement about the subsistence of the city (see part 1, p. 57). At all events, this brings us to a closer inspection of the character of the ancient capital and of its culture, which is the subject of parts 2, 3, and 4 of this volume.

What was to become the most important city of the Maya in its time seems to have begun as a minor ceremonial center for the worship of Kukulcan. The main pyramid-temple was probably a copy on a smaller scale of the great temple to Kukulcan, or Castillo, at Chichen Itza, and the other buildings of this small group also very likely imitated those of Chichen Itza in design and function. It will be remembered that Landa attributes the establishment of Mayapan to Kukulcan, who had previously reigned at Chichen Itza (see part 1, pp. 56-57), and the same writer goes on to describe the building of the temples and the houses of the lords within a walled enclosure and the subsequent building of houses for the people outside the wall. With the exception of the walled enclosure, no trace of which has been found, and which Landa, who probably never visited Mayapan, seems to have confused with the great wall around the city, this description is nicely paralleled by the archaeological findings. The oldest part of the city, as just indicated, does seem to be the main ceremonial and civic center, and, though there is no reason to believe that all construction there was completed before any houses were built outside the center, the residential areas seem to have been a later development.

Over the century and a half or two centuries following the building of the small ceremonial group we have just mentioned, Mayapan grew to be a city of 11,000 to 12,000 inhabitants that covered an area of more than 4 square kilometers and was enclosed by a massive, though not very high, stone wall. The population lived in more than 2000 dwellings, made use of almost as many more domestic buildings, and worshipped and carried on their affairs in well over 100 ceremonial structures. Much in the manner of the typical town described by Landa (see part 3, p. 205) the main group of temples and other religious and civic buildings lay near the center of the city. Close to this center were most of the residences of the lords and important people, while stretching out over the remainder of the city were the houses of the less well-to-do. Other than this arrangement in zones of importance, there was no city planning in a present-day sense. Favorite locations of dwellings were on the many natural rises that dot the site, so that the distribution has a random appearance (see map in back cover pocket). Houses and groups of houses, the family unit, were almost invariably surrounded by rough stone walls, more or less circular in plan, that marked the limits of the particular property. As these were often closely adjacent, the result was a maze of alleyways twisting all through the city. With the exception of three formal causeways, probably more ceremonial than utilitarian in nature, and several straight lanes bordered by stone walls, there were no streets in a modern sense. There were, moreover, no obvious roads that led toward the center of the city from the dozen entrances in the city wall. Topography and water supply seem to have been the determining factors in the arrangement of the city, the most crowded part being in the southwest, where water was in most ample supply.

This, then, in briefest sketch, was Mayapan, an experiment in urbanism, and possibly in form of government, that seems to have been new to the Maya. Landa tells us that the end of the city came through political dissension caused by oppression on the part of the ruling group, and the native literature speaks of fighting, seizure, and depopulation (see part 1). That the end was abrupt and drastic is attested by ample evidence of burning of buildings and widespread looting. Whether or not the city was literally depopulated and abandoned, we do not know. As two of the chronicles (see part 1) mention a "pestilence" that seems to have occurred at Mayapan in a Katun 4 Ahau (A.D. 1481-1500), some of the people may have continued to live there after the fall of the capital. There seems no reason to doubt, however, that the importance of the city as a center of government had ceased some forty years earlier.

To see the culture of Mayapan and of late pre-Columbian Yucatan in perspective, we must remember the civilization of earlier centuries. Apparently referring to a time before the establishment of the capital at Mayapan, Landa mentions the rule of three brothers at Chichen Itza, their deaths, and the dissension that followed (part 1, pp. 56-57). There are also a number of allusions in the native chronicles to disturbed conditions at this time (see part 1). These seem to refer to the aftermath of the breakup of Toltec rule at Chichen Itza. In any event, the archaeological remains indicate a drastic decline in level of civilization, and reflect what might be expected in times of turmoil and the breaking down of old religious, and very probably social, forms.

It has been mentioned that the early buildings at Mayapan very probably imitated those of Chichen Itza, and this influence, mainly expressed in the cult of Kukulcan, carried on in the new city for some time. There was, however, a vast difference in execution. The magnificent Classic tradition of the Maya had, of course, long since disappeared in anything like its pure form, but a part of that tradition had survived through sheer impetus, or a sort of hybrid vigor, or even perchance because the two cultures were in part contemporaneous, in the imposing architecture, powerful sculpture, and excellent ceramics of the Maya-Toltec civilization of Chichen Itza. Now that too was gone. Civic and religious buildings were smaller in scale, less massive in design, and the lofty stone vaults of the great structures at Chichen Itza were all but forgotten, being replaced by flat-ceilinged beam-and-mortar roofs. There was no fine cutting and shaping of stone for building or for sculpture. Indeed, the stone itself was selected with little care, most of it being of inferior quality. Poor masonry was hidden by quantities of plaster, and there was the tendency to resort to modeling in stucco in place of carving in stone. Such stone sculpture as there was seems for the most part to have relied on stucco and paint for the final effect, and, even allowing for the present eroded condition, there appears to have been little of artistic merit. Pottery and the products of the lesser arts and industries were almost without exception of poor quality. Mayapan was born when civilization was in eclipse, and, in spite, or perhaps because, of the numerous foreign influences that moved across the peninsula and filtered into the city, culture never again approached the excellence of earlier centuries.

As might be expected in times of this sort, religious and social values were changing. This trend is not only seen in the literature, in the outcry against the Itza in the native chronicles, but is also reflected in the archaeological remains. A case in point is the great number of shrines and the prevalence of the family oratory, accompanied by altar figures and effigy censers, that surely indicate the breaking-down of the old centralized religious organization, the growth of cults, of which ancestor worship was conspicuous, and the transference of much of ceremonialism to the private dwelling, or "the rise of secular forces at the expense of sacerdotal control, a vulgarization of the spiritual aspect of religion," as Thompson puts it (Current Report 40, p. 624). The mention by the early Spanish writers of the worship of idols and the introduction of idolatry by Kukulcan and the Mexicans, apparently a custom foreign to the old Maya culture, almost certainly is in reference to the effigy censers and altar figures, many of which are of non-Maya deities and are otherwise non-Maya in character. That the age was materialistic, that personal comfort and glory came ahead of religious devotion, is shown by the palaces and finer residences being better built and apparently more lavishly furnished than the temples and other ceremonial buildings. Dedicatory or ritual offerings were often retrieved from their resting places, presumably to be used again. Human sacrifice on a considerable scale was practiced, and may well be a reflection of the taking of captives, slavery, and the rise of militarism that seemingly marked this era.

Much of the change that went on was undoubtedly due to the impact of foreign peoples and foreign customs, a process that had gone on at least since the advent of the Toltec some centuries earlier. At the same time there seems to have been an internal dry rot in Maya culture that cannot

be explained solely by the importation, or even the domination, of foreign ideas. How much of this is attributable to the disruption of invading peoples, how much to the degenerative process of a civilization that has flowered and reached old age, we cannot say, but the collapse of the brilliant civilization of the southern Maya at the end of the Classic period, apparently without external pressures, gives us food for thought. One might consider the possibility that the advent of the Toltec in Yucatan, rather than bringing the downfall of the old Maya culture, a theory that has often been advanced, on the contrary prolonged it in something like its old vigor, and that only with the collapse of Toltec power did the inherent decadence of Maya civilization become fully apparent. However we sort out the causes, or chart the course, of decay, it is quite clear that Mayapan fell heir to an impoverished culture. Over its life the city was subjected to numerous outside influences, but instead of finding a stimulus in them the result was a sterile eclecticism, a culture without vitality.

One of the primary reasons for embarking upon the program of research that is reported on in this volume was the availability of a body of early literature, both native and Spanish, that it was hoped could be brought into combination with the archaeological evidence to produce a more detailed, more vivid, more lifelike picture of a bygone civilization than archaeology alone can provide. This was far from being a new thought in the practice of archaeology, but the existence of native texts is rare in the New World, and here was what seemed to be a bright opportunity. As the field seasons rolled by, however, I had many unhappy moments in the thought of how little the remains contributed to the definition of historical events or the exposition of historical text in general.

Now that the work is over and the results are presented here, I feel much better. In succeeding pages the reader will find numerous references to Landa and to other documentary sources as they pertain to the archaeological findings. Many of the findings, probably the majority, confirm the historical records; some disprove them. Not so many years ago I remember discussing on more than one occasion Landa's description of the typical native house. Nothing resembling it had ever been found, and the discussion usually was concerned more with where Landa went wrong in his description, or what he really meant, than with the question whether houses of this form had ever in fact existed. They have, of course, now been found in large numbers at Mayapan, and we have a much better idea of exactly what Landa was describing. This is but a simple example of the confirmation of written record, of its further elucidation, by the archaeological remains and of the gain in understanding that comes from the combined approach.

Looking at the results of the work as a whole, I think it has been worth while, even though we were dealing with a degenerate civilization, devoid of great art, that to all intents and purposes reached a dead end in the Spanish Conquest. Certainly there is no ancient center of the Maya about which we know as much as we do about Mayapan, and this understanding comes nearer to being living history, inadequate as it is, than is true of any other place.

Postscript

Since the preceding pages were written, and have gone to press, two new radiocarbon dates from Chichen Itza have been published. The first of these (Y-626 bis) is a second measurement of the Early Mexican substage specimen (Y-626) previously reported. The new date, A.D. 820 ± 100, is not significantly different from the earlier figure. A specimen (LJ-87) from a Florescent stage building at Chichen Itza is dated A.D. 820 ± 200. This is quite close to the hieroglyphic date from that building which is read by J. E. S. Thompson (1937, pp. 181, 186) as 10.2.10.11.7 in the Maya

calendar or A.D. 880 by the Goodman-Martínez-Thompson correlation, and the radiocarbon date of course supports that correlation. (See Stuiver, Deevey, and Gralenski, 1960; Hubbs, Bien, and Suess, 1960, for above radiocarbon dates. Also see Rubin and Alexander, 1960, p. 181, in connection with previous reference to Crane and Griffin, 1959.)

An important, but as yet unpublished, paper announcing a series of radiocarbon dates from the Classic ruins of Tikal in Guatemala was recently presented by L. Satterthwaite at the annual meetings of the Society for American Archaeology, held at New Haven in May, 1960. This paper reportedly does much to confirm the validity of the Goodman-Martínez-Thompson correlation. Until the writer has the opportunity to see this paper he is unable to comment further.

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