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Time Depth or Vacuum: The 11.3.0.0.0 Correlation and the Lowland Maya Postclassic

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Although research in the Maya area has been increasingly concerned with the spatial, rather than temporal, distribution of Maya remains, the correlation of independent regional chronologies throughout the Maya Lowlands is still confused for the later part of Maya prehistory. Several reasons may be cited for the disparate picture that currently exists for the Postclassic era: the distinct change of gears that this time period represents from the Classic Period; the repeated intrusion into the Lowland area by groups of foreigners (and, presumably, the introduction of associated artifactual assemblages) as represented in the limited ethnohistorical references available; and, most important, the conceptual limitations of the existing archaeological paradigm in which researchers often associate differences in archaeological remains, particularly pottery, with temporal change prior to evaluating evidence for the presence of spatial and/or cultural factors.

The differentiation of spatial and temporal dimensions is a difficult task, especially for the Postclassic era. Unlike Classic Period buildings, which often engulf and encompass each other (thus providing a clear temporal sequence), Postclassic remains are often spatially distinct, unstratified constructions; thus, the problem of distinguishing temporal change from variation within a single time period is not easily solved. In addition to the general lack of stratigraphy, the problems of sepa-

rating time and space in the Postclassic Period are exacerbated by problematic radiocarbon dates. Because of these difficulties, schemata for correlating different ceramic complexes and regional sequences during the Postclassic Period have proliferated, perhaps most notably in Ball's (1974, 1979a) work on the possible relationships between the ceramic complexes of northern Yucatan.

The work of Ball (1974a, 1979a, 1979b, 1985a) in northern Yucatan and of D. Chase (1981, 1982a, 1985) and myself (1983, 1985) in northern Belize and central Peten points to serious problems in the present conceptualization of the Terminal Classic–Early Postclassic Period in particular and of the Postclassic Maya Lowlands in general. It is suggested here that these recent efforts to correlate and understand regional sequences for the era point to the need for a Maya-European calendric correlation different from the current 11.16.0.0.0 bulwark. Probably some version of the 11.3.0.0.0 correlation is called for. Unlike earlier attempts to bind the Maya and European calendars together, however, this does not assume that there ever was any one-to-one day correlation, but rather a series of differing regional calendars, possibly referable to a single katun.

Both recently excavated data and the native documents, especially the Books of Chilam Balam, indicate that an 11.3.0.0.0 correlation may be profitably utilized for interpreting Lowland Maya Postclassic history. That some version of an 11.3.0.0.0 correlation is applicable to the Maya area finds support not only in recent information from the Yucatecan and Peten areas, but also in advances that have been made in the anthropological understanding of archaeological remains since the original arguments for this correlation of Maya and European calendars (Lehmann 1910; Escalona Ramos 1940; Thompson 1941a, 1950). Much like a paper once written by Thompson (1941: i–ii), this statement has been written in order "to outline tentative solutions which conform to information now on hand, with the purpose not of supplying final answers but of stimulating interest in these problems." However, given current information on the Maya, this paper argues that the 11.3.0.0.0 correlation is a logical solution to certain of the above mentioned problems now being encountered in cross-regional syntheses of Lowland Maya Postclassic archaeology.[1]

Any correlation of the Maya and European calendars must deal with an array of widely scattered and conflicting data. To be accepted by the modern archaeologist, a correlation must coherently "fit" or ac-

count for the various kinds of archaeological information available from the Maya area: radiocarbon dates; calendrical, hieroglyphic, and astronomical peculiarities; the extant archaeology; and the existing ethnohistory. Before each of these bodies of information is tackled, however, an explanation of the Maya calendrical system and its various correlations with the European calendar is necessary.

THE MAYA CALENDAR AND ITS CORRELATION WITH THE EUROPEAN CALENDAR

The Maya calendric system was based upon the juxtaposition of two counts: (1) a 260-day ritual count comprised of the coincidence of 13 day numbers (possibly deities) with 20 named days; and (2) a 365-day vague year count formed by 18 months of 20 days each with the addition of 5 ceremonial unnamed days at the end of the year (see Satterthwaite 1965 for more detail). Within this system of recording time a particular day only recurred every 52 years; these 52-year periods are known as "calendar rounds." During the Classic Period, calendar-round periods were utilized in conjunction with a system of linearly recording time, known as the "Long Count"; the Long Count registered the absolute passing of time in a vigesimal system from a fixed starting point in the distant past. Long Count dates are currently transcribed in a specific way with the completed number of each of the baktuns (20 katuns or 144,000 days or roughly a 400-year period), katuns (20 tuns or 7,200 days or roughly a 20-year period), tuns (18 uinals or 360 days or approximately a year), uinals (20 kins or 20 days), and kins (days) followed by a period. For example, 10.3.0.0.0 1 Ahau 3 Yaxkin implies a Long Count date of 10 baktuns, 3 katuns, 0 tuns, 0 uinals, and 0 kins correlating with a calendar-round date of 1 Ahau 3 Yaxkin. Thus, during the Classic Period a calendar-round date was fixed in place by its associated Long Count date.

With the onset of the Postclassic Period, however, the Long Count system of recording time fell into disuse. Although the 52-year calendar round continued to be utilized, it was no longer placed in relation to an absolute scale of linear time. During the Postclassic Period, the Long Count was replaced by a truncated recording system that combined calendar-round and katun information into a single notation. This "Short Count" recorded only the day on which a particular katun (or 20-year period) ended; because all katuns ended on the day Ahau,

this notation always consisted of this day in combination with one of the thirteen primary numbers (in the Maya system, these were not recorded in standard numerical order, but rather proceeded cyclically as follows: 13, 11, 9, 7, 5, 3, 1, 12, 10, 8, 6, 4, 2, 13, . . .). In the Short Count, no uinal information was recorded; rather, the Ahau date represented an entire katun. Thus, each named Ahau date in the Short Count recurred only after 256 years. Although events were recorded in relation to the specific named katun in which they occurred, they were not placed within a time-distance count of depth greater than 13 katuns, or roughly 256 years.

Most of the possible Maya correlations are based on the fact that a Katun 13 Ahau ("The Katun of Conquest") shifted to a Katun 11 Ahau during the first half of the sixteenth century. The last known Katun 13 Ahau date that can be correlated with a Long Count date is the calendar-round date 13 Ahau 18 Cumku, which is associated with a 9.17.0.0.0 date in the Classic Maya Long Count; therefore, a Katun 13 Ahau in the Short Count system could be related to any 256-year period that occurred after this Long Count date. In Long Count notation, these periods of time fall at 10.10.0.0.0, 11.3.0.0.0, 11.16.0.0.0, 12.9.0.0.0, and 13.2.0.0.0. In fact, each of these dates has been mentioned as a possible correlation point with the sixteenth-century European calendar (10.10—Vaillant 1935; Thompson 1935: 70–72; 11.3—Vaillant 1935; Thompson 1935: 72–73, 1941; Andrews IV 1940; Escalona Ramos 1940; Wauchope 1947, 1948, 1954; 11.16—Goodman 1905; Spinden 1924, 1928, 1930; Martínez Hernández 1926; Thompson 1927, 1935: 73–78; Beyer 1934; 12.9—Morley 1910; Thompson 1935: 78–80; 13.2—Long 1931; Thompson 1935: 80; see also L. Roys 1933). An additional possible correlation, the 11.10.0.0.0 (Kriegauer), was noted as a possibility by Andrews IV (1940) and Lothrop (1952); recently Kelley (1983) has suggested an 11.5.0.0.0 correlation. Although the 11.16.0.0.0 correlation has been generally accepted and presently dominates Maya archaeological thought, the following sections demonstrate both the need to reassess the current correlation problem and the value of an 11.3.0.0.0 correlation.

RADIOCARBON DATING: WHY 11.3.0.0.0?

Few scientific techniques or methods have had as much effect on archaeology as the development and implementation of carbon-14

dating. One area on which radiocarbon dating has had both a methodological and a conceptual impact is the testing of the validity of possible Maya calendrical correlations with the European calendar; in fact, support for different correlations paralleled the development and refinement of the dating technique and the dates that it yielded. Since the inception of radiocarbon dating, Maya researchers have adhered to the method, first arguing for Spinden's 12.9.0.0.0 correlation (Andrews IV 1965a) based on the early datings, and then arguing for Goodman, Thompson, and Martínez's 11.16.0.0.0 correlation, with Satterthwaite and Ralph's (1960) article based on later datings.

The early 1950s radiocarbon support of the 12.9.0.0.0 correlation (Kulp, Feely, and Tryon 1951; Libby 1954) seemingly forced many researchers who had been considering the 11.3.0.0.0 correlation to seek "refuge" in a middle ground 11.16.0.0.0 correlation. Satterthwaite (1956) found it necessary to remind the early 12.9 supporters that the 11.16 correlation (let alone an 11.3 correlation) was still a viable option. Deevey, Gralenski, and Hoffren (1959) noted that "the difference between the two correlations, 260 years, is small, corresponding to about 3 percent difference in net C-14 content, and methodologic errors of this order of magnitude are inherent in any radiocarbon measurement," concluding that "the question of the Maya-Christian correlation" was "still an open one."

The Tikal excavations produced over 100 radiocarbon dates and supported an 11.16.0.0.0 correlation in 1960, overturning an earlier backing of the 12.9.0.0.0 correlation being argued for in the Yucatan (Andrews IV 1965a). Andrews V (1972, 1978: 381; Andrews IV and Andrews V 1980: 281–85) subsequently attempted to bring the Yucatecan sequence and its associated radiocarbon dates into line with an 11.16.0.0.0 correlation as opposed to a 12.9.0.0.0 correlation, but in all his attempts concluded that "radiocarbon determinations from the Maya area will not solve the correlation problem for us."

Presently the 11.16.0.0.0 paradigm dominates Maya dating. One of the last stalwarts for an alternative correlation, Robert Wauchope, adopted the 11.16.0.0.0 correlation in 1975 even though he had earlier noted (1954: 20) that it afforded him "considerable difficulty to try to reconcile post-Classic sequence with the 11.16.0.0.0 correlation." Before the advent of radiocarbon dating, Wauchope forcefully demonstrated (1947) that the ethnohistory of the Maya Highlands, when combined with the known archaeology, implied the need for an

11.3.0.0.0 correlation. Even earlier, Thompson (1941a, 1942) and Vaillant (1935) had also argued for an 11.3.0.0.0 correlation based on archaeological and ethnohistoric associations. Although Wauchope eventually opted for the "most widely accepted GMT correlation," his discussion (1975: 66) of the correlation question in terms of Zacualpa is still not convincing and only serves to bring out the possible application of *either* the 11.3.0.0.0 or the 11.16.0.0.0 correlation at that site.

Mayanists have long been aware of the difficulty in dating their material because of the problems of half-life, sigma, average death rate, postsample error, placement history, contamination, and various other statistical, chemical, and archaeological problems (Stuckenrath, Coe, and Ralph 1966: 372–74; Stuckenrath 1977; Andrews IV and Andrews V 1980: 285). In many instances, even an awareness of these factors has not helped them to obtain successful dating (for example, see Adams 1971: 143–52). The 1960 dates utilized by Satterthwaite and Ralph (1960) to uphold an 11.16.0.0.0 correlation may now be questioned simply by recalibrating them; they no longer fall into perfect harmony with the 11.16.0.0.0 correlation.

An example of methodological problems in radiocarbon dating causing problems in interpretation can be found in Ball's (1974) reconstruction of the Early Postclassic Period of the Yucatan Peninsula. Using the understanding then current of radiocarbon dates from Balankanche Cave, Ball postulated two "Itza" invasions in the Yucatan peninsula. The first he placed (1974a: 91–92) anywhere from A.D. 750 to 900 and associated with the Balankanche material; the second he placed around A.D. 980, basing this idea on other known archaeological material. However, a recalibration of the radiocarbon dates from Balankanche, based on new advances in the technique (MASCA recalibration tables), places these dates from A.D. 940 to 950; the new dates tend to meld Ball's two invasions into one and serve to illustrate the difficulty in basing culture history and, indirectly, dating paradigms on a method that is still being refined. As radiocarbon dating becomes both more precise and possibly more accurate, future recalibrations of the Balakanche dates will undoubtedly alter the current picture.

The present paper, like those of Deevey, Gralenski, and Hoffren (1959) and Satterthwaite (1956) before it, argues that the Maya correlation question is far from settled. Given the role that radiocarbon dating has played in the debate over the correlation, supporters of the

current 11.16.0.0.0 paradigm must be reminded that there are methodological problems in the radiocarbon dating technique (Ogden 1977; Pardi and Marcus 1977; Stuckenrath 1977) which could yet shift the paradigm forward another 260 years.

CALENDRICAL CONSIDERATIONS

Much has been written on the astronomical and calendrical capabilities of the Maya, and these skills must be considered in effecting any correlation. The use of Maya astronomy and calendrics as evidence in support of one correlation rather than another requires examination of ethnohistoric references to the coincidence of the Maya and European calendars in addition to a consideration of the basic workings of the calendar. Most scholars have sought to use this combination of calendrics and ethnohistoric statements to argue for a precise correlation of a specific day in the European calendar with a specific katun ending in the Maya Short Count. While many would suggest that a precise day-to-day correlation of the European and Maya calendars is possible given calendric, astronomical, and ethnohistorical information, the evidence presented below indicates not only that such a search for a single correlation is inappropriate, but also that the European calendar may best be placed in a general association to the 11.3.0.0.0 correlation.

In past dealings with the correlation question the majority of researchers have been in search of a single day-to-day correlation that could then be compared with astronomical information. This paper does not purport to espouse any particular day-to-day correlation, but rather suggests that some general version or several versions of an 11.3.0.0.0 correlation may plausibly be applied to the Postclassic Period in the Maya Lowlands. It is in fact proposed, following the Books of Chilam Balam and in accordance with the research of Kirchoff (1950) and Kubler (1976), that more than one calendar was in operation in the Postclassic Lowlands at any point in time and that a search for a single day-to-day correlation equivalent will prove fruitless. This would accord well with other evidence from Mesoamerica, for data from highland Mexico also suggest the use of several calendars (Nicholson 1975: 491). The use of multiple calendars in the Maya Lowlands during the Postclassic Period would not be surprising given the regional differences in its organization (see D. Chase, this volume).

One secure ethnohistoric reference pertaining to calendrics and the correlation question comes from the central Peten, where Villagutierre (1933) stated that Fuensalida and Orbita noted that A.D. 1618 occurred in a Katun 3 Ahau. While this observation brackets Katun 3 Ahau to a 40-year period ranging from A.D. 1598 to 1638, it provides little other information, for it is not clear that the Itza calendar of the central Peten can definitely be associated with one from northern Yucatan. Earlier, Landa (Tozzer 1941: 168) had noted that "the Spaniards finally arrived at the city of Merida in the year of the birth of our Lord, 1541, which was precisely in the first year of the era of Buluc Ahau"; this statement has repeatedly been contested by various Mayanists (see Tozzer 1941: n.279), although the implied Katun 13 Ahau/Katun 11 Ahau shift in A.D. 1540 accords with other known evidence (see below).

Although Thompson is widely considered to have found the "correct" correlation when he suggested an 11.16.0.0.0/A.D. 1539 correlation (1935), he unfortunately formulated his correlation without taking serious enough account of the native history reflected in the Books of Chilam Balam. These books contain important calendric information on a postcontact horizon. While probably the most important sources from the ethnohistorian's standpoint, they have often been summarily dismissed by many Maya archaeologists.

> Morley and Spinden place great reliance on the various statements on the correlation to be found in the Chilam Balam of Chumayel, Mani, and Tizimin, but in this summary these statements are discarded as original material, being used only as confirmatory evidence. (Thompson 1935: 57)

Thompson also sought to show that a Katun 13 Ahau ended in the fall of 1539; basing his belief on page 66 of the Chronicle of Oxcutzcab, as discussed by Morley (1920), he commented (1935: 59): "Although this page can not be classed as original material, its value is greater than that of the various books of Chilam Balam." Thompson's selective use of ethnohistory appears to have introduced a source of bias into his commonly accepted 11.16.0.0.0 correlation, for Morley's (1920: 494) reasoning in favor of a 1539 13 Ahau date, followed by Thompson, may have been incorrect. Page 66 of the Chronicle of Oxkutzcab, compiled by the Xiu family of Yucatan between 1608 and 1817, was supposedly written in 1685. Morley (1920: 472, 497) believed this page to have been transcribed from a codex, but it is not at all clear why, as it deals only with postconquest events. More important, its year

bearers (the numbered days that begin the Maya year) are consistently off by a year from those in other native documents (Satterthwaite 1971: 30). It would appear that the early attempts at a Maya-Christian correlation prematurely dismissed data that were difficult to reconcile with a single day-to-day correlation.

The search for a "single" correlation is evident in Closs's (1976) attempt to show that Ponce de León reached the Yucatan in 1513 (Tio 1972) and, thus, that Thompson's 11.16.0.0.0/A.D. 1539 correlation is valid. Closs (1976: 194) believes that the appearance of Ponce de León corresponds with the first mention of the Spaniards in the Books of Chilam Balam (Tizimin) in Tun 13 of Katun 2 Ahau. He interprets the linkage of these two events as proving an 11.16.0.0.0 correlation, ignoring the probability that Spaniards had reached the peninsula at an earlier date. Brinton (1882: 132) argued that Pinzón had reached the peninsula in A.D. 1506 (although this argument has been largely dismissed; see Rubio Mane 1957) and that Aguilar and Guerrero had been shipwrecked on the coast in A.D. 1511; these latter two individuals were widely known to the Protohistoric Maya. This evidence of early Spanish presence suggests that the Tizimin reference may not relate to Ponce de León. Even if Ponce de León had arrived in mid-July, as Closs says (1976: 194), the Maya year was then in the process of changing; the Tun 13 of Katun 2 Ahau that would be assigned to the 1513 Ponce de León landing by the Tizimin chronicle may actually be one tun too late (i.e., it may have occurred in Tun 12). In any case, the positioning of this tun not only agrees with an 11.16.0.0.0 correlation, as argued by Closs, but could coincide with any correlation, especially if no single day-to-day correlation (or Ahau equation) exists.

While much research has been expended on the search for a specific day equivalency between the Maya and European calendric systems, the Maya correlation question can be approached from several other avenues dealing with Maya glyphs and calendrical data. Glyphic data on at least one historic personage suggest the plausibility of an 11.3.0.0.0 correlation. An important potential connection may be made between the hieroglyphic texts at Chichen Itza and the katun records in the Books of Chilam Balam; this linkage is such as to argue for an 11.3.0.0.0 correlation if only a single person is involved. Kelley (1967: 263–64) has provided a convincing argument that a person named Kakupacal may be associated with Chichen Itza sometime after 10.2.0.0.0. This

name reappears in the Books of Chilam Balam and corresponds nicely with the noted abandonment of Chichen Itza in a Katun 1 Ahau (see below). The name Kakupacal also reappears in the seventh tun of Katun 8 Ahau as being the person who conquered Chakanputun. Providing that the date 10.2.0.0.0, ascribed by Kelley (1968: 164) to Kakupacal, is his birth date and that the second reference is to the same person (and not a son), he would have been approximately 87 years old at the time of this conquest under an 11.3.0.0.0 correlation. Any other correlation would mandate that the Kakupacal of the hieroglyphs and the Kakupacal of the Chilam Balams be different individuals.

Other calendrical data also suggest the validity of an 11.3.0.0.0 correlation. Edmonson (1976) argues that a "reform" in the year bearers of the Maya calendar "proves" the validity of the 11.16.0.0.0 correlation. Although there may have been a calendar reform, such a reform would not verify either the 11.16 or the 12.9 correlation, but could possibly verify an 11.3 correlation. Edmonson (1976: 713) concludes that "it was the Tikal calendar that was in use in Yucatan at the beginning of 1539" and notes the existence of a two-day difference between the Tikal and colonial Mayapan calendars. It is suggested here that this difference may be due to a baktun-cycle change of year bearers and that this cyclical change may be seen as coincidentally adding further evidence in favor of an 11.3.0.0.0 correlation based on the mandated number of changes.

> In early Classic times in Tikal (8.12.0.0.0; A.D. 277) the yearbearers were Ik, Manik, Eb, and Caban (Morley 1947: 301). By 9.12.0.0.0 (A.D. 672) in Campeche a new set had been installed: Akbal, Lamat, Ben, and Etz'nab (Thompson 1960: 304). In the colonial calendar of 16th century Mayapan (11.16.0.0.0; A.D. 1539) the yearbearers were Kan, Muluc, Ix, and Cauac. By the 18th century in Valladolid (12.6.0.0.0; A.D. 1756) they had changed again to Imix, Cimi, Chuen, and Cib (Roys n.d.). (Edmonson 1976: 713)

There are only four possible combinations of year bearers, all represented in Edmonson's summary. The days missing from the above list are Chicchan, Oc, Men, and Ahau, but these four days could not have served as year bearers since the first day of the Maya year "was counted by its *last* day, which was *always* Ahau" (Edmonson 1976: 713; my emphasis). Knowing that there were shifts in the sets of year bearers, it is logical to assume, in accord with the nature of the Maya

calendar, that such shifts were cyclical. Based on the known temporal occurrence of the four possible groupings of year bearers, it may be suggested that the year bearer sets changed in a regular cycle every baktun—perhaps at the end of the twelfth katun of each baktun, to judge from the above-mentioned Classic Period evidence. A diagram of this cyclical phenomenon (Table 4.1) shows how the cycle would have carried into the eighteenth century and would have been continuous under an 11.3.0.0.0 correlation. The cyclical nature of the shift from the Tikal to the Campeche to the colonial Mayapan calendar in fact indicates a continuity that is impossible in any correlation other than the 11.3.0.0.0; specifically, the 11.16.0.0.0 introduces too much time into the calendrical record to allow for such a cyclical shift.

While a cyclical shift is in accord with Maya calendrics, a day-to-day equivalency between the Maya and European calendars does not appear to be possible. The Books of Chilam Balam, discussed below, indicate the use of at least two calendars during the Maya Postclassic Period. This would indicate that the search for an Ahau Equation (or single day-to-day correlation between Maya and European calendars; see Satterthwaite 1965), thought to be so important in effecting any correlation, is in fact meaningless, for even though there is calendric continuity from the Classic to Postclassic, the existence of more than one calendar precludes distinguishing which are continuous with their Classic counterparts. The differing versions of the Maya calendar are, therefore, only "accurate" in a general sense and are not precise on a day-to-day level. Because several Postclassic calendars seem to have

Table 4.1

Christian Year	Bactun Beginning In Maya Long Count	Year Bearers	Location Of Use
A.D. 520	8.12.0.0.0	Ik, Manik, Eb, Caban	Tikal
A.D. 920	9.12.0.0.0	Akbal, Lamat, Ben, Etz'nab	Campeche
A.D. 1320	10.12.0.0.0	Kan, Muluc, Ix, Cauac	Colonial Mayapan
A.D. 1720	11.12.0.0.0	Imix, Cimi, Chuen, Cib	Yucatan

Table 4.1: Diagram using a rough equation in which A.D. 1540 equals 11.3.0.0.0, showing the cyclical change of year bearers through Maya history, assuming that year bearers changed in the twelfth katun of each baktun.

existed, because these appear to vary within a limited frame, and because no day-to-day precision can be attributed to them over time, arguments over the applicability of astronomical data to a single Maya calendar are fairly pointless. Even if there was only one Postclassic calendar, the associated astronomical data are much disputed. For instance, the 11.3.0.0.0 day-to-day correlation put forth by Escalona Ramos (1940) used the Ahau equation 678,108, making 11.3.0.0.0 13 Ahau 13 Pax equal March 11, 1543. Thompson (1950: 308) disputed Escalona Ramos's Ahau equation, stating: "Although I have not been averse to an 11.3.0.0.0 correlation, I can see little to recommend this particular version of it." He argued that the Escalona Ramos day count did not correlate well with the Dresden Codex in terms of the heliacal rising of Venus after inferior conjunction and also claimed (1950: 308) that Ramos's "lunar data are about nine days out" if he accepts Landa. Satterthwaite (Satterthwaite and Coe 1968; Christopher Jones, personal communication), however, argued that the Ramos 11.3.0.0.0 correlation was more accurate in terms of moon ages than either the 12.9.0.0.0 or the 11.16.0.0.0 correlation and saw Escalona Ramos's (1940) day count as only off by one-third of a day. Disagreements like these become meaningless if one accepts the calendric disuniformity of the Postclassic Maya.

ARCHAEOLOGY

In a discussion of Maya archaeology and the 11.3.0.0.0 correlation, one invariably turns to the ceramicist for interpretations. Ceramic support for an 11.3.0.0.0 correlation has been noted by Vaillant (1935) and Wauchope (1948). Even Thompson (1950: 306) remarked in his discussion of Chichen Itza that "perhaps this ceramic and architectural frame can be garbed in the 11.3.0.0.0 correlation." In his work dealing with the coast of Campeche, Ruz Lhuillier (1969: 215–52) was also suspicious of the 11.16 correlation and added that the "door is open" for the 11.3 correlation; he did, however, cast doubt on this latter correlation (1969: 252) in view of his reading of the Books of Chilam Balam.

Many arguments in favor of an 11.16.0.0.0 correlation have been based on the limited temporal occurrences of ceramic complexes and horizon markers. Recent archaeological work has led to a re-evaluation of much of this temporal framework. Newly recovered data have in-

creased the temporal and spatial understanding of former horizon markers such as Plumbate and Fine Orange. The spatial relationships between ceramic complexes have also undergone critical rethinking. Ball's (1971a: 30–35) discussion of the overlap among Cehpech, Sotuta, and Hocaba in northern Yucatan more than ever suggests the probable validity of an 11.3 correlation because of the time compression involved.

Thompson (1941b: 109), who designed much of the temporal frame now utilized for interpreting the Maya, invalidated an 11.3.0.0.0 correlation in his reading of the Chilam Balam to indicate that "under such a correlation plumbate would coincide with the Old Empire." Plumbate is one of the most important horizon markers for the early part of the Postclassic Period; Shepard (1948: 1) has noted that "its associations indicate a relatively short period of manufacture, estimated at between 150 and 250 years." Radiocarbon dates on material associated with Plumbate place it in existence at A.D. 1400 in the Highlands (Bilbao date TBN-315-2). In addition, though, Plumbate is known from the "Old Empire" sites of Quirigua and Copan. "At Quirigua it is found on a Terminal Classic level in Group B as well as in the Central Acropolis" (Jones, Ashmore, and Sharer n.d.: 38). Although Thompson did not believe it possible, Plumbate seems to coincide with the end of the Maya Classic Period; the ware apparently extends at least through the middle of the Postclassic Period. Thus, one of the early objections to an 11.3.0.0.0 correlation—that Plumbate would coincide with the end of the Maya Classic Period—has proven untenable.

R. E. Smith (1958, 1971: 20–21) and Brainerd (1941, 1953) have dealt extensively with Fine Orange Ware, whose various types are important horizon markers for the Terminal Classic through Late Postclassic periods. There is some question, however, whether spatial or cultural differences have become temporal differences under the rigidification of the type concept for this particular ware. Brainerd (1953) demonstrated that X-Fine Orange must be contemporaneous with the Mazapan–Chichimec–Monte Alban IIIc–Aztec I horizons as defined by Vaillant (1938). Although the strict associations are not spelled out, it may be more than coincidence that the sites listed by Brainerd (1953: 181) as containing heavy amounts of X-Fine Orange are also noted as generally having a heavy Late Postclassic component. In attempting to sort out this possible temporal inconsistency, Smith (1958: 151) defined five kinds of Fine Orange—X (Silho), Y (Altar), Z (Balancan),

V (Matillas), U (Cunduacan); he ended up, however, calling the Isla de Sacrificios material "problematical," since Brainerd (1953: 151) had noted a large proportion of X-Fine Orange in obviously late contexts. While such an occurrence would not be unexpected under an 11.3.0.0.0 framework, it cannot be accepted under an 11.16.0.0.0 correlation. Smith (1958: 160) noted that "there are a number of fine orange specimens difficult to place within the 5 known fine orange types," indicating that the phenomenon of "intergrading," noted by Sharer and Chase (1976) for Barton Ramie's Paxcaman type, may exist. In his later work, Smith (1971: 19–20) indirectly addressed this problem by specifically noting the complementarity of U and V Fine Orange, especially as witnessed in their mutual exclusivity in forms and decorative techniques. Recent investigation has indicated that X, Y, and Z Fine Orange wares may be generally grouped together (Ball 1977a: 45–46) as may the V and U categories of Fine Orange wares (J. Ball, personal communication). As tradewares, these two groupings may in turn be associated with the Terminal Classic and Late Postclassic periods; what, if any, Fine Orange occurs between these two temporal limits is presently undefined. It may be posited that X, Y, and Z Fine Orange are directly ancestral to V and U Fine Orange, which indirectly lends credence to an 11.3.0.0.0 correlation.

At present, the archaeological understanding of the Postclassic Period in the Northern Lowlands is clouded; the key site in clearing the present mists, especially as they now envelop the ceramic sequence for this area, is Chichen Itza. Work done in the 1930s at Chichen Itza emphasized the architectural complexes (Morris, Charlot, and Morris 1931; Ruppert 1935, 1952; Bolles 1977); the ceramics and artifacts were virtually ignored except for brief treatments by Brainerd (1958), Stromsvik (1937), Smith (1971), and Bolles (1977). While the position of Chichen Itza in Mesoamerican history has long been considered important, especially for the Maya Postclassic, the site has largely been placed in time by means of various interpretations of the Books of Chilam Balam, with little use being made of its extant archaeology. While more data have been published on Mayapan (Pollock et al. 1962; Smith 1971) than on Chichen Itza, Mayapan's inception, like that of Chichen Itza, is not securely placed in time. In part these gaps were due to the then-current argument over dating schemes going on in the Northern Lowlands (Andrews IV 1965a) and in part to preconceptions about the native histories, although ethnohistoric references

were interpreted to place Mayapan's abandonment at about A.D. 1440 (Pollock et al. 1962). The final Cozumel Project Report may be able to suggest answers to some of the temporal and spatial questions in the Yucatecan area; the publications now available (Rathje and Sabloff 1973; Sabloff et al. 1974; Rathje 1975; Sabloff and Freidel 1975; Sabloff and Rathje 1975a, 1975b) do not attempt to answer such questions. Connor (1975: 129), however, notes that there is a scarcity of sherds representing the Modified Florescent on Cozumel, but that a quantity of Pure Florescent material does exist on the island; as Ball (1979a) has posited that each of these bodies of ceramic material represents two spatial spheres, this distribution is particularly interesting at Cozumel and may be viewed as possible supporting evidence for one of Ball's alternative temporal frameworks.

Smith (1971) produced the most definitive statement on Postclassic pottery in the Northern Lowlands. His analysis of the temporal limits of the Mayapan ceramics, specifically at the complex and group levels, however, appears to have been largely based on the commonly accepted interpretations pertaining to the Books of Chilam Balam (which followed an 11.16.0.0.0 correlation) and not strictly on archaeological data. He appears to have overlooked the concept of "sloping ceramic horizons," which would indicate contemporaneous variability among pottery, and its applicability to Postclassic Yucatan; assuming that sloping horizons existed, Smith's earlier two ceramic complexes, termed Cehpech and Hocaba, could easily be encompassed within a single phase (as suggested by Ball 1979a). Tschopik (1950: 217) had already demonstrated for Protohistoric Peru that "class-linked ceramic styles should receive serious consideration in the reconstruction of . . . prehistory," and, later, Morris (1972: 394–95) illustrated the contemporaneous existence of two completely different ceramic complexes in the same area of Peru because of political exigencies. Although this is apparently the same phenomenon that existed in the Yucatan during Postclassic times, individual and/or current interpretations of Yucatecan ethnohistory have been allowed to dominate the archaeology.

Among the first scholars to attempt to remodel the framework of Maya archaeology, Joseph Ball has been especially innovative in conceptualizing temporal and spatial problems that had previously been delicately ignored. Especially noteworthy is his reworked presentation of the northern Yucatec data (Ball 1979a, 1979b), containing interpretations that seriously counter the previous linear arrangement pre-

sented both by himself (1974a) and by Smith (1971). His application of "sloping ceramic horizons" to the problems he encountered in the generally accepted linear arrangement of the archaeology of northern Yucatan (Andrews IV 1965; Smith 1971) succeeded in at least partially solving a tricky chronological problem.

Ball's research also raises a more important question. If one accepts the probability that Cehpech and Sotuta were overlapping, if not coeval, and that Hocaba may also have overlapped with the other complexes, then one is forced to reanalyze the temporal frame in which these complexes are being placed. The postulated overlap would, in effect, shrink the time heretofore allotted for these complexes. The question is, How much of a vacuum is there and what does this shrinkage do to the present conceptualization of the Maya Postclassic Period? An acceptance of such overlap may, I suggest, minimally dictate the consideration of alternative Maya-European correlations. The archaeology, when interpreted in terms of the known ethnohistory, would, I believe, support a version of an 11.3.0.0.0 correlation (see Table 4.2).

Looking at specific examples of temporal frames provided for specific areas, sites, and ceramic groups under an 11.16.0.0.0 as opposed to an 11.3.0.0.0 correlation (Table 4.2), it is clear that an 11.3.0.0.0 correlation fits well with the currently defined archaeological situation. The span provided for Puuc architecture and associated events is roughly the same under either correlation (280 years in 11.6; 240 years in 11.3). The span provided for the florescence of Chichen Itza is considerably shortened, from 340 years under the 11.6 correlation to 260 years (or less) under the 11.3 correlation. That Chichen Itza's florescence can be dated to the Maya Terminal Classic Period (at least to 10.2.0.0.0 in the Long Count) is indicated by hieroglyphic associations with "Toltec" architecture (see Lincoln, this volume) and by events farther south (see Chase and Chase 1982). The culmination of the site would be dated by katun records to about 10.19 under an 11.6 correlation and to circa 10.8 under an 11.3 correlation. While it is clear that Chichen is reoccupied during the Late Postclassic Period, it is also clear that most of the site is clearly Terminal Classic in date; thus, a 10.19 end date is improbably late. Under either correlation, the span provided for the existence of Mayapan is relatively consistent (240 years in 11.6 and 220 years in 11.3). Ceramics make perhaps the best case for an 11.3 correlation. The span provided by an 11.16

Table 4.2

11.16 Correlation									11.3 Correlation								
MAYA	A.D.								MAYA	A.D.							
11.16	1539						·		11.3	1540						·	
11.15	1520						·		11.2	1520						·	
11.14	1500						·		11.1	1501						T	
11.13	1480						·		11.0	1481						U	
11.12	1461						·		10.19	1461			x			L	
11.11	1441			x			·		10.18	1442			M			U	
11.10	1421			x			·		10.17	1422			A			M	
11.9	1401			M		·	T		10.16	1402			Y			·	
11.8	1382			A		·	U		10.15	1382			A			R	
11.7	1362			Y		·	L		10.14	1363			P			E	
11.6	1342			A		·	U		10.13	1343			A		·	D	
11.5	1323			P		·	M		10.12	1323		x	N		P	W	
11.4	1303			A		·	·		10.11	1304		C	x		E	A	
11.3	1283			N		·	R		10.10	1284		H	x		T	R	
11.2	1263			x		P	E		10.9	1264		I	x		O	E	
11.1	1244			x		E	D		10.8	1244	x	C	x	·	·	·	
11.0	1224			x		T	W		10.7	1225	x	H		·	·	·	
10.19	1204		x	x	·	O	A		10.6	1205	x	E		P		·	
10.18	1185		x		·	·	R		10.5	1185	x	N		L			
10.17	1165		x		·	C	E		10.4	1166	x	x		U			
10.16	1145		x		·	R	·		10.3	1146	P	x		M			
10.15	1125		x		·	E	·		10.2	1126	U	x		B			
10.14	1106		C		P	A	·		10.1	1106	U	x		A			
10.13	1086		H		L	M	·		10.0	1087	C	x		T			
10.12	1066		I		U	·	·		9.19	1067	x	x		E			
10.11	1047	x	C		M	·	·		9.18	1047	x						
10.10	1027	x	H		B		·		9.17	1028	x						
10.9	1007	x	E		A		·		9.16	1008	x						
10.8	987	x	N		T		·		9.15	988							
10.7	968	P	x		E		·										
10.6	948	U	x		·		·										
10.5	928	U	x		·												
10.4	909	C	x		·												
10.3	889	x	x		·												
10.2	869	x	x		·												
10.1	849	x			·												
10.0	830	x			·												
9.19	810	x			·												
9.18	790	x															
9.17	771	x															
9.16	751																
9.15	731																

Table 4.2: Archaeological Data and the 11.16 and 11.3 correlations as viewed from the Northern Lowlands. Data from the Southern Lowlands, with a 10.3 "collapse," only have a tangential effect on the correlation question, whereas data from the

continuously occupied Northern Lowlands are crucial for arguing either correlation. This figure assumes substantial overlap between the Cehpech, Sotuta, and Hocaba ceramic complexes in the Northern Lowlands; the spreads for the 11.16 correlation are derived from Ball 1979a (especially Fig. 17); the spreads for an 11.3 correlation are derived from archaeological and other data presented in this paper. A brief definition of the significance of each of the categories in the figure follows:

PUUC. The span provided for Puuc architecture and associated events is roughly the same under either correlation (280 years in 11.16; 240 years in 11.3).

CHICHEN. The span provided for the florescence of Chichen Itza is considerably shortened from 340 years under the 11.16 correlation to 260 years (or less) under the 11.3 correlation. That Chichen can be dated to 10.2 is suggested by hieroglyphic association with "Toltec" architecture (see Lincoln this volume) and by events further south (see Chase and Chase 1982); its culmination is dated by katun records to circa 10.19 under an 11.16 correlation and to circa 10.8 under an 11.3 correlation.

MAYAPAN. The span provided for Mayapan is relatively constant under either correlation (240 years in 11.16; 220 years in 11.3).

PLUMBATE. The span provided by an 11.6 correlation for plumbate is minimally 400 years in length given the extant archaeological data; this span is shortened to no more than 180 years under an 11.3 correlation.

PETO CREAM WARE. Peto Cream Ware exhibits a span of approximately 360 years under an 11.16 correlation; this span is shortened to approximately 120 years under an 11.3 correlation.

TULUM RED WARE. Based on archaeological data, Tulum Red Ware would be in existence for approximately 600 years under an 11.16 correlation; this span would be shortened to approximately 340 years under an 11.3 correlation.

correlation for plumbate, a supposed "horizon marker," is at least 400 years according to the extant archaeological data; this span is shortened to no more than 180 years under an 11.3 correlation. Peto Cream Ware exhibits a span of approximately 360 years under an 11.6 correlation; this span is shortened to approximately 120 years under an 11.3 correlation. Under either correlation, Tulum Red Ware, as currently defined in the literature for the eastern littoral of the Maya region, is enigmatic. Based on archaeological data, Tulum Red Ware would be in existence for approximately 600 years under an 11.6 correlation; this span would be shortened to approximately 340 years under an 11.3 correlation.

The crucial time frame for judging the validity of the 11.3.0.0.0 correlation is that period of time between the Terminal Classic and Late Postclassic periods. It is important to be able to define both how much time elapsed and what continuities exist between these two archaeologically defined limits. However, the exact end of the Classic

Period, the exact beginning of the Postclassic Period, and the mechanisms involved in this transition form one of the murky lagoons of Maya prehistory. Not only has this transition been difficult to document archaeologically given the extant data, terminology has also obscured the nature of this ill-defined time period. It has been called both Terminal Classic (Coe and Broman 1958: 40, 48) and Postclassic at Tikal (W. Coe 1965a, 1965b, 1967), one term remanding the problem solely to the Classic Period while the other places it squarely in the later period. Smith and Gifford (1965: 525) have referred to this period both as the "protopostclassic" and as a "transition" era, reflecting a similar conceptual problem. Others (D. Chase 1982a; Chase and Chase 1982; Miller 1982) now refer to this time as the Terminal Classic–Early Postclassic, thus emphasizing the overlap between the two periods. There is an obvious problem in defining the relationship between the Terminal Classic and the Late Postclassic, for it is difficult to determine if an Early Postclassic and Middle Postclassic exist and whether they lead directly into a Late Postclassic. The whole problem is compounded when one considers the regionalization that characterizes this era.

While what may be termed the Terminal Classic–Early Postclassic problem was first analyzed from the standpoint of northern Yucatan (Andrews V 1979; Ball 1979a, 1979b), archaeological evidence (presented below) can also be mustered from both northern Belize and central Peten in support of an alternative, and temporally compressed, interpretation of the transition from the Terminal Classic to the Late Postclassic periods. By association, additional support is given to an 11.3.0.0.0 correlation.

The Central Peten

The Tayasal-Paxcaman Zone (Figure 4.1) was extensively investigated by a University of Pennsylvania Project in 1971 and 1977 (A. Chase 1979, 1983, 1985). This research, geared toward defining the Postclassic Period in the Central Peten, succeeded in generating many data that go far toward achieving the research goal. The general Postclassic sequence for the region may be presented under either an 11.16 or an 11.3 correlation, as either could fit the data. As now understood, the sequence for Tayasal varies from the rest of the Late Classic material for the Peten (Imix-Eznab at Tikal; Tepeu 2–3 at Uaxactun) during

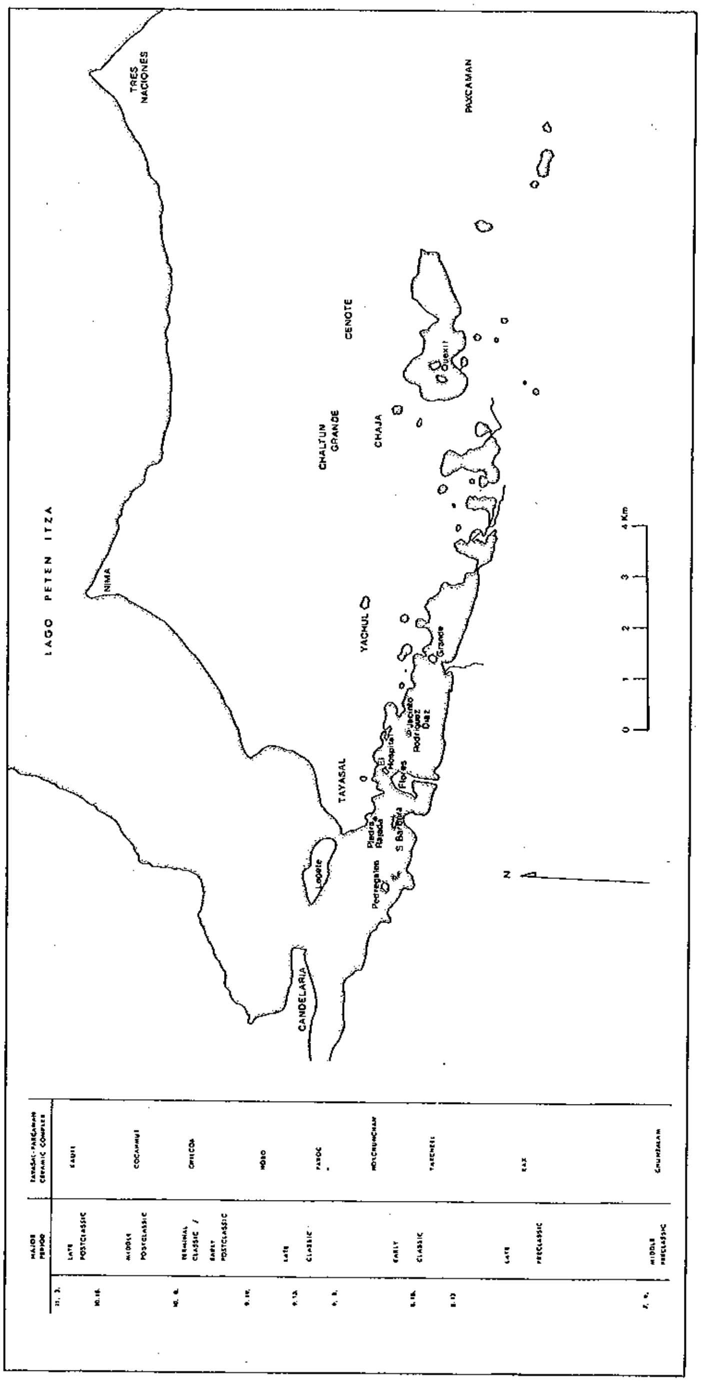

Figure 4.1 The Tayasal-Paxcaman zone and its archaeological sequence.

the Terminal Classic Period (late facet Hobo) with the continuation of the Tepeu Ceramic Sphere in the area in addition to the establishment of regionalized ceramics (Simaron Group). The Fine Orange wares prominent at Seibal (Sabloff 1973, 1975: 189–213) and Altar (Adams 1971: 26–30, 45–52, 1973) do not make a prominent appearance in this region. Settlement patterns appear to follow the traditional Classic pattern, revolving about the site center.

The late facet of Hobo is either immediately followed by Early Postclassic Chilcob or interdigitates with these Postclassic materials. Evidence from Tayasal could show that Augustine materials were in use during the late facet of Hobo and that late-facet Hobo and Chilcob could be compressed into a single phase. The epicentral part of Tayasal definitely includes construction efforts that date to the Chilcob era and seem to be continuous with earlier efforts. A burial pattern ascribable to the Chilcob phase uses bowls of Late Classic form and design, thus possibly also indicating interdigitation (rather than the use of heirlooms). I have argued that there was a general replacement of Hobo ceramic forms with those of Chilcob (A. Chase 1983) and that the Chilcob phase is generally one of innovation and experimentation.

By the end of Chilcob, Augustine ceramics had generally been replaced by Trapeche Pink ceramics, which appeared briefly (A. Chase 1979), and the experimental Tanche Red group. While both the Trapeche and Tanche ceramic groups probably overlapped with Augustine pottery, they also form clear ancestral types for Paxcaman Red pottery, which is predominant in the later history of the central Peten. Trapeche is similar in many respects to slateware (as is much of the fireclouding found on early facet Chilcob Augustine Red). Both the Trapeche and the Tanche ceramic groups contain unusual forms that are not generally replicated in the later Paxcaman material. Tohil Plumbate also appears in the Tayasal sequence by this time; besides the relative abundance of Plumbate at Tayasal as compared to other sites in the Peten, the ware is present in many scattered locales at Tayasal and contrasts with the more limited appearance of Fine Orange. The settlement pattern also changes by the end of Chilcob to a heavy emphasis on the lakeshore, with little exploitation of the higher hinterland for settlement.

The Cocahmut phase represents the later Postclassic history of the central Peten and is characterized by the Paxcaman Red ceramic group. Perhaps the only temporal distinction evident in these redwares is the

diminution in size of tripod plates over time. Some large-scale construction ascribed to this time period was undertaken at Tayasal on the bluff immediately above Lake Peten in the form of a small structure in epicentral Tayasal and one or more large platforms supporting one or more structures in the eastern part of Tayasal. In general, however, most of the construction was confined to smaller house-platforms near the lakeshore. Incision characterizes pottery from the earlier part of the phase. Censerware includes hourglass and human effigy censers, but both these forms are generally rare and do not occur as abundantly as they do to the north.

The latest phase recognizable at Tayasal has been called Kauil, and two facets have been defined for it. The earlier facet sees the continuation of Paxcaman Red, but with the introduction of a red-on-paste mode of decoration and an associated introduction of Topoxte Red. While the Topoxte Red material appears to be associated with a more compact settlement pattern and Yucatec-style "temple assemblage" groups in the eastern part of the Peten (Topoxte—Johnson 1985; Rice and Rice 1985; Macanche—Rice and Rice 1979, 1981; Salpeten—Rice and Rice 1980b), this settlement pattern is not replicated in the Tayasal-Paxcaman Zone.

By the end of the Kauil phase, the former snail-paste Paxcaman Red pottery is replaced by a hard granular paste which is often black in color both in redwares and plainwares (Chilo Unslipped). Two caches recovered on the Tayasal mainland point to the continuance of this practice into the Protohistoric Period. The distribution of Historic Period materials in the region accords with the lakeshore pattern established much earlier, indicating a continuity in settlement pattern from the Postclassic to the Historic Period for the Lake Peten region.

The Tayasal sequence may readily be adapted to an 11.3 correlation; such a framework in fact allows for a better interpretation of the culture history of the Southern Lowlands following the collapse. Under an 11.3 correlation, the Terminal Classic Hobo would interdigitate with the Early Postclassic Chilcob and date from about A.D. 1050 to 1250. With or without the 11.3 correlation, an intrusive group appears to have entered the Lake Peten area at this time (A. Chase 1983, 1985). Although foreign groups also appeared in the Usumacinta drainage on the same temporal level (Adams 1971, 1973; Sabloff 1973), the distribution of Fine Orange wares versus Plumbate ware in the Peten would indicate that these two groups were distinct. The exclusivity of

these ceramics may, in fact, be taken to indicate the existence of differing trade, or possibly warfare, patterns at or following the end of the Classic order. Two major changes may be ascribed to the new group in the central Peten: the introduction of Augustine Red and the introduction of what would appear to be different organizational principles, which eventually led to a settlement pattern different from that found in the Classic Period (A. Chase 1983). Trickle ware and a Chichen-style stela at Flores may indicate that this new group had ties, remote or otherwise, to the eastern lowlands of northern Yucatan (A. Chase 1985).

The use of the 11.3 correlation obviates the need for an Early Postclassic, and the subsequent history of the Peten may be ascribed to Middle Postclassic and later times. The 11.3 correlation eliminates a 260-year period, needed under an 11.16 correlation, during which an almost unchanging ceramic tradition must be postulated to have existed. This Middle Postclassic Period would therefore see the logical development of the Cocahmut phase out of Hobo-Chilcob and the introduction of new elements, probably from Topoxte, into the Lake Peten sequence during the fifteenth century A.D. Considered in this light, the 11.3 correlation provides adequate time for all the known events in the Postclassic Peten.

Northern Belize

Perhaps even more than that of the central Peten, the archaeology of northern Belize (Figure 4.2) fits an 11.3 better than an 11.16 framework. The probability that the Terminal Classic—Early Postclassic led directly into the Late Postclassic was first alluded to by Hammond (1974; see also Heighway et al. 1975: 71), although Hammond (1977: 57–58) later retracted most of his original statement. D. Chase (1982a, 1982b) has attempted to define the Postclassic Period in northern Belize on the basis of her work at Nohmul and Santa Rita Corozal. When her data are combined with those from Lamanai (Pendergast 1981a, 1981b, 1981c, this volume), the complexity of the Postclassic in northern Belize emerges.

The site of Santa Rita Corozal has been identified by D. Chase (1981, 1982a, 1985, this volume) as the regional capital for the province of Chetumal; the archaeological remains from this site may be roughly positioned in time as bracketing the final part of the Postclassic

	MAJOR PERIOD	SANTA RITA	NOHMUL	COLHA
11. 3.				
	LATE	XABALXAB		
	POSTCLASSIC	(LATE FACET)		
10.18.				
	MIDDLE	XABALXAB		
	POSTCLASSIC	(EARLY FACET)		
10.10.				(LATE FACET)
10. 8.	TERMINAL CLASSIC / EARLY POSTCLASSIC	NATALNAT		SAN ANTONIO
10. 3.			IKILIK	(EARLY FACET)
9.19.				MASSON
	LATE CLASSIC	EMELEM	(NOT NAMED)	BOMBA
9.13.				
9. 8.				

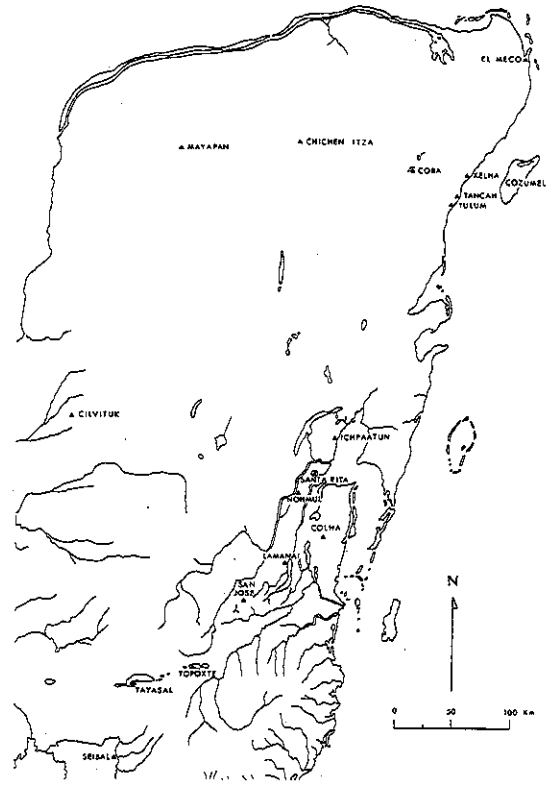

Figure 4.2 Northern Belize and defined Classic and Postclassic sequences from Nohmul, Santa Rita, and Colha.

Period in northern Belize. Pendergast (1975, 1977, 1981a, 1982d) has further defined the terminus of the Belize Protohistoric with his work on the Historic Period church at Lamanai. Both sites show evidence of having used effigy censers, which suggests some relation to the Northern Lowland sequence since these censers were common during the Late Postclassic in northern Yucatan (Smith 1971).

While the end of the Postclassic in northern Belize can be bracketed at Santa Rita Corozal and Lamanai and while the Late Postclassic can be adequately defined, at least for Santa Rita Corozal, the question of how to define the Terminal Classic–Early Postclassic looms even larger in northern Belize than in the central Peten. Pring (1975, 1976a, 1976b: 43–45) has examined the ceramics of various sites in northern Belize and has noted the existence of at least two spatially overlapping ceramic complexes for both Classic and Terminal Classic sites. Subsequent research at Nohmul (A. Chase and D. Chase 1981; D. Chase 1982a, 1982b; D. Chase and A. Chase 1982), Colha (Hester 1979; Hester, Eaton, and Shafer 1980), and possibly Lamanai (Pendergast 1977, 1981a, 1981b, 1981c) has supported Pring's original supposition. The work in the Nohmul area has been even more informative; it may indicate the existence of class-linked ceramics at that site for the Terminal Classic Period, especially when the site core Ikilik ceramic complex (D. Chase 1982b) is compared to the data recovered outside the site center (Robert Fry, personal communication, and observation). Thus, data from northern Belize indicate that recognizable spatial distinctions are clearly at work during the Terminal Classic–Early Postclassic Period.

Perhaps even more than ceramics, other archaeological data suggest the dynamic character of the Terminal Classic Period at both Colha and Nohmul; these data incidentally reaffirm the distinct possibility of confusing time and space in the archaeological record during this transition era. The Colha Classic Period sequence is viewed as coming to a dramatically violent end with the beheading of the local elite (Hester, Eaton, and Shafer 1980: 5–6). The termination of the Nohmul Classic Period sees the intrusion of a nonlocal architectural complex into the site center and the melding of local and nonlocal ceramics into a single complex (Chase and Chase 1982). Paradoxically, the data available from Lamanai suggest a gradual development out of the Classic into the Postclassic Period (Pendergast 1981a: 43).

A consideration of the Terminal Classic–Early Postclassic Period at

three sites in northern Belize therefore reveals three different situations. Lamanai's gradual ceramic and architectural development out of the Classic into the Postclassic has led Pendergast (1981a: 48–49) to suggest that northern Belize ceramics were the forerunners of some northern Yucatec ceramic traditions. The violent end of the Classic order and traditions at Colha is followed by an Early Postclassic redware tradition that is clearly ancestral, if not equivalent, to Paybono Red and the Tulum redware tradition. Nohmul's situation is most similar to that of Seibal, where a foreign elite may have usurped power (Sabloff and Willey 1967; Chase and Chase 1982).

Three different ceramic traditions may, therefore, be tentatively ascribed to northern Belize during the Terminal Classic–Early Postclassic era. While the sequences at Nohmul and Colha do not extend to the Late Postclassic, the Lamanai sequence leads directly into the Late Postclassic. At Santa Rita Corozal (D. Chase 1982a), ceramics of the Tulum Red tradition, common at Colha, are found only infrequently in mound fills; more commonly found in these fills, however, are ceramics relating to the Ikilik ceramic complex at Nohmul (D. Chase 1982b). The Santa Rita Corozal sequence indicates that Late Postclassic pottery followed directly after Ikilik-related ceramics. The northern Belize data, therefore, effectively indicate the realities of the Terminal Classic–Early Postclassic compression mandated by an 11.3.0.0.0 correlation.

ETHNOHISTORY: THE BOOKS OF CHILAM BALAM

According to Brinton (1882: 69), "Chilan *[sic]* Balam . . . is not a proper name, but a title, and in ancient times designated the priest who announced the will of the gods and explained the sacred oracles." Morley (1911: 197) noted that a total of sixteen Books of Chilam Balam were in existence, each one distinguishable from the others by its identification with a specific town; of these books only three—those of Mani, Tizimin, and Chumayel—contain accounts of ancient chronologies. In fact, these three Books of Chilam Balam are the only ones that have been dealt with and translated in any detail in the published literature.[2] Besides ancient chronology, preconquest history, and postconquest history, the Chilam Balams also concern themselves with astrology-prophecy and medicine. These books are most likely His-

panicized Maya transcriptions of the "ancient" glyphic codices of the Maya, of which three are known. The importance of the katun rounds, or *u kahlay katunob*, found in the Books of Mani, Tizimin, and Chumayel is that they can be used in establishing the Maya-European correlation as well as in possibly correlating the katun record with the Classic Maya "Initial Series," or Long Count, record of time. The katun rounds, in fact, appear to be extremely accurate records of Postclassic Maya history.

The first account of the Books of Chilam Balam and the history they contained was presented by Stephens (1843), where Pío Pérez argues that the Maya had 24-year katuns. Valentini's doctoral dissertation, on the "Katunes of Maya History" (1880: 97), disagrees with Pérez, stating that the katuns were arranged in periods of 20 years. Valentini's argument for the 20-year katun was immediately challenged in a series of articles by Brinton (1881, 1882) and Thomas (1881a, 1881b, 1882, 1886). Morley (1920) and Spinden (1924) were the first to show that the 20-year katun argument was correct. Articles by Weitzel (1930, 1931a, 1931b), Teeple (1930), Thompson (1932, 1950), and Jakeman (1947) continued the argument over the validity of the chronologies given in the books.

The *u kahlay katunob* appear to be closely related to ancient glyphic counterparts. Brinton (1882: 70) stated that the Book of Chilam Balam of Mani "was undoubtedly composed not later than 1595, as is proved by internal evidence." Morley (1920: 469) believed that these three books "were *copied* by native Maya, perhaps directly from Maya historical codices, which have since been either lost or destroyed." This supposition may, in fact, be demonstrated by Roys's translation (1967: 155–61), for he noted the existence of extra numbers in one of the chronicles and inserted the word *katun* into the translation as being the understood word; however, he could not ascertain a reason for starting the implied "new count," as the original katuns were in correct order. If *fold* is the understood word in the Roys translation, the inconsistencies he noted disappear and the form of the ancient prophetic book of Chumayel can be reconstructed as shown in Table 4.3. It would appear that the Maya scribe kept the Katun Count in correct order and read horizontally even though his European training had taught him to read page by page (fold by fold); thus, he read "11, 9, 7, 5, . . ." instead of "11, 1, 4, 9, . . ." To resolve this inconsistency, he noted every time he changed a page and thus noted on which page

Table 4.3

FOLD 1	FOLD 2	FOLD 3	FOLD 4	FOLD 5
KATUN 11 AHAU	KATUN 9 AHAU	KATUN 7 AHAU	KATUN 5 AHAU	KATUN 3 AHAU
KATUN 1 AHAU	KATUN 12 AHAU	KATUN 10 AHAU	KATUN 8 AHAU	KATUN 6 AHAU
KATUN 4 AHAU	KATUN 2 AHAU	KATUN 13 AHAU	MISSING	MISSING

Table 4.3: Reconstructed Maya codex from which part of the Book of Chilam Balam of Chumayel was copied (of which the illustration on Chumayel Page 84c might be a garbled copy). It is suggested that the Maya scribe kept the Katun Count in correct order and read horizontally even though his European training had taught him to read page by page (fold by fold); thus, he read "11, 9, 7, 5, . . ." instead of "11, 1, 4, 9, . . ." To resolve this inconsistency, he noted every time he changed a page and thus noted on which page a given katun was recorded, allowing a reconstruction of the codical format of the manuscript he was copying.

a given katun was recorded, allowing a reconstruction of the codical format of the manuscript he was copying (as shown in Table 4.3).

The *u kahlay katunob* of the Book of Chilam Balam of Tizimin resembles closely its counterpart from Mani; Morley (1920: 469) felt that this chronicle "must have been copied from the original . . . probably at the same time." Brinton (1882: 136–37) pointed out several internal problems with the Tizimin *u kahlay katunob*: (1) the insertion of extra katuns, (2) the possible mistranscription of part of the series, and (3) the possible repetition of certain katuns. Both Brinton (1882: 152) and Morley (1920: 473) believed that the Book of Chilam Balam of Chumayel and its three *u kahlay katunob* were translated by Juan Josef Hoil in 1782, as his name and that date occur on page 81 of the manuscript, which was photographed by Gordon (1913) in 1911. Roys (1960: 8), however, noted that "its language suggests the seventeenth century more than the eighteenth, and it contains no reference to a twenty-four year katun."

Much of the current argument over various correlations rests indirectly on data gathered from the Books of Chilam Balam. Besides the information contained directly in the histories, other information related to the books has also been utilized. This has sometimes pre-

sented paradoxical situations in which clearly stated material is rejected out of hand in favor of secondary interpretations concerning the documents. In fact, investigation shows that the current 11.16.0.0.0 correlation is based upon data that have been incorrectly derived from the books. Brinton (1882: 83) stated that "all the native writers agree, and I think, in spite of the contrary statement of Bishop Landa, that we may look upon it as beyond doubt that the last day of the 11th Katun was July 15th, 1541." The writers do *not* agree; only Nakuk Pech (in Brinton 1882) states this. Morley (1920: 468) placed most of his confidence in *The Chronicle of Chacxulubchen*, a translation of which occurs only in Brinton (1882). This chronicle was believed to have been written by Nakuk Pech in 1562; Morley argued that Pech received training in the Maya priesthood *before* the Spanish conquest. Because Nakuk Pech evinced accuracy in the European calendar, Morley (1920: 468) stated that this "gives to any statement he may make about his own calendar the highest degree of reliability"; Morley also noted, however, that "the original Pech manuscript has disappeared" and that a "duplicate chronicle by Ah Naum Pech . . . which . . . is practically a word-for-word transcription of the Nakuk Pech chronicle, with only the name of the author changed" was used. However, Nakuk Pech is credited with noting that a katun was 24 years in length, a concept Roys (1960: 7) has pointed out as originating sometime in the seventeenth century. Doubt may therefore be cast on the supposed early date of this chronicle. However, many of the basic tenets of the current 11.16.0.0.0 correlation rest directly on the Nakuk Pech material.

An examination of the Books of Chilam Balam in fact reveals that two different calendrical correlations may be obtained directly from them. Landa (Tozzer 1941), discredited above by Brinton, stated that 1541 was the first year of Katun 11 Ahau. This agrees with internal data in some of the Books of Chilam Balam and allows the establishment of one possible calendar, here called the T-M-CI (Tizimin–Mani–Chumayel I) correlation (first year of 11 Ahau began in July 1540 and ended in July 1541). This correlation may or may not concur with the Oxcutzcab correlation. A second calendar may be established from data in the Chumayel III or "Itza" chronicle based on internal dating consistencies (first year of 11 Ahau began in July 1535 and ended in July 1536). These two Yucatec calendars are graphically illustrated in Table 4.4.

Table 4.4

YEAR	EVENT	ITZA (CH. III) CALENDAR	TIZIMIN-MANI-CH. I CALENDAR
1535			
1536	Death of Alpuhla	1st Year of 11 Ahau	14th Year of 13 Ahau
1540			
1541	Spaniards Arrive	7th Year of 11 Ahau	1st Year of 11 Ahau
1542			
1562	Toral Dies	6th Year of 9 Ahau	9 Ahau
1579	Landa Dies	7 Ahau	7 Ahau

Table 4.4: Chronological data from the Books of Chilam Balam indicating the existence of two different "Maya" calendars prior to the colonization of the Yucatan Peninsula by Spaniards.

The establishment of these two calendars probably accounts for much of the confusion over the attempts to set the European dates found in the chronicles into a single correlation, for it is clear that different calendric systems were being used at the same time in northern Yucatan. It is proposed here that the T-M-CI calendar had the change from Katun 13 Ahau to Katun 11 Ahau occurring on July 15–16, 1540; Landa (Tozzer 1941: 168) appears to be following this calendar. The Itza calendar changed from a Katun 13 Ahau to a Katun 11 Ahau on July 15–16, 1535, for, as Brinton (1881: 721) pointed out,

> The Maya year did not begin January 1 as does ours, *but July 16*, at or about the time of the transit of the sun by the zenith in the latitude of Merida. Hence the Maya chronicler identified the 6th year from the end of the Ahau with 1536, because the greater part and the latter part of that Ahau was actually in A.D. 1536. In point of fact, Chief Ahpula, whoever he was, died Sept. 11, 1535, O.S.

In summary, the Books of Chilam Balam can be used to demonstrate the probable existence of at least two calendars from northern Yucatan. This effectively dismisses any search for a "single" correlation. If no single day-to-day correlation exists between the European and Maya calendars, then many of the astronomical arguments and attendant baggage that accompany the 11.16.0.0.0 correlation are not relevant to effecting a correlation. Therefore the archaeological and ethnohis-

torical data must answer the correlation question. These archaeological data may be utilized to indicate that some version of an 11.3.0.0.0 correlation is the correct one; the ethnohistoric data contained in the katun records of the Chilam Balam also indicate the potential validity of an 11.3.0.0.0 correlation.

The 11.3 Correlation, The Books, and Lowland Culture History

Having briefly reviewed both the Books of Chilam Balam and some of the early arguments over their chronology, we can now offer a synthesis of the history recorded in the various documents according to an 11.3 correlation. Presented in Tables 4.5–4.9, this arrangement differs from that given by Brinton (1882: 87–88) and Morley (1920: 503), upon which the currently accepted paradigm is based. Just as the codices were read in a different order from that dictated by a Western perspective, so were the Books of Chilam Balam. They do *not* consist of a linear arrangement of katuns, but rather deal with the specific katun histories for certain places, people, or events—histories which were not meant to be placed in a strictly linear, diachronic arrangement as Brinton (1882) and Morley (1920) did. Accordingly, the interpretation for the katun history presented in Tables 4.5–4.9 follows that presented in the various books, but assumes a basically cyclical-linkage reading of events linked to specific places and covering a period of about two katun rounds. The dating of the events described is based on internal consistencies in the documents.

> It appears to me, in conclusion, that the chronicles from The Books of Chilan *[sic]* Balam have much to recommend them as reliable sources for the reconstruction of Maya history. When these records fail to agree, which is the exception rather than the rule, it has been shown that in some cases, at least, disagreement may have arisen from errors in copying or translation, for which the original texts themselves cannot be held responsible. Again it has been shown that in age, authorship, subject matter, and general agreement, these native chronicles are such that they constitute their own best guarantee of truthfulness. In view of these facts and one other, that they are almost the only native sources left to us for the recovery of the main events of Maya history, we are justified in accepting them for what they purport to be: The Maya Chronicles. (Morley 1911: 204–5)

In order to understand the histories recorded in the Books of Chilam Balam, it is necessary to understand who or what the Itza were, es-

Table 4.5 The Book of Chilam Balam of Mani and its eight narrated events adapted to an 11.3.0.0.0 correlation.

LONG COUNT	AHAU	BOOK OF CHILAM BALAM OF MANI			
		(1)	(2)	(3)	(4)
9.12.0.0.0	10	Nonoual left by Tutulxiu			
9.13	8				
9.14	6			Ziyan-caan or Bakhalal discovered and ruled; Chichen discovered	Chanputun seized and ruled by Itza
9.15.0.0.0	4				
9.16	2		Ahmekat Tutulxiu arrives at Chacnouitan		
9.17	13	Holon Chantepeuh arrives in Chacnouitan			
9.18	11			Chichen Itza ruled	
9.19	9				
10.0.0.0.0	7				
10.1	5				
10.2	3				
10.3	1			Chichen abandoned for Chanputun where Itza were	
10.4	12				
10.5.0.0.0	10				
10.6	8				Chanputun abandoned
10.7	6				
10.8	4	(5)	(6)		Chanputun lost; houses established a second time
10.9	2	Ahcuitok Tutulxiu founds Uxmal; Uxmal in league with Chichen and Mayapan			
10.10.0.0.0	13				
10.11	11				
10.12	9				
10.13	7				
10.14	5		(8 Ahau) Chac-Xib-Chac driven from Chichen; Hunac Ceel?		
10.15.0.0.0	3				
10.16	1				
10.17	12				
10.18	10			(7)	(8)
10.19	8				Mayapan depopulated
11.0.0.0.0	6				
11.1	4				
11.2	2				Spaniards first passed
11.3	13			?	Ahpula died
11.4	11			Itza invade land; Mayapan depopulated	pestilence
11.5.0.0.0	9				

Table 4.6: The Book of Chilam Balam of Tizimin and its nine written events adapted to an 11.3.0.0.0 correlation.

LONG COUNT	AHAU	BOOK OF CHILAM BALAM OF TIZIMIN
		(1)* (2) (3) (4)
9.12.0.0.0	10	
9.13	8	Chichen learned about;
9.14	6	Ziyan-caan discovered; Chakanputun seized and
9.15.0.0.0	4	Mekat Tutulxiu ruled by Itza
9.16	2	arrives at
9.17	13	Chacnabiton Pop counted in order
9.18	11	
9.19	9	
10.0.0.0.0	7	
10.1	5	
10.2	3	
10.3	1	Chichen is destroyed;
10.4	12	"they" went to live
10.5.0.0.0	10	in Chakanputun among
10.6	8	the Itza
10.7	6	Chakanputun abandoned
10.8	4	by Itza
10.9	2	(5) (8) (6) (7) Houses established a
10.10.0.0.0	13	Ahzuitok Tutulxiu second time
10.11	11	founds Uxmal
10.12	9	
10.13	7	
10.14	5	
10.15.0.0.0	3	
10.16	1	
10.17	12	
10.18	10	(9)
10.19	8	Chichen depopulated Mayapan fighting Mayapan depopulated
11.0.0.0.0	6	due to Hunac Ceel pestilence
11.1	4	Ruler seized land on
11.2	2	account of Hunac foreigners pass smallpox
11.3	13	Ceel by Yucatan Ahpula's death
11.4	11	foreigners arrive
11.5.0.0.0	9	

Table 4.7 Books of Chilam Balam of Chumayel: I and II—adapted to an 11.3.0.0.0 correlation.

LONG COUNT	AHAU	THE BOOKS OF CHILAM BALAM OF CHUMAYEL: I AND II		
		I		*II*
9.13.0.0.0	8	(1)	(2)	
9.14	6	Chichen discovered		
9.15.0.0.0	4		Chakanputun seized	Birth of Pauahs; descent
9.16	2		by Itza	of rulers; Chichen found;
9.17	13	Mat counted in		the four divisions
9.18	11	order		
9.19	9			
10.0.0.0.0	7			
10.1	5			
10.2	3			
10.3	1			
10.4	12			
10.5.0.0.0	10			
10.6	8	Chichen abandoned	Chakanputun abandoned	"Remainder of Itza" arrive
10.7	6	for Chakanputun	by Itza	and rule Chakanputun
10.8	4	(3)		Little Descent of the four
10.9	2			divisions
10.10.0.0.0	13			Mayapan founded
10.11	11			
10.12	9			
10.13	7			
10.14	5			Hunac Ceel?
10.15.0.0.0	3			
10.16	1			
10.17	12			
10.18	10			
10.19	8	Ichpaa Mayapan	Itza abandon homes again	town abandoned
11.0.0.0.0	6	fighting	due to Hunac Ceel	ceased to be called Maya
11.1	4	pestilence	Ichpaa Mayapan seized by	souls cry out
11.2	2	smallpox	Itza due to Hunac Ceel	
11.3	13	Napot Xiu died		
11.4	11	arrival of men		Maya men called Christians
11.5.0.0.0	9	Christianity		
		began		

Table 4.8 The Book of Chilam Balam of Chumayel: III—adapted to an 11.3.0.0.0 correlation.

THE BOOK OF CHILAM BALAM OF CHUMAYEL: III (THE "ITZA" KATUNS)		
LONG COUNT	AHAU	
9.11.0.0.0	12	
9.12	10	
9.13	8	
9.14	6	people of Conil dispersed
9.15.0.0.0	4	
9.16	2	
9.17	13	
9.18	11	
9.19	9	
10.0.0.0.0	7	
10.1	5	"Foreigners Without Skirts" arrived, but did not depopulate the land
10.2	3	
10.3	1	Tancah Mayapan was depopulated
10.4	12	
10.5.0.0.0	10	
10.6	8	"Remainder of the Itza" founded "their" town and establish Zaclactun
10.7	6	Mayapan; Chakanputun perished due to Kakupacal and Tec Uilu
10.8	4	
10.9	2	
10.10.0.0.0	13	
10.11	11	
10.12	9	
10.13	7	
10.14	5	town of the ruler of Izamal destroyed by Hunac Ceel
10.15.0.0.0	3	
10.16	1	"Remainder of the Itza" driven out of Chichen and Chichen is depopulated
10.17	12	stone taken at Otzmal
10.18	10	stone taken at Zizal
10.19	8	stone taken at Kancaba
11.0.0.0.0	6	stone taken at Hunacthi
11.1	4	stone taken at Atikuh; pestilence occurred
11.2	2	stone taken at Chacalna
11.3	13	stone taken at Euan
11.4	11	stone taken at Colox-peten; Napot Xiu dies; Spaniards first arrive
11.5.0.0.0	9	no stone taken; Toral arrives

Table 4.9 Synopsis of Yucatecan history contained in the Books of Chilam Balam adapted to an 11.3.0.0.0 correlation.

LONG COUNT	AHAU						
9.10.0.0.0	1						
9.11	12						
9.12	10	Chacnouitan	Chichen Itza	Chakanputun	Ziyan-caan / Bakhalal		
9.13	8	Holon Chantepeuh	Chichen discovered	seized by Itza			
9.14	6	leaves		and ruled	discovered and ruled		
9.15.0.0.0	4				GREAT DESCENT		
9.16	2	Ahmekat Tutulxiu					
9.17	13	Holon Chantepeuh			POP COUNTED IN ORDER		
9.18	11	arrive	Chichen ruled				
9.19	9						
10.0.0.0.0	7						
10.1	5	Chacnouitan left					
10.2	3						
10.3	1		Chichen abandoned		(CLASSIC MAYA COLLAPSE)		
10.4	12		by Xiu for Itza				
10.5.0.0.0	10		Chakanputun				
10.6	8		Chichen occupied	abandoned by			
10.7	6		by Ytza	Itza			
10.8	4			seized by Ytza	Uxmal	LITTLE DESCENT	
10.9	2			and ruled	founded by	Mayapan	
10.10.0.0.0	13				Xiu	founded	
10.11	11		Tribute to Chichen			(by Itza?)	LEAGUE OF MAYAPAN
10.12	9						
10.13	7						
10.14	5		Hunac Ceel episode				
10.15.0.0.0	3						
10.16	1		Ytza driven out of				
10.17	12		Chichen				
10.18	10				end ?		
10.9	8		Conquered by Mayapan			destroyed ?	
11.0.0.0.0	6						
11.1	4		Land seized				
11.2	2						
11.3.0.0.0	13	SPANIARDS ARRIVE					
11.4	11						
11.5.0.0.0	9						

pecially in view of their importance to Postclassic Maya history and, indirectly, to the correlation question. Jakeman (1945, 1946) and Thompson (1946) were the first to debate this sore point in Maya archaeology. It is believed that these Itza migrated from the Yucatan to the Peten of Guatemala around A.D. 1450 (see A. Chase 1976, 1982 for amplification). The Books of Chilam Balam, however, use the term *Itza* to refer only to "foreigners" to northern Yucatan, as Jakeman (1945, 1946) points out. The term *Itza* may have been either applied to or adopted by *any* foreign group who arrived in the Yucatan Peninsula. The Chilam Balam of Chumayel (Roys 1967; Brinton 1882), in fact, makes a distinction between the "native" historical katuns and those of the Itza, which are recorded in a separate chronicle. As the

Books of Chilam Balam appear to concern themselves only with the Terminal Classic and Postclassic periods, it should be possible to correlate the histories in these documents with extant archaeological data from the Northern Lowlands. This interpretation counters Scholes and Roys's (1968: 74) assertion that the "Yucatecan historical tradition . . . probably does not go back to the advent of certain foreign invaders, who were the bearers of a Mexican culture and who established themselves in the country as a new ruling caste."

Four groups of people are described in the books: the Tutulxiu, the Maya, the Itza, and the "Remainder of the Itza." The preface to Chumayel III equates the Maya with the Itza. A people called Ah Conil, also mentioned as being the original inhabitants of the land, may represent yet another group of "Maya." The Books of Chilam Balam refer to two intrusions into the "Maya" area, referring to them as the Great and Little descents. As interpreted here the Great Descent occurred around 9.14.0.0.0 (ca A.D. 970) and affected the lower Yucatecan area while the Little Descent occurred around 10.7.0.0.0 (ca. A.D. 1230) and affected the northern Yucatecan area.

The Great Descent involved only four areas: Chacnouitan, Chichen Itza, Chakanputun, and Bakhalal or Ziyan-caan. Chacnouitan is not readily identifiable, although it may have been far to the south as Valentini (1880) placed it. It is proposed here that Chacnouitan may have been associated with the archaeological site of Seibal, since the dating for an intrusion at the site as noted in the monuments (Graham 1973) agrees with the statements in the chronicles under an 11.3 framework. Additionally, Seibal is noted as having "Puuc"-type architecture (Willey and Smith 1967) which is consistent with the Tutulxiu being present. One division of the Tutulxiu remain at Chacnouitan until about 10.1.0.0.0, when other foreigners are reported as arriving; this again accords well with the archaeological interpretations of data from Seibal (Sabloff 1973) and Altar de Sacrificios (Adams 1971).

Chichen Itza and Bakhalal are identifiable. The Tutulxiu were the rulers of Ziyan-caan and/or Bakhalal by 9.14.0.0.0 and of Chichen by 9.16.0.0.0. Chakanputun may or may not have been located in the area of present-day Champoton. Chakanputun was seized from the Ah Conil by the "Itza," who may have been one of the four Tutulxiu divisions, at approximately 9.13.0.0.0. Chichen ("Tancah Mayapan") is recorded as having been destroyed around 10.3.0.0.0, possibly by the "Ytza," and then abandoned by the Tutulxiu, who went to Chak-

anputun to live among the Itza. In 10.6.0.0.0 a group often confused with the Itza and referred to by Roys as the "remainder of the Itza," here called "Ytza" (as opposed to "Itza"), drove both the Tutulxiu and the Itza out of Chakanputun under the leadership of Kakupacal and Tec-Uilu. This may be the event depicted in the murals of the Temple of the Warriors at Chichen Itza (Miller 1979), for, as Willey (1979: 215) points out, these paintings "show what appear to be Putun warriors attacking other Putun peoples." The Ytza were associated with Tan-Xuluc-Mul and Ppoole and were also noted as having established "Zaclatun Mayapan"; until 10.16.0.0.0 the Ytza were associated with Chichen. It may be that the Ytza were equivalent to the group often referred to as "Toltec"; the abandonment of Chichen Itza by the Tutulxiu in the early part of Katun 8 Ahau corresponds well to the historical material provided by Vaillant (1938), in which a Toltec invasion led by Quetzalcoatl was presumed to have conquered Chichen Itza in A.D. 1191 (Spinden 1924: 55).

The Little Descent took place in 10.7.0.0.0, when the "houses" were established a second time. Ahcuitok Tutulxiu was recorded as "founding" or "establishing his lineage at" Uxmal in 10.8.0.0.0, while "Ichpaa Mayapan" was "founded" in 10.9.0.0.0, probably by the Itza. The relationships evident between Cehpech and Hocaba ceramic spheres may mirror the close ties between the Tutulxiu and Itza in Chakanputun. The Sotuta ceramic sphere may be viewed as being that of the Ytza. The League of Mayapan was also established with the Little Descent.

Circa 10.13.0.0.0 Hunac Ceel, the ruler of Mayapan, destroyed the town of the ruler of Izamal, Kinich Kakmoo, as well as Pophol Chan. The Mani manuscript's account of this episode, even if confused, is correct in terms of its chronology of this event. It is possible that the Tizimin and Chumayel manuscripts were copied in part from the garbled Mani manuscript. The Itza chronicles, however, indicated that the Ytza under Chac-Xib-Chac were driven out of Chichen in 10.6.0.0.0. The Tutulxiu rule of Uxmal ended at approximately 10.18.0.0.0. Ichpaa Mayapan was destroyed in or around 10.19.0.0.0, possibly in retaliation for the treatment of Ulmil and his "Itza" men on the east coast of Yucatan. Although the Mani chronicle reported the destruction of Mayapan by the "Itza," Brinton (1882: 131) argued that "the Itzas seized the territory in and around Mayapan, but they were not the ones who destroyed the city. This was the work of Ahuit-

zilzul, foreign mountaineers." It is interesting to note that the Itza chronicle contains no reference to the destruction of Mayapan.

Roys (1962: 80–81) associates the fall of Mayapan with the Aztec ruler Montezuma, thus linking Mayapan with the Valley of Mexico lineage chronology worked out by Vaillant (1938). Montezuma I's reign, given as A.D. 1440–69, correlates well with the Maya Katun 8 Ahau in which Mayapan was depopulated. It also explains the heavy presence of Nahua names at Mayapan indicated in the Mani chronicle, for an unpopular alliance with the Mexicans was supposed to have been made at Mayapan. According to Brinton (1882: 129), Landa and Herrera noted that Aztec warriors were in fact invited to Mayapan. It may be that the Postclassic sites of the east coast of Yucatan, such as Tulum and Xcaret, whose general architectural plan differs from that of Mayapan and Chichen Itza, represent areas ceded to the Aztecs by the League of Mayapan. This is also the probable location of the ruler of Ulmil Ichpaa and his "Itza" men. In fact, the downfall of Mayapan may be directly linked to its attempt to redominate this area in the Hunac Ceel episode and the retaliation from central Mexico in the form of the Ahuitzilzul.

Much of the above picture would be clarified by better understanding of the archaeological record in northern Yucatan. While it is possible that certain temporally distant events have been linked in the Books of Chilam Balam, the general outline presented above is quite plausible within an 11.3.0.0.0 framework. The ancestral identity of the Itza, however, remains an open question.

The Books of Chilam Balam and Postclassic Maya Prehistory

The Books of Chilam Balam provide overlapping histories of several centers. While they are useful in supporting the 11.3 correlation, they may also be interpreted (following Table 4.5–4.9), especially when combined with the extant archaeological data, as presenting a series of local histories dealing with areas important in the regulation of trans-Yucatecan trade routes. The Great Descent may well have been concerned with establishing control over a trade route through the Southern Lowlands, thus indirectly or directly resulting in the Classic Maya Collapse. The Tutulxiu were reported to have first established themselves at Chacnouitan and Bakhalal/Ziyan-caan, while the Itza

had dominion over Chakanputun. Relationships between the Itza and Tutulxiu appear always to have been quite amiable and may have been based on economic as well as political alliance. The location of the Itza and Tutulxiu in Chakanputun and Bakhalal/Ziyan-caan indicate the probable existence of a band of control across the basal portion of the Yucatan Peninsula. If Chacnouitan was Seibal, its position in the Peten would have been ideal for gaining control of an Usumacinta trade system.

The Little Descent appears to have been preceded by an attempted usurpation of the southern routes by the Ytza. This attempt may have resulted in a reorganization of the newly adopted Southern Lowland trade routes and a possible relocation of them through the northern portion of the peninsula. Both land and sea routes may have been involved. Terminal Classic–Early Postclassic Nohmul may be viewed as a southern outpost of the Ytza resulting from an early attempt at consolidating their ascendancy on the basal riverine trade route. While the Ytza, by means of an outpost at Nohmul, may have gained control of the Hondo drainage, they were apparently stymied on the New River drainage as attested by the continuous sequence at Lamanai. The Bakhalal area is not mentioned in the chronicles after the Great Descent. Ytza control of Chichen Itza and Chakanputun probably circumvented the Southern Lowlands by shifting the routes northward. Such a northern route may have formed a major economic basis for the League of Mayapan and would have been operative until approximately 10.15.0.0.0, when Chichen Itza was overcome by Mayapan.

With the destruction (abandonment) of Chichen Itza, Mayapan acceded to its brief period of total dominance in Yucatan. It may be hypothesized that Mayapan was in league with the peoples of Tabasco and/or central Mexico, possibly the Aztec, and that Nahua-related peoples were responsible, at least in part, for the east coast architecture. It is possible that there was at least partial Mexican control of the trans-Yucatecan trade routes and salt resources. Some group of central-Mexican-related peoples may have previously moved to fill the east coast void caused by the failure of the Ytza to dislodge an indigenous northern Belize tradition and a prospering central Peten tradition. Colha would date the existence or founding of the east coast Tulum tradition to the "Early Postclassic," indirectly indicating, based on the extant archaeological data and shared ceramics, that Tulum may have also been established by this period.

Time Depth or Vacuum

It was evidently not until the later part of the "Late Postclassic" that northern Belize was enveloped by the Yucatecan cocoon. Santa Rita, Chetumal's regional capital, may at this time either have supplanted or rivaled Lamanai as a local capital and continued into the Historic era. In the Peten, Topoxte may represent the post-Mayapan legendary Itza outpost, for the site has late-Yucatec-related ceramics, architecture, and layout.

CONCLUSION

Revised conceptions concerning the dating of and relationships among sites, archaeological complexes, and horizon markers indicate that Lowland Maya Postclassic history can be successfully subsumed by an 11.3.0.0.0 correlation. When spatially overlapping events are not forced into a sequential order, both the archaeology and the ethnohistory permit the use of such a framework. Still troublesome, however, to an 11.3.0.0.0 correlation are the extant radiocarbon dates from the Maya area. However, general methodological problems in the dating technique and the recent recalibrations indicate that future modifications may not preclude such a framework. In light of the general disuniformity of the dates, perhaps less emphasis should be placed on their utility in solving the correlation problem.

The establishment of two protohistoric calendric systems is most significant for its implications for the Maya-Christian correlation. The existence of two calendars in which the same katun change differed by five years implies that no day-to-day correlation exists. Other Postclassic calendars that changed katuns at different times probably also existed; which one, if any, of these calendars was directly descended from the Classic Maya Long Count is impossible to determine. The search for a single Ahau equation is, therefore, meaningless for the Postclassic Period. However, the cyclical, ordered, and continuous shift in year bearers, seemingly every baktun, strongly supports an 11.3.0.0.0 correlation.

In summary, an 11.3.0.0.0 correlation is not only applicable to the prehistory of the Southern Maya Lowlands, but may be interpreted as uniting extant archaeology and ethnohistory into a conceptual whole. The problems involved in radiocarbon dating and calendrical considerations do not preclude such a correlation, and the archaeology and ethnohistory may be viewed as being more supportive of such a frame-

work than of the one presently in use. The problems of interrelating the various areal sequences of the Maya area are now being overcome through increased consideration of spatial phenomena and the application of sloping ceramic horizons and interaction spheres. Temporal concepts as well as spatial concepts, however, need to be seriously reconsidered for the region. I venture to prophesy that such review and future archaeological studies will both vindicate some version of an 11.3.0.0.0 correlation and establish it as the dominant paradigm for the Southern Maya Lowlands.

NOTES

1. An earlier version of this paper was first written in 1976 and circulated in 1977; it has been substantially reworked since then. Many of the substantial changes wrought in earlier versions were due to the editorial comments of Christopher Jones, Robert J. Sharer, Jane Kepp, and the editors of this volume. I owe much inspiration over the years to many hours of productive discussions with Joseph Ball and Diane Z. Chase. Diane Z. Chase has also graciously read and helped revise this manuscript innumerable times. Any errors of interpretation, however, are solely the responsibility of the author.

2. E. W. Andrews V (personal communication) has noted that Edmonson would see only twelve books of Chilam Balam, that parts of Kaua and Tusik were translated by Barrera, and that M. Hires has translated the Chilam Balam of Chan Kan.