

COMALCALCO A CASE FOR PRE-COLUMBIAN TRANSOCEANIC CONTACT

by

Neil Steede and David J. Eccott.

This paper is dedicated to the memory of Thibault
David J. Eccott. 24th October, 2000

Summary

The remains of Comalcalco in Tabasco, Mexico, display anomalous features relating to architecture and construction that are not found elsewhere in the Maya region. These features appear without any apparent developmental stages. Fired clay brick, instead of the usual limestone, was also used in one construction phase. Fired clay brick technology, found only at a few sites in the vicinity of Comalcalco and at a couple of minor sites in neighbouring Chiapas, was otherwise unknown in pre-Columbian America. Various designs and motifs were incised upon the bricks, a percentage of which correspond to motifs found on fired clay bricks from the Roman World. This, along with other factors that have parallels in contemporary Europe, has led to speculation that these were the result of intrusion from a Mediterranean source. However, detection of possible alphabetic characters on some of the bricks reveals that the donor culture was more likely to have been Indo/Asiatic, although seemingly containing elements of contemporary European culture.

COMALCALCO

Location and historical excavation:

THE ANCIENT Maya inhabited the south-eastern extremity of present day Mexico, including the whole of the Yucatan peninsula, Guatemala, Belize, and the western parts of Honduras and El Salvador. Maya civilization is divided into the following periods: Archaic (ca. 6000-2000 BC), Preclassic (ca. 2000 BC to AD 250), Classic (AD 250-900), and Postclassic (ca. AD 900-1500).

Comalcalco lies on the northern perimeter on the western-most extremity of the Maya area in the broad coastal plain of the state of Tabasco, Mexico. It is situated about forty-five kilometres northwest of the state capital Villahermosa in typically lowland terrain containing many swamps, marshes and lakes. Although it is fifteen kilometres south of Mexico's Gulf Coast, it lies on the banks of the now extinct Rio Seco, once a tributary of the Rio Grijalva which, together with the Rio Usumacinta, form the major river networks draining the Chiapas highlands and flowing

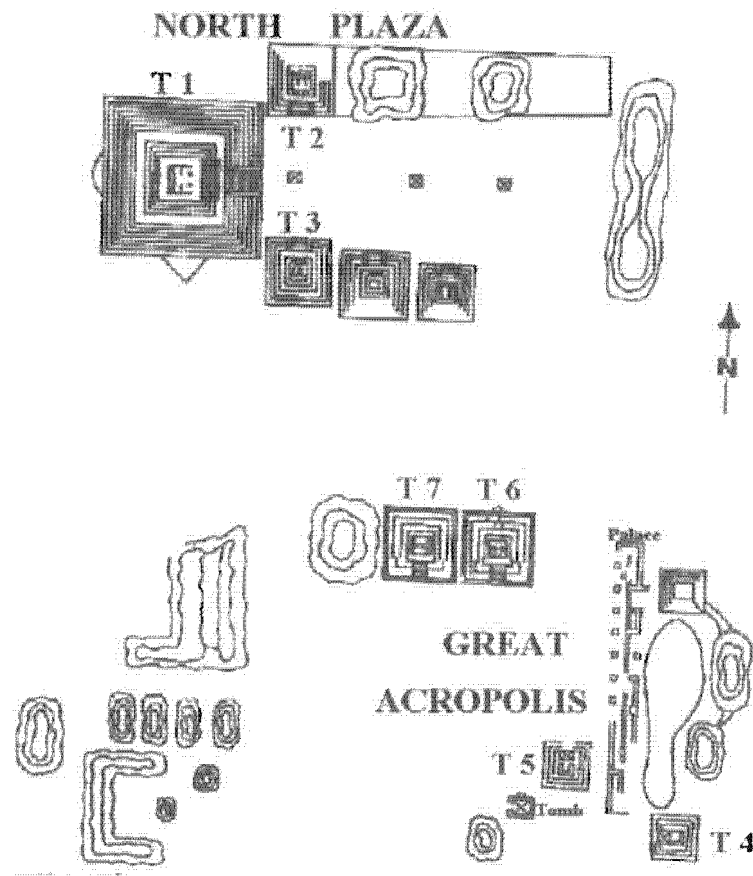


Figure 1: Comalcalco site map



Figure 2: Temple 1 (Photo: D. Eccott)



Figure 3 : Palace interior showing fired clay bricks in situ (Photo : D. Eccott)

north into the Gulf of Mexico. Therefore, in its heyday, Comalcalco would have had direct access to the sea. Comalcalco's abandonment was gradual and probably began around 1350 AD.

PRELIMINARY excavations, clearing projects, and mapping surveys were made by Desire Charnay in 1888 and Blom & LaFarge in 1925. More intensive excavation work at Comalcalco has been undertaken by Gordon Ekholm (1956-7), Piña Chan (late 1950s), P. Salazar (1978-79), Neil Steede (1980-83), Mario Perez Campa (1992-93), and Ricardo Armijo Torres (1997 to present). The only extensive archaeological study on Comalcalco to have been published resulted from an architectural and mapping survey of the site conducted in 1966 by a team from Oregon University led by George F. Andrews. His report was first published in 1967. In 1989 it was revised and updated into a 160-page document.¹ Even results obtained from an ambitious excavation and consolidation project at Comalcalco, undertaken by Mexico's INAH with Ponciano Sálazar as Project Director between 1972-1981, remain largely unavailable.

In 1984 a *Preliminary Catalogue of the Comalcalco Bricks* was published, and in 1998 three papers on Comalcalco by members of America's Early Sites Research Society (ESRS) were accepted for presentation at the Fourth Congreso Internacional de Mayistas in Antigua, Guatemala. One paper was delivered by Neil Steede, and the remaining two were delivered by Larry Athy and Frank Reynolds respectively.

Today, the exposed remains of Comalcalco consist of two distinctive groups: the North Plaza Cluster, and the Great Acropolis (Fig. 1). A third complex known as the East Acropolis, which lies east of the North Plaza and seems to be a small-scale version of the Great Acropolis, has not been excavated. Although the entire site extends some 700 to

1000 feet in all directions, the North Plaza and the Great Acropolis comprise the original ceremonial centre.

The North Plaza is a large, open space with three mounds in the centre. Its longest axis runs east/west, and it is bounded on the north, south, and east sides by long platform mounds which supported temples, some of which have been partially restored. The western extremity is bounded by Temple 1 (Fig. 2), the largest pyramid at the site.

Fired clay bricks:

COMALCALCO is unique in many ways, but by far the most interesting and unusual aspect is the use of fired clay bricks (Fig. 3) instead of limestone which was the principal Maya construction material.

Of course, as with the majority of Maya city names, Comalcalco is not the original name of the site. The name Comalcalco derives from two Nahuatl words "Coomal" and "Calco", which translate as 'houses of the clay pans'. When Nahua speakers from Central Mexico first encountered the city, they gave it that name because they had small clay pans which resembled the shape of the bricks they saw.

Although adobe (sun-dried) clay bricks were used in pre-Columbian America, the utilisation of fired clay brick is almost without precedent. It is indeed puzzling that kiln-baked brick, otherwise virtually unknown in pre-Columbian America, should emerge in this particular pocket of the Maya area. In fact, it is so unusual that some commentators have not even been aware of its existence. Herbert Krieger, in attempting to prove that Amerindian cultures developed entirely independently of any form of trans-oceanic contact, listed the absence of certain traits in Amerindian cultures which would be expected to appear if some form of contact had occurred. Krieger noted kiln-baked brick amongst other "trait absences" in Amerindian

cultures to prove his point.² (It should be noted that many of Krieger's "trait absences" are actually present in one or another pre-Columbian American cultures).

There are a few other minor sites containing buildings constructed using fired brick masonry, but they are also found only in Mexico. Two of them, Balankan and Tenosique, lie in Chiapas, the neighbouring state to Tabasco, and are located approximately 100 and 130 miles southeast of Comalcalco respectively. Besides these, the only other known sites of fired brick, such as Bellote and Jonuta, are found in the immediate vicinity of Comalcalco. They are thought to have been cultural satellites of Comalcalco, and probably post-date it.

Where did the use of fired brick masonry in this part of the Maya area originate? Was the technology developed at Comalcalco? The usual explanation given for the sudden appearance of fired brick masonry is that because Comalcalco is over sixty miles distant from the nearest substantial outcropping of rock, the Comalcalco Mayas exploited the clay soil of the area to make bricks. However, as Andrews points out, although Comalcalco is the largest of all these sites, which would seem to favour it as the place of origin for brick masonry, this is by no means certain.

AT THIS JUNCTURE it should be pointed out that the present-day archaeological reconstruction of Comalcalco is not entirely accurate. For the benefit of the visitor, various reconstruction projects have placed bricks over the entire surface of the pyramidal terraces. It is now known that only the flats of the terraces were covered with fired brick, not the slopes. However, this in no way alters the fact that fired bricks were used.

The appearance of fired-brick technology at Comalcalco has led both diffusionists and isolationists alike to tentatively explore the

possibility that some form of foreign intrusion may have been responsible for its introduction and employment. Even Professor Andrews, in his 1966 survey, admits that 'One of the major questions under consideration at the beginning of the project was whether the use of brick facing for structures at Comalcalco represents a localized adaptation to a region where limestone, or any other type of stone, is not readily available, or whether it represents the intrusion of a foreign tradition of construction'.³ Andrews confines his search to other areas within the Americas, and eventually concludes that 'it seems more probable that the development of brick masonry was a logical adaptation to a local situation involving a limited use of building materials'.⁴ Andrews bases his conclusion on the fact that Comalcalco demonstrates no change from Maya traditions in form or architectural style which, he thought, should be the case if fired brick was the result of an outside influence. He also stresses that the use of the corbelled vault, as a means of roofing over the interiors of structures, is evident at Comalcalco. Therefore it is typical of all other Maya sites, providing a positive basis for differentiating Maya construction from that of adjoining cultures.

Andrews' conclusion that 'Comalcalco demonstrates no change from Maya traditions in architectural style' is by no means entirely accurate. We shall shortly refer to a number of features in which the opposite could be said to be the case.

Is there cause for exploring the possibility that an Old World source was responsible for the introduction of fired-brick masonry at Comalcalco? Many have considered that the brick construction at the site is reminiscent of Mediterranean construction, and particularly of Roman construction. Whilst we are of the opinion that an Old World source was involved at Comalcalco, we do not believe that it stemmed directly from the Roman or Mediterranean area. Our reasons for this will

become clear later in the text. Even so, concordance with Roman and Mediterranean construction techniques are worth exploring in more detail, and we shall shortly outline some of the anomalous aspects of Comalcalco and consider some parallels with the Roman world. Before doing so, however, it is important to examine Comalcalco's chronological development because the date for the appearance of fired brick masonry is central to any conjecture that intervention by Old World people may have occurred at the site.

Chronology:

ALL OF THE STAGES of construction at Comalcalco, in which fired bricks were used, are identical. The same methods of construction were used at each level, and there is a complete lack of any fundamental difference among the temple structures. In fact, Andrews draws attention to the remarkable similarity of plan layouts that exist between the nine temple buildings at the site.⁵ Because the buildings at Comalcalco appear fully developed without any apparent intermediate, evolutionary, or developmental stages, it is assumed that they must have been built within a relatively short period of time. It is also assumed, therefore, that the basic concept for these structures were imported from elsewhere. Exactly where these concepts originated is an important question, especially with regard to a diffusionist viewpoint.

Palenque, situated one hundred air miles south-east of Comalcalco, has always been seen as the great metropolis of the ruling Cholan Maya of the area. It is also the closest site to Comalcalco of any importance, and a road (sakbe) once connected the two sites. Because there are strong similarities between Comalcalco and Palenque, such as temple floor-plans, decorative elements, and sloping upper walls, it has been assumed that the building plans for Comalcalco were derived from the mid-eighth century models of

Palenque. Archaeologists assume that the movement of ideas progressed from Palenque to Comalcalco, and regard Comalcalco as having been a Gulf Coast heir to Palenque. However, uncertainty exists concerning the precise temporal relationships between the two sites. The problem is further compounded by difficulties in establishing a precise date for the period when Comalcalco's fired brick masonry phase began.

ALTHOUGH evidence of a Los Pinos ceramic phase suggests that there was an elementary pre-Classic occupation at Comalcalco as early as 800 BC, problems arise when attempting to determine the period during which Comalcalco progressed from a small village settlement to a major ceremonial and trading centre. Regarding this progression, two major construction periods have been detected. The first consisted of building earthen platforms to support structures of wood and thatch that were then surfaced with several coats of lime plaster. As the site grew, a second more permanent construction method was subsequently developed whereby the original earth-and-plaster substructures were enlarged and expanded and faced with fired clay bricks plastered together with lime cement made from oyster shells which are abundant in the area. The facades were, in turn, faced with stucco. Floors, stairways, and walls, etc, were also added using fired bricks.

It is generally thought that the brick masonry construction phase at Comalcalco appeared quite late in the history of the site, after the fall of Palenque which must have occurred circa 800 AD. It has been assumed that corroborative evidence for this comes from a ceramic study undertaken by Peniche Rivero⁶ which indicates a gap in the occupation of the site from 100 AD at the end of the Los Pinos ceramic phase, until 800 AD at the beginning of the Mezcalpa 1 phase when intensive occupation then appears to have continued through to 1350 AD. If Peniche Rivero is

correct it means that, not only the brick-masonry phase, but also the earth-stucco platform phase, belong to the Terminal Classic and Post Classic periods (800 AD to the time of the conquest). Given that the earth-stucco period obviously preceded the brick masonry phase and lasted for a certain time, the brick masonry phase itself may not have even begun until the beginning of the Post Classic period (1000 AD).

A FEW POINTS need to be considered regarding the above statements.

Firstly, the ceramic artefacts obtained by Peniche Rivero came from the area north of the North Plaza where there are no brick structures. This area was possibly inhabited during a period that post-dated the main construction phases.

Secondly, a date of 1000 AD for the beginning of the brick phase causes problems because it suggests that the brick masonry temples at Comalcalco, which are very similar in their basic plan to those of Palenque, were not built until 200 years later than their Palenque counterparts. During this time, Palenque had entered into eclipse, and its architectural styles would surely have passed from memory.

Thirdly, Andrews himself points to the high incidence of temple-type structures at Comalcalco which conflict with a shift towards construction of multi-chambered, palace-type buildings that occurred at other Late and Terminal Classic sites in the central Maya Lowlands with which Comalcalco would be contemporary if it post-dated Palenque. Andrews puzzles over the resulting 'cultural time-lag effect' of Comalcalco.⁷ (See also remarks concerning ballcourts in the proceeding section). Such an apparent "time lag" has led some, Ekholm in particular,⁸ to maintain that Comalcalco's intensive period of occupation took place during the Late Classic period (550-800 AD), thereby being contemporary with Palenque's

major construction phase which occurred between 583 and 799 AD.

HOWEVER, ESRS has recently obtained the unpublished notes of Dr. Ekholm, made during his 1956-57 excavations at Comalcalco. In his notes Ekholm reports that a trench dug at Mound 2 of the North Plaza revealed that the temple above the mound contained over thirty-nine sequential floors.⁹ Sixteen are thin stucco floors, one is a thick floor of mortar without bricks, but the remaining twenty-two floors consist of fired brick in mortar. (Fig. 4). Therefore, if we concur with Ekholm that building ceased at Comalcalco circa 800 A.D., and assume a ten year (one half Katun) interval between floor replacements, thirty-eight additional floors would represent a 380 year time span, indicating that the earliest brick floor may have been constructed in 420 AD. A twenty year (one Katun) interval between floor replacements indicates a 760 year time span, suggesting that fired bricks may have been in use as early as 40 AD.

Admittedly, this is not conclusive proof that Comalcalco's brick masonry phase began much earlier than generally claimed. However, it is perhaps worth mentioning that, in 1994, Oyster-shell material in mortar from the Cube Tomb, located in the area of the Great Acropolis, was Carbon-14 dated by Goechron Laboratories in Cambridge, Massachusetts, (Sample No. GX-20252). It yielded an age of 1,505 years, plus or minus 65 years (C-13 corrected). As the age was referenced to the year 1950 AD, the earliest date for the artefact would be 380 AD. Dr. Curtis Hoffman has outlined the serious problems in using mortar for dating.¹⁰ Whilst we fully accept the points raised by Dr. Hoffman, we nevertheless feel it important to report the results of the dating. We also draw attention to the fact that the earliest date (380 AD) falls within the range of the dates given in the previous paragraph (40 - 420 AD). The latest possible date (510 AD) is still earlier than the accepted date for the beginning of

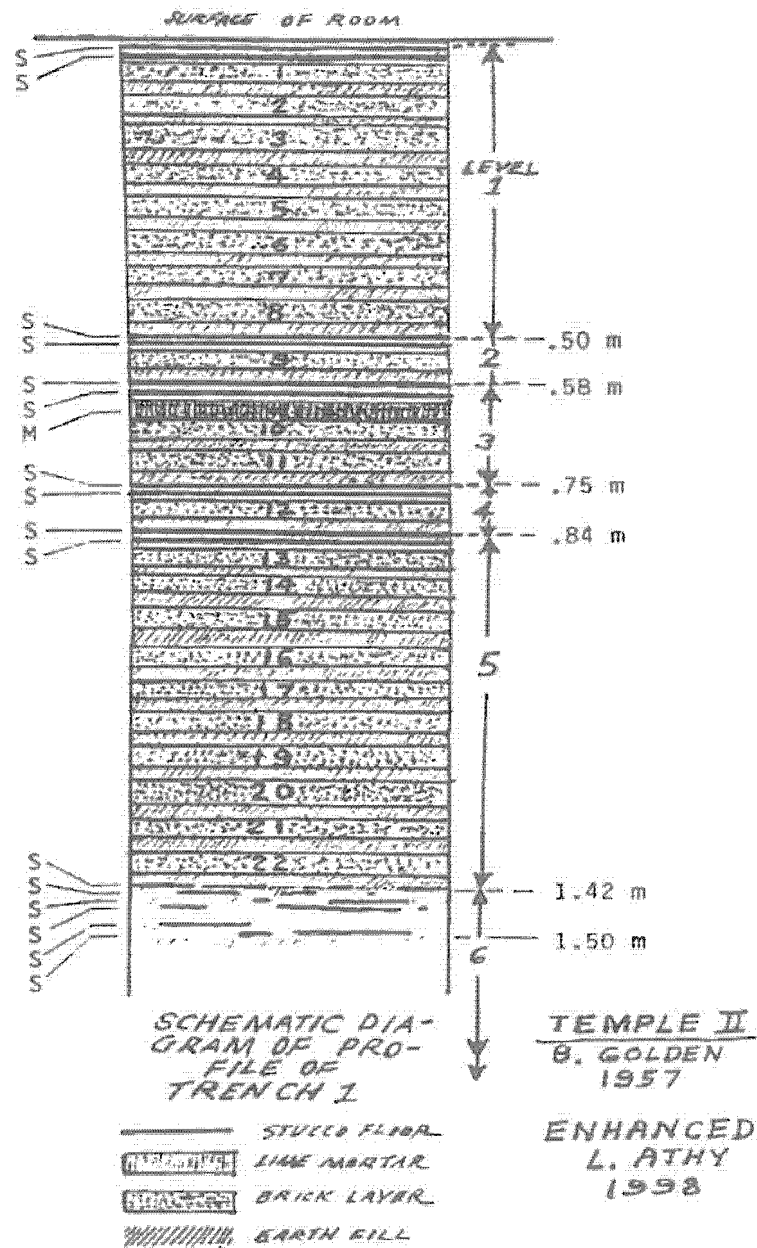


Figure 4: Stratigraphic section drawing of Trench 1 at Temple 2.
 Each of the 22 numbered strata represents a floor of fired brick in mortar.
 Each strata labelled "S" is a thin stucco floor.
 Stratum labelled "M" is a floor of mortar without bricks.
 Drawing by B. Golden for Gordon Ekholm. Enhanced by Larry Athy.
 With permission. Museum of Natural History, New York.

Palenque's major construction phase (circa 580 AD). Therefore, although both items of evidence are inconclusive, they do complement one another. Even so, the matter will not be resolved until sufficient samples are recovered from the lowest levels of flooring at Temple 2 and submitted for Carbon-14 analysis. It is hoped that this will take place in the not too distant future.

ESTABLISHING an accurate chronology for Comalcalco's various developmental phases is indeed problematical, but it is our contention that there are sufficient grounds for challenging the hypothesis of a late date for Comalcalco's fired brick phase, and for suggesting that Comalcalco may have actually preceded Palenque. If this were the case, the following question then arises: From where did Comalcalco derive its technological and architectural innovations? In an attempt to answer this question, we shall now discuss more of the anomalous aspects of the city and its apparent parallels with the Old World.

ANOMALIES AT COMALCALCO:

1. Construction:

Unusual features, consisting of wing walls, buttresses, wall niches, and cornice edging are evident at Comalcalco. Although these construction techniques are found in other parts of the world at earlier dates, they have no known antecedents in Mesoamerica. It would seem that all of the above items appeared for the first time in Mesoamerica at Comalcalco. If confirmed, this finding would imply an amazing leap in construction technology.

Normal Maya wall footings are not found beneath Comalcalco's walls. Unlike Maya wall footings, those at Comalcalco extend outward from the walls like an inverted "T" in Roman fashion. This allows for the walls to be thinner and more stable.

THE MORTAR and stucco mixes at

Comalcalco are comparable to the 1st century mixes in the Mediterranean area.¹¹ All mixes in Mesoamerica, with which comparisons have been made, have less durability and strength than those found at Comalcalco. At the site's earliest brick stage, no developmental stage in the mortar has been detected, implying that a near perfect mix suddenly appeared at Comalcalco only to degenerate later into a less effective mix during the Maya Classic period.

Although Comalcalco's arches are corbelled, they deviate from the typical Maya corbelled arch by being slightly curved in order to strengthen the arch. In fact, an arch at Comalcalco contains the largest span (18 feet) known in the Maya area. Andrews states that 'There is no physical evidence for an extended developmental phase for brick vaulting, so it must be assumed that the basic structural concept involved was imported full-blown from elsewhere....'¹² Andrews inclines to the theory that the technology was imported from Palenque, but if Comalcalco preceded Palenque, this would not have been the case. Another factor that argues against importation from Palenque is that some of the corbelled roofs at Comalcalco contain broken pottery placed in the fill over the arch to lighten the load. Such a procedure was never a feature of Maya construction, but it was carried out for a short time in Roman construction, (circa 1st century AD).

EKHOLM also reports that, during his excavations, drainage tiles were found at Comalcalco.¹³ These drainage tiles are "fluted" with a flange at only one end, thus allowing the small end of one tile to fit into the larger end of another. To the best of our knowledge only one other such drainage tile, excavated at Dianzu in Oaxaca, is known from the whole of ancient Mesoamerica.

2. Architecture:

AS PREVIOUSLY stated, there are strong similarities between Comalcalco and



Figure 5: Temple 5. Note absence of central stairway. (Photo: D. Eccott)



Figure 6: View across the Palace showing large window opening (at left and right) in East Wall (Photo: D. Eccott)

Palenque. Indeed, many of the shared architectural traits demonstrate a specific deviation from more typical forms of Maya architecture. If the evidence for an early date for Comalcalco's brick masonry phase proves to be correct, the possibility that such deviations began at Comalcalco, and then spread to Palenque, must be given serious consideration.

UNLIKE other Maya Pyramids, some of the Comalcalco pyramids seem to have had no central stairway, although on many site-maps the pyramids are often drawn with central stairways purely on assumption. Instead, the steps of certain pyramids span the entire front of the structure. This is certainly true of the temple structures in the Great Acropolis area, such as Temple 5 (Fig. 5), although the pyramids in the North Plaza, especially Temple 1, seem to have incorporated the central stairway. This may possibly suggest that, at one point in time, there was a merging of Maya architecture with some form of foreign architectural design. Furthermore, the steps of the Comalcalco pyramids are not as tall as steps at other Maya sites. Maya steps also tend to be very narrow on the horizontal, whereas at Comalcalco the horizontals are very wide. Also worth noting, especially in conjunction with the remarks on measurements (below), is that the steps of the central stairway of Temple 1 conform to Roman inches. Although slump and erosion make precise measurements difficult, as far as can be ascertained the steps of Temple 1 measure 6 Roman inches on the vertical, and 8 Roman inches on the horizontal.

Large window-like openings in the east wall of the Palace are another unusual feature. (Fig. 6). Such window-like openings are virtually unknown in Maya architecture. In fact, the only other examples that can be cited are the windows on the Temple of the Seven Dolls at Dzibilchaltun which, together with a tall narrow doorway, form the eyes and nose of a Mask of the Sun for the equinox sunrise. The only function for the windows at

Comalcalco appears to have been to allow air and daylight into a dark and poorly ventilated room. Even so, this in itself comprises a strong deviation from the Maya norm.

UNUSUAL MOUNDS that have become known as "erratic mounds" are also to be found at Comalcalco. They seem to comprise certain geometric concepts, possibly an oval and a spiral. There is also a possibility that such mounds may have acted as sundials, which would constitute another non-Maya trait. Andrews notes the presence of two "unusual" mounds lying north of the North Plaza. He states that 'Whilst we could not positively ascertain that some of their more complicated features were not due to mere vagaries of slump and deterioration, the structural relationships between the major features strongly suggests the presence of a distinct formal concept.'¹⁴

Two ruins within the area of the Great Acropolis and in the immediate vicinity of the Palace, (designated Structures 1 and 2), contain neither the general characteristics of a palace-type structure or the stepped pyramidal substructure and rear room of a temple. Both are noted by Andrews himself as being non-conformist and atypical of Maya architecture. Structure 1 seemed to have contained several narrow slots around the corners of its northern end. The slots begin at floor level and probably continued upwards to the medial moulding. As the remains of the walls are only 1.22 meters high, the purpose of such apparent slots, which must have weakened the structure, cannot be determined. In fact, such slots are so unusual that it is difficult to cite other such examples in Maya architecture.

NO REMAINS of a ballcourt have so far been found at Comalcalco. Andrews states that 'Since Comalcalco was a centre of some considerable size we hoped to find clear evidence of at least one ballcourt somewhere within the main ceremonial area. Unfortunately our survey did not disclose

anything that we could positively identify as the remains of a ballcourt.¹⁵ Only two mounds were tentatively identified as being associated with the possible remains of a ballcourt, but their state of deterioration made it impossible to ascertain the presence of the characteristic sloping bench feature. Even so, these particular mounds contained no evidence of brick masonry. If Comalcalco's brick masonry phase did indeed belong the Maya Post Classic period, it would be virtually unheard of for a Post Classic centre not to contain a ballcourt. Furthermore, ballcourts are extremely common throughout the Maya region. Virtually every urban centre had at least one. Furthermore, unbeknown to Andrews who was writing in 1989, excavations at Palenque in 1992 revealed the remains of a ballcourt. If, as Andrews continually informs us, the architecture at Comalcalco was derived from the mid-eight century models at Palenque, why did the Comalcalco Mayas not incorporate a ballcourt?

A controversy surrounds the question of whether roof-combs existed at Comalcalco. Although Charnay¹⁶ referred to a 'base of a decorated wall' (long since collapsed) toward the centre of the Palace roof, no hard evidence has emerged to support the supposition that Comalcalco's buildings had roof-combs. Roof-combs were widespread throughout the Maya area and are a prominent feature at Palenque. From the evidence of the architectural designs on some of Comalcalco's bricks, a form of tower (not roof-combs) may have been constructed. Of course, such a conjecture leads to the interesting question of whether the famous four-storied tower at Palenque, (unique in Maya architecture) was based on a concept that had originally flowered at Comalcalco. It should be noted that Palenque itself has many features that are considered to be "unusual", including a great trilobate arch which, in the words of Hunter, is 'reminiscent of those in the Islamic World'.¹⁷

BRICK COLUMNS in front of the Palace at Comalcalco appear to show an affinity with similar façade-like elements at Palenque's Palace, thus suggesting a derivation from there. However, the brick columns at Comalcalco were erroneously constructed by Piña Chan, and are not an original feature. Therefore they do not comprise a derivation from Palenque.

Finally, no polychrome pottery has been excavated at Comalcalco, whereas it is known to have existed at Palenque and almost all other Classic sites. This again suggests that Comalcalco was earlier than Palenque.

3. Burials:

Another peculiarity that existed at Comalcalco was the method of burying the deceased in a foetal position under very large up-turned pots on a bed of crushed oyster shells. The pots are approximately 4ft high, 25 inches at the base, and 34 inches at the mouth. This practice is otherwise unknown in Mesoamerica, except at Yaxchilan where one such burial exists. At Temple 3 of Comalcalco's North Plaza, one of the pot burials has recently been excavated. The possibility that the teeth of the skeleton may be submitted for DNA testing is still pending.

4. Measurements:

EVIDENCE FOR the existence of a measuring system in ancient Mesoamerica is controversial, particularly with regard to the Maya. Most Mayanists are of the opinion that the Maya had no measuring system. Despite this, several obscure studies, Brinton¹⁸ in particular, have concluded that a Maya unit of measurement existed, and that it corresponded to 42cm (17.7 inches). The buildings at Comalcalco do not appear to conform to this unit or parts thereof. On the contrary, evidence suggests that the entire site was laid out using Roman feet and inches. Although, due to the difficulties in

estimating the thickness of the now-eroded stucco and brick edges, this is impossible to prove conclusively. However, measurement of the bricks themselves tends to support the conjecture that units of measurement, similar to those employed by the Romans, were used at Comalcalco. Upon measuring one hundred and sixty individual bricks, 90 percent fell into an acceptable category of closed Roman inches (within the tolerance of 1/32 of an inch). Also, over sixty bricks have been found that appear to have measuring marks on them. These marks seem to conform to Roman inches, spaced at one-half, one-quarter, and one-third of a Roman inch. (Fig. 7). Even so, the argument is still not conclusive because firstly, it is not known for certain if such bricks were indeed measuring devices, and secondly, the measurements need to be tested against other ancient measuring systems that may also correspond. We should also remember that the Romans adopted their measuring system from the Greeks who, in turn, derived it partly from the Egyptians and partly from the Babylonians (probably via the Phoenicians).

Inscribed bricks:

BY FAR THE MOST unusual feature is the fact that Comalcalco's fired clay bricks were incised with various motifs and designs. This is an extremely important aspect of our discussion as it is central to the view that Comalcalco was intrusive. The inscriptions consist of anthropomorphic, zoomorphic, architectural, and geometric designs that were incised on the bricks prior to the sun drying and baking processes. It is interesting to note that the bricks were placed in the various structures in a definite sequential order with regard to the type of inscription that they contained. Bricks with plant and animal designs were placed in an area from floor level to approximately three feet above. Bricks with human renditions were placed in an area from three feet to ceiling height, whilst ceilings contained bricks with architectural, geometric, and numeric

inscriptions.¹⁹

Brick technology was used extensively throughout the Roman World. Both sun-dried and kiln-fired bricks were used, although the kiln-fired variety was not widely used until after the 1st century BC. It was common practise for bricks and tegulae to be inscribed in various ways before the sun-drying and baking processes. Once the bricks were incorporated into the various structures, the designs on the bricks were theoretically lost to view forever. This is also true of the designs on the Comalcalco bricks.

THE LATE Dr. Gerald Brodrigg undertook an important study of Roman brick and tile²⁰ in which he divided the inscriptions on Roman bricks into a series of categories consisting of signatures, tally-marks, combing and scoring, roller-printed relief patterns, tile stamps, Legionnaire and Fleet stamps, impressions and imprints, and graffiti. With the exception of the Legionnaire and Fleet stamps, all of the above categories of imprints are found on the Comalcalco bricks. Although the true meaning of the signature-type variety is undetermined, some contain close similarities with markings on the Comalcalco bricks. Figure 8 shows just two of many such bricks. (Fig. 8). The simplicity of the marks could lead one to suppose that purely coincidental, independent invention occurred on either side of the Atlantic. However, the uniqueness of some of the designs, which do not conform in any way with Maya iconography, and the fact that both sets of marks are found fired clay brick, must be taken into consideration. It should also be noted that such markings are not found at other Maya sites.

Numeric-type markings were also inscribed on Roman bricks. Although their true purpose is undetermined, they have become known as "tally-marks". Such numeric markings have also been detected on the Comalcalco bricks, but whereas on Roman bricks the numerals were inscribed on the

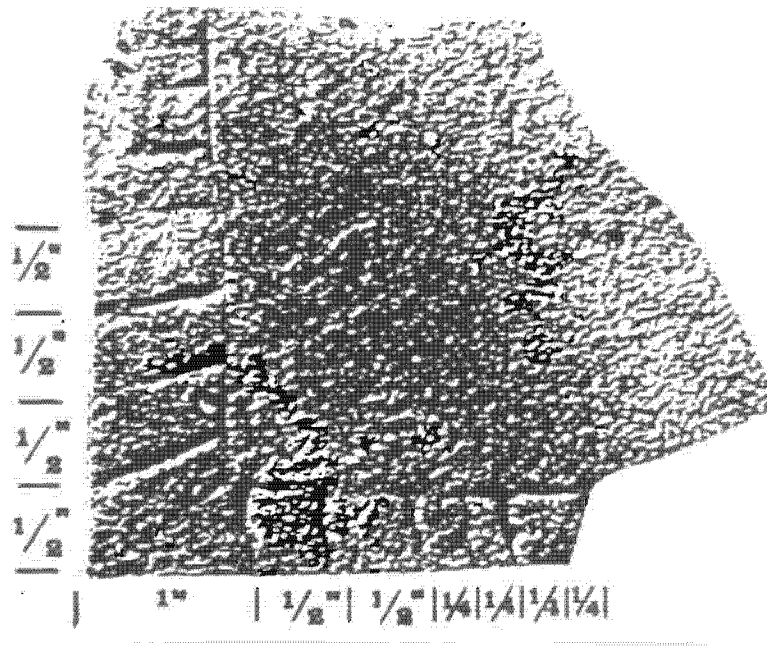


**Figure 7: Comalcalco brick No. T1-159 showing apparent Roman measuring units.
(Photo copyright: Neil Steede)**

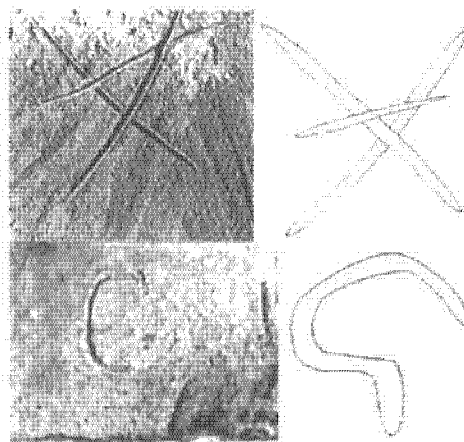


**Figure 8: Left column: Comalcalco bricks T1 250 (above), and T1 59 (below).
Right column: Matching marks appearing on Old World Roman bricks.
/Drawing by D. Eccott after Brodribb.)**

edge of the brick, at Comalcalco they appear on the larger surface near the edge.

ON A FEW OF the Comalcalco bricks that contain pictorial elements, there appear to be attempts to draw in perspective. In pictorial motifs, the Maya settled for flat, two-dimensional art. In fact, there is nothing in the whole of ancient Mesoamerica, save at Comalcalco, to suggest that people attempted to experiment with the difficult medium of depth and perspective. In the light of all that has been said previously, this may also suggest that the problems of perspective were yet another imported theme at Comalcalco. Even though such attempts were somewhat rudimentary, they are definitely detectable. During the first centuries AD in the Roman world, the struggle with perspective was also just flowering.

The origin of apparent foreign traits:

We have attempted to demonstrate that Comalcalco contains a considerable number of anomalies, a large proportion of which are without precedent in ancient Mesoamerica. It is for this reason that we suggest that Comalcalco was intrusive, and that the various anomalies probably were the result of an intrusion from the Old World. This is not to say that the Maya were not creative enough to have invented such advanced technological features, but it is unlikely that so many would have been developed simultaneously and without developmental stages.

WE HAVE ALSO attempted to demonstrate that Comalcalco, assuming an early date, contains certain parallels contemporary with the Roman world. Therefore we must enquire as to whether the proposed intrusion actually stemmed from the Roman Empire. Despite the parallels, there are a number of factors that negate the possibility of a direct Roman influence. These are as follows:

Firstly, there are no Latin inscriptions on

Comalcalco's bricks that have so far been excavated, neither are there any to be found in any of the archaeological remains. Roman bricks were often inscribed with Latin graffiti. The Comalcalco bricks do not contain any Latin script.

Secondly, the Roman true arch is not found at Comalcalco. Only corbelled arches are found.

Thirdly, there are no flanged tegulae (roof tiles) at Comalcalco. Flanged tegulae are an extremely common feature of Roman buildings.

THESE FACTORS alone suggest that, assuming certain traits were introduced to Comalcalco via an Old World culture, the donor culture was not Roman. Therefore, if we are to proceed with the hypothesis of Old World influence, we must look at other Old World cultures for a possible solution.

Let us, for a moment, return to the Roman-type "signatures" and "tally marks" which appear on Roman bricks. With regard to the tally marks, Brodribb goes to some lengths in an attempt to discern the meaning of these signs. He states that 'The first impression is that the marks represent Roman numerals'. He finds that IIII (presumably indicating 4) is as common on inscriptions as IV. Similarly VIII is as common as IX. Quite common is N, which Brodribb suggests could perhaps stand for 4 even though the second line on the V is vertical...²¹ Brodribb also suggests that a Roman V with a vertical line inserted in the middle (rather like an arrow) may represent the figure 6. The Roman V is also found inverted on some bricks.²¹ The question therefore arises as to whether these upside-down Vs, retrograde numerals, and symbols such as N and S which are not even part of the Roman numerical system, were ever intended to be numerical signs or tally marks. Therefore, in much the same way as the Romans adopted their measuring system from earlier epochs, it's possible that the "signatures" and "tally-marks" may also stem

from an earlier tradition.

BOTH SETS of markings can, in fact, be traced back to Minoan culture.²² In reality there should not be any differentiation between the two sets of symbols as they are, almost certainly, one and the same thing. Research by Marija Gimbutas, Professor of European archaeology at UCLA, also reveals that the symbols appear on artefacts from the earliest Neolithic village sites in Europe (circa 7000 to 3500 BC).²³ Dr. Richard Rudgley reports that the respected prehistorian Andre Leroi-Gourhan became convinced that Upper Palaeolithic symbols were very advanced and came close to an actual alphabet.²⁴ Rudgley also compares a group of Upper Palaeolithic signs from the Franco-Cantabrian region of Europe with characters from Linear A, Linear B, Cypriote, Proto-Sinaitic, Phoenician, Iberian, Etruscan, Roman, Runic, and Indus Valley writing systems. He points to 'the far-flung similarities from the Ice Age to historical times and from Spain to China.'²⁵

It would therefore appear that the "signatures" and "tally marks" were not a Roman invention, but a continuation of some form of artisan tradition. Whether these ancient signs constituted an actual writing system is debatable; although it's possible that they may have been a rudimentary form of communication. The essential point is that they seem to be of considerable antiquity, and were preserved by many successive cultures. If, as Rudgley observes, this ancient tradition had also spread to Asia and India, then perhaps it is in these regions that we may locate the culture responsible for possibly transferring such traditions to the New World. This supposition is reinforced by another group of inscriptions and motifs on Comalcalco's bricks that will now be discussed.

Possible Indic script and motifs:

AS PREVIOUSLY stated, there are no

known Latin inscriptions on the Comalcalco bricks. However, there are a certain number of bricks carrying inscriptions that are possibly alphabetic or syllabic in nature. With regard to this, Phillip Leonard, who has been studying these inscriptions, has supplied the following information.

'At least six bricks found at Comalcalco bear possible Brahmi inscriptions. (Figs. 9 - 12). The inscriptions are 3-12 characters in length. One brick consists of a single two or three character inscription like that of the mysterious "shell script" of India and Indonesia which was in use during the 4th to 8th centuries AD. (Figs. 13A & 13B). In the Old World these scripts are often found together consisting of short sequences of characters which Richard Salomon believes to be mostly signatures or 'pilgrim records.'²⁶

'ONE PARTICULAR brick, reported by Ekholm, (brick No. EK-S-145A R1) bears a very oriental looking visage. The image is in profile, and is of a man with a moustache and beard. His head is shaved, except for a side-lock of hair that is long enough to be restrained in a tubular device. The side-lock restraint bears a possible inscription. (Fig. 14).

'Blom and Lafarge²⁷ also reported a brick with Brahmi-like markings. David H Kelley reported a cylinder seal from Tlatilco which he said bore a form of writing.²⁸ The figures on the seal can all be matched to Brahmi characters.

'Twenty-four different letterforms can be identified among the forty-four characters found on the bricks and seal.

'INDIAN-LIKE motifs also appear on some of the bricks. These include an anthropomorph emerging from a lotus-like flower (fig 15), and an animal headed human with a round turban-like hat. (A possible Avatar?). (Fig. 16). There is also a Shiva-like figure composed of a frontal view

of a skull with water buffalo horns. (Fig. 17). (Archaeologist David H. Kelley has reported that the Maya used animals for calendar symbols matching those of India and China). Another brick (Fig 18) bears an image similar to some found in India; the image of a creature whose upper half is human and the feet those of a bird.²⁹

With regard to this report, it should be added that stone blocks excavated at the Maya site of Lagartero appear to carry Indic symbols similar to those from Comalcalco described above. Also, Dr. Tomas Lee located three Roman figurines in a private collection. Whilst it is claimed that the figurines had originally been found in an arroyo, some commentators consider them to be Colonial imports. However, considering the fact, shortly to be discussed, that Roman trade goods found their way to Southeast Asia via India, the possibility that the figurines may have been actual pre-Columbian trade items cannot be dismissed. They are now housed in the Chiapas State Museum of Tuxla Guterrez.

It is also worth noting that a stucco head of a man, with beard and moustache, displaying Indo-Asiatic features, has also been excavated at Comalcalco. (Fig. 19). (Depictions of men with beards are uncommon, although not unknown, in Maya art).

India as a possible donor culture:

WITH REGARD to the above information, it is pertinent to point out that it is in India that we also find evidence for early use of fired-clay bricks in building construction. By about 3000 BC kiln-fired clay bricks were being used in Mesopotamia and the Indus valley, although some baked bricks are known to have existed prior to 3000 BC in pre-Indus cultures where the technology was possibly developed.³⁰ However, it was not until the emergence of the Classic civilizations of India that kiln-baked brick began to be used

extensively sometime during the middle of the first millennium BC in north India and the middle Ganges Valley. It was in these regions that fired-brick technology was resurrected after having been virtually forgotten since the Harappan period of the earlier Indus Valley cultures.³¹

It is known that India had strong trading links with Rome. Under Augustus and Nero, the Romans established direct sea-routes from Aden to India that revolutionized trade and cultural connections.³² Therefore, if India were the donor culture, such links may explain the appearance of Roman traits at Comalcalco. Moreover, when we consider the work of Johannessen³³ regarding evidence for Maize in India before Columbus, India becomes a strong candidate for the transfer of traits from the Old to the New World.

HOWEVER, when debating the possibility of cross-fertilization between the Old and New Worlds on a wider scale, it is necessary to consider the implications of important studies relating to ancient genetic and cultural links between the continents. In doing so it will become apparent that the European and Indic characteristics that appear to emerge at Comalcalco were probably transmitted via an intermediary Asiatic culture.

Genetic evidence:

In 1985 Douglas Wallace, head of the Center for Genetics and Molecular Medicine and Departments of Biochemistry and Anthropology, Emory University School of Medicine, Atlanta, Georgia, began publishing papers of studies his team had made on the mitochondrial DNA of about 20 indigenous Americans tribes.³⁴ They found that all stemmed from four founding types that they labelled haplotypes A, B, C, and D. The progenitors of all, except for type B, are found in Northeast Asia. Type B was found only in coastal South Asia, the Pacific Islands, and near the west coasts of America.

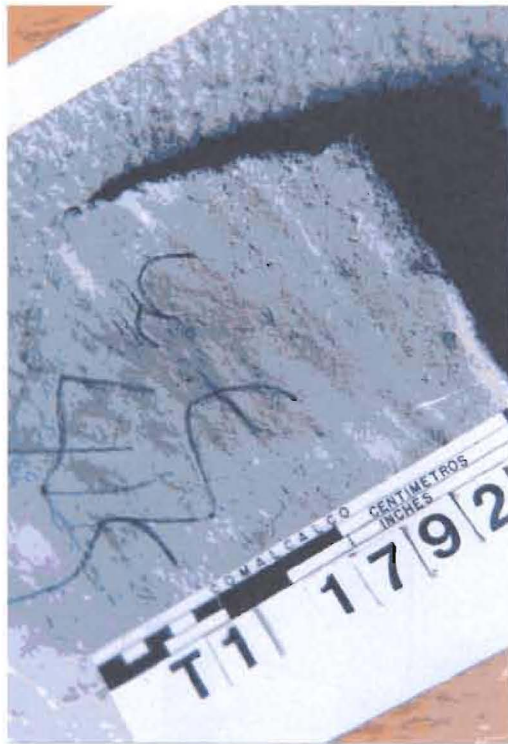


Figure 9: Comalcalco brick No.T1-1792 showing possible Brahmi inscription.
(Photo copyright: Neil Steede)



Photo 10: Comalcalco brick No.T3-105 showing possible Brahmi inscription.
(Photo copyright: Neil Steede)

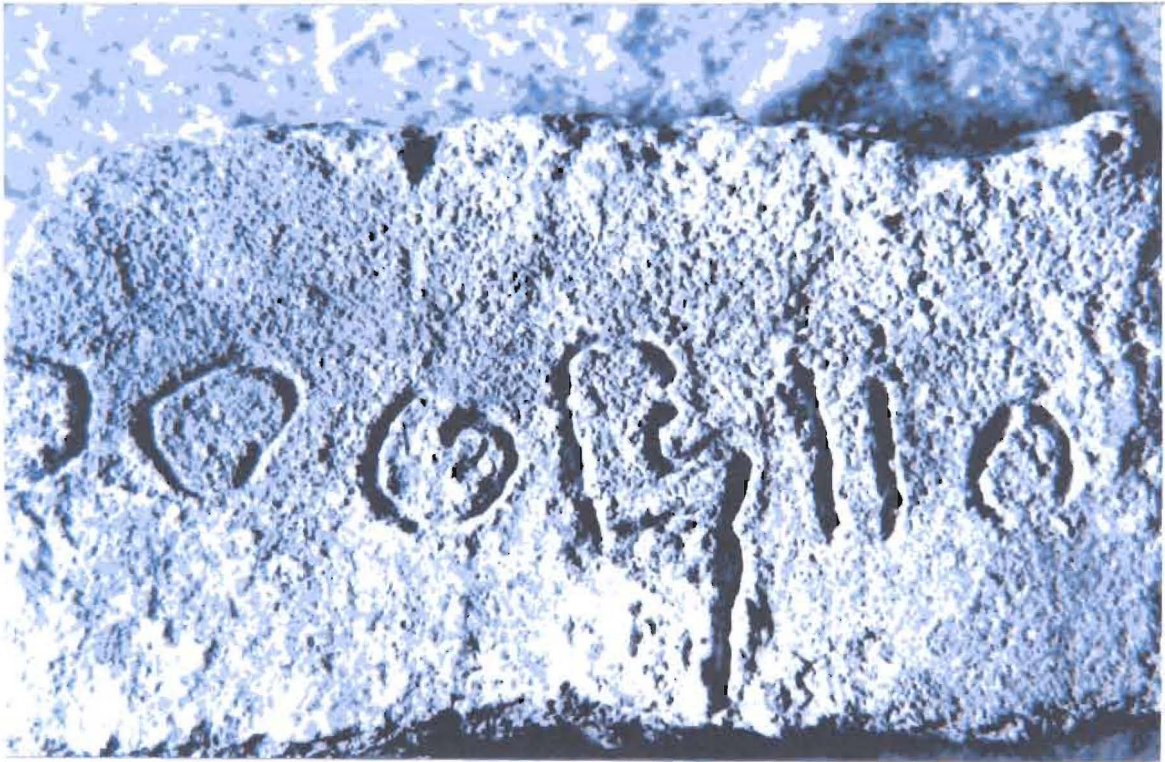


Figure 11: Comalcalco brick No.T3-7 showing possible Brahmi inscription on Cartouche around neck. (Photo copyright: Neil Steede)



Figure 12: Comalcalco brick No.T1-2112 showing possible Brahmi inscription. (Photo copyright: Neil Steede)

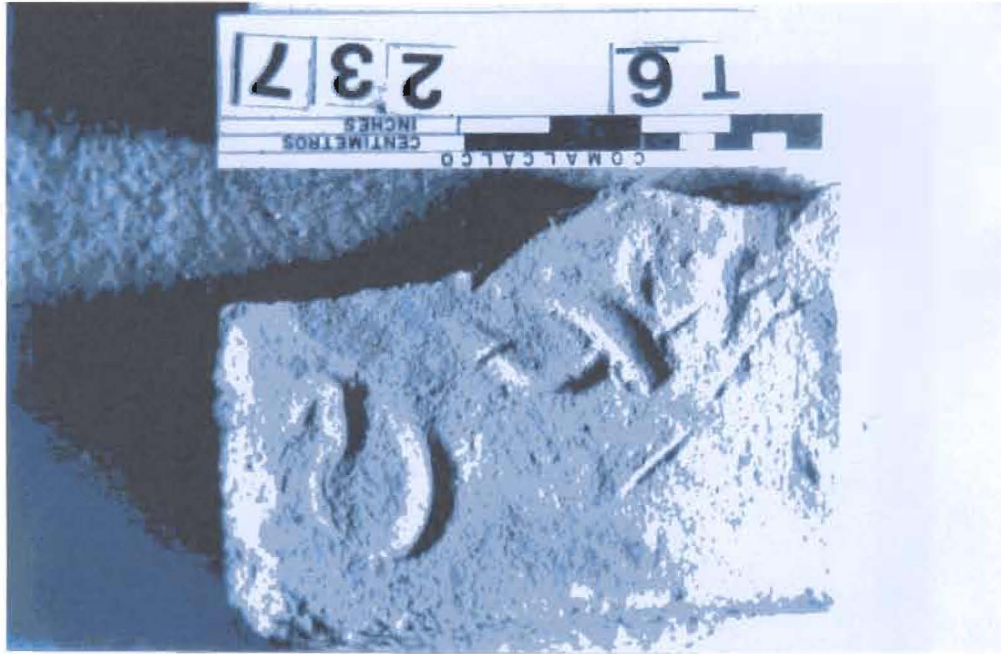


**Figure 13A: Comalcalco brick No.T6-237 showing apparent shell character inscription
(Photo copyright: Neil Steede)**



**Figure 13B: Shell character inscription in the Dhyanaaghar cave at Khandagiri (Orissa).
Drawing by D. Eccott after photo, courtesy of Archaeological Survey of India, published in
Indian Epigraphy: Its Bearing on the History of Art. Ed. Frederick Primlani & G.S. Gai.
Mohan Primlani, Oxford & IBH Publishing Co. New Delhi. India. 1985.**

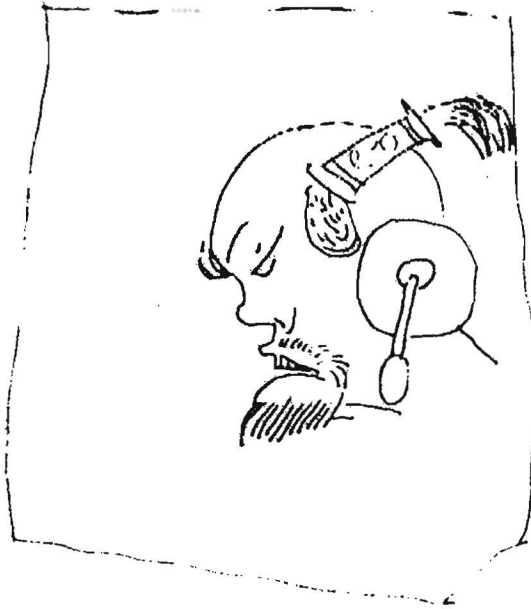


**Figure 14: Comalcalco brick No.EK-S-145A R1.
Oriental looking visage showing bearded man with possible Brahmi
inscription on side-lock restraint.
Drawing by Phillip Leonard.**



**Figure 15: Comalcalco brick No.T1-3015
Anthropomorph emerging from a lotus-like flower.
(Photo copyright: Neil Steede)**



Figure 16: Comalcalco brick No.T1-481
Animal headed human with a round turban-like hat.
(Photo copyright: Neil Steede)



Figure 17: Comalcalco brick No.T1-498
Shiva-like figure
(Photo copyright: Neil Steede)



Figure 18: Comalcalco brick No.T1-2738
Creature whose upper half is a human, but with the feet of a bird.
(Photo copyright: Neil Steede)



Figure 19: Stucco head with beard and moustache from Comalcalco
Comalcalco Museum (Photo: D. Eccott)

Various scenarios have been offered to explain the distributions in America of these haplotypes, although there is no consensus as yet. Regarding the cluster B haplotypes, Torroni, et al, have suggested that they arrived in a separate migration and that they were the same kind of people who populated Polynesia. Even more significant is the fact that haplotype B is absent in Beringia where, if the Bering land bridge was the only route for ancient man to the Americas, it should be expected to be found.³⁵

IN AN EXTENSIVE study of Human Lymphocyte Antigen distributions tabulated by Cavalli-Sforza and colleagues, James Guthrie observes that 'studies of mummies and coprolites have established the presence of tropical intestinal parasites, especially *ancylostoma duodenale*, in ancient South America. These almost certainly came from Southeast Asia or Oceania....'³⁶ Soper (1927) indicated Indonesia as the likely source of *ancylostoma duodenale*.³⁷ It should be noted that such parasites could not have survived in the subarctic climates of Beringia. Guthrie provides genetic and other evidence supporting the postulates of Ibarra Grasso and others that elements of Indus civilization were retained by people who settled Indonesia and eventually reached the Pacific coasts of South and Central America.

Such evidence, despite the necessary brevity required for the confines of this paper, is unequivocal. The link has been made. Pre-Columbian contact between the Old and New Worlds existed by means of oceanic travel. For ancient man, the Bering Strait was not the only entry-point into the Americas. Furthermore, Southeast Asia begins to assume particular significance, especially when certain cultural relationships are considered.

Southeast Asia:

MANY SCHOLARS consider Southeast Asia to have been an important link with pre-

Columbian America. For instance, a study by University of Montreal archaeologist Paul Tolstoy compares and analyses the techniques used for bark cloth and paper making of Southeast Asia and Mesoamerica. Of one hundred and twenty-one steps identified in the process, ninety-two steps correspond. Of those ninety-two steps, forty-two steps are not dependent upon previous stages.³⁸

Studies by Stephen Jett, Professor of Geography at the University of California, Davis, determine that the development and use of the blowgun in South and Central America, including the hemispherical mouthpiece, are extremely similar to those in Southeast Asia where it was probably invented.³⁹

THE WORK OF Betty J. Meggers, indicating that early Valdivia-culture pottery of coastal Ecuador (circa 3000 BC) was derived from transpacific contact from Kyushu Japan in the Middle Jomon Period, is well known.⁴⁰ However, in a recent study of the prehistory of Southeast Asia and its apparent archaeological, linguistic, and genetic interlinkage with the rest of the world, Stephen Oppenheimer notes that Jomon pottery from Japan is found further east in Melanesia where it seems to have been widely traded.⁴¹

A migration across the Pacific by Southeast Asian peoples would also explain the absence of the true arch in Mesoamerica. Although the true arch was known in China during the Han dynasty period (205 BC to AD 200), Heine-Geldern points out that the true arch was never adopted by the peoples of Champa, Cambodia, Java, etc, even though they were in close contact with the Chinese.⁴² Southeast Asian buildings were constructed with corbelled arches until the fifteenth century AD.

THE EVIDENCE for ancient cultural and genetic links between pre-Columbian

America and Southeast Asia lend credence to the possibility that a trade route was subsequently established between those locations. Certainly, by the early centuries AD, large four-masted ships, technically capable of making a Pacific crossing, existed in Southeast Asia.

Oc-eo:

When excavations at Calixtlahuaca, west of Mexico City in the Toluca Valley, were carried out in 1933 by archaeologist José García Payón, a small stucco head of a bearded man was found in a truncated pyramidal structure where it had been sealed in beneath three layers of stone and cement. Experts agreed that it belonged to Hellenistic/Roman culture, and dated it to AD.200. (This dating has now been confirmed by photoluminescence). Anthropologist Dr. Robert Heine-Geldern theorized that the Calixtlahuaca artefact might have reached the Americas on a Southeast Asian ship, having found its way to Southeast Asia via Rome's intensive trade network with India.⁴³ He pointed to the fact that Louis Malleret's excavation of the Southeast Asian city of Oc-eo, (2nd-7th century AD), had revealed Roman imported pieces such as sculptured and cut stones, and medals bearing the heads of Roman Emperors Antoninus Pius and Marcus Aurelius.

OC-EO IS LOCATED south of modern Saigon on the Mekong delta of Indo-China and close to the west coast of the Ca-mau peninsula in Southern Vietnam. This region of Southeast Asia is where Indian and Chinese influences met. Such a combination, together with the fact that imports from the Roman World have also been found in the area, makes it worthy of further investigation with regard to Comalcalco.

Preliminary inspection of Malleret's work at Oc-eo seems to suggest that there may even be some correspondence between

Comalcalco and Oc-eo. Malleret's ground plan of Oc-eo appears to show some concordance with the layout of Comalcalco, although there are ambiguities relating to orientation that have yet to be resolved. Brick, albeit of sandstone, was also used at Oc-eo to face the structures. However, much more detailed study needs to be undertaken before firm parallels can be drawn.

OF SPECIAL IMPORTANCE is the fact that Oc-eo contains the earliest known examples of Brahmi-based script found in Southeast Asia.⁴⁴ The scripts date from the second century AD, a time frame that immediately precedes the period when, as our evidence suggests, fired brick technology may have first been introduced at Comalcalco. Judging from information supplied in a report by Mukherjee,⁴⁵ it would appear that these Brahmi scripts were introduced to Oc-eo by trading communities that had originated in the north-western part of the Indian subcontinent. During the first century AD, these communities had migrated to the territory now in lower West Bengal where they established maritime commerce with Southeast Asia. They consisted of people known as Yüeh-Chih, since they had originally come from the domain of the Yüeh-Chih in Bactria where the dynasty of the Kusans (Kushānas) had been established. In their new homeland, together with non-ethnic groups from the north-west, they used North-western Prakrit as their language and wrote either in Kharoshti (imported from the north-west) or in a mixed script consisting of Kharoshti and Brahmi letters. Mukherjee asserts that an inscription on a seal-matrix of tin unearthed at Oc-eo had been written in a mixed Kharoshti-Brahmi script. This, along with other such finds, indicates that the script was introduced to various localities in Southeast Asia during the early centuries AD by trading communities hailing from India.

In Bactria, the Yüeh-Chih were known to the Greeks as the "Tókharoi". Mukherjee

observes that, during the middle of the 2nd century AD, Ptolemy noted a place named Thagora, i.e. Tukhara (or Tókharoi). He deduces, from Ptolemy's geographical information, that the location should not have been far from the site of Oc-eo, or may even have been Oc-eo itself.⁴⁶ Thus, the Yüeh-Chih's links with Oc-eo can be quite firmly established.

The Yüeh-Chih:

TWO IMPORTANT questions now arise. Firstly, were Brahmi based scripts subsequently transmitted to Comalcalco from Oc-eo, and secondly, were the Yüeh-Chih the actual conveyers? At this stage in our investigations such questions cannot be answered with any degree of certainty, and it would be unwise to formulate premature conclusions. However, it might be appropriate to mention that Joseph Mahan, whilst having made no associations with Comalcalco, and without apparently being aware of the Yüeh-Chih's maritime capabilities and their affiliations with Oc-eo, has investigated apparent connections between the Yüeh-Chih and the North American Indian tribe known as the Yuchi.⁴⁷ Whilst some of Mahan's conclusions could be considered to be somewhat tenuous, his case deserves re-evaluation. If genetic analysis eventually supports Mahan's basic premise, the possibility of a Yüeh-Chih incursion into Central America could then be considered. Until such times, we would urge extreme caution in this matter. It may, however, prove to be significant that, near the end of the Yüeh-Chih's trading ventures during the 5th century AD, sculptures of Hindu gods holding maize ears appeared at temples in west central India.⁴⁸ Maize is thought to have originated in the Mexican region of the Americas.

DESPITE THE need for caution, the conjecture that there may have been a Yüeh-Chih presence at Comalcalco would also go some way in explaining why the assumed

donor culture, although apparently Indo/Asiatic in origin, seemingly contained elements of contemporary European culture. Under Alexander the Great, the Greeks established colonies and exerted considerable influence in Central Asia and, in particular, Bactria. As Elizabeth Wayland Barber points out, 'when the Greater Yeuzhi (Yüeh-Chih), or Tókharoi, eventually left Bactria for northern India, they took Greek ideals with them to their new kingdom of Gandhara.... Converted to Buddhism, the Yeuzhi/Tókharoi merged the Greek and Indian traditions into the delicate style known today as Gandharan or Greco-Buddhist art.'⁴⁹ It should also be noted that the Dynasty of the Kusans in Bactria had traded heavily with the Romans when the Silk Road became established as a trade route between 200 BC and 220 AD.

Also of interest is a particular study by Thomas Barthel (developed at the University of Tübingen in Germany) which argues that Hindu religious impulses emanating from Bengal reached Mesoamerica where they fused with the Maya of the Palenque region.⁵⁰ If, as we suspect, the movement of ideas progressed from Comalcalco to Palenque, the implications for Comalcalco become consequential.

It should also be noted that there are parallels between Indo-China and India regarding the custom of urn burials.⁵¹ These are somewhat earlier than those at Comalcalco but, as such, they further substantiate the possibility of a link extending from India to Comalcalco via Southeast Asia.

ONE FURTHER matter requires elucidation: If a migration from Southeast Asia indeed occurred, it would have terminated on the pacific coast of the Americas, whereas Comalcalco lies on the eastern seaboard. This need not pose a problem, as there was certainly coast-to-coast contact. For instance, an obsidian trade

route is known to have existed between Kaminaljuyu, only 60 miles from the Pacific coast in Guatemala, and Comalcalco.

One Comalcalco brick is of particular interest with regard to this matter. The brick in question depicts the head of an animal. (Fig. 20) Phillip Leonard consulted three Veterinary Surgeons in Utah regarding the illustration on this particular brick. Based on the anatomical characteristics, two of the Veterinary Surgeons said that the engraving was of a llama, whilst the third said it was a horse. All three Vets had worked with both llamas and horses. Beasts of burden were completely absent in ancient Mexico. Therefore, if a llama was being depicted, it implies that someone had either taken a llama to Comalcalco from the Andes on the pacific side of South America, or had come from the Andes where they had seen one. The identification of a horse is not as impossible as may seem. Horse remains (associated with pot sherds and other artefacts, showing no evidence of fossilization, and considered as being referable to *Equus occidentalis* on morphological characteristics) have been reported from cave deposits in Yucatan. Horse remains were also found in an unmistakable pre-Columbian context during Carnegie excavations at the Maya site of Mayapan.⁵² Scholars have not ventured to suggest how these horses may have arrived in the Americas. However, a possible explanation may be found from the fact that the Yüeh-Chih traders who had settled in West Bengal were known to have supplied Central Asian horses to Southeast Asia via their maritime trade network.⁵³ If the Yüeh-Chih actually reached the Americas, did they also attempt trade horses to the Maya? Now the authors have been informed that the horse remains (reported in *The Journal of Mammalogy*) are from the Pleistocene era.

Final remarks:

IT IS ALWAYS extremely difficult, when

dealing with pre-Columbian transoceanic contact, to determine the precise donor culture (or cultures), and to establish the exact mechanism for the transmission.



Figure 20: Comalcalco brick No.T1-2719. Llama or horse? (Photo copyright: Neil Steede)

Certain Indic motifs and Brahmi-based script, both of which appear to have existed at Comalcalco, may have been conveyed via Southeast Asia. Roman-like and contemporary European-like traits, also apparently present at Comalcalco, could also have been transmitted via the same Indo/Asiatic routes. However, it also appears that there may have been an actual cultural-mix of people at Comalcalco. For instance, figure 14 bears witness to an oriental presence. Perhaps the fact that the aforementioned Yüeh-Chih had originated in Northwest China⁵⁴ has some significance regarding this. Tokharians also wore full beards and handlebar moustaches.⁵⁵

FURTHERMORE, although we are certain that there was not a direct link between Rome and Comalcalco, some of the engravings on the Comalcalco bricks seem to show people wearing Roman clothing. Forms of Early Christian symbolism also seem to appear.⁵⁶ Even if such interpretations in this regard are accurate, our present understanding of the ethnic and

religious factions that were possibly operating at Comalcalco are not sufficiently advanced to enable us to explain the cultural mechanism responsible for such renditions.

This is not the definitive word on Comalcalco. Many questions still remain unanswered. In due course, further research and archaeological excavation may provide more answers. Until such time, we recognise the need to progress cautiously in our interpretation of the data.

Conclusion:

COMALCALCO contains sufficient anomalous and unique features to be considered intrusive. These same features, in a cultural context, argue strongly in favour of transoceanic contact. The utilization of fired bricks at the site was not, we believe, a logical adaptation to a local situation involving a limited use of building materials, but instead represents evidence of technique imported from outside of the Americas. COMALCALCO should not be seen as an isolated curiosity, but as part of a much greater whole. Therefore, in a wider context, the following points are relevant:

Indian Satavahana Dynasty (circa 200 BC - 200 AD) is known to have had extensive trade connections with Rome. By this time the use of kiln-baked brick had been revived in Hindu Kush and the middle Ganges Valley. The Kushana (Yüeh-Chih) people migrated from Hindu Kush to the lower Ganges and developed active maritime trade with Southeast Asia. They supplied horses to that region and introduced Brahmi script to Oc-eo. Roman artefacts are also known to have been traded to Oc-eo.

Comalcalco employed fired brick technology, and Indic motifs seem to have been inscribed on some of the bricks. Brahmi script (possibly) existed at Comalcalco. Roman-like measurements and Roman architectural features also seem to have been employed. Urn-burials, virtually contemporary with those in India and Southeast Asia, exist at the site.

Elsewhere in the Maya region, Roman-style figurines have emerged, and pre-Columbian horse remains have also been excavated. Old World parasites and DNA affinities, the blowgun, bark cloth and paper manufacturing add to the mix.

Until further evidence can add more substance to the proposition, a Yüeh-Chih involvement at Comalcalco must remain purely a possibility; but the "possibility" is under investigation.

WHILST ALL of this suggests that the Maya, and indeed ancient American societies in general, did not develop in total isolation, it in no way detracts from the inventiveness and abilities of Amerindians themselves. In order for a society to understand the potential of an imported trait, it must have attained a developmental stage whereby it is able to comprehend, accept and utilize it, or reject it accordingly. Indigenous American Indians have demonstrated that they are perfectly capable of establishing their own intellectual momentum, despite outside influences.

REFERENCES

-
- ¹ Andrews, George F. *Comalcalco, Tabasco, Mexico*. Labyrinthos, California. 1989.
- ² Krieger, Herbert W. *Indian Cultures of Northeastern South America*. Annual Report of the Board of Regents of the Smithsonian Institution. 1934, pp.401- 421.
- ³ Andrews, op. cit., p.2.
- ⁴ Andrews, op. cit., p.33.
- ⁵ Andrews, op. cit., p.29.
- ⁶ Peniche Rivero, P. *Comalcalco, Tabasco: Su Ceramica, Artifacts, y Enterramientos*. Unpublished thesis. University of Yucatan, Merida. 1973.
- ⁷ Andrews, op. cit., p.29.
- ⁸ Meighan, Clement W. (Ed). *Notes and News: Middle America*. American Antiquity, vol.23, p.218. Salt Lake City. 1957.
- ⁹ Ekholm, George F. Unpublished Field Notes. American Museum of Natural History. New York. 1957.
See also Athy, Lawrence F. *The Stratigraphy of Temple II, Comalcalco, Tabasco, Mexico*. E.S.R.S. Monograph Series No.3. Independence, MO. USA. 1999.
- ¹⁰ Hoffman, C. *Commentary-Section 1*. (In) *Across before Columbus* (Gilmore & McElroy Eds.). NEARA Publications. Edgecomb, Maine. 1998, p.100.
- ¹¹ Littman, Edwin R. *Ancient Mesoamerican mortars, plasters and stuccos*. American Antiquity 23:2,3. 1957.
- ¹² Andrews, op. cit., p.34.
- ¹³ Ekholm, George F. Unpublished field notes. American Museum of Natural History. New York. 1957
- ¹⁴ Andrews, op. cit., p.18.
- ¹⁵ Andrews, op. cit., p.31.

- ¹⁶ Charnay, D. *Ancient Cities of the New World*. New York. 1888, pp.199-200.
- ¹⁷ Hunter. C. Bruce. *A Guide to Ancient Maya Ruins*, University of Oklahoma Press. Norman & London. 1986, pp.131-136.
- ¹⁸ Brinton, Daniel G. *Essays of an Americanist*. Porter and Grimes. University of New Mexico. 1891.
- ¹⁹ Armijo Torres, R. Paper delivered to the 61st Annual Conference of the Society of American Archaeologists. New Orleans. 1996.
- ²⁰ Brodrigg, G. *Roman Brick and Tile*. Alan Sutton Publishing, Gloucester. 1987.
- ²¹ Ibid. pp.131-134.
- ²² Fell. B., *The Comalcalco Bricks: Part I, The Roman Phase*. Epigraphic Society Occasional Publications. Vienna, VA, USA. 1990. Vol. 19, pp.299-336.
- ²³ Gimbutas, M. *The Language of the Goddess*. HarperCollins, San Francisco. 1989. and *The Civilization of the Goddess*. HarperCollins, San Francisco. 1991.
- ²⁴ Rudgley, R. *Lost Civilizations of the Stone Age*. Arrow Books Limited, London. 1999, p.77.
- ²⁵ Ibid, pp.77-79.
- ²⁶ Salomon, R. *Indian Epigraphy*. Oxford University Press, New York. 1998, pp.121-122.
- ²⁷ Blom, F. and Lafarge, O. *Tribes and Temples*. Tulane University of Louisiana, New Orleans, Los Angeles. 1926.
- ²⁸ Kelley, David H. *A Cylinder Seal from Tlatilco*. American Antiquity. Vol. 31, No.5. 1966.
- ²⁹ Leonard, P. Personal communication. August, 2000.
- ³⁰ Mishra, T.N. *Ancient Indian Bricks and Brick Remains*. Harman Publishing House, New Delhi. 1997.
- ³¹ Ghosh, A. (Ed.) *An Encyclopaedia of Indian Archaeology*. Munshiram Manoharlal Publishers Pvt. Ltd. Indian Council of Historical Research: New Delhi. Vol. 1, p.131.
- ³² Scullard, H. H. *From the Gracchi to Nero*. University Paperbacks.

London. 1963, pp.340-341.

- ³³ Johannessen, Carl L. *Maize Diffused to India before Columbus Came to America*. (In) *Across before Columbus* (Gilmore & McElroy Eds.). NEARA Publications. Edgecomb, Maine. 1998, pp.110-124.
- ³⁴ Torroni, A., et al. (eleven authors, including Wallace). January 1992, *Genetics* 130: 153-162.
- ³⁵ Shields, Gerald F., et al. *American Journal of Human Genetics*. 1992, 50: 758-765.
- ³⁶ Guthrie, James L. *Human Lymphocyte Antigens: Apparent Afro-Asiatic, South Asian, and European HLAs in Indigenous American Populations*. In publication. 1998 (rev. 1999), note 24.
- ³⁷ Soper, Fred L. *The Report of a Nearly Pure "Ancylostoma duodenale" Infestation in Native American Indians and a Discussion of its Ethnological Significance*. *American Journal of Hygiene*. 1927. 7:174-184.
- ³⁸ Tolstoy, P. *Cultural Parallels Between Southeast Asia and Mezoamerica in the Manufacture of Bark Cloth*. Academy of Sciences, 1963, Transactions, series 2, 25: 646-642.
- ³⁹ Jett, Stephen C. *The Development and Distribution of the Blowgun*. *Annals of the Association of American Geographers*. 1970, 60: 664-688, and 1991, 81: 89-102.
- ⁴⁰ Meggers, Betty J. *Prehistoric America. An Ecological Perspective*. Aldine Publishing Company, New York. 1972 & 1979, pp.34-43.
- ⁴¹ Oppenheimer, S. *Eden in the East*. Phoenix, London. 1999, p.477.
- ⁴² Heine-Geldern, R. *Theoretical considerations concerning the problem of pre-Columbian contacts between the Old World and the New*. In *Selected Papers of the 5th Int. Congress of Anthropology, Ethnology and Science*. (A. Wallace. Ed.) Philadelphia. 1960, pp.278-279.
- ⁴³ Heine-Geldern, R. *Ein Römischer Fund aus dem Vorkolumbischen Mexiko*. *Anzeiger. Der Österreichischen Akademie der Wissenschaften*, 1961, Nr. 16, pp.118-119.
- ⁴⁴ Court, C. *The Spread of Brahmi Script into Southeast Asia*. (In) *The World's Writing Systems*. Daniels, Peter T. & Bright, W. (Eds.) OUP, New York & Oxford. 1996, p.445.
- ⁴⁵ Mukherjee, B.N. *A Few Prakrit Inscriptions from South-East Asia*.

(In) *Jainism and Prakrit in Ancient and Medieval India*. N.N. Bhattacharyya (Ed.). Manohar. 1994.

⁴⁶ Ibid, p.85.

⁴⁷ Mahan, Joseph B. *The Secret*. Published by author. Columbus, Georgia. 1983.
See also *The Yuchi, American and Asian*. (In) *Across before Columbus* (Gilmore & McElroy Eds.). NEARA Publications. Edgecomb, Maine. 1998, pp.161-163.

⁴⁸ Johannessen, op. cit., p.122

⁴⁹ Barber, Elizabeth W. *The Mummies of Ürümchi*. Pan Books (Macmillan). London. 1999, p.207.

⁵⁰ Barthel, Thomas S. *Hindu-Maya Syncretism: The Palenque Focus*. Ibero-Amerikanisches Archiv, 1985, 11: 51-63.

⁵¹ Oppenheimer, op. cit., p.90.

⁵² Ray, Clayton E. *Pre-Columbian Horses from Yucatan*. (In) *Journal of Mammalogy*. American Society of Mammalogists. Vol.38. No.2., p.278.

⁵³ Mukherjee, op. cit., pp.83 & 85.

⁵⁴ Scullard, op. cit., p.127.

⁵⁵ Barber, Elizabeth W. op. cit., p.118.

⁵⁶ Steede, N. Paper presented at the 4⁰ Congreso Internacional de Mayistas. Antigua, Guatemala. 1998.

ACKNOWLEDGEMENTS

We are indebted to Phillip Leonard for his extensive research and study relating to the epigraphic elements discussed in this paper. Acknowledgements are also due to James Guthrie for supplying data relating to genetic factors. We are extremely grateful to both Phillip Leonard and James Guthrie for their reading of the draft text prior to publication, and for offering suggestions, advice, and further information.

FORMER PUBLICATIONS

Steede, N.: Catalogo Preliminar de los Tabiques de Comalcalco.(Preliminary Catalogue of the Comalcalco Bricks). Cardenas, Tabasco, Mexico. 1984. (Available from ESRS).

Steede, N.: Comalcalco: An Early Classic Maya Site. Published in "Across Before Columbus". (Gilmore & McElroy, eds). NEARA Publications. Edgecomb, Maine. USA. 1998.

Steede, N.: A Comalcalco Update. Published in "Epigraphic Society Occasional Papers". Vol.23. The Epigraphic Society. Vienna, VA. USA. 1998.

Eccott, D.: Comalcalco: Maya Innovation or Old World Intervention? Published in "Ancient American". Vol.3, issue 24. Colfax, Wisconsin, USA. 1998.

Eccott, D.: Comalcalco: A Case for Early Pre-Columbian Contact and Influence. Published in "Chronology and Catastrophism Review". The Society for Interdisciplinary Studies. Leeds, United Kingdom. 1999:1.

Correspondence addresses:

Early Sites Research Society

Neil Steede
ESRS
PO Box 4175
Independence.
MO. 64050.
USA.

Tel: 816 254 4658
email: Sidiggit@aol.com

David J. Eccott
66 Fleet Road
Dartford
Kent.
DA2 6JF.
United Kingdom.

Tel: (0)1322 226379
email: dave.eccott@virgin.net

PENNSYLVANIA UNIVERSITY
AND
THE COMALCALCO CONFERENCE

by

David J. Eccott

Readers who have studied the paper on Comalcalco that was written by Neil Steede and myself (*Migration & Diffusion*, Issue Number 5) will be interested to learn of the developments that surrounded a proposed conference on Comalcalco.

During August 2000, I visited Neil Steede in Missouri. During that visit, one of our main tasks was to prepare the paper on Comalcalco for *Migration & Diffusion*. Shortly before my visit, Neil had received an invitation from Dr. Victor Mair who was interested in holding a conference on Pre-Columbian transoceanic contacts between the Old and the New Worlds. Dr. Victor H. Mair is a Professor at the Department of Asian and Middle Eastern Studies at the Pennsylvania University and, together with Dr. J. P. Mallory of Queens University, Belfast, has recently co-authored *The Tarim Mummies*.

Neil Steede proposed a full day of presentations of subject matter relating to Comalcalco, and suggested that the conference be split into three parts: The first part would consist of presentations relating to direct evidence for Pre-Columbian Asiatic contact found at Comalcalco, the second part would deal with indirect evidence (consisting of papers delivered by Dr. Paul Tolstoy, Dr. David Kelly, Dr. Stephen Jett, Dr. Paul Shao, Dr. George Carter, Dr. John Sorenson, and Dr. Carl Johannesson), and the third part was to be a round table debate between the

speakers of the previous two sessions and the leading critics of diffusionist theories. These proposals were accepted by Dr. Victor Mair, and a date for the conference was set for May 4th, 2001. During the following months, various people were contacted and arrangements were made for the venue at Pennsylvania University.

Then, on December 27th 2000, Neil Steede received an e-mail from Dr. Mair. In the message, Dr. Mair expressed his deep regret that certain events had transpired that would now prevent the conference being held at Pennsylvania University. Dr. Mair explained that when he had discussed the content of the conference with the Executive Committee of the Centre for Ancient Studies, (the body that oversees such events at Pennsylvania University), they would not approve. According to Dr. Mair, their reasons for disapproval were partly to do with logistics, and partly to do with what they felt would be a lack of control over the proceedings. The Executive Committee's decision was final and could not be reserved. Dr. Mair said that he felt especially apologetic toward Neil Steede who had worked so hard to formulate such an interesting programme.

Although we are extremely disappointed by the fact that the Comalcalco Conference at Pennsylvania University had been cancelled, we were even more bemused by the reasons given by the Executive Committee for the cancellation. As stated above, apart from the pro-diffusionist speakers, we also had intended to invite those opposed to the

theories of pre-Columbian contact to participate in the round table debate. These opponents would have been gathered from some of the leading academic institutions in America. We had also intended to invite Dr. Ricardo Armijo Torres, the resident archaeologist at Comalcalco, whose views on Comalcalco are **not** predisposed towards diffusionism. Furthermore, a Professor of debate at Pennsylvania University (who was without a specific agenda) had been secured to monitor the round table discussion. We simply wished to present our evidence, and then give the critics ample chance to respond to, and debate, the various issues. We were to have public peer criticism of each paper. To avoid conflict, E.S.R.S. and I.S.A.C. were to co-sponsor the event, rather than the university itself. Therefore, we felt that we had done our utmost to ensure that the proceedings would be balanced and fair. Despite all of this, the Executive Committee at Pennsylvania University decided that they would not have sufficient control over the proceedings, and that part of their reasons for preventing the conference from taking place were connected to *logistics*, whatever that may mean.

I, personally, am especially concerned by the fact that the Committee was actually unwilling to listen. I apologize to the Executive Committee if that is not the case, but without a more detailed explanation it is difficult to see any other reason for the cancellation. Even more perplexing is the fact that the conference on the possibility of transoceanic contact is still to take place at the university in May, but Comalcalco cannot, for some reason, be considered amongst the various issues. With regard to this point, Neil Steede has asked me to convey that 'an institute of higher learning should be willing to consider the Comalcalco issue at whatever cost. Even if they thought that our evidence was misguided, they should have recognized the fact that other institutions were not only willing to listen, but were also participating. Are they all

wrong too? Real science explores for real truth.'

Whilst I admit that I am of the opinion that there was some form of contact between the Old and New Worlds prior to the time of Columbus, I do not feel that the possibility that ancient American cultures may have been in some ways influenced by Old World cultures should be in any way detrimental to the Amerindians themselves. It is known that there was continual, ongoing contact and influence between the ancient civilizations of Europe, Asia, and Africa, yet each individual culture still bears its own hallmarks, and each individual culture is still recognized for its own particular innovations. Such interaction cannot be accepted for one hemisphere, yet denied for the other. The oceans were not an impenetrable barrier for ancient man. Columbus himself was perfectly aware of this as is evident from his dairy entry for October 12th, 1492. This is not to suggest that the academic community should consider every inane theory thrown at them by the lunatic fringe, but they should be prepared to at least give fair consideration to serious data that has been honestly and thoroughly researched.

The indigenous American Indian has proved time and time again that he is, and was, perfectly capable of establishing his own intellectual momentum, but to refuse to even consider the possibility that he was also capable of accepting, developing, modifying, or rejecting, according to his needs, any alien trait that may have come his way, is also tantamount to denying the American Indian an ability to understand the psyche of an alien culture in the same way that Old World cultures understood the motivation of adjacent cultures in their hemisphere. Not only does it also deny a consideration of the contributions that the American continent may have made to the Old World continents, it also denies an attempt to investigate the full extent of human mobility and interaction in the distant past.

However, we are extremely grateful to Dr. Victor Mair, even though he may not necessarily share our opinions, for all his efforts in attempting to incorporate Comalcalco into the debate at Pennsylvania University. Dr. Mair has also made a very honourable gesture by providing us with the means by which we may eventually organize a subvention on Comalcalco. At present we are considering various ways in which we may achieve this. Perhaps, at some point in the future, a European university may be willing to debate the case for Comalcalco.

Finally, it must be said that we are greatly honoured to have had the support of such a professional as Dr. Victor Mair. His book, *The Tarim Mummies* (J.P. Mallory and Victor H. Mair. Thames and Hudson Ltd.), is essential reading for anyone who is seriously interested in the subject of ancient migration and diffusion.

Correspondence address:

David J. Eccott
66 Fleet Road
Dartford
Kent.
DA2 6JF
United Kingdom

Tel: (0) 1322 226379
email: dave.eccott@virgin.net