Intensive Gardening Among the Late Classic Maya

A Possible Example at Ixtutz, Guatemala

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The lowlying areas of the Southern Maya Lowlands of Mexico, Guatemala, and Belize were at one time crisscrossed with extensive agricultural field systems. Much recent work in the Maya area has focused upon these newly discovered agricultural features and their implications for Maya civilization (Harrison and Turner 1978; Flannery 1982). It would appear that the beginnings of these field systems date to the Maya Preclassic Period or prior to A.D. 900; they likely continued to be utilized until the onset of the Maya Postclassic Period or until about A.D. 1000.

Investigations undertaken on these widespread Maya field systems has tended to focus on their relationship to those field systems that are well understood in the North (e.g., Arthur 1971: 441). Even should any traces be left, one would be hard pressed to assign the term "garden" as the functional use for these remains. In spite of the inherent problems, it will be suggested here that a previously unexplored feature at the site of Ixtutz may have represented an intensive garden/orchard system of the Late Classic Maya and possibly be of ceremonial importance. Several alternative explanations for its function will also be considered.

GARDENS IN THE MAYA AREA

Infield gardening in the Maya area included orchards, gardens, and probably a mix of the two. The cultivation of trees (arbocultivation) has been noted by Puleston (1968, 1971) and can also be clearly derived from ethnohistoric sources. Speaking of the tree from the bark of which the Maya made balche' (a fermented drink), Landis noted that "all of them planted it in their yards or spaces around their houses" (1962: 196). The translation of Avendano's 1695 account (Means 1971: 156) also suggests the presence of farms or orchards associated with Maya houses. Roys (1943: 50-40) noted that "it seems likely that many vegetables now usually grown in patches in the fields were formerly cultivated in town gardens adjoining the houses." Ethnographic work in the Maya area confirms the existence of gardens among modern peoples with the types of these gardens varying slightly throughout the area. Wauchope (1968: 136) noted that almost every Yucatecan family has some sort of flower garden, although the plants that he described as growing in the garden—"virginia tobacco (virginia), sweet basil (elbacon), pepper (chili babanero), poppy (ya'ish), rose (loll), marigold, heart of cuajita, elobolo, and postres"—do not suggest a purely decorative garden. Wauchope also noted the existence of special vegetable gardens within some properties where onions, peppers, tomatoes, coriander, garlic, cabbage, epazote, and squash were grown. Onions and garlic were often grown in elevated gardens as protection from animals and fowl. Wauchope (1968: 132) noted that this platform type of garden was described for the 19th century Maya as well. Although more gardens are now made on the ground (Wauchope 1968: 40), the existence of cultivation in a hollow-log is also described by Redfield and Villa Rojas (1971: 35, 48) in the Yucatecan community of Chan Kom. They (1932: 38) mention that great pains were taken by the inhabitants of Chan Kom to raise vegetables in their gardens (separate from their milpas or maize fields) for use as condiments. In Chan Kom the men clear the little kitchen gardens and may help plant them, but the women water and weed them (Redfield and Villa Rojas 1971: 66). Both Wauchope (1938: 133) and Redfield and Villa Rojas (1971: 47) commented on the fact that Yucatecans highly prize fruit trees.

Much attention is given to fruit trees; seedlings are cared for and transplanted, and grafting is understood and practiced. Papayas (palt) are the commonest: these are easily grown and nearly every yard contains a few. Oranges (palk), both sour (mew) and sweet (chuchuk palk), limes, and grapefruit are not uncommon, and there are also several kinds of bananas (hane), custard apples (two varieties: chac cop and yaxap op), guavas (pich), pomegranates, guanabanas (pox), hog plums (abael)—of which there are three varieties: toxilo abael, abael, and turpans abael—chirimoyas (pox), sourcrops (tutzulpox) and guayos (uyan).

These trees may be enclosed in low rubble walls (Fig. 2). Even though some of the
INTENSIVE GARDENING IN THE SOUTHWESTERN UNITED STATES

While the known ethnographic examples of gardens in the Maya realm would not readily leave archaeological traces and were not necessarily used for subsistence purposes, the practice of intensive gardening in the southwestern United States was widespread. Although an analogy to the southwestern United States for the Maya area might be considered inappropriate because of the environmental differences, specifically the lack of water, the practice of intensive gardening in the southwestern United States is an example of this.
The site of Ixtutz, located in the southeastern Peten region of Guatemala, may provide an archaeological case of intensive gardening among the Late Classic Maya. Ixtutz was first visited in 1882 (Grahame 1980: 171) and was rediscovered over a century later in 1979 (Robertson 1972). In 1971 the site was mapped during a period of two weeks; it was later remapped by Ian Graham (1980); a composite of these two maps is presented in Figure 5. The site of Ixtutz evinces at least six architectural groups and at least 44 buildings (Figs. 6 and 7). Group A contains a building with a hieroglyphic panel (Fig. 8) as well as four carved stelae (Figs. 9 and 10). These monuments may be dated to between approximately 9.17.0.0.0. and 10.1.0.0.0.0. A.D. 770 to A.D. 950 in an 11.16.0.0.0.0. correlation.
Maya count, indicating that Ixtutz dates to the Late to Terminal Classic Periods of the Southern Maya Lowlands.

The most interesting feature of the site is unfortunately the one which is least known. Epipontal to Ixtutz is an area approximately 80 m. wide and 75 m. long which is bounded on all four sides (Fig. 5). Within this 6,000m. square area is a series of passages, chultums, and gridded areas roughly 2.5 m. on each side.

An intriguing section of the site is the entire, roughly square area bounded by the Acroporphic Causeway on the south, the North Causeway on the west, the Chapultepe Causeway on the north, and the platform terrace of Group A on the east. The area is completely level without any mounds. It was not possible in the limited time available to satisfactorily investigate this area, and only a 24 x 7 m. zone could be mapped. This zone was 6 m. north of the Acroporphic Causeway and parallel to it. This section contained four parallel rows of crudely cut stones about 20 x 30 cm. each which ran the entire 24 m. length, continuing an unknown distance both to the east and west. The first two parallel lines of stone were laid out 3 m. apart and the enclosed area was divided with similar stones at intervals of 3 and 2.5 m. if divisions of market stalls. A third and fourth set of parallel stone lines were laid out along the east side of this series of enclosures and appeared to be designed in the same general pattern but with variations as to the size of the compartments.

(Robertson 1972: 01)

As this central area represented a definite anomaly in terms of structural components of Maya sites, Ixtutz was again visited briefly in the summer of 1977 (by the authors and Julie Bentley) and the central component reviewed and a small portion mapped in detail (Fig. 11). The unmarked stones were not always laid out in formal rows, but were definitely squared and raised above the ground in roughly rectangular, usually contiguous, grids. Overall the area may be similar to that described by Cyrus Landell (1933: 73) for Campeche: "numerous areas in the forest ... appear to have been marked off by stones as if the entire region had been divided up into agricultural plots ... assigned for intensive cultivation." Alternatively, this area may have represented the remains of territorial plots or boundary walls, well known from the northern and eastern parts of the Yucatan Peninsula.

Although analogy may be utilized to suggest that the grid area at Ixtutz represents either arboriculture or a garden, other possible explanations for the use of this area would include market stalls (Robertson 1972: 91). Animal pens, beehive stands, grave plots, or some other phenomena. Following is a brief review of the archaeological formation processes involved in certain of these alternative possibilities.

Should the gridded area of Ixtutz have functioned as a market area, as suggested by Robertson (1972: 91), several conditions may be expected. For instance, markets may be expected to be associated with a hard-packed recognizable plaza surface with much artificial debris pious bust into it based on ethnohistoric and ethnographic analogy. It may also be expected that the soil would be very organic, as tested by phosphate analysis, as a result of the decomposition of spoiled and discarded produce. Workshop areas might also exist if the area served as a market. The gridded rock pattern would in this case have served as supports for perishable market stalls.

If this gridded area was proposed to function as an apiary, one might expect to find specialized vessels for collecting honey, specific areas for the processing of honey, and perhaps specialized pollen. Again, the grid rock pattern must be hypothesized to have functioned as supporting base walls, in this case for hives. If animal pens were the proposed function, the soil should be very organic and if pollen were present, it might be expected to consist of specialized feed pollen. No artifacts, other than perhaps water jars or dishes, would be expected unless butchering practices took place, in which case, broken flint or obsidian cleavers and knives as well as bone debris might be found. Packed floors should also result. The rocks would in this case have served as supports for pens.

Should the gridded area have served as grave plots, one would expect burials and perhaps a proportion of ceremonial artifacts such as conch ware. The gridded rock areas would in this case serve to delimit the grave plots.

For a garden area, specialized artifacts, such as water jars and perhaps weeding implements, may be expected and no particular restrictions imposed by the grid. The water table should ideally be high and the soil organic from possible use of household refuse as fertilizer. Because the area may reflect that an infilled garden would have served, specific kinds of pollen from specialty plants, as well as from mites, should be present. No large rocks should occur within the gridded area, but smaller ones may. The larger bordering rocks should serve to delimit the cultivated area and to maintain moisture within the plot.

Although this gridded area of Ixtutz may have served several of the above functions or perhaps some other purpose, both the extant archaeological data and the cited analogy support the likelihood that this locale could represent the remains of an intensive gardening/arborecture system. Preliminary investigations show that the gridded central area at Ixtutz is largely devoid of ceramics, both on the surface and underground (as evidenced by upturned trees). This fact tends to negate the use of the area as a market, but does not preclude it. No skeletal material was found in disturbed grave areas. No hard-packed surfaces or floors are evident within this central area and no large stones exist within the gridded areas. This would tend to preclude both a market area and animal pens. No workshop areas were observed nor were an abundance of specialized tools or vessel types noted. Additionally, this episcopal locale has a high water table. Further investigation and excavation are needed to test each of the above options, but at this point the Southwest gardens provide the closest parallel in form to the central Ixtutz gridded stone pattern.

IMPLICATIONS

Irrespective of whichever of the alternative functions considered above applies to the Ixtutz gridded area, the location of this feature in the site is significant. The locale in which the feature was placed is bounded by four architectural groups. Plaza A to the east, now covered with stelae and one plain stele and is of obvious 'ceremonial' import. Group C, located to the west, contains one plain stele. The gridded area itself is bounded to the north, west, and south by the main causeways of the site of Ixtutz; to the east, it is bounded by the northern terrace of Plaza A. The area, then, is central to the site of Ixtutz and its location needs interpretation or explanation.

The existence of a garden as suggested by analogy, then its central placement at the site of Ixtutz would imply that the items cultivated within this area were of special importance to the Maya. The plants could have been used for offerings of food or drink, for incense, or for food for the 'high status' occupants of the neighboring plaza areas. Lundell (1933: 07), in discussing modern Maya gardening in Campeche, noted that plants used in religious ceremonies tended to be centrally located in Maya communities: "the village meeting house is surrounded by ornamental plants such as the tree called flor de mayo (Plumeria sp.), planted for its beautiful yellow, white, and rose-colored flowers which are used chiefly in religious ceremonies connected with agriculture."
The association between Maya religion and cultivation is well known. Several Maya stelae (Figs. 12 and 13) show Maya laborers scattering what may be kernels of maize in a ritual activity—perhaps maize grown specifically for ceremonial and sacred purposes in a garden like the postulated example at Ixultz. The use of these ceremonial gardens by the Hopi (Hack 1943; Forde 1931) and by present-day Mesoamericans (Anderson 1952) to provide plants important for ritual purposes has been noted. It is probable that special maize was grown for Maya first fruit ceremonies (pibilnaha) or for use in the divinatory kits of the Maya priests. Although maize (Fig. 14) was especially important to the Maya, other plants and trees of ceremonial or magical importance to the Maya may also have been grown in special ritual gardens. Careful analysis of soils at Ixultz may reveal what plants were grown in such gardens during the Classic Period.

**CONCLUSION**

The epicentral portion of the site of Ixultz contains a configuration which appears to conform to historic, ethnographic, and archaeological descriptions of intensive gardens, particularly when assessed against southwestern United States analogies are used to complement information from the Maya area. Further research is clearly necessary to the grid pattern at Ixultz to test this and other possible functions. If the central location of the features is any indication of importance, such research should also provide new insight on items which the Classic Period Maya prized. Additionally, it might provide a further indication of the important relationship between ritual and cultivation among the Maya, for if the identification of the gridred feature at Ixultz serves as a garden proves to be correct, this relationship would appear to have been manifested in the actual organization of the site.

It is hoped that the attention paid to the Ixultz gridred area will lead to the recognition of similar low and almost invisible features elsewhere in the Maya realm regardless of their necessity. The above discussion of intensive gardens should, irrespective of the outcome in this individual case, be indicative of the possibility for future work on the investigation of infilled gardens. This is significant because any archaeological consideration of small scale gardens is likely to provide information on Maya agricultural practices complementary to that provided by the present research on the larger field systems.

**Bibliography**


Redfield, R., and A. Villa Rojas 1934 Mexico, University of New Mexico Press, Albuquerque.


