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## 24 **DENUDED LANDSCAPES AND EXPOSED NEIGHBORHOODS: RESULTS OF THE 2022 VALLEY OF PEACE ARCHAEOLOGY PROJECT**

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*Much of the Valley of Peace Archaeology (VOPA) project area, encompassing the center of Yalbac to the south, the pilgrimage destination of Cara Blanca to the north (owned by The Belize Maya Forest Trust as of late 2020) and rural areas in between that were home to farmsteads and elite residences, has recently been deforested for agricultural purposes exposing hundreds of mounds. Here we present the results of the 2022 VOPA salvage archaeology operations (excavations of 14 rural residences) in an area between Yalbac and Cara Blanca that yielded information on ancestral neighborhoods. One of the major benefits of this project is our contribution to recording ancestral Maya culture heritage one neighborhood at a time, which not only preserves their history, but also reveals lessons from the past. Even when Maya population peaked c. 600-800 CE in the Late Classic period, the Maya endured because of their diverse and sustainable practices.*

### **Introduction**

Gordon Willey and other pioneers of settlement archaeology followed more recently by LiDAR mapping have transformed Maya settlement studies. No method, however, can recover settlement data if history is being erased—as it is in various parts of Belize (Fedick 1996), including central Belize. After a destructive hurricane in 2010 and subsequent wildfires destroyed most hardwoods, Yalbac Ranch, a sustainable logging company, sold over 30,000 acres to the Spanish Lookout Community Corporation (SPLC) in 2014. SPLC has since clear-cut thousands of acres for agricultural purposes and continues to do so, including much of the Valley of Peace Archaeology (VOPA) project area encompassing the center of Yalbac to the south up to the pilgrimage destination of Cara Blanca to the north (owned by the Belize Maya Forest Trust as of late 2020), and rural areas in between. In the process, they have exposed hundreds of ancestral Maya farmsteads and elite residences with long occupation histories (c. 300 BCE-1100 CE) (Benson 2017). And since the Maya would ritually raze houses and rebuild in the same place about every 20 years and bury their deceased family members beneath house floors (Ashmore 1981), we lose 20 to 40 years of a family's history each time farmers plow. Our salvage operation is thus vital to collect as much information before additional history is erased.

One fact is clear. Even when Maya population peaked c. 600-800 CE in the Late Classic period, the Maya remained resilient because of their diverse and sustainable practices

that did not result in extensive deforestation, as evident in their long occupation histories. In this paper we present the results of the first (2022) of three seasons of salvage archaeology in the VOPA area where we were able to excavate 14 ancestral Maya sites in three different areas or neighborhoods (MF1, MF5, and MF2).

### **2022 Salvage Operations**

The sites selected for excavations over the three-year period (2022-2024) reflect the percentages of types surveyed in 2014 and 2016: 29% Type 1 (n=13); 41% Type 2 (n=19); 24% Type 3 (n=11); and 5% Type 4 (n=2) (Figure 1). As Table 1 shows, the site types are determined by size, construction materials, and layout. In 2022, we ran three concurrent salvage operations and excavated 14 of the 15 planned sites (Table 2).

Early on we realized that we could take the opportunity to excavate several structures of the same neighborhood or community. A neighborhood is defined as “a group of co-located residents with frequent, repeated face-to-face social interaction...of ~3-25 households (or under 500 people...)” (Thompson et al. 2022:6). That said, mounds still had to near roads so as not to interfere with growing crops.

Some mounds have become smaller since they were first classified in 2014 due to mechanized farming (Table 3). Given that ceramics dating up to 900 CE and arrow points dating to the Postclassic (c. 1100+CE) were recovered in 2016 (Benson 2017; Ferree and Benson 2017; Kosakowsky 2017), and that many

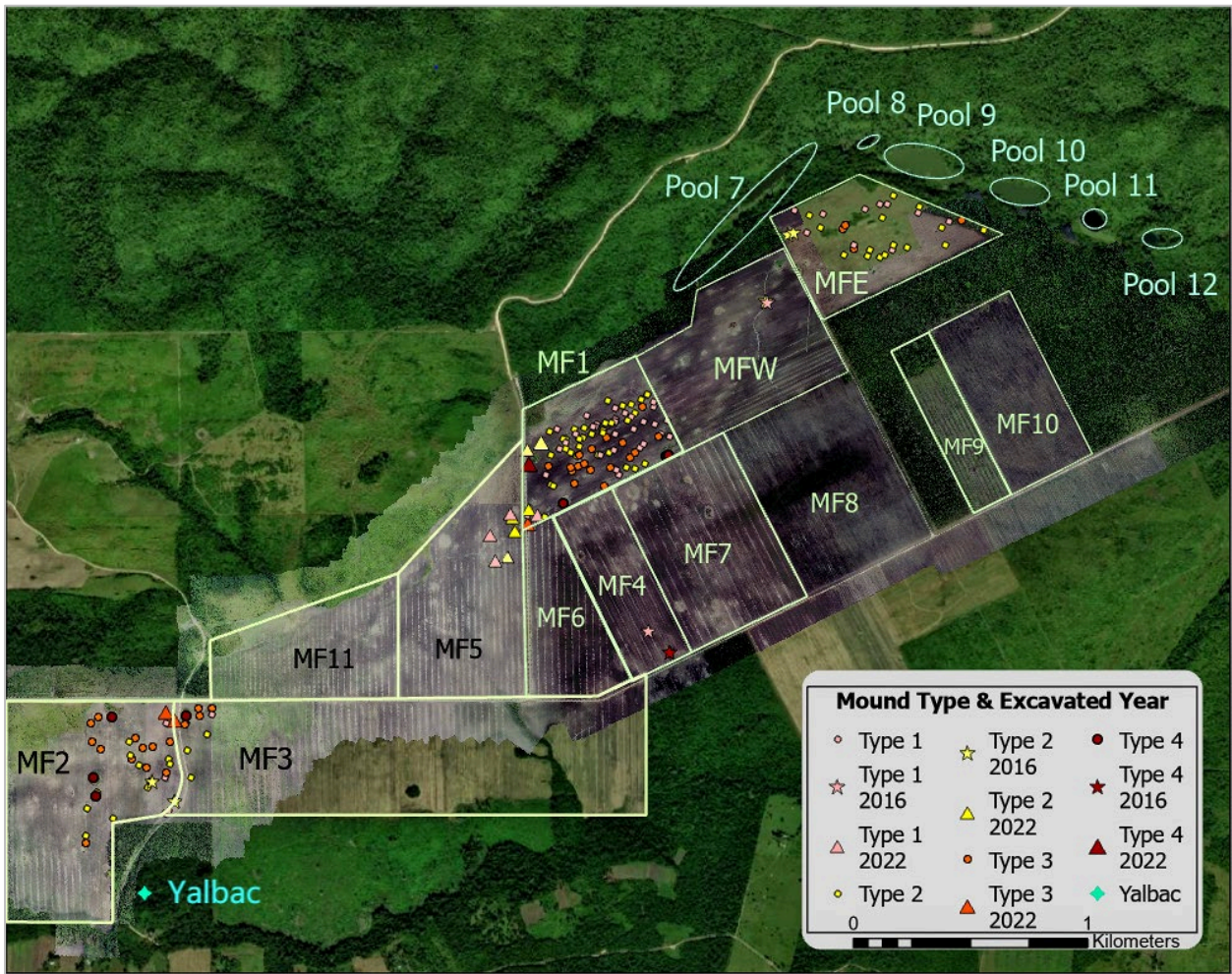


Figure 1. Drone and GIS Google with sites excavated in 2016 and 2022.

Table 1. Site types (revised from Benson 2015).

Type 1	Small, low scatters of cobbles, no cut stone; c. 0.5 m or less in height
Type 2	Mounds ranging from 0.5 to 1.5 m tall; cobbles, no obvious cut stone
Type 3	Mounds c. 1.5 m or taller; cut stone
Type 4	Large, multi-structure (3-4 structures) surrounding patio; similar to Type 3 but on raised platform

Table 2. 2022 excavated mounds.

	Type 1	Type 2	Type 3	Type 4	Total
Year 1- 2022	4	6	4	1	15
Achieved 2022	4	6	3	1	14

locations excavated in 2022 lacked a strong Terminal Classic component, we estimate that plowing has resulted in over 100 years of lost ancestral Maya history.

The land has been leveled by bulldozers with a giant chain attached between them (i.e., the chaining method), after which logs and debris were piled up and burned and then farmers

**Table 3.** 2022 excavated MF mounds, type, status, and occupation history

Site	Type/year classified	Current Type	Status	Occupation history
<b>MF2-34</b>	3/2022	3	Unplowed w/ piled flat boulders	Late Preclassic-Late Classic (300 BCE- post-700 CE)
<b>MF2-35</b>	3/2022	3	Unplowed w/ piled flat boulders	300 BCE- post-700 CE
<b>MF1-1</b>	3/2014	2	Plowed	300 BCE- post-700 CE
<b>MF1-3</b>	2/2014	2	Plowed	Late Preclassic-Terminal Classic (300 BCE-900 CE)
<b>MF1-4</b>	1/2014	1	Plowed	300 BCE- post-700 CE
<b>MF1-22</b>	4/2014	4	Unplowed	300 BCE-900 CE
<b>MF1-86</b>	2/2014	2 (barely)	Plowed	300 BCE- post-700 CE
<b>MF1-92</b>	2/2022	2 (barely)	Plowed	300 BCE-600 CE
<b>MF5-1</b>	2/2022	2	Plowed	300 BCE- 900 CE
<b>MF5-2</b>	2/2022	2 (barely)	Plowed	300 BCE- post-700 CE
<b>MF5-3</b>	1/2022	1	Plowed	300 BCE- post-700 CE
<b>MF5-4</b>	2/2022	2	Plowed	300BCE- post-700 CE
<b>MF5-5</b>	1/2022	1	Plowed	300 BCE- post-700 CE)
<b>MF5-6</b>	1/2022	1	Plowed	300 BCE- 900 CE

carried out heavy-duty mulcher crushing, spreading the remaining debris (see Brouwer Burg et al. 2016). Heavy machinery churned up soil, exposing and reconfiguring architectural features and artifacts.

We had to learn about plow archaeology and plow architecture (see Brouwer Burg et al. 2016)—roots, time, plowing (at least 20 cm deep), and the weight of the plow and other heavy machinery really churned up the sites. There was also lateral drag that spread out mounds that resulted in mixed deposits and mound shifting—for example, at MF5-2, a Type 2 site, we placed two trenches through what we thought was the mound center. As we excavated, we realized that the site center was several meters to the west. Plowing had transformed the mound's configuration. In another example, MF5-7 (not measured or excavated) has a 35.1 m plow drag. 'Below surface' measurements also took on an entirely new meaning—'below plowed surface' is more accurate. We also noted that farmers had sheared the edges of larger Type 3 mounds and Type 4 platforms.

### Excavations

Excavations focused in three mound fields (MF1, MF2, and MF5) due to their proximity to each other and roads (see Figure 1). We also chose them because of their diversity in mound types. At each mound we usually excavated two c. 1 m-wide trenches, north-south and east-west through the center of each mound. We collected diagnostic ceramics (rims, flanges, bases, decorated sherds, etc.), obsidian, jade, fauna, and marine shell. We only counted and photographed chert flakes and cores, non-diagnostic body sherds and groundstone for grinding maize, after which we placed them in the backfill. We exposed six burials that date to c. 700-900 CE and removed all except Bu. 6 and part of Bu. 5 at MF1-22—a protected Type 4 site that is not in danger of being destroyed.

The earliest ceramics date to the Late Preclassic and Terminal Preclassic periods (Chicanel and Floral Park: 300 BCE to 250 CE). However, these earlier ceramics only appear in later mixed contexts, which may be the result of plowing in some cases. The first evidence of

strong occupation occurs in the Early Classic (Tzakol: 250 CE) and continues uninterrupted through the Late Classic (Tepeu 1/Tiger Run) until sometime in the 9<sup>th</sup> century CE (Tepeu 2-3/Spanish Lookout 1-2). The Preclassic and Early Classic ceramics show linkages to the Petén, northern Belize and the Belize Valley, though by the Late Classic (post 700 CE) linkages to the Belize Valley appear stronger (Ball in Gifford 1976). Not all mounds have a strong Terminal Classic (Tepeu 3/Spanish Lookout 2) component, likely due to plowing.

MF1 excavations consisted of four Type 2 mounds, one Type 1 mound, and one Type 4 mound (see Table 3). MF1-1 (8.2 x 6.81 m, c. 1.46 m high), previously a Type 3 and now classified as a Type 2, showed several phases of architectural construction dating from 300 BCE to post-700 CE. We uncovered three identifiable plaster floors with small cobble fills (with artifacts) between them, an interior wall orienting east-west, a well-made, cut stone exterior wall orienting north-south, and lots of large boulders on the east exterior, suggesting fill for a large exterior platform. One of the top floors (c. 25 cm below ground surface) was initially not distinguishable from the surrounding matrix, though we did identify it in the profile. We found the cut stone interior wall when we followed out this first floor. Most of the artifacts are ceramic sherds, especially in the lower layers. From the topsoil, we noticed a greater variation in artifact types (e.g., flakes, cores, a broken biface, etc.).

MF1-3 (10.98 x 11 m, c. 1 m high) dates from c. 300 BCE-900 CE and did not appear to be as well-constructed as MF1-1. The cobble fill was much less uniform, and the walls and several plaster floors were much more degraded, less defined, and constructed with walls largely of uncut small and large boulders. Additionally, the artifacts were more varied and included several lithic tools, chert cores and flakes, some soft and sandy stones, and ceramic sherds. At c. 47 cm below the surface level on the south edge of the south trench, we came upon plastic wrapping and glass shards beneath what we thought was a floor or platform fill. This discovery made us reevaluate the extent of the damage caused by modern agricultural practices.

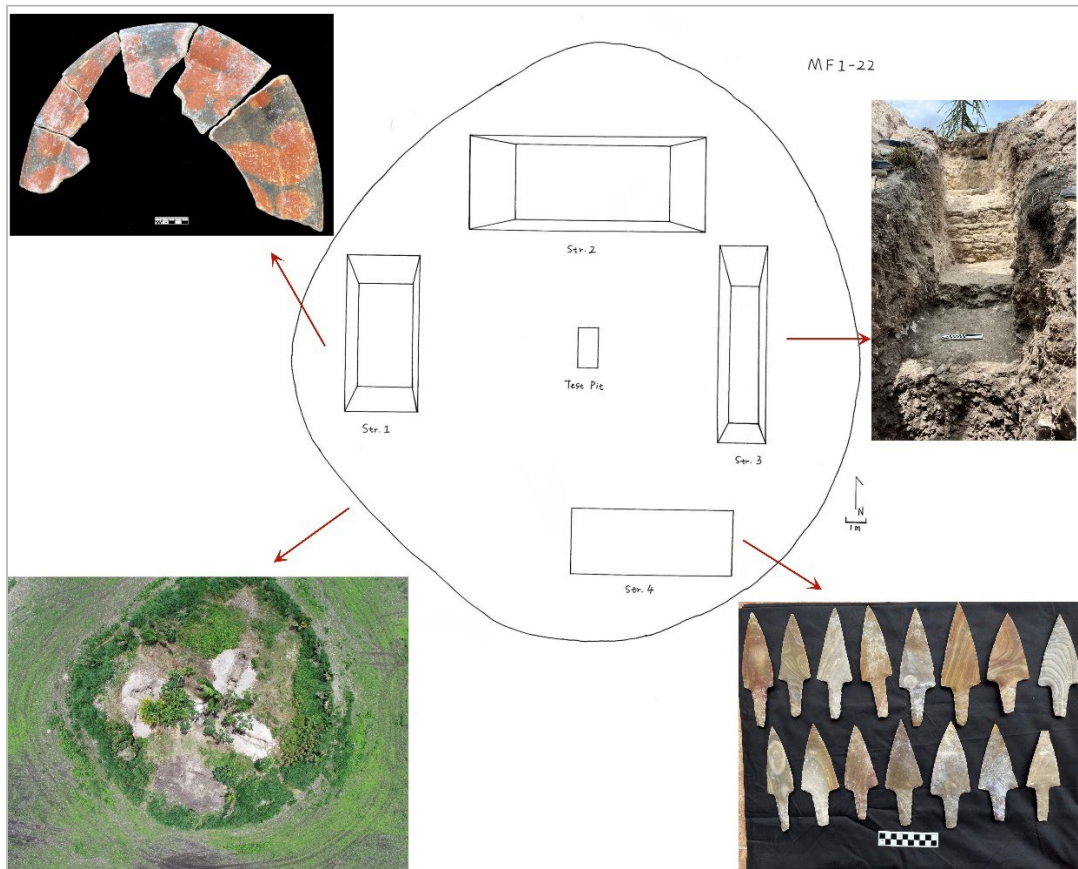
In contrast to the two previous mounds, MF1-4 (300 BCE to post-700 CE), a Type 1

mound (2.55 x 2.48 m, c. 0.10 m high), had less identifiable plaster floors and stone walls or features. The artifact density appeared to be higher, though we postulate that this could be due to their highly fragmentary nature and surface proximity as the result of plowing. Despite locating a single, degraded plaster floor, some cobble and pebble fill on what appears to be the exterior of the structure, and small burned patch of floor, we found no additional defining features like walls. It may be worth doing quantitative analyses as outlined in Thompson et al. (2022) to generate discussions about the spatial relationships between these structures. MF1-4 is close to the other two structures just described, but have no similar architectural features, which may indicate it served for storage, cooking, or some other non-residential function.

MF1-86 (barely a Type 2 at 5.4 x 5.7 m and 0.79 m high) and MF1-92 (also barely a Type 2 at 5.7 x 7.46 m and c. 0.67 m high) are probably the worst defined mounds and were severely damaged by mechanized farming. MF1-86 dates from c. 300 BCE to post-700 CE, and MF1-92 to c. 300 BCE to 600 CE. We collected an abundance of ceramics and other artifacts in deeply mixed contexts, but without any defining architectural features. This makes interpretation difficult, though their proximity to the Type 4 MF1-22 and other structures with more clearly defined architecture could suggest that these two mounds may have served as storage or kitchen structures. However, we did not find many faunal remains or other types of discarded material, so their use is currently unclear.

MF1-22 is the largest and most complex site we excavated, unsurprising since it is a Type 4 site—a platform (height, c. 0.57 m) on which the Maya built four structures (Figure 2). In the initial phases of excavation, we were only aware of three structures, but after a site visit from Josue Ramos, he informed us that there was a smaller fourth structure on the south side that had been bulldozed in the recent past. In addition to placing a center trench perpendicular to their length in each of the four structures (Strs. 1-4), we excavated a 2 x 1 m test unit in the plaza center for chronological purposes. We also noticed that there were steep slopes behind Strs. 2 and 3, perhaps exacerbated by plowing shearing off platform edges. Based on the diagnostic ceramics





**Figure 2.** MF1-22 planview and drone photo, ‘Daylight Orange’ dish from Bu. 5 in Str. 1, Str. 3.

we recovered, the Maya occupied MF1-22 from c. 300 BCE to 900 CE.

Str. 1 (height, 1.16 m) is the next tallest after Str. 4 (height, 0.59 m) and sits on the west side of the platform. It appears to have an outset wall on the north and south edges, as well as a large ceramic deposit (over 300 sherds) on the exterior of the south outset wall. This dense concentration of sherds that covers the entire time range of occupation, and did not include complete vessels and may or may not have been purposeful. We excavated some of this ceramic deposit, but decided that since this site was protected, that we had no need to go any further. In the center of the structure we uncovered a burial (Bu. 5). The orientation of the individual was difficult to ascertain as the matrix was quite loose and defining the remains grew increasingly difficult the more we excavated. However, it did appear to be the best preserved of the burials we uncovered since we were able to see and recover smaller bones like phalanges and vertebrae. After

removing a portion of the remains for analysis, we left the rest of the remains *in situ*. Associated with Bu. 5 is an almost complete Daylight Orange bowl.

Str. 2 (height, c. 1.97 m), which lies on the north side of the platform, had a series of floors and east-west walls that were uncovered along with what we think is a plastered bench near the bottom of the platform (c. 1.05 m below the surface) that appears to have been constructed before the walls. It continued to the south much farther than we had anticipated, and we were unable to determine its extent due to time constraints. Immediately below the bench lay another plaster floor (c. 1.18 m below surface), which we realized was probably an extension of the central plaza floor because of their similar color and texture. In the north wall profile on the trench, we noticed a plaster floor near the top and heavily degraded that we missed while excavating.

Str. 3 (height, c. 2.14 m) sits on the east side of the platform and is the tallest and best constructed. Strs. 3 and 2 are quite close to each other, and there may have been a covered walkway connecting them. There are minimally four plaster floors, as well as several walls of uniform cut stone. There were artifacts present within the structure fill, though nothing of note. At the trench bottom we recovered several small and currently unidentifiable faunal remains from the west wall.

Str. 4 on the south side of the platform, while barely perceptible on the surface, yielded the most unique deposits. On the north side we uncovered Bu. 6, which we ultimately decided to leave *in situ* for similar reasons to Bu. 5, though we did extract a few bone samples for isotopic analysis. Additionally, we recovered fifteen stemmed macroblades stacked on top of one another that essentially fell out of the south wall while excavating. They show no use wear and are made with fine chert; the Maya likely manufactured them specifically for caching. They did not appear to be associated with the burial, but we did find some fragmented faunal remains near the stemmed macroblades, which upon further analysis may end up being significant. On site, they appeared to be of to a large mammal, likely deer.

Finally, we excavated a 1 x 2 m test pit in the center of the MF1-22 plaza. The first floor we encountered was deeper than expected, suggesting that the bulldozer may have removed the most recent floor(s) and fills. Because this floor was so deep (c. 65 cm below surface), we decided to continue excavating a 1 x 1 m unit (north side) so we had some means of getting out of the test pit. Under the initial floor discovered, we found another floor 1.13 m below surface that had three replastering events in close sequence and with no fill between them (i.e., four floors starting at c. 1.13 m below surface). After the fourth replastering, we came upon a cobble fill with few artifacts and then what appeared to be topsoil c. 1.5 m below. After excavating into this ‘topsoil’ 15 cm without finding artifacts, we closed the plaza unit. The total depth of the plaza test pit was at 1.65 m below surface with ceramic dates ranging from c. 300 BCE to 900 CE.

The diversity in the construction of not only the four structures of MF1-22, but the other



**Figure 3.** Drone photo of MF5-1, 1 m scale north (right side)-south.

MF1 mounds, suggest that despite their geographic proximity, each of these households had differential access to or different preferences of construction materials, and different experiences in design and construction. The lack of uniformity across these structures paints a dynamic portrait of different lives in close proximity to both the pilgrimage destination of Cara Blanca and the urban center of Yalbac.

Separated from MF1 to the west by a 3 m wide dirt road is MF5 (see Figure 1). We excavated six mounds (three Type 1 and three Type 2) with four burials (see Table 3). The mounds in this area have been severely damaged by mechanized farming and upper architectural features have been destroyed. According to Google Earth, MF5 was still forested until 2017. MF5 mounds have not been mapped or classified in previous seasons, so we do not know their original dimensions and classification. However, on the 2018 Google Map, several mounds that no longer exist in 2022 appear to be Type 3. The soil of MF5 is black and clayey with poor drainage compared to the other fields. In general, there is a notable lack of architecture, which is more likely due to mechanized farming rather than natural formation processes.

MF5-1 (c. 8.35 x 10 m, .99 m high), a Type 2 mound, does not appear to be residential and dates from c. 300 BCE to 900 CE (Figure 3). It was exquisitely built with several well-made plaster floors and straight cut stone interior walls and rounded on the exterior. On the west side, we revealed two walls made of boulders separating an additional external “room” with a

limestone cement and steps constructed of a row of three boulders oriented north-south. In addition, we collected several human skeletal fragments in the west interior wall but did not find additional remains below. The central room appears to be empty of features and is covered by a c. 4 x 4 m plaster floor rebuilt several times with only a few small sherds and chert chunks in the fill. On the south side, the Maya added two cobble walls to make the south corner more circular and included ceramics and lithics, including half of a hematite disk with a drilled center hole. On the north edge, a gibnut-sized animal bone was found. It is also worth noting that the soil of MF5-1 is consistent throughout: yellow (Munsell 10YR6/3), clean and loose—quite different from the black, MF5 clayey soil.

Based on its clean central room, its relatively few artifacts, its unique circularesque shape and pure yellow fill, we posit that MF5-1 served not as a typical residence but rather a public community center for ceremonies and other neighborhood events. The Maya likely used the west room with the most artifacts as storage for ceremonial paraphernalia.

To the north of MF5-1 c. 3.5 m distant is MF5-3, a Type 1 mound (c. 2.84 x 3.06 m, .20 m high), that dates from c. 300 BCE to 900 CE. Given its small size, we posit that MF5-3 did not serve as a residence, but rather an auxiliary structure for MF5-1. However, there was a noticeable number of artifacts on and near the surface. The non-plastered floor was compact and difficult to excavate, which may be the result of heavy-duty agricultural machinery. After removing the topsoil, which contained large amounts of household items and agricultural implements (e.g., ceramics, *manos* and *metates* fragments, bifaces, etc.), we exposed two burials, Bu. 1 in the south and Bu. 2 to the north.

Beneath two partial inverted ceramic bowls (one Rubber Camp Brown and the other Garbutt Creek Red), pebbles and freshwater shells in Bu. 1, we collected human skeletal remains oriented c. 20°. Exposed to plowing, the remains close to the surface were fragile and poorly preserved with barely identifiable parts. Based on the general layout of the human remains, we think Bu. 1 was of a flexed adult. Similarly, after removing several boulders in the north, we found a human tooth and several long

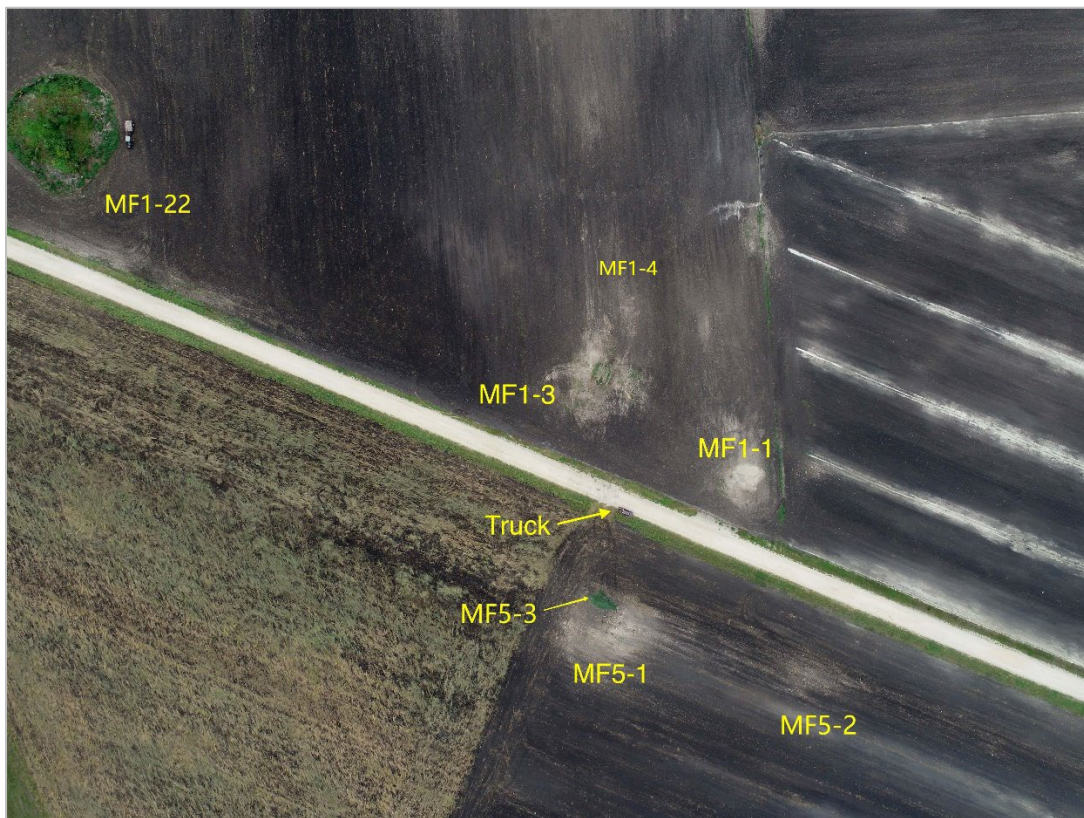
bones (Bu. 2), followed by several obsidian blades. However, when we expanded excavations, we did not find additional human remains. We collected all human remains from both burials since they were at a risk of additional damage.

To the south of MF5-1 are two contemporary Type 2 (barely) mounds, MF5-2 (c. 5.64 x 4.25 m, .7 m high) and MF5-4 (c. 6.1 x 7 m, .5 m high). We exposed little obvious architecture at MF5-2—no walls or plaster floors despite using the same trenching techniques as the other structures. But we did recover a noticeable number of artifacts, including diagnostic ceramics that range from c. 300 BCE to 700 CE and lithics (e.g., a jade ax, chert hammerstones, bifaces, chert chunks and flakes, a chalcedony or alabaster fragment, etc.).

MF5-4 consists of a series of well-made plaster floors (the uppermost one was c. 5 cm thick) and linear exterior cobblestone walls including a double wall (a narrow porch?), also dating from c. 300 BCE to 700 CE. However, it has been severely altered by plowing: the original mound center was shifted further west over meter based on the layout and orientation of the plaster floor. Also, the exterior walls may have been shifted or damaged by plowing. On the south edge of the mound, we found several sherds from a highly eroded Portia Gouged Incised vessel (similar to Ahk'utu' molded-carved) with a human figure that mimics fine orange molded-carved ceramics from the Terminal Classic in the Petén (Ting 2018), as well as several marine shells.

While excavating below the top center lower plow fill and finding a green jade bead, we came upon a pale gray (Munsell 10YR3/2) plaster floor with a circular hole the Maya had cut to place a deceased individual (Bu. 3) that would have originally been in the center of the structure as far as we can tell (plow shifting resulted in Bu. 3's current location on the east side). Unlike the other burials, Bu. 3 was articulated and in good condition with few burial goods. This individual was placed on their left side, curled up with the right side of the body facing up (a flexed burial). The individual's hands appear to be tied behind their back. Due to time constraints, we only collected the exposed bones and a few teeth rather than expand excavations. We also collected two





**Figure 4.** MF1 and MF5 'neighborhoods'.



**Figure 5.** Drone photo of MF2-24, MF2-34, MF2-35, MF2-36, and the cave system



bags of screened soils from Bu. 3 for paleobotanical and humic acid analysis.

MF5-5 and MF5-6 are both Type 1 mounds near MF5-4. They were both quite rocky, with pebble fills and a large number of ceramics and chert agricultural tools indicating that farmers had lived in them (i.e., farmsteads). We found few architectural features, likely because of plow damage, especially at MF5-6. At MF5-5 (c. 4.97 x 4.58 m, .05 m high), we exposed three plaster floors; the middle one was not clearly defined. After removing the top floor, we came upon a concentration of ceramics on the northwest side. In the north floor profile, we also found a few fragments of large mammal bones, possibly deer. The Maya cut a circular hole in the plaster floor and placed an adult person (Bu. 4) beneath the cobble fill above the third floor in the mound center. The skeleton is oriented c. 300° with the skull to the south. The individual is in a flexed position, on their back, with their legs curling up on the upper body. We collected the humerus, left and right radius and ulna, and the pelvis. Due to the poor preservation, the remainder of the skeleton was too fragile to remove. Although we excavated deeper near the skull and screened the soil, no teeth were found. We think the ceramic concentration was associated with Bu. 4, but was displaced by plowing. Diagnostic ceramics date MF5-5 from c. 300 BCE to 700 CE.

At MF5-6 (c. 3.49 x 4.24 m, .07 m high), in addition to ceramics, groundstone and chert lithics, we recovered four crystalized stones, likely from a cave or water system. According to a landowner of MF5, there is a spring nearby to the northwest. It reminded us of the dry, collapsed cave system we found in MF2 (see below), which could indicate interaction between these neighborhoods. Ceramics show that the ancestral Maya continuously resided at MF5-6 from c. 300 BCE to 900 CE.

MF5 mounds certainly beg the question as to whether the features we excavated were shaped intentionally by the ancestral Maya, damaged and shifted by modern agriculture, or a combination of the two.

A neighborhood or community is created when residential groups in close proximity establish social identities through kinship, religion, and administration and subsistence

cooperation (Smith 2010; Thompson et al. 2022). The Maya may have conducted public rituals or administrative affairs at the possible community building (MF5-1) that connected local families in the area (Figure 4). Furthermore, MF5-1 and its neighboring sites (MF5-2, MF5-3, MF1-1, MF1-3) formed a “face-block,” which can be defined as a “small neighborhood based on community layout where households facing each other across a street form a social unit” (Thompson et al. 2022:6).

While MF2 is further away from both MF1 and MF5 areas (see Figure 1), these mounds were chosen based on their type (Type 3), their proximity to the road, and their being unplowed. We were hoping to reveal a complete building construction history to compare to plowed mounds to see how much of the latter’s history has been plowed away. We excavated portions of two mounds (MF2-34 and MF2-35), surface collected one (MF2-24), and also noted a collapsed cave system nearby (Figure 5).

Abutting the south side of MF2-34 (7.44 x 8.0 m, 2.3 m high) is a pile of large flat boulders. Farmers bulldozed them against the structure to clear the surrounding area for farming, which has slightly obscured the mound size and configuration making it appear larger (the dimensions do not include the boulder pile—they would add an additional 11 m to its north-south measurement). After removing the topsoil on to the mound summit, we revealed a massive flat stone similar to the stacked boulders, but much larger; in fact, the flat stone appeared to cover the entire summit (c. 4 x 4 m). Where necessary the Maya had added plaster c. 6-7 cm thick manufactured from tufa (10YR84) from the cave system to even out the surface—it could have served as another community building. Artifacts are predominantly ceramics, ranging from c. 300 BCE to 900 CE.

MF2-35 (3.69 x 8.8 m, 1.52 m high) has an odd shape—it almost looks like two mounds conjoined in the center. There is also boulder pile to the east (c. 3.46 x 4.43 m). We decided to excavate an east-west trench along the longest part of the mound to expose as many architectural features as possible. We came upon a wall almost immediately that was oriented north-south near the center of the structure that appeared to be placed haphazardly on top of a nicer wall oriented

to the east-west. We also found an east-west 'path' that the Maya appeared to have cut through a plaster floor c. 50 cm below surface. Artifacts consisted primarily of ceramics that date from c. 300 BCE to 900 CE, some in clusters near the walls and above the floor.

Near to the collapsed cave system, the Maya built a Type 1 mound (MF2-36) beside and over one of the smaller cave entrances. We do not know its original size. We suspect that plowing and bulldozing caused the collapse of the surrounding area, including the cave system and what likely was a spring that is now dry. Most of the tufa and large flat boulders we found at MF2 sites likely came from this cave system.

### **Concluding Remarks**

The fact that we still find so many mounds despite all the plowing is a testament to their longevity—and the positive relations the ancestral Maya had with their nonhuman neighbors—soils, water, forest, fauna, etc. The lack of any obvious agricultural features in drone images and from ground checking highlights two things: 1) there was plentiful fertile soils that did not require intensified agricultural strategies (e.g., ditches, terraces, etc.); and 2) the Maya maintained soil fertility through a different kind of collaboration than we see presently, which is not sustainable in the long run.

One of the major benefits of the VOPA salvage operation is our contribution to recording ancestral Maya culture heritage one neighborhood at a time, which not only preserves their history, but also reveals lessons from the past (see Coningham and Lucero 2021). The past embodies practices, challenges, strategies, successes, and failures from which to devise sustainable solutions to address current problems of, for example, deforestation (Lucero and Gonzalez Cruz 2020). Diversity is key, at all scales; thus, identifying and evaluating diverse strategies considering current and future needs are critical.

Ancestral settlements are at the mercy of looting, urban sprawl, and increasingly the need to feed growing populations by expanding agricultural fields and grazing lands (Fedick 1996). "The slash-and-burn cultivation practiced by most farmers in Belize does little damage to archaeological sites. In contrast, mechanical

cultivation rapidly destroys the mounds that contain otherwise well-preserved remains..." (Fedick 1996:2). In the face of this growing threat, all we can do as archaeologists is to collect information as quickly and comprehensively as possible. Salvage archaeology programs will become increasingly critical in this endeavor. As Brouwer Burg and colleagues note (2016:21), that once mechanized machinery begins, "there is a limited window of 10-15 years for archaeological discovery, documentation, and investigation." Ironically, most non-Maya mechanized farmers only buy or lease land with lots of Maya mounds because they know that ancestral Maya were expert farmers who knew how to select the best soils for agriculture.

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