

NEWSLETTER

The Institute of ARCHAEOLOGY Siegfried H. Horn Museum



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INSTITUTE OF ARCHAEOLOGY
HORN ARCHAEOLOGICAL
MUSEUM
NEWSLETTER

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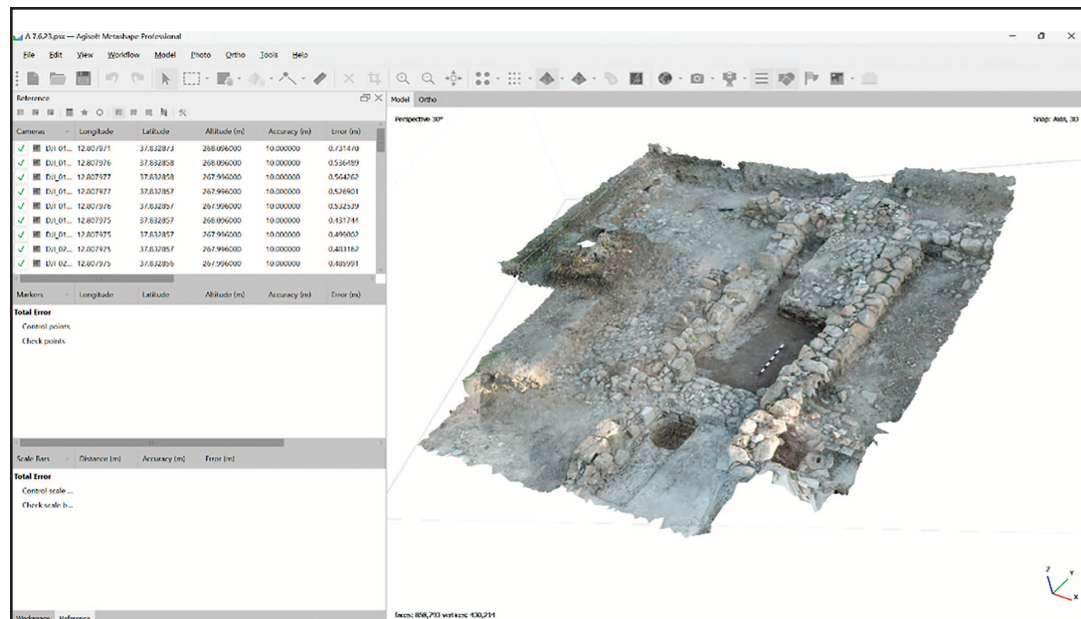
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San Miceli Excavations, Sicily

Recently, Andrews University has embarked on a new excavation in western Sicily at the site of San Miceli. Located approximately an hour south-southwest of Palermo, San Miceli is situated in the municipality of Salemi in the province of Trapani. The site was originally excavated by Sicilian Archaeologist Antonio Salinas in the late 1890's. His excavations exposed a Christian Basilica, several tombs, and a Christian village just south of the basilica. The site dated approximately from the fourth through seventh centuries A.D. Since Salinas's excavations, there has been little scientific exploration, except for a small excavation in 2008 as well as some preservation work in and around the basilica. In 2014, the Horn Museum was able to procure a permit to excavate San Miceli afresh with the hopes of exploring the material culture of early Christianity in Sicily. Excavating a site in the western Mediterranean allowed Andrews University to broaden its scope of research to include questions related to church history, including questions such as how did Christianity reach and grow in rural Sicily? What material culture factors, if any, contributed to the spread of Christianity in Sicily? What did the material culture of early Christianity consist of in Sicily?

Three fields were opened in 2014: Fields A, B, and C. Field A was opened just south of the basilica, but not as far south as Salinas's original probe. The purpose of Field A was to find Salinas's "Christian" village and determine if it dated to the same period as the basilica as well as to determine to what extent the village was indeed Christian. Twelve squares were opened in Field A between the years 2014 and 2023. Excavations have exposed a large complex of superimposing structures. The first clearly defined occupational phase dates to the fourth century A.D., although sparse evidence suggests that there may have been a pre-fourth century phase. Some of the finds

(cont'd on p. 2)



3D Model rendered by Jared Wilson using Agisoft Metashape Professional Software.

from this period include a large cache of coins found on top of a plaster floor, as well as glass dating the architecture to the fourth century A.D. The next structure, built on top of the earlier, dates to the fifth century and may have been re-used as a private inn for travelers. The final phase dates to the sixth-seventh centuries A.D. The dates for the final phase are based on a gold coin that was found with the image of the Byzantine emperor Constans II.

It is difficult to identify the exact nature of the structure exposed in Field A. The main problem is that only the south-east corner of the buildings has been exposed. Another problem is that some of the walls have been remodeled and/or re-used in later periods. This makes any interpretation highly speculative. The current interpretation is that each of the structures from the fourth through seventh centuries has been identified initially as a *villa rustica* which may also have functioned as a stopping-place (Latin *mansio*). The structure requires more excavation in order to clarify the function of the buildings from their respective periods in history.

Field B (the Basilica) is north of Field A and was the only structure that was still exposed. The first basilica (Basilica 1) was constructed during the second half of the fourth century A.D. The dimensions measured approximately fifteen meters long by seventeen meters wide. The basilica's length was oriented east-west, with the apse located on the western end and included a baptistery behind the apse. The baptistery may be one of the earliest, if not the earliest, in Sicily. The sparse remnants of a mosaic floor can be seen inside in the southwestern area. At least three mosaic floors were exposed inside the basilica, though it is possible to discern a fourth. Each mosaic floor represents the three (and possibly four) different phases of construction.

In the fifth century, Basilica 1 was remodeled. A new mosaic floor (Mosaic B) was constructed using stones and pieces made of black, white, brown, orange, green and pink colors. On the

western side of the mosaic was a Greek epitaph with the names "Kobouldeus and Maxima," who may have been donors to the basilica. Toward the western end in front of the apse is another Greek inscription that reads "For the salvation of Kobouldeus" with a monogrammatic cross symbol, which is also referred to a *staurogram*: a combination of the Greek letter's *tau* and *rho*. This symbol was found on both sides of the inscription. During a later phase, Mosaic B was destroyed, and a new one was made with a Latin inscription, "*Dionisius presbiter vixit in pace an(nis) LV 59.*" Collapsed roof tiles and ash pockets indicate that the basilica was most likely destroyed by conflagration.

During the sixth/seventh century A.D., the basilica (Basilica 2) was rebuilt. This second basilica was constructed with the same orientation as the previous one, with the apse located on the western side, but this basilica was smaller than the first one. This basilica also had its own mosaic floor with a dedicatory Latin inscription. The style of mosaic and the artifacts dated the basilica to the sixth century. This morphology of the basilica was also destroyed by fire.

A necropolis was exposed on the eastern and southern side of the basilica, just outside of the building. A few tombs were exposed on the north side, including one inside the basilica. The tombs often contain two sets of remains: either a husband and wife, or mother and child. Personal items were also included such as symbols of wealth and potentially high social status, such as belt buckles and jewelry made of gold, silver, and bronze objects, including earrings and necklaces. Often a small ceramic jar was placed above the head within the burial. Other items found in the graves included terracotta and glass jugs.

The basilicas and Field A structures seemed to have been constructed at the same time and followed the same occupational history. The Field A structure may have functioned as a *villa-rustica* as well as a stopping-place for travelers to stay overnight. The basilica functioned as the

religious center of the immediate area for the local inhabitants and travelers. The San Miceli village was constructed near the ancient Elymian site of *Alicia*, which was exposed on the acropolis of the modern municipality of Salemi. Later, a Roman village was also constructed in the vicinity near the acropolis. The Roman name of the site has yet to be positively identified. Some have referred to it as *Ad Olivam*; a Roman *mansio* listed in the Antonine Itinerary. However, this has yet to be proven, and excavations seem to indicate that it may not be this particular site. Future excavations will hopefully clarify the problems and provide more answers.

Archaeologists engage in extensive excavations throughout many years of fieldwork, unearthing a substantial volume of material. The meticulous documentation of all excavated items contributes to the slow pace of excavations. To address this challenge, one of Andrews University's archaeologists' long-term goals for the San Miceli excavations was to test different technologies that could benefit both the excavation and reporting its results. Over the past decade, archaeologists at this excavation have used many different types of technology to try to decrease time in data collection and increase the public's awareness of the excavations they are conducting.

Comprehensive documentation is essential for all data obtained from the field. A supervisor's notebook contains various sheets detailing different aspects of fieldwork such as the locus, installation, excavated pottery, and more, encompassing the who, what, when, where, and why of each find. Every detail within a three-dimensional space is meticulously recorded, from the earth's color to the precise positioning of individual artifacts. The process involves capturing and documenting images and creating drawings and top plans, often requiring work to halt in a specific area for a time. The time-consuming nature of detailed information-gathering using conventional paper and notebooks is a significant challenge for supervisors.



Drone Shot of the San Miceli excavations.

Investing in long-term solutions for excavations also proves beneficial in the short term; incorporating technology to streamline the documentation process in the field enables archaeologists to dedicate more time to addressing the fundamental questions driving their fieldwork. This procedure eliminates the need for manual copying, printing, or handwriting multiple copies of forms, allowing anyone with a computer to access the documentation.

One of the most critical aspects of fieldwork is to plan the excavation before going into the field. This aspect is known as research design. Archaeologists have quickly learned that having a data management plan was very important to understand what technologies would be brought into the field and how that technology might benefit the excavation. The data management plan can no longer be considered just a box that needs to be addressed in the archaeology research plan. Instead, it should be a primary concern on the archaeologist's part as they plan for each season's excavation. Currently, virtually every aspect of archaeological field practice will deal with data management.

Before going out into the field each year, several of Andrews' archaeologists

developed a data management plan for that summer. Questions like: What new technology can be used in the field? How did last year's technology help? What problems were there in last year's use of technology? After these questions were answered, archaeologists could develop a data management plan.

In the years following 2015, archaeologists utilized a wifi-enabled, large-megapixel camera mounted on a 15-foot telescoping pole controlled by an iPad positioned close to the user's face.

This setup, employed over multiple excavation seasons, proved an effective method for documenting the top plans and creating full-scale 3D models of each day's excavation using Agisoft Metashape. These models and top plans played a crucial role in observing and understanding changes within the excavation site over time. However, the downside of this method was its slow pace. Each morning, an archaeologist had to rise early to set up the equipment and capture detailed documentation of the previous day's changes before the sun cast shadows. The process involved capturing 36-48 points of data around the circumference of the excavation unit, with 3-4 points on each side of the square, and taking three pictures at each point to gather

substantial data within the limited time frame.

As the size of the excavation units increased, it became unmanageable to maintain this time-consuming documentation process within the available time each morning. Consequently, in the 2018 excavation season, Andrews University introduced a solution by acquiring a Mavic Pro drone with a high-definition camera and continuing to use Agisoft Metashape Professional to render the 3D Models.

This new setup significantly reduced the time required for data collection in the field and enhanced the resolution of the 3D models. Furthermore, it incorporated georeferencing in each picture, enabling archaeologists to obtain georeferenced data from the excavation units daily, even months or years later, from remote locations. This advancement significantly improved the accuracy of archaeological data analysis, allowing discrepancies to be cross-referenced against the georeferenced data from the 3D models generated by the drone.

As a result of the reliable data obtained through drone usage, archaeologists at San Miceli have continued to use this technology in their ongoing excavations. Large aerial shots from the drone can be taken from high altitudes to encompass the entire field and the individual fields. These images can help understand the site's layout within its surrounding area context.

Integrating digital methods has greatly enriched archaeological research and its interpretation of historical events. The addition of technology into field excavation is not perfect and has its problems, but as a whole, it is a considerable net positive experience. Archaeologists at San Miceli can explore fresh perspectives and approaches to comprehending and documenting past events with digital tools. For more examples of 3D models that archaeologists at San Miceli have made, visit <https://sketchfab.com/jaredw/models> to see and manipulate the models.

(Christopher Chadwick and Jared Wilson)



RANDOM SURVEY

Neolithic Boats Found:

Five finely crafted Neolithic-period canoes, containing stone tools, have been found at La Marmotta, near Rome. These boats, dating between 5700-5100 BC, were precisely constructed from hollowed-out alder (*Alnus sp.*), aspen (*Populus tremolo*), lime (*Tilia sp.*), oak (*Quercus sp.*), and pine (*pinus sylvestris*) trees. They exhibit advanced construction techniques such as transverse reinforcements that enabled durability and maneuverability. One vessel featured a T-shaped object used for securing ropes to nautical components such as sails.

Biblical Name Found:

An ostrakon, dating to ca. 1100 BC, with the name *Jerubbaal* meaning “*May Baal contend*,” has recently been found archaeologically for the first time, at the site of Khirbet al-Ra’i, possibly biblical Ziklag, ca. 4.0 km (2.5 mi) west of Lachish. While the name is best known as the nickname of Gideon (Judg 6:31-32), the ostrakon does not necessarily refer to the same person.

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Shipwreck Discovered:

The remains of a Bronze Age vessel, with its cargo of copper ingots, has recently been found, scattered at depths of 30-50 m in the Bay of Antalya, off the coast of Turkey. The copper ingots contain up to 10% iron compounds. Leaving the Bay of Antalya into the open Mediterranean posed various hazards due to wind patterns and changing currents, as a number of nearby wrecks over time would seem to indicate. There was a high demand for copper during the Middle and Late Bronze Age (1950-1175 BC), as it was a vital resource in the production of bronze.

Bronze Mirror Found:

The location of the site of Hala Sultan Tekke on the SE coast of Cyprus facilitated commerce and trade, with its extramural necropolis yielding intact tombs reflecting various regional cultural influences, including funerary offerings from Egypt, the Levant, Minoan Crete, and Mycenaean Greece. Among the treasures found in Chamber Tomb XX is a rare Aegean bronze mirror, possibly from Crete. It measures 11.2-11.4 cm in diameter, and lacks handles or rivets, suggesting it was fashioned from perishable materials.

Ancient Tunnel Found:

A 1.98 m (6.5 ft) high, 1,310 m (4,300 ft) long tunnel has been found under the Egyptian temple of Taposiris Magna, west of the ancient city of Alexandria. Coins of Cleopatra VII and the heads of Ptolemaic-period alabaster statues were also located at the site.

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