

The Changing Sacred Landscape of Egypt's Western Desert in Late Antiquity: The Case of 'Ain el-Gedida

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This article explores ways in which the sacred landscape of Egypt's Western Desert changed in the fourth and early fifth centuries CE with the advent of Christianity. The oases of Kharga and Dakhla, in particular, offer a wide range of archaeological and documentary evidence on the development of Christianity. The landscape of the oases was dotted with churches, the construction of which at times occurred within a preexisting—and densely built—setting and often involved substantial alterations to the surrounding built environment. The focus of this article is on the reuse and reorganization of space at the agricultural hamlet of 'Ain el-Gedida, located in Dakhla Oasis. Excavations at the site revealed extensive evidence of a church complex, dated to the fourth century, located to the east of a mudbrick temple that by that time was no longer in use as a cultic place. This article discusses how the spatial arrangement of the built environment was readapted to accommodate the construction of the church complex. These changes affected not only the configuration of several buildings but also the surrounding network of streets and passageways, thus reshaping patterns of movement at the site.¹

INTRODUCTION

Egypt in the fourth and fifth centuries experienced momentous changes in its religious and cultural environment, which had been characterized for several centuries by both native and foreign traditions, including Graeco-Roman influences, as well as their syncretic combination.² Such changes were fostered by Christianity, whose introduction in Graeco-Roman Egypt continued, in many ways, Egypt's long and well-established tradition of syncretism. Christianity reached Egypt by the first century, though the earliest archaeological evidence that is currently available dates from the beginning of the fourth century.³ The new faith initiated the progressive abandonment of a system based on ancient Egyptian religion. It was a period of intense religious

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² On the complexity of Egypt's hellenization see, among others, Frankfurter 1998; Baines 2004.

³ On early Egyptian Christianity, see Pearson and Goehring 1986; Griggs 1991; Goehring and Timbie 2007.

transformation that saw change but also continuity.⁴ From the fourth century on, Christianity brought about changes to the landscape of Egyptian cities, towns, and villages down to the smallest hamlets.⁵

While temples, largely in traditional Egyptian style, had previously marked the local built environment, it was churches that progressively became ubiquitous features of the Late Antique urban and rural landscape, though not with the same degree of monumentality at first. This phenomenon, which was gradual, is best attested in the region of the Western Desert, where archaeological evidence for the flourishing of Christianity in the fourth and fifth centuries is more abundant and better preserved than elsewhere in Egypt. In particular, the oases of Kharga and Dakhla offer the widest range of available archaeological evidence on the development of Christianity and, more specifically, on the adoption of artistic and architectural forms in early Christian architecture in Egypt. Although churches and monasteries were built throughout the region beginning in the early fourth century, temples remained part of the sacred landscape of Late Antique Egypt, whether still in use or not, for a significantly long time.⁶

The focus of this article is on the organization (and reuse) of space that was carried out in the fourth century at the agricultural hamlet of 'Ain el-Gedida, located in Dakhla Oasis. As Christianity flourished at the site, there is evidence of shifting spatial arrangements to accommodate new religious structures. This article draws on archaeological evidence from the excavation of 'Ain el-Gedida, and in particular, the remains of a fourth-century church excavated in 2006–2008 and a mudbrick temple, which shows clear evidence of reuse as a ceramic workshop in late antiquity. The discussion that follows shows how the archaeological evidence from 'Ain el-Gedida provides a vivid snapshot of life at a fourth-century Egyptian village that was never reoccupied after the late fourth/early fifth century. More broadly, it frames 'Ain el-Gedida as a remarkable case study for how the adoption of Christianity brought about changes to the sacred landscape of Egypt's Western Desert, in terms both of new building types and of how space was manipulated to accommodate them.

These changes affected not only the configuration of buildings but also networks of streets and passageways, reshaping patterns of movement at the site.

OVERVIEW OF THE SITE

Dakhla Oasis lies in a remote location in Egypt's Western Desert, about 300 km west of Luxor and about 800 km southwest of Cairo (fig. 1). The oasis lies in a depression to the south of an escarpment that is part of the northern Libyan plateau (fig. 2). Dakhla does not consist of one contiguous expanse of fertile land but rather is composed of a group of small-sized oases, all separated from one another by stretches of desert sand. In the Roman period, Dakhla was administratively part of a larger oasis, called Oasis Magna, together with Kharga Oasis, located about 190 km to the east. Within Dakhla Oasis, 'Ain el-Gedida lies approximately 5 km northwest of the ancient village of Kellis, now known as Ismant el-Kharab (see fig. 2). To the north is a narrow stretch of desert land that separates the archaeological remains from the northern escarpment. Cultivated fields surround (and at times encroach on) the edges of the site, creating issues of preservation for the structures located in the liminal areas. The intense agricultural exploitation of the area, enhanced by the presence of a modern, mechanically operated well, makes it impossible to form a clear understanding of the ancient environment surrounding the site. Indeed, the size of the village might have been significantly larger in the fourth century than the current archaeological area, though the available archaeological evidence indicates a relatively small rural site.⁷ Notwithstanding the limitations posed by the proximity of 'Ain el-Gedida to cultivated fields, essential information on the site's development can still be drawn from looking at the physical environment. This includes the location of the settlement in an area rich in water sources⁸ but at the same time affected by

⁴ On continuity and change, see Dijkstra 2008.

⁵ For an introduction to the subject, in relation not only to Egypt but also to the wider eastern Mediterranean world in late antiquity, see Hahn et al. 2008.

⁶ Caseau 2001, 2004; Dijkstra 2011.

⁷ Particularly in comparison with nearby villages such as Kellis (see Hope 2002).

⁸ Indeed, the toponym 'Ain el-Gedida means "the new spring," alluding to the relative wealth of water in this area (see Aravecchia 2018, 25). A Greek ostrakon found at the site in 2008 mentions the Coptic toponym Pmoun Berri (also meaning "water source"), which is tempting to read as an attestation of the name of the site in the fourth century (see Aravecchia 2018, 281). If this interpretation is correct, the ostrakon indicates that the area may have been exploited as cultivated land also in late antiquity, thanks to easy access to water. Neverthe-



FIG. 1. Satellite map of Egypt (NASA, <https://visibleearth.nasa.gov/images/71790/the-nile-egypt>).

harsh climatic conditions, above all high temperatures, strong winds, and sandstorms.⁹

The archaeological site, oriented roughly north–south, consists of five mounds (fig. 3).¹⁰ Today, these are separated from one another by desert sand, though

less, caution is in order since other documentary evidence was found in Dakhla suggesting that there may have been more sites with the same or a similar name (see Bagnall and Dzierzbicka 2018, 508).

⁹ Davoli (forthcoming) focuses on Graeco-Roman settlements in arid regions of Egypt and emphasizes how environmental factors were key to the development of particular architectural features and, more broadly, of models of spatial organization at those sites. The significance of this approach is apparent in the study of domestic architecture in Egypt's desert regions, particularly when the archaeological record is incomplete or ambiguous (e.g., in the case of spaces, like courtyards or kitchens, for which it is no longer possible to detect traces of their original roofing). On Roman and Late Roman houses at the site of Kellis, see Bowen 2015; Hope 2015.

¹⁰ The same north–south orientation characterizes other Late Antique sites in Dakhla, including Trimithis (present-day Amheida; see Davoli [forthcoming]) and Kellis (see Knudstad and Frey 1999, 193).

it is possible that they were once part of a continuous built landscape.¹¹ Mound I is the largest of the five, and it was the focus of Egyptian excavations from 1994 to 1996, carried out mainly on the southern half of the low hill.¹² These revealed a compact cluster of rooms, built adjacent to one another and often interconnected (figs. 4, 5).¹³ The discovery of storage facilities, clustered in the southwestern section of the excavated area (Rooms A2–A4), and the absence of identifiable domestic units suggest that the nature of this area may have been predominantly utilitarian, possibly linked with the agricultural utilization of the surrounding land in antiquity.

The majority of these spaces were once barrel vaulted, but most vaults are no longer in place. The wedges between the walls and the vault springings may have once been used for utilitarian functions, such as the storage of food.¹⁴ The area above the roof was accessible by staircases, which are preserved in three rooms. The spatial arrangement in this sector is highly dense and of a labyrinthine design with only a few short and narrow alleys or passageways.¹⁵ A vaulted corridor (B11) ran along the northern edge of this sector, separating it from the more public area to the north, while the eastern part was intersected by a north–south street (A34). This compact layout, with most rooms, and possibly passageways, roofed, gives the impression of a locked, self-isolating spatial arrangement. This was likely the conscious response to the harsh environmental conditions of the desert, especially extreme heat and sand carried by strong winds. The organization of space, as well as the choice of specific architectural models, points to a deliberate adaptation, by the local community, to the peculiarities

¹¹ On issues associated with surveying the evidence of the ancient built environment in a desert region, see Davoli 2019, 46–50.

¹² The excavations were conducted by the local Coptic and Islamic Inspectorate (see Bayoumi 1998).

¹³ The topographical configuration of the northern half of Mound I seems rather different from the southern portion. It is characterized by roughly rectangular blocks consisting of spaces that seem to open onto internal courtyards.

¹⁴ Partially preserved storage facilities were found on the roof of Room B10, to the north of the sector excavated in the mid 1990s.

¹⁵ This spatial arrangement makes it difficult to form any clear understanding of the original circulation pattern in this area. A similar layout was noted elsewhere in Dakhla Oasis, e.g., in some areas at the polis of Trimithis (Davoli 2019, 56).

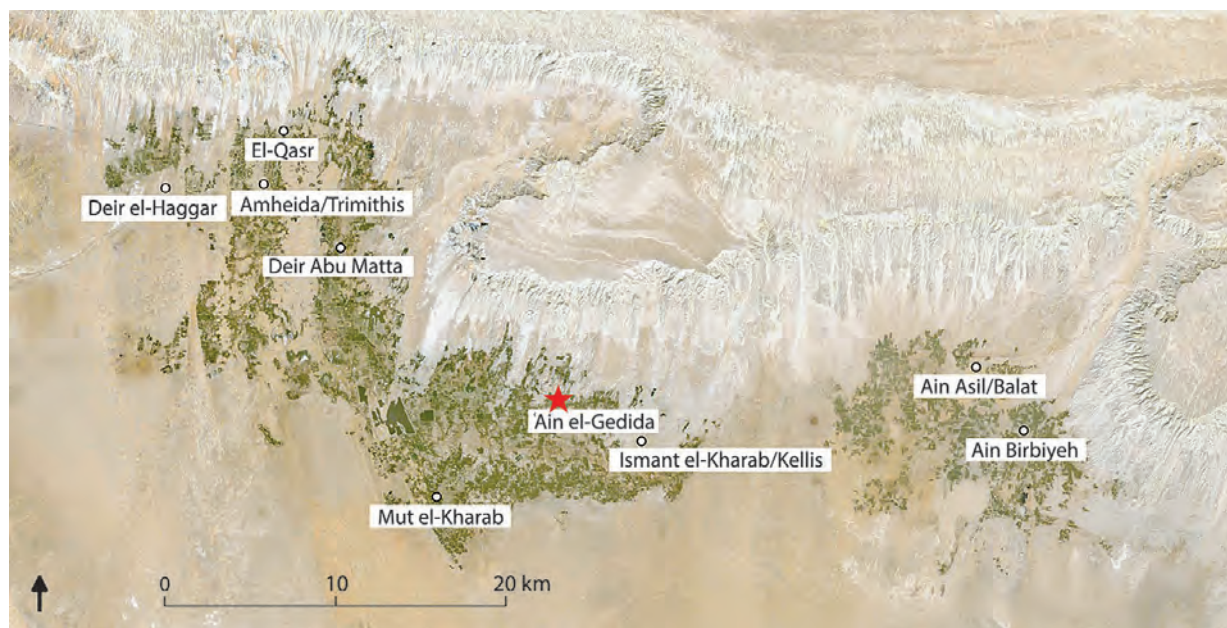


FIG. 2. Map of Dakhla Oasis (Google Earth, 2018 Google, Image Landsat / Copernicus, © 2018 ORION-ME; modified by B. Bazzani).

of the desert environment.¹⁶ Davoli points out that a closed system, characterized by a high building density, a compact layout, and covered spaces—including courtyards, streets, and alleys—is a defining feature of Roman and Late Antique rural settlements in Egypt's arid regions.¹⁷ The construction and use of space at

these sites show an approach that has already been noted in the study of the relatively limited, although steadily increasing, evidence for settlement patterns in rural Egypt—that is, an adaptation to the geographical and climatic peculiarities of the local environment, in addition to the incorporation of different traditions, including building techniques and materials.¹⁸

The southern half of Mound I at 'Ain el-Gedida seems to have developed in different phases, although

¹⁶ Vitruvius enunciated this principle, in broader terms, in *De architectura* 61.1: "Haec autem ita erunt recte disposita, si primo animadversum fuerit, quibus regionibus aut quibus inclinationibus mundi constituentur. Namque aliter Aegypto, aliter Hispania, non eodem modo Ponto, dissimiliter Romae, item ceteris terrarum et regionum proprietatibus oportere videntur constitui genera aedificiorum, . . . ad eundem modum etiam ad regionum rationes caelique varietates videntur aedificiorum debere dirigi conlocationes." (Now we shall proceed aright here in if first we observe in what regions or latitudes of the world our work is placed. For the style of building ought manifestly to be different in Egypt and Spain, in Pontus and Rome, and in countries and regions of various characters, . . . it appears that in like manner the arrangement of buildings should be guided by the kind of locality and the changes of climate.) Trans. Granger 1934. Adaptation to the peculiarities of a harsh desert environment is also seen in the domestic architecture of Egypt's Western Desert (see Davoli 2015, 178).

¹⁷ Davoli (forthcoming). On Graeco-Roman *aithria* (internal courtyards) being covered spaces, see Daniel 2010, 128–47. Davoli also discusses the evidence for the existence, at other sites in Dakhla and Kharga Oases, of doors that closed off sections of some streets. This partitioning of axes of movement within a settlement would have provided not only a higher degree of pri-

vacy to the nearby houses but also more protection against extreme heat and wind. Evidence of doors blocking passageways has not yet been detected at 'Ain el-Gedida, but this may be due to the relatively limited area of the site that has been excavated. Evidence for streets and passageways covered by ceilings, either flat or vaulted, was found at Trimithis (see Bagnall et al. 2015, 68–72; Davoli [forthcoming]) and inside fortified settlements at Kharga Oasis (see Rossi and Ikram 2018, 123). Continuity has been established between these features in the Roman/Late Antique villages and Byzantine/Medieval-period settlements of Dakhla and Kharga, attesting to long-established ways to effectively cope with the difficulties of life in the harsh desert environment (see De Filippi 2006; Davoli [forthcoming]).

¹⁸ See Davoli 2011 for a discussion of evidence from the Fayyum and Dakhla, two areas in which large-scale excavations have produced a substantial amount of archaeological data on Graeco-Roman settlements. In particular, see Davoli 2011, 69, for a discussion on the limits of the currently available evidence for our knowledge of Egyptian urbanism, especially in the countryside.

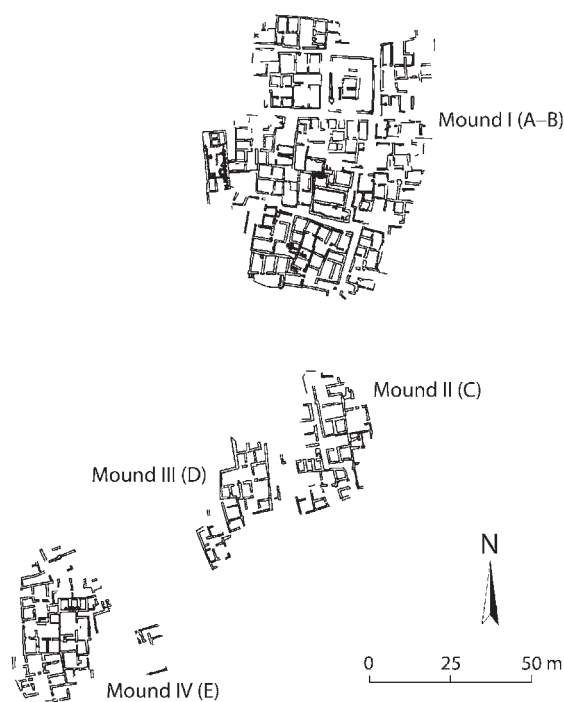


FIG. 3. Site map of Mounds I–IV, 'Ain el-Gedida.

it is not possible to date each of them with any degree of precision.¹⁹ A small and compact cluster of structures was erected in a central location, focused around a large room (A6; fig. 6) that contained industrial installations and was connected, by means of a narrow corridor, with a more public area of the mound farther north.²⁰ This original core was then progressively expanded with the addition of several rooms, which were built against the outer walls of the earlier buildings.²¹ The construction of the newer structures did not follow any systematic plan but was rather quick and haphazard, as shown by a construction technique

¹⁹ Documentation is lacking from the excavations of the mid 1990s.

²⁰ The installations consist of at least three round bread ovens. Even though no traces of a ceiling can be detected on the walls of the room (whose excavation remains undocumented), some form of roofing is not to be ruled out. The existence of a light roof is not disproved by the presence of the three ovens, as small openings in the ceiling may have allowed the smoke to escape, and the roof would have offered protection against the elements during the process of bread making and baking.

²¹ The earlier spaces were also subject to heavy alterations, as attested by blocked-off doors, and traces at foundation level of earlier walls that were razed when the area underwent remodeling.

significantly poorer than that employed in the original core.²² What appears to have been constant in this process is the effort to maintain a compact and clustered layout with narrow passageways and no large, open spaces, aimed at limiting any direct exposure to the harsh climatic conditions.²³

THE FOURTH-CENTURY CHURCH COMPLEX

Beginning in 2006, the central and northern parts of Mound I were objects of intensive archaeological investigation and documentation.²⁴ Among the most significant discoveries was a church complex that, based on numismatic, ceramic, and documentary evidence, can be dated to the early fourth century. The building was accessed from the outside through a long corridor (fig. 7, B7) and consists of two large rectangular rooms (B5 and A46) and a set of three interconnected rooms to the north (B6, B8, B9). Room B5 is the southernmost space of the entire complex and measures 3.5 m north–south x 11.0 m east–west. Substantial remains were found, both in situ and collapsed, of a barrel-vaulted ceiling. The north, west, and south walls of this room are lined with low mudbrick benches; a semicircular apse, opening onto a small L-shaped side room to the south, lies at the east end of this space. Room B5 presents a layout and architectural features that are, to use Bowes' words, “material markers of Christian

²² The generally lower quality of the newer structures was read by Bayoumi, the chief excavator of this area in the mid 1990s, as evidence of a rapid expansion of the built area and the answer to a sudden population increase in the late fourth century (1998, 58). On mudbrick architecture in Dakhla, see Schijns et al. 2003.

²³ Large windows are absent in these buildings. Smaller openings or shafts may have been placed at a higher level on the walls, possibly below the ceilings, but they are no longer preserved. Such openings would have allowed air and some light to enter the rooms, but quite clearly their purpose would not have been to create a visual link between interior spaces and the external environment. For windows and wind catchers (an architectural device that directs airflow downward into a house and creates natural ventilation, in Egyptian Arabic called *malqaf*) in Romano-Egyptian architecture, see Bagnall et al. 2015, 93; Davoli (forthcoming).

²⁴ The excavations were carried out as part of a broader project in the oasis directed by Roger Bagnall. The present author was the field director of the excavations at 'Ain el-Gedida, which were carried out between 2006 and 2008, followed by two study seasons in 2009 and 2010. The preliminary reports are available online at www.amheida.org. Aravecchia 2018 is the final archaeological report of the 2006–2008 excavation seasons.



FIG. 4. Plan of the southern half of Mound I, 'Ain el-Gedida.



FIG. 5. View of the southern half of Mound I (looking northeast).



FIG. 6. View of Rooms A6 and A7 (kitchen/bakery) in the middle ground (A5 in the foreground; looking east).

presence.”²⁵ The identification of this space as a basilical church is unambiguous, chiefly on the basis of comparative evidence with other Christian places of cult from the same region and a similar time frame.²⁶

Room B5 was originally accessible from the north through two doorways, one located at the west end of the north wall and one, a larger opening (which was, at some point in antiquity, bricked in), in the middle of the north wall. Both doorways connected the church with Room A46, which was once barrel vaulted and had mudbrick benches (still well preserved) running along three of its walls (fig. 8). It is likely that this room served as an assembly hall for a relatively large number of people, possibly catechumens or women, even though no evidence is currently available to show its original function or functions with any degree of certainty.²⁷ Against the south side of the bricked-in central opening between Rooms B5 and A46 lies a well-preserved mudbrick podium. It consists of a set of three steps descending into Room B5, and its function must have been to grant visibility to anyone (possibly a priest or a reader from the local clergy) who wished

to be seen and heard in both the church (B5) and the gathering hall (A46). A door from Room A46 opens to the north into a roughly rectangular anteroom (B6) of considerably smaller dimensions. Ample archaeological evidence shows that this space was also used, at least toward the end of the complex's occupation, for the preparation and possibly storage of food.²⁸ This space was connected through a narrow, vaulted passageway with Room B9, likely a storage space for food and pottery vessels. Room B6 opened also onto a well-preserved staircase (B8), which currently leads to the remains of clay features located on the roof of Room B10, a kitchen not directly connected with the church complex.²⁹

In order to study the topographical relationship of the church complex with the surrounding built environment, further excavations were carried out to

²⁵ Bowes 2018, 454.

²⁶ Aravecchia 2018, 200–10.

²⁷ On the subject of catechumens in the early Church, see, e.g., Mitchell 1981; Johnson 1999, esp. 50–60, 116–21; 2006; Baldovin 2006.

²⁸ The evidence includes remains of a hearth, set into the clay floor, with traces of ash, charcoal, and organic remains, and also round imprints on the floor of storage containers and cooking vessels (see Aravecchia 2018, 116–23).

²⁹ The features include a rectangular clay bin and traces of a small round structure, also made of clay. These had been built in the wedge between the east wall of Room B10 (kitchen) and the vault once covering this space. The bins may have been part of a rooftop pantry, a common feature of Egyptian domestic architecture that is also mentioned in papyri (see Daniel 2010, 119–22).

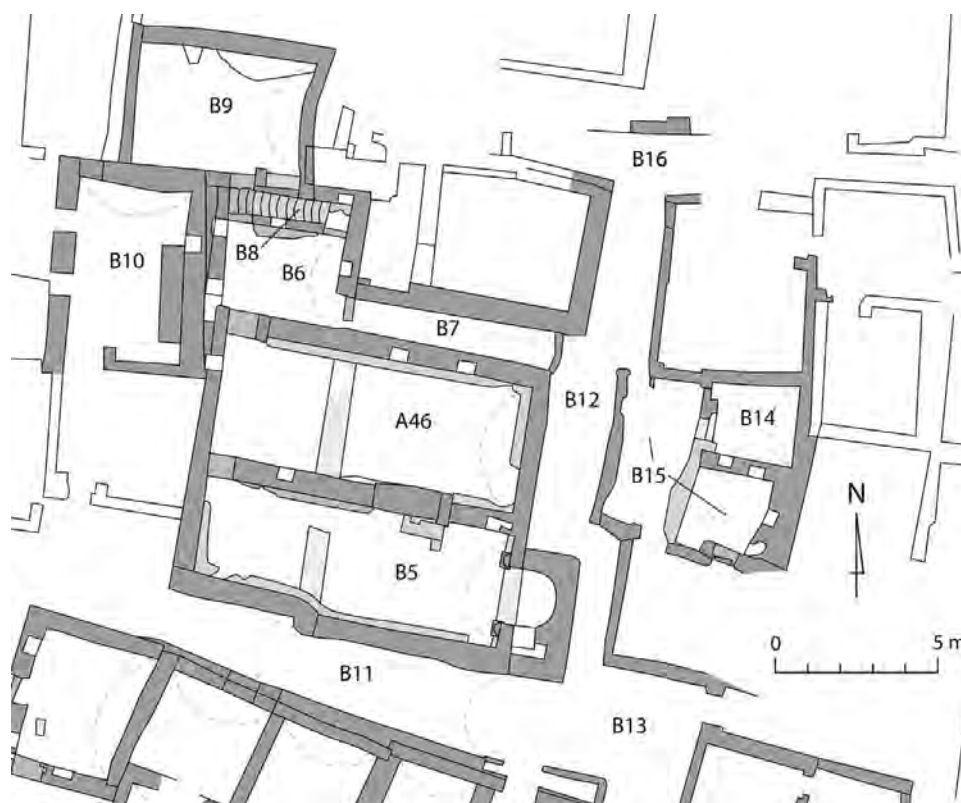


FIG. 7. Plan of the vicinity of the church complex. Dark and light gray walls belong to excavated rooms; light gray areas are what now exist only as foundations and features that are at, or close to, floor level, such as mudbrick benches and thresholds. B5 is the church and A46 is the gathering hall.

the east and south of the basilica. A long segment of a north–south street (B12) was cleared along the eastern boundary of the church and the gathering hall to the north. Immediately across the street from the entrance into the ecclesiastical complex was a set of two interconnected rooms (B14 and B15) with evidence (in B15) of several bread ovens. Street B12 opened to the south onto a roughly rectangular space (B13), which still bears traces of two mangers built against its south wall. This open space also functioned as the intersection of Street B12 with Corridor B11, the barrel-vaulted passageway running east–west beside the south wall of the church.³⁰

³⁰ The excavation of B11 and B12 showed that these streets were paved with floors of compacted clay and bore evidence for the occasional discharging of domestic trash, which formed irregular piles that are easily identified in the stratigraphy. This phenomenon has been attested elsewhere in the oasis, e.g., at Trimithis (Davoli 2019, 54–55). Kaiser (2011, 21–23) discusses this practice in the broader context of streets in the Roman world.

Several architectural features of the church of 'Ain el-Gedida are common to other fourth- and fifth-century churches, especially from Dakhla and Kharga Oases.³¹ The basic layout of the 'Ain el-Gedida complex, with its one-nave basilica adjoining a large rectangular room, is known from other examples throughout Egypt, although these are generally later than the church of 'Ain el-Gedida.³² One building that shares with the 'Ain el-Gedida complex substantial typological similarities, as well as the same chronology, is the Small East Church at Kellis, also located in Dakhla Oasis.³³ Both churches comprised an east-oriented basilica with no side aisles and a large parallel hall on the north that communicated with the basilica via two

³¹ For a comparative study of the complex of 'Ain el-Gedida and other early Christian churches in Egypt, see Aravecchia 2018, 200–10, which is based on the seminal work by Grossmann (2002).

³² Aravecchia 2018, 209–10.

³³ Bowen 2003.



FIG. 8. Room B5 (church) to the right and Room A46 (gathering hall) to the left (looking northeast).

openings. Both churches were built reusing preexisting rooms that were subject to significant alterations; these included the blocking of doorways, the addition of mudbrick benches, and the construction of a semi-circular apse at the east end of the nave.

A considerable amount of data proves the existence of different phases of construction in the church complex of 'Ain el-Gedida. This includes the south wall of the nave (Room B5), which was irregularly laid out and clearly built in different phases (fig. 9), and the whole semicircular apse with L-shaped pastophorion (service space) added to Room B5 at a later stage. Excavation revealed the existence of foundation walls, below the floor level, that belonged either to previous buildings or to earlier construction phases of the church and the adjacent hall. Previous studies have looked at the available archaeological evidence for the existence of earlier rooms in the area that was later occupied by the church complex.³⁴ I have argued elsewhere that two preexisting spaces were extended to the west in order to accommodate the basilica and the assembly hall.³⁵ A north-south wall (whose foundations are still visible cutting through Rooms B5 and A46 below floor level) was removed, and B5 and A46

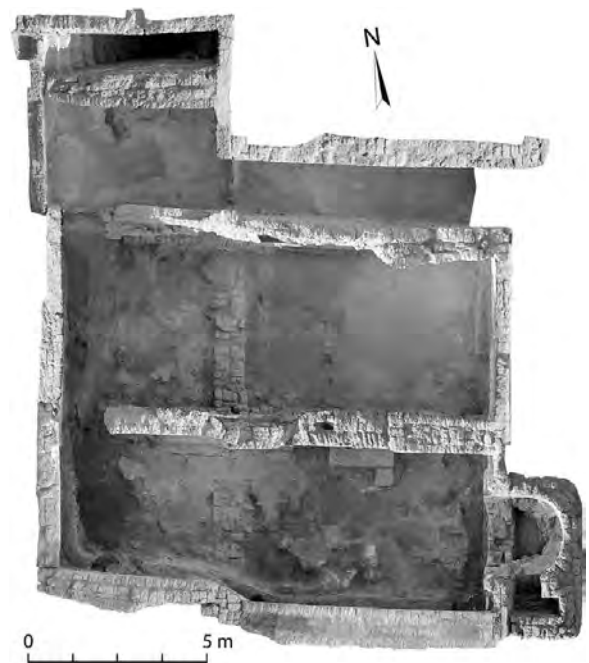


FIG. 9. Mosaic of photogrammetric images of the church complex; traces of earlier walls are visible below the floor level.

were enlarged to the west. The wall between B5 and A46 was rebuilt on the foundations of an earlier wall. The south wall of the church was extended farther west, and evidence of an extension of the north wall of the gathering hall was also detected. The anteroom

³⁴ Aravecchia 2012, 402; 2018, 187–94; Bagnall et al. 2015, 143.

³⁵ Aravecchia 2018, 187–94.

of the complex (B6) was also the object of significant alterations when Staircase B8 and Storage Room B9 were added as part of the complex (also in the fourth century). It is unclear, however, whether all alterations in B6–B9 were carried out at the same time as the enlargement of B5 and A46. It is also unknown whether the earlier rooms functioned as gathering spaces for the local Christian community before the final construction phase of the church complex. Therefore, it cannot be ascertained if any continuity of function existed between the earlier set of rooms and the later church.³⁶

CHANGES IN THE BUILT ENVIRONMENT

As the plan of Mound I shows (fig. 10), the church complex of 'Ain el-Gedida is quite centrally located and provided with a high degree of accessibility.³⁷ An extensive network of streets, passageways, and alleys must have been quite effective in shaping the movement of people around the main hill and channeling their flow toward the area of the church complex.³⁸ How the built environment was integrated into the surrounding landscape, however, remains unknown.³⁹

³⁶ It would not be surprising if there was a functional continuum between the earlier set of rooms and the church: "Renovation reflects a natural course of functional usage by designating areas spatially that had become associated with specific forms of religious action or assembly" (White 1990, 114). See White 1997 for a catalogue of written sources and archaeological evidence of early Christian cult places. On White's model of development of early Christian places of cult (from house to *domus ecclesiae* to *aula ecclesiae*), see Kidner 2001, 358–60. On the use of the term *domus ecclesiae*, see Sessa 2009.

³⁷ On the location of fourth- to fifth-century rural churches (with a focus on the western Mediterranean), see Bowes 2018, 457. For a summary of the three churches excavated at Kellis, near 'Ain el-Gedida, see Bowen 2002, 2003.

³⁸ One should also take into account the possibility of moving from one room to another at the level of their roofs, with covered passageways (like B11 to the south of the church) allowing connections between different areas of the site above street level. For a discussion of the network of streets and passageways on Mound I, see Aravecchia 2018, 195–200. Only selected sectors of a couple of streets to the east and south of the church complex were fully excavated. The remaining streets were surveyed at surface levels; thus, the information that can be inferred is subject to limitations. In the southern half of Mound I, a few narrow passageways were excavated by the Egyptian mission between 1994 and 1996. In 2006 they were documented, following the removal of layers of windblown sand that had deposited during the previous 10 years.

³⁹ Davoli (forthcoming) remarks that the networks of streets, roads, and passageways in excavated Egyptian villages do not

Excavation and survey have shown that some of the main north–south and east–west oriented passageways reach the current edges of Mounds I and II.⁴⁰ It is not known, however, how these streets were connected with the environment outside the settlement's original perimeter.

It has not been possible to conduct any investigation that might shed light on how the ancient built environment was integrated into the surrounding landscape because, as mentioned above, the site lies in an area that is subject to intensive agricultural use. The cultivated fields are threateningly close to the protected archaeological site, and irrigation canals are near the mudbrick architectural features. One may reasonably argue—although no evidence is available—that a road or path connected 'Ain el-Gedida with the nearby village of Kellis (see fig. 2).⁴¹ This is supported by apparently close administrative links between the two ancient settlements.⁴² Apart from this likely topographical connection, it is doubtful that 'Ain el-Gedida was located within any developed road or path network. This is particularly true in light of the likely identification of the site as an *epoikion* (a small rural hamlet associated with the management of an agricultural estate)⁴³ located, in the fourth century as it is now, at the center of a large area extensively utilized for agriculture. Thus, 'Ain el-Gedida would have been located at a relatively long distance from other villages of the oases. It is likely that the primary, if not the only, topographical connection was with the main town or village on which the hamlet depended.

provide information on how these settlements were topographically connected with the surrounding environment.

⁴⁰ This was largely visible on Mound I, which was the focus of investigation. There was also evidence detected on Mound II; in particular, a street running from northwest to southeast, which reflects the general orientation of most architectural features surveyed on this mound.

⁴¹ Kellis shares a similar chronology with 'Ain el-Gedida, particularly with regard to the latest phase of occupation and abandonment.

⁴² Bagnall and Dzierzbicka (2018, 509) detected a wide range of similarities (in terms of onomastics, formulas used, and general wording) among the ostraka found at 'Ain el-Gedida and documentary material from Kellis.

⁴³ For 'Ain el-Gedida as an *epoikion*, see Bagnall et al. 2015, 167; Aravecchia 2018, 280–83. See Banaji 2007 on *epoikia* and, more generally, on forms of organization of agricultural estates in late antiquity.



FIG. 10. Plan of Mound I with red lines *a–i* indicating the main streets and passageways that were surveyed or excavated on the mound.

The church complex had only one entrance (B7), which was located off the main street (B12) crossing the central part of the mound from north to south (see fig. 7). The choice of a prime, easily accessible location for the church seems to reflect a pattern that can be witnessed in other regions of the eastern Mediterranean world during the fourth and fifth centuries.⁴⁴ Neither the church (B5) nor the gathering hall (A46) was

particularly large;⁴⁵ yet, considering the overall limited extension of the site, a large portion of the Christian villagers could probably have fit at one time inside the church complex.⁴⁶ Unfortunately, no information is

⁴⁵ Together, they measured ca. 8.0 m north–south (max. width) x 9.5 m east–west (max. length, not including the apse in Room B5).

⁴⁶ Together, the benches in B5 and A46 could probably have accommodated about 75 people. On the focus on assembly space in the process of adaptation of earlier buildings by a local Christian community for cultic purposes, see White 1990 (117).

⁴⁴ See, e.g., Harl 2001, 309–11, for evidence from Asia Minor.

available to discern to which form of Christianity this community belonged or whether different groups co-existed at 'Ain el-Gedida in the fourth century.⁴⁷

The inhabitants of 'Ain el-Gedida (or at least some of them) chose to fit a basilica, albeit a relatively small one, in a tight, densely built setting. Thus, they had to face and find solutions to a considerable number of issues. For example, the apse was not built inside Room B5;⁴⁸ instead, it was added against the outer face of the room's east wall, which was razed down to foundation level to provide access into the apse itself. The entire addition containing the apse protruded into Street B12 and must have posed challenges to the regular flow of people, animals, and carts passing through (fig. 11).⁴⁹ Indeed, the street is significantly narrower to the east of the church because of the apse and the west end of Room B15, which was extended westward onto Street B12 to make space for several bread ovens.⁵⁰ The challenges that drivers of carts must have faced when passing by the church may be testified to by the presence of gouges in the bricks of the apse's outer wall.

The vaulted passageway (B11) to the south of the church was subject to significant alterations when the church was extended westward. The north and south walls of this covered alley were not parallel, and the alley narrowed toward the west. In order to prevent the west end of the alley from becoming excessively narrow, the west end of the basilica's south wall had to be built as a recess inside the church (see figs. 7, 12). A mudbrick vault added to the new section made the passageway completely covered by a ceiling along its full length.⁵¹

⁴⁷ As Busine (2015, 4) notes, "ancient Christian religions should not be reduced to a homogeneous and uniform system, studied in terms of Christianity as it is known today." With regard to other sites in fourth-century Dakhla Oasis, written sources attest to the existence of nonorthodox forms of Christianity, in particular, of Manichaean communities (see Gardner 1997a, 1997b, 2000). On the difficulty of discerning heterodoxy in the archaeological record, see Bowes 2001, 323.

⁴⁸ Aravecchia 2018, 190–91.

⁴⁹ A question arises as to whether it would have been possible to drive a cart along this sector of the street. To the east of the church's apse, Street B12 is less than 1.1 m wide (at its narrowest). Kaiser (2011, 56–57) states that only streets that were at least 2 m wide could have allowed cart traffic. On modes of transportation in Late Antique Egypt, see Bagnall 1986.

⁵⁰ Considerable evidence of building activities that affected the width of streets was found also at Trimithis (Davoli 2019, 54).

⁵¹ The vault is no longer extant, but substantial remains of

A key reason for the construction of a church in this specific location may have been its centrality in the main settlement. As this area was at the highest point of the entire site (at least its excavated or surveyed parts), buildings located there enjoyed a relatively high degree of visibility.⁵² Although considerable evidence suggests that the siting of early Christian churches could vary, at 'Ain el-Gedida the church was erected in a conspicuous location.⁵³ In addition, Room B5 featured an elongated rectangular plan, relatively large dimensions, and an apse at the east end; these elements, combined with the location of the building, made its identification as a Christian place of cult apparent to all inhabitants and visitors to the hamlet. Emphasis on the visibility of early Christian places of cult is attested elsewhere, in both archaeological and documentary records.⁵⁴

A set of crucial questions also arises concerning issues of ownership and management of the 'Ain el-Gedida church complex.⁵⁵ Unfortunately, the available archaeological and documentary record from 'Ain el-Gedida thus far has not offered conclusive answers on these important matters.⁵⁶ Nevertheless, if the identification of the site as an *epoikion* is correct, it would allow us to place the church of 'Ain el-Gedida within the organizational structure of a fourth-century rural estate in the oasis.⁵⁷ Documentary sources often

vault springings are still visible above the north and south walls of the passageway. No evidence of doors was detected at the two ends of the corridor or along its length.

⁵² Aravecchia (forthcoming).

⁵³ There are several examples of early Christian churches that were built at the periphery of towns and cities, rather than in a central location, and often in the proximity of baths (see Leone 2013, 66). In Dakhla, examples of fourth-century churches that were not centrally located include the church of Trimithis and the churches of Kellis, nearly all of which (the exception being the West Church at Kellis) were near baths. On early Christian churches and baths, see also DeForest 2019.

⁵⁴ White 1990, 128–30; see also Wharton 1995, 32.

⁵⁵ One question in particular relates to the ownership—whether by an individual, a group of people, or an institution—of the ecclesiastical building (and of the land on which it was erected). On the difficulties in identifying the ownership of rural churches (though in the context of villas of the western Mediterranean), see Bowes 2018, 454–55. See also White 1990, 146, on questions of ownership and patronage of house-churches.

⁵⁶ On possible answers, in relation to rural churches in general, see Bowes and Gutteridge 2005, 413.

⁵⁷ Supra n. 43. The question remains regarding who actually owned the estate and the associated *epoikia*. On the social



FIG. 11. View of Street B12 showing the protruding apse at the east end of the church (looking southwest).



FIG. 12. View of the church complex (looking west). The yellow line marks the irregular south wall of the church (which is also the north wall of Corridor B11).

mention *epoikia* in the context of Egypt's rural landscape; however, their existence has been unattested in the archaeological record until now. The excavations at 'Ain el-Gedida may provide the first archaeological evidence for this type of settlement and offer new data

change brought to Egyptian villages by the spread of Christianity, see Sessa 2018, 44–45.

for the study of the Egyptian economy in the Graeco-Roman period.

THE WEST COMPLEX

About 25 m west of the church is a building (see fig. 10, B17–B24) that was excavated in 2008 and that, in its latest occupational phase, appears to have been roughly contemporary with the construction of the

small Christian basilica (see figs. 10, 13). It measures 18.5 m north–south x 7.1 m east–west, comprises eight rooms, and was accessible from the south. The state of preservation, particularly in the west half of the building, is poor because of erosion and human activity. The discovery of bins and large basins inside the largest room of the complex (B19), along with partially worked clay, several sherds of unbaked pots, and fragments of pottery wheels, led to the identification of the complex as a small-scale ceramic workshop (fig. 14).⁵⁸ However, a study of the original layout, which did not include the internal partition walls inside the large courtyard (see fig. 13, lightest gray walls), allowed the identification of the west complex of ‘Ain el-Gedida—in its earlier occupational phase—as a small-scale mudbrick temple. The temple included a large courtyard (B19), characterized by long niched walls, that led to a pronaos (B20) and then a naos (B21) at the north. The pronaos and naos were flanked by two longer rectangular rooms (B22 and B23) symmetrically placed.

Significant evidence is available to support the original identification of the west complex at ‘Ain el-Gedida as a temple. It is quite similar to that of the temple of El-Qusur (fig. 15), located near the village of Tineida, at the east end of Dakhla Oasis.⁵⁹ This building is still largely unexcavated, but the general layout is easily recognizable, and its long south wall is still standing to a considerable height. A comparison with similar buildings excavated in Dakhla and Kharga allows the secure identification of the structure at El-Qusur as a temple.⁶⁰ In both the temple of ‘Ain el-Gedida and the temple of El-Qusur, regularly spaced niches are set into the long walls of the main rectangular halls.⁶¹ The unearthing of the west complex at ‘Ain el-Gedida is significant for the site’s occupational history, as most of the available evidence for dating the site, consisting

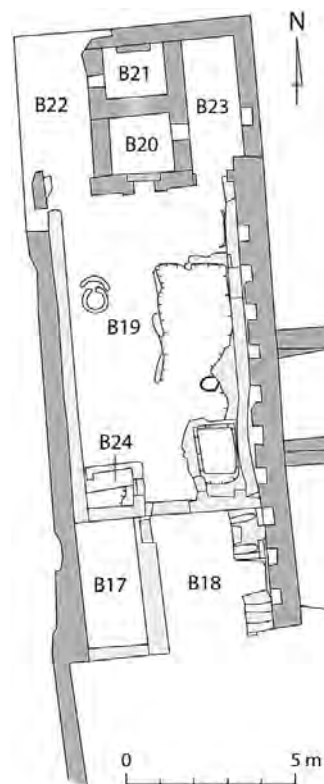


FIG. 13. Plan of the west complex, B17–B24. Dark gray walls belong to the original phase of the building; the lightest gray areas indicate fourth-century modifications.

of coins, pottery, and ostraka, points to the fourth and early fifth centuries, with only a few finds datable to the third century. However, the presence of a temple shows that the site must have had a longer occupational history, going back to at least the middle of the third century.⁶²

Several mudbrick temples have been identified and recorded (if not always published) in Dakhla; most have been dated to the Roman period.⁶³ Nevertheless, a recent survey of ceramic materials associated with some of these buildings points to a significantly

⁵⁸ For a discussion of the evidence for this complex, see Aravecchia 2018, ch. 6.

⁵⁹ The first available plan of the temple is in Winlock 1936, 17, pls. 9, 10. See, more recently, Gill 2016, 301–2.

⁶⁰ Aravecchia 2018, 265–67.

⁶¹ The niches are more clearly visible in the temple of El-Qusur; only the bottom parts of the niches along the east wall are visible in the temple at ‘Ain el-Gedida. Other mudbrick temples in Kharga Oasis share similar layouts and architectural features (Ikram 2018). Two temples in North Kharga (Lebekha North and Ain al-Dabashiya) have the long walls of their main halls pierced not by niches but by windows (see Rossi and Ikram 2018, 165–69, 385–87).

⁶² The middle of the third century is when the building of new pagan places of cult seems to end in Egypt. Some Egyptian temples were still operating in the third century, perhaps up to the first quarter of the fourth (see Bagnall 1993, 261–68). See also Dijkstra 2011.

⁶³ Mills 1981, 181–82; 1983, 129–38; Kaper 1997, 7–9. Mudbrick temples have been found in nearby Kharga (supra n. 61), including one at the site of Douch (Reddé 2004, 179–84. See also Ikram 2018.



FIG. 14. Aerial view of the west complex (looking north).

earlier dating—that is, in the Ptolemaic period.⁶⁴ The site of 'Ain el-Gedida may thus may go back to the Ptolemaic era.⁶⁵ It remains puzzling that during three excavation seasons no diagnostic object was retrieved that is clearly datable to the Ptolemaic period; the finds instead give the impression of a settlement that developed, and was then abandoned, in late antiquity.

The conversion of the temple at 'Ain el-Gedida into a ceramic workshop must have been dictated by pragmatic reasons, for example the need for a pottery-making facility in an area already characterized, at least in its southern part, by utilitarian functions. It is not clear if the temple underwent a period of abandonment before its transformation into a ceramic workshop probably around the time when the church was built not far to the east of it. All the evidence collected during the excavation of the building relates to its use as a ceramic workshop around the same time that the

church was built. It seems strange, considering the temple's relatively large dimensions and proximity to the center of the main mound, that this structure was not chosen as a suitable location for the church, but one must avoid the temptation to assume a sort of functional continuity between pagan and Christian ritual places or practices.⁶⁶ What can be established, in the context of 'Ain el-Gedida, is that its inhabitants preferred to deal with the considerable range of issues caused by adding a church to a densely built environment rather than refashioning the temple at the west edge of Mound I into a church.⁶⁷ Visibility, accessibility, and centrality within the site's urban fabric must have been critical factors in their choice.

⁶⁴ On historical functionalism, particularly the application of functionalist principles to the study of Christianization, see Bowes 2007, particularly 152–54. On the reuse of temples in Late Antique Egypt, see the discussion by Dijkstra (2011).

⁶⁵ However, the temple must have been characterized—at least when it was still in use as a cult place—by some degree of centrality and ease of access: see Davoli 2019; on monumental access to temples in the Fayyum, see Davoli 2011.

⁶⁴ Gill 2016, 101–4.

⁶⁵ Aravecchia 2018 (269–75) contains a broader discussion of issues of chronology regarding 'Ain el-Gedida.

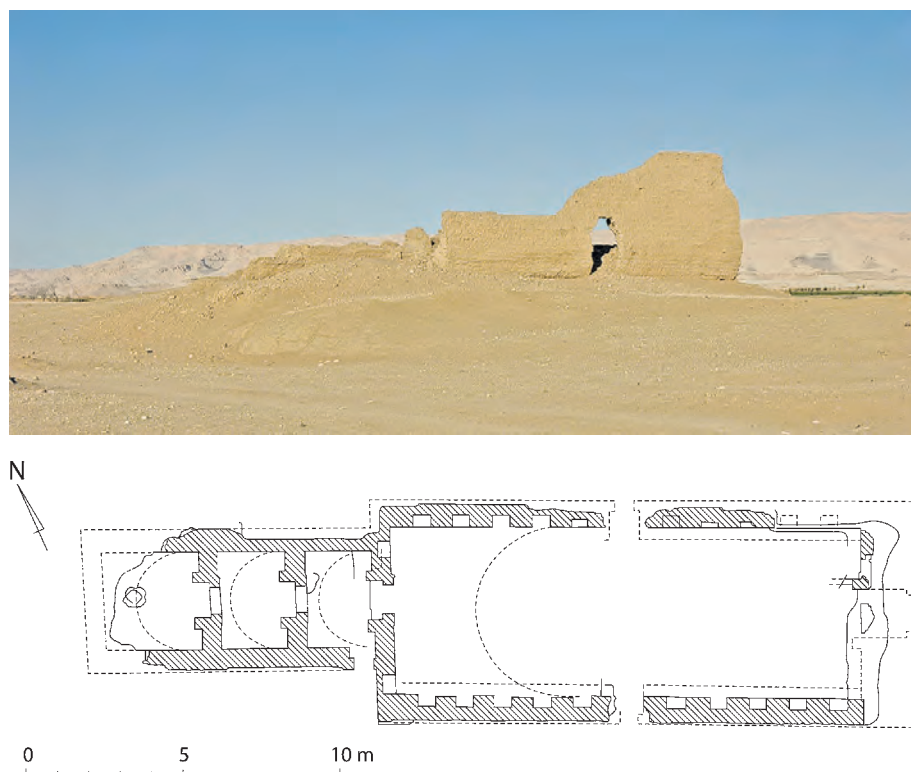


FIG. 15. Temple of El-Qusur near Tineida (looking northeast) and plan (after Kaper 1997, 8).

DISCUSSION

Based on the available evidence, Mound I appears to have been highly accessible and was probably where most interactions between villagers, and between villagers and visitors, occurred. It is the location of both the church complex and the mudbrick temple, which may well have been the only two public buildings in the village.⁶⁸ Indeed, it is not to be expected, due to the small size and the nature of the settlement, that 'Ain el-Gedida had any monumentalized center with buildings such as gymnasia, baths, and arches as in the bigger regional centers of Roman and Late Antique Egypt.⁶⁹

⁶⁸In terms of size and visibility, traces of a large structure were surveyed near the northern edge of Mound I (see fig. 10 herein and Aravecchia 2018, 59–61). The building, which was identified as a *columbarium* or pigeon tower, must have been considerably larger and taller than the surrounding structures (including the church complex), notwithstanding its utilitarian function.

⁶⁹See Davoli 2019 on monumental buildings in an oasis city of Late Antique Egypt. On the armatures and connective architecture such as squares, monumental public buildings, arches,

'Ain el-Gedida was no longer inhabited after the late fourth century, or the beginning of the fifth century, at the latest.⁷⁰ Three seasons of survey and excavation did not reveal in the latest occupational levels any inscriptional, numismatic, or ceramic material that is dated after the end of the fourth or the early fifth century. The archaeological record does not provide any evidence that the inhabitants of 'Ain el-Gedida left the site as the consequence of a sudden, dramatic incident, and the reasons for the abandonment of the site remain unknown. The abandonment may have been somewhat gradual over a relatively short amount of time, as suggested by the fact that most rooms (at least of those excavated) were carefully emptied of any valuable objects.⁷¹ There are no traces of resettlement at 'Ain el-Gedida in the following centuries—an absence that is attested also at other sites of Dakhla Oasis during the

porticoes, and fountains within cities of the Roman world, see MacDonald 1986, chs. 2, 3. Regarding the architectural setting of cities in Roman Egypt, see McKenzie 2007; Bailey 2012.

⁷⁰Aravecchia 2018, 271–75.

⁷¹See Keenan 2003.

same period, though this larger-scale phenomenon has not received conclusive explanation.⁷²

There is evidence for rural sites that were abandoned, in Egypt as well as in other regions of the post-Classical world, during the fifth and sixth centuries.⁷³ Nevertheless, field research carried out in the last few decades has refuted the picture of a general population decline—as well as of a decline in living standards—that was once associated with the rural Mediterranean world in late antiquity.⁷⁴ Signs of a process of ruralization affecting the built environment can be seen both in the West and in the East. An example of this is the partition of residential areas into smaller units that are often associated with industrial or agricultural installations.⁷⁵ A similar feature, attested throughout the Roman world in late antiquity, is described by Jacobs as “the usurpation and subdivision of public spaces by smaller structures.”⁷⁶ In general, there does not seem to be evidence of a correlation between such changes in the spatial organization of Late Antique settlements and economic decline; rather, these changes can be seen as pointing to new forms of social organization and aggregation.⁷⁷ Archaeologists have documented a similar phenomenon in Egypt’s Western Desert during the fourth century, for example at Douch (Kharga Oasis) and at Kellis (Dakhla Oasis).⁷⁸ In particular, excavations at both sites revealed evidence for the partitioning of the internal space of earlier buildings for

reuse as stables.⁷⁹ Often, these alterations were accompanied by the construction of loculi, rectangular mud and mudbrick features, for the feeding of animals. Two loculi were also detected at ‘Ain el-Gedida along the south wall of Space B13, which was not part of a dwelling or a stable but, as mentioned above, functioned as a crossroad between Corridor B11 and Street B12. There is also evidence, at the site, for the partitioning of an earlier building—the temple—into a set of smaller spaces linked with productive activities—the ceramic workshop. Nevertheless, the alterations that were carried out inside the former temple are not necessarily a manifestation of a process of ruralization but may simply have been dictated by a need for available space in a central location. Furthermore, one must acknowledge that ‘Ain el-Gedida was likely an agriculturally oriented site from the beginning of its occupational history, built and managed for the agricultural exploitation of the surrounding land.⁸⁰ Therefore, the existence of features such as mangers at the site could hardly qualify as evidence for the ruralization of a site that was already rural.

The site of ‘Ain el-Gedida represents a case study that reveals ways in which the built landscape of oases, and more broadly of Egypt, was manipulated and re-adapted in late antiquity. The goal was to accommodate the construction of Christian places of worship in prime locations, a phenomenon that paralleled the loss of the importance of temples in the religious landscape of Late Antique Egypt.⁸¹ The erection of churches within preexisting—and densely built—settings often entailed significant alterations to earlier buildings and, more broadly, a reorganization of the surrounding built environment, including patterns of access to—and movement within—this landscape.

⁷² See Knudstad and Frey 1999, 213. On the presence of sand deposits at Kellis during the last phase of occupation at the site, see Bowen 2015, 233.

⁷³ For a summary of the debate on this phenomenon, with a particular focus on rural villas of the western Mediterranean regions, see Lewit 2003; Bowes and Gutteridge 2005. For an introduction to rural villas in the Near East and the comparatively scanty evidence for them, see Graf 2001, 227–30.

⁷⁴ See Chavarría and Lewit 2004. On the dynamic transformation of the countryside in the Late Antique Mediterranean, see Chavarría et al. 2018. The publication of books in the *Late Antique Archaeology* series has significantly contributed to an accurate re-evaluation of the evidence on changes to the rural landscape in late antiquity. See also Percival 1999; Said 1999.

⁷⁵ Lewit 2003.

⁷⁶ Jacobs 2009, 203; this phenomenon is not seen by her as a sign of either economic growth or decline (224).

⁷⁷ Bowes and Gutteridge 2005.

⁷⁸ Kellis is located near ‘Ain el-Gedida, which may have been administratively dependent on it (see Bagnall et al. 2015, 283–84).

⁷⁹ See Reddé 2004, 56 (for Douch); Hope 2002, 173, 186 (for Kellis). Further evidence was discovered in recent years at the polis of Amheida (Dakhla Oasis), where a stable, which was joined to the fourth-century house of a local *bouleutes* (city councilor), was created reusing space that had been previously in use as a school (see Bagnall et al. 2015, 89).

⁸⁰ Supra n. 8. See also Reddé 2004, 185–96, and Davoli 2019, 52, on agricultural exploitation of land as a key factor in the development and growth of sites in Dakhla and Kharga Oases. On the social organization of Egyptian villages in late antiquity, see Sessa 2018, 21–46.

⁸¹ Bagnall (1993, 7) commented on the need for more archaeological work to gain a better understanding of the presence and role of churches in towns and villages of Late Antique Egypt.

This is attested not only at el-Gedida but also at other sites in the Western Desert, for example at Kellis.⁸² Thus, the archaeological and documentary evidence on the Christianization of the rural environment at 'Ain el-Gedida may bear witness to the appearance of what Bowes and Gutteridge call "new sociologies of settlement" in late antiquity.⁸³

More generally, the evidence from this rural hamlet in the Western Desert bears witness to the complexity, as well as the intensity, of the process of Christianization, not only in the major cities and nome capitals of the Delta and Nile Valley but also in Egypt's most remote—though clearly not so isolated—outposts.⁸⁴ The region of the oases was evidently fertile ground for the adoption of new beliefs as well as of the architectural and artistic manifestations of those beliefs, which nonetheless must have coexisted for some time with previous traditions. What traveled along the network of caravan routes that crossed the desert, and connected its oases with the broader Mediterranean world, was not only people and goods but also new ideas and practices.

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Works Cited

- Aravecchia, N. 2012. "The Church Complex of 'Ain el-Gedida, Dakhleh Oasis." In *The Oasis Papers 6: Proceedings of the Sixth International Conference of the Dakhleh Oasis Project*, edited by R.S. Bagnall, P. Davoli, and C.A. Hope, 391–408. Dakhleh Oasis Project Monograph 15. Oxford: Oxbow.
- , with contributions by R.S. Bagnall et al. 2018. *'Ain el-Gedida: 2006–2008 Excavations of a Late Antique Site in Egypt's Western Desert*. New York: New York University Press and Institute for the Study of the Ancient World.
- . Forthcoming. "Christian Identity in the Archaeological Record: A Case Study from Egypt's Western Desert." In *Acts of the Fourth International Symposium on Coptic Culture* (Stevenage, UK, June 29–July 2, 2017). Cairo: American University in Cairo Press.
- Bagnall, R.S. 1986. "The Camel, the Wagon, and the Donkey in Later Roman Egypt." *BASP* 22:1–6.
- . 1993. *Egypt in Late Antiquity*. Princeton: Princeton University Press.
- Bagnall, R.S., and D. Dzierzbicka. 2018. "Ostraka and Graffiti." In *'Ain el-Gedida: 2006–2008 Excavations of a Late Antique Site in Egypt's Western Desert*, edited by N. Aravecchia, 507–38. New York: New York University Press and Institute for the Study of the Ancient World.
- Bagnall, R.S., N. Aravecchia, R. Cribiore, P. Davoli, O.E. Kaper, and S. McFadden. 2015. *An Oasis City*. New York: New York University Press and Institute for the Study of the Ancient World.
- Bailey, D.M. 2012. "Classical Architecture." In *The Oxford Handbook of Roman Egypt*, edited by C. Riggs, 189–204. Oxford: Oxford University Press.
- Baines, J. 2004. "Egyptian Elite Self-Presentation in the Context of Ptolemaic Rule." In *Ancient Alexandria Between Egypt and Greece*, edited by W.V. Harris and G. Ruffini, 33–61. Leiden and Boston: Brill.
- Baldovin, J.F. 2006. "The Empire Baptized." In *The Oxford History of Christian Worship*, edited by G. Wainwright and K.B. Westerfield Tucker, 77–130. Oxford and New York: Oxford University Press.
- Banaji, J. 2007. *Agrarian Change in Late Antiquity: Gold, Labour, and Aristocratic Dominance*. Oxford and New York: Oxford University Press.
- Bayoumi, K.A. 1998. "Excavations at 'Ain al Gadida in the Dakhleh Oasis." In *Life on the Fringe: Living in the Southern Egyptian Deserts During the Roman and Early-Byzantine Periods. Proceedings of a Colloquium Held on the Occasion of the 25th Anniversary of the Netherlands Institute for Archaeology and Arabic Studies in Cairo 9–12 December 1996*, edited by O.E. Kaper, 55–62. Leiden: Research School CNWS School of Asian, African, and Amerindian Studies.
- Bowen, G.E. 2002. "The Fourth Century Churches at Ismant el-Kharab." In *Dakhleh Oasis Project: Preliminary Reports on the 1994–1995 to 1998–1999 Field Seasons*, edited by C.A. Hope and G.E. Bowen, 65–85. Dakhleh Oasis Project Monograph 11. Oxford: Oxbow.
- . 2003. "The Small East Church at Ismant el-Kharab." In *The Oasis Papers 3: Proceedings of the Third International Conference of the Dakhleh Oasis Project*, edited by G.E. Bowen and C.A. Hope, 153–65. Dakhleh Oasis Project Monograph 14. Oxford: Oxbow.
- . 2015. "The Environment Within: The Archaeological Context of the Texts from House 3 at Kellis in Egypt's Dakhleh Oasis." In *Housing and Habitat in the Ancient Mediterranean: Cultural and Environmental Responses*, edited by A.A. Di Castro and C.A. Hope, 231–41. Leuven, Belgium: Peeters.
- Bowes, K. 2001. "'... Nec sedere in villam': Villa-Churches, Rural Piety, and the Priscillianist Controversy." In *Urban Centers and Rural Contexts in Late Antiquity*, edited by T.S. Burns and J.W. Eadie, 323–48. East Lansing: Michigan State University Press.
- . 2007. "'Christianization' and the Rural Home."

⁸² This phenomenon is clearly noticeable in the rearrangement of earlier spaces for the construction of the Small East Church; see Bowen 2003, esp. 158–62.

⁸³ Bowes and Gutteridge 2005, 413.

⁸⁴ Bagnall et al. 2015, 147–48.

- Journal of Early Christian Studies* 15(2):143–70.
- . 2018. “Christianization of Villas.” In *The Roman Villa in the Mediterranean Basin*, edited by A. Marzano and G.P.R. Metraux, 453–64. Cambridge: Cambridge University Press.
- Bowes, K., and A. Gutteridge. 2005. “Rethinking the Later Roman Landscape.” *JRA* 18:405–13.
- Busine, A., ed. 2015. *Religious Practices and Christianization of the Late Antique City (4th–7th Cent.)*. Leiden and Boston: Brill.
- Caseau, B. 2001. “Sacred Landscapes.” In *Interpreting Late Antiquity: Essays on the Post-Classical World*, edited by G.W. Bowersock, P. Brown, and O. Grabar, 21–59. Cambridge, Mass.: Belknap Press of Harvard University Press.
- . 2004. “The Fate of Rural Temples in Late Antiquity and the Christianisation of the Countryside.” In *Recent Research on the Late Antique Countryside*, edited by W. Boden, L. Lavan, and C. Machado, 105–44. Leiden and Boston: Brill.
- Chavarria, A., and T. Lewit. 2004. “Archaeological Research on the Late Antique Countryside: A Bibliographical Essay.” In *Recent Research on the Late Antique Countryside*, edited by W. Boden, L. Lavan, and C. Machado, 3–51. Leiden and Boston: Brill.
- Chavarria, A., T. Lewit, and A. Izdebski. 2018. “Settlement, Land Use and Society in the Late Antique Mediterranean, 4th–7th c.: An Overview.” In *Environment and Society in the Long Late Antiquity*, edited by A. Izdebski and M. Mulryan, 132–47. Leiden and Boston: Brill.
- Daniel, R.W. 2010. *Architectural Orientation in the Papyri*. Papyrologica Coloniensia 34. Paderborn, Germany: Ferdinand Schöningh.
- Davoli, P. 2011. “Reflections on Urbanism in Graeco-Roman Egypt: A Historical and Regional Perspective.” In *The Space of the City in Graeco-Roman Egypt: Image and Reality*, edited by E. Subias, P. Azara, J. Carruesco, I. Fiz, and R. Cuesta, 69–92. Tarragona: Institut Català d’Arqueologia Clàssica.
- . 2015. “Classical Influences on the Domestic Architecture of the Graeco-Roman Fayyum Sites.” In *Housing and Habitat in the Ancient Mediterranean: Cultural and Environmental Responses*, edited by A.A. Di Castro and C.A. Hope, 173–84. Leuven, Belgium: Peeters.
- . 2019. “Trimithis: A Case Study of Proto-Byzantine Urbanism.” In *The Great Oasis of Egypt: The Kharga and Dakhla Oases in Antiquity*, edited by R.S. Bagnall and G. Tallet, 46–80. Cambridge: Cambridge University Press.
- . Forthcoming. *Egyptian Houses in Their Urban and Environmental Contexts: Some Case Studies of the Roman and Late Roman Periods*. Ithaca, NY: Cornell University Press.
- De Filippi, F. 2006. “Traditional Architecture in the Dakhleh Oasis, Egypt: Space, Form and Building Systems.” In *PLEA2006 23rd International Conference on Passive and Low Energy Architecture, Geneva, Switzerland, 6–8 September 2006, Conference Proceedings*. http://web5.arch.cuhk.edu.hk/server1/staff1/edward/www/plea2018/plea/2006/Vol1/PLEA2006_PAPER881.pdf.
- DeForest, D. 2019. “Baths, Christianity, and Bathing Culture in Late Antiquity.” In *The Oxford Handbook of Early Christian Archaeology*, edited by W.R. Caraher, T.W. Davis, and D.K. Pettegrew. Oxford: Oxford University Press.
- Dijkstra, J.H.F. 2008. *Philae and the End of Ancient Egyptian Religion: A Regional Study of Religious Transformation (298–642 CE)*. Leuven, Belgium, and Dudley, Mass.: Peeters, Departement Oosterse Studies.
- . 2011. “The Fate of the Temples in Late Antique Egypt.” In *The Archaeology of Late Antique ‘Paganism,’* edited by L. Lavan and M. Mulryan, 389–436. Leiden and Boston: Brill.
- Frankfurter, D. 1998. *Religion in Roman Egypt: Assimilation and Resistance*. Princeton: Princeton University Press.
- Gardner, I. 1997a. “The Manichaean Community at Kellis.” In *Emerging from Darkness: Studies in the Recovery of Manichaean Sources*, edited by P. Mirecki and J. BeDuhn, 161–75. Leiden, New York, and Cologne: Brill.
- . 1997b. “Personal Letters from the Manichaean Community at Kellis.” In *Atti del Terzo Congresso Internazionale di Studi “Manicheismo e Oriente Cristiano Antico”: Arcavacata di Rende, Amantea, 31 Agosto–5 Settembre 1993*, edited by L. Cirillo and A. van Tongerlo, 77–94. Leuven and Turnhout, Belgium: International Association of Manichaean Studies, with Center of the History of Religions, and Brepols.
- . 2000. “He Has Gone to the Monastery . . .” In *Studia Manichaica 4: Internationaler Kongress zum Manichäismus, Berlin, 14.–18. Juli 1997*, edited by R.E. Emmerick, W. Sundermann, and P. Zieme, 247–57. Berlin: Akademie Verlag.
- Gill, J.C.R. 2016. *Dakhleh Oasis and the Western Desert of Egypt Under the Ptolemies*. Dakhleh Oasis Project Monograph 17. Oxford and Philadelphia: Oxbow.
- Goehring, J.E., and J.A. Timbie, eds. 2007. *The World of Early Egyptian Christianity: Language, Literature, and Social Context*. Washington, D.C.: Catholic University of America Press.
- Graf, D.F. 2001. “Town and Countryside in Roman Arabia During Late Antiquity.” In *Urban Centers and Rural Contexts in Late Antiquity*, edited by T.S. Burns and J.W. Eadie, 219–40. East Lansing: Michigan State University Press.
- Granger, F., trans. 1934. *On Architecture*, by Vitruvius. Vol. 2, Books 6–10. Loeb Classical Library. Cambridge, Mass.: Harvard University Press.
- Griggs, C.W. 1991. *Early Egyptian Christianity: From Its Origins to 451 C.E.* Leiden and New York: Brill.
- Grossmann, P. 2002. *Christliche Architektur in Ägypten*. Leiden, Boston, and Cologne: Brill.
- Hahn, J., S. Emmel, and U. Gotter, eds. 2008. *From Temple to Church: Destruction and Renewal of Local Cultic Topography in Late Antiquity*. Leiden and Boston: Brill.
- Harl, K.W. 2001. “From Pagan to Christian in Cities of Roman Anatolia During the Fourth and Fifth Centuries.” In *Urban Centers and Rural Contexts in Late Antiquity*, edited by T.S. Burns and J.W. Eadie, 301–22. East Lansing: Michigan State University Press.
- Hope, C.A. 2002. “Excavations in the Settlement of Ismant el-Kharab in 1995–1999.” In *Dakhleh Oasis Project: Preliminary Reports on the 1994–1995 to 1998–1999 Field*

- Seasons*, edited by C.A. Hope and G.E. Bowen, 167–208. Dakhleh Oasis Project Monograph 11. Oxford: Oxbow.
- . 2015. “The Roman-Period Houses of Kellis in Egypt’s Dakhleh Oasis.” In *Housing and Habitat in the Ancient Mediterranean: Cultural and Environmental Responses*, edited by A.A. Di Castro and C.A. Hope, 199–229. Leuven, Belgium: Peeters.
- Ikram, S. 2018. “Temples of North Kharga.” In *North Kharga Oasis Survey: Explorations in Egypt’s Western Desert*, edited by C. Rossi and S. Ikram, 467–77. Leuven, Belgium: Peeters.
- Jacobs, I. 2009. “Encroachment in the Eastern Mediterranean Between the Fourth and the Seventh Century AD.” *Ancient Society* 39:203–43.
- Johnson, M.E. 1999. *The Rites of Christian Initiation: Their Evolution and Interpretation*. Collegeville, Minn.: Liturgical Press.
- . 2006. “The Apostolic Tradition.” In *The Oxford History of Christian Worship*, edited by G. Wainwright and K.B. Westerfield Tucker, 32–75. Oxford and New York: Oxford University Press.
- Kaiser, A. 2011. *Roman Urban Street Networks*. New York: Routledge.
- Kaper, O.E. 1997. “Temples and Gods in Roman Dakhleh: Studies in the Indigenous Cults of an Egyptian Oasis.” Ph.D. diss., University of Groningen.
- Keenan, J.G. 2003. “Deserted Villages: From the Ancient to the Medieval Fayyūm.” *BASP* 40:119–39.
- Kidner, F.L. 2001. “Christianizing the Syrian Countryside: An Archaeological and Architectural Approach.” In *Urban Centers and Rural Contexts in Late Antiquity*, edited by T.S. Burns and J.W. Eadie, 349–79. East Lansing: Michigan State University Press.
- Knudstad, J.E., and R.A. Frey 1999. “Kellis: The Architectural Survey of the Romano-Byzantine Town at Ismant el-Kharab.” In *Reports from the Survey of the Dakhleh Oasis Western Desert of Egypt, 1977–1987*, edited by J.E. Knudstad and R.A. Frey, 189–214. Dakhleh Oasis Project Monograph 2. Oxford: Oxbow.
- Leone, A. 2013. *The End of the Pagan City: Religion, Economy, and Urbanism in Late Antique North Africa*. Oxford: Oxford University Press.
- Lewit, T. 2003. “‘Vanishing Villas’: What Happened to Élite Rural Habitation in the West in the 5th–6th c.?” *JRA* 16:260–74.
- MacDonald, W.L. 1986. *The Architecture of the Roman Empire*. Vol. 2, *An Urban Appraisal*. New Haven and London: Yale University Press.
- McKenzie, J. 2007. *The Architecture of Alexandria and Egypt, c. 300 B.C. to A.D. 700*. New Haven: Yale University Press.
- Mills, A.J. 1981. “The Dakhleh Oasis Project: Report on the Third Season of Survey, September–December, 1980.” *Journal of the Society for the Study of Egyptian Antiquities* 11:175–92.
- . 1983. “The Dakhleh Oasis Project: Report on the Fifth Season of Survey, October 1982–January 1983.” *Journal of the Society for the Study of Egyptian Antiquities* 13:121–41.
- Mitchell, L.L. 1981. “The Development of Catechesis in the Third and Fourth Century: From Hippolytus to Augustine.” In *A Faithful Church: Issues in the History of Catechesis*, edited by J.H. Westerhoff and O.C. Edwards, Jr., 49–78. Wilton, Conn.: Morehouse-Barlow.
- Pearson, B.A., and J.E. Goehring, eds. 1986. *The Roots of Egyptian Christianity*. Philadelphia: Fortress.
- Percival, J. 1999. “Villas.” In *Late Antiquity: A Guide to the Postclassical World*, edited by G. Bowersock, P. Brown, and O. Grabar, 741–42. Cambridge: Cambridge University Press.
- Reddé, M. 2004. *Kysis: Fouilles de l’Ifao à Douch, Oasis de Kharga, 1985–1990*. Cairo: Institut Français d’Archéologie Orientale.
- Rossi, C., and S. Ikram. 2018. *North Kharga Oasis Survey: Explorations in Egypt’s Western Desert*. Leuven, Belgium: Peeters.
- Said, S. 1999. “Countryside.” In *Late Antiquity: A Guide to the Postclassical World*, edited by G. Bowersock, P. Brown, and O. Grabar, 398–99. Cambridge: Cambridge University Press.
- Schijns, W., O.E. Kaper, and J. Kila. 2003. *Vernacular Mudbrick Architecture in the Dakhleh Oasis, Egypt, and the Design of the Dakhleh Oasis Training and Conservation Centre*. Dakhleh Oasis Project Monograph 10. Oxford: Oxbow.
- Sessa, K. 2009. “*Domus Ecclesiae*: Rethinking a Category of Ante-Pacem Christian Space.” *JThS* 60(1):90–108.
- . 2018. *Daily Life in Late Antiquity*. Cambridge and New York: Cambridge University Press.
- Wharton, A.J. 1995. *Refiguring the Post Classical City: Dura Europos, Jerash, Jerusalem and Ravenna*. Cambridge and New York: Cambridge University Press.
- White, L.M. 1990. *Building God’s House in the Roman World: Architectural Adaptation Among Pagans, Jews, and Christians*. Boston and London: Johns Hopkins University Press.
- . 1997. *The Social Origins of Christian Architecture*. Vol. 2, *Texts and Monuments for the Christian Domus Ecclesiae in Its Environment*. Valley Forge, Pa.: Trinity Press International.
- Winlock, H.E. 1936. *Ed Dakhleh Oasis: Journal of a Camel Trip Made in 1908*. New York: Metropolitan Museum of Art.