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Mapping the religious landscape of Coptic Egypt *New Results Between Hagiographical Sources and Network Analysis*

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Summary: The expansion of the Christian phenomenon in Late Roman Egypt, as in the rest of the Mediterranean, is a fact known and witnessed by ancient sources and archaeology. Contemporary or slightly later Coptic written sources have allowed historians to visualize and understand for hundreds of years the motives, intentions and processes of expansion and consolidation of Christianity in Egyptian territory. In recent years, it has begun to be seen that this expansion process, based on the establishment of Coptic monasteries, was more complex and different from what ancient texts had transmitted. From the development of a research project including terrestrial prospections, it has been possible to create a historical geodatabase that has documented the Coptic monastic landscape of Egypt between the 3rd and 7th centuries AD. Surprisingly, the results obtained have shown very particular patterns of expansion and distribution of Coptic monasteries that perfectly show the social and political intentionality of the foundations in geographically important locations. In this paper, the aim is to show the need and benefits of georeferenced historical data, including typological and chronological information, to determine historical processes, such as in this case, the expansion of the Coptic religious system in Egypt. As a result, more than two hundred Coptic sites from the Late Roman Empire have been georeferenced allowing the reinterpretation of the religious, social, and political events related with the Coptic singularity.

Introduction

During the 3rd and 4th centuries AD, the territory of Egypt experienced a particular and unique political and religious situation within late Roman Antiquity (Bagnall 2008). A territory with a long history of polytheism became one of the epicentres of early Christianity and experienced a strong fervour and rise of Christian movements. Arianism, for example, was established in Alexandria as a doctrine that took hold strongly in the East and especially in the large Nilotic cities of Egypt. At the same time, another theological current also began to develop strongly in the Nile area. In this case, due to the growing strength of Arianism in urbanised areas, this new current of Christian thought grew pushed out of the cities. It was the Coptic Christianity. Among some of its postulates, this Christian movement advocated asceticism, the distancing of large social gatherings and the creation of temples and monasteries dedicated to Christ in isolated territories, close to the desert (Guimerà 2023).

In this sense, the deconstruction of Christian literary sources has been strengthened by archaeological evidence, which demonstrates that the iconoclastic violence proffered against the temples and their later conversion into basilicas or churches were rather exceptional and not ordinary actions (Saradi- Mendelovici 1990). In fact, the reuse of a sanctuary as a church was just one of several, more pragmatic ways of reusing an abandoned building, such as pulling it down for construction material or rebuilding it as a nonspiritual edifice, and as a regulation such

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transformations only happened from the late 4th century onwards, which is after the period previously studied as witnessing a peak in religious violence. The emphasis in latest publications away from violence has also led to more serious attention to the sources, especially imperial laws, that display an appreciation for temples as monuments, which, as we have seen, has previously been largely brushed under the table (Bagnall 2008; Guimerà 2023; Guimerà and De Soto 2024).

As Roger Bagnall pointed out, if we confront the hagiographical sources with archaeological data, but also numismatic and papyrological evidence, we will be able to see that what happened to Egyptian temples depended entirely on a multifaceted picture and local phenomena. If we want to comprehend the background of the abandonment, destruction, and the reuse of temples, we cannot avoid focusing on Egyptian faith and cults, and on the practice of religious legislation in other parts of the Eastern Roman Empire. This study believes that we must refuse the anthropological interpretation of an ahistorical approach and see it as a period and territory of continued transformation rather than of permanence and a static context. In the present paper, concerning the application of Geographical Information System (GIS) and Network Analysis on Egyptian Landscape, we will reconsider one type of source that is often asserted to withdraw the representation of Eastern Christian iconoclasm. On one hand, we examine and reconsider the boundaries of the hagiographical sources as historical evidence. On the other, we then review the archaeological data and georeferenced information regarding Egyptian temples in chronological periods.

Early Coptic Christianity, since this religious movement still exists today, strongly rooted in Egypt and was formed during its first centuries along the Nile River. The study of these first communities had traditionally been based on the scriptures preserved contemporary to these times and later, especially after the Edict of Thessalonica (Frankfurter 1998). Only in recent years, especially from the work of Papaconstantinou (2001), is it being observed that part of the theological discourse that supported this ideology does not quite agree with the archaeological record. Based on the concept of *Temple to Church* (Hahn et al. 2008), it is becoming clear that the asceticism promoted by the original texts was actually more of an evasive choice of large urban centres but without seeking to completely distance themselves from communication routes. As has been seen recently (Guimerà and De Soto 2024), these Coptic architectural spaces were mostly located in well-connected places.

The E-Koptos Project

Since 2021, a project has been developed to catalogue, study and georeference all these religious buildings linked to the Coptic movement (Guimerà 2023). The entire Thebaic area has been surveyed and, for the moment, the rest of the Egyptian territory has been documented from other studies and historical and archaeological information (Guimerà and de Soto 2024). As a result of this study process, almost 200 Coptic spaces have been catalogued. These sites were configured from male and female monasteries, hermitages, lauras, etc. For each site, its modern and ancient toponyms, its chronology, its typology, and other interesting elements such as the type of communities that occupied them or the evolution of each building, among other aspects, have been incorporated.

To manage all this volume of information, a geodatabase has been created that allows storing all the information related to each Coptic settlement as well as its geographical position. Visualizing all this data allows us to answer key questions about the geographical location and structural choices made by the Coptic monks in choosing each of the sites to build their buildings.

ID						
Name	Ancient	Modern				
Date	Creation date	Roman (I-V)	Byzantine (VI-IX)			
Coordinates	X	Y				
Typology	Episcopal See	Church	Monastery	Laura	Hermitage	
Main Typology						
Other info	Reuse	Abandonment	Pagan Phase	Muslim Phase	Iconoclasm	Genre (M/F)
Bibliography						

Figure. 1. Scheme of the fields in the E-Coptos Database

In addition, to complete the geographical and historical knowledge of this territory, this project has incorporated the most recent data on Roman transport networks provided by the Dessert Networks Project (Manière et al., 2021) and the Itiner-e project (Brughmans et al., 2024). The inclusion of this data has made possible to assess the geographical location of each Coptic site in relation to the connectivity of the territories. The combination of the geodatabase with multiple data and the potentialities of GIS software allow to enhance our understanding of the Coptic society evolution.

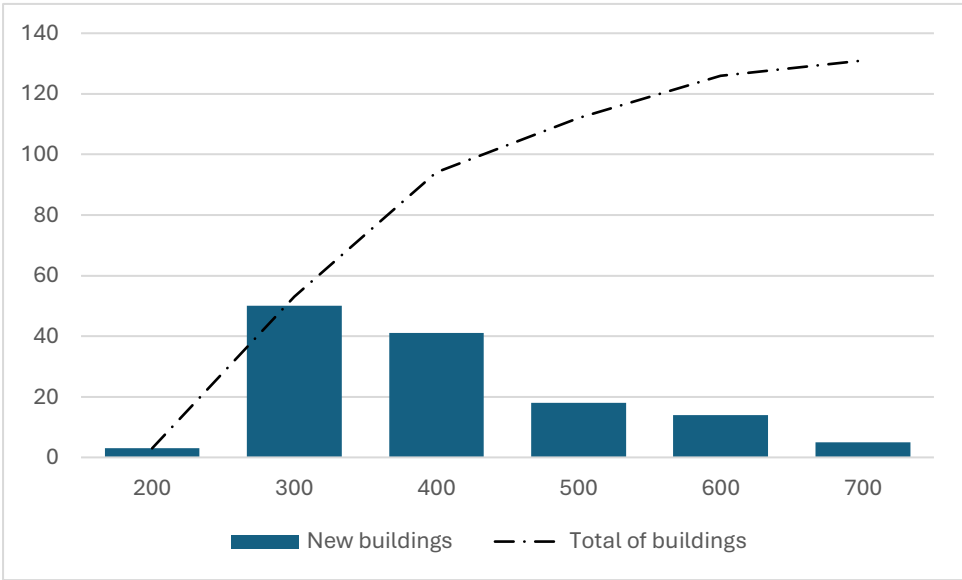


Figure. 2. Quantification of Coptic sites between IIIrd. AD. and VIII AD.

The Egypt Landscape during Coptic Times

Between the 3rd and 7th centuries AD, nearly 150 buildings were consecrated to Coptic worship in Egypt. The evolution of the occupation of Egypt by Coptic communities seems clear while analysing our current database. After a short and limited beginning, with the settlement of a few buildings during the 3rd century AD, Egypt experienced a real growth in the number of Coptic sites over the next centuries (Fig. 2). The 4th century AD represents the peak period in the construction and/or reoccupation of buildings dedicated to Coptic worship. From this time until the 8th century AD (when this study ends), new buildings continued to be built, although at a gradually slower pace. It seems logical to think that with the pass of time and the growth in the number of settlements, it is increasingly difficult to find new spaces and build new buildings.

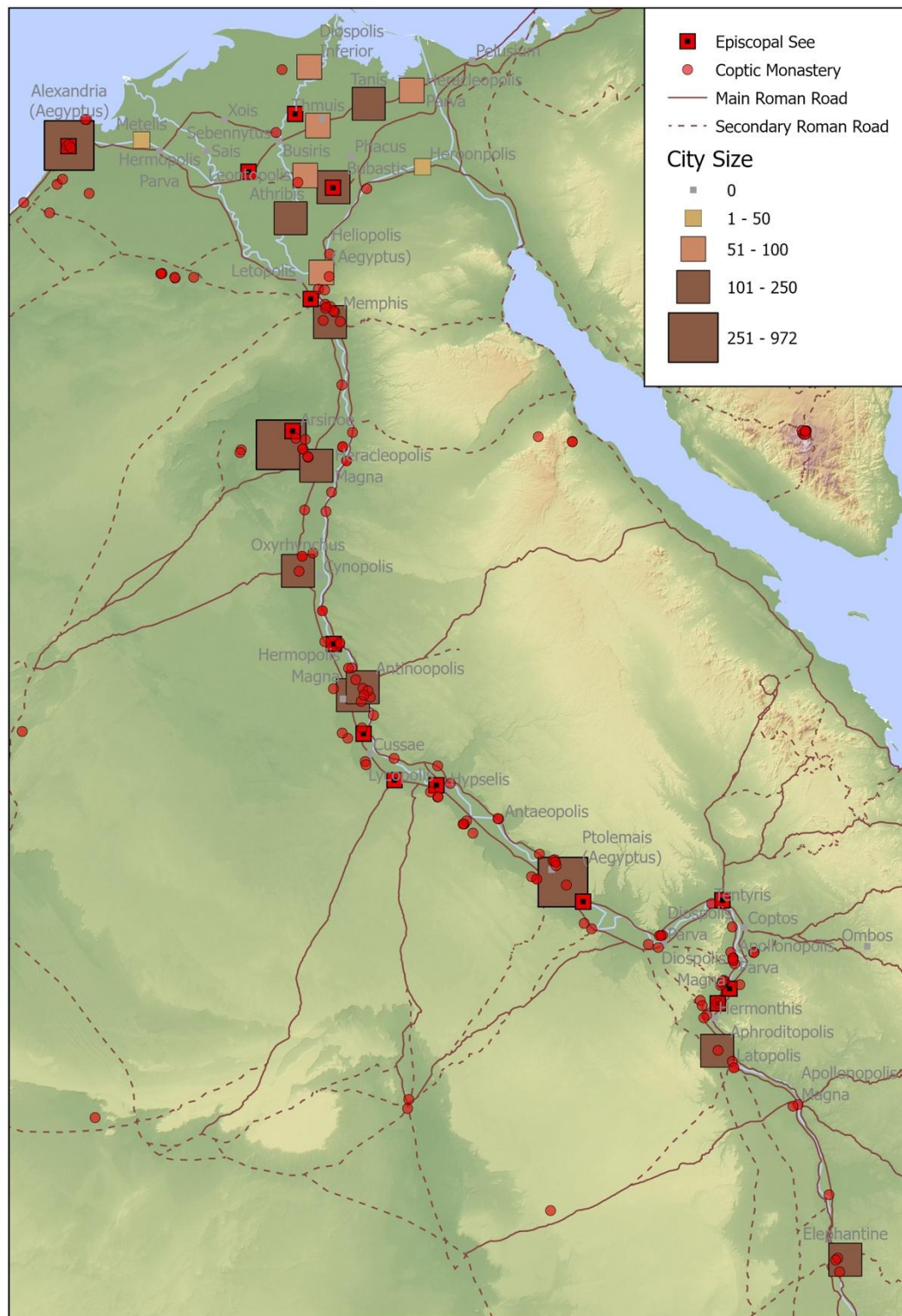


Figure 3. Distribution of Coptic sites in Egypt

The growth in the number of Coptic settlements took place mainly outside the urban areas of the Nile. Sometimes in the vicinity of cities, but often in certain rural areas. The result of this political-religious occupation concentrated in all those territories located around the cities, pointed out the urban domination of the Arianism. This mostly rural occupation, although it seems to respond to

the ascetic mandate described in the antique sources, allows us to observe how the majority of these Coptic settlements were located at crossroads and in well-connected territories (fig. 3).

This Coptic movement expanded through the consecration of monasteries, churches, lavras, hermitages and other types of buildings along the fertile valley of the Nile River. The morphology of these buildings was varied, as were their functions and the religious people who lived in them. They all had in common a religious belief that diverged from the Arianism prevalent in Egyptian cities, as well as from the initial apostolic Christianity that developed especially in the Western Roman Empire. The most notable buildings within the panorama of Coptic religious dispersion were the monasteries (Figure 4). In these buildings, homogeneous communities of mostly men or, to a lesser extent, women (never mixed) lived together, in which their individuals were governed by the norms established by the Coptic interpretation of the sacred texts. These monasteries had built spaces large enough to maintain a medium-sized community of religious people and to carry out the different existential tasks linked to this form of vital development. Male monasteries tended to be more self-governing, while female monasteries were traditionally subordinate to the management of a nearby male monastery (Guimerà and de Soto 2024; Guimerà and Carrasco in press).

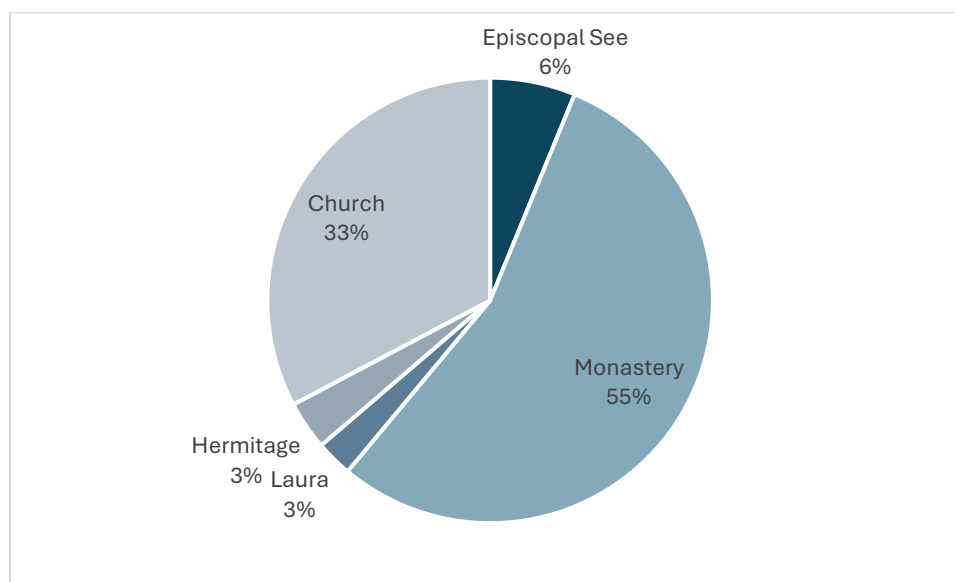


Figure 4. Typology of Coptic sites

However, in addition to these monastic buildings, the Coptic religious movement also opted for other types of buildings, which were minority ones, among which we must highlight the hermitages, spaces where a single monk carried out his activity away from other individuals. Despite this apparent self-sufficiency, the Coptic hermits frequently travelled to urban centres where they offered sermons and reflections to urban society. These activities probably brought them part of the vital sustenance they needed from voluntary donations (Guimerà and de Soto 2024). Other spaces, also minority and even more isolated and humble, where the Coptic monks stayed were the lauras, small cells or spaces where they carried out all their activities.

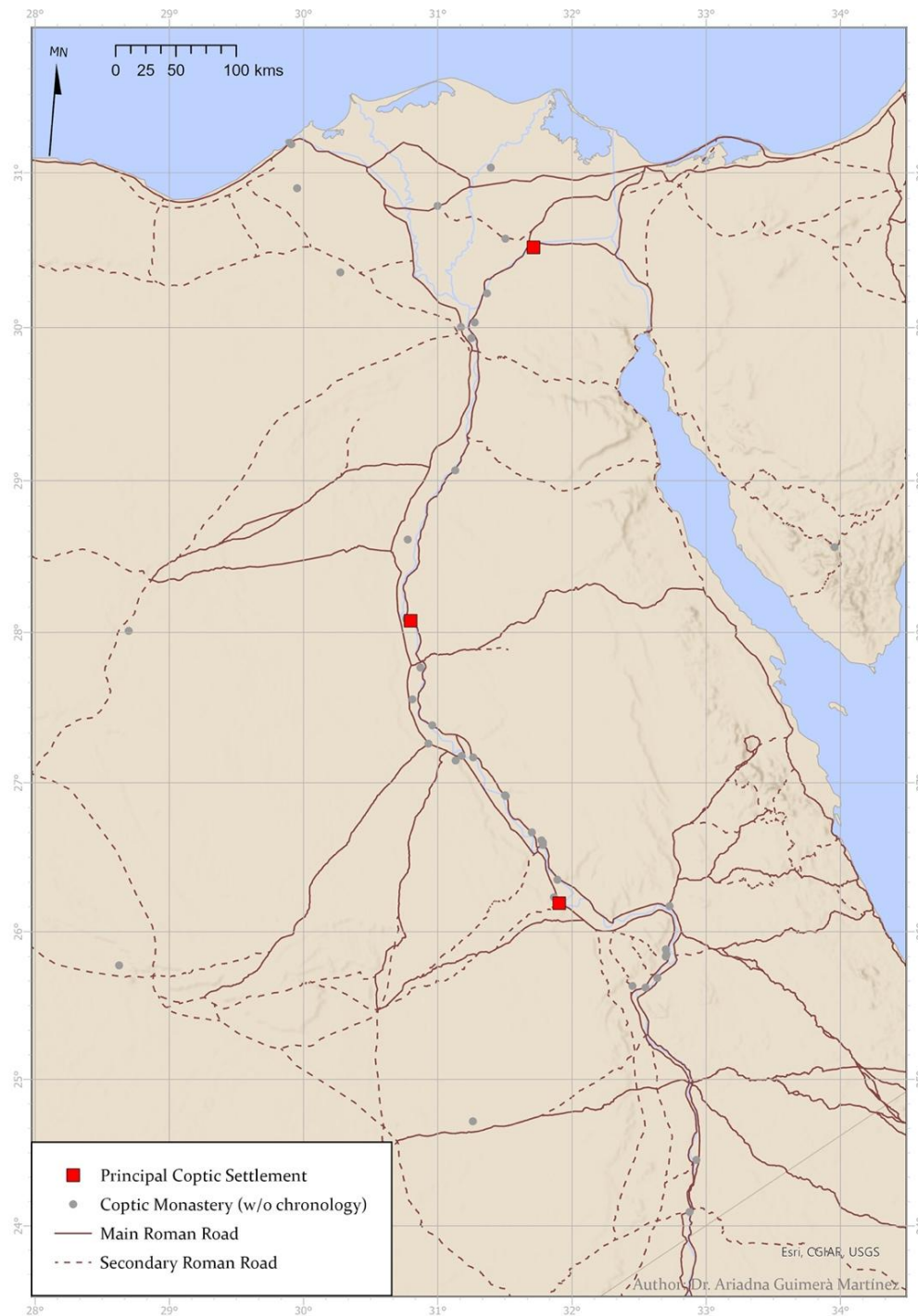


Figure 5. Distribution of the first Coptic monasteries around 250 BC.

Results (Monasteries)

An analysis of the Coptic occupation in late antique Egypt allows us to visualise the territorial expansion of this religious movement over several centuries. Initially, the first centres were established in three points that controlled practically the entire Egyptian territory (Figure 5). In the middle of the 3rd century AD, at a time when Arianism was also beginning to be established in Egyptian cities, the Coptic monks decided to locate their first three spaces in three areas far from

the main urban centres. The construction of these three original points spread across the Nilotic geography seems to demonstrate an interest in expanding Coptic beliefs throughout the Egyptian geography. In fact, from these three original centres the rest of the communities would gradually occupy other spaces around the Nile and at the main crossroads leading to the Red Sea and the Western Desert.

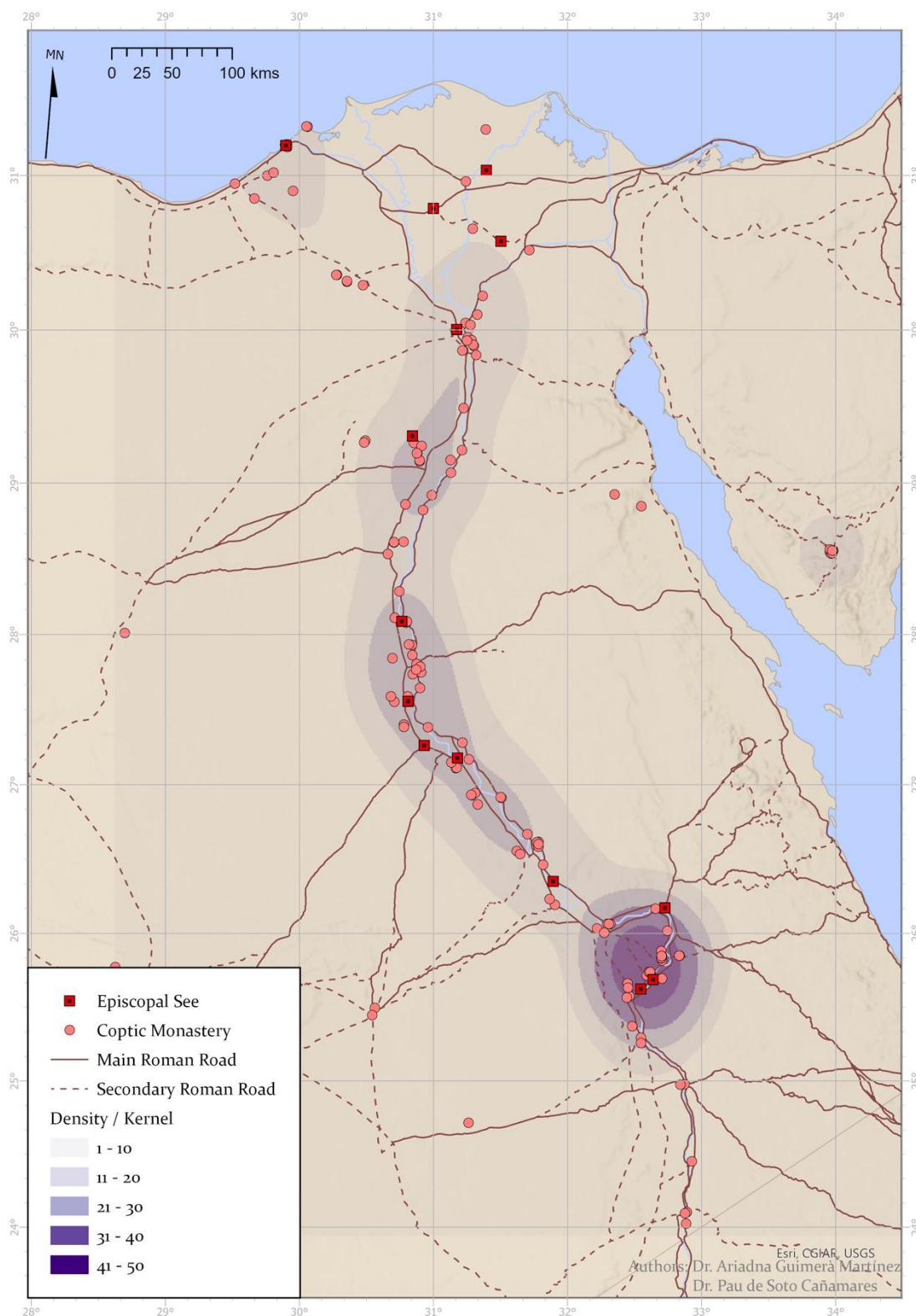


Figure 6. Distribution and density of the Coptic monasteries.

From this point on, each century gradually represents an advance in the territorial occupation of Coptic society in Egypt. On this expansion, the main Coptic settlements are located on both banks of the Nile River and are concentrated in those points with good land road communications to other territories. Over time, some centres will become Coptic Episcopal Sees, attracting a significant set of other types of buildings around them. Territories around Cairo and Memphis, Hermiopolis and Amarna, and especially in the Thebaid area concentrated a large number of Coptic monasteries and establishments (Figure 6).

Conclusions

For many years, there has been a traditional belief that Coptic expansion in Egypt was carried out especially in search of isolation over rural and desert territories. These axioms were depicted by the early Coptic texts. As Papaconstantinou (2001) pointed out a few years ago, recent studies and archaeology seem to contradict some of these theories. Although the Coptic movement did not manage to establish itself in the main Egyptian cities, it is also true that it decided to locate its centres of worship at crossroads and in well-connected territories. The geographical choice of the locations chosen to settle the different Coptic settlements was key to the development of this Christian movement. Thus, as can be seen, monasteries have not been documented that are more than a few kilometres (~5 km) away from the main communication routes and especially at the crossroads of several routes.

In this way, the development of this project is allowing us to observe in a more orderly, rigorous and archaeologically justified way the evolution of the Coptic movement in Egypt during late antiquity. Furthermore, the chrono-typological classification developed by this project is also allowing us to delve deeper into the knowledge of the religious organization of this community, evaluating the role of male and female monasteries, the historical dispersion in the occupation of spaces, the repeated use of reoccupations of previous buildings as ancient temples or public buildings, among other aspects.

To conclude, the Late Roman Egypt's landscape requires to be contemplated as largely territory and did not inevitably reproduce what was essentially proceeding throughout Egypt and the spread of the Coptic communities. Otherwise, regarding the archaeological data, the appreciation of widespread religious violence must be significantly nuanced, an impression that is based mainly on Christian literature but, unfortunately, has been repeated in so many historiographical studies until becoming a historical narrative that is difficult to diverge from. Besides, analogous episodes appear to have been relatively exceptional and to have come about in particular local and historical contexts, while the demolition and reuse of temples as churches has been presented to be a fairly late singularity, not performing until the following chronological period enclosed by the hagiographical sources and the imperial legislation. These historiographical tendencies have led us to take a renewed look at the Late Roman Egypt landscape concerning pagan temples, which were considered mainly as a slightly different set of propagandistic policies, rather than a one-sided religious program directly replicating historical reality.

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