

Article

# Sacred Animals at Saqqara

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**Abstract:** Saqqara, the necropolis of the first capital city of a unified Egypt, is best known today for the Step Pyramid of Pharaoh Djoser (2667–2648 B.C.). However, the Step Pyramid is only the most visible feature of this great burial site, and the tombs of many thousands of individuals are hidden beneath the sands, some excavated, others not. These human burials are only a part of Saqqara’s funerary history. This paper examines the catacombs of the numerous animals revered by the Egyptians at Saqqara and whose burial places have come to be known collectively as ‘The Sacred Animal Necropolis’ (SAN). First amongst these, both in importance and inception, was the Apis bull, the living image (*ba*) of Ptah, creator god of Memphis. However, it was the work conducted by Professor W.B. Emery (1903–1971) which brought to light the burial place of the Mother of the Apis as well as those for ibises, falcons, and baboons and which has provided much of what we know of the Sacred Animal Necropolis at North Saqqara. More recent work has built upon the discoveries made by Emery and others and taken a new approach to these subterranean catacombs for sacred animals.

**Keywords:** Egypt; Saqqara; sacred animals; necropolis; Mariette; Emery



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## 1. Introduction

Saqqara, the Memphite necropolis, was already a focus for visitors by the time of the New Kingdom (1550–1069 B.C.) and doubtless earlier. Imhotep, the architect of Djoser’s Step Pyramid, was credited with the invention of building in stone and the monument he created for his king had become a source of wonder, as witnessed by graffiti left at the House of the South within the Djoser complex [1]. Similarly, prince Khaemwese, a son of Ramesses II (1279–1213 B.C.) left a long inscription stating that he had restored the pyramid of the 5th Dynasty Pharaoh Unas (2375–2345 B.C.) [2] (182, 184, 229) and left similar evidence on other monuments [3].

As discussed below Saqqara remained an important religious site up to the end of the Pharaonic era and beyond and it is to its later history that many of the animal catacombs belong. It is often supposed that the evidence for these animal catacombs first came to light as a result of the work of Auguste Mariette (1821–1881) at the Serapeum [4,5] but the catacombs were already known to travellers well before his time, and these travel accounts should be considered as part of the history both of exploration at Saqqara and of tourism in the modern era.

## 2. Early Travellers

There is no space here to detail the accounts of all those who visited what has become known as the Sacred Animal Necropolis in the decades and centuries before Mariette, though Geoffrey Martin (1934–2022) has provided a convenient summary of some of their works [6] (p. 4).

What is clear from many of these accounts is that whilst visitors came to Saqqara to see the Step Pyramid, what impressed them more on their arrival were the so-called ‘bird pits’ or ‘wells’. These are now known to be mainly the shafts of mastaba tombs whose burial chambers, originally meant for human occupants, had been cut away in the later construction of animal catacombs and which the population of Saqqara and Abusir had

cleared for the ‘convenience’ of visitors. While the particular tomb shafts cleared by the local population are not known, examples of chambers being cut away in the construction of the catacombs can be found in mastabas 3508 and 3513 among others.

A particularly early and interesting account is that given by the Rev. Richard Pococke (1704–1765) [7] who during his visit to Egypt in 1738–1739 descended some thirty feet into a catacomb of birds which he describes as ‘much more magnificent than the others, being the sepulchres of those birds and other animals they worshipped; for when they happen’d to find them dead, they embalm’d them and wrapped them up with the same care as they did human bodies, and deposited them in earthen vases cover’d over and stopped close with mortar . . . ’ [7] (p. 54). He also provided a plan of the catacomb he visited and an elevation showing the stacked mummy pots. It is not known which bird catacomb Pococke visited, but it is likely to be one of those for ibises which are described below. He also records seeing ‘several larger jarrs [sic] which might be for dogs and other animals; of which some have been found but are now very rare’ [7] (pp. 54–55).

It is clear from Pococke’s account that he was well aware that he was not the first to visit the site and that he had read the accounts of other travellers of his era; hence, his observation that dog mummies were known from Saqqara. It is also apparent that he and his fellow early travellers did not really know the extent of the catacombs or their original entrances, assuming—not unreasonably—that they had been accessed via shafts [6,7].

Somewhat later, Pascal Coste (1787–1879) also visited the bird catacombs during his service with Muhammed Ali between 1818 and 1827 [8] (pp. 110–111). In this case, it is almost certain that he visited what is now known as the South Ibis Catacomb since the name ‘Coste’ is written in lamp black in one of the burial galleries within it [6] (p. 3).

Pococke and Coste are but two of many early travellers who visited Saqqara out of curiosity and recorded their visits. Others, however, were more focused, notably, the *savants*, who accompanied the Napoleonic expedition to Egypt [9]. The Napoleonic expedition made a visit to the Tombeau de Momies d’ Oiseux [10] (Volume 5, p. 1) and made a partial plan of the catacomb, as well as providing an elevation showing the vessels as Pococke had shown [7], along with a cut-away section of a mummy pot [10] (Volume 5, p. 4). As with Pococke’s plan, it has not so far been possible to match their plan with the galleries recorded in modern work. However, the same is not true of the work of the Prussian expedition of 1842–1845 led by Karl Richard Lepsius (1810–1884). Lepsius was a particularly astute and organised scholar and had accepted Champollion’s decipherment of hieroglyphs above various alternative proposals. His expedition was highly organised and well-equipped, and he recorded, and collected, extensively. Following his expedition, he became Professor in Berlin [8].

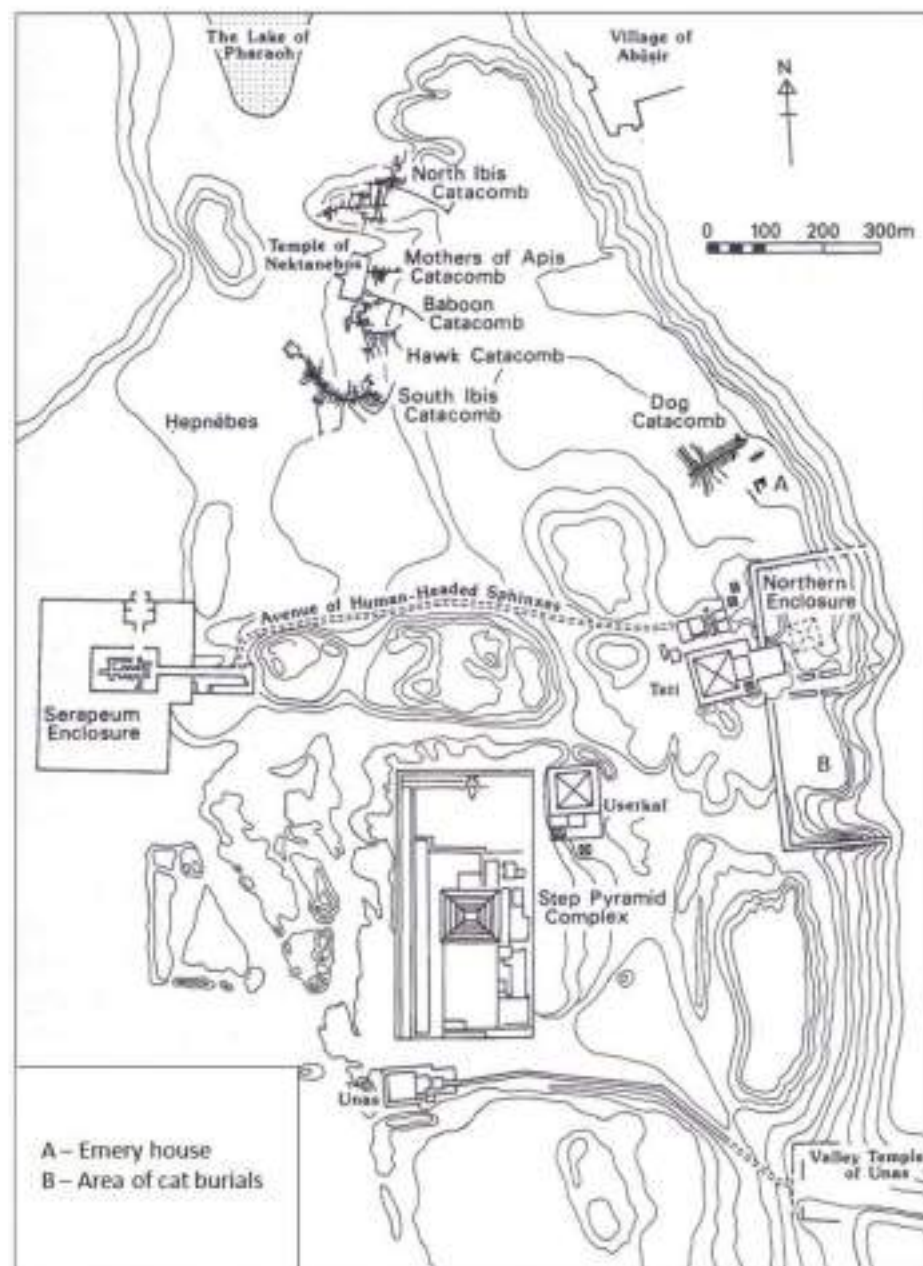
It is clear that the Prussians visited an *Ibisgrab* as it is clearly marked on their map [11] (p. 141). Furthermore, Lepsius himself made a sketch plan of part of the catacomb [12] (p. 141), and this can be matched precisely with part of the North Ibis Catacomb [13]. This is the first instance known to the author where the account of an early traveller can be matched with confidence to one of the catacombs.

It may seem surprising that we do not possess more precise locations for the sites visited, particularly by the French and Prussian expeditions. However, maps and, more especially, plans, were often drawn rather schematically and are not tied into any grid system. More significantly, the landscape of Saqqara is continually altering as sand drifts into hollows and tomb shafts or is blown away from standing features during storms. A further complication is that whilst Saqqara became popular with visitors, especially after Mariette’s discovery of the Serapeum (below), the nature of those visitors changed from intrepid travellers to rather less bold tourists. These new visitors did not wish to risk being lowered down tomb shafts in baskets or having to crawl in sand-choked and mummy-filled passages. Rather, they wanted to experience Egypt in somewhat greater comfort. The result was that visits to the bird pits declined, their entrances sanded up, and their locations were lost. Whilst the late 19th-century guidebook produced by the famous London publisher John Murray still referred to the ‘ibis mummy pits’ at Saqqara [14] (p. 268), their position

was not marked on the accompanying map, suggesting that the information was provided only for completeness and that their location was already lost.

### 3. Mariette, the Apis Bull, and the Rediscovery of the Animal Necropolis

On 12 November 1851, Auguste Mariette, an employee of the Louvre Museum, first entered the vast burial catacomb, known as the Serapeum, the resting place of the Apis bull [15] (p. 41). His discovery had taken over a year of searching and had been inspired by an account of the Serapeum given by the 1st century B.C. author Strabo who had noted that it was 'in a place so very sandy that dunes of sand are heaped up by the winds; and by these some of the sphinxes which I saw were buried even to the head and others were only half visible . . . ' [16] (Bk. 17. 1.32). The same conditions which led to the loss of the bird catacombs centuries later were equally prevalent in his time (Figure 1).



**Figure 1.** Sketch map of North Saqqara showing the location of the animal catacombs mentioned in the text (drawn by Joanne Hodges).

The publication of Mariette's discovery [4,5], which gave apparent reliability to Classical sources, came at a time when news of such finds could be quickly and widely disseminated. It was the discovery which put Saqqara firmly on the tourist map, and it can be seen as the first real step in the rediscovery of what has come to be known as the Sacred Animal Necropolis at North Saqqara [17].

So much then for the rediscovery, but why was there a Sacred Animal Necropolis at Saqqara in the first place? The Apis bull, a unique animal, the living image of Memphis's creator god Ptah, lived its life within special quarters at the Temple of Ptah in Memphis [18]. As the image of the deity, it was able to give oracles [19] and, over time, became a part of what might be considered popular religion.

However, in the words of John Ray 'nothing in the Apis's life quite became him like the leaving of it; amid national mourning, often displayed hysterically, the bull was embalmed, encoffined and escorted to the western desert, finally to lie in a massive granite sarcophagus in . . . the Serapeum' [19] (p. 151). The manner of disposal of the earliest Apis bulls, attested from the 1st dynasty onward, is unknown [20]. They may have found their rest at Saqqara, but from the reign of Amenhotep III (1390–1352 B.C.), they were certainly buried at the site in a newly constructed catacomb [21] (p. 74).

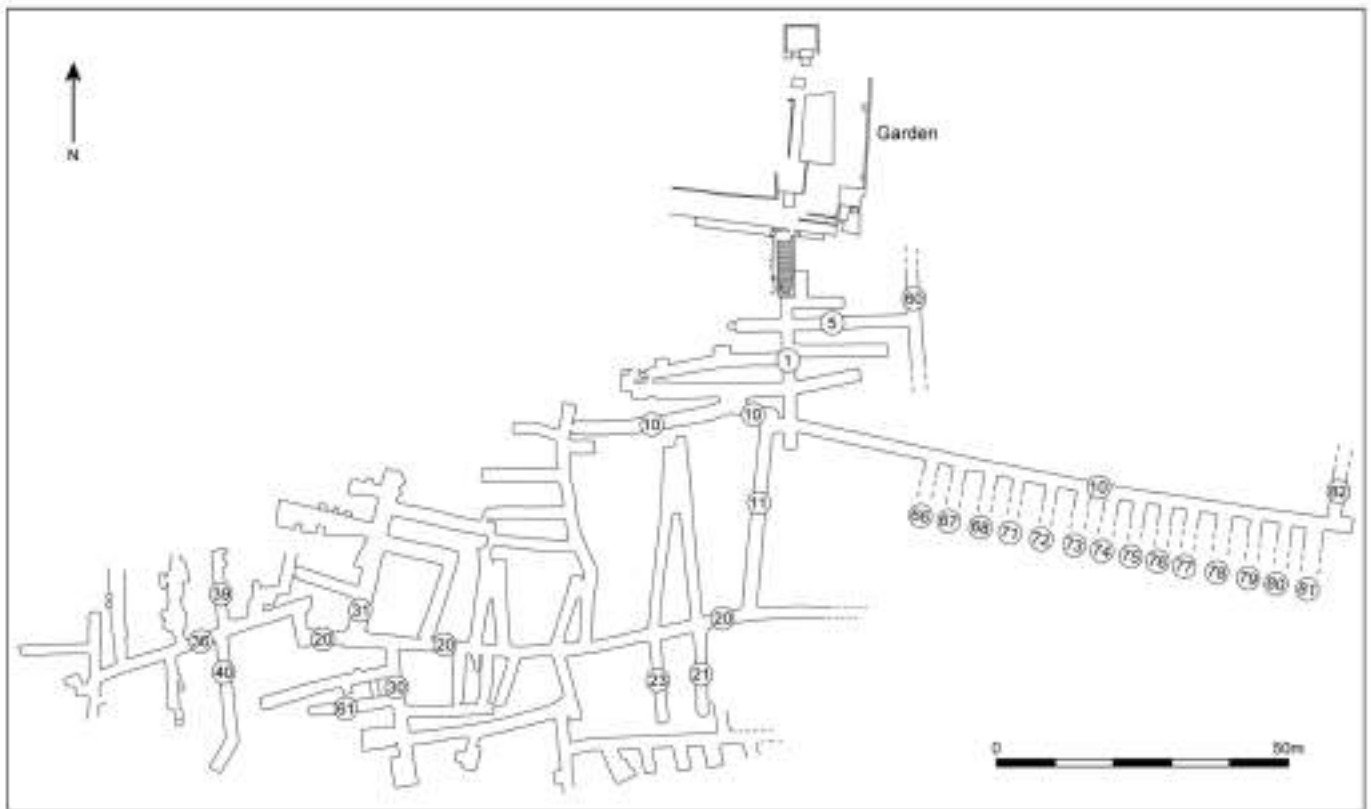
The presence of this most venerable creature at Saqqara, perhaps from very early times, could only add to the sanctity of the site and doubtless helped to make it a focus for the burials of other sacred animals. Most of these other animals, however, were not the unique living images of the god; rather, they were votive sacred animals which were dedicated by visitors to the site in thanks for a favour attributed to the god they represented or in the hope of such favour in the future.

#### 4. Development of the Sacred Animal Necropolis

The detailed chronology of the development of the Sacred Animal Necropolis is not yet established since radiocarbon dates are unavailable and because a secure chronology of some of the votive objects, such as ritual bronzes, is yet to be established. The development of a detailed and reliable chronology must be one of the priorities for future work at the necropolis. The broad dates used are based on documentary evidence used alongside archaeological evidence.

Ray [19] (p. 152) suggested that a catacomb for the mother of the Apis Bull, identified with Isis, might have been established in the 6th Century B.C., but a more recent study of the evidence suggests that the catacomb itself was in operation from the reign of Hakor (393–380 B.C.) until that of Cleopatra VII (51–30 B.C.) [21], though there is inscriptional evidence for a mother of Apis burial as early as year 37 of Amasis (c. 533 B.C.) [22] (p. 16, 37). The identification of the deceased Apis with Osiris (hence Osiris-Apis, Osorapis, and ultimately Serapis) would need to be balanced, in this case with Isis.

There are two catacombs for mummified ibis, both discovered by Emery (below), but they are unlikely to be entirely contemporary. The North Ibis Catacomb (Figure 2) is currently being researched by the writer, and a firm date has not yet been assigned to it. However, its location and some lines of the evidence from it suggest that it is the earlier of the two ibis catacombs and possibly begins in the 4th or 3rd Century B.C., perhaps at a similar time to the first known burials in the Mothers of Apis Catacomb.



**Figure 2.** The North Ibis Catacomb at Saqqara showing some of the axial galleries (e.g., 1 and 10) and some of the burial galleries (e.g., 21, 23, 66–81). (Plan by K.J. Frazer, C.M. Jackson, and the author.)

The ibis was the representative of Thoth, god of wisdom and writing but also a lunar deity and in local mythology the father of Isis [19] (p. 152). The inclusion of a burial place for Thoth would make good sense within the local religious landscape and also forms a link with Imhotep whose creation of the Step Pyramid had led to his being revered as a source of wisdom and ultimately to his deification, probably in the Late Period.

Thoth was also represented at Saqqara by the baboon, whose burials seem to have occurred sometime in the 26th Dynasty [20,22]. Unlike the ibis' burials, the baboons were not votive animals dedicated by visitors (such visitors might—with caution—be called 'pilgrims' though no such word exists in ancient Egyptian) but rather were animals which had been kept in captivity at the temple of *Ptah-under-his-Moringa-Tree* at Memphis [17] (p. 42). Their burials would have been the responsibility of the priests of the temple rather than being dedications by visitors.

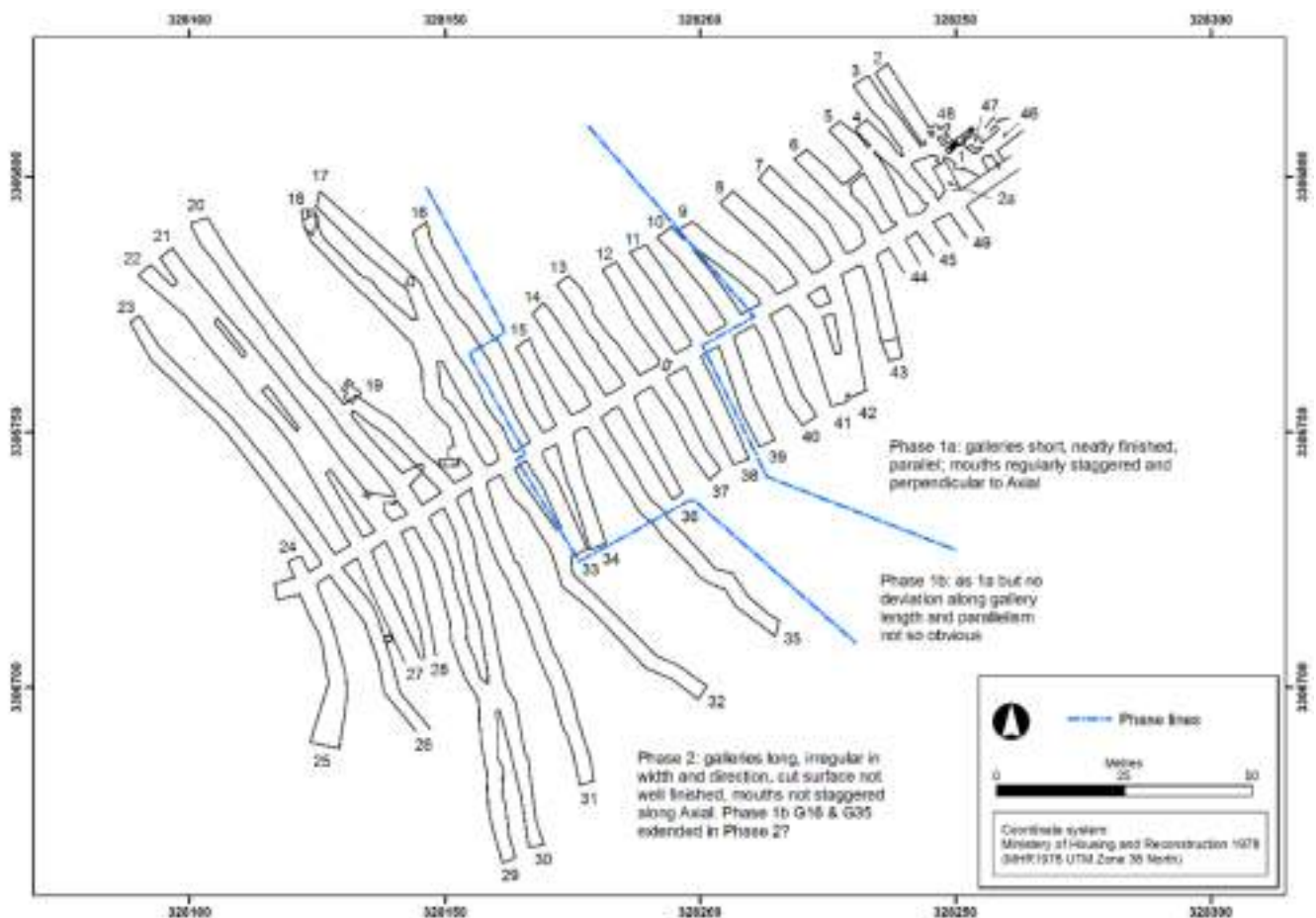
The lunar Thoth was counterbalanced by the solar falcon Horus [19] (p. 152), whose burials probably began in reused tomb chambers in the 6th century B.C [23] (pp. 15–16), before the catacomb proper was created in the early 4th century B.C. [23] (p. 34). Ray points out that 'the father of Horus was none other than Osiris, who was the embodiment of the dead Apis bull; and so the circle was completed' [19] (p. 152), in other words, the links between Osiris, Isis, and Horus were complete and similarly the duality between lunar and solar deities.

However, an account of the main part of the Sacred Animal Necropolis is not complete without consideration of a second burial place for ibises, the South Ibis Catacomb. Martin places this catacomb in the 2nd century B.C. [6] (p. 119). It is possible that its creation overlapped with the end of the period of use of the North Ibis Catacomb so that both were in operation for a time. This possibility is currently being examined by the writer.

This concludes the catacombs of the Sacred Animal Necropolis as rediscovered by Mariette and Emery, but there were yet other catacombs, probably on this same western side of the Saqqara plateau, including one for the calves of the Apis [24]. There are also

catacombs on the eastern side which should be considered. The first of these eastern catacombs is for ‘dogs’ and has become known as the Catacombs of Anubis [25].

The Catacombs of Anubis, or at least the larger of the two, which is the only one to be examined in recent times, begin no earlier than the end of the Late Period in the late 4th century B.C. and end, at the latest, in the early Roman period probably the 1st century A.D. It is quite likely that they belong completely within the Ptolemaic era (332–330 B.C.), but this cannot be proven without radiocarbon dates [25] (p. 44) (Figure 3).



**Figure 3.** The larger of the two Catacombs of Anubis at Saqqara showing suggested phases within the monument. It well illustrates the typical layout of an axial corridor with burial tunnels opening to either side. (Plan by Steve Mills, Scott Williams, and Hendrikje Nouwens).

To the south of the Catacombs of Anubis and their temple the Anubieion [26], is the Bubastieion Temple dedicated to the cat goddess Bastet. The burials of the votive cat mummies were made in reused New Kingdom tombs and are to be dated to the mid-first millennium B.C., making them contemporary with the other animal cults at Saqqara, as one might expect [27].

## 5. Rediscovery and Archaeological Work

Mariette’s discovery of the Serapeum has already been referred to above but the discovery of what we now know as the Sacred Animal Necropolis is largely the result of the work of Professor W.B. Emery (1903–1971), and his work should be considered here before discussing the findings of subsequent expeditions and linking these findings to give some impression of the functioning of the sacred animal cults.

Emery’s expressed aim was to ‘discover the Asklepieion and the tomb of Imhotep, the great architect and vizier of King Zoser’ [28] (p. 3). The Asklepieion was the shrine of the Greek deity Asklepios with whom Imhotep had come to be identified. Emery’s view was

that the tomb of Imhotep would be in the area of the shrine and that both would be located amongst the 3rd dynasty tombs on the west side of the plateau where it was known that there were ibis' burials. The association between Thoth, the learned ibis, and Imhotep, the learned man, made this the obvious location for his tomb.

Emery began his work, conducted on behalf of the Egypt Exploration Society, on 5 October 1964 and soon came upon what is now known as the South Ibis Catacomb. Equally significant, however, was the discovery in the courtyard of this catacomb of a collection of Demotic texts from the 2nd century B.C. which had been compiled by a temple resident named Hor of Sebennytyos [29]. These offer valuable insights into the working of the ibis cult. Emery's discoveries have been covered elsewhere [30], but suffice it to say that the 1966–1967 season involved the clearance of part of the temple terrace which yielded clues that the burial place of the mothers of the Apis was nearby. Armed with these clues, Emery worked with some 400 local workmen [31] in the hope of finding the catacomb.

Whilst searching for the entrance to the Mother of Apis catacomb, his team came upon the entrance to the Baboon Catacomb which proved to have a break into a further catacomb, this time that of the Falcons which he began clearing, with some 250 workmen, in 1969–1970. In February of 1970, the team finally found the entrance to the Mother of Apis Catacomb [32], and in the following season of 1970–1971, they found the North Ibis Catacomb. Tragically, however, in March of 1971, during the course of fieldwork, Emery died suddenly, leaving the work uncompleted [33]. The tomb of Imhotep has not been found, though it may be mastaba 3518 which Emery worked on during his seasons at Saqqara [34] (p. 112).

Emery's work marked the last large-scale excavations at the Sacred Animal Necropolis. His work was built upon and published by his successors, Professor Geoffrey Martin [6] and Professor H.S. Smith [17] along with Sue Davies [20,22]. The writer is currently completing work on the North Ibis Catacomb on which only preliminary reports have thus far appeared [35].

Emery's successors have been able to bring new insights into the study of the Sacred Animal Necropolis and have conducted new survey work as well as metrical studies on the mummy pots [35] and faunal examination of the mummified remains [25,27,36]. These studies have gained from advances in technology ranging from improved hand-held lighting for work underground to GPS mapping and Electronic Distance Measuring equipment.

On the eastern side of the plateau, beyond the area examined by Emery, it is unknown who discovered the Catacombs of Anubis or when the find was made. They simply appear on a plan by Jacques de Morgan (1857–1924) published in 1897 [37]. The modern techniques of investigation have been used on this catacomb which was otherwise unpublished [25,38].

## 6. Findings from the Sacred Animal Necropolis

Work ranging from the accounts of the early travellers through to the most recent investigations in the 21st century allows some common themes to be developed.

It is clear that there are broad categories of 'sacred' animals—those such as the Apis which were unique and whose burial was a matter of national concern with rites akin to those of a royal burial. In addition, there are burials of temple animals such as the baboons which were relatively few in number and which were interred in their own burial niches by priests, and lastly, the great majority of animals which were probably dedicated by 'pilgrims' as a mark of piety and in thanks for good deeds received or requested. This latter group includes the birds, cats, and dogs.

All of these creatures were interred in subterranean catacombs of various kinds, though the cats had no bespoke burial place; rather, they were placed in the barely modified tombs of humans of the New Kingdom. The other animals had their own burial catacombs manufactured. In principle, they are all similar in that there is an axial corridor from which open the burial places. In the case of the baboons, these are small niches, while for the cows and for the Apis they are single large vaults. In the case of the birds and dogs, however,

these side galleries can take the form of tunnels many metres long and can contain many thousands of votive mummies (Figures 2 and 3).

There is a kind of middle-ground amongst these mass burials of birds and dogs in that the walls of their catacombs contain niches, and it is likely that these were used for the interment of animals which were in some way special. It can be suggested that they were creatures which were dedicated by persons of greater than average wealth or that they were the animals which formed part of the temple flock or pack. Such animals may well have been buried by the temple priests as the baboons would have been, but the latter were rarer and more difficult to obtain than the birds and dogs, and therefore had their own dedicated gallery, whilst the 'special' dogs and birds had only dedicated niches within catacombs which were otherwise reserved for votive dedications of their fellow animals.

The birds, both ibises, and falcons were sometimes mummified with great care—the wrappings elaborately wound and sometimes decorated with applique figures of deities. Painted plaster masks might be added to some of the falcons or facial details be modelled in painted linen. Once mummified the birds were placed in tapering cylindrical jars (Figure 4) and, at the appropriate time each year, would be buried en masse in the catacomb. At first sight, these burial jars seem to be uniform, but closer examination has shown that their shapes vary. Dr. Nick Fieller (1947–2017) was able to demonstrate that the shape variation could be studied statistically and so used to suggest similarities between burial galleries within catacombs as well as between them [35]. This is proving helpful in determining the likely contemporaneity of some of the catacombs.



**Figure 4.** Mummy pots stacked in the Falcon Catacomb. Those at the top, without sand, have been restacked by the Emery expedition, whereas those below are still bedded on ritually pure sand. Some of the larger jars may be for birds such as vultures, but the majority are for falcons (photo: author).

Estimates of the numbers of creatures buried vary considerably, but Fieller estimated that the North Ibis Catacomb may have held up to 1 million birds, the South up to three-quarters of a million, and the Falcon Catacomb half a million [39]. The recent study of the Catacombs of Anubis has shown that many of the animals were very young, a matter of hours or days old, at the time of their deaths and were consequently very small. On this basis, it has been suggested that the catacomb *could* have contained as many as 8 million dogs [25,38]. Whatever the precise numbers, it is clear that the cults required numerous votive animals. However, because of the uncertainties around the *precise* dates



for individual catacombs, it is unclear how many animals might be needed annually, something which has implications for the operation of the cults (below).

A key piece of information on the operation of the ibis cult comes from the 'Archive of Hor' [29]. The archive was compiled by a resident of the settlement within the Sacred Animal Necropolis during the 2nd Century. Hor had gained some credence as a seer and was devoted to the worship of Thoth at whose shrine he served a secretarial role [29,40]. He was, moreover, a 'whistle blower' alerting the authorities to irregularities in the operation of the cult. There had evidently been malpractice in that several mummified birds were being put into a single mummy pot, whilst those who purchased the mummies were each being charged for a mummy and its pot. This profiteering led to a ruling that the priests 'are to impart regularity into it [the potting of birds], one god in one vessel' [29] (p. 78).

The irregularities reported by Hor in his archive have had a major impact on the way in which scholars have come to view the archaeological material. For example, it is known that many mummies contain little or no actual animal remains. It has been common to call these 'fake' mummies and to attribute them to a corrupt priesthood. However, more recently they have come to be seen as 'pseudo-mummies' [41] which might, through the *Opening of the Mouth* ritual, have been deemed to be the magical equivalent of actual mummies and have been included without any intention to deceive the donor. While scholars may have placed too much emphasis on the sharp practices recorded by Hor, it is clear that the cults had an important economic function and that transactions were being made around them.

Hor provides useful evidence of the way the cult was organised and lists those who were to be present at what was evidently an annual mass burial event for the ibises which had been mummified and stored in the preceding months. Whilst we have no equivalent of Hor's writings for the other cults, such as the dogs, it seems reasonable to assume that they operated in a similar way and that mass burials would occur in the presence of particular priests and officials only once or twice each year. The physical space within the catacombs, as well as their sacred nature, would preclude the presence of onlookers inside, but there would doubtless be ample opportunities for visitors to witness the procession to the catacomb just as they would have witnessed, albeit less regularly, the burial of an Apis bull or its mother.

## 7. Reconstructing the Cults

Our evidence for the Sacred Animal Cults at Saqqara is tantalising. On the one hand, there are abundant physical remains of the catacombs and of the mummified animals themselves as well as votive bronze objects dedicated at the animal shrines. There is also limited textual evidence, most notably from the *Archive of Hor*.

What we lack, however, are details of the operation of the individual cults. Hor speaks of the ibis' cult, and it is not unreasonable to believe that the cult of the falcons might have operated similarly—but was this also true of the dogs and the cats? Were the baboon burials a much simpler version of the funeral of a Mother of Apis, or were they something different?

There is then the question of the votive animals themselves. Where did all these animals come from? We know that immediately north of the Saqqara plateau was the 'Lake of Pharaoh' [42] which survived into modern times as the Lake of Abusir, which has now dried up though has some vegetation during the winter months. This would have been a suitable breeding place for ibis, and they may have been encouraged to stay year round by providing food for them. Indeed, Text 8 from the *Archive of Hor* refers to the writer having a dream in which he is to bring food for 60,000 ibises [29] (pp. 38–44) which is an unlikely dream if feeding was not the actual practice. Feeding places—*Ibiotropheion*—are well-known from Tuna el-Gebel in Middle Egypt [43]. Recent genomic work has illustrated a high level of genetic variation comparable to that of modern African populations. This suggests that whilst ibis may have been encouraged to stay at particular sites during the breeding season, they were not actively farmed [44]. It has also been suggested that raptors

may sometimes have been force-fed [45]. Ibis breed easily and although finds of eggs at Saqqara have been used to suggest artificial incubation [6] (p. 27), they may be unconnected with such a practice.

Raptors are more difficult to breed in captivity than are ibis, and this may account for some of the 'false' or pseudo-mummies found in the Falcon Catacomb. However, pseudo-mummies of ibis are also well-attested which tends to favour either sharp practice by those who prepared such mummies or suggests that such fakes were magically as good as the actual birds. Many pseudo-mummies are very well-wrapped and decorated, suggesting that they may have been expensive and so, perhaps, less likely to have been intended to deceive their donors. For the moment, we have no certainty over their status.

The procurement of canines for votive mummification is of some interest in that very large numbers may have been produced, and evidence suggests that they were often very young at the time of their deaths [25,36] (Figure 5). They are also predominantly males, which would be appropriate for Anubis, but which might also suggest that females were required for breeding. It is not known for how long the Catacombs of Anubis were in use, but it may be that more animals were required than could be procured naturally and that a captive breeding system involving puppy farms was employed.



**Figure 5.** A view of gallery 38 in the Catacombs of Anubis showing the remains of dog mummies which have been broken up by robbers in the past. The remains are about 1.10 m deep, but, unlike the potted birds, they never filled the full height of the galleries (photo: Author).

The places of mummification are uncertain: the Anubieion Temple is associated with the practice [42] (p. 23) but may not have been able to cope with the large numbers of dog mummies let alone those of other animals, and it is tempting to suggest that some of it were carried out in independent embalming workshops, perhaps in Memphis as well as at Saqqara.

Some mummies may have been commissioned, while others were probably sold to visitors as they came to Saqqara [6] (p. 9). Many of these visitors probably accessed the plateau via the Anubieion temple and so might have seen dog mummies before those of other creatures [46]. The potting of mummified birds was probably a separate operation and occurred once the dedicant had made their choice of mummy [6] (p. 9), but it may be that some simply paid for a dedication without seeing either mummy or vessel.

As recorded in the *Archive of Hor*, the ibises were stored before burial with the burial event occurring once each year in the presence of a committee of priests and officials. Only they, along with assistants to carry the birds in their pots, would have had access to the catacombs and one must assume that similar rituals occurred for the burials of the dog and cat mummies. ‘Special’ mummies might be laid to rest in their wall niches before the main burial events, but we have no firm evidence for this, other than that their niches would often be completely obscured by the laying of the piles of standard mummies during the mass burial. This is particularly true of the dog mummies but applies also to some of the ‘special’ bird mummies.

Onlookers would doubtless be present to witness these solemn processions to the catacombs, and one might imagine that these were occasions of local festivals. The remains of earlier monuments, such as mastaba tombs, would have served as convenient platforms for those witnessing the events. [47].

In addition to votive mummies, visitors might also purchase votive bronzes. These might take the form of figures of deities or the ritual buckets known as *situlae* [48,49]. One must imagine that these were sold at the temples and along routeways. These, it can be assumed, were dedicated at the shrines associated with the cults, not least on the temple terrace in front of the entrances to the Falcon and Baboon Catacombs [22]. Therefore, numerous were these votives that, from time to time, the priests in charge of the shrines removed. However, as the property of the god, they could not be thrown away or recycled; instead, they were buried within the sacred precinct [49], so making space for new dedications. The animal cults must have formed an important part of the economy and supported the makers of such bronzes and mummies, as well as all those who guided visitors, interpreted dreams, and kept records.

## 8. Discussion and Conclusions

As the efforts to reconstruct aspects of the cult have shown, there is much we do not know about the operation of the Sacred Animal Necropolis at North Saqqara.

There is a particular lack of secure dating evidence in the form of radiometric dates which would allow us to date individual burial galleries within the catacombs and so confirm the suggested order of their construction. Such dating would also give us a better indication of the duration of each catacomb and, in so doing, allow an estimate of the numbers of animals buried each year and whether some cults flourished at particular times. Currently, such radiocarbon dates that exist are mainly from animal mummies in museum collections rather than material collected during recent fieldwork.

At present, we can only guess at the mechanisms by which votive animals were procured and mummified, and although views on the ‘fake’ mummies are changing away from the idea that they were made to deceive and toward them as valid dedications, we lack firm evidence. The change in the way these mummies are perceived also reflects a change in the way that Egyptology has evolved, with archaeology being given greater importance than earlier when ideas were sometimes too heavily dependent upon limited textual sources. This is not to deny the importance of written evidence but to note that it should be used alongside the archaeological evidence and that its limits should be recognised. Genomic studies offer a new and additional way to begin to study the mummified populations from the catacombs.

The Sacred Animal Necropolis at North Saqqara remains a fascinating and sometimes enigmatic focus of research and one which will occupy scholars for decades to come.

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