

in Egypt. She discusses the various surviving aspects of crocodile worship in the Faiyum, drawing on features from different temples at Karanis, Qasr el-Qarun, Lahun, Hawara, and Medinet Maadi, all of which highlight the workings of the crocodile cult in this region with parallels for animal cults in the rest of Egypt.

Redford and Redford discuss the excavation of the necropolis at Mendes, which focuses on the necropolis of the sacred rams worshipped in the vicinity. As with Dodson's chapter on the bull cults, no intact ram burials were found in this necropolis, although the varied designs in the sarcophagi intended for the sacred rams and their placement in this sacred landscape were visualized by way of excavation. In addition, the deposition of fish in cups and jars alongside votive stelae dating to the Twentieth Dynasty was noted at this site. The authors observe that this mass burial may well have been a physical manifestation of the Egyptian conception of divine representation on earth.

The book comes full circle with the study and re-display of the amazing collection of animal mummies in the Egyptian Museum, Cairo, which are compiled in a chapter devoted to the Animal Mummy Project. It highlights the importance of non-invasive imaging as the primary tool for the initial study of this type of material, among many others, held in museum collections. This final chapter is followed by a postscript, which gives an overview of the type of research being carried out on animal mummies in the ten years since the first edition was published. It represents the many facets that are employed on animal mummies, both in the field and in museum collections, with texts, mummies, archaeological survey, excavation, and archaeological science.

The postscript is by no means exhaustive, likely due to a word count versus breadth of content issue, which I take as a good sign of how far the study of animal mummies has come in the past decade. The bibliography, however, is quite extensive and should one wish to garner further information on particular areas of research mentioned in the postscript, this is a good place to start. There is no doubt that this book is a worthy re-edition; better, and more user-friendly, in paperback form and an essential item for those interested in ancient Egyptian animal mummies.

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*Scanning the Pharaohs: CT Imaging of the New Kingdom Royal Mummies*. By ZAHY HAWASS and SAHAR N. SALEEM. Cairo: THE AMERICAN UNIVERSITY IN CAIRO PRESS, 2016. Pp. xviii + 318, illus. \$59.95.

The history of radiography and mummies is now more than a century old and it is a tale of progress. X-rays of mummies of commoners began at the end of the nineteenth century and by 1903 the mummy of Tuthmosis IV was being driven in a horse-drawn taxi to a Cairo hospital for the first x-ray of a royal

mummy. Later, other royals would be x-rayed. This new study by Hawass and Saleem is an important addition to mummy research.

The book is large, but well written and full of new discoveries. As the title suggests, it focuses specifically on the royal mummies of the New Kingdom. The first chapter, “Radiographic Imaging of Royal Mummies,” provides a concise history of the field and then explains the differences between x-rays and CT scans. CT scans have many advantages over plain x-rays. For one thing, they image soft tissue as well as bone, greatly increasing the information about the mummy scanned. Further, because the image produced depends on the density of the object encountered, one can tell not only the shape of objects such as amulets, but also the material. By looking up the density on a standard chart, one can differentiate between a metal, wood, or ceramic amulet. This chapter is also a mini-course in Physical Anthropology, explaining clearly for the layman how we determine age, sex, health, etc., of a mummy from the scan.

This introduction to the technical aspects is followed by an introductory Egyptological chapter, “The Story of the Royal Caches.” The discovery of the two caches of royal mummies—one in the 1870s at Deir el Bahri and the other in 1896 in the tomb of Amenhotep II in the Valley of the Kings—has been told many times, but never so well as here. Hawass had access to Arabic archives and documents most researchers could not read, so he provides details I had never read before. After the two introductory chapters, the research begins.

By scanning the royals of the New Kingdom, Hawass and Saleem solve mysteries, present surprising new findings, and raise questions. Several chapters are devoted to individual mummies—Hatshepsut, Tutankhamen, Ramses III, etc. I was especially interested to see if they found anything new relating to the famous “Harem Conspiracy,” where an attempt was made to assassinate Ramses III. An ancient papyrus contains details of the attempt and the subsequent trial of the conspirators, but does not tell if the criminals succeeded. Now we know; they did. The new CT scans show that Ramses’ throat was slit and part of his foot chopped off, suggesting multiple attackers, one with a knife, another perhaps with an ax. The bone where the foot was injured is jagged, suggesting there was no healing. The scans also reveal several eye-of-Horus amulets within the bandages surrounding the damaged foot, probably placed there by the embalmers in an attempt to heal Ramses’ foot in the afterlife.

The book also contains general chapters, and the one on embalming practices offers important discoveries that will be of great interest to mummy scholars. (People who study mummies, not mummies who do research.) For example, it was generally believed that removal of the brain was almost ubiquitous for the royals during the New Kingdom. The new scans reveal that Tuthmosis II, Tuthmosis III, and the mummies believed to be Hatshepsut and Tuthmosis I still have their brains intact. Perhaps the most important finding about mummification is the extent to which the ancient embalmers used subcutaneous packing to give their clients a life-like appearance. The mummies of Youya and Thuya, among others, show skillful and extensive filling in of the facial features. Seti I not only had facial packing, but even his feet were fleshed out.

No scanning of the royal mummies would be complete without Tutankhamen, who had previously been both x-rayed and CT scanned. Here there are several findings of interest. First, the authors argue strongly that the boy-king had a clubbed foot, which would explain why he is shown hunting while seated. Another interesting finding is that there is no evidence of a blow to the back of the head that could have caused death. This was tentatively suggested by the radiologist who first x-rayed Tutankhamen and later championed by others. Hawass and Saleem may have finally put this one to rest. One finding that is not so clear-cut is the ambiguous evidence that Tutankhamen could have died as a result of a fractured femur. To their credit, the authors mention that the team was divided on this issue.

Chapter 7 is based not on CT scans, but rather depends on a recent DNA study done in Cairo on Tutankhamen and mummies believed to be his relatives. For the most part, the results were said to confirm what many Egyptologists already believed to be the family tree of Tutankhamen: Amenhotep III and Queen Tiye are his grandparents, while the occupant of Tomb 55 turns out to be Akhenaten, who is said to be Tutankhamen’s father. One surprise was that Tutankhamen’s mother is not Kiya, the minor wife of Akhenaten, but rather one of Akhenaten’s many sisters. It must be pointed out, however, that *the* DNA study referred to is not universally accepted. When it first appeared in *JAMA* there were several rebuttals. One problem is that before the Cairo study, no other DNA labs had been successful

in extracting DNA from Egyptian mummies. Most of the DNA community is awaiting confirmation by labs outside of Cairo before accepting the results.

This controversy should not distract from the quality and quantity of important radiological findings presented in this remarkable book. The scans are reproduced for all to see and an extensive section of color images provides information never before reported. The comprehensive bibliography is also a contribution. This volume sets a high standard for future scans of the mummies of ancient Egypt.

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*Ctesias' Persica and Its Near Eastern Context.* By MATT WATERS. Wisconsin Studies in Classics. Madison: UNIVERSITY OF WISCONSIN PRESS, 2017. Pp. xiii + 159, illus. \$64.95.

Perfidious eunuchs, warrior queens, egregious lion slayings: *Ctesias' Persica*, at least what fragments remain of it, bursts with amusing stories told from the other side of the Mediterranean—the Persian side, and with a gusto and imagination that rivals Herodotus. But this is not history, suggests Matt Waters in his brief yet illuminating account of the *Persica* and its context. Although rivaling Greek historians, Ctesias sought not historical accuracy but distinction. Better to consider Ctesias' work a romance, a “proto-historical novel.” This genre-switching opens new pathways of research, freeing the reader from the pedantry of policing errors and misstatements. Waters' treatment of the *Persica* raises exciting questions about the making of history as well as the writing of it.

*Ctesias' Persica and Its Near Eastern Context* traces illustrative case studies in the *Persica* to unfold the literary and oral traditions that shaped and were shaped by it. Waters examines eunuchs as threshold figures; the Semiramis story as a Ctesian rendition of the Assyrian and Babylonian legends undergirding their ideology of kingship; Ctesias' creative retelling of the story of Cyrus; and the aspects of Achaemenid ideology and royal practice manifested by other extant stories from the *Persica*. All of these intellectual forays presume that Ctesias appropriated Mesopotamian motifs, rather than simply borrowing them. This appropriation, moreover, comes in the service of an overarching ambition to stir the imagination of his readers (p. 104).

Eunuchs certainly stirred Ctesias' imagination. According to Waters, Ctesias' treatment of eunuchs as liminal figures finds no historical antecedent. Waters reads eunuchs in the *Persica* as serving the literary purpose of bridging divides between the public side of the royal family and its private sphere: between the King and his women, between the King and his court, between the King and his rivals, and between life and death. Waters surveys the controversy about who eunuchs actually were; although the language of *sha resi* is inconsistently applied, Ctesias appears to use it to develop a particular character type, namely the “perfidious eunuch” (or “conniving courtier,” p. 20). This type appears in named and unnamed registers, both showing how trust forms the material of whatever bridge eunuchs create between parties in the royal court; Ctesias seems to employ this character to illuminate the many human connections upon which this court rested.

Ctesias also offers one of the earliest sources for Semiramis, the legendary queen of Assyria. Examining these stories (preserved primarily by Diodorus Siculus), Waters suggests that Semiramis fascinated Ctesias and his audience because she “flipped the type”: she embodied many masculine attributes central to kingship while still maintaining the patronage of Ishtar, the goddess of sexual love and war. Semiramis thus illustrates Ctesias' interest in gender opposition and inversion as well as the crossing of boundaries that many of these types occasion. Waters educes the particular features of Semiramis by using the legend of Sargon as a comparison point. Ctesias' account of Semiramis has close parallels, such as their birth and upbringing stories or possible divinity; however, alongside these masculine features, Semiramis also incorporates feminine elements such as her beauty and sexual allure. When Diodorus recounts how Semiramis sexually preyed upon and then killed attractive young men from her own army, he evokes the gendered ambiguity that sets off Semiramis from her male predecessors. Ctesias creates a “hybridized Semiramis” embodying the Greek fascination with opposites and inversions.