

BEES AND BEEKEEPING IN ANCIENT EGYPT (A HISTORICAL STUDY)

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Abstract

Throughout the ancient Egyptian history until the Roman times,¹ the bee was a favored insect by the ancient Egyptians.² It was used as a symbol of Kingship in Lower Egypt and appeared in ancient texts and tomb monuments.³ It was also linked to several major gods and was mentioned in the Pyramid texts and the ancient Egyptian Mythology. Its honey was included in several religious rituals, was presented as offerings not only to the gods but also to the dead and was used in many aspects of their lives.⁴ Historical evidences today believe that the ancient Egyptians were the first to practice beekeeping in history. The earliest evidence of such practice was as early as the Fifth Dynasty, Old Kingdom, in the sun temple of the king Nyusera, which contains a relief depicting beekeeping.⁵ This article will focus on the nature, name of bees, historical evidence of beekeeping, its culture and religious role in ancient Egypt.

Key words: Bees – Beekeeping – Ancient Egypt – History

Ancient Egyptian bee and its nature

Its scientific name is '*Apis Mellifera*,' which is the Latin name for '*honeybee*.'⁶ Normally every species develop its own characteristic features according to the surrounding environment, meaning that the Egyptian honeybee *Apis Mellifera Lamarackii* in the Delta had different characteristics when compared to that living in Upper Egypt. Generally the Egyptian honeybee was considered smaller and more aggressive than the European honeybee. The warm climate of Egypt was suitable for beekeeping, but bees needed water, which explains why they favored the Delta region, the oasis and along the Nile valley. The Egyptian honeybees built smaller colonies than the European ones. They used the bee wax for the construction of the combs, which consisted of hundreds of hexagonal cells used for storing honey, water and for raising young bees. Thus harvesting honey was done by the removal of these wax combs.⁷ The Egyptians knew two types of beehives: one in pottery, the oldest, composed of long jars probably having only one opening for the control of the bees. The other was cylindrical with two openings, which is a development of the first type, allowing the complete examination of the interior and the practice of artificial swarming.⁸

Its name and usage

The native Egyptian 'honeybee'                



Fig. 1 A relief with the representation of the *nswt- bjtj*. After, www.flickr.com (1-7-2018, 1:34 p.m.)

The Bee and Religion

According to the ancient Egyptian Mythology, the son-god  Ra²² wept and his tears fell onto the earth and turned into bees.²³ Thus bees, their wax and honey were made out of the tears of Ra. This made god Ra closely associated with bees.²⁴ However, he wasn't the only deity associated with them, as goddess  Neith's,²⁵ temple at Sais, was called  *pr bjt*, 'the House of the Bee.'²⁶ Moreover, goddess  Nut²⁷ was mentioned in the Pyramid Texts as a bee,²⁸  ²⁹ *dd mdw tm.t s3t shmt mwt sh'et m bjt* 'Words to be said, you are the daughter, mighty in her mother, who appeared as a bee' (Utterance 431).  ³⁰ *dd mdw Nwt h'nt m bjt n shm tm ntrw* 'Words to be said, Nut, you have appeared as a bee; you have power over the gods,' (Utterance 444).³¹

In one of the festivals of goddess  Hathor³², in her temple at Dendera, honey was prohibited from being eaten, probably due to its association with god Ra, who had a very strong relationship with Hathor.³³ However, honey was mentioned among the offering list of the Opet festival³⁴ depicted in the Luxor temple (fig.2).³⁵ Since honey was closely connected to fertility and sexuality, ritual scenes of offering honey to ithyphallic deities were commonly known in temples like Dendera and Edfu. Among these gods to whom honey was offered is god  Min.³⁶ He had priests known as the *fty*-priests who were probably temple bee-keepers, whose main task was to provide honey for his rituals. Also another type of priests called *bjty*, were mostly involved in the gathering of wild honey from the desert regions under the control of Min.³⁷ It should be noted that some documents confirm the existence of *bjty*-priests also for god Amun.³⁸ In other rituals like the 'Opening of the Mouth,' honey was an essential part of the religious offerings as both the bee and honey had a relevant connection with the souls' resurrection.³⁹

Ancient Egyptian Literature metaphorically linked bees to the creator god,  Khnum,⁴⁰ who is described as the 'laborious bee.'⁴¹ Moreover, in the book of the *imy-dw3t*, the caves of the east and the west are thought to have been connected by a passage, where the dead gods are sheltered to sleep. It is believed that they wake up at the passage of the sun god and their voices are like 'a swarm of bees.'⁴²



Fig.2 shows King Amenhotep III making offerings and above him is the offering list for the Opet Festival, Luxor Temple. . After G. KRITSKY, *The Tears of Ra, Beekeeping in Ancient Egypt* (Oxford, 2015),101.

Historical Evidence of Beekeeping

Old Kingdom

The earliest relief representing beekeeping came from the Solar Temple of king Nyusera⁴³ (2445-2421B.C.) of the fifth dynasty at Abu Ghorab, north of Abusir.⁴⁴ This relief was originally located in the Chamber of Seasons,⁴⁵ but nowadays is among the collection of the Egyptian Museum in Berlin.⁴⁶ It contains four scenes showing the removal of the comb from the hives, the extraction and preservation of the honey⁴⁷(fig. 3). This is further confirmed by the hieroglyphic inscriptions separating the scenes, which can be translated as “hymning, filling, pressing and sealing of honey.”⁴⁸

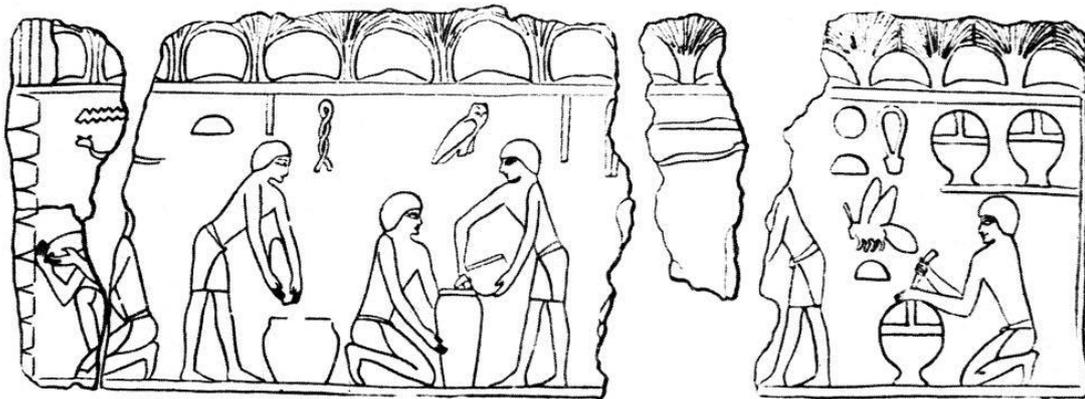


Fig.3, Relief from the Solar Temple of Nyusera, Fifth Dynasty. After G. KRITSKY, *The Quest for the Perfect Hive, A History of Innovation in Bee Culture* (Oxford, 2010), 12.

The extreme left of the relief contains the first scene which depicts a keeper kneeling before the hives which appear to be nine represented one on top of the other in the form of pipes probably made out of mud or clay.⁴⁹ He is collecting the honey with one hand while with the other he is holding an oval shape nowadays missing. Some scholars suggested that it might be a piece of cow dung used for smoking the bees.⁵⁰ However, an alternative explanation is debated by Kritsky that the oval shape might be a jug used by the keeper while ‘calling for the queen,’⁵¹ so as to manage the swarm by trapping the queen and the workers inside.⁵² Furthermore, the word

 *ntf* on top of the scene might not mean ‘to blow’⁵³ or ‘to create an air current,’⁵⁴ but could mean ‘little sound’⁵⁵ or ‘hymning,’⁵⁶ which confirms the calling sound produced by the keeper.⁵⁷

The second scene depicts three men engaged in emptying the honey taken from the hives into larger pottery containers and vessels placed on the ground.⁵⁸ This is further confirmed by the word  *mh* on top of the scene, which means ‘to fill.’⁵⁹ It should be noted that the man standing to the left is pouring the honey into a container with a nozzle on its side, which could help separate the honey from the wax.⁶⁰ As for the third scene, which is badly damaged, it represents two men facing each other. From the position of their hands and attitude it seems that there

was a container between them similar to the one in the previous scene.⁶¹ On top of the scene the word  *ff* which means ‘to squeeze.’⁶² This means that they are squeezing the honey probably to remove any unwanted impurities. The last scene in the relief shows a kneeling man facing right sealing a spherical container in front of

him, probably filled with honey to fully preserve it.⁶³ On top of the scene are the words  *htm bjt* or ‘sealing honey,’⁶⁴ which confirms the sealing process of the honey containers.⁶⁵ It should be noted that no private tomb of this era has given us similar representations.⁶⁶

Despite the fact that the workers shown in the previous Nyuserra relief appeared with no names or titles, yet titles like  *htm bjt* ‘the Sealer of the Honey’⁶⁷ was known in ancient Egypt as early as the first dynasty.⁶⁸ Moreover,

Nykara, one of the officials of King Nyuserra, was referred to as  *jmy-r bjty wnb(w)* ‘the Overseer of all beekeepers’⁶⁹ upon the right jamb of his false door⁷⁰ (fig 4). Thus, beekeeping was an established industry in Egypt as early as the archaic period.⁷¹



Fig.4, The false door of Nykara, Fifth Dynasty. Courtesy of the Cleveland Museum of Art.

The importance of beekeeping during the Old Kingdom did not stop after the reign of Nyuserra, but continued during the reign of his successor Unas (2375-2345 B.C.) the last king of the fifth dynasty.⁷² This is evident from a badly damaged relief (fig.5) that once decorated his causeway at Saqqara, which included a simple scene of ‘collecting honey.’⁷³ The scene depicts three sealed spherical honey containers, similar to those found in the solar temple of Nyuserra, on top of which inscriptions are thought to read as ‘*hk3t*’⁷⁴ of honey.⁷⁵ By the end of the Old Kingdom, and during the long reign of Pepi II (2278-2184 B.C.),⁷⁶ honey became very important for trade.⁷⁷ Sabni,⁷⁸ the governor of Aswan, made several trading expeditions to Nubia⁷⁹ and took with him as gifts 100 donkeys laden with honey, oil and other commodities, which were mentioned in his autobiography covering the walls of his tomb at Aswan.⁸⁰



Fig.5, The badly damaged relief of the causeway of Unas. After G. KRITSKY, *The Tears of Ra, Beekeeping in Ancient Egypt* (Oxford, 2015), 20.

Middle Kingdom⁸¹

Our first evidence of beekeeping during the Middle Kingdom came from the reign of King Senusret III (1870-1831 B.C.).⁸² Remaining blocks from his causeway at Dahshour, showed a beekeeping relief. It shows two sets of horizontal hives similar to those of Nyusera solar temple and between them are three bees flying right and left alternatively. The relief confirms that beekeeping methods and practices remained similar to those of the Old Kingdom.⁸³ Furthermore, the use of honey has been generalized during the Middle Kingdom as Maspero discovered cakes and jars of honey in the Gebelein private tombs of the 11th dynasty.⁸⁴ Honey was mentioned in the story of Sinuhe⁸⁵ dating back to the reign of Amenemhat III (1831-

1786B.C.)⁸⁶:  *3 bjt.f' s3 b3k.f*, 'Abundant was its honey, plentiful its oil'⁸⁷ Also beekeeping titles continued to be seen in the ancient Egyptian administration as a scarab seal (fig.6 a and b) from the thirteenth dynasty, now in the British museum, is inscribed with the titles;  *h3ty-^c jmy-r bjtyw rh-nsw jn-t-f* 'Mayor, Chief Beekeeper, King's Acquaintance Intef.'



Fig. 6a and b, the front and the back view of the seal scarab. Courtesy of the British Museum, online collection. www.britishmuseum.org

New Kingdom

Several non royal tombs dating back to the New Kingdom contained scenes reflecting the importance of beekeeping that flourished during this era. Among these tombs is TT73⁸⁸ of Amenhotep, Chief Steward of Hatshepsut.⁸⁹The tomb includes a badly damaged important beekeeping scene⁹⁰(fig.7) that was reconstructed by Säve-Söderbergh, who confirmed that scene contained a number of pipe-like bee hives with tapering ends similar to those of the Old Kingdom (fig.3). In front of them are two kneeling beekeepers represented in two registers. Unfortunately due to the bad condition of the scene it is difficult to confirm what the two men are doing. However, Säve- Söderbergh, speculated that the two men are doing two different tasks; the one on the lower register is leaning forward probably collecting honey from the hive. As for the one on the top register, he is sitting upright, holding a smoking incense pot near the hive,⁹¹ probably as offerings for the bees. ⁹²Accidentally, the smoke calmed the bees down, which probably made the ancient Egyptian beekeepers continue in the process afterwards.⁹³This scene is probably the oldest showing the smoking technique

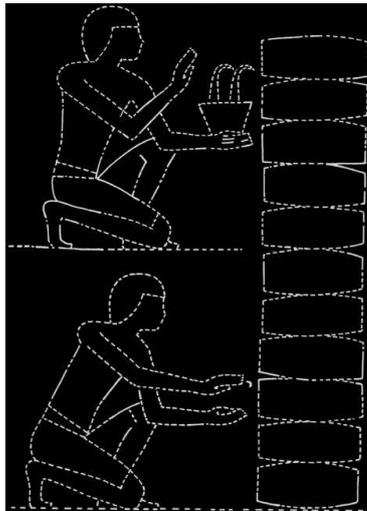


Fig. 7 showing the reconstructed beekeeping scene from TT73 of Amenhotep. After G. KRITSKY, The Tears of Ra, Beekeeping in Ancient Egypt (Oxford, 2015), 28.

The tomb TT100⁹⁴of Rekhmira,⁹⁵shows two important scenes; He appears while receiving taxes in the form of different goods including honey⁹⁶ (fig.8a)⁹⁷ Moreover, the tomb contains the most complete beekeeping scene⁹⁸ from ancient Egypt; where the owner supervises a group of workers while preparing the temple provisions. Among these workers are beekeepers harvesting honey from the hives.⁹⁹ The scene¹⁰⁰(fig.8b) shows at the far right three horizontal beehives with rounded ends resting on a platform probably made out of clay. In front of the hives are two men; one standing and leaning forward while holding a smoking incense pot probably as offerings to the bees or to calm them down. As for the second man he is kneeling in front of one of the hives and collecting combs of ‘white honey’ and placing them in bowls.

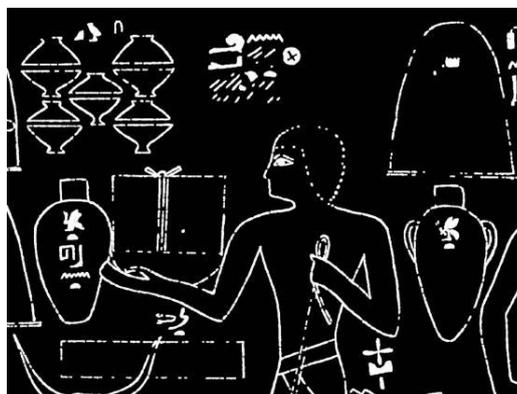


Fig.8a, Rekhmira receiving taxes in the form of honey, from the tomb (TT100). After G. KRITSKY, The Tears of Ra, Beekeeping in Ancient Egypt (Oxford, 2015), 80.



Fig.8b, Honey provisions of the temple prepared, from the tomb of Rekhmira (TT100). After G. KRITSKY, *The Tears of Ra, Beekeeping in Ancient Egypt* (Oxford, 2015), 34.

Behind those two men near the hives are two other men facing each other working with a set of vessels placed between them. Since honey is a product that fears heat and moisture, so its preservation can only be done in a vacuum. The ancient Egyptians seem to have understood it very well. We notice the presence of two kinds of vases in which the honey is sealed; some are smaller spherical ones, while the others are longer vases made for containing food or precious substances such as oil and ointments; we can therefore assume that they were to contain honey of the highest quality.¹⁰¹ The rest of the scene depicts two men facing each other kneeling on the ground and holding a diamond- like bowl probably filled with honey and being sealed with bee wax. Behind them are four similar bowls, which were also depicted in other tombs, as they probably hold a standard quantity of honey. In another part of the scene, two men are represented while mixing flour with honey to bake honey loaves as part of the temple provisions (fig.9).¹⁰²

From these scenes, scholars concluded that the ancient Egyptians knew different types of honey; the 'white honey,' of the Delta which was reserved only for the use of kings and for the temples.¹⁰³ This type was considered to be pure virgin honey that was first extracted from the combs, by experienced beekeepers.¹⁰⁴ It was also known as 'white milk.'¹⁰⁵ The second type was the 'wild or red honey,' which was brought from the desserts of Upper Egypt during hunting expeditions.¹⁰⁶ Moreover, they produced different grades of honey according to its usage and concentration; the 'light liquid honey,' which was of a second quality, obtained by pressing the combs with a percentage of water, and this was probably the one used inside the private tombs. The last grade was the honey used for making cakes, since the ancient Egyptians didn't know sugar.¹⁰⁷

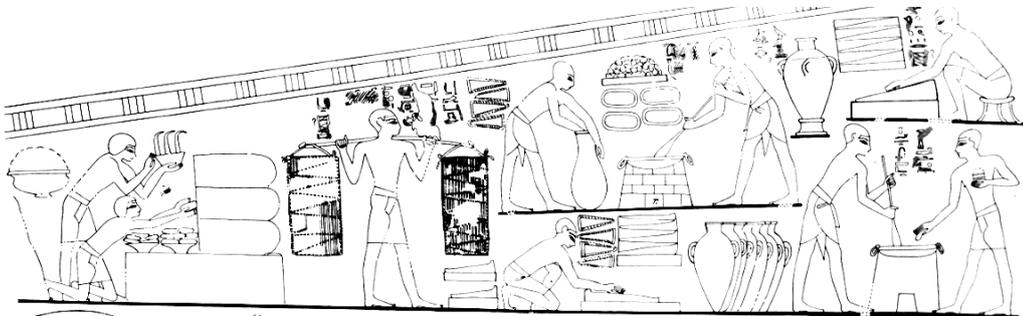


Fig.9 Part of the scene of preparing the provisions for the temple showing baking honey loaves. After N. Davies, *The tomb of Rekhmira at Thebes Vol.1* (New York, 1973), pl XLIX.

Despite the fact that honey did not appear in any of the ritual or offering lists till the Middle Kingdom¹⁰⁸ yet it appeared as offerings in several private tombs from the New Kingdom. The earliest of these is tomb TT343¹⁰⁹ of Benia,¹¹⁰ which depicts him while seated in front of a heaped offering table, with two diamond- like honey bowls shown on the top among the offerings.¹¹¹ In front of the offering table the wall is divided into three registers showing an offering procession depicting offering bearers carrying different goods. Among them is a bearer carrying two sealed diamond- like honey bowls (fig. 10).¹¹²



Fig. 10, Scene from TT 343 of Pahekaamen (Benia) showing the diamond-shaped bowl of honey among other different offering items. After, www.flickr.com (1-7-2018, 1:34 p.m.).

Similar scenes showing sealed honey diamond-like bowls either among the offerings on an offering table or carried by bearers in an offering procession appeared in tombs TT69¹¹³ of Menna¹¹⁴ (figs.11,12)¹¹⁵ TT52¹¹⁶ of Nakht¹¹⁷ (fig.13),¹¹⁸ and TT56 of Userhat¹¹⁹ (fig.14).¹²⁰ Most of the previous offering scenes depicted sealed diamond-like honey bowls, however, the tomb TT101 of Tjanuro,¹²¹ depicted an offering bearer while holding an opened diamond-like honey bowl,¹²² containing seven rounded honey combs, which were identified by the existence of two bees resting on these combs (fig.15). A more detailed representation of the honey combs is depicted in tomb TT51¹²³ of Userhat,¹²⁴ where he appears¹²⁵ while making offerings before god Osiris and in front of him is a heaped offering table upon which are two oval honeycombs with hexagonal details (fig. 16).¹²⁶

Honey was mentioned in the Decree of Seti I at Nauri,¹²⁷ among the very precious goods of economical value, of his temple of Osiris at Abydos, preventing the interference with them in the whole land. The decree mentions: '[The treasuries?] are filled (?) with [val]uables, silver and gold in heaps on the ground, royal linen and clothing in (different?) counts, millions of oil, incense, wine, honey, without limit in counting their abundance.'¹²⁸ Moreover, the decree also mentions the beekeepers among the different workers of the temple at Abydos, which proves the importance of their profession: 'whether men or women, whether guardians of land, inspectors, beekeepers, cultivators, gardeners (?), vintners (?).'¹²⁹ Furthermore, titles of beekeepers were mentioned in several stelae from the New Kingdom; Smenthu was mentioned in his unfinished stela¹³⁰ as 'Head of Beekeepers of his Lord, before Min and Isis.'



Figs. 11 and 12, Scenes from the transverse hall of the tomb TT 69 of Menna, showing the sealed honey containers placed among the offerings on the offering table and being carried by the offering bearer in an offering procession. After, www.flickr.com (1-7-2018, 1:34 p.m.)

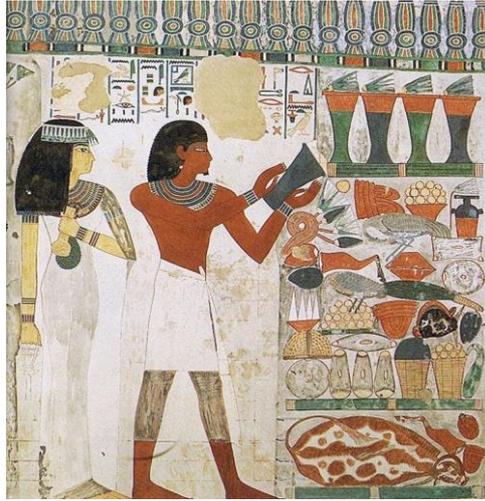


Fig. 13, Scene from TT 52 of Nakht showing the diamond- shaped bowl of honey among other different offering items. After, www.flickr.com (1-7-2018, 1:34 p.m.).

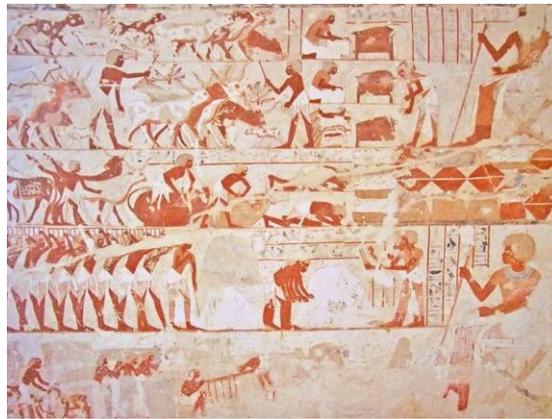


Fig. 14, Scene from the tomb TT56 of Userhat showing him while inspecting cattle and under him are several diamond – like bowls of honey among other tributes. After, www.flickr.com (1-7-2018, 1:34 p.m.)

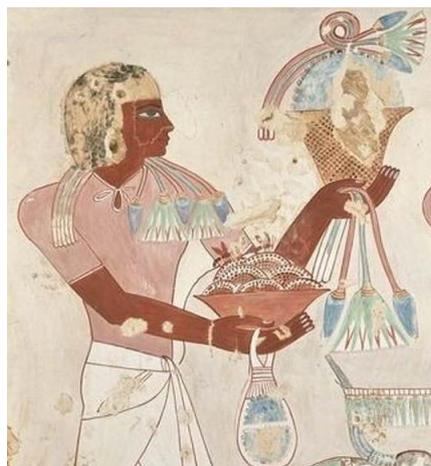


Fig. 15, Scene from the tomb TT101 of Tjanuro showing an offering bearer while holding an opened diamond-like honey bowl containing honey combs with two bees resting upon them. After, www.flickr.com (1-7-2018, 1:34 p.m.)



Fig. 16, Scene from the tomb TT51 of Userhat showing him while in front of an offering table heaped with offerings among which are two oval honey combs with hexagonal details. After, www.flickr.com (1-7-2018, 1:34 p.m.)

Late Period

Our info about beekeeping during the Late Period came from two tombs dating back to the Saite period at Asasif. These are tombs; TT279 of Pabasa,¹³¹ and TT414 of Ankh-her. The two tombs show very similar beekeeping scenes,¹³² however the scene in the latter tomb is in a bad condition. The tomb of Pabasa shows one of the best beekeeping scenes¹³³, (fig. 17)¹³⁴ represented in two registers. The lower one (fig. 18) shows a beekeeper in a kneeling position, facing right and raising his hands in adoration, in front of eight separate pipe-like bee-hives similar to those represented in the solar temple of Nyusera. In front of the hives, are two vertical rows of five bees, also facing right, probably forming a swarm.¹³⁵ It should be noted that two similar bees are represented flying very close above the kneeling beekeeper. As for the upper register (fig. 19), it represents a beekeeper standing and pouring 'red honey' into a storage container, similar to that represented in the solar temple of Nyusera, with two bees flying on top of him. In front of the beekeeper, are two vertical rows of seven bees, facing right, probably forming a swarm. Behind him, are two rows of four long offering stands, probably used for holding similar jars to the one used by the keeper to pour honey into the storage container.¹³⁶ As for the left side of the scenes, they are in a very bad condition with very few parts still remaining.



Fig.17, representing the pillar in the court of offerings of TT297, decorated by the beekeeping scene. After G. KRITSKY, *The Tears of Ra, Beekeeping in Ancient Egypt* (Oxford, 2015), plate 9.



Fig. 18, representing the lower register of the beekeeping scene of the tomb of Pabasa TT 297. After, www.flickr.com (1-7-2018, 1:34 p.m.).



Fig. 19, representing the upper register of the beekeeping scene of the tomb of Pabasa TT 297. After, www.flickr.com (1-7-2018, 1:34 p.m.).

Conclusions

Among all insects, the ancient Egyptians favored the bee as it was not only linked to the royal ideology being the sign of legitimacy, but was also represented on top of every cartouche of every reigning sovereign, throughout the ancient Egyptian history. Bees were also related to several gods in the ancient Egyptian pantheon; the fact that made them of great importance.

It seems that the ancient Egyptians realized the importance of bees as being the only source of honey, so they practiced beekeeping as early as the Old Kingdom and continued till the Roman Empire. Moreover, beekeepers played an important role in administration, as they occupied important positions in the Egyptian court and temples. They seemed to have a certain hierarchy, as they started as 'beekeepers' and they were promoted to obtain important titles like 'the Head of the Beekeepers of his Lord.' Moreover some priests took the titles of beekeepers being the ones responsible for obtaining the honey that will be used in the religious rituals made for several gods, like Amun and Min.

Despite the fact, that the beekeeping scenes that were found throughout the ancient Egyptian history are limited, yet they told us a great deal about the beekeeping methods that were practiced by the ancient Egyptians. These methods are very similar to those practiced today in the modern world. Beekeepers today use horizontal mud

hives similar to the ones depicted in the solar temple of Nyuserra. Just like the modern times, the ancient Egyptian beekeepers used smoke censors, which probably started as offerings to the bees, but they realized that it quietened them. The ancient Egyptians were able to harvest honey from combs and they produced different grades of honey according to its concentration and usage; the purest virgin honey, which was the first obtained from the comb, was only limited for the usage of gods and kings. The second grade honey was lighter, as they had to press the comb with a percentage of water to obtain the rest of the honey. This was probably for commercial use. As for the third grade honey, it was used as a sweetener for making cakes a process that was depicted in the tomb of Rekhmira (TT100) or even added to beer or wine, which was represented in the Solar Temple of King Nyuserra. They understood the nature of honey, which can be easily affected by heat and moisture, so they stored it in different vessels, which they sealed to protect its contents.

Honey was used as offerings to the gods in several rituals and was mentioned in the offering lists of festivals like the 'Opet festival.' Moreover, it was represented on the offering tables of the deceased in private tombs of the New Kingdom and was also part of the Opening of the Mouth ritual, which confirms that it had certain relevance for the resurrection of the soul. Late in the Egyptian history honey was even used in the embalming process.¹³⁷ From a different perspective, honey was mentioned among valuable commodities, like gold and silver in the decree of Seti I at Nauri. Moreover, it was part of the tax tribute represented to the owner in several tombs. Thus, it was recognized as a valuable product of a certain economical value by the ancient Egyptians.¹³⁸

النحل و تربيته في مصر القديمة، (دراسة تاريخية)

في جميع عصور التاريخ المصري القديم وحتى العصر الروماني ، كانت النحلة حشرة مفضلة من قبل المصريين القدماء. كانت تستخدم كرمز للملكية ، ظهرت في النصوص القديمة والمقابر. كما تم ربطها بالعديد من الآلهة الرئيسية وتم ذكرها في نصوص الأهرام والأساطير المصرية القديمة. وزادت أهمية النحلة باستخدام العسل في عدة طقوس دينية ، كما قدم كقرابين ، ليس فقط للآلهة ولكن أيضا للموتى، واستخدم في العديد من جوانب حياتهم اليومية. وتؤكد الأدلة التاريخية اليوم أن المصريين القدماء كانوا أول من مارس تربية النحل في التاريخ. أقدم دليل على هذه الممارسة كان في وقت مبكر من الأسرة الخامسة، حيث ظهر في معبد الشمس للملك ني-وسر-رع ، مناظر تصور تربية النحل واستخراج وحفظ العسل. يسعى هذا المقال إلى التركيز على طبيعة النحل والأدلة التاريخية على تربيته، ودوره الديني في مصر القديمة من خلال المناظر الجنائزية و النصوص الدينية المختلفة.

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- ²³HANSEN, in REDFORD (ed.), *The Oxford Encyclopedia 2*, 161; M. LURKER, 'Bee,' in *An illustrated Dictionary of the Gods and Symbols of Ancient Egypt* (London, 1996).
- ²⁴R. LOBBAN, 'Bees in Ancient Egypt,' *Anthrozoos Vol VII No.3* (1994), 161.
- ²⁵LECLANT in *LÄ I*, 788.
- Goddess Neith was the goddess of war and hunting. Her symbols are a shield and crossed arrows. She was associated with Lower Egypt and was venerated in by the 26th dynasty kings at Sais, in the Nile Delta. See J.H.WEGNER, 'Neith,' in B.D. REDFORD (ed.), *The Oxford Encyclopedia of Ancient Egypt, vol.2* (Oxford, 2001), 516.
- ²⁶KRITSKY, *The Tears of Ra*, 95; ZECCHI, *Aegyptus* 77 (1/2) (1997), 79.
- ²⁷The sky goddess who was a member of the Heliopolitan Ennead in the Old Kingdom and was mentioned in several spells in the Pyramid Texts. She performed the same remaking for the deceased like she does with Ra. See, L.H. LESKO, 'Nut,' in B.D. REDFORD (ed.), *The Oxford Encyclopedia of Ancient Egypt, vol.2* (Oxford, 2001), 558-559.
- ²⁸LECLANT in *LÄ I*, 788.
- ²⁹K. SETHE, *Altaegyptischen Pyramidentexte Nach Den Papierabdrucken und Photographien, Des Berliner Museums Neu Herausgegeben und Erläutert* (Leipzig, 1908), 781 a.
- ³⁰SETHE, *Altaegyptischen Pyramidentexte*, 824 a.
- ³¹R.O. FAULKNER, *The ancient Egyptian pyramid texts*, Vol. 2 (Oxford, 2007), 142,148.
- ³²She is the cow goddess, associated with love, sex and fertility. She was the mother of Horus and was connected to Ra, as she received him at night on the western horizon and protected him within her body until he was reborn each morning. She was worshipped at Dendera, Upper Egypt. See, D. VISCHAK, 'Hathor' in B.D. REDFORD (ed.), *The Oxford Encyclopedia of Ancient Egypt, vol. 2* (Oxford, 2001), 82-85.
- ³³KRITSKY, *The Tears of Ra*, 99; LECLANT in *LÄ I*, 788.
- ³⁴The Opet festival is a festival celebrated so as Amun would give the pharaoh the powers of kingship as the living Horus. See, A.J. SPALINGER, 'Festivals,' in B.D. REDFORD (ed.), *The Oxford Encyclopedia of Ancient Egypt, vol.1* (Oxford, 2001), 521.
- ³⁵KRITSKY, *The Tears of Ra*, 100.
- ³⁶Min, god of the dessert was closely connected of fertility, especially male sexual potency. See, E.ROMANOSKY, 'Min,' in B.D. REDFORD (ed.), *The Oxford Encyclopedia of Ancient Egypt, vol.2* (Oxford, 2001), 413-414.
- ³⁷ZECCHI, *Aegyptus* 77 (1/2) (1997),72.
- ³⁸KRITSKY, *The Tears of Ra*, 98.
- ³⁹THOMAS, *Vergilius (1959-) No.24* (1978),32.
- ⁴⁰Khnum is the creator god who was mentioned in the Pyramid Texts during the Old Kingdom. He was worshiped in the south. See, P.F.O' ROURKE, 'Khnum,' in B.D. REDFORD (ed.), *The Oxford Encyclopedia of Ancient Egypt, vol.2* (Oxford, 2001), 231-232.
- ⁴¹LECLANT, in *LÄ I*, 788.
- ⁴²KRITSKY, *The Tears of Ra*, 99.
- ⁴³SAGRILLO, in REDFORD (ed.) *The Oxford Encyclopedia of Ancient Egypt, Vol.1*,173.
- ⁴⁴I. SHAW, *The Oxford History of Ancient Egypt* (New York, 2000), 100.
- ⁴⁵KUÉNY, *JNEA* 9, no.2 (1950), 84.
- ⁴⁶M. VERNER, *The Pyramids, The Mystery, Culture and Science of Egypt's Great Monuments* (Cairo, 2002), 271.
- ⁴⁷KRITSKY, *The Quest for the Perfect Hive*, 12.
- ⁴⁸RANSOME, *The Sacred Bee in Ancient Times*, 26.
- ⁴⁹R.J. HEAD, 'A Brief Survey of Ancient Near Eastern Beekeeping,' *Review of Books on the Book of Mormon 1989-2011: Vol. 20, No. 1, Article 6* (2008), 60.

- ⁵⁰RANSOME, *The Sacred Bee in Ancient Times*, 26. Smoking the bees is a way to calm the bees while obtaining the honey from the hive. This process is still done in modern times.
- ⁵¹In this process the keeper will put his mouth close to the opening of the hive and make a piping sound several times imitating the sound of a newly emerging queen, if the hive contains a mature queen she will then respond to the caller. This same practice is still done in modern times See G. KUÉNY, *JNES* 9(2) (1950) 84-93.
- ⁵²KRITSKY, *The Tears of Ra*, 10-11.
- ⁵³E. EDEL, *Zu den Inschriften auf den Jahreszeitenreliefs der Weltkammer aus dem Sonnenheiligtum des Niuserre* (Berlin, 1961), 178.
- ⁵⁴E. CRANE, *The World History of Beekeeping and Honey Hunting* (New York, 1999), 164.
- ⁵⁵KRITSKY, *The Tears of Ra*, 11.
- ⁵⁶R. FAULKNER, *A Concise Dictionary of Middle Egyptian*, 142.
- ⁵⁷D. J. BREWER, D.B. REDFORD, S. REDFORD, *Domestic Plants and Animals*, 126.
- ⁵⁸RANSOME, *The Sacred Bee in Ancient Times*, 27.
- ⁵⁹FAULKNER, *A Concise Dictionary of Middle Egyptian*, 113.
- ⁶⁰The wax will float on top of the container making room for the honey to be poured from the nozzle. See KRITSKY, *The Tears of Ra*, 12.
- ⁶¹RANSOME, *The Sacred Bee in Ancient Times*, 27.
- ⁶²It is translated by FAULKNER as 'to brew' which is done by squeezing the liquid from the fermented barely mash to obtain beer. Thus the word afj means 'to squeeze'. See FAULKNER, *A Concise Dictionary of Middle Egyptian*, 42.
- ⁶³EDEL, *Zu den Inschriften auf den Jahreszeitenreliefs der Weltkammer aus dem Sonnenheiligtum des Niuserre*, 179.
- ⁶⁴FAULKNER, *A Concise Dictionary of Middle Egyptian*, 199.
- ⁶⁵P. LOYSON, 'Chemistry in the Time of the Pharaohs,' *Journal of Chemical Education* Vol.88, No.2 (2011), 147-148.
- ⁶⁶KUÉNY, *JNEA* 9, no.2 (1950), 84.
- ⁶⁷M.A. MURRAY, *Index of Names and Titles of the Old Kingdom* (London, 1908), 38.
- ⁶⁸RANSOME, *The Sacred Bee in Ancient Times*, 26
- ⁶⁹J. DILWYN, *An Index of Ancient Egyptian Titles, Epithets and Phrases of the Old Kingdom* (Oxford, 2000), 109-110.
- ⁷⁰His false door is made out of limestone and is now among the Egyptian collection in the Cleveland Museum of Art. It was found in his tomb at Saqqara.
- ⁷¹RANSOME, *The Sacred Bee in Ancient Times*, 26.
- ⁷²SHAW, *The Oxford History of Ancient Egypt*, 102-103.
- ⁷³SAGRILLO in REDFORD (ed.) *The Oxford Encyclopedia of Ancient Egypt, Vol.1*, 173.
- ⁷⁴hqAt is a measuring unit of about 4.54 liters. See GARDINER, *Egyptian Grammar*, 197.
- ⁷⁵KRITSKY, *The Tears of Ra*, 20.
- ⁷⁶SHAW, *The Oxford History of Ancient Egypt*, 106.
- ⁷⁷KRITSKY, *The Tears of Ra*, 20.
- ⁷⁸M. BUNSON, *Encyclopedia of Ancient Egypt* (New York, 2002), 349.
- ⁷⁹B.G. TRIGGER, *Nubia Under the Pharaohs* (London, 1976), 59.
- ⁸⁰LOBBAN, *Anthrozoos* Vol. VII No.3 (1994), 160.
- ⁸¹There is no reference to beekeeping or honey during the First Intermediate Period.
- ⁸²SHAW, *The Oxford History of Ancient Egypt*, 154.
- ⁸³KRITSKY, *The Tears of Ra*, 23.
- ⁸⁴KUÉNY, *JNEA* 9, no.2 (1950), 84.
- ⁸⁵M. LICHTHEIM, *Ancient Egyptian Literature*, Vol. I: The Old and Middle Kingdoms, 1973, 222.
- ⁸⁶SHAW, *The Oxford History of Ancient Egypt*, 156.
- ⁸⁷LICHTHEIM, *Ancient Egyptian Literature*, Vol. I, 226.
- ⁸⁸PM I², 1960, 143-144.
- ⁸⁹Amenhotep was the chief Stewart of Hatshepsut who oversaw the construction of her obelisks during her 16th reign year. He was also the overseer of the cattle of Amun. See, E.H. CLINE, D. O'CONNOR, *Thutmose III, A New Biography* (Michigan, 2006), 94, 111.
- ⁹⁰The scene (fig.7) is a sub-register of the northeastern wall of the main hall (1) see, PM I², 1960, plan, 136.
- ⁹¹SAGRILLO in REDFORD (ed.) *The Oxford Encyclopedia of Ancient Egypt, Vol.1*, 173.
- ⁹²T. SÄVE- SÖDERBERGH, 'Four Eighteenth Dynasty Tombs,' in N. DAVIES, T. SÄVE- SÖDERBERGH, M. C. DAVIES (eds.) *Private Tombs at Thebes, Vol. 1* (Oxford, 1957), 73.
- ⁹³KRITSKY, *The Tears of Ra*, 27-29.

⁹⁴PM I², 1960, 206-214. This T-shaped tomb, at Sheikh Abdel Qurna, is considered exceptional in both size and decoration when compared to similar tombs, see L.MANNICHE, *The Tombs of the Nobles at Luxor* (Cairo, 1989), 52-53.

⁹⁵He was the vizier of king Thutmosis III and Amenhotep II

⁹⁶The tax-collection scene (fig.8a) is located at the south eastern wall of the transverse hall , near the entrance (6). See, PM I², 1960, plan, 208.

⁹⁷D. J. BREWER, D.B. REDFORD, S. REDFORD, *Domestic Plants and Animals*, 127.

⁹⁸KUÉNY, *JNEA* 9, no.2 (1950), 85.

⁹⁹SAGRILLO in REDFORD (ed.) *The Oxford Encyclopedia of Ancient Egypt, Vol.1*, 173.

¹⁰⁰The temple provisions scene (fig.8b) is the first scene on the western wall of the long passage (13). See, PM I², 1960, 210.

¹⁰¹KUÉNY, *JNEA* 9, no.2 (1950), 92.

¹⁰²KRITSKY, *The Tears of Ra*, 31.

¹⁰³P. E. NEWBERRY, 'Bee-Hives in Upper Egypt,' *Man* 38 (1938), 31.

¹⁰⁴KUÉNY, *JNEA* 9, no.2 (1950), 93.

¹⁰⁵L. CILLIERS, F. P. RETIEF, 'BEES, HONEY AND HEALTH IN ANTIQUITY,' *Akroterion vol 53*, (2008), 8.

¹⁰⁶HANSEN, in REDFORD (ed.), *The Oxford Encyclopedia* 2,161.

¹⁰⁷D. J. BREWER, D.B. REDFORD, S. REDFORD, *Domestic Plants and Animals*, 127.

¹⁰⁸NEWBERRY, *Man* 38 (1938), 32.

¹⁰⁹PM I², 1960, 410- 413.

¹¹⁰Benia was an Asiatic man who was brought to Egypt as a child to join the Egyptian court. His Egyptian court name was Paheqamen. He had several other titles such as; Overseer of the Construction Projects of King Thutmosis III,' the Overseer of the Seal-bearer. See J. BUDKA, 'Hohe Verwaltungsbeamte unter Thutmosis III,' *Kemet*, 10 no. 3 (2001), 31.

¹¹¹The offering scene and offering bringers (fig. 10) are located at the southern wall of the inner hall of the tomb(10 and 11), see PM I², 1960, plan, 400.

¹¹²KRITSKY, *The Tears of Ra*, 37.

¹¹³PM I², 1960, 134-139. This T-shaped tomb is considered to be among the most important tombs at Sheikh Abdel Qurna due to its wall paintings, which are considered to be the finest in ancient Egypt. See M. HARTWIG, *The Tomb Chapel of Menna (TT69) The Art, Culture, and Science of Painting in an Egyptian Tomb* (Cairo, 2013),1.

¹¹⁴Menna was the 'Scribe of the Fields of the Lord of the two lands of Upper and Lower Egypt,' during the reign of King Thutmosis IV. See S. HODEL-HOENES, *Life and Death in Ancient Egypt: Scenes from Private Tombs in New Kingdom Thebes* (London, 2000), 85.

¹¹⁵Menna in front of the offering table (fig. 11), is located on the south eastern wall of the transverse hall near the entrance(2). See, PM I², 1960, plan, 136. Offering bringers scene (fig. 12), is located at the northern side of the inner passage (12), see PM I², 1960, plan, 136.

¹¹⁶PM I², 1960, 99-102.

¹¹⁷Nakht lived during the reign of Kings Thutmosis IV and Amenhotep III. He gained the titles of the 'Scribe' and the 'Hour priest of Amun.' His tomb TT 52 is located at Sheikh Abdel Qurna, a small T-shaped tomb, yet it contains scenes that are considered among the most famous in the ancient Egyptian art. See M. SEIDEL, R. SCHULZ, A. SHEDID, M. ULLMANN, *Egypt* (New York, 2006), 428; MANNICHE, *The Tombs of the Nobles at Luxor*, 49-50.

¹¹⁸The scene (fig. 13) is located on the western side near the entrance of the transverse hall (1), see PM I², 1960, plan, 90.

¹¹⁹Userhat gained the titles of Royal Scribe and Child of the Nursery during the reign of Amenhotep II. His tomb TT56 is a T-shaped tomb at Sheikh Abdel Qurna. See PM I², 1960, 111-113.

¹²⁰The scene (fig.14) is located at the western wall of the transverse hall (3), see PM I², 1960, plan, 106.

¹²¹Tjanuro was the 'Royal Butler during the reign of Amenhotep II. His tomb TT101 is a T-shaped tomb at Shiekh Abdel Qurna. See PM I², 1960, 214-215.

¹²²The scene (fig. 15) is on the northern wall of the transverse hall, near the entrance to the inner passage (5), see PM I², 1960, plan, 208.

¹²³A spacious T-shaped tomb at Sheikh Abdel Qurna. See PM I², 1960, 97-99.

¹²⁴Userhat was called Neferhabef, he was the 'First Prophet of the Royal Ka of Thutmosis I,' during the reign of king Seti I. See MANNICHE, *The Tombs of the Nobles at Luxor*,70-71.

¹²⁵The scene (fig.16) is depicted on the north eastern wall of the transverse hall near the entrance to the inner hall (9), see PM I², 1960, plan, 90.

¹²⁶KRITSKY, *The Tears of Ra*, 41.

¹²⁷ A great rock cut stela erected by Seti I at Nauri in the vicinity of the Third Cataract is inscribed by a royal decree addressed on behalf of the king of Upper and Lower Egypt to the high officers and courtiers of Kush commanding them that order should be enforced, upon both the property and the valuable goods belonging to the temple he built for god Osiris at Abydos, against anyone.. The decree also stated that punishments will be executed on those who violate these commands. See F.L. GRIFFITH, 'The Abydos Decree of Seti I at Nauri,' *JEA* 13 (1927), 193-208.

¹²⁸ GRIFFITH, *JEA* 13 (1927), 198.

¹²⁹ GRIFFITH, *JEA* 13 (1927), 201.

¹³⁰ GRIFFITH INSTITUTE, New Kingdom, Dynasties XVIII- XX, Royal Stelae or those with representation of Kings without non royal persons (but including queens), 803-055-027, Berlin, Ägyptisches Museum, 19778, 126.

¹³¹ He was also known as Pbes. He lived during the reign of king Psamtik I and was 'Chief Steward of the God's Wife, Nitociris.' He gained other titles of 'Chief Steward of Amun' and 'Controller of All the Divine Offices of the Divine Consort of Amun', See PM I², 1960, 357-359.

¹³² SAGRILLO, in REDFORD (ed.) *The Oxford Encyclopedia of Ancient Egypt, Vol.1*, 173.

¹³³ KUÉNY, *JNEA* 9, no.2 (1950), 86.

¹³⁴ The scene is located on the southern side of the second pillar (C) on the left of its 'Court of offerings' facing the entrance of the Hypostyle hall. See PM I², 1960, plan, 356.

¹³⁵ E. CRANE, 'Honey: Past, Present, and Future,' *American Bee Journal* 117 (3) (1977), 142.

¹³⁶ KRITSKY, *The Tears of Ra*, 48-50.

¹³⁷ K. A. Allsop, J. B. Miller. 'Honey revisited.' *British Journal of Nutrition* 75 (1996), 513-520.

¹³⁸ The medical papyri (mostly the Ebers Papyrus) recorded the extensive use of honey as medicine, however the article mostly focused on bees, beekeeping and its religious role. See J. F. Nunn, *Ancient Egyptian Medicine*. (Oklahoma, 2002), 72.