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# FOOD IN EGYPT

BY

SIR ARMAND RUFFER

## PREFATORY NOTE.

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The material for this paper was collected by my husband, the late Sir Armand Ruffer, c. m. g., m. d., during 1915 and 1916, with a view to tracing the connection between the Food used in Ancient Egypt, and the incidence of caries and other diseases of the teeth among the inhabitants at different periods — a subject on which he wrote an exhaustive treatise, which will be published later.

His death in April 1917, on returning from a mission to Salonika, prevented his editing the paper in the complete form that he would have wished. I have however collected all Sir Armand's material, and without adding Introduction or Conclusions, offer this paper merely as a work of reference for future students who may be interested in the Food of the Ancient Egyptians.

ALICE RUFFER.

January 1918.

SIR ARMAND RUFFER.

# FOOD IN EGYPT.

## CHAPTER I.

### ANIMALS.

Cattle were kept in Egypt as far back as civilisation can be traced. Fragments of the *Bos taurus* and *Bos bubalus* have been found in the predynastic kitchen-middings of Toukh. Egyptian artists of very early times sculptured the feet of furniture in the shape of bull's legs<sup>(1)</sup>, and pottery figures of kine, dating from the time of Zet, were deposited in the tombs of Abydos.

Some of the cattle as shown on monuments<sup>(2)</sup> were tall, long-legged beasts with large semi-circular, lyre-shaped horns, parallel with the forehead; others, equally tall, had short horns directed upwards and outwards and implanted on the sides of the head; others again showed a more or less developed hump level with the «withers», and hornless cattle with a very high «chignon» were represented also.

The bones of cattle unearthed so far<sup>(3)</sup> are mostly of the first variety. Remains of *Bos indicus* Lim., not distinguishable from the present common domestic Egyptian ox, have been found in the catacombs of Denderah<sup>(4)</sup>. Remains of the short-horned and humpless Syrian or Asiatic cattle (*Bos brachyceros*) have not been found, but this fact does not exclude the possibility of these animals having been bred in or imported into ancient Egypt, for skeletons of the tall, short-horned cattle, the existence of which is proved by numerous correct representations on monuments, have not been discovered

<sup>(1)</sup> CAPART, *Les débuts de l'art en Égypte, de l'ancienne Égypte*, p. 65.  
p. 130.

<sup>(2)</sup> LORTET et GAILLARD, *La Faune momifiée*  
*Mémoires de l'Institut d'Égypte*, t. I.

<sup>(3)</sup> LORTET, *La Faune momifiée*, p. 65.

<sup>(4)</sup> PETRIE, *Denderah*, p. 60.

either. Indeed, the literary evidence proves that Syrian cattle were imported very early into Egypt, but the theory that the importation began after the destruction of the long-horned race by an epidemic is not supported by any facts. All that is known for certain is that the long-horned cattle disappeared and were replaced by short-horned animals.

Although hornless cattle were numerous, their bones have not been unearthed. One domain alone<sup>(1)</sup> is said to have contained 35 long-horned and 220 hornless cattle, but, until anatomical proof is forthcoming, the existence in ancient Egypt of a race comparable with the hornless races of the modern world remains not proven, as the animals represented as hornless may have been simply mutilated.

The famous Hathor from Deir el Bahari<sup>(2)</sup>, a typical specimen of the old race, resembles many drawn at Memphis or Thebes. The small head, narrow chest, thin shoulders, long, well curved spine, high and thin legs, muscular thighs, prominent hips, and small udders are typical. The coat is brownish red, dark on the back, lighter and tawny, shading into white, on the belly, and is studded with dark spots like flowerets, which might be looked upon as artificial, were it not that the coats of modern Sudanese cattle are similarly marked. The cow is a typical *Bos Africanus*.

The colour of the cattle varied a good deal: black, pie-bald, a very few white, and the majority fawn-coloured, and of many colours<sup>(3)</sup>. Ramses III<sup>(4)</sup> bred in the Delta black cows and faultless animals for the sacrifices. Milch cows<sup>(5)</sup> were white or with black spots, with black and red calves, the heads of sacrificial oxen white with black stripes, the bodies white, white with a few black dots, black with reddish-brown bellies and red-brown cross lines on the legs, but, as will be seen later on, the sacrificial oxen were generally red. In a ceremony often repeated, the king or queen offers four bulls to Amon-Ra, red, white, black and spotted. At Deir el Bahari, for instance<sup>(6)</sup>, the queen holds the four calves together with four ropes tied to the left fore-foot, and she brings them to the god Min who makes a suitable speech.

<sup>(1)</sup> ERMAN, *Egypten*, quoted by LORTET, *La Faune momifiée*, p. 65. (BREASTED, *Ancient Records*, I, no. 408).  
<sup>(2)</sup> MASPERO, *Causeries d'Égypte*, p. 321. <sup>(3)</sup> WIEDEMANN, *Herodots zweites Buch*, p. 181.  
<sup>(4)</sup> *Ibid.*, p. 181. <sup>(5)</sup> *Ibid.*, p. 181.  
<sup>(6)</sup> NAVILLE, *Deir el Bahari*, Part V, p. 7.

Large and small cattle are frequently mentioned<sup>(1)</sup>. Dwarf cattle are represented both at Beni Hasan and at Saqqarah<sup>(2)</sup>, where women are seen bringing them in. It must be remembered that the artist always drew the cattle on a smaller scale than the man, but never to the extent shown on these walls. Of the mountain cattle occasionally mentioned, nothing is known<sup>(3)</sup>.

The mummified cattle are of the same race as the Hathor cow, and probably therefore that particular race, more than any other, was sacred. Many of the oxen and goats of the animal cemetery at Gurob<sup>(4)</sup> had long horns. Among the offerings at Saqqarah<sup>(5)</sup> there are mentioned *nag*, which is translated the «long-horned ox» or «mature ox»<sup>(6)</sup>, and the *yua*, or «short-horned ox».

Cattle-breeding and the supervision of the herds of kings or temples conferred a high position on the persons trusted with this work, for the «Overseer of cattle»<sup>(7)</sup>, «Overseers of the cattle of the temple of Ra in On»<sup>(8)</sup>, of the cattle of Senmut triumphant<sup>(9)</sup>, of the cattle of Amon, of the cattle of the Royal House, were high officials, sometimes decorated with other titles. A herd of cattle was the outwards and visible sign of opulence, and to own numerous cattle was equivalent to having a large bank balance in modern days. The wealth of the temple of the Memnon Colossi is indicated by an inscription stating that «its cattle are like the sand of the shore, they make up millions». Elsewhere, a monarch boasts that he «settled every district of the nome with men and cattle»<sup>(10)</sup>. «I filled the pastures with cattle, every man had many colours, the cows brought forth twofold, the folds were full of calves»<sup>(11)</sup>.

<sup>(1)</sup> Great Abydos Inscription dating from Ramses II (BREASTED, *Ancient Records*, III, no. 267). *Papyrus Harris*. <sup>(7)</sup> *Tomb of Hesi*, XVIII<sup>th</sup> Dynasty (BREASTED, *Ancient Records*, II, no. 1041).  
<sup>(2)</sup> MARGARET MURRAY, *Saqqara Mastabas*, I, p. 13, pls. IX, X, XII. <sup>(8)</sup> DAVIES, *The rock tombs of El Amarna*, V, p. 15.  
<sup>(3)</sup> *Pap. Harris* (BREASTED, *Ancient Records*, IV, no. 272). <sup>(9)</sup> *Inscription of Senmut*, XVIII<sup>th</sup> Dynasty (BREASTED, *Ancient Records*, II, nos. 354 and 355).  
<sup>(4)</sup> L. LOAT, *Gurob*, p. 33. <sup>(10)</sup> *Tomb Inscription of the Nomarch Henku*, V<sup>th</sup> Dynasty (BREASTED, *Ancient Records*, I, no. 281).  
<sup>(5)</sup> MARGARET MURRAY, *Saqqara Mastabas*, Part I, p. 34. <sup>(11)</sup> *Inscription of Siout*, IX<sup>th</sup> Dynasty (BREASTED, *Ancient Records*, I, no. 408).  
<sup>(6)</sup> NEWBERRY, *Life of Rekhmera*, p. 28.

The numbering of animals was a great feast. The Palermo Stone mentions the «Year of the second occurrence of the numbering of all large and small cattle of the North and the South», and also «of the third year of the numbering of large cattle<sup>(1)</sup>». The requisitioning of cattle as tribute probably accounts for their annual numbering, and the inspection of the cattle by the owner and the vizier is depicted with tiresome reiteration on Egyptian monuments.

Bulls, oxen and cows were brought from abroad, sometimes in very large numbers, as spoils of war, tribute or by way of trade. King Snefru of the III<sup>rd</sup> Dynasty brought 200,000 large and small cattle from Negro land<sup>(2)</sup>, as well as small cattle and bulls from Negro land<sup>(3)</sup> or Ibhet and Hua south of the Atbara Meshwesh, as spoil of the Libyan Mediterranean expedition. Under Thutmose III<sup>(4)</sup> large and small cattle were raided from Megiddo, Zahi, Naharrin, Retenu. The white small cattle from Megiddo<sup>(5)</sup> and the red cattle from Negro lands are specially mentioned<sup>(6)</sup> in other inscriptions.

Part of the income of the temples of Amon and other gods consisted of cattle offered by kings, nobles and others. 866 heads of cattle formed part of Amon's income<sup>(7)</sup>, and Ramses III gave 297 «various cattle», etc.<sup>(8)</sup>, and again 3029 «various cattle» for the new feasts.

Cows certainly are mentioned as divine offerings<sup>(9)</sup>, but there are no representations of cow sacrifice in ancient Egypt. According to Herodotus, this animal was holy, and never sacrificed, and was sacred to Isis, «for the image of Isis is made in the form of a woman with the horns of a cow, as the Grecians represent Io, etc.».

Cows were not slaughtered for food as the following curious passage of Herodotus indicates: «The people of Marea<sup>(10)</sup> and Apis, in the part of Egypt

<sup>(1)</sup> BREASTED, *Ancient Records*, I, nos. 81, 157.

<sup>(2)</sup> *Palermo Stone* (BREASTED, *Ancient Records*, I, no. 146).

<sup>(3)</sup> *Inscription of Harkhuf at Assuan*, VI<sup>th</sup> Dynasty (BREASTED, *Ancient Records*, I, no. 336).

<sup>(4)</sup> *Merenptah*, XIX<sup>th</sup> Dynasty (BREASTED, *Ancient Records*, I, nos. 435, 462, 482).

<sup>(5)</sup> *The Annals* (BREASTED, *Ancient Records*, II, no. 435).

<sup>(6)</sup> *Karnak Sheshonk I*, XXII<sup>nd</sup> Dynasty (BREASTED, *Ancient Records*, IV, no. 724).

<sup>(7)</sup> *Tomb of Rekhmere*, XVIII<sup>th</sup> Dynasty (BREASTED, *Ancient Records*, II, no. 736).

<sup>(8)</sup> BREASTED, *Ancient Records*, IV, no. 235.

<sup>(9)</sup> IDEM, *ibid.*, IV, no. 190.

<sup>(10)</sup> HERODOTUS, II, 18.

bordering on Libya, deeming themselves Libyans and not Egyptians, and being discontented with the restrictions concerning victims, were desirous not to be restricted from the use of cow's flesh, and therefore sent to Ammon saying they had no relation to the Egyptians, because they lived out of the Delta and did not speak the same language with them; and they desired to eat all manner of food.» The god, however, refused this favour, maintaining that all the country irrigated by the Nile was Egyptian, and that all who dwelt below the city of Elephantine, and drank of that water were Egyptians.

The bull was the emblem of strength, and the Pharaoh compared himself to a bull. «He made me mighty as a mighty bull<sup>(1)</sup>», or, «I have caused them to see thy majesty as a young bull, firm of heart, ready-horned, irresistible<sup>(2)</sup>». Or the terrifying aspect of a king is described as follows: «Thou makest bulls into women<sup>(3)</sup>». Bulls were often sacrificed to the gods and to the dead, and the head of the bull was a mortuary offering during the II<sup>nd</sup> and III<sup>rd</sup> Dynasties already.

The worship of the bulls Apis and Mnevis attracted the notice of all early writers. Apis was engendered by a flash of lightning which came down from heaven, and impregnated a cow that never afterwards produced any more young. The Apis had certain characteristic signs. He was black with white spots; on his forehead he had a white triangle, on his right side the figure of a crescent moon. On his back he generally wore a red cloth. Herodotus<sup>(4)</sup> describes him as black with a square spot of white on the forehead, and on the back the figure of an eagle, and in the tail double hairs and under the tongue a swelling shaped like a beetle. Divine honours were paid to him: Psammitichus<sup>(5)</sup>, for instance, built a court for Apis «in which he was fed whenever he appeared, opposite the portico, surrounded by a colonnade and full of sculptured figures».

There are<sup>(6)</sup>, said Pliny, two temples appropriated to him, which are called *Hetemi*, and to these the people resort to learn the auguries. Accordingly as the

<sup>(1)</sup> *Coronation Inscription of Thutmose III*, XVIII<sup>th</sup> Dynasty.

<sup>(2)</sup> *Thutmose III, Hymn of victoria*, Karnak, XVIII<sup>th</sup> Dynasty (BREASTED, *Ancient Records*, II, no. 659).

<sup>(3)</sup> *Stela of Piankhi*, XXIII<sup>rd</sup> Dynasty.

<sup>(4)</sup> HERODOTUS, III, 27.

<sup>(5)</sup> IDEM, II, 153.

<sup>(6)</sup> PLINY, VIII, 71.

ox enters the one or the other of these places, the augury is deemed favourable or unfavourable. He gives answers to individuals, by taking food from the hand of those who consult him. He turned away from the hand of Germanicus Cæsar, who not long after died. The honours which were paid him both during his life and after his death were described by Diodorus Siculus<sup>(1)</sup>. The death of Apis caused the people to go into mourning until the priests had found a successor, who was then brought to Nilopolis where he was fed during 40 days. He was then taken down the Nile in a special vessel, in a gilt cabin, and finally reached Memphis. The animal might not drink the water of the Nile, but used that of a special well. The rule was that it must not live for more than 25 years<sup>(2)</sup>, but this rule was sometimes broken, for it is known that in the XXII<sup>nd</sup> Dynasty, two of the holy steers lived more than 26 years<sup>(3)</sup>, and Diodorus<sup>(4)</sup> mentions an Apis who died of old age.

When Apis died<sup>(5)</sup>, the pious wore mourning garments, and nothing but water and vegetables entered their mouths for fully 60 days, till his burial was over. His tomb was visited by pilgrims, and grave-stones were erected inscribed with the interesting biography of this bull; when he was born, when he was brought into the temple of Ptah, and what was the entire length of his life; we are told what place it was that had the honour of being his home, and the name of his mother. His burial was conducted with fullest observances, for the State itself provided for it. In 547, king Amasis made for Apis "a great sarcophagus of red granite, which his Majesty had found, such as never had been made of stone, by any king or at any time. And he fitted him out with bandages, and amulets and all adornments of gold and all precious stones; they were more beautiful than any that had ever been made before." This was the first of those colossal sarcophagi at Saqqara, made of a single block of granite, four metres in length, and over three metres high.

The second best known bull in Egypt was Mnevis with the same physical characteristics. It was worshipped at Heliopolis<sup>(6)</sup> with honours as great as those given to Apis. The bull Netos may have been Mnevis under another

<sup>(1)</sup> DIODORUS SICULUS, I, 85.

<sup>(2)</sup> PLUTARCH, 56.

<sup>(3)</sup> FRAZER, *Spirits of the Corn*, II, p. 36.

<sup>(4)</sup> DIODORUS, I, 85.

<sup>(5)</sup> ERMAN, *A handbook of Egyptian Religion*, p. 170.

<sup>(6)</sup> DIODORUS, I, 84 and 88.

name. Other sacred bulls were Omphis, Baris, and a five-legged ox that lived in the temple of Jupiter Polieus in Alexandria.

The goddess Hathor was often worshipped in the shape of a cow, especially at Denderah, the principal seat of her cult, and is sometimes represented, especially on columns, as a woman with a cow's ears, or as a cow. The beautiful Hathor cow from Deir el Bahari is adorned with the characteristic attributes of the goddess, namely a solar disk between the horns with two ostrich feathers. A clump of lotus at each side sends up open flowers and buds gracefully bending round the neck and over the head. Of the two human figures close to it, the first stands in front of the cow just beneath the head, with the back towards the animal. The face is mutilated, but the whole attitude, the uræus on the crown, and the stiff skirts falling down to the knees, indicate that it is meant for a Pharaoh. The skin is dark, and the hands are extended in a position of submission as if proclaiming himself the humble servant of Hathor. The second person, also a Pharaoh, is naked but painted red, and, kneeling beneath the animal, drinks milk straight from the udder.

The seven Hathors that assisted at confinements appear to have played a part similar to that of our fairies. In Ptolemaic times Hathor was the goddess of the dead par excellence, and, to some extent, supplanted Osiris. A dead woman was then not called an Osiris but a Hathor.

The sky, generally regarded as a female (a woman or a cow)<sup>(1)</sup>, was often pictured as a cow, with ships sailing along her belly; the sun was said to be born in the morning as a calf of the celestial cow, or as a child of the goddess of the sky. The cow was sacred to Isis<sup>(2)</sup> also and was honoured in many parts of Egypt<sup>(3)</sup> and especially in certain nomes: at Aphroditopolis, where Isis appeared as a white cow, at Hermopolis and Hermonthis<sup>(4)</sup>.

The great veneration for this animal was probably the reason why many sarcophagi show the head of a cow or ox, and Mycerinus, son of Cheops<sup>(5)</sup>, is said to have buried his favourite daughter in a block of wood hollowed out in the shape of a cow.

The old Greek idea that the cow was worshipped on account of its utility

<sup>(1)</sup> ERMAN, *Egyptian Religion*, p. 7.

<sup>(2)</sup> HERODOTUS, II, 41.

<sup>(3)</sup> STRABO, XVII, 812.

<sup>(4)</sup> STRABO, XVII, 817.

<sup>(5)</sup> HERODOTUS, II, 129.

does not appear to be based on fact. In the *Book of the Dead*<sup>(1)</sup> offerings are given to the «bull, the husband of the divine cow». In the same work<sup>(2)</sup> a vignette represents a cow having the disk with plumes between her horns, and wearing a collar, from which is suspended the emblem of life. Elsewhere<sup>(3)</sup> is seen a vignette showing a hall or shrine within which, on the left, the deceased stands between two rows of offerings adoring Ra, or Osiris, hawk-headed. Next are ranged seven kine and a bull, each animal having offerings before it. Before it are four rudders, emblematic of the cardinal points, and on the extreme right are four triads of gods. The speech of the deceased read: «Hommage to thee, O thou lord, thou lord of right and truth, the only One, the lord of eternity and creator of everlastingness, I have come unto thee, O my lord Ra, I have made offerings of herbs unto the seven kine and unto their bull, etc.».

The method of burial of the animals that died a natural death is said to have been peculiar<sup>(4)</sup>. The cows were thrown into the river, but there is no confirmatory evidence of this statement, and mummified cows<sup>(5)</sup> have been found at Thebes. The males, according to the same author, were severally interred in the suburbs, with one horn, or both, appearing above the ground for a mark. When the bodies were putrified and the appointed time arrived, a raft came to each city from the island called Prosopitis: this island was in the Delta, and was nine schœni in circumference: «Now in this island Prosi-pitis there are several cities; but that from which the rafts come to take away the body of the oxen, is called Artabechis; in it a temple of Venus has been erected. From this city then, many persons go about to other towns; and having dug up the bones, all carry them away, and bury them in one place; and they bury all other cattle that die in the same way that they do the oxen; for they do not kill any of them.»

The statement that oxen were not slaughtered is manifestly erroneous (witness the frequent representations in tombs of cattle being sacrificed), and, moreover, it is difficult to believe that all the male cattle were buried in the way just described, as a regular State department with a large staff and

<sup>(1)</sup> *The Book of the Dead*, II, 430.

<sup>(2)</sup> *Ibid.*, III, 533.

<sup>(3)</sup> *Ibid.*, chapter CXLVIII.

<sup>(4)</sup> HERODOTUS, II, 41.

<sup>(5)</sup> WILKINSON, *Manners and Customs of the ancient Egyptians*, V, 195.

budget would have been necessary to carry out this system. Whether the skeletons were ever carried to Artabechis is uncertain, but certain it is that heads and skeletons of bulls and oxen, mummified and not, have been found in many and various parts of Egypt. The animals were often skinned after death, as the skin of the ox is a well-known hieroglyphic sign.

Mummies in the shape of cattle contain the bones of one or of several animals, and this has been invoked in favour of the truth of Herodotus' story. This fact, however, is of little value because the many and various tricks of mummifiers may account for this state of things. Mummies with the external characteristics of birds contained bones of crocodiles or rags; mummies adorned with the head of a ram contained birds; mummies shaped like crocodiles were made up of a human adult femur and of a piece of skull, or of reeds, the truth being that the mummifiers' trade was one of the most fraudulent that ever existed.

It is very probable therefore that Herodotus' statement was based on fact or facts which he generalised unduly.

The castration of bulls for the purpose of improving the meat was carried out at a very early period. The addresses of Horus<sup>(1)</sup>, for instance, give the following passage: «I have come, and I have smitten for thee emasculated beasts». The castration of animals, however, does not appear to have been represented on Egyptian monuments. Sacrifices of oxen were common: A white ox, for instance, was offered to Ra at Heliopolis, at Qurneh<sup>(2)</sup> 32 oxen with legs bound, 72 ox haunches and 45 heads were found as representations of offerings.

Egypt not having much pasture land, the animals specially bred for the butcher were often stable fed. At Beni Hasan and elsewhere men are seen coaxing oxen to swallow balls probably of grain or some similar nutritious food, and the animals are often represented with long, turned up hoofs such as develop in animals kept in imprisonment.

The hooves of animals found some feet below the surface in a shaft of the XI<sup>th</sup> Dynasty temple at Deir el Bahari were long and unworn, showing that the animals had never been used for work.

<sup>(1)</sup> *The Book of the Dead*, III, p. 591. — <sup>(2)</sup> PETRIE, *Qurneh*, p. 14.

*Mémoires de l'Institut d'Égypte*, t. I.

The slaughter of cattle for sacrifice or food is depicted on many monuments, and the pictures resemble one another so closely that the description of one such scene will suffice. The animal was thrown, its legs tied together and the throat cut with a knife. One man held up one of the forelegs<sup>(1)</sup>, while another with a strong knife severed the leg from the shoulder, for the legs were evidently the choice parts. A butcher was represented also sharpening his knife with a long whetstone hanging from his belt, as with butchers of the present day. The heart was then taken out of the body and also the liver; the animal was skinned in order to cut out the ribs. Even the phrases which accompany the scene vary but little, we find them in other places than Deir el Bahari. They are either the explanation of what is being done, such as these words: «the sharpening of the blade», or they are short dialogues between the men who are working. Thus: «Thou art brave; put the knife into the leg». «Cut it completely», and the answer «I do as you like».

The animals used for sacrifice were carefully examined beforehand<sup>(2)</sup>, and the animal was rejected «if the examiner found one black hair upon him, and one of the priests appointed for this purpose makes an examination, both when the animal is standing up and lying down; and he draws out the tongue, to see if it is pure as to the prescribed marks. . . He also looks at the hairs of his tail, whether they grow naturally.» If the beast was found pure, it was duly marked for sacrifice; but any one who sacrificed an unmarked animal was punished by death. The real object of the careful examination was probably to avoid possibility of slaughtering an animal with the characteristic marks of an Apis. Plutarch<sup>(3)</sup> went so far as to say that in order to avoid a mistake, no cattle were slaughtered. It was perhaps because no mistake could possibly occur in the case of red oxen that these animals were allowed to be slaughtered<sup>(4)</sup> and not, as Diodorus suggests, because Typhon was red. It is strange, however, that the Jews followed this custom<sup>(5)</sup>. «This is the statute of the law which the Lord has commanded, saying: Speak unto the children of Israel, that they bring thee a red heifer without spot, wherein is no blemish. . . and one shall slaughter, etc.»

<sup>(1)</sup> NAVILLE, *The Temple of Deir el Bahari*, Part IV, p. 7.

<sup>(2)</sup> HERODOTUS, 38.

<sup>(3)</sup> PLUTARCH, *De Iside*, p. 31.

<sup>(4)</sup> DIODORUS, I, 88.

<sup>(5)</sup> *Numbers*, XIX, 2.

At Edfu<sup>(1)</sup> the following Ptolemaic inscription gives the precautions taken before slaughter: «A sacrificial animal, which is still young in its testicles and the nose of which has not been perforated yet, is in the temple. He has been cleaned in the temple pool, every day twice during the whole year. The dirt on his head has been washed off and his hoofs cleaned with palm-wine. He is now led to the altar, which is put up in the great holy place, where he is stretched out on the sacrificial table made of palm wood. The butcher approaches and after careful examination he removes his head, his chest part, his two forelegs, etc.»

After sacrifice and dissection, the pieces were piled up on the altar. The offerings of meat actually found in certain tombs give us a very good notion as to what parts were appreciated most.

At Deir el Bahari, for instance, the head of a calf in its wrappings was found among the offerings for queen Isimkhâbiu<sup>(2)</sup>. The *khopesh*<sup>(3)</sup> or foreleg seems to have been the most important joint of the sacrificial animal, and in all representations of offerings the foremost priest carries a foreleg, generally on his shoulder. *Sekhen*<sup>(4)</sup> was the forepart of an animal and *yf en hât* was the flesh of the forepart. Several boxes containing 209 well preserved alimentary offerings, of which about 200 from young cattle or calves, were found in the tombs of Thutmosis III and Amenophis III at Biban el Molouk. These offerings consisted of pieces of meat and bone taken from all parts of the body, with the exception of the head, neck, tail, pelvis and the extremities of the limbs, i. e. metacarpals, metatarsals and phalanges.

About 50 such muscles or fragments of muscles had been detached from the bones and consisted of pieces of salted and dried meat, 10 to 15 centimetres long, which still showed the groove of the rope by which they were suspended.

Twenty-one pieces consisted of the tibia, twenty of the femur, eighteen pieces of the humerus, eighteen pieces of the cubitus and radius, and fourteen pieces of the scapula, all of them with flesh attached to the bone. Eight pieces consisted of the whole foreleg of calves, but without the foot.

<sup>(1)</sup> DÜMICHEN, *Geogr. Inschr.*, II, 90, Z. 79, 4<sup>th</sup> edit., 1908, p. 491.

124.

<sup>(2)</sup> MARG. MURRAY, *Saqqara Mastabas*, I, p. 38.

<sup>(3)</sup> G. MASPERO, *Guide to the Cairo Museum*,

<sup>(4)</sup> IDEM, *ibid.*

The thorax was divided into a certain number of blocks of vertebræ or ribs. There were eleven sternums of ox or calf with their costal cartilages; five pieces each composed of four to eight ribs, nine pieces of the vertebral column, each of five to eight dorsal vertebræ with their long spinous processes, and lastly 6 lumbar vertebræ in one block. Pieces of liver and spleen were also found, but no trace of heart or lungs. The bones belonged to young animals with ununited epiphyses, not more than two or three years old therefore. The animals from which they came possibly belonged to the *Bos brachyceros*.

The *myst* «kidneys (?)» and *nenshem* «spleen», are mentioned in the list of offerings of the V<sup>th</sup> Dynasty<sup>(1)</sup>. According to Griffith<sup>(2)</sup>, the *sut* was the haunch or shoulder shrunk by boiling, and *yua* was the shoulder similarly treated.

Although it has been repeatedly stated that these meats were salted, there is really no evidence to that effect.

At first sight, the fact that no part of the head was found would appear to confirm Herodotus' statement that when an animal was sacrificed the head was cut off and sold to a Greek merchant, or, in the absence of such a merchant, thrown into the river; the following imprecation being pronounced on the head: «If any evil is about to befall either those that now sacrifice, or on Egypt in general, may it be averted on this head». Herodotus adds: «With respect, then, to the heads of beasts that are sacrificed, and to the making libations of wine, all the Egyptians observe the same customs in all sacrifices alike; and from this custom no Egyptian will taste of the head of any animal».

Yet on the walls of many Egyptian monuments, one sees the calf's head being carried on a tray or actually put on the dinner table with the rest of the food. The prohibition, therefore, did not extend to calves, or was not so complete as Herodotus supposed, or did not exist in early Egyptian times.

Of the cooking of the meat very little is known. When they sacrificed to the goddess<sup>(3)</sup> «whom they consider the greatest. . . », they removed the intestines, leaving the vitals with the fat in the carcase; cut off the legs, and the extremity of the hips, with the shoulder and legs, and filled the body of

<sup>(1)</sup> MARGARET MURRAY, *Saqqara Mastabas*, I, p. 38.

<sup>(2)</sup> IDEM, *ibid.*, p. 37.

<sup>(3)</sup> HERODOTUS, II, 109.

the bullock with fine bread, honey, raisins, figs, frankincense, myrrh and other perfumes; «and after they have filled it with these, they burn it, pouring on it a great quantity of oil. They sacrifice after they have fasted; and while the sacred things are being burnt, they all beat themselves, and after they have done beating themselves, they spread a banquet of what remains of the victim.» The frankincense, myrrh, and other perfumes might not be appreciated now, but a stuffing of figs, bread, honey and raisins is not at all unlike the stuffing that modern Egyptians and Greeks serve with certain meats.

Doubtless, as is done in the East to this day, a small stick or metal skewer was passed through several small pieces of meat, which were slowly turned over a charcoal fire or brazier. In the kitchen of Ymery, superintendent of the domain of king Shepseskef, the hearth is replaced by a metal brazier with pretty open-worked sides. The meat was cut up on low tables and cooked, the smaller pots were placed on a brazier, and the large ones stood on two supports over the open fire. At the time of the New Empire we find, in the kitchen of Ramses III, a great metal cauldron with feet, standing on the fire; the kitchen boy is stirring the contents with an enormous two-pronged fork. The stock of meat is hung on a bar close to the ceiling.

From the time of the Old Empire cattle<sup>(1)</sup> were fattened artificially with dough of bread. The herdsmen are represented in the act of «beating the dough» and making it into rolls, and then squatting down before their animals, they coaxed them to eat it, pushing the dough from the side into the mouths.

Oryx, antelopes, geese, and cranes were fattened in the same way.

Fattening houses for animals are several times mentioned<sup>(2)</sup> among the gifts to the gods by Ramses III.

## SHEEP.

Large numbers of sheep were bred in Egypt. A herd of 974 sheep existed<sup>(3)</sup> at the time of the pyramid builders, and at the beginning of the New Empire

<sup>(1)</sup> ERMAN, *Life in ancient Egypt*, p. 438.

IV, nos. 217, 260, 313 and 323).

<sup>(2)</sup> *Pap. Harris* (BREASTED, *Ancient Records*,

<sup>(3)</sup> WIEDEMANN, *Herodots zweites Buch*, p. 197.

there was a herd of 1,100 animals at El Kab. The neighbouring deserts were then as now the breeding places for sheep, as these animals can live for a very long time without water, if allowed to proceed at their leisure.

Two principal races of sheep existed. The first, *Ovis longipes* (Tritzinger), Race *palaeoegyptiacus*, has been identified by fragments of crania found in the kjökkenmöddings at Toukh<sup>(1)</sup>. The characteristic horns, heavy, with long transverse spirals are figured on a very beautiful slate found at El Bersheh<sup>(2)</sup> and now in the Cairo Museum, and on the papyrus Neb-Qued of the Louvre Museum<sup>(3)</sup>, and on a clay seal found at Hierakonpolis<sup>(4)</sup>. No mummified remains of this sheep have been found so far.

The sheep with curved horns, the typical Amon's horns, was by far the most common, and several mummies of this animal are in the British, the Cairo and Berlin Museums. The Cairo specimens come from Saqqara and one of them still bears branded on the forehead the mark of the former owner.

Lortet<sup>(5)</sup> states definitely that this race of sheep does not appear on the monuments till the XII<sup>th</sup> Dynasty, and without bringing any proof or documents, he assumes that the *Ovis palaeoegyptiacus* died out about the beginning of the Saïtic period, and was replaced by the second species. At the time of the Ptolemies, Eubœan and Arabian sheep were brought into Egypt.

According to some authors, the cult of the sheep was spread all over Egypt<sup>(6)</sup>, whereas Strabo localises it in Sais and the Thebaid. The sheep is mentioned among the animals that were fed by Amon<sup>(7)</sup>, and a sheep with human voice also rendered oracles. The divine shadow was in the likeness of a ram<sup>(8)</sup>. In the speech of Ptah regarding the birth of Ramses<sup>(9)</sup> the god exclaims: "I assumed my form as the Ram, lord of Mendes, and begot thee in

<sup>(1)</sup> In the original paper J. de Morgan, p. 99, there is no mention of these crania, although later on Lortet repeatedly refers to this list. As far as I can make out Lortet first thought these fragments belonged to a goat and changed his mind afterwards.

<sup>(2)</sup> NEWBERRY, *El Bersheh*, II, pl. XXV.

<sup>(3)</sup> LORTET et GAILLARD, *La Faune momifiée*, p. 87.

<sup>(4)</sup> QUIBELL, *Hierakonpolis*, Part II, pl. LXX,

figs. 10 and 11.

<sup>(5)</sup> LORTET et GAILLARD, *op. cit.*, p. 82.

<sup>(6)</sup> POLYAÏN, VII, 9; see WIEDEMANN, *Herodot.*, p. 196.

<sup>(7)</sup> MARIETTE, *Pap. Bulak*, 17, pl. 6 (see WIEDEMANN, *Herodot.*, p. 196).

<sup>(8)</sup> Karnak Inscriptions, XVIII<sup>th</sup> Dynasty, Thutmose II (BREASTED, *Ancient Records*, II, no. 396).

<sup>(9)</sup> BREASTED, *Ancient Records*, III, no. 400.

thy august mother". The ram-headed sphinxes at Karnak and elsewhere are well known, and the head was frequently used as an ornament.

The god Khnum and kings such as Seti I and Ramses II<sup>(1)</sup> are represented with the long spiral horns, whereas the heads of Amon and of many kings, including Alexander the Great, were adorned by the curved horns characteristic of Amon. An attempt has been made to identify the ram of Mendes with the long horned sheep, but, unfortunately, the pictures of the animal show both kinds of horns<sup>(2)</sup>.

The question whether the animal worshipped at Mendes was a ram or a goat is an open one, which, however, need not be discussed here. Whatever the animal may have been, sterile women came from afar to worship it, and the animal is said to have had sexual connection with these women on certain occasions. It is more probable, however, that a priest wearing the mask of a ram or goat was the active agent.

As in the case of cattle, it has been suggested that their utility in providing wool, butter, cheese, milk, etc., caused sheep to be looked upon as sacred at one time<sup>(3)</sup>. Sacrifices of sheep to the gods were certainly never common, but the theory does not appear to be based on well-ascertained facts.

It was said that the animal was never sacrificed to Isis<sup>(4)</sup>, and that the inhabitants of the Nitriotic nomes were "the only people who sacrificed a sheep"<sup>(5)</sup>, but it was eaten in Lycopolis<sup>(6)</sup> also, and at the festival of Amon<sup>(7)</sup> the Thebans slaughtered a ram, clothed the statue of Amon with the skin of the creature, placed the statue of Herakles in front of it, then beat themselves and forthwith buried the ram.

The animal was doubtless eaten, but still there must have been prejudice against it at some time or other, for the priests<sup>(8)</sup> did not eat mutton, and Juvenal<sup>(9)</sup> went so far as to say that none of the Egyptians ate mutton.

Bones of *Capra hircus*<sup>(10)</sup> have been found in the kjökkenmöddings of Toukh, and some osseous fragments found in the same locality may be

<sup>(1)</sup> LORTET, *La Faune momifiée*, p. 91.

<sup>(2)</sup> WIEDEMANN, *Herodot.*, p. 219.

<sup>(3)</sup> DIODORUS, I, 87.

<sup>(4)</sup> *Sext. Emp. Pyrrh.*, III, 220.

<sup>(5)</sup> STRABO, XVII, 803.

<sup>(6)</sup> PLUTARCH, *De Iside*, p. 72.

<sup>(7)</sup> HERODOTUS, II, 42.

<sup>(8)</sup> PLUTARCH, *De Iside*, p. 5.

<sup>(9)</sup> JUVENAL, XV, 11.

<sup>(10)</sup> J. DE MORGAN, *Origines*, p. 99.

remains of *Capra caucasica*<sup>(1)</sup> or of males of *Capra membrica*. A skull of *Hircus membricus* was found at Saqqarah (Cairo Museum, no. 29673), and representations of this animal adorn the walls of the funerary chapel of Ra-n-ousir of the V<sup>th</sup> Dynasty, of a Gizeh tomb of the IV<sup>th</sup> Dynasty, and of other monuments<sup>(2)</sup>. A skull of *Hircus Thebaicus*, an animal pictured on the most ancient Egyptian monuments, is in the Cairo Museum, and fragments of the skull of *Hircus reversis*, the dwarf goat of Central Africa, have been found in the prehistoric débris of Toukh<sup>(3)</sup>. Long-horned goats<sup>(4)</sup> were buried in the animal cemetery at Gurob. The horns of a fine specimen measured, according to Mr. Oldfield Thomas, 1 foot 10 1/2 inches along the outside curve and 1 foot 7 inches from tip to tip.

The sacrifice or slaughter of the goat is not often seen on monuments. The best is at El Gebrawi<sup>(5)</sup>, where the skinning of a goat hanging from a branch of a tree is the subject. «Cut it up and make it come» seems to be the injunction, and the other «I am doing according to thy pleasure». A man who is described as : «A tomb-cook performing his duty», is cutting up meat on a board, while a comrade stirs the joints which are being cooked in a cauldron over the brazier. He remarks : «These are done». In Rome<sup>(6)</sup> the she-goat was a favourite dish.

Goats were of some value as they were taken as spoils of war, and were presented to Ramses II of the XIX<sup>th</sup> Dynasty by Asiatic princes who visited him. A favourite general, Uni, under Pepy I of the VI<sup>th</sup> Dynasty, boasts that of his soldiers «no one thereof took any goat from any people». Menerptah, on the other hand, commanded the goats of his Libyan enemies<sup>(7)</sup>. White and small goats were brought back as spoils of war by Thutmose III<sup>(8)</sup>.

Mountain animals were offered as sacrifices under Thutmose III<sup>(9)</sup>. 1,089 goats and 205 various goats are numbered among the offerings of Ram-

<sup>(1)</sup> LORTET et GAILLARD, *La Faune momifiée*, p. 111.

<sup>(2)</sup> GAILLARD et DARESSY, *La Faune momifiée*, p. 102.

<sup>(3)</sup> LORTET et GAILLARD, *La Faune momifiée*, 3<sup>e</sup> série, p. 80.

<sup>(4)</sup> LOAT, *Gurob*, p. 3.

<sup>(5)</sup> N. DE G. DAVIES, *Deir el Gebrawi*, Part I,

p. 16.

<sup>(6)</sup> ATHENEUS, *Cookery*.

<sup>(7)</sup> Karnak Inscription (BREASTED, *Ancient Records*, III, no. 584).

<sup>(8)</sup> *The Annals* (BREASTED, *Ancient Records*, II, no. 490).

<sup>(9)</sup> *Coronation Inscription* (BREASTED, *Ancient Records*, II, no. 139).

ses III<sup>(1)</sup>, and these animals were presented to the temples under Sesostri II in the XII<sup>th</sup> Dynasty<sup>(2)</sup>.

Wild goats were caught in some sort of trap : «The god has taken us for himself, as prey, like wild goats creeping into a trap»<sup>(3)</sup>. They were also hunted<sup>(4)</sup>. This animal was eaten by early Egyptians<sup>(5)</sup> : «I portioned the daily bread, and wine for every day, cooked flesh, and fowl in roast; besides the wild goats of the hills».

Large numbers, 20,000 large and 20,500 white, were imported from abroad in the Old Empire<sup>(6)</sup>. Needless to say, many goat herds were necessary for such large numbers, and hence they are frequently mentioned<sup>(7)</sup> by various authors.

Three specimens of the wild sheep, *Ammotragus tragelaphus*, from Egyptian tombs have been described. The first consists of the cervical vertebrae and cranium of a very old subject; the second is a broken mummy of a small individual, and the last is the intact body of a fine male<sup>(8)</sup>. Apparently, all these remnants were found at Saqqarah. This animal was not in great request by ancient Egyptians, for it is not represented on the monuments, except perhaps at Hierakonpolis. The evidence on this point is not at all conclusive, but, in any case, the flesh of this animal does not seem to have been in great request.

The idea that it was the ancestor of *Ovis palaeoegyptiacus* has been now entirely given up.

#### GAZELLES.

Two kinds of Oryx inhabited the Egyptian desert, the white oryx or Leucorix with curved horns, and the *Oryx Beisa* with straight horns. Bows<sup>(9)</sup> made

<sup>(1)</sup> *Pap. Harris* (BREASTED, *Ancient Records*, IV, nos. 298-347).

<sup>(2)</sup> *The Contracts of Hapzefti* (BREASTED, *op. cit.*, I, no. 556).

<sup>(3)</sup> *Medinet Abou*, Ramses III, XX<sup>th</sup> Dynasty (BREASTED, *op. cit.*, IV, no. 91).

<sup>(4)</sup> *Sphinx Stela*, Thutmose III (BREASTED, *op. cit.*, II, no. 501).

*Mémoires de l'Institut d'Égypte*, t. I.

<sup>(5)</sup> XII<sup>th</sup> Dynasty, Amenemhet I, *The tale of Sinua* (BREASTED, *Ancient Records*, I, no. 496).

<sup>(6)</sup> WIEDEMANN, p. 217.

<sup>(7)</sup> LORTET et GAILLARD, *La Faune momifiée*, 1<sup>re</sup> série, p. 103.

<sup>(8)</sup> GAILLARD et DARESSY, *La Faune momifiée*, no. 29522.

<sup>(9)</sup> Pl. VII, 7, p. 26.

with two long, straight horns of the oryx, have been found in a tomb of the 1<sup>st</sup> Dynasty.

The monuments of predynastic times mostly show the *Beisa* variety, and the *Leucorix* appears on those of the Ancient and Middle Empires. Its white back, and characteristic brick-coloured belly are well shown in the tombs of Beni Hasan.

Representations of oryx anterior to the 1<sup>st</sup> Dynasty exist on a hard cylinder from the royal tomb of Negadah<sup>(1)</sup>, on an ivory plate, probably prehistoric<sup>(2)</sup>, on several vases at Ballas and Negadah<sup>(3)</sup>, and on the walls of a prehistoric tomb at Hierakonpolis. At Gizeh and Rifeh<sup>(4)</sup> an oryx couchant forms the handle of an ivory lid.

The hunting of the oryx is represented on a prehistoric palette from Hierakonpolis<sup>(5)</sup> and it appears several times at Beni Hasan and at Saqqarah. Herds of the animal are seen walking about the desert, and the birth of an oryx is represented, with a wolf or jackal waiting for the young to be born in order to devour it<sup>(6)</sup>.

The animal was domesticated<sup>(7)</sup> and was also imported from the South, possibly because it had been gradually killed off in Egypt. It was fattened for the table; an oryx, for instance<sup>(8)</sup>, is seen lying in its stable; and an inscription relates how the man is there to fatten the oryx. A similar scene is represented at Beni Hasan<sup>(9)</sup>. It was slaughtered for food in exactly the same way as cattle, the butcher using almost similar words: "Hold fast the oryx that I am cutting to pieces. That is done, comrade. Pull towards thee very strongly, comrade."

The sacrifice of the oryx is somewhat realistically represented twice<sup>(10)</sup>; white oryx<sup>(11)</sup> were kept in the slaughteryard of the temple of Medinet Abou<sup>(12)</sup>

<sup>(1)</sup> J. DE MORGAN, *Recherches sur les origines de l'Égypte*, I, 1896, p. 115, fig. 136, and II, 1897, pl. V, p. 266.

<sup>(2)</sup> Pitt Rivers collection (J. DE MORGAN, *Recherches*, 1896, II, p. 169, fig. 560).

<sup>(3)</sup> FL. PETRIE, *Nagada and Ballas*, pl. LXXVII and following.

<sup>(4)</sup> FL. PETRIE, *Gizeh and Rifeh*, p. 6.

<sup>(5)</sup> QUIBELL and GREEN, *Hierakonpolis*, II, pl. XXVIII, p. 41.

<sup>(6)</sup> LORTET et GAILLARD, *La Faune momifiée*, p. 170.

<sup>(7)</sup> N. DE G. DAVIES, *Deir el Gebrawi*, Part II, p. 9.

<sup>(8)</sup> LORTET et GAILLARD, *op. cit.*, p. 170.

<sup>(9)</sup> NEWBERRY, *Beni-Hasan*, I, pl. XXVII.

<sup>(10)</sup> See LORTET et GAILLARD, *op. cit.*, p. 172.

<sup>(11)</sup> *Pap. Harris* (BREASTED, *Ancient Records*, IV, no. 190).

<sup>(12)</sup> BREASTED, *Ancient Records*, IV, no. 242.

for the new feasts, and were offered also under Sheshonk III<sup>(1)</sup> in the XXII<sup>nd</sup> Dynasty. Ramses III appointed for the god Ra<sup>(2)</sup> "hunting archers to capture white oryxes, in order to offer them to thy Ka at all thy feasts". On the whole, however, it would appear that it was offered but rarely, as only 367 white oryxes, male gazelles, are mentioned in the recapitulation of the gifts of Ramses III<sup>(3)</sup>, an insignificant number when compared with the thousands of head of cattle given by the king during the same period.

A skeleton<sup>(4)</sup> of a male *Bubalis Bucephalis*, or hartbeest, an animal very rarely drawn on Egyptian monuments, was found at Saqqarah, and is in the Cairo Museum. The hartbeest is said to have been recognised on a prehistoric palette from Hierakonpolis<sup>(5)</sup>.

Various antelopes are painted or scratched on prehistoric pottery at Negadah and Ballas<sup>(6)</sup>. A prehistoric Kom<sup>(7)</sup> of Aouled-Haroun contained a great many excrements of antelopes, and this fact suggests that these animals were then kept in captivity, and the enclosure seen at Hierakonpolis<sup>(8)</sup> certainly favours the same idea. Later on, antelopes and oryxes were driven together<sup>(9)</sup>, and the fatness and sleekness of these animals prove that they were fattened for the table.

Antelopes do not often appear on the list of offerings. They are not mentioned in the papyrus Harris, for instance, but figure in the XVIII<sup>th</sup><sup>(10)</sup> and the XXII<sup>nd</sup> Dynasties<sup>(11)</sup>.

Bones of the Gazelle Isabella have been discovered in the prehistoric debris of Toukh<sup>(12)</sup>, in the temenos of Osiris<sup>(13)</sup> and in another tomb of the same locality<sup>(14)</sup>. At Tarkhan<sup>(15)</sup> a gazelle's head lay in a tomb together with a

<sup>(1)</sup> BREASTED, *Ancient Records*, IV, no. 768.

<sup>(2)</sup> IDEM, *op. cit.*, IV, no. 266.

<sup>(3)</sup> *Pap. Harris*.

<sup>(4)</sup> GAILLARD et DARESSY, *La Faune momifiée*, no. 29519.

<sup>(5)</sup> Plate LXXV and following of *Hierakonpolis*, II.

<sup>(6)</sup> PETRIE and QUIBELL, *Negadah and Ballas*, pl. LI and LII. See CAPART, p. 126.

<sup>(7)</sup> J. DE MORGAN, *Origines*, p. 31.

<sup>(8)</sup> QUIBELL and GREEN, *Hierakonpolis*, II, pl. LXXV.

<sup>(9)</sup> NEWBERRY, *Beni-Hasan*, II, pl. XIV.

<sup>(10)</sup> BREASTED, *Ancient Records*, II, no. 553.

<sup>(11)</sup> BREASTED, *op. cit.*, IV, no. 768.

<sup>(12)</sup> J. DE MORGAN, *Recherches sur les origines de l'Égypte*, p. 99.

<sup>(13)</sup> FL. PETRIE, *Abydos*, I, p. 16.

<sup>(14)</sup> *Ibid.*, t. I, 16.

<sup>(15)</sup> FL. PETRIE, *Tarkhan*, p. 8.

cylinder of King Ka (?), and bony fragments were present in the mummy tombs of Denderah<sup>(1)</sup> which were used from the time of the XVIII<sup>th</sup> Dynasty until Ptolemaic times.

The graceful head of the animal ornamented the prehistoric pottery of Negadah, and two long-necked gazelles and a palm tree are seen on a prehistoric slate. « The details of the forms of the joints and the general pose of the animals is excellent, and the feeling for the graceful, slender outline and smooth surfaces is enforced by the rugged palm stem placed between the gazelles<sup>(2)</sup>. »

Mummified bodies, male and female, of *Gazella Dorcas* and *Gazella Isabella* have been found in large numbers at Kôm-Mereh, Kom Ombo, Toukh<sup>(3)</sup> and elsewhere, and it has been stated that<sup>(4)</sup> the dorcas gazelle is figured chiefly in monuments of Upper Egypt and the gazelle Isabella on those of Lower Egypt.

The members of the ruling houses or families wore the undressed skins of animals such as goats or gazelles made into drawers, fastened round the waist by a rope or cord, tied in a knot<sup>(5)</sup>. The skin, in the prehistoric period, was used for various purposes, including the wrapping up of the dead<sup>(6)</sup>.

Gazelle hunting is often represented on the monuments, and rich men, especially in the Ancient Empire, kept herds of gazelles which were fattened for the table.

They were offered to the gods occasionally. Thutmose III relates how he ordered gazelles to be represented to Amon-Ra<sup>(7)</sup>, and these animals figure among the oblations by Ramses III to Amon-Ra<sup>(8)</sup>, among the animals<sup>(9)</sup> in the slaughter-yard of the temple at Medinet Abou, and among the offerings of the priest Osorkon under Sheshonk III (XXII<sup>nd</sup> Dynasty)<sup>(10)</sup>, and this king presented to Amon-Ra gazelles brought from negro land<sup>(11)</sup>.

<sup>(1)</sup> FL. PETRIE, *Denderah*, p. 29.

<sup>(2)</sup> FL. PETRIE, *Arts and Crafts in Egypt*, p. 49.

<sup>(3)</sup> LORTET et GAILLARD, *La Faune momifiée*, 1<sup>re</sup> série, p. 78.

<sup>(4)</sup> SELATER and THOMAS, *The Book of Antelopes*, vol. III, p. 105, 1898.

<sup>(5)</sup> BUDGE, *History of Egypt*, p. 50.

<sup>(6)</sup> J. DE MORGAN, *Recherches sur les origines de l'Égypte*, p. 134.

<sup>(7)</sup> *Coronation Inscription of Thutmose III* (BREASTED, *Ancient Records*, II, no. 106).

<sup>(8)</sup> *Pap. Harris* (BREASTED, *Ancient Records*, IV, no. 242).

<sup>(9)</sup> *Ibid.* (BREASTED, *op. cit.*, no. 190).

<sup>(10)</sup> Inscription on the Bubastis gate (BREASTED, *op. cit.*, IV, no. 768).

<sup>(11)</sup> Wall Inscription of Karnak (BREASTED, *op. cit.*, IV, no. 724).

## PIGS.

Pigs were not an object of repulsion in prehistoric times, as palettes dating from the time of Menes are pig-shaped<sup>(1)</sup>, and, had these animals been looked upon as repulsive, this shape would certainly not have been chosen for slates on which paint used for the adornment of the body was prepared.

A glazed pig dating from the 1<sup>st</sup> Dynasty comes from Abydos<sup>(2)</sup>. At Kom Ombo, in a temple of the Roman Period, teeth of *Sus Scrofa*, pierced for suspension, have been discovered. Other pig-shaped amulets dating from various periods<sup>(3)</sup> exist, some representing sows being dedicated to Isis as the goddess of fertility and carrying the inscription : « May Isis give happiness to the owner of this sow ». In the IV<sup>th</sup> Dynasty, a place near Meydum was called the « village of the white sow »<sup>(4)</sup>. The name Ta-rerut (The Sow) existed in the XIII<sup>th</sup> Dynasty<sup>(5)</sup>, and during the Ptolemaic period the pig was the determinative of the word cattle-herd<sup>(6)</sup>.

Nevertheless, the existence of a special caste of swine-herds, who, although native Egyptians<sup>(7)</sup>, were not allowed to enter temples nor to intermarry with others, implies a fairly large trade in pigs.

Pigs were used for treading the seed of the corn into the soft earth after sowing, but as this work occupied a few days only in the year, it follows that this animal must have been eaten or sacrificed, or both. The live-stock of Renni, whose tomb is at El Kab (XIII<sup>th</sup> Dynasty), included 300 swine, and as this man was a prophet of the goddess at El Kab, it is probable that he earned an honest penny by providing swine for the sacrifices.

There is evidence to show that the pig was regarded with that primitive<sup>(8)</sup> sentiment of religious awe and fear in which the feelings of reverence and abhorrence are almost equally blended. The animal came to be looked upon as an embodiment of Set and Typhon, the Egyptian devil and enemy of Osiris. It was in the shape of a black pig that Typhon injured the eye of the god

<sup>(1)</sup> MASPERO, *Guide to the Cairo Museum*, 4<sup>th</sup> edit., p. 539.

<sup>(2)</sup> FL. PETRIE, *Abydos*, II, p. 25, pl. VI.

<sup>(3)</sup> REISNER, *Amulets*, p. 162, also plate XX.

<sup>(4)</sup> WIEDEMANN, *Herodots zweites Buch*, p. 85.

<sup>(5)</sup> IDEM, *ibid.*

<sup>(6)</sup> IDEM, *ibid.*

<sup>(7)</sup> HERODOTUS, II, p. 119.

<sup>(8)</sup> FRAZER, *Spirits of the Corn*, etc., vol. II, p. 29.

Horus, who burned him and instituted the sacrifice of the pig, the sun-god having described the beast as abominable.

In the Egyptian Heaven and Hell<sup>(1)</sup>, where Osiris is represented sitting in judgment, a pig is beaten by an ape, and possibly represents here the eater of the dead. In the papyrus of Nekht also, the deceased is seen grasping a chain by which a serpent is fettered, and spearing a pig. The Egyptians at one time, certainly abhorred the pig, as a foul and loathsome animal, for if a man<sup>(2)</sup> so much as touched a pig in passing, he stepped in the river with all his clothes on to wash of the taint; and to drink pig's milk was believed to cause leprosy and other skin diseases to the drinker<sup>(3)</sup>. Yet, once a year, the Egyptians sacrificed pigs to the moon and to Osiris, and not only sacrificed them but ate of their flesh, though on any other day of the year they would neither sacrifice them nor taste of their flesh. Those who were too poor to offer a pig on that day, baked cakes of dough and offered them instead. «When the sacrificer has slain the victim, says Herodotus, he puts together the tip of the tail with the spleen and the caul, and then covers them with the fat found about the belly of the animal, and next consumes them with fire; the rest of the flesh they eat during the full moon in which they offer the sacrifices, but on no other day would any one taste it.»

In the kjokkenmøddings of Toukh<sup>(4)</sup> many fragments of long bones and jaws of swine were discovered and débris of *Sus Scrofa* have also been identified from tombs in the Fayoum.

The popular idea that the old Egyptians abstained from pork because of its supposed unwholesomeness has no certain foundation. The priests, it is said, «hated» pork because its meat left too much residue, but, as they attributed the same drawback to mutton, it is clear that the explanation was an after-thought, and that the reason for their avoiding this meat is unknown.

The Greeks living in Egypt partook of pork freely without suffering any evil consequences. We have<sup>(5)</sup> a letter from a man, Alpino, to his friend Eronos asking him to send him two nice little pigs, and begs him to see that they are really good ones and not «quite useless like the last one». King

<sup>(1)</sup> BREASTED, *Ancient Records*, III, no. 160.

<sup>(2)</sup> HERODOTUS, II, 47.

<sup>(3)</sup> PLUTARQUE, *Œuvres morales*, p. 226.

<sup>(4)</sup> LORTET et GAILLARD, *La Faune momifiée*,

3<sup>e</sup> série, p. 252.

<sup>(5)</sup> COMPARETTI, *Lettere d'Heronione*(?), no. 166.

Ptolemy<sup>(1)</sup> must needs relate in his commentaries that when he was at Assus, the Assians brought him a pig, two cubits and a half in height, «and the whole of his body corresponding in length to that height, and of a colour as white as snow : and they said that king Eumenes had been very diligent in bringing all these animals from them, and that he had given as much as 4000 drachmæ as price for one». Doubtless, the Greek and Roman dishes of pork, including stuffed sows' teats, dear to the Roman poets, were the fashion in Alexandria.

The meat supply of Egypt was dependant partly on domesticated animals and partly on the slaughter of wild, or semi-domesticated herbivora, such as oryx, antelopes, gazelles, etc., which were either killed or caught in the desert. Many illustrations show the king or the local magnate enjoying the pleasures of the chase, and, doubtless, the fellaheen who cultivated the land bordering on the desert seized every opportunity to destroy the wild herbivora which browsing on the crops, inflicted irreparable damage in a night. How great that damage can be it is difficult for any one who has not seen it to conceive, and the villagers of Faras in Nubia for instance, implored me, during a short stay, to slaughter the gazelles, which, in spite of all kinds of devices, devastated their miserable barley fields. The killing of oryx, antelopes, gazelles, etc., was therefore not done for sport only, but was a necessary precaution on the part of the agriculturist, who, at the same time, provided himself with excellent meat.

#### HYENA.

The hyena occupies a peculiar position in so far that it was the only carnivorous animal that was eaten in ancient Egypt. It was fattened for the table and such fattened hyenas are occasionally represented<sup>(2)</sup>.

The skin and various parts of that animal probably had marvellous magical and curative powers, and in Pliny's time 79 remedies were «derived»<sup>(3)</sup> from

<sup>(1)</sup> ATHENEUS, IX, 17.

<sup>(2)</sup> FL. PETRIE, *Desheshch*, IX; N. DE G. DAVIES,

*Cheikh Saïd*, pl. XIX, XX.

<sup>(3)</sup> PLINY, XXVIII, 27.

the hyena. The modern Sinai Bedouins hunt the animal for the sake of its fat, which is popularly supposed to be the best fat for ointments.

In the Old Kingdom hyenas were amongst the domestic animals and were probably used for food<sup>(1)</sup>. In the tomb of Sekhemka (pl. VII), among the animals which are being taken to the sacrifice is a hyena, carried in the arms of a Ka-priest. In the tomb of Peheniuka<sup>(2)</sup> at Saqqara there is another being carried among the deer and cattle which are offered to the deceased. In several tombs of Gizeh, at Sheikh Saïd, at Deir el Gebrawi, and at Deshesheh, hyenas are seen being driven or led by men, generally herdsmen, and very seldom by women, and, clearly therefore, they were not uncommonly offered to the dead. They appear to have been domesticated like antelopes, oryx, etc., for they were led<sup>(3)</sup> like dogs, tethered to the ground as other farm animals<sup>(4)</sup>, or they were kept in packs<sup>(5)</sup>, or fattened and stuffed like cattle, geese, etc.<sup>(6)</sup>.

It is not clear where the supply of hyenas came from, for neither their capture nor their slaughter is represented. It seems probable, considering the number of females which appear, that they were bred in confinement, like other farm-yard animals.

On the ivory handle of a prehistoric flint knife in the Pitt-Rivers collection<sup>(7)</sup> hyenas are carved. It was a sacrificial knife, and the animals figured on the handle are possibly sacrificial animals.

#### HARE.

Bones of *Lepus* (sp. undetermined) were buried in the prehistoric kjökkenmøddings at Toukh, and the animal sometimes figures among the presents of the peasantry to the master of the estate<sup>(8)</sup>. It is not at all certain that hares or rabbits were domesticated, and the bones which were found were doubtless those of animals killed in the desert wadys near the cultivated land, which

<sup>(1)</sup> MARGARET MURRAY, *Saqqara Mastabas*, Part I, p. 29.

<sup>(2)</sup> LEPSIUS, *Denkmäler*, II, 43.

<sup>(3)</sup> QUIBELL, *Ramesseum*, pl. XXXIII.

<sup>(4)</sup> LEPSIUS, *Denkm.*, II, 50 b.

<sup>(5)</sup> LEPSIUS, *Denkm.*, II, 96.

<sup>(6)</sup> Edwards collection, see MARGARET MURRAY.

<sup>(7)</sup> PETRIE and QUIBELL, *Negadah and Ballas*, pl. LXXVII.

<sup>(8)</sup> NAVILLE, *Ahnas el Medineh*, p. 24.

have a tender, white, somewhat aromatic flesh. I have never shot one more than a few months old, possibly because they get killed off early by foxes or jackals, or, perhaps, because with advancing age they become more wily.

#### MILK.

Among the divine offerings, milk played some part. The prayer of Osiris in the tomb of Harmheb<sup>(1)</sup> says: "May they grant bread, beer, oxen, fowl, libations of water, wine and milk for the hereditary prince". The gifts of cattle of Thutmose III<sup>(2)</sup> comprised four loan cow "in order to draw the milk thereof into jars of electrum each day, and to cause it to be offered to my father, Amon", and the coronation inscription of the same king<sup>(3)</sup> mentions that Amon commanded milk "each day for these vessels of silver, gold and bronze, which my majesty made for him anew". Instructions were given to priests to "Fill ye me the altar with milk"<sup>(4)</sup>.

Ramses III<sup>(5)</sup> offered milk for the new feasts, to the Nile god and to all gods, and it is mentioned as an oblation to Ra<sup>(6)</sup> at Heliopolis, in the stela of Tanutamon in the XXV<sup>th</sup> Dynasty<sup>(7)</sup>, and as a temple offering in the XXVI<sup>th</sup> Dynasty. In more modern Egypt, at Oxyrhynchus for instance, milk was still offered as a sacrifice<sup>(8)</sup>, and was recommended against phthisis<sup>(9)</sup>. The milk of asses and goats was drunk also, and in the tomb of Beha at El Kab of the XVIII<sup>th</sup> Dynasty we read: "They (60 children) consumed 120 ephahs of durra, the milk of 3 cows, 52 goats and 9 she-asses, a him of balsam, and 2 jars of oil"<sup>(10)</sup>.

As at the present time in the East, it was probably always warmed before being served up<sup>(11)</sup>. The Bedouin chief who entertained Sinuhe<sup>(12)</sup> at once

<sup>(1)</sup> BREASTED, *Ancient Records*, III, no. 17, XIX<sup>th</sup> Dynasty.

<sup>(2)</sup> IDEM, *op. cit.*, II, no. 556.

<sup>(3)</sup> IDEM, *op. cit.*, II, no. 162.

<sup>(4)</sup> IDEM, *op. cit.*, II, no. 571.

<sup>(5)</sup> *Papyrus Harris* (BREASTED, *Ancient Records*, IV, nos. 295, 301, 350, 395).

<sup>(6)</sup> *Stela of Piankhi*, XXIII<sup>rd</sup> Dynasty (BREASTED, *Mémoires de l'Institut d'Égypte*, t. I.

ASTED, *Ancient Records*, IV, no. 870).

<sup>(7)</sup> BREASTED, *Ancient Records*, IV, no. 925.

<sup>(8)</sup> HUNT, *Oxyrh. Pap.*, Part IX, p. 256.

<sup>(9)</sup> PLINY, B. XXIV, chapter 19.

<sup>(10)</sup> BRUGSCH, *Egypt under the Pharaohs*, p. 121.

<sup>(11)</sup> BREASTED, *Ancient Rec.*, IV, no. 958, M.

<sup>(12)</sup> MASPERO, *Contes populaires*, p. 63.

heated up the milk for the stranger within his tent, just as his successor 5000 years afterwards did for Doughty and for the writer.

The milking of cows has been represented many times, at Deir el Bahari<sup>(1)</sup> and Desheshah for instance, the milk being received in appropriate vessels. The celebrated Hathor's cow of the same temple has the king crouching under her and sucking milk from her teats.

At Alexandria many dairies were opened, and, as far as can be made out, the milk was as quite dear as it is now<sup>(2)</sup>.

## BIRDS.

### GOOSE.

The third source of meat supply consisted in the numerous domesticated or semi-domesticated birds and in the wild birds caught in the fowler's net, and the one most often eaten was the goose, wild or domesticated.

Several well preserved ancient specimens of this bird have been discovered.

Included<sup>(3)</sup> in the funerary offerings of Amenhotep II at Thebes<sup>(4)</sup> are the fragments from all parts of the body, of a goose, with the exception of the head and extremities which were always removed before reasting. A specimen from the tomb of Biban el Molouk at Thebes<sup>(5)</sup> and another in the same case<sup>(6)</sup> probably belonged to the same species also, large numbers of which winter in Egypt.

A goose from the tomb of Maher-Pra at Thebes<sup>(7)</sup> is so well preserved that the insertions of the feathers are still noticeable. The viscera had been taken out, and the gizzard, heart and liver were bandaged, tied together by string, and replaced in the interior. Clearly, these were considered as titbits by the Egyptian gourmet.

<sup>(1)</sup> NAVILLE, *Temple of Deir el Bahari*, I, p. 63, pl. XXVIII and XX.

<sup>(2)</sup> SCHUBERT, p. 513.

<sup>(3)</sup> CAIRO MUSEUM.

<sup>(4)</sup> GAILLARD et DARESSY, *La Faune momifiée*,

<sup>(5)</sup> IDEM, *ibid.*, no. 29704.

<sup>(6)</sup> IDEM, *ibid.*, no. 29705.

<sup>(7)</sup> XVIII<sup>th</sup> Dynasty. LORTET, *La Faune momifiée*,

2<sup>e</sup> série, p. 97.

Two geese (sp. *Anser cinereus* Meyer and *Anser albifrons* Scop.) prepared as above were also found in a tomb of the Valley of the queens<sup>(1)</sup>.

In the foundation deposits of the tombs of Thutmose III at Gournah, five mummies of the Egyptian goose (*Chenalopex Aegyptiaca* L.) were discovered<sup>(2)</sup>, but it is not possible to say to what date they belong.

The well known picture at Meydum represents 3 kinds of geese, namely : *Branta ruficollis*, *Anser cinereus*, and *Anser albifrons*, all of which sometimes winter in Egypt.

Three species of geese *Re*, *Tharp*, and *Set* are represented<sup>(3)</sup> being stuffed with pellets contained in a basket. Newberry notes that in the Rhind Mathematical Papyrus, the *Re* and *Tharp* are all allowed the same amount of corn for fattening, namely : 1/6 of a heqt (gallon), about a pint and a half a day; while the *Set* only receives 1/20, less than one-third of the others and a little less than half a pint<sup>(4)</sup>. Elsewhere<sup>(5)</sup>, 121,200 *Re* geese, 121,200 *Tharp* geese, 111,000 hen or *smen* geese (Egyptian geese) are mentioned as the property of one man. Other kinds of geese are *mnyt*-geese<sup>(6)</sup> in the XII<sup>th</sup> Dynasty, *r-pw*-geese<sup>(7)</sup> and white geese<sup>(8)</sup> (*tharp* geese) (Papyrus Harris).

Geese are often mentioned among the offerings to the gods and temples. The inscription of Senmut for instance<sup>(9)</sup> asks : « May she (Mut) give the mortuary offering of bread, beer, oxen, geese, etc. », or<sup>(10)</sup> : « A royal offering which Amon-Ra and the king of Upper and Lower Egypt, Makere, give : May they grant the mortuary oblation of bread, beer, oxen, geese, etc. ». The goose is repeatedly mentioned as a divine offering, *e. g.* on the Karnak Ptah-temple<sup>(11)</sup>, on the Elephantine Stela<sup>(12)</sup>, in the book of opening the mouth<sup>(13)</sup>, etc.

« Live geese of the exactions » to the number of 744 are mentioned in the

<sup>(1)</sup> LORTET et GAILLARD, *La Faune momifiée*, 3<sup>e</sup> série, p. 145.

<sup>(2)</sup> *Ibid.*, p. 154.

<sup>(3)</sup> NEWBERRY, *El Bersheh*, p. 31.

<sup>(4)</sup> See *Proceedings S. B. A.*, XVI. Number for June.

<sup>(5)</sup> *Mastaba of Ptahhetep*, Part I, p. 11.

<sup>(6)</sup> XII<sup>th</sup> Dynasty, Sesostri III (BREASTED, *Ancient Records*, I, no. 729).

<sup>(7)</sup> BREASTED, *Ancient Records*, nos. 235, 242, 345.

<sup>(8)</sup> BREASTED, *op. cit.*, IV, no. 43.

<sup>(9)</sup> XVIII<sup>th</sup> Dynasty (BREASTED, *op. cit.*, II, no. 365).

<sup>(10)</sup> BREASTED, *op. cit.*, II, no. 365.

<sup>(11)</sup> IDEM, *op. cit.*, II, nos. 616, 621, 622.

<sup>(12)</sup> IDEM, *op. cit.*, II, no. 798.

<sup>(13)</sup> BUDGE, p. 103.

Payrus Harris as part of Amon's income <sup>(1)</sup>. Then <sup>(2)</sup> 20 geese occur among the gifts of the king to Amon, 540 1/2 (*sic*) as part of Ra's income <sup>(3)</sup>, 1150 as offerings for the new feasts <sup>(4)</sup>, 192 as offerings to the Nile god <sup>(5)</sup>, etc., etc. «Live geese of the exactions» to the number of 1920 are mentioned in the same papyrus as the total of the god's income <sup>(6)</sup>, and a total of 353,918, «fat geese, live geese, and various water-fowl» were offered by the king to the gods.

The rations of soldiers on the march consisted partly of goose flesh, and the bird was the favourite food of priests <sup>(7)</sup> and kings. Under the Ptolemies, a special class of men, the *χηρόσχοι* <sup>(8)</sup>, reared and fattened geese for the market, and paid a special tax against which they grumbled feelingly <sup>(9)</sup>. Geese were sometimes kept as pets <sup>(10)</sup>.

The *Anser Aegypticus*, *Chelemopez* or Vulpenser was sacred to the god Seb, who, though one of the 12 great gods of Egypt, appears to be little known <sup>(11)</sup>. The bird <sup>(12)</sup> often appears in some relation to Amon-Ra, as in a Theban stela of the XVIII<sup>th</sup> Dynasty <sup>(13)</sup> which shows a goose called Amon-Ra, and in another stela <sup>(14)</sup> which mentions two geese «Amon-Ra, the beautiful goose, and the beautiful goose of Amon-Ra», that is, the god incorporated in the goose and the animal sacred to the god. A third stela <sup>(15)</sup> mentions with Amon-Ra, «The beautiful goose, the great goose of love», and a fourth puts, near the god, the goose as the picture of Ament his female appearance. The liver was presented to Isis and Osiris in the Roman cult of Isis <sup>(16)</sup>.

Veal and geese were the food of kings <sup>(17)</sup>, so much so that the Egyptians <sup>(18)</sup>

<sup>(1)</sup> BREASTED, *Ancient Records*, IV, no. 229.  
<sup>(2)</sup> IDEM, *op. cit.*, IV, no. 239.  
<sup>(3)</sup> IDEM, *op. cit.*, IV, no. 283.  
<sup>(4)</sup> IDEM, *op. cit.*, IV, no. 293.  
<sup>(5)</sup> IDEM, *op. cit.*, IV, no. 298.  
<sup>(6)</sup> IDEM, *op. cit.*, IV, no. 387.  
<sup>(7)</sup> HERODOTUS, II, p. 37.  
<sup>(8)</sup> BOUCHÉ-LECLERCQ, *Histoire*, III, p. 247, note 2.  
<sup>(9)</sup> PAP. Petrie, II, no. 10.  
<sup>(10)</sup> ERMAN, *Life in ancient Egypt*, p. 494.  
<sup>(11)</sup> Wilkinson gives as his authority Herodotus, II, 72, but in my edition it is simply stated

that the Vulpenser was considered sacred.  
<sup>(12)</sup> WIEDEMANN, *Herodot.*, p. 311.  
<sup>(13)</sup> Wiedemann collection.  
<sup>(14)</sup> LANZONE, *Dizionario di Mitologia egizia*, pl. XXII.  
<sup>(15)</sup> *Rev. arch.*, I, série VII, p. 2.  
<sup>(16)</sup> Wiedemann quotes *Ovid. Fast.*, I, p. 453.  
 In my edition, the passage runs as follows : «Nor does the defence of the capitol avail to prevent the goose from affording its liver for thy dishes, O dainty daughter of Machus».  
<sup>(17)</sup> DIODORUS, I, 70.  
<sup>(18)</sup> ATHENEUS, IX, 32.

endeavoured to propitiate Agesilaus, the Lacedæmonian, by sending him some fattened calves and geese.

## DUCK.

Some mummified remains and bones of the ducks eaten in Egypt have been discovered <sup>(1)</sup>.

*Dafila acuta* (Linni), easily recognisable by its forked tail, is represented in many Egyptian monuments, as, for instance, in the tomb of Tehuti Hotep at El Bersheh <sup>(2)</sup>. Bones of *Querquedula Crecca* have been found mixed with monkey's bones in the Valley of the Queens <sup>(3)</sup>.

In the tomb of Paheri <sup>(4)</sup> a man is seen putting ducks into a pot, possibly for pickling, and fragments of a similar scene are represented at Qurneh <sup>(5)</sup>. 120,000 pin-tailed ducks are mentioned at Saqqarah <sup>(6)</sup>.

A passage of the Papyrus of Nebsemi <sup>(7)</sup> runs as follows : «Grant that I may attain to the offerings, that is to say, to the cakes, and ale, and oxen, and ducks, etc.» And elsewhere : «May the god Osiris, and all the company of the gods who dwell in Sekhet-Hetep grant offerings of cakes, and ale, and oxen, and ducks, etc.» A pin-tailed duck is included among the offerings of Dendereh <sup>(8)</sup>. The ducks were cleaned before cooking, which process was usually carried out by skewering the duck on a piece of stick and roasting it over the fire. This process has doubtless been carried out with all birds from time immemorial; modern cooks get rid of the minute down and feathers of all birds, from turkeys down to befigues, by holding them over a spirit flame.

The *ser* teal is represented in the list of offerings of the V<sup>th</sup> Dynasty <sup>(9)</sup>.

<sup>(1)</sup> GAILLARD et DARESSY, *La Faune momifiée* (nos. 29704, 29705 and 29706 in the Cairo Museum probably refer to ducks).  
<sup>(2)</sup> NEWBERRY, *El Bersheh*, I, pl. XX, XXII.  
<sup>(3)</sup> LORTET, *La Faune momifiée*, pp. 3, 4 and 5, liv. p. 132.  
<sup>(4)</sup> *Egypt Exploration Fund XX<sup>th</sup> Memoir*, pl. IV.

<sup>(5)</sup> Pl. XXXVI, p. 11.  
<sup>(6)</sup> *Mastabah de Ptahhetep*, I, 11.  
<sup>(7)</sup> BUDGE, *Book of the Dead*, p. 11, 320 p.  
<sup>(8)</sup> FL. PETRIE, *Dendereh*, p. 43.  
<sup>(9)</sup> MARG. MURRAY, *Saqqara Mastabas*, Part I, p. 39.

### PIGEON.

The pigeon is not often represented on Egyptian monuments, and one might presume therefore that these birds were not popular before Ptolemaic times, when the Greeks bred them in large numbers, the birds nesting in pots put out for that purpose as is the custom in modern Egypt.

As a matter of fact, however, these birds were numerous in ancient Egypt, at the time of Thutmose III for instance<sup>(1)</sup>. The «scribe of the islands which are in the south» brought in 30 pigeons as tribute (*n b-t m't*); 40 birds were contributed by the scribe of the district of Hermonthis, 500 by the mayor of Atuet-Amenemhet<sup>(2)</sup> and some also by the Recorder of Diospolis Parva, 111,200 pigeons are mentioned as part of the fortune of an Egyptian noble<sup>(3)</sup>. Ramses III<sup>(4)</sup> gave 25,020 pigeons (*mnyl*) as offerings for the new feasts and 68 pigeons on another occasion<sup>(5)</sup>.

Pigeons' eggs were occasionally placed as funerary offerings in small recesses, as for instance in the Necropolis of Heracleopolis<sup>(6)</sup>, and in the Necropolis of Sedment of the XVIII<sup>th</sup> and XIX<sup>th</sup> Dynasties. Eggs of the size of pigeon's eggs are often found with other funereal objects<sup>(7)</sup>.

### QUAIL.

Every year, from the first week in September and sometimes earlier, large numbers of quails migrate from the North into Egypt, and as they are utterly exhausted by the journey, many are easily caught in nets along the sea-shore. These having just gorged on the excellent grapes of Greek Islands, are in prime condition for the table.

The same was probably done in ancient Egypt, and the Egyptians also

<sup>(1)</sup> The Tomb of Rekhmira (BREASTED, *Ancient Records*, II, no. 726). no. 242).

<sup>(2)</sup> BREASTED, *op. cit.*, II, no. 735.

<sup>(3)</sup> Ptahhotep (BREASTED, *op. cit.*, I, no. 11).

<sup>(4)</sup> *Pap. Harris* (BREASTED, *op. cit.*, IV, p. 14).

<sup>(5)</sup> BREASTED, *Ancient Records*, IV, no. 298.

<sup>(6)</sup> NAVILLE, *Ahnas el Medineh*, p. 12.

<sup>(7)</sup> NAVILLE, *Temple of Deir el Bahari*, III,

p. 14.

salted quails, ducks and smaller birds and ate them raw<sup>(1)</sup>. A small kind of quail<sup>(2)</sup> called *χεννιον*, was very popular in Egypt.

I can not fancy the Egyptian life,  
Plucking the chennion, which they salt and eat.

### CRANE.

Though no remains of cranes have been found in ancient Egyptian kjökkenmöddings, these birds were certainly eaten by ancient Egyptians.

A lime-stone slab in the Cairo Museum<sup>(3)</sup> shows three different kinds of cranes, among which the Zaït (*Grus cinerea*) and the Ouzaït (*Grus Virgo*). The execution is very skilful and the birds have been observed and rendered with admirable accuracy. At Deir el Bahari, the peasants are shown bringing in cranes as presents, and at El Bersheh (see Geese) the artificial fattening of these birds is represented.

### PHEASANT.

Ptolemy<sup>(4)</sup> mentioned in his *Memorabilia* that the Alexandrians had pheasants (*τεταροι*) which they sent for from Media, and also put the eggs under broody hens, and thus raised a sufficient number for the table «for they call it very excellent eating». It must have been a rare bird, however, for caged pheasants were carried together with parrots, peacocks, guinea-fowl and an immense number of Æthiopian birds as curiosities in certain processions during the time of the Ptolemies.

### BUSTARD.

The bustard, imported from the adjacent parts of Libya<sup>(5)</sup>, was eaten in Alexandria.

<sup>(1)</sup> HERODOTUS, II, 77.

<sup>(2)</sup> ATHENEUS, IX, 48.

<sup>(3)</sup> MASPERO, *Guide to the Cairo Museum*,

4<sup>th</sup> edition, p. 44.

<sup>(4)</sup> ATHENEUS, XIV, 69.

<sup>(5)</sup> ATHENEUS, *Deipnosophists*, IX, 44.

DOVE.

Doves are hardly ever mentioned except in figurative language; the Papyrus Harris<sup>(1)</sup>, however, mentions 6510 doves given by Ramses III as offerings for the new feasts.

FISH.

The Nile and the many large and small irrigation canals were inexhaustible reservoirs of fresh-water fish. « Its canals<sup>(2)</sup> are full of fish. The red fish is in the lotus-canal, the Borian fish in the ponds, besides carp and pike in the canal of Pa-Harotha, fat fish and *Khipti-pennu* fish are in the pools of inundation, the Haaraz fish in the full mouth of the Nile near the full mouth of the conqueror<sup>(3)</sup>. »

To this day, a fish drive in the canals, even when these are a few feet wide only, brings together all the boys of a village. When, owing to the fall of the river, the canal is gradually emptying itself into the river, a net spread over a small barrage of palm-leaves constructed across the canal soon contains many fish.

The Nile banks, far from being clean and free of plants as they are now, were lined in many places with very tall vegetation, resembling that of the fresh-water canal now connecting Ismailia with Suez. Near the banks there runs a very sluggish stream of yellow water, two-thirds of which are invaded by reeds. Water-fowl here abound, which, trusting to the protection of the thick vegetation, do not rise even when the sportsman is almost touching them. The innumerable fish are invisible in the muddy water, and the ancient Egyptian sport of spearing fish therefore was probably carried out in shallow pools into which fish had been driven, and which may then have been so thickly crowded together that the fish could be caught by hand.

During the fall of the Nile also, many fish collect in the pools, creeks and small streams left behind by the vanishing river.

<sup>(1)</sup> BREASTED, *Ancient Records*, IV, no. 242.

<sup>(2)</sup> *Papyrus Anastasi III.*

<sup>(3)</sup> BRUGSCH, *Egypt under the Pharaohs*, pp. 299-300.

The Egyptians probably never went in much for deep-sea fishing. Even now, with excellent railway facilities for the forwarding of the catch, Italians and Greeks are almost the only deep-sea fishermen on the coasts.

On the narrow strip of land between the dark blue sea and the great muddy lakes, vegetable life is almost absent, and animal life also except for the numerous birds and a few fishermen. Here and there a jackal, a fox, or a dog may be seen skirting the shore looking for dead fish<sup>(1)</sup>.

In the morning, before the sun is high, one may see a pariah dog standing absolutely still in the water with head close to the surface. Then suddenly the head disappears under water and emerges again with a fish struggling in the dog's mouth. This observation had been made by the Egyptians, and in the Cairo Museum there is a perfume spoon representing a dog running off with a fish in its mouth, the body of the fish being the bowl of the spoon.

A few snakes, rats, here and there a scorpion, and certain insects, including at certain times innumerable midges, are the only representatives of animal life on this barren strip of shore.

The whole coast is indeed desolate. The wind from the north or north-west blowing day after day, almost without intermission, allows no vegetation near the sea, in spite of the presence of sweet underground-water. The low sand dunes are covered with a few tufts of scant vegetation, and very far inland, on the other side of the big lagoon, occasional palm-trees may be visible. In some places only a few water-melons or tomatoes may be induced to grow in deep trenches artificially made in the sand.

It is from these great lagoons and from the mouths of the river that the ancients probably got their sea-fish, but fresh sea-water fish was eaten near the coast only, for when a journey from Alexandria to Memphis took 4 days at least, and artificial ice had not been invented, sea-water fish could not be sent more than a few miles inland. Remains of fresh-water fish, *Chromis niloticus*, *Clarias anguillaris*, *Synodontis macrodon* and *Synodontis schall* have been discovered in prehistoric kjökkenmøddings, and abundant remains of fish have been isolated from the alimentary tracts of predynastic Egyptians<sup>(2)</sup>. T

<sup>(1)</sup> J. DE MORGAN, *Recherches sur les origines de l'Égypte*, p. 99.

*Mémoires de l'Institut d'Égypte*, t. I.

<sup>(2)</sup> NEOLITZKY, in ELLIOT SMIT *Egyptians*.

fish bones and scales which were frequently swallowed, led to the identification of the species used for food with *Tilapia nilotica*. Large numbers of ivory fish figurines from the tomb of Mena at Negadah<sup>(1)</sup>, and a similar figurine from a tomb of the 1<sup>st</sup> Dynasty at Abydos testify to the popularity of fish in these early days<sup>(2)</sup>. Fish-hooks also have been found in the royal tombs of Abydos<sup>(3)</sup>.

The supply was so abundant that Egyptians are said to have lived principally on fish, fresh, dried, or salted<sup>(4)</sup>, and an ancient Egyptian hoped to see the day when corn would be as cheap as fish. The army on the march, and great persons, king's messengers and standard-bearers on a mission, had rations of fish served out to them in the XIX<sup>th</sup> Dynasty<sup>(5)</sup>, and an Egyptian stranded and starving in Syria, was provided with 30 measures of fish by the king of Egypt.

Cured fish, packed in baskets<sup>(6)</sup>, was exported from Egypt to Palestine. Certain places were celebrated for some particular fish. Thus, the tania was found in the greatest numbers and in the finest condition off Canopus, a place also celebrated for the tellinæ «digestible, light, and nutritious, and most common where the Nile begins to rise up to the higher ground»<sup>(7)</sup>. The Nile coracinus was celebrated everywhere, whereas connoisseurs were far from unanimous regarding the fish from other places. The Mendesian fish, for instance, «was considered by some to be most agreeable, whereas others were of opinion that a mad dog would scarcely touch them».

Pickling factories, *τάρικαι*, were established at the Pelusiac, Canopic and Mendesian mouths of the Nile and at Senos, but pickled fish were prepared in private households also. The transition of the sublime to the ridiculous is seen in a letter from one brother to the other warning him against the designs of certain people on a girl called Thais, which ends without any transition : «If you are making any pickled fish for yourself send me a jar,

<sup>(1)</sup> J. DE MORGAN, *Recherches sur les origines de l'Égypte*, figs. 702, 707.

<sup>(2)</sup> FL. PETRIE, *Royal Tombs of the Earliest Dynasties*, Part II, p. 21.

<sup>(3)</sup> FL. PETRIE, *Royal Tombs of the Earliest Dynasties*, Part II, p. 21; also *Abydos*, Part I,

p. 24.

<sup>(4)</sup> HERODOTUS, II, 77; DIODORUS, I, 36.

<sup>(5)</sup> *Silsileh Quarry Stele* (BREASTED, *Ancient Records*, III, no. 208).

<sup>(6)</sup> *Bibl. Encycl.*, Art. *Fish*.

<sup>(7)</sup> ATHENEUS, *Deipnosophists*, III, 40.

too»<sup>(1)</sup>. The foreigners born in Egypt, even after a long absence, remembered the names of the chief fish found in the Nile. Athenæus<sup>(2)</sup>, who was born in Egypt, had not forgotten the ray, sweetest of them all, the sea-pig, snub-nose, *phagrus*, *oxyrhynchus*, *alabes*, *silurus*, *synodontis*, *eleotris*, *ecl*, *thrissa*, *abramis*, blind-fish, scaly-fish, bellows-fish, and *cestreus*, besides many others. Strabo<sup>(3)</sup> enumerates the *oxyrhynchus*, *lepidotus* (*Cyprinus bynni*), *latus* (*Perca nilotica*), *alabes* (*Silurus anguillaris*), *coracinus*, *choerus*, *phagrorius* or *phagrus*, *silurus*, *citharus*, *thrissa* (shad), *cestreus* (mullet), *lychnus*, *physa* and *bous*.

The most accurate information regarding the fish eaten in ancient Egypt is based partly on the representations of fish on Egyptian monuments<sup>(4)</sup>, and partly on the examination of the mummified fish of Egyptian cemeteries.

*Lates nilotica* (Arabic name : *Keshr*) mentioned by Strabo, Pliny and Athenæus, is represented in the tomb of Mera, at Meidum<sup>(5)</sup>, and at Deir el Gebrawi. Numerous specimens have been buried in the tombs of Gourob<sup>(6)</sup>. Sonnini<sup>(7)</sup> recognised that it was identical with the *Latos* of the Greeks<sup>(8)</sup>. It was worshipped at Esneh, and hence the name of Latopolis given to that city by the Greeks.

*Tetrodon fahaka* is to be seen on the walls of the tomb of Mera, in the fishing scene of the Gizeh pyramids<sup>(9)</sup>, in the tomb of Ptah-hotep<sup>(10)</sup>, and at Deir el Gebrawi<sup>(11)</sup>.

The *salpe*<sup>(12)</sup> was considered hard, with an unpleasant taste, with the exception of those caught in Alexandria, which, especially during the autumn, were «white, full of moisture, and free from any unpleasant smell».

Dressed shene fish is mentioned in Papyrus Harris<sup>(13)</sup>. The *Chromis niloticus* or *Tilapia nilotica* is represented on the tomb of Mera, at Deir el Gebrawi, at

<sup>(1)</sup> HUNT, *Oxyr. Pap.*, Part VI, p. 293.

<sup>(2)</sup> ATHENEUS, VII, 88.

<sup>(3)</sup> XVII, II, 4.

<sup>(4)</sup> See mastabas of Mera, Deir el Gebrawi, Sheikh Saïd, etc.

<sup>(5)</sup> FLINDERS PETRIE, *Meidum*, pl. XII.

<sup>(6)</sup> LOAT, *Gourob*.

<sup>(7)</sup> *Voyage dans la Haute et la Basse-Égypte*, Paris, an VII, vol. II, p. 292.

<sup>(8)</sup> See GAILLARD et DARESSY, *La Faune momifiée*, p. 70.

<sup>(9)</sup> LEPSIUS, *Denkmäler*, Abth. II, pl. IX and XLVI.

<sup>(10)</sup> QUIBELL, *Ramesseum*, pl. XXXII, 1898.

<sup>(11)</sup> N. DE G. DAVIES, *Deir el Gebrawi*, I, pl. IV, V, and II, pl. IV, V, XV, 1902.

<sup>(12)</sup> ATHENEUS, VIII, 52.

<sup>(13)</sup> BREASTED, *Ancient Records*, IV, no. 243.

the Ramesseum, in the Mastaba of Ptah-Hotep, etc. The oldest figure of this fish is perhaps that on a slate plate from a prehistoric grave at Hierakonpolis<sup>(1)</sup>, but other<sup>(2)</sup> bronze and ivory palettes and figures probably represent this fish also<sup>(3)</sup>.

The *coracinus* was one of the most esteemed of Nile fishes<sup>(4)</sup>. «*Coracinus*, glory of the Egyptian markets, where you are eagerly sought, no fish is more highly esteemed than you among the gourmands of Alexandria<sup>(5)</sup>.» Two species of this fish inhabited the Nile; one was black, inferior when roasted to the larger kind, but in any case it was roasted, «good for the stomach and good for the bowels<sup>(6)</sup>». The other was the *heminerus* of the Alexandrians, «fleshy, nutritious, easily digestible, and not apt to disagree with any one<sup>(7)</sup>, was rather fat and had a juice far from disagreeable». The Alexandrians gave the name of *Plataus* to the whole genus. The only discordant note is given by Athenæus<sup>(8)</sup>: «Whoever eats a sea born coracinus when he may have a grayling, is a fool», he quoted.

*Mugil capito*, the grey mullet, adorns the walls of the tombs of Mera, of Ti at Saqqarah, of Ptah-Hotep<sup>(9)</sup>, and at Deir el Gebrawi. Strangely enough, it is not mentioned by Strabo. A mullet roasted on the glowing embers was considered as a most delicate dish, «and far more agreeable than the vegetables and fish which you make such a fuss about<sup>(10)</sup>».

Mummies of *Barbus bynni* Forskål, the *lepidotus* of Strabo and Athenæus, sacred in some parts of Egypt, are not at all rare. Two bronze representations of this fish are known<sup>(11)</sup>.

*Malapterurus electricus*, the electric cat-fish of tropical Africa, is also represented in the tombs of Mera, in the tomb of Ti at Saqqarah<sup>(12)</sup> and also

<sup>(1)</sup> GREEN and QUIBELL, *Hierakonpolis*, 1900, pl. LXVI.

<sup>(2)</sup> IDEN, *ibid.*, pl. XXI.

<sup>(3)</sup> J. DE MORGAN, *Recherches sur les origines de l'Égypte*, p. 193; LEPSIUS, *Denkmäler*, Abth. II, pl. IX and LVI; QUIBELL, *The Ramesseum*, pl. XXXII, 1898; N. DE G. DAVIES, *The Mastaba of Ptah-Hotep*, pl. XXV, 1900; IDEN, *Deir el Gebrawi*, I, pl. III and IV; II, pl. IV, V, 1902.

<sup>(4)</sup> PLINY, IX, 104.

<sup>(5)</sup> MARTIAL, *Epig.*, B. XIII, Ep. LXXXV, p. 599.

<sup>(6)</sup> ATHENÆUS, II, 560.

<sup>(7)</sup> ATHENÆUS, III, 93.

<sup>(8)</sup> ATHENÆUS, *Deipnosophists*, VII, 81.

<sup>(9)</sup> N. DE G. DAVIES, *The Mastaba of Ptah-Hotep*, pl. XXV.

<sup>(10)</sup> ATHENÆUS, III, 88, 96.

<sup>(11)</sup> BOULENGER, *The Fishes of the Nile*.

<sup>(12)</sup> BOULENGER, p. 330.

in a tomb at Gizeh. It has been identified by some in King Naarmer's slate palette, whereas others<sup>(1)</sup> maintain that it is the *Heterobranchus bidorsalis* which is represented there. Its name, *Ra'ad* or *Ra'ash*, meaning thunder, implies that the ancient Egyptians knew its peculiar powers.

*Mormyrus oxyrhynchus* is frequently represented on the monuments. The ancient Oxyrhynchus was the *Mormyrus kannume* or *M. cashive*<sup>(2)</sup>. Representations of this fish in schist or metal are not rare<sup>(3)</sup>.

Only one specimen of *Synodontis schall* Bloch-Schneider has been found in the necropolis of Gourob<sup>(4)</sup>, and it is represented in the tomb of Mera and at Deir el Gebrawi<sup>(5)</sup>. *Synodontis batensoda* Rüppel and *Synodontis membranaceus* have also been identified quite easily owing to their curious habit of swimming on their backs, which has been correctly represented by the Egyptian artist.

Some of the eels in Mera's tomb are either *Clarias anguillaris* or *Clarias lazera*. The latter has been found in the necropolis of Gourob in the Fayoum<sup>(6)</sup>. A fish drawn on the wall of a pyramid tomb as well as in various other tombs, has been identified as *Clarias Hasselsquiti*<sup>(7)</sup>.

An eel on the walls of the tomb of Mera<sup>(8)</sup>, though not correctly drawn, probably represents *Anguillaris vulgaris*.

*Hyperopisus bebe* (Genus *Hyperopisus*) and *Citharinus citharus* are also represented in the tomb of Mera. The latter has also been found on various mural pictures at Giza, Deir el Gebrawi and the tomb of Ti at Saqqarah. The Kahun Papyri mention the Lotus fish, the striking fish, and a Drink-water fish<sup>(9)</sup> which was probably some highly salted and spiced preparation inducing thirst.

Two specimens of the *Bagrus docmac* were found in the animal cemetery at Gurob<sup>(10)</sup>.

Nothing is more difficult to understand than the religious attitude of Egyptians towards fish. On the one hand, there is the fact that fish was eaten

<sup>(1)</sup> LORTET.

<sup>(2)</sup> LORTET et GAILLARD, *La Faune momifiée*, p. 126.

<sup>(3)</sup> CAIRO MUSEUM.

<sup>(4)</sup> LOAT, *Gurob*, p. 5, pl. IX, h.

<sup>(5)</sup> BOULENGER, *The Fishes of the Nile*.

<sup>(6)</sup> LOAT, *Gurob*.

<sup>(7)</sup> HEKEL, BOULENGER.

<sup>(8)</sup> LORTET.

<sup>(9)</sup> GRIFFITH.

<sup>(10)</sup> L. LOAT, *Gurob*, pp. 22-23, pl. X, 1.

by the people all over Egypt, from prehistoric times right down to the present. On the other hand, there is equally sure evidence that the priests abstained from fish altogether, that certain fishes were not eaten in some places and were therefore considered holy, and that in certain localities fish were buried like other sacred animals in special cemeteries. In the animal cemetery of Gurob, for example, a certain part was reserved for fish<sup>(1)</sup> which were buried in carefully dug pits. Many of these pits were occupied by a single fish, and when two or more were buried together a certain arrangement was followed: they were either side by side, or in layers, and sometimes head to tail, in a thick packing of grass ashes, probably halfa, which was also introduced into the mouth and openings of large specimens. Sometimes the fish had been disembowelled and the cavity packed with ashes. The greater part of the fish were *Lates niloticus*, but a few examples of other species were also found, though in no case were different species placed in the same pit. A few specimens were found wrapped in cloth.

The Sudanese king Piankhi would not admit to his presence the Egyptian messengers who had eaten fish. This proves two things; firstly, that in the Sudan fish was considered impure, and secondly, that most Egyptians ate fish. Yet certain Egyptian ceremonies<sup>(2)</sup> could only be performed by men ceremonially pure, and one of the qualifications for that state was that the man must have eaten neither meat nor fish.

The Jewish law prohibited certain fishes. "All that have fins and scales ye may eat; but those that have not fins and scales, ye may eat none: they are unclean unto you<sup>(3)</sup>". In Leviticus<sup>(4)</sup> the forbidden fish are styled an "abomination". Later on, the law was not considered to have been broken if the fish had two scales and one fin<sup>(5)</sup>, and this interpretation brought the whole law into ridicule. Fish as offering to the gods is mentioned in the Papyrus Harris, and also in a Hyksos grave<sup>(6)</sup>. Fragments of fish in black pricked pottery are very common in these graves and the Hyksos vases are mostly in the form of fish.

<sup>(1)</sup> L. LOAT, *Gurob*, p. 3.

<sup>(2)</sup> BUDGE, II, 240.

<sup>(3)</sup> *Deuter.*, XIV, 9.

<sup>(4)</sup> *Leviticus*, XI, 9, 12.

<sup>(5)</sup> *Bibl. Encycl.*

<sup>(6)</sup> FL. PETRIE, *Hyksos and Israelite Cities*, p. 14.

The *Lates niloticus* were revered in Latopolis-Esneh<sup>(1)</sup>, the nome coins of which are stamped with its effigy, while figures of it in wood, stone or bronze are quite common<sup>(2)</sup>. It was dedicated to Hathor, and its images frequently carried the cow's horns and solar disk characteristics of this goddess. The numerous mummies are usually those of small adults, though occasionally numerous young ones are gathered together in one bundle. Thousands are buried quite superficially in the sandy ground to the east of Esneh, as also in the human necropolis of the Roman and Ptolemaic periods.

The *Oxyrhinchus* was sacred at the town of that name, the nome sign of which it was, and so holy was it in this nome that the inhabitants ate no fish taken with a hook, lest the hook should have touched an oxyrhinchus. The cult extended to Esneh, where it was sacred to Hathor and therefore was represented sometimes carrying the disk characteristic of the goddess. It seems never to have been eaten, and one explanation of this custom was provided by the story that when Osiris was cut to pieces which were thrown into the river, the penis, having been eaten by the lepidotus, the phagrus and the oxyrhinchus, was the only part of the god that Isis did not recover.

The feuds<sup>(3)</sup> between the Oxyrhinchus and the neighbouring Cynopolites are well known. The latter having eaten an Oxyrhinchus, the Oxyrhinchites retaliated by eating a dog, the sacred animal of Cynopolis, and blood-shed followed.

The *Phagrus* was sacred in every part of Egypt<sup>(4)</sup> and especially in Syene and in Phagriopolis. It has been suggested that it is identical with the fish *at*<sup>(5)</sup>, which together with the fish *u'a*, were forbidden as food in the 20<sup>th</sup> nome of Lower Egypt.

The worship by the Egyptians of the eel was a source of great amusement to the Greeks:

I never could myself your comrade be,  
for neither our manners nor our laws  
agree with yours, but they are wholly different.

<sup>(1)</sup> STRABO, XVII, I, 47.

<sup>(2)</sup> CAIRO MUSEUM.

<sup>(3)</sup> PLUTARCH, *De Iside et Osiride*.

<sup>(4)</sup> PLUTARCH, *De Iside*.

<sup>(5)</sup> WIEDEMANN.

You do adore an ox, I sacrifice him  
to the great gods in Heaven. You do think  
an eel the mightiest of divinities,  
but we do eat him as the best of fish.

(*Alexandrides in Athenæus*, p. 55.)

*Physa* is associated with Selene<sup>(1)</sup>. *Silurus* was holy to the goddess Hāt-mahit of Mendes, and many of these fish were kept in a pond at Bubastis<sup>(2)</sup>. It was<sup>(3)</sup> one of the largest fishes of the Nile<sup>(4)</sup> and has been identified with the *Silurus glannis*.

The Sir, *Acerina*, a kind of perch, was embalmed<sup>(5)</sup>.

The priests, according to Plutarch, abstained from all kinds of fish, and so great was their horror of it that to them the word to hate, and also any disgusting thing were figured by a fish. On the 9<sup>th</sup> day of the first month, when every Egyptian ate a roast fish before his house, the priests did not taste it though they had one burnt in front of their doors. The first reason for this was the fact that they looked upon fish as impure, and the second Plutarch calls «evident, so to speak, it is, that as a food, fish, on the one hand, is not indispensable, and, on the other hand, there is nothing exclusive about it». Plutarch's contemporaries were of a different opinion and so fond of fish that «opson» (a relish), came to mean almost exclusively a relish of fish. «Who ever buys some opson for his supper, and when he might get real genuine fish, contents himself with radishes, is mad<sup>(6)</sup>».

Further, some of the gods, kings, and common people did not share the priestly hatred of fish. On the stela at Abou Simbel in the XIX<sup>th</sup> Dynasty, Ptah promises plenty of fowl and fish<sup>(7)</sup>; when King Ramses dug a well (pond?) at Akite, he stocked it with fish from the Delta<sup>(8)</sup> marshes, and the Nile was described as the great Nile, lord of fish and fowl<sup>(9)</sup>.

Wooden toys<sup>(10)</sup> for children represent fish; fish-shaped amulets have been

(1) See WIEDEMANN; *ÆLIAN, De animalium natura*, XII, 13.

(2) *ÆLIAN*, mentioned by WIEDEMANN.

(3) *PLINY*, V, 10.

(4) *PLINY*, IX, 17.

(5) WIEDEMANN; ABDEL LATIF, ed. S. DE SACY,

pp. 202, 278.

(6) *AMPHIS* in *ATHENÆUS*, VIII, 5.

(7) BREASTED, *Ancient Records*, III, no. 404.

(8) *IDEM, op. cit.*, no. 291, XIX<sup>th</sup> Dynasty.

(9) *IDEM, op. cit.*, II, no. 883.

(10) Cairo Museum and British Museum.

discovered especially in Upper Egypt; and slate palettes of the same form for face paint are not uncommon. These creatures were even kept as pets; on the walls of Deir el Bahari, for instance, an aquarium is represented with two small fish swimming in it.

That fishing was a favourite sport can be seen on many ancient Egyptian tomb; and a native<sup>(1)</sup> sportsman is described as «great in fish, rich in wild fowl, and loving the goddess of the chase», or as the «chief paddler of a canoe in the papyrus beds and pools of wild fowl, capturing birds and fish; spearing with the trident, he spears thirty fish (?)». «Tall» fishing stories, it would seem, came into fashion quite early.

Fishermen in large numbers were on the staff of the courts. «Officers of the divisions of the court fishermen, 200 men<sup>(2)</sup>», took part in the Hamamat expedition<sup>(3)</sup>. The fishermen who supplied the temple of Khnum were exempt from taxes<sup>(4)</sup>, and contributed a certain amount of fish and water-fowl for the god's income<sup>(5)</sup>, or were made to undertake some extra work for the community, as for instance, the cleaning of a canal<sup>(6)</sup>.

The fish was sold in the open market and the fishmongers were not always the most honest of men :

Hermeus the Egyptian, who skins  
And disembowels all the vilest fish  
And sells them for the choicest, as I hear.

(*ATHENÆUS, Deipnosophists*, vol. I, p. 539, B. VI, 10.)

The farming of the fishing brought in considerable sums. King Mœris<sup>(7)</sup>, as example, gave his wife the revenues of Lake Mœris as pin-money, which brought in a talent each day (L. E. 225), for this lake was inhabited by 22 kinds of fish, and so many were taken that the numerous workmen employed in salting fish could hardly cope with their task.

The fish tax enforced by the Ptolemies<sup>(8)</sup> was remitted later on, and when

(1) NEWBERRY, *Beni Hasan*, Part II, p. 11.

(2) BREASTED, *Ancient Records*, IV, no. 466.

(3) RAMSES IV, XX<sup>th</sup> Dynasty.

(4) BREASTED, *op. cit.*, IV, no. 148.

(5) *Papyrus Harris* (BREASTED, *op. cit.*, IV,

nos. 229 and 283).

(6) BREASTED, *op. cit.*, II, no. 650.

(7) DIODORUS, I, LII.

(8) *British Museum Catalogue*, p. 18.

Vespasian reintroduced it, the Alexandrians retaliated by giving this king an opprobrious nickname.

The Greeks and Romans also were very partial to fish. Athenæus<sup>(1)</sup> wrote : « Although all the different fishes which we eat, besides the regular meal, are properly called by one generic name, ὄψον, still it is very deservedly that on account of its delicious taste, fish has prevailed over everything else, and has appropriated the name to itself ». The Greeks also spoke of a man being ὀψοφαιστότατος or exceedingly fond of fish<sup>(2)</sup>, and yet, the old heroes of Homer would eat fish only when « hunger subdued their belly<sup>(3)</sup> ».

Very little is known regarding the cooking of the fish in ancient Egypt. It was usually broiled over the fire as soon as caught, a long stick being passed through its mouth and tail and the fish turned over the fire until done, the cook meanwhile fanning the fire with a fan<sup>(4)</sup>. Or the fish was split open with a knife or sharp stone, and then dried in the sun<sup>(5)</sup>, while sometimes it was placed into large pots for pickling.

The Romans were very fond of a fish sauce, garum, which was prepared at Pompei, Clezomene, Leptis, and many other towns, the best coming from Carthage or Carthage. It was made from the intestines of the « scombres », salted and exposed to the sun or artificial heat, and there were various brands of the sauce, including a « Kosher » sauce for the Jews. It is very probable that this sauce, if not made in Egypt, was imported into the country, but there is no proof of it.

#### SHELLS.

Molluscs never played a great part in the alimentation, as the climatic conditions did not allow marine molluscs, e. g. oysters, to be carried inland. It is clear that the shells of marine molluscs found at Memphis and in Upper Egypt had been imported there, not for food, but for some other purpose, such as ornamentation.

<sup>(1)</sup> ATHENÆUS, VII, 5.

<sup>(2)</sup> ATHENÆUS, VIII, 2.

<sup>(3)</sup> HOMER, *Od.*, IV, 366 and XII, 329.

<sup>(4)</sup> DAVIES, *The Tombs of Sheikh Saïd*, pl. XII.

<sup>(5)</sup> NEWBERRY, *El Bersheh*, Part I; *Guide to the Cairo Museum*, 4<sup>th</sup> ed., p. 180.

On the other hand, some of the fresh-water molluscs found in prehistoric kjökkenmöddings<sup>(1)</sup> may possibly have been eaten. Such are : *Vivipara unicolor*, *Spatha Caillaudi*, *Spatha elongata*, *Spatha Letourneuxi*.

No doubt they tasted of mud, but so do Nile fish, which are, however, greatly relished by the modern Egyptians.

<sup>(1)</sup> J. DE MORGAN, *Recherches sur les origines de l'Égypte*, p. 99.

## CHAPTER II.

### CEREALS AND BREAD.

The most important food of the Egyptians was bread made of various cereals, wheat, barley, and possibly millet, as well as from lotus seeds and dùm-palm dates. The fondness of Egyptians for bread was so well-known that they were nick-named «artophagoi» or «eaters of bread»<sup>(1)</sup>; it was the food *par excellence*, and the word was and has remained synonymous with food in this country. The most terrible curse was: «They shall hunger without bread and their bodies shall die»<sup>(2)</sup>.

The hard stones used for grinding cereals have been found<sup>(3)</sup> in Egyptian prehistoric and very ancient historic cemeteries. The grain was simply crushed between two hard stones, a fatiguing labour reserved for the wife or daughters of the poor and for the slaves, male or female of large households. The use in early times of handmills is not proven<sup>(4)</sup>.

The dough, wrapped up in a cloth<sup>(5)</sup>, was occasionally kneaded with the feet: «They knead the dough with their feet; but mix clay and take up dung with their hands», wrote Herodotus<sup>(6)</sup>. This custom was evidently very repulsive to Greek authors as in their country bread was kneaded by hand, or by machinery. Some Greek gourmands carried cleanliness so far as to make workmen wear gloves and tie cloths before their mouths to prevent contamination of the dough<sup>(7)</sup> by the sweat or breath.

As a rule, however, kneading was done by hand and many models show rows of bakers, probably slaves, kneading the dough for large households, and it stands to reason that the quantity of dough sufficient for a family was too small to be kneaded easily with the feet. The bread for a small household was prepared as in Palestine by some women of the family or by a female

<sup>(1)</sup> HERODOTUS.

<sup>(2)</sup> IDEM, II, 925.

<sup>(3)</sup> J. DE MORGAN, *Recherches sur les origines de l'Égypte*.

<sup>(4)</sup> See J. DE MORGAN.

<sup>(5)</sup> WILKINSON, *Manners and Customs*, II, p. 385.

<sup>(6)</sup> HERODOTUS, II, 36; see also STRABO, II, 17, 823.

<sup>(7)</sup> WIEDEMANN, *Herod.*, XVII, p. 823.

servant<sup>(1)</sup>, whereas rich people and temples had their own bakers under the order of a chief<sup>(2)</sup>. «O ye priests<sup>(3)</sup> and scribes of the house of Amon, good servants of the divine offerings, bakers, mixers, confectioners, makers of cakes and loaves, etc.». Bread was also bought from professional bakers whose work is described as unpleasant<sup>(4)</sup>.

The process of bread-making is illustrated in some of the monuments, at El Bersheh. First is a man crouched<sup>(5)</sup> with his hands on a table in front of him, above is the inscription «art hesa», making dough. Next, a woman seated on the ground holds in her hand an elongated object, the inscription above which reads *men at* = «a roll of wheat-dough». After a gap, we see rows of bread on mats<sup>(6)</sup>, then a woman mixing or pounding grain called *aet aget set at*. The two kinds of aget called *set* and *at* are frequently found in the list of offerings. In the next picture the «white and green shest» are being prepared.

Little is known about the leavening of the bread in ancient Egypt, or regarding the date when this process first became fashionable. The Alexandrians undoubtedly ate leavened bread, and the *Σημοουργος*, was a specialist in preparing leaven.

Baking over a fire or in the ashes of a small fire was a simple procedure in small households, whereas more important households and public bakeries used a large earthenware stove on which the cakes were stuck until dry, when they dropped off. In order to avoid this, the stove was sometimes covered with small projections

It is doubtful of what grain the bread eaten by the mass of people was made. Herodotus' statement that<sup>(7)</sup> «The Egyptians feed on bread made into loaves of spelt, which they call *cyllastis*», can not be accepted unconditionally. Whereas the same bread was known to later authors, Athenæus<sup>(8)</sup> and Aristophanes mention the *cyllastis* and the *petosiris*. Nicander of Thyatira, on the other hand, wrote that the *cyllastis* of the Egyptians was made of barley.

<sup>(1)</sup> *Exodus*, XI, 5.

<sup>(2)</sup> *Genesis*, XL, 2, 5.

<sup>(3)</sup> *Karnak Inscription of the High Priest Roy, XIX<sup>th</sup> Dynasty Menepthah* (BREASTED, *Ancient Records*, III, nos. 624-625).

<sup>(4)</sup> *Papyrus Anastasi II*, 6, 7 = *Sall. I*, 6 ff.

<sup>(5)</sup> NEWBERRY, *El Bersheh*, III, p. 34, pl. XXV.

<sup>(6)</sup> *idem*, *ibid.*, pl. XXXI, p. 5.

<sup>(7)</sup> HERODOTUS, II, 77.

<sup>(8)</sup> ATHENÆUS, *Deipnosophists*, III, 189.

Large quantities of wheat were grown in Egypt, and wheat in heaps is mentioned on a stela in the temple of Medinet Abou<sup>(1)</sup>, as offerings to the gods<sup>(2)</sup>, and as temple endowments and equipment. Granaries filled with wheat are mentioned in more than one text, and ships were built for the transport of cereals on the Nile.

During funerals<sup>(3)</sup> the Egyptians abstained from eating wheat.

The encouragement of the cultivation of grain was counted among the meritorious acts of great kings : «I was one who cultivated grain», boasts Amenemhet of the XII<sup>th</sup> Dynasty<sup>(4)</sup> : The monarch is proud of having built granaries for the temples : «for the god Ra I made granaries<sup>(5)</sup> filled with grain». The same monarch<sup>(6)</sup> built granaries for the temple of Sutekh and other gods. Ramses II<sup>(7)</sup> endowed his father's temple with numerous granaries and grain. Grain was a favourite gift to temples from the kings and private individuals. Under Amenhotep I<sup>(8)</sup> it is mentioned as one of the temple offerings<sup>(9)</sup> «His granaries were bursting with grain, rising for the old feasts». It is mentioned as being presented to the temples for the feasts<sup>(10)</sup> as part of Ra's income<sup>(11)</sup> as offering to the Nile god<sup>(12)</sup>, to Ptah<sup>(13)</sup>, and generally as part of the god's income<sup>(14)</sup>. In the stela of Sheshonk<sup>(15)</sup> it is enumerated as an endowment of the temples. It was given as an oblation<sup>(16)</sup> and also as a mortuary offering as early as the V<sup>th</sup> Dynasty<sup>(17)</sup>.

Although grain was so plentiful in Egypt that large quantities were exported to Rome and elsewhere yet the Egyptian kings exacted it as tribute from conquered nations, and whenever possible, brought it back as booty from their wars.

<sup>(1)</sup> XX<sup>th</sup> Dynasty (BREASTED, *Ancient Records*, IV, no. 9).

<sup>(2)</sup> BREASTED, *op. cit.*, IV, no. 363.

<sup>(3)</sup> DIODORUS, I, 84.

<sup>(4)</sup> I, 483.

<sup>(5)</sup> *Papyrus Harris* (BREASTED, *op. cit.*, IV, no. 267).

<sup>(6)</sup> *idem*, *op. cit.*, IV, no. 362.

<sup>(7)</sup> XIX<sup>th</sup> Dynasty (BREASTED, *op. cit.*, III, no. 271).

<sup>(8)</sup> XVIII<sup>th</sup> Dynasty.

<sup>(9)</sup> BREASTED, *op. cit.*, II, no. 806.

<sup>(10)</sup> *Papyrus Harris* (BREASTED, *op. cit.*, IV, nos. 289, 346).

<sup>(11)</sup> BREASTED, *op. cit.*, IV, no. 283.

<sup>(12)</sup> *idem*, *op. cit.*, IV, no. 297.

<sup>(13)</sup> *idem*, *op. cit.*, IV, nos. 313-314.

<sup>(14)</sup> *idem*, *op. cit.*, IV, nos. 371, 376.

<sup>(15)</sup> XXI<sup>st</sup> Dynasty (BREASTED, *op. cit.*, IV, no. 685).

<sup>(16)</sup> BREASTED, *op. cit.*, II, no. 749.

<sup>(17)</sup> *idem*, *op. cit.*, I, no. 252.

Thutmose III (XVIII<sup>th</sup> Dynasty)<sup>(1)</sup> levied a toll on the harvest of Zahi, consisting of clean grain, and brought some back from the land of the Retenu<sup>(2)</sup>, Naharen<sup>(3)</sup>, Tunip<sup>(4)</sup> and other Syrian tribes.

Several kinds of grain are mentioned, which it is not always easy to identify now.

There are «red grain» which was probably barley.

«Clean grain» which, as its name implies, was probably grain harvested with great care, dearer, and therefore a favourite present to the gods. Clean grain in kernel is an expression which is not quite clear. *Sekhet hez* translated «white sekhet-corn», *sekhet uaz* translated «green sekhet-corn», *agu* or yellow corn<sup>(5)</sup> are all mentioned in the lists of offerings of the X<sup>th</sup> Dynasty<sup>(6)</sup>. *Baut* has been translated<sup>(7)</sup> «green corn», but M. Maspero suggests «lentils»<sup>(8)</sup>.

Several other grains such as *sw-t* grain, *sc* grain, *tb-* grain, *yeh* are mentioned, the nature of which is not known.

A grain mentioned is the «southern grain» which probably came from Upper Egypt. It was one of the offerings of Sesostri III, and is mentioned as a taxed product in Rekhmara's tomb at Thebes<sup>(9)</sup> and at Tell el Amarna<sup>(10)</sup>.

The officials, supervisors of the granaries were very high personages indeed. Simontu, registrar of the grain under Amenemhet II<sup>(11)</sup>, was also «scribe of the harem» and «chief of works of the entire land». The overseer of the granaries, Henu, was «Wearer of the Royal seal, sole companion, overseer of the temples, overseer of horn and hoof, chief of the 6 courts of Egypt, etc.». Another overseer, Ineni (XX<sup>th</sup> Dynasty)<sup>(12)</sup>, was «Hereditary Prince, count, chief of all works in Karnak . . . Excellency, overseer of the double granary of Amon». The overseer of the granaries was probably the manager of the whole of the king's estates<sup>(13)</sup>, and the granaries of temples of Amon, of Aton, etc., were also under the supervision of very high officials.

<sup>(1)</sup> BREASTED, *Anc. Rec.*, II, nos. 510, 519.

<sup>(2)</sup> IDEM, *op. cit.*, II, no. 473.

<sup>(3)</sup> IDEM, *op. cit.*, II, no. 480.

<sup>(4)</sup> IDEM, *op. cit.*, II, no. 530.

<sup>(5)</sup> GRIFFITH, in *Beni Hasan*, III, p. 30, gives *yt-aget*.

<sup>(6)</sup> MARGARET MURRAY, *Saqqara Mastabas*, Part I, p. 40.

<sup>(7)</sup> GRIFFITH, *Beni Hasan*, III, p. 30.

<sup>(8)</sup> FL. PETRIE, *Royal Tombs*, I, pl. XLII, p. 64.

<sup>(9)</sup> BREASTED, *Ancient Records*, II, nos. 727 bis, 741, 742, 743.

<sup>(10)</sup> IDEM, *op. cit.*, II, no. 987.

<sup>(11)</sup> IDEM, *op. cit.*, I, no. 598 (XII<sup>th</sup> Dynasty).

<sup>(12)</sup> IDEM, *op. cit.*, II, no. 43.

<sup>(13)</sup> IDEM, *op. cit.*, II, no. 768 (XVIII<sup>th</sup> Dyn.).

These men were entrusted with confidential work which had no connection with grain. An overseer of the granary<sup>(1)</sup>, Menmarnakht, for instance, was a member of the commission appointed to enquire into a plot to assassinate Ramses IX. Even after death, special honours were paid to these high officials<sup>(2)</sup> whose tombs were sometimes placed quite close to the king's.

Taxes<sup>(3)</sup> were often paid in grain in the XII<sup>th</sup> Dynasty or possibly earlier<sup>(4)</sup>, and as late as the XIX<sup>th</sup> Dynasty<sup>(5)</sup>. In the tomb of Rekhmara numerous Egyptian officials bring grain to the king's vizier, and it is mentioned as a tribute to the temple of Amon.

Grain was imported in great quantities from Syria<sup>(6)</sup>. At Tell el Retabel, the store city of Ramses II, not far from Ismailia, a keeper of the granaries is mentioned<sup>(7)</sup>, and in one house a complete mud-baked oven was found, the upper portion of which was shaped like a bee-hive with an opening at the top to allow the smoke to pass out. The furnace was underneath. The whole rested on a brick-built platform, waist-high. The granaries or so-called Pits of Joseph have been well described by Petrie.

#### BREAD.

The making of bread had become quite a fine art in Alexandria where, as in Pompeii, the grinding of the grain and the baking of bread were part of the same trade<sup>(8)</sup>. Mortars were sometimes used for grinding, or at any rate for husking the grain, and mills were either worked by hand, or, if large, by animals. Important public establishments, such as temples or the Serapeum, probably worked their own mills.

Barley flour, *ἀλφιτον*, and wheat flour, *ἀλευρον*, *ἀλειαρ*, *σεμίδαλις*, *γῦρις* are mentioned. Starch-flour also was used, the preparation of which was different, and a special kind of which was made in Egypt<sup>(9)</sup>. On the other hand, Egyptian barley was apparently of inferior quality.

<sup>(1)</sup> BREASTED, *Ancient Records*, IV, no. 546.

<sup>(2)</sup> IDEM, *op. cit.*, IV, no. 517.

<sup>(3)</sup> IDEM, *op. cit.*, IV, no. 403.

<sup>(4)</sup> IDEM, *op. cit.*, II, no. 462.

<sup>(5)</sup> IDEM, *op. cit.*, III, no. 6.

<sup>(6)</sup> PETRIE, *Hyksos and Israelite Cities*, p. 31.

<sup>(7)</sup> IDEM, *op. cit.*, Shaghabeh or Burru el Yussef. «The Pits of Joseph», p. 54.

<sup>(8)</sup> TH. REIL, p. 150.

<sup>(9)</sup> PLINY, XVIII, 77; Diosc., II, 125.

Some bakers specialised in certain breads. The ὄλυρα, for instance, was baked by the ὄλυροκοκα, but as the word is mentioned once only, olyra was probably not as popular as Herodotus thought. The σιλιγνιαριοί or wheat bakers (these appear only in the v<sup>th</sup> century) and the confectioners, the καθαροϋργοί and κλακουντοκοιοί.

Home baking was carried out as well, but all the finer confectionery appears to have been bought.

The special breads were :

- ἄρτος αοτκυρος = Coarse wheat bread.
- ἄρτος βενερίνης = a bread baked specially for the wives of the priest.
- ἄρτος σεμιδαλίτης = a bread of the finest wheaten flour, = a roll.
- ἄρτος ὀλοκυρκίης.
- ἄρτος κεκίος.
- κάκεις = a bread from Ricinus, a remedy against diarrhoea <sup>(1)</sup>. It was a κίκι bread.
- κυλλάστις = or olyra bread <sup>(2)</sup>.
- Lotos bread from the seed of the lotus <sup>(3)</sup>.

Certain localities were celebrated for special bread, e. g. *Panes Alexandrini* <sup>(4)</sup>, and the breads of Canopus.

A loaf called « ὀβελίαις » <sup>(5)</sup> or penny loaf, because it was sold for a penny, was a favourite at Alexandria. Chronos breads were baked in hot ashes and coals and distributed in the Chronos temple at Alexandria.

A certain amount of salt was added to bread <sup>(6)</sup> and in some cases, this was replaced by nitrum.

Among cakes and confectionery may be mentioned :

- ἄμης milk cakes.
- ἄττακιτής <sup>(7)</sup>.
- βουκιον.

<sup>(1)</sup> The reference is STRABO, XVII, 824, who does not say that *kakeis* was made of castor oil.  
<sup>(2)</sup> ATHENEUS, *Hekateios*, XI, 418 E; HERODOTUS, II, 92; DIODORUS, I, 34, 6, etc.  
<sup>(3)</sup> HERODOTUS, II, 92; DIODORUS, I, 34, 6; PLINY, XXII, 56. See also date-bread, ἄρτος

φοίνιξ London, II, p. 255, 37 and also, ἄρτος-τηρος London, I, p. 71.  
<sup>(4)</sup> PLINY, XX, 163.  
<sup>(5)</sup> ATHENEUS, III, 76.  
<sup>(6)</sup> PLINY, XXXI, 16.  
<sup>(7)</sup> See ATHENEUS, XVI, 647 b.

- ἴτριον.
- κάυδηλος.
- κοκτάριον or sesame cake.
- λάγανον cake.
- μελίτωμα honey-cake.
- κασείλλιον small cake.
- τιλάκους.
- χρυστούμιμος sweetmeat.

καγκαρκία cakes mashed up together and boiled with honey. After boiling they were made up into round balls and fastened round with a thin string of byblus in order to keep them together.

Anise was sometimes strewn on bread.

Tryphon of Alexandria <sup>(1)</sup> mentions the leavened loaf, the unleavened loaf, the loaf made of best wheaten flour, the loaf made of groats, the loaf made of remnants, thin, very digestible, the loaf made of millet. The loaf made of groats, said he, is made of oaten groats, for groats are not made of barley. There was also a loaf called ipnites.

Bread and oil formed the main food of the people. The troops <sup>(2)</sup> and king's messengers were given 20 deben <sup>(3)</sup> (about 4 pounds) of bread daily as rations which was carried by numerous parties accompanying the army on the march <sup>(4)</sup>.

Bread is mentioned many times as divine and mortuary offering <sup>(5)</sup> and was the gift most in request in all mortuary prayers.

The temples' income and equipment included bread <sup>(6)</sup> and Ramses III, for instance, presented <sup>(7)</sup> about 6 1/2 million loaves of bread to the temples.

The Egyptians, aware that, except under very special conditions, the bread offered to the dead would disappear, replaced it by imitation sepulchral loaves, made of clay; some of which <sup>(8)</sup>, found at Thebes, date from the XI<sup>th</sup> Dynasty to the XXVI<sup>th</sup> Dynasty. A collection also from Thebes, of such loaves stamped

<sup>(1)</sup> PLINY, III, 74.  
<sup>(2)</sup> BREASTED, *Ancient Records*, II, no. 207.  
<sup>(3)</sup> IDEM, *op. cit.*, III, no. 208.  
<sup>(4)</sup> *Abydos Stela*, XX<sup>th</sup> Dynasty (BREASTED, *op. cit.*, IV, no. 467).  
<sup>(5)</sup> *Inscription of Ptahsepses* (BREASTED, *op.*

*cit.*, I, no. 252).  
<sup>(6)</sup> *Papyrus Harris* (BREASTED, *op. cit.*, IV, nos. 190 and 200).  
<sup>(7)</sup> BREASTED, *op. cit.*, IV, no. 393.  
<sup>(8)</sup> G. MASPERO, *Guide to the Cairo Museum*, 4<sup>th</sup> edit., p. 329.

with the names and titles of princes<sup>(1)</sup>, chiefs and officials, dates from 1500 to 1000 B. C. Some stamped with the names of two persons had evidently been used twice.

### BARLEY.

Isis discovered wheat and barley growing wild, and her husband and brother<sup>(2)</sup> Osiris showed men how to cultivate it<sup>(3)</sup>. At the feasts of Isis<sup>(4)</sup> baskets full of wheat and barley were carried in the procession in memory of the benefaction of the goddess. Husks of this cereal<sup>(5)</sup> were isolated from almost every sample of intestinal contents of predynastic Egyptians both in Egypt and in Nubia<sup>(6)</sup> and also as late as the Christian<sup>(7)</sup> period. Barley grains were contained in an amphora from the Royal Tombs of Negadah<sup>(8)</sup> and carbonised fragments of a wooden carving of an ear of the bearded variety were discovered in a tomb of the 1<sup>st</sup> Dynasty<sup>(9)</sup>. Fragments of ears of *Hordeum vulgare* have been isolated from bricks made of unbaked mud, dating from 3500-4000 years ago<sup>(10)</sup>, and also from bricks of the XXII<sup>nd</sup> Dynasty. Broken-up ears of barley from the V<sup>th</sup> Dynasty<sup>(11)</sup> found at Saqqarah belong to the *Hordeum hexastichum* species, specimens of which have also been discovered<sup>(12)</sup> in ancient Egypt by Ungar and Alphonse de Candolle. In the Valley of the Kings at Thebes there was found the tomb of a royal fan-bearer who had lived about 1500 years B. C. Among the rich contents of the tomb there was a bier on which rested a mattress of reeds covered with three layers of linen. On the upper side of the linen was painted a life-size figure of Osiris; and the interior of the figure, which was waterproof, contained a mixture of mould, barley and a sticky fluid. The barley had sprouted and sent out shoots two or three inches long<sup>(13)</sup>. Débris of *Triticum dicoccum* were also found, and, strangely enough it is called Egyptian spelt in Germany still.

The literary evidence also shows that barley was always grown in Egypt.

<sup>(1)</sup> British Museum.

<sup>(2)</sup> DIODORUS, I, 16.

<sup>(3)</sup> FRAZER, *Osiris*, IV, p. 270.

<sup>(4)</sup> DIODORUS, I, 16.

<sup>(5)</sup> ELLIOT SMITH, *The Proto-Egyptians*, p. 41.

<sup>(6)</sup> *Archæological Survey of Nubia*, p. 189.

<sup>(7)</sup> IDEM, *ibid.*, p. 219.

<sup>(8)</sup> J. DE MORGAN, *Recherches sur les origines de l'Égypte*, p. 171, also pp. 94, 95.

<sup>(9)</sup> FL. PETRIE, *Royal Tombs*, p. 23.

<sup>(10)</sup> WÖNIG, *Pflanzen in alten Aegypten*.

<sup>(11)</sup> WÖNIG, pp. 168-169.

<sup>(12)</sup> SCHWEINFURTH.

<sup>(13)</sup> *Cairo Museum*.

Sinuhe relates that it grew in his garden<sup>(1)</sup>, and it is mentioned in many inscriptions and papyri such as in the coronation inscription of Thutmose III<sup>(2)</sup> and his queen at Karnak, in the Papyrus Harris, in the Stela of Piankhi and in the *Book of the Dead*. The harvest of barley is represented in the Rock Tombs of Sheikh Saïd<sup>(3)</sup> and elsewhere, the barley being clearly distinguished by the bearded ears and by the length of straw.

Some of the barley was «7 cubits in height, the ears thereof 3 cubits and the stalks thereof 4 cubits». Though this statement appears twice in the *Book of the Dead*, it is difficult to make out to what species the writer may have been referring. In this connection<sup>(4)</sup> one must remember that according to Herodotus the ear of Mesopotamian barley was 4 cubits in size.

Barley grew abundantly in Egypt and was also imported from Syria<sup>(5)</sup>, for instance from the lands of the Retennu<sup>(6)</sup>, as early as Thutmose III<sup>rd</sup> and possibly before that date. The taxes on this cereal were heavy and the barley «from the impost of peasants» is frequently mentioned. In Alexandria, it was by no means cheap, one artaba costing 20 drachmæ. Barley water was drunk in Alexandria, for the expenditure of 1/2 obol for this beverage is mentioned in one of the papyri<sup>(7)</sup>. It was a favourite gift to the temples, and is mentioned as a divine offering by Thutmose III<sup>(8)</sup> and<sup>(9)</sup> as a gift to Ra, to Ptah and other divinities. The temples had their own barley granaries as, for instance, those of Medinet Abou<sup>(10)</sup>, the temples of Ra<sup>(11)</sup> and Ptah<sup>(12)</sup>, the temple of Sebek at Kom Ombo<sup>(13)</sup>.

Like all foodstuffs it was one of the spoils of war and Tefnekhate, the chief of Sais, for instance, stimulated the zeal of his troops before Memphis by the promise that this town was full of barley<sup>(14)</sup>.

<sup>(1)</sup> XVIII<sup>th</sup> Dynasty (BREASTED, *Ancient Records*, II, no. 66).

<sup>(2)</sup> XVIII<sup>th</sup> Dynasty, II, p. 149.

<sup>(3)</sup> DAVIES, *Tombs of Sheikh Saïd*, p. 21.

<sup>(4)</sup> HERODOTUS, I, 193.

<sup>(5)</sup> *Papyrus Harris* (BREASTED, *Ancient Records*, IV, no. 287).

<sup>(6)</sup> BREASTED, *op. cit.*, II, no. 473.

<sup>(7)</sup> HUNT, *Oxyr. Pap.*, p. 323.

<sup>(8)</sup> XVIII<sup>th</sup> Dynasty (BREASTED, *Ancient Re-*

*records*, II, no. 66).

<sup>(9)</sup> *Papyrus Harris* (BREASTED, *op. cit.*, IV, nos. 287, 344, 391).

<sup>(10)</sup> BREASTED, *op. cit.*, IV, no. 190.

<sup>(11)</sup> IDEM, *op. cit.*, IV, nos. 250, 259, 265, 266.

<sup>(12)</sup> IDEM, *op. cit.*, IV, nos. 314, 325.

<sup>(13)</sup> IDEM, *op. cit.*, IV, no. 329, etc.

<sup>(14)</sup> *Stela of Piankhi* (BREASTED, *op. cit.*, IV, no. 859).

Barley was one of the chief funeral offerings, «and there<sup>(1)</sup> in the celestial mansions of heaven . . . let my hands hold upon the wheat and the barley which shall be given unto me therein in abundant measure». Similar invocations are scattered through the *Book of the Dead*.

Two kinds of barley, the white and the red, were evidently favourites. Of these, the first was probably the best for «Let me live upon bread of white barley» occurs in more than one passage<sup>(2)</sup>. Red barley was chiefly used in brewing<sup>(3)</sup>.

#### WHEAT.

Wheat has been found in amphoræ of the prehistoric tombs of Negadah<sup>(4)</sup>. *Triticum vulgare* has been isolated<sup>(5)</sup> from old Egyptian mud-bricks, and some grains from ancient Egypt are deposited in the Berlin Museum<sup>(6)</sup>. The old Egyptian monuments show that both the bearded and the beardless existed, and one beardless wheat has been identified as *Tr. hibernum* L.<sup>(7)</sup>, and the other probably as *Tr. turgidum* L.

In Europe, *Triticum spelta* was grown in Neolithic times. In Egypt no remains of it have so far been discovered in ancient tombs<sup>(8)</sup>, but it is mentioned in the tale of Sinuhe<sup>(9)</sup>, as a gift from the King in the XVIII<sup>th</sup> Dynasty<sup>(10)</sup> and XIX<sup>th</sup> Dynasty<sup>(11)</sup>, among the King's gifts to Ra<sup>(12)</sup>, to Ptah<sup>(13)</sup>, to the gods<sup>(14)</sup>, to the temple of Nut at Kom Ombos<sup>(15)</sup> and among the king's gifts to Atun in the XX<sup>th</sup> Dynasty<sup>(16)</sup>. It formed part of the loot promised to the troops on the fall of Memphis.

When Herodotus<sup>(17)</sup> visited Egypt, he says, «Wheat and barley were a common article of food in other countries; but it is in Egypt thought mean

<sup>(1)</sup> *The Book of the Dead*, chap. LXXXI.

<sup>(2)</sup> *Idem*, *ibid.*, chapters XCIC, LXXII, etc.

<sup>(3)</sup> *Book of the Dead*, p. 308.

<sup>(4)</sup> J. DE MORGAN, *Recherches sur les origines de l'Égypte*, p. 171.

<sup>(5)</sup> UNGER.

<sup>(6)</sup> WÖNIG, p. 166.

<sup>(7)</sup> *Idem*, *ibid.*, p. 66.

<sup>(8)</sup> SCHULZ, p. 59; WÖNIG, p. 164.

<sup>(9)</sup> XII<sup>th</sup> Dynasty (BREASTED, *Ancient Records*,

I, no. 496).

<sup>(10)</sup> BREASTED, *op. cit.*, II, no. 171.

<sup>(11)</sup> *Idem*, *op. cit.*, III, no. 66.

<sup>(12)</sup> *Papyrus Harris* (BREASTED, *Ancient Records*, IV, no. 250).

<sup>(13)</sup> BREASTED, *op. cit.*, IV, nos. 314, 325.

<sup>(14)</sup> *Idem*, *op. cit.*, IV, no. 325.

<sup>(15)</sup> *Idem*, *op. cit.*, IV, no. 359.

<sup>(16)</sup> *Idem*, *op. cit.*, IV, no. 355.

<sup>(17)</sup> HERODOTUS, II, XXXVI.

and disgraceful, the diet here consists principally of spelt, a kind of corn which some call *zea*». Wönig translates *olyra* as spelt. The translation is not accepted by Wiedemann<sup>(1)</sup>, who maintains that spelt is not figured on Egyptian monuments. Schweinfurth<sup>(2)</sup> supposes that the Egyptian word *Bóta* is identical with the *olyra* of the Septuagint and Herodotus, which according to Schultz, is most probably *Triticum dicoccum*.

Theophrast gave the name of spelt to the Alexandrian corn, the flour of which<sup>(3)</sup> was finer and nicer than the ordinary wheaten kinds and the bread made from it was supposed<sup>(4)</sup> to be less nourishing than that made from other wheat flour and dried up more rapidly. Spelt meal was certainly of less value than other wheaten flour, which was offered to the gods.

The remains of naked wheat found in old Egyptian bricks and graves<sup>(5)</sup> belong for the most part to *Tr. vulgare*, and *Tr. turgidum*. In the bricks of the pyramids of Dahshur<sup>(6)</sup> remains of *Tr. vulgare* and *Tr. compactum* globiforme<sup>(7)</sup> have been discovered. Mummy wheat is maintained by some<sup>(8)</sup> to be allied to *Tr. vulgare*: Schweinfurth thinks that the Egyptian word *coyo* meant *Tr. durum*, of which he had found traces.

Bread made of lotus seed and bread made of düm dates are mentioned by several authors.

#### MILLET.

The ordinary Egyptian or Indian millet, *Durra* in Arabic (*Sorghum vulgare* Pers. = *Holcus sorghum* L.), now cultivated all over Africa, was perhaps grown in Ancient Egypt also. It must be confessed, however, that the seeds<sup>(9)</sup> from Thebes which are supposed<sup>(10)</sup> to belong to this plant, have not been identified with certainty, and neither Birch nor Schweinfurth have discovered remains of this plant. Pickering alone believes that he isolated fragments of ancient leaves coming from catacombs.

<sup>(1)</sup> WIEDEMANN, *Herodot*, p. 158.

<sup>(2)</sup> SCHULZ.

<sup>(3)</sup> PLINY.

<sup>(4)</sup> DIOSCORIDES.

<sup>(5)</sup> UNGER, *Schultz*, p. 59.

<sup>(6)</sup> BUSCHEN.

<sup>(7)</sup> BUSCHEN.

<sup>(8)</sup> KOERNIKE.

<sup>(9)</sup> ROSELLINI.

<sup>(10)</sup> WÖNIG, p. 172.

Wilkinson<sup>(1)</sup> published pictures from Thebes and Eileithyes, in which a tall grain is seen. He thinks that «from the colour, the height to which it grows compared with the wheat, and appearance of the round, yellow head it bears on the top of its bright green stalk, it is evidently intended to represent the Durrah or *Holcus sorghum*. It was not reaped by a sickle like wheat and barley, but men, and sometimes women, were employed to pluck it up; which being done, they struck off the earth that adhered to the roots with their hands, and having bound it in sheaves, they carried it to what may be called the threshing floor, where, being forcibly drawn through an instrument armed at the summit with metal spikes, the grain was stripped off and fell upon the well swept area below.»

In a similar picture<sup>(2)</sup> the old slave whose duty it was to do the combing is seated in the shade of a sycamore; he pretends that the work is no trouble, and remarks to a peasant who brings him a fresh bundle of durra to comb : «If thou didst bring me eleven thousand and nine, I would yet comb them». The peasant, however, pays no attention to the foolish boast : «Make haste», he says, «and do not talk so much, thou oldest among the field labourers<sup>(3)</sup>».

According to Lepsius<sup>(4)</sup>, it is also represented among hieroglyphics as a rush with three seeds.

Wiedemann<sup>(5)</sup> agrees with Wilkinson that durra was the zea of Herodotus. Plinius<sup>(6)</sup> speaks of bread made of durra, but I can find no trace of it in Egyptian monuments. In Italy<sup>(7)</sup> the bread made from Indian corn was not considered as of good quality.

<sup>(1)</sup> WILKINSON, *Manners and Customs*, II, p. 50.

<sup>(2)</sup> ERMAN, *Life in Ancient Egypt*, p. 435.

<sup>(3)</sup> See also GRIFFITH, *Beni Hasan*, I, XXIX.

<sup>(4)</sup> WÖNIG, p. 178.

<sup>(5)</sup> WIEDEMANN, *Herodots zweites Buch*, p. 158.

<sup>(6)</sup> PLINY, 18, 62, 81 and 92.

<sup>(7)</sup> MOMMSEN and MARQUARDT, p. 49.

## CHAPTER III.

### FRUITS.

#### FIGS.

Ancient Egypt never produced many varieties of fruit, and, even now, when several European, Asiatic, and American trees, oranges, guava, banana, etc., are growing in the country, the supply of fruit is inadequate to the needs of the country.

The representations on ancient monuments and the finds in the tombs show that not more than a dozen different kinds were grown in Egypt. The most important of these, the grape, has been discussed elsewhere.

Figs have been discovered<sup>1</sup> in many excavations. Some well preserved specimens are exhibited in the Passalacqua collection : others from a grave of the XII<sup>th</sup> Dynasty at Dra Abou Nagga are in the Cairo Museum. Fig-baskets made of leaves of the date-palm and fruits of the sycamore tree have been found at Thebes. As early as King Snefru in the IV<sup>th</sup> Dynasty<sup>(1)</sup>, fig-trees were cultivated in gardens<sup>(2)</sup>; the fig-trees of the sand dwellers in the VI<sup>th</sup> Dynasty are spoken of, and the tree is mentioned in the tale of Sinuhe<sup>(3)</sup> dating from the XII<sup>th</sup> Dynasty.

The tree grows in lower Egypt without any artificial irrigation, and was therefore common on the Northern littoral. The trees are planted at the bottom of deep trenches made in the sand so as to protect them against the perpetual blast of the Northern winds, and to allow the roots to reach water more easily. The process of caprification was well known<sup>(4)</sup>.

Figs formed part of the rations of King's messengers and standard-bearers in the XIX<sup>th</sup> Dynasty. Under Ramses III 310 measures of figs<sup>(5)</sup> and 4600

<sup>(1)</sup> *Biography of Methen* (BREASTED, *Ancient Records*, I, no. 173).

<sup>(2)</sup> *Inscription of Uni* (IDEM, *op. cit.*, I, no. 313).

*Mémoires de l'Institut d'Égypte*, t. I.

<sup>(3)</sup> IDEM, *op. cit.*, I, no. 496.

<sup>(4)</sup> IDEM, *op. cit.*, II, no. 8.

<sup>(5)</sup> *Papyrus Harris* (IDEM, *op. cit.*, IV, no. 240).

pyramids of figs<sup>(1)</sup>, and again 310 measures, 1410 «weights»; 55 measures, 15,500 measures, 310 measures of figs of the impost are mentioned among the king's gifts for the new feasts<sup>(2)</sup>.

Sycamore figs, strung together, have been discovered in the royal tombs of the 1<sup>st</sup> Dynasty, and similar strings are now sold in the streets of Cairo, Alexandria and other Egyptian towns. These fruits under the name of *nebes* are mentioned in the lists of offerings of the V<sup>th</sup> Dynasty<sup>(3)</sup>, and in the tomb of Rekhmara (Pl. V) they are brought as tribute, packed in skins. Pliny correctly describes the growth of the fruit on the trunk of the tree and not on the branches, and praises its sweetness, incorrectly stating, however, that it has no seed. According to this author, the fruit ripens only if incisions are made into it with hooks of iron. Provided this was done, seven crops were gathered yearly, whereas only four were obtained from a tree left to itself. Athenæus describes<sup>(4)</sup> the method of scraping the fig with a knife and leaving it on the tree; after three days exposure to the winds, especially if the wind is in the west, the fig becomes ripe and fragrant. At the present time, the natives often make an incision in the fruit to hasten its maturity.

The sycamore tree plays an important part in the worship of the dead and was sacred to Isis, Nephthys, Nut, and Hathor.

In the *Book of the Dead* in the chapter LI<sup>(5)</sup> the deceased exclaims: «Let me eat my food under the sycamore tree of my lady, the goddess Hathor», or he is represented kneeling beside a pool of water, wherein grows a sycamore tree, in which the goddess Nut is seen pouring out water for him from a vessel with the left hand, and giving him cakes with the right, whereupon he exclaims: «Hail, the sycamore tree of the goddess Nut! . . . Grant thou to me of the water and of the air which dwells in thee, etc.<sup>(6)</sup>» Elsewhere the deceased<sup>(7)</sup> is seen kneeling by the side of a pool of water and receiving

<sup>(1)</sup> BREASTED, *Ancient Records*, IV, no. 295.

<sup>(2)</sup> IDEM, *op. cit.*, IV, no. 240.

<sup>(3)</sup> MARGARET MURRAY, *Saqqara Mastabas*, Part I, p. 40.

<sup>(4)</sup> ATHENÆUS, *Deipnosophists*, II, no. 73.

<sup>(5)</sup> Chapter of avoiding unclean food. BUDGE,

I, p. 194, also chapter LXXXIX «Of Avoiding hunger».

<sup>(6)</sup> Chapter LIX, «Of Snuffing the air». BUDGE, I, p. 104.

<sup>(7)</sup> Chapter LXIII A, «Of Drinking water», I, p. 208.

water in a bowl which he holds in his right hand, from a vessel which the goddess of the sycamore tree (Hathor) is emptying into it.

Evidence of worship of this tree occurs in other places, and sycamore figs were, as we have seen, among the most common offerings to the dead.

The gathering of figs from trees is represented at Deir el Gebrawi<sup>(1)</sup> and in a similar scene from the tomb of Asa, a tree bearing pomegranate or figs, stands among trellised vines.

A queer superstition was that abstaining from figs improved the voice. It is related, for instance, that Hegesianax, the Alexandrian, «who was originally a man with a very weak voice, became a tragedian and an actor, and a man with a very fine voice by abstaining from figs altogether for 18 years»<sup>(2)</sup>.

Fig-leaves during the Greek period were used in cookery, for wrapping up various meats and especially fish. The making of wine from figs is discussed elsewhere.

#### DATES.

Arabia has always been regarded as the original home of the date-palm, and, considering the intimate commercial relations between Egypt and Arabia, it is quite possible that the date-tree may have travelled from east to west, though there is no evidence whatever of such a migration. Egypt may have been the original home of the date-palm, and the discovery of date-stones<sup>(3)</sup> in the prehistoric kjökkenmöddings of Toukh proves the existence of the palm-tree in Egypt from the earliest times.

Numerous stalks, leaves, dates, date-stones of the palm have been discovered in Egyptian tombs. Cakes of dates were found in a grave at Thebes<sup>(4)</sup>; and dates are exhibited in the Museum of Berlin<sup>(5)</sup>, and some from Deir el-Bahari have found a home in the Cairo Museum<sup>(6)</sup>.

Date wine was known in the VI<sup>th</sup> Dynasty<sup>(7)</sup>. Dates are mentioned as food

<sup>(1)</sup> N. DE G. DAVIES, I, no. 14.

<sup>(2)</sup> DEMETRIUS the Scapsian *apud* ATHENÆUS, III, no. 19.

<sup>(3)</sup> J. DE MORGAN, *Recherches sur les origines de l'Égypte*, p. 100.

<sup>(4)</sup> WILKINSON.

<sup>(5)</sup> Passalacqua collection.

<sup>(6)</sup> WÖNIG, no. 314.

<sup>(7)</sup> Inscription of Harkhuf (BREASTED, *Ancient Records*, vol. I, no. 336).

in the XIII<sup>th</sup> Dynasty <sup>(1)</sup>, as divine offerings and oblations <sup>(2)</sup> in the XVIII<sup>th</sup> Dynasty. Ramses III offered dates, fresh and dried, to the gods <sup>(3)</sup>, and this fruit was among the provisions carried by the nobles on an expedition <sup>(4)</sup>.

The palm-tree was grown in the whole of Egypt, and probably in the same sites as now, namely in the vicinity of the village ponds, and sakkias, and along the banks of the rivers and canals.

The life history and the fertilisation of the female palm by the male tree were well-known to the ancients <sup>(5)</sup>. «It is asserted <sup>(6)</sup> that in a forest of natural growth the female trees all become barren if they are deprived of the males, and that many female trees may be seen surrounding a male with downcast heads and a foliage that seems to be bowing caressingly towards it; while the male tree, on the other hand, with leaves all bristling and erect, by its exhalation, and even by the very sight of the dust from off, it fecundates the others; if the male tree, too, should happen to be cut down, the female trees, thus reduced to a state of widowhood, will at once become barren and unproductive. So well, indeed, is this sexual union between them understood that it has been imagined even that fecundation may be ensured through the agency of men, by means of blossoms and the down gathered from off the male trees, and, indeed, sometimes by only sprinkling the dust from off them on the female trees.»

All the uses of the palm-tree were well-known : «The palm tree <sup>(7)</sup> furnishes . . . bread, wine, vinegar and meal; all kinds of woven articles are also produced from it. Braziers used the stone of the fruit instead of charcoal. When softened by being soaked in water they are food for fattening oxen and sheep.» This description of the use of the palm in Babylonia applies to the Egyptian tree also.

The brain of the palm may sometimes have been eaten as a vegetable. Xenophon <sup>(8)</sup> relates how the soldiers first tasted the «cabbage from the top of the palm-tree, and most of them were agreeably struck both with its

<sup>(1)</sup> BREASTED, *Ancient Records*, I, no. 785.

<sup>(2)</sup> IDEM, *op. cit.*, II, no. 159.

<sup>(3)</sup> *Pap. Harris* (IDEM, *op. cit.*, IV, nos. 244, 295, 299, 344, 347).

<sup>(4)</sup> XXVI<sup>th</sup> Dynasty. *Stela of adoption of Nito-*

*cris* (BREASTED, *Ancient Records*, IV, no. 944).

<sup>(5)</sup> THEOPHRAST, II, 6 and 8; V, 6.

<sup>(6)</sup> PLINY, XIII, 7.

<sup>(7)</sup> STRABO, XVI, I, 14.

<sup>(8)</sup> XENOPHON, *Anabasis*, II, III, 16.

external appearance and the peculiarity of its sweetness, but this also was exceedingly apt to give headache».

Other Greek authors wrote :

And at the same time cutting off the branches  
Loaded with dates, they bring away the brain,  
A dainty greatly fancied by the young.

Or, «The brains of the dates are filling and nutritious; still, they are heavy and not very digestible : they cause thirst, too, and constipation of the stomach».

Nevertheless, one may remain somewhat sceptical as to the frequent use of date-cabbage in Egypt. Xenophon maintained that the removal of the cabbage was fatal to the tree, and this operation certainly does injure the tree greatly. It stands to reason therefore, that valuable trees like palms were but rarely sacrificed for the sake of a few pounds of vegetables, though possibly a few tender shoots may have been cut off and eaten.

Dates, grown in Egypt or imported from abroad, were eaten in large quantities. During the Greek period Egyptian dates were rather despised by connoisseurs. «Throughout the whole of Egypt <sup>(1)</sup>, the palm-tree is of a bad species and produces no good, edible fruit in the places about the Delta and Alexandria; yet the best kind is found in the Thebaïs. There are, however, two kinds of dates in the Thebaïs and Judæa, the caryotic and another. The Thebaïc is firmer, but the flavour is more agreeable. The best dates were grown on an island, which was, of course, promptly seized by the kings.»

Authors, however, did not agree, and Pliny described the Thebaïc and Arabic dates as being dry and small, with a shrivelled body, and so parched up and scorched by the constant heat that they were covered with a shell rather than with a skin. The Thebaïc date was packed in casks, with all its natural heat and freshness, for otherwise it soon became vapid, and in order to restore its fresh taste, it was exposed, before being eaten, to the heat of an oven.

<sup>(1)</sup> STRABO, XVII, I, 51.

Very probably, these two authors were not writing of the same fruit, and it seems possible that Pliny's Thebaic date was the fruit of the dùm-palm.

The Æthiopian<sup>(1)</sup> date, brittle owing to the dryness of the climate, was ground to flour and kneaded into bread. It was named coix and grew on a shrub, with branches a cubit in length, and had broad leaves. The fruit was round, and larger than an apple. The shrub came to maturity in 3 years, and «there is always fruit to be found upon the shrub, in various stages of maturity». The only certain conclusion to be drawn from this description is that this shrub was not the date-palm.

Many of the soldiers of Alexander the Great were said to have been choked by eating great quantities of dates, and a similar fate, it was said, had overtaken greedy people elsewhere<sup>(2)</sup>. The dates were so remarkably luscious, when fresh, that there would have been no end to eating them, had it not been for fear of the dangerous consequences that would certainly have ensued.

The story, though most probably true, has been scoffed at by many authors. Cases of death from surfeit of dates are not rare in Egypt when dates are just ripening, and like the soldiers of Alexander the Great, the voracious patients suffer from intense dyspnœa. Indeed, when one sees the enormous quantities of dates which an Egyptian can eat at a sitting, the comparative rarity of such deaths is a matter of wonder.

#### DÛM.

The dùm-palm does not, and probably never did grow in Lower Egypt, at any rate within historic times, and it is not seen now below the latitude of Assiut.

Dates from this palm are contained in the Passalacqua collection and large quantities have been discovered among the débris of mummies in Theban graves<sup>(3)</sup>, in a tomb of XX<sup>th</sup> Dynasty at Dra Abou Nagga<sup>(4)</sup>, at Gournah el-Makhzin<sup>(5)</sup>, and in the mortuary offerings of Ahnas el Medineh. A sepulchral box in the British Museum<sup>(6)</sup> from about 900 B. C. also contains these dates.

<sup>(1)</sup> PLINY.

<sup>(2)</sup> PLINY, XIII, 9.

<sup>(3)</sup> F. UNGER.

<sup>(4)</sup> SCHWEINFURTH.

<sup>(5)</sup> Cairo Museum.

<sup>(6)</sup> *Guide*, p. 113.

The tree (*Hyphæna thebaica* Mart. = *Cuccifera thebaica* Del.), the *Kukio-phoron* of the Greeks, has been correctly described by Theophrast<sup>(1)</sup>, who noted the forked division of the branches, the reedy, fan-like leaves, the yellow dates and the uses to which the various parts of the tree are put. The oft repeated statement that Strabo and Pliny (see above) both described the dùm-palm under the name of Thebaic palm is erroneous, for whereas Strabo praised the Thebaic date as being the best, Pliny despised it, as the worst date grown in Egypt. The special bread *caces* which Strabo recommended against fluxes<sup>(2)</sup> was supposed to have been made from the fruit.

These dates are frequently mentioned in the Papyrus Harris.

#### MELONS.

Melon seeds have been discovered in the intestinal contents of predynastic bodies, thus establishing the antiquity of this fruit as an article of food. Wönig<sup>(3)</sup> has identified on Egyptian monuments the *Citrullus vulgaris* Schrad., *Cucumis melo* L., *Cucumis chate* L., *Lagenaria vulgaris* L., and perhaps also *Momordica balsamina* L.

The water-melon, *Battikh* in Egyptian, is often represented as an offering or as a favourite dish offered to guests, and the foliage of this plant (*Citrullus vulgaris* L., var. *colocynthoides* Schweinf.) has been found among the vegetable remains of funeral chambers. Its leaves were present in the coffin of the priest Neb Seni of the XX<sup>th</sup> Dynasty, and when softened in hot water, recovered their intense green colouration. They were identified as belonging to a variety still thriving in the country and usually called Gjurma (Schweinfurth). Other melon leaves found in the same spot could not be classified.

Melons are mentioned among the pleasant foods enjoyed by the Israelites in Egypt<sup>(4)</sup>, whose praises were probably intended for the water-melon, *Citrullus vulgaris*.

The Calabass (*Lagenaria vulgaris* Scringe = *Cucurbita lagenaria* L.) was grown in Egypt as early as 2400 B. C. and some have been found in ancient

<sup>(1)</sup> THEOPHRAST, *Hist. Plant.*, I, 10, V.

<sup>(2)</sup> STRABO, XVII, II, 5.

<sup>(3)</sup> P. 201.

<sup>(4)</sup> *Numbers*, XI, 5.

graves. Those from Dra Abou Nagga in the Cairo Museum date from the XII<sup>th</sup> Dynasty.

The squirting cucumber has been identified on Egyptian monuments (Wönig, 206) and, considering how common this vegetable is now in Egypt, the probability that it existed in ancient times is very great. *Sekhept* generally translated cucumbers, may have been<sup>(1)</sup> a liquid expressed from fruit, or a very juicy fruit, and was included in the list of offerings of the V<sup>th</sup> Dynasty. Among the offerings<sup>(2)</sup> carried by the farm women are large melons (?) striped with green, which may be *sekhept*.

#### POMEGRANATES.

Pomegranates are to be seen in the Passalacqua collection in Berlin, and blossoms of the tree were found by Maspero in a grave of Sheikh Abd el-Gournah (XXVI<sup>th</sup> Dynasty).

They are mentioned several times as offerings of the king<sup>(3)</sup> and in large quantities, e. g. 373 crates; 15,500 measures and 1240 crates, etc. Large plantations of this tree must have existed therefore.

The fruits thereof were crushed by smashing with a club<sup>(4)</sup> and eaten raw or cooked.

#### BALANITES.

*Balanites Ægyptiaca* (*Lelobe* in the Sudan, *Hegelig* in Arab) has been found<sup>(5)</sup> among the offerings of the dead and the stones have been discovered in a mummy tomb not far from the town of Kasr Dakhel in the Libyan Desert<sup>(6)</sup>, and some are to be seen in the Museum of Florence and the Passalacqua Collection in Berlin. The Egyptians<sup>(7)</sup> possibly ate the fruit and left the stone for the dead.

<sup>(1)</sup> MARGARET MURRAY, *Saqqara Mastabas*, Part I, p. 39.

<sup>(2)</sup> *Ibid.*, pl. IX.

<sup>(3)</sup> BREASTED, *Ancient Records*, IV, nos. 234, 241, 301, 379, 391.

<sup>(4)</sup> WÖNIG, 325.

<sup>(5)</sup> SCHWEINFURTH.

<sup>(6)</sup> WÖNIG, 320.

<sup>(7)</sup> SCHWEINFURTH.

The fruit is about as large as a plum, long and oval, with one stone, and a taste which, very bitter at first, then becomes rather insipid though still bitter, and, in my opinion, altogether unpleasant.

A tree called *Sàuba* or *Sàab*<sup>(1)</sup> in hieroglyphics, is supposed to be the *balanites Ægyptiaca*, but botanists are not unanimous on that point.

#### JUJUBE.

The Paliurus grew in Cyrenaica<sup>(2)</sup> and was probably the *Rhamnus paliurus* of Linnæus, or *Ziziphus spina Christi* of botanists. The red fruit contained a nut, the kernel of which had a very agreeable flavour, and greatly improved the taste of wine. An infusion of the paliurus was used by the Troglodytes<sup>(3)</sup>.

It would appear that there were several kinds of paliurus trees. The author just quoted describes in another place the paliurus as «a kind of thorn» with astringent leaves, which, together with the root, had valuable therapeutic properties. This has been identified by Fée as the *paliurus aculectus* of de Candolle.

The paliurus was a favourite article of food in Alexandria<sup>(4)</sup>. The author mentions together the *konnaron* and the *paliouroi*. The first is the size of an elm or fir with many branches of great length and rather thorny, with a round tender leaf. Its fruit, which it bears twice a year, in the spring and autumn, is about the size of a phaulian olive, and very sweet. The fruit was eaten while still green. When it had become dry, it was rubbed into a paste, which was eaten just as it was without any addition of water. Apparently, the fruit of the paliurus was treated in the same way, and was often served as part of the second course in the beautiful city of Alexandria.

#### CAROB.

The carob is represented at Saqqarah<sup>(5)</sup> and is mentioned in the Kahun papyri<sup>(6)</sup>, and in the Papyrus Harris<sup>(7)</sup> as a present to the gods. All kinds of

<sup>(1)</sup> WÖNIG, 319.

<sup>(2)</sup> PLINY, XIII, 33.

<sup>(3)</sup> STRABO, XVI, IV, 17.

<sup>(4)</sup> ATHENÆUS, XIV, 62.

*Mémoires de l'Institut d'Égypte*, t. I.

<sup>(5)</sup> *Plah-holep* (BREASTED, *Ancient Records*, I, no. 24).

<sup>(6)</sup> IDEM, *op. cit.*, II, no. 48.

<sup>(7)</sup> IDEM, *op. cit.*, IV, no. 295.

furniture and utensils, such as chairs, chests, tables, chariots, etc., were made of this wood.

#### APRICOT.

*Yshed*, translated apricots<sup>(1)</sup> are mentioned in the list of offerings of the V<sup>th</sup> Dynasty.

<sup>(1)</sup> MARGARET MURRAY, *Sakkara Mastabas*, Part I, p. 40.

## CHAPTER IV.

### VEGETABLES.

Vegetables were extensively grown in Egypt, but on the whole, the species appear to have been remarkably few. The cheapest and therefore most popular were probably the roots of the marshy plants, lotus and papyrus, which when raw, are fibrous and tough, with a sweetish, slightly bitter not unpleasant taste. Beans, lentils, onions, garlic were eaten by rich and poor alike, whereas, very probably, asparagus, artichokes, etc., the cultivation of which required special attention, were grown for the rich.

#### PAPYRUS.

The papyrus was distinctive of Lower Egypt, and its picture in hieroglyphic writing was the determinative for that part of the country.

The papyrus (*Cyperus papyrus* L., *Papyrus antiquorum* Wille), βίβλος of the ancient Greek authors, grows in marshy places but not in fast running water, and thrives in a garden provided it gets water from time to time. Representations of it are common at all periods of Egyptian history, and the tuberosities of *cyperus esculentus* have been found in many graves, as for instance at Deir el Bahari, and those of an allied species *Cyperus aureus* Ten. are exhibited in the Berlin Museum.

All ancient authors<sup>(1)</sup> agree that the roots and tuberosities of aquatic reeds were eaten by Ethiopians and Egyptians, who also extracted the sweet juices from grasses.

The papyrus rhizome was considered as very nutritious, whether raw, boiled or roasted<sup>(2)</sup>. When eaten raw, the juice was swallowed and the fibrous remains forcibly spat out.

<sup>(1)</sup> WÖSIG, *Pflanzen im alten Aegypten*, p. 130. — <sup>(2)</sup> THEOPHRAST, *Hist. Plant.*, IV, 2.

“Of the Byblus”, says Herodotus<sup>(1)</sup>, “which is an annual plant, after taking it from a marshy place, where it grows, they cut off the tops, and apply them to various uses. They eat or sell what remains, which is nearly a cubit in length. To make this a still greater delicacy, there are many who previously roast it<sup>(2)</sup>.”

The rhizome was a favourite and cheap food for children and the parents cooked “any plain food ready to hand; and they gave them also the lower part of the stem of the papyrus to eat, as far as one can roast it in the fire. Therefore, to bring up a child, costs his parents on the whole 20 drachmæ<sup>(3)</sup>.”

The old, hard and wooden stems were used for fuel and other purposes, and the best writing material was made from the leaf.

Of the cyperusæ the *Cyperus esculentus* L. was probably the best for food. Theophrast.<sup>(4)</sup> says that: “In sandy places not far from the river, the so-called *Malinathalle* grows near the earth. It is round in shape, equal in size to a *medlar*, without stone and without capsule. From this tuberosity spring leaves as in the *Cyperidæ*. The inhabitants gather these tuberosities, and cook them in barley drink, by which process they become very sweet. One generally eats them as dessert.”

This plant is cultivated even now in the Delta on account of its rhizome rich in oil and sugar, and it also grows wild in various parts of the Delta. Its fleshy tuberosities (knollen), the size of a nut and sweet in taste, are sold in the markets of Egypt under the name of *Hab el Aziz*. They are roasted and ground down and sold under the name of “Mandelkaffee”.

A plant called *sari*<sup>(5)</sup>, growing in water and in flat marshy places left by the retreating river, had a hard and curved root from which sprung roots called *saria* which were about two cubits high, triangular like the papyrus and with a similar “head”. These were eaten like the papyrus roots, that is the fibrous part was spat out after long mastication. Sprengel looks upon this plant as *Cyperus fastigiatus* Roth.<sup>(6)</sup> In the same place, Theophrast mentions two other foodstuffs in Egypt, but without giving an accurate description of them. “One kind which is quite excellent lives near ponds and swamps; one uses it green

<sup>(1)</sup> HERODOTUS, II, 92.

<sup>(2)</sup> DIODORUS, I, 80.

<sup>(3)</sup> About 12/-.

<sup>(4)</sup> THEOPHRAST, *Hist. Plant.*, IV, 8, 12.

<sup>(5)</sup> THEOPHRAST, IV, 8.

<sup>(6)</sup> WÖNIG, 130.

but gives it also in winter to the cattle when they have worked. By it they are well fed, even when they have nothing more to eat. Another plant also grows there under the corn; the seed of it, when the corn is cleaned, is softened and placed in wet earth. When it has sprouted, the plant is cut and together with the fruit which is the size of the sesame fruit, round, green and excellent to eat, it is given to cattle.” As *Panicum apressum* L. and *Panicum gros-sarium* L. still grow on parts flooded by the Nile and are used as cattle food, Sprengel thinks that Theophrast meant one of these for the first kind which he mentioned. The second he thinks was probably *Corchorus aestuens* which is still found among the Egyptian corn and gives an excellent food for all cattle.

The *Arundo donax* L. (Spanisches Rohr) was certainly very common, for its panicles occur among hieroglyphic signs. It was probably used as building material, but there is no evidence that it was eaten.

#### LOTUS.

The special characteristics of *Nymphaea lotus* and *Nymphaea caerulea* are well represented on monuments, coffins, etc., and the artists of the IV<sup>th</sup>, V<sup>th</sup> and VI<sup>th</sup> Dynasties often figured both kinds in the same picture. This is the case for instance in the Papyrus Harvest, from the tomb of Ptah-Hotep<sup>(1)</sup>, and on a sarcophagus from Saqqarah, which shows a vase filled with both kinds of flowers.

*Nymphaea caerulea*, however, was in greater request than the other kind, which though often seen in works of art from the IV<sup>th</sup>-XX<sup>th</sup> Dynasty (3733-1233 B. C.) was afterwards eclipsed by the first species. In later times it disappeared almost completely from monuments, and then the botanical characteristics of plants supposed to be *Nymphaea caerulea* are so vaguely drawn that a confusion between it and another kind of nymphaea, namely *Nelumbium speciosum* is always possible. Herodotus clearly knew both species of plants: “There is a second species of the lotus, which grows in the Nile, and which is not unlike a rose. The fruit, which grows from the bottom of the root, resembles a wasp’s nest: it is found to contain a number of kernels of the size of an olive stone, which are very grateful either fresh or dried.”

<sup>(1)</sup> V<sup>th</sup> Dynasty, 3733-3133 B. C.

Homer<sup>(1)</sup> relates how Ulysses came to the land of the Lotophagi (Egypt), who eat flowers as food : « There then we landed on the continent and drew water, and immediately my companions took supper near the swift ships. But when we had tasted of meat and drink, then at length I sent my companions, having chosen two men, giving a herald as third in company with them, to go and inquire what men they were who would eat food upon the land. But they, going immediately, were mingled with the Lotus-eating men : nor did the Lotophagi devise destruction for our men, but they gave them the taste of the lotus. But whoever of them ate of the pleasant food of the lotus, he no longer wished to bring back news, nor return, but preferred to remain there with the Lotophagi eating lotus, and to be forgetful of return. Then indeed weeping, I by force led them to the ships, and dragging, bound them under benches in the hollow ships. But I exhorted my other beloved companions to hasten and embark on the swift ships lest by chance any of them eating of the lotus, should be forgetful of return. » It is possible, however, that the lotus mentioned by Homer was the *Rhamnus lotus*.

The lotus plants<sup>(2)</sup> were probably cultivated artificially in Egypt. Lotus fruits were a very common article of food, for the poor at any rate. Herodotus<sup>(3)</sup> describes how when the Nile had overflowed its banks, an immense quantity of plants of the lily species, *Nymphaea lotus*, which the Egyptians call *lotos*, appeared above the surface : « Having cut down these, they dry them in the sun. The seed of the flower, which resembles that of the poppy, they bake, and make into a kind of bread; they also eat the root of this plant which is round, of an agreeable flavour, and about the size of an apple. » The seeds are numerous, small, quite round, brown and contain a good deal of albumen and are imbedded in a kind of pulp, and<sup>(4)</sup> the whole agglomeration resembles a poppy capsule.

In order to isolate the seeds, the fruits were piled up in heaps, allowed to putrefy<sup>(5)</sup>, and when the shell had rotted away, the capsules were peeled off in the river and the seeds removed, dried and pulverised. Bread was then made from the seeds.

<sup>(1)</sup> HOMER, *Odyssey*, IX, 84.

<sup>(2)</sup> PLINY.

<sup>(3)</sup> HERODOTUS, II, XCII.

<sup>(4)</sup> DIOSCORIDES, IV, 8.

<sup>(5)</sup> THEOPHRAST, *Hist. Plant.*

The Egyptian shepherds triturated the millet-like seeds with water and milk and then made bread with this. « Nothing is supposed to be so healthy and so easily digestible as this bread when it is warm; when cold it is hard of digestion and is more heavy. It is known that men eat it who are suffering from dysentery or tenesmus or any other disease of the abdominal wall. »

The rhizoma of *Nymphaea lotus* is bulbous, round, creeps horizontally, and measures about 0 m. 53 cent. in length and 0 m. 36 cent. in breadth. It is covered by a dry, brown, leathery cortex and has stringy, dirty white, fibrous roots. The root, *Koroïou*, has been well described by Theophrast<sup>(1)</sup>, Pliny and Dioscorides<sup>(2)</sup>. It was excellent for diarrhoea, was somewhat sweet in taste, and was eaten raw, boiled or roasted by the poorer Egyptians. The brown cortex was used as fattening food for pigs<sup>(3)</sup>. Prosper Alpini in 1580, Alyre Raffæan, Delille, Savary in 1777, Savigny and Nectoux in 1800, all testify that the roots of *N. lotus* and *N. caerulea* were still eaten in Lower Egypt.

The second kind of lotus, *Nymphaea caerulea*, which for unknown reasons has almost disappeared now, thrived in Egypt until the middle of the last century.

The third kind, *Nelumbium speciosum* Wille, (*Nymphaea nelumbo* L.)<sup>(4)</sup> the *κίχμος*, *fabia aegyptiaca* of Theophrast<sup>(5)</sup>, the lily or rose of the Nile, is supposed to have been brought from India, and, according to old writers, was a very common plant in Egypt, but not till Roman times.

The bean-grounds<sup>(6)</sup> presented an agreeable sight, and afforded amusement to those who were disposed to recreate themselves with convivial feasts. These entertainments took place in boats with cabins; they entered the thickest part of the plantation, where they were overshadowed with the leaves, which were very large and served for drinking cups, etc.

According<sup>(7)</sup> to Wönig, leaves from this plant are represented on the temple at Esneh.

The rank, multi-jointed and knotted rhizome *κολοκασία* is meaty with a sweet taste, and forms a number of bunch-like fibrous roots, which<sup>(8)</sup> greatly

<sup>(1)</sup> IDEM, IV, 8.

<sup>(2)</sup> DIOSCORIDES, IV, 414.

<sup>(3)</sup> PLINY, XIII, 32; WÖNIG, 29.

<sup>(4)</sup> WÖNIG, 36.

<sup>(5)</sup> THEOPHRAST, XII, 6, IV, 8.

<sup>(6)</sup> STRABO, I, XVII, c. I, 15 c.

<sup>(7)</sup> WÖNIG, 50.

<sup>(8)</sup> THEOPHRAST, IV, 8.

resemble those of the bulrush. The whole fruit or *Kiborion*<sup>(1)</sup> has been compared to a wasp's nest<sup>(2)</sup> or to the head of a poppy<sup>(3)</sup>, and all ancient writers agree that not more than thirty beans are present in any one fruit.

The seeds measure 0 m. 015 mill. × 0 m. 01 cent. and enclose a meaty, white kernel, and were described as being the size of an olive stone<sup>(4)</sup> or an Egyptian bean. Strabo thought it necessary to explain that they differed both in size and taste from the garden bean. No part of the plant remained unused<sup>(5)</sup>. The seeds were eaten fresh or dried, the roots raw, or boiled or roasted<sup>(6)</sup>, and the dried fruit capsules were rubbed into a farinaceous magma<sup>(7)</sup>. From the root a stomach-strengthening soup was prepared<sup>(8)</sup> which was an excellent remedy against «excoriationem cholericam and dysenteries»; the green part (gum of the seed) when rubbed up with oil and trickled into the ear calmed earache, and the flattish funnel or key-shaped leaves were used as drinking vessels in Alexandria.

#### COLOCASIA.

The *Arum colocasia*<sup>(9)</sup> may have been grown in ancient Egypt, but no certain evidence exists concerning this point. A plant called *aron*<sup>(10)</sup> is described as being as large as a squill, with a leaf like that of *lapathum* and a straight stalk a couple of cubits in length and the thickness of a walking stick. The root was of a «milder nature, so much so, indeed, as to admit of being eaten raw».

#### BEANS.

A passage of Herodotus<sup>(11)</sup> has served as a basis for the oft repeated assertion that beans were not eaten by ancient Egyptians. «Beans are sown in no part of Egypt, neither will the inhabitants eat them, either boiled or raw; the

<sup>(1)</sup> DIODORUS, DIOSCORIDES.

<sup>(2)</sup> THEOPHRAST AND HERODOTUS.

<sup>(3)</sup> PLINIUS.

<sup>(4)</sup> HERODOTUS.

<sup>(5)</sup> STRABO, XVII, c1, 15 c.

<sup>(6)</sup> HERODOTUS.

<sup>(7)</sup> DIODORUS.

<sup>(8)</sup> DIOSCORIDES.

<sup>(9)</sup> WÖNIG, 130.

<sup>(10)</sup> PLINY, XIX, 30.

<sup>(11)</sup> HERODOTUS, II, 37.

priests will not even look at this pulse, esteeming it exceedingly unclean.» The statement is certainly incorrect, for seeds of *Faba vulgaris* Mönch. (*Vicia faba* L.)<sup>(1)</sup>, the ordinary broad bean (horse or tick-bean), have been discovered in the funerary offerings of the XII<sup>th</sup> Dynasty. One seed of the Indian bean (*Cajanus Indicus* L.) has also been found<sup>(2)</sup>. Among the offerings of Ramses III to the Nile god<sup>(3)</sup> 11,998 jars, and again<sup>(4)</sup> 2,396 jars of shelled beans are mentioned. Ancient authors, Pliny, Diodorus, etc., bear witness to the cultivation of beans in Egypt. There is some evidence, however, that priests and certain Egyptians avoided this vegetable, the priests<sup>(5)</sup> because mashed beans were given as mortuary offerings and were offered to the gods, and other Egyptians did so for philosophical reasons. «Some abstain, says Diodorus, from eating lentils, others from beans, others again from cheeses, onions and other foods abundant in Egypt. They thus give to understand that men should know how to abstain from certain things necessary to life, and that if one wished to eat of everything, nothing would suffice.»

Beans were used to adulterate Galbanum<sup>(6)</sup>.

Egyptian beans were exported to Rome, though, apparently, they were considered of inferior quality there. «You will deride this Egyptian vegetable, with its wool that sticks so closely, when obliged to tear its obstinate filaments with teeth and hands<sup>(7)</sup>.»

#### LENTILS.

Mashed lentils<sup>(8)</sup> — *Lens esculenta* Mönch. — have been found among the mortuary offerings of the XII<sup>th</sup> Dynasty, also at Dra Abou Nagga<sup>(9)</sup> and at Deir el Bahari<sup>(10)</sup>. In the tomb of Ramses III in Thebes, a servant is represented sitting before a cauldron and cooking lentils. In times of famine<sup>(11)</sup>, bread was made from them.

<sup>(1)</sup> SCHWEINFURTH, *Bull. de l'Inst. égyptien*, 1884, p. 3.

<sup>(2)</sup> WÖNIG.

<sup>(3)</sup> *Pap. Harris* (BREASTED, *Ancient Records*, IV, no. 301).

<sup>(4)</sup> IDEM, *op. cit.*, IV, no. 350.

<sup>(5)</sup> PLINY, XVIII, 30.

*Mémoires de l'Institut d'Égypte*, t. I.

<sup>(6)</sup> DIODORUS, I, 89.

<sup>(7)</sup> PLINY, XII, 56.

<sup>(8)</sup> WÖNIG, 215.

<sup>(9)</sup> SCHWEINFURTH, *Bull. de l'Inst. égyptien*, 1884, p. 7.

<sup>(10)</sup> CAIRO MUSEUM.

<sup>(11)</sup> WÖNIG, 214.

The best<sup>(1)</sup>, greatly appreciated in Alexandria, came from Pelusium<sup>(2)</sup> and from Phacusa, the lentil town. This vegetable being a favourite crop in Italy, large quantities of it were exported from Egypt to that country. Caligula's ship<sup>(3)</sup> carried the great obelisk to Rome and 120,000 measures of lentils also. The Romans greatly appreciated this vegetable: «Receive these Egyptian lentils, a gift from Pelusium; if they are not so good as barley, they are better than beans»<sup>(4)</sup>.

Two kinds were grown<sup>(5)</sup> and were eaten by rich people. When cooked with oil and garlic, they became of a chocolate-brown colour, and the «red pottage»<sup>(6)</sup> or pottage of lentils<sup>(7)</sup> owed its red colour<sup>(8)</sup> to the lentils having been shelled before cooking<sup>(9)</sup>.

The fondness of the Alexandrians for lentils was a subject for chaff by the Greeks<sup>(10)</sup>, who maintained that all the fine gentlemen of the town were fed on them from childhood, and that «the whole city was full of things made of lentils».

#### ONIONS.

Egyptian onions, greatly appreciated by connoisseurs, have none of the disagreeable, biting taste of the European onion, but are almost sweet in taste, very white in colour, with an extremely thin and tender skin. They have been cultivated from the earliest times, e. g. at the time of the Pyramid builders, and are now a favourite article of food for all classes of the population. *Hezin* onions figure among the list of offerings of the V<sup>th</sup> Dynasty<sup>(11)</sup>, and as late as the Christian era we find St. Appolonius saying that the Egyptians give the name of god to the onion. The Israelites<sup>(12)</sup> greatly regretted the onions of Egypt. Nevertheless, the Egyptian onions were not always appreciated, and Athenæus<sup>(13)</sup>, for instance, discussing the properties of several kinds

<sup>(1)</sup> WIEDERMAN, 178.

<sup>(2)</sup> GALEN, ed. Küh, XI, 142; ATHENÆUS, *Deponosophists*, IV, 158; VIRGIL, *Geor.*, I, 228, II, 120.

<sup>(3)</sup> WÖNIG, 215.

<sup>(4)</sup> MARTIAL, *Epigrams*, III, LX.

<sup>(5)</sup> PLINY, XVIII, 31.

<sup>(6)</sup> *Genes.*, XXV, 30.

<sup>(7)</sup> *Ibid.*, 34.

<sup>(8)</sup> REYNIER.

<sup>(9)</sup> WÖNIG, 214.

<sup>(10)</sup> ATHENÆUS, IV, 48.

<sup>(11)</sup> MARGARET MURRAY, *Saqqara Mastabas*, I, pl. 38.

<sup>(12)</sup> *Numbers*, XI, 5.

<sup>(13)</sup> ATHENÆUS, II, 65.

of onion, e. g. the royal, the red, the white, the Libyan, exclaims that the Egyptian onions were «the worst of all».

They were offered<sup>(1)</sup> by the king to the gods, and are represented time after time as mortuary offerings. In the 15<sup>th</sup> Ceremony of the Liturgy of funerary offerings<sup>(2)</sup>, the Sem priest offers onions to the deceased while the Kher-heb exclaims: «Osiris Unas, the white teeth of Horus are presented unto thee that they may fill thy mouth».

A similar formula was used in the 68<sup>th</sup> Ceremony when four onions, or bunches of onions were offered: «Osiris Unas, his (i. e. Horus's) teeth, which are white and health giving, have been brought unto thee», and with slight modifications, this prayer is repeated several times in the liturgy of funerary offerings.

As for all strongly smelling foods, there were particular laws regulating the use of the onion. Thus for reasons by no means clear, the eating of onions was rigidly forbidden to priests<sup>(3)</sup>, perhaps because, according to tradition<sup>(4)</sup>, Dictus, the suckling of the goddess Isis, fell into the river and was drowned when endeavouring to seize onions. Plutarch rejects this theory and attributes the aversion of the priests to this vegetable to the supposed fact that the onion grows in size and strength during the decline of the moon only.

The aversion of certain Egyptians to onion was also noted by Diodorus Siculus<sup>(5)</sup>. «As a matter of fact, the onion is good neither for fasting sinners, nor for those who go for merry feasts; in the first they provoke thirst, and it brings tears into the eyes of the others»<sup>(6)</sup>.

Others<sup>(7)</sup> maintained that onions were good for the stomach, as they set the winds in motion.

Three stereotyped forms of onions appear on Egyptian monuments<sup>(8)</sup>. The first, *Allium sativum* L. or garlic, has small leaves surrounding the shaft-like sheath up to its middle; the second, *Allium cape* L., Tree or Egyptian onion. The last, with a long egg-shaped head, and long round shaft, is the levantine Shalot, *Allium Ascalonicum*.

<sup>(1)</sup> *Pap. Harris* (BREASTED, *Ancient Records*, IV, nos. 296, 348).

<sup>(2)</sup> BUDGE, *Liturgy of funerary offerings*, pl. 74, 119.

<sup>(3)</sup> PLUTARCH, *De Iside*.

<sup>(4)</sup> PLUTARCH, *De Iside et Osiride*, 7.

<sup>(5)</sup> DIODORUS, I, 1.

<sup>(6)</sup> PLUTARCH.

<sup>(7)</sup> PLINY, XX, 20.

<sup>(8)</sup> WÖNIG, pl. 196.

Garlic and onions<sup>(1)</sup> were invoked by the Egyptians, when taking an oath, in the number of the deities. The inhabitants of Pelusium<sup>(2)</sup> more particularly were devoted to the worship of the onion, holding it in common with garlic, in great aversion as an article of food. At Pelusium there was also a temple in which the sea-squill was worshipped. Onions are not unfrequently found among the bandages or in the coffins of mummies of the XXI<sup>st</sup> Dynasty, and even as early as the XIII<sup>th</sup> Dynasty, and onion skins were sometimes placed over the eye of the dead.

#### GARLIC AND LEEK.

The poor Egyptians probably ate very large quantities of garlic and leeks, and the pleasant, sweet taste of Egyptian and Syrian garlic was praised by ancient authors<sup>(3)</sup>. The Egyptian garlic was very strong and particularly suitable for persons « who change water or place ».

The Spanish leek (*Allium porrum* L.), so good as to be grown in Homeric times in special gardens, and also mentioned in the Bible<sup>(4)</sup>, was grown<sup>(5)</sup> in ancient Egypt.

Seeds of *Allium* are contained in the Passalacqua Collection.

Garlic was much used in Greek cookery<sup>(6)</sup> as, for instance, a seasoning for fish, and large quantities of it therefore must have been used in Alexandria.

#### SALADS.

Salads<sup>(7)</sup> made from shoots and leaves of chicory (*Chicorium intybus* D.) was a favourite food on account of its bitterness. The wild endive or chicorium<sup>(8)</sup> grew in Egypt, together with a smaller cultivated kind, Seris, distinguishable by its size and by the great vascularity of its leaves.

Chicory had the most wonderful therapeutic magical properties, so much so that it was called « ehrestion » and « pancration » by its admirers.

<sup>(1)</sup> PLINY, XIX, 32.

<sup>(2)</sup> BOSTOCK and RILEY in PLINY.

<sup>(3)</sup> PLINY, XXXVI, 12; XX, 23.

<sup>(4)</sup> *Numbers*, XI, 5.

<sup>(5)</sup> PLINY, XIX, 23.

<sup>(6)</sup> ATHENEUS, VI, 16.

<sup>(7)</sup> WÖNIG, 221.

<sup>(8)</sup> PLINY, XIX, 39; XX, 29.

#### ARTICHOKES.

Artichokes are represented on many Egyptian monuments<sup>(1)</sup> although, strangely enough, de Candolle remained doubtful on this point. One observer, however<sup>(2)</sup>, copied 36 different modifications of this vegetable, and pointed out that the head was generally coloured dark green or bright green, with its leaves often outlined in yellow. In Mauretania<sup>(3)</sup> the artichoke grew 12 cubits in height, and 4 palms in thickness.

#### ASPARAGUS.

Asparagus<sup>(4)</sup> is represented on the wall of a grave at Saqqarah dating from the V<sup>th</sup> Dynasty (3566-3333 B.C.). The asparagus represented on monuments was *Asparagus officinalis* L.<sup>(5)</sup>, which is common in Egypt now; but several kinds probably existed, for Columella and Theophrast describe asparagus which was thorny and leafless. This may have been *Aspargillus aphyllus* Tournefort.

The asparagus described by Dioscorides was perhaps *Asparagus acutifolia* L. of which the lightly boiled shoots have a mild purgative and diuretic action. When mixed with white wine they relieved nephritic pains, were slightly diuretic, and when boiled and roasted they cured dysuria and dysentery. Asparagus was also recommended as a remedy against tooth-ache<sup>(6)</sup>.

It was certainly grown in Græco-Roman times, for 19 bundles of asparagus are mentioned in one of the Oxyrhynchus Papyri<sup>(7)</sup>.

#### CABBAGES.

Though cabbages were eaten, representations of these vegetables do not occur on monuments. 620 heket of cabbages were offered by Ramses III<sup>(8)</sup> for the new feasts, and 390,215 measures and bundles of cabbages, *litani* fruit and southern fruit are mentioned in the recapitulation of the king's gifts.

<sup>(1)</sup> WÖNIG, 209.

<sup>(2)</sup> WÖNIG, 209.

<sup>(3)</sup> STRABO, XVII, III, 5.

<sup>(4)</sup> WÖNIG, 208.

<sup>(5)</sup> F. UNGER.

<sup>(6)</sup> PLINY, II, 151.

<sup>(7)</sup> HUNT, Part IX, p. 257.

<sup>(8)</sup> BREASTED, *Ancient Records*, IV, no. 240.

The Alexandrian cabbage was notoriously bitter and attempts to improve it failed<sup>(1)</sup>, because the seed imported from Rhodes produced good cabbage for one year, and then rapidly degenerated, owing, it was said, to the nature of the soil. So poor was the quality of Egyptian cabbage that<sup>(2)</sup> it was despised in that country, a fact which doubtless astonished Romans who were very partial to cabbage sprouts<sup>(3)</sup>.

#### RADISH.

The Radish (*Raphanus sativus* L.) was grown in ancient Egypt and was<sup>(4)</sup> greatly valued for its seed which yielded large quantities of oil. Whenever possible, radishes rather than any other vegetables were sown, as the profit from such a crop was greater than from corn even, and at very small expense.

Herodotus<sup>(5)</sup> mentions that part of the food of the pyramid builders consisted of radishes.

#### MANGOLD.

The mangold (*Beta vulgaris*) was probably cultivated in Egypt also (Wönig).

#### LEEKs.

Leeks (*Allium porum* L.) mentioned by Homer as being grown in special gardens, were greatly missed by the Hebrews on their wanderings. Egyptian leeks had the reputation of being the best<sup>(6)</sup>, the second best coming from Ostia and Aricia<sup>(7)</sup>.

#### BAMIA.

A tree<sup>(8)</sup> painted on the walls of Beni Hasan is said, though without proof, to represent the bamia-tree, and a fruit called *bannu* is mentioned in the Papyrus Harris.

<sup>(1)</sup> ATHENEUS, IX, 9.

<sup>(2)</sup> PLINY, XX, 35.

<sup>(3)</sup> MARTIAL, *Dinner menus*.

<sup>(4)</sup> PLINY, XX, 12, 13.

<sup>(5)</sup> HERODOTUS, II, 125.

<sup>(6)</sup> PLINY, XIX, 33.

<sup>(7)</sup> See also MARTIAL, III, 119.

<sup>(8)</sup> WÖNIG, 219.

#### OIL.

Oil, the most important article of Egyptian food after bread, is mentioned very frequently in the records of all times. To receive oil from the table of a king was a great honour, and it was freely presented by the kings to the gods, to Ra<sup>(1)</sup>, to the Nile god<sup>(2)</sup>, to Ptah<sup>(3)</sup>, to Horus at Athribis<sup>(4)</sup>, etc., and as the temples consumed a great deal of it for illumination<sup>(5)</sup> and other purposes, it was necessarily part of the god's income.

The sacred oils enumerated on many monuments played an important part in religious ceremonies. In the tomb of Shades, dating from 3500 B.C.<sup>(6)</sup>, the 7 scented oils are shown contained in jars duly labelled with their names. Griffith calls them *Set Heb* (Festival scent), *Heknu* (Offering), *Seft*, *Khmem*, *Tuau*, *Hatet āsh* (cedar oil?) and *Hatet Tehenu* (Libyan oil). At Beni Hasan<sup>(7)</sup>, the jars containing five sacred oils are carefully tied up, and each knot sealed with clay, the lid being, no doubt, a separate disc. The stopper is made air-tight by a large piece of material reaching half-way down the body of the vase, and terminating there in a wavy edge. This material, which is tightly stretched and clings closely to the vase, is clearly the skin of a goose or other bird, from which the feathers have been plucked. Modern perfumers, let it be noted, also close with animal membranes bottles of scented oils.

The four most important oils of daily life were sesamum oil, olive oil, enicis oil and castor oil. The favourite cooking oil was extracted from the *Sesamum orientale*, a plant not figured on early Egyptian monuments. This oil therefore was probably imported in early times from Syria, where the sesamum bush was always extensively cultivated<sup>(8)</sup>. Nowadays the oil<sup>(9)</sup> is extracted from the seeds of *Sesamum orientale* or *Sesamum Indicum*, which when in good condition yield from 49-51 per cent of oil.

Nevertheless, the cultivation of Sesamum in Egypt on account of the oil in its seed is attested by Theophrastus, Dioscorides, Plinius, and it was Ælius

<sup>(1)</sup> *Pap. Harris* (BREASTED, *Ancient Records*, IV, no. 286).

<sup>(2)</sup> IDEM, *op. cit.*, no. 299.

<sup>(3)</sup> IDEM, *op. cit.*, nos. 329, 344.

<sup>(4)</sup> IDEM, *op. cit.*, IV, no. 360.

<sup>(5)</sup> IDEM, *op. cit.*, IV, no. 992.

<sup>(6)</sup> FL. PETRIE, *Deshashch*, 46.

<sup>(7)</sup> GRIFFITH, *Beni Hasan*, p. 31, pl. VI.

<sup>(8)</sup> GRENFELL, *Revenue Laws*, pl. 150.

<sup>(9)</sup> WRIGHT, in GRENFELL, *Revenue Laws*, pl. 39.

Gallus<sup>(1)</sup>, prefect of Egypt in 24 B.C., who is reported to have made the great discovery that the Nomads extracted oil from sesame.

### OLIVE.

Olive twigs have been found in very ancient graves<sup>(2)</sup>, and bundles of olive twigs may be seen in many museums.

Funeral garlands of olive leaves dating from the XXII<sup>nd</sup> and XXV<sup>th</sup> Dynasty are in the Leyden Museum, others from Sheikh Abdel Gurnah from the XX<sup>th</sup> to XXVI<sup>th</sup> Dynasty may be seen in the Cairo Museum. Maspero found an olive crown on a Greek mummy at Thebes.

Ramses III<sup>(3)</sup> boasted of his great olive lands «planted with great trees in all their many parts, wherein was oil more than the sand on the shore». And again<sup>(4)</sup>: «I made for thee olive lands in the City of Heliopolis, equipped them with gardeners and numerous people, to make pure oil, and the best in Egypt, in order to light the flame in thy august house». The passage suggests that olive oil was occasionally used for lighting temples. It was presented as a gift to Ra<sup>(5)</sup> or other gods<sup>(6)</sup>. Under Seti I<sup>(7)</sup> olive oil was part of the rations of king's messengers and standard bearers, and it was imported from Greece also. Plato, for instance, is supposed to have earned his living in the Nile Valley by selling olive oil. In spite of a heavy tax, it was also brought from Syria during the Alexandrian period<sup>(8)</sup>, but nevertheless it does not appear to have been in great request for cooking or lighting during the Ptolemaic period, since the state did not monopolise its sale, as it did with other oils.

The olive-tree never was popular in Egypt though it is represented on the walls of Tell el Amarna<sup>(9)</sup>. In the first century, the Arsinoite was, it is said, the only nome planted «with large, full-grown, olive trees, bearing fine

<sup>(1)</sup> PLINY, VI, 33.

<sup>(2)</sup> WÖNIC, 330.

<sup>(3)</sup> *Pap. Harris*, XX<sup>th</sup> Dynasty (BREASTED, *Ancient Records*, IV, no. 216).

<sup>(4)</sup> *Idem*, *op. cit.*, no. 263.

<sup>(5)</sup> BREASTED, *Ancient Records*, IV, no. 288.

<sup>(6)</sup> *Pap. Harris* (BREASTED, *Ancient Records*, IV, nos. 239, 241, 379, 393, etc.).

<sup>(7)</sup> XIX<sup>th</sup> Dynasty (BREASTED, *op. cit.*, III, no. 208).

<sup>(8)</sup> GRENFELL, *Revenue Laws*, pl. 150.

<sup>(9)</sup> WÖNIC, 327.

fruit». Had proper precautions been taken the oil would have been good, but owing to the carelessness of the farmer the smell was often very unpleasant. The olives near Alexandria were grown for the table and not for lighting and the trees acted as supports for vines<sup>(1)</sup>.

The olive tree (*Olea Europæa* L.) was grown in the Thebaïd<sup>(2)</sup>, some 300 stadia inland, where its plantations were watered by brooks and springs; a statement very difficult to understand. It has been suggested that<sup>(3)</sup> oases of the Libyan desert are meant, but the distance of these oases from the Nile does not agree with that given by Strabo. Wönig states that the olive tree now grows luxuriantly in these oases, but I saw very few olive trees during my visit<sup>(4)</sup>. The olives of the Fayoum alone have remained celebrated to this day, and some of the huge olive trees of that province may possibly date from Greek or Roman times. Nevertheless, Egypt was considered by the Romans<sup>(5)</sup> to be a land poor in oil, and the «meaty olives» grown there were of little use for oil making.

Olive oil was not as important to the Egyptians as to the Greeks and Romans who looked upon it as the very best oil for cooking and lighting. Still, the custom of presenting successful athletes with oil was followed by the Egyptian Greeks<sup>(6)</sup>, and vases to hold the prize oil from the sacred olive trees have been discovered in Alexandria and the neighbouring Cyrene. On one side of these vases Athena, armed with helmet, lance, and shield, stands between two columns, on the top of which there are either cocks, owls, or a statue of Athena, etc.; in the field one reads the following inscription arranged vertically: ΤΩΝ ΑΘΕΝΕΘΕΝ ΑΘΛΩΝ (Prizes given at Athens in the athletic games). Often, a second inscription gives the name of the archontes who was then in power, and on the other side of the amphora, a scene of the plays in the stadium. One vase can thus be dated from 370 B.C. and the other from 340 B.C.

Cneus or Cnicus oil, monopolised by the Ptolemaic government, was probably made from the seeds of the safflower or bastard saffron, or *Cartha-*

<sup>(1)</sup> STRABO, XVII, 1, 35.

<sup>(2)</sup> THEOPHRAST, *ibid.*

<sup>(3)</sup> WÖNIC, 327.

<sup>(4)</sup> See also H. J. L. BEADNELL, *An Egyptian*

*Mémoires de l'Institut d'Égypte*, t. I.

*Oasis*, pl. 222.

<sup>(5)</sup> PLINY.

<sup>(6)</sup> Musée d'Alexandrie, salle 18, vitr. B, pl.

255.

*mus tinctorius*<sup>(1)</sup>. Flowers of this plant arranged in small bundles had been found on the mummy of Amenhotep I of the XVIII<sup>th</sup> Dynasty, but the flower is not represented on monuments. The yellow colour of the mummy linen and mummy bandages<sup>(2)</sup> was usually due to the saffron dye.

The suggestion<sup>(3)</sup> has been made that enecus oil was almost certainly extracted from the seeds of some composite plant, possibly an artichoke, or possibly from a sunflower seed. There are no facts to support this theory. On the contrary, the Egyptian<sup>(4)</sup> enecus, the seeds of which gave the *Oleum enicicum Aegyptium*, existed in two varieties, wild and domesticated, and of the former there were, again, two sorts, and it is distinctly stated that the enecos was a thorny plant, *enecos* means a thistle-like plant and this word accurately describes the saffron plant of Pliny.

A third oil, Kiki, usually called croton oil, was really castor oil. The inhabitants of the marshy<sup>(5)</sup> grounds, says Herodotus, made use of an oil termed by them Kiki, expressed from the Sillicyprian plant. This<sup>(6)</sup> evidently was the *ricinus communis* of Cyprus, where it was called *σέτελλ*.

*Κυκρίς* - Sillicyprian. It grew on the banks of the Nile or of canals, and produced abundant strong-smelling fruit from which an unctuous liquid was expressed, which notwithstanding its offensive smell, was as good as olive oil for burning.

The plant<sup>(7)</sup> called *Sesamum sylvestre* and croton, when extracted with salt under pressure, yielded an oil useful enough "but dreadful as food". It is possible, though by no means proved, that the "caecis" of Strabo<sup>(8)</sup>, used as "statikon Koilias" or hemmer of colic, contained castor oil, which may have removed the cause of the colic by purgative action and may thus have been of some use. Poor people<sup>(9)</sup> anointed themselves with castor oil just as my Bishari and Ababdi guides in the Eastern desert did every month. Well preserved seeds of the castor-oil plant have been found in several graves.

<sup>(1)</sup> WÖNIG, 351.

<sup>(2)</sup> *Ibid.*, 352.

<sup>(3)</sup> WRIGHT in B. P. GRENFELL, *Revenue Laws*, p. 39.

<sup>(4)</sup> PLINY, XXI, 53, 56.

<sup>(5)</sup> HERODOTUS, II, XXIV.

<sup>(6)</sup> WIEDEMANN, *Commentaries*, p. 382.

<sup>(7)</sup> PLINY.

<sup>(8)</sup> STRABO, I 7, 824.

<sup>(9)</sup> STRABO, *ibidem*.

The oil was extensively used for lighting<sup>(1)</sup>, even in temples<sup>(2)</sup> as is shown by an inscription on a statue at the Louvre Museum: "I, the dead, gave Takem (= Castor oil) to light the lamps of your temple in Elephantine".

This strong smelling oil may possibly have been used for cooking by the poorest inhabitants, a practice which has not yet died out in Nubia, and China.

Colocynth oil, mentioned in the *Revenue Laws* as a monopoly, was probably made from the *Citrullus colocynthis*, a plant still used as food by the tribes of the Sahara, who extract a coarse oil from it. The pulp contains only about 3 per cent of fixed oil, whilst the seeds contain about 15 per cent. It was used for anointing the body "only by the poorer sort of people and labourers, both men and women".

Linseed oil and oil of pumpkins were included in the monopoly made by Ptolemaic rulers<sup>(3)</sup>. Little is known regarding the preparation and use of linseed oil, except that it was evidently in request for lighting.

Great quantities of oil were made in Egypt<sup>(4)</sup> from radish seed (*Raphanus sativus* L.) or else from a common grass known there as chortinon. It was<sup>(5)</sup> much used during the Roman period, possibly because, not being included in a monopoly, its price was low, and although it was considered a very inferior oil it was occasionally used in cooking<sup>(6)</sup>.

There were also many different kinds of oil about which very little is known.

*Sefet* oil, mentioned in the V<sup>th</sup> Dynasty under Pepy II<sup>(7)</sup>, evidently had its special uses as revealed in the following inscription: "I buried my father the count, Zau, beyond the splendour, beyond the goodliness of any equal of his who was in this South. I requested as an honour from the majesty of my lord, the king of Upper and Lower Egypt, Neferkere (Pepy II) who lives for ever, that there be taken a coffin, clothing and festive perfume for this Zau. His Majesty caused that the custodian of the royal domain should bring a coffin of wood, festive perfume, *sft* oil, clothing, 200 pieces of prime linen,

<sup>(1)</sup> STRABO, XVII, II, 5, and DIOD., 38.

<sup>(2)</sup> WIEDEMANN.

<sup>(3)</sup> REIL, 137.

<sup>(4)</sup> PLINY, XV, 7.

<sup>(5)</sup> REIL, 138.

<sup>(6)</sup> DIOSCORIDES, I, 37.

<sup>(7)</sup> BREASTED, *Ancient Records*, I, no. 382.

and of fine southern linen of (—) taken from the double white house of the court of this Zau, etc. Evidently, this oil was used for anointing the dead or embalming. It is mentioned under Ramses III as a gift to the gods<sup>(1)</sup>, and was also imported from Syria<sup>(2)</sup>.

Another oil used for embalming, the so-called Festival oil, is mentioned in the inscriptions of Sebni<sup>(3)</sup> dating from the same reign. The inscription describing the embalment of a man called Mekhu, states: «He brought Festive oil from the double White House».

A special sweet oil, also imported from Syria<sup>(4)</sup>, was part of the rations of King's messengers and standard bearers<sup>(5)</sup> under Seti I in the XIX<sup>th</sup> Dynasty.

«Sweet oil of gums» was possibly a more expensive oil, as only small quantities of it were given away, and only as a special favour. Ramses IX<sup>(6)</sup> wishing to reward his favourite<sup>(7)</sup> decides that: «Command has been given to the overseers of the White House, the butler of Pharaoh and all the Princes, to give to thee praise, to anoint thee with *sweet oil of gums*, etc.».

Green oil<sup>(8)</sup>, a special oil also, was imported from Syria in large quantities. Other oils occasionally mentioned are red *bf* oil<sup>(9)</sup> and *nhh*<sup>(10)</sup>, oil from Syria, *nhh* oil from Egypt, and also *thnt* oil<sup>(11)</sup>.

Several qualities of oil existed, for in the same paragraph, not «oil», but «best oil», also are offered to a god<sup>(12)</sup>.

Before the Ptolemaic period, oil was freely imported into Egypt by commerce or as a tribute. It is mentioned as a tribute from Punt on the walls of the tomb of Rekhmara<sup>(13)</sup>, and several times as a tribute from abroad<sup>(14)</sup>. Syria, the land of the olive tree and the sesame bush, was the great oil country, and it is no wonder therefore that oil figures prominently in the tribute<sup>(15)</sup>

<sup>(1)</sup> *Pap. Harris* (BREASTED, *Ancient Records*, IV, no. 376).

<sup>(2)</sup> *Idem*, *op. cit.*, II, no. 518.

<sup>(3)</sup> *Idem*, *op. cit.*, I, no. 370.

<sup>(4)</sup> *Idem*, *op. cit.*, II, no. 482.

<sup>(5)</sup> *Idem*, *op. cit.*, III, no. 208.

<sup>(6)</sup> *Records of the Royal Tombs Robberies*.

<sup>(7)</sup> BREASTED, *Ancient Records*, IV, no. 497.

<sup>(8)</sup> *Idem*, *op. cit.*, II, nos. 509, 518.

<sup>(9)</sup> *Idem*, *op. cit.*, IV, nos. 239, 376.

<sup>(10)</sup> *Idem*, *op. cit.*, IV, nos. 239, 376.

<sup>(11)</sup> VI<sup>th</sup> Dynasty (BREASTED, *Ancient Records*, I, no. 366).

<sup>(12)</sup> *Idem*, *op. cit.*, IV, no. 394.

<sup>(13)</sup> XVIII<sup>th</sup> Dynasty (BREASTED, *Ancient Records*, II, no. 750).

<sup>(14)</sup> *Stela of Intef the Herald* (BREASTED, *Ancient Records*, II, no. 771).

<sup>(15)</sup> *Idem*, *op. cit.*, II, no. 509.

from Retenu<sup>(1)</sup>, the Naharin<sup>(2)</sup>, the Zahi<sup>(3)</sup> and other Syrian and Phœnician tribes.

The Ptolemies monopolised the oil trade, prohibited the importation of foreign oil at first and taxed it heavily afterwards. «No one shall be allowed to introduce foreign oil into the country whether from Alexandria or Pelusium or any other place. Offenders against this law shall both be deprived of the oil, and in addition pay a fine of 100 dr. for each metrites and for less, or more in proportion. If any persons bring with them foreign oil for their private use, those who enter the country from Alexandria shall register themselves at Alexandria, and pay a duty of 12 dr. for a metrite, and less in proportion and shall bring a receipt for it before they bring it into the country.» Elaborate precautions were taken to secure the identification of those who had paid the import duties.

Egyptian oil was taxed heavily and the tax-farmers<sup>(4)</sup> paid a fixed sum to the state, elaborate precautions being taken to prevent immoderate profits.

The area of land to be planted with sesame or castor-oil plant, etc. in each province, was decreed before each season and the crops were received and forwarded to Alexandria by a special official. The price paid by contractors varied according to the care taken by the cultivators: according as to whether, for instance, the plant had been cleaned or not.

The royal factory was practically the only oil-factory, for temples were allowed to make oil under very strict control only: «Those who make oil<sup>(5)</sup> in the temples throughout the country shall declare to the contractor and the agent of the œconomus and antigrapheus, the number of oil-factories in each temple, and the number of mortars and presses, etc.» Very heavy fines were imposed in case of non-compliance with these rules, or in case of the sale to private people of oil made in the temples.

Only sesame oil was made in the temples in the presence of an official and during a period of two months only, during which the yearly supply must be completed. The Kiki oil for the temples was supplied at a fixed price by the contractors.

<sup>(1)</sup> BREASTED, *Ancient Records*, II, no. 475. Thutmoses III, XVIII<sup>th</sup> Dynasty.

<sup>(2)</sup> *Idem*, *op. cit.*, II, no. 482.

<sup>(3)</sup> *Idem*, *op. cit.*, II, no. 519.

<sup>(4)</sup> *Laws of Ptolemy Philadelphus*.

<sup>(5)</sup> *Idem*, pl. 50.

Any one making oil mortars or oil presses risked a heavy fine, and those existing when the law was passed had to be registered. The contractors had the right to search for concealed oil presses, the rights of the public being duly safeguarded, in case no press of oil was found. Certain government officials were bound to attend during the search, but if after due notice given, they failed to appear; or to stay during the search, they were heavily fined. Any one pressing oil or begging it except from a contractor was heavily fined, or incarcerated in case of non-payment of the fine.

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