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Description

OF AN

EGYPTIAN MUMMY,

PRESENTED TO

THE MASSACHUSETTS GENERAL HOSPITAL;

WITH AN

ACCOUNT OF THE OPERATION OF EMBALMING,

IN

ANCIENT AND MODERN TIMES.

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This Mummy was sent to Boston by Mr Van Lennep, merchant of Smyrna, to be given to some public establishment as a mark of respect to the city. This gentleman had requested Mr Lee, British Consul in Alexandria, to procure a mummy; and the latter, "having found," as he says in his letter, "that no good ones, opened, were to be found in this place or Cairo, commissioned a person going to Thebes to select one, and he succeeded in procuring the best that had been seen for a long time." On its arrival in Boston it was placed in the charge of Bryant P. Tilden, Esq., and Captain R. B. Edes, who thought they should best accomplish the intentions of Mr Van Lennep, by presenting it to the Massachusetts General Hospital, in order to aid the funds of this charitable institution*. They requested my colleagues Doctors

* It is understood that a considerable sum has been already received for its public exhibition.

Jackson and Gorham, with myself, to open the cases, and examine their contents; and afterwards the trustees of the Hospital, having received the donation, desired me to give a description of it for the satisfaction of the public. The freshness and fine state of preservation of every part, led some persons to suggest that it might be one of those fabricated mummies, of which we have heard. These suspicions induced me to examine every thing belonging to it with great care, that I might be able, if it proved genuine, to do justice to the gentleman who presented it, and to afford the Hospital the fair benefit of its exhibition. The results of this investigation, together with two drawings made from the outer case, I now beg leave to send you, for publication in your Journal, if you find them likely to be in any way useful.

It is a curious fact that the most perishable of substances, the flesh of man, should present itself to us as one of the most ancient remains of human art: for there is nothing which claims a higher antiquity than the mummies, not even the catacombs that enclose them, nor the pyramids in their neighbourhood.

In the oldest and most venerable of books, the practice of embalming is more than once mentioned in the earlier periods of the history of the Israelites. This people, during their residence in Egypt, naturally adopted the customs of that country. When Jacob died, Joseph commanded the physicians to embalm him. The embalming required forty days, and the same space of time was uniformly required for this process by the Egyptian embalmers. "Forty days were fulfilled for him, for so are fulfilled the days of those that are embalmed." Gen. c. l. v. 3.: and in the same chapter it is said, that Joseph also was embalmed, and put in a coffin in Egypt. v. 26. Jacob died in the year before our Saviour 1689; that is 3512 years ago: and as the practice seems to have been well established at that period, it must have existed long before; and been anterior to the time of the erection of the pyramids*. In truth,

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* If we adopt the account of Herodotus, the pyramids were built by successors of Sesostris: the first by Cheops, who was the fourth king from Sesostris; and the second, lately opened by Belzoni, was built by Cephrenes, the successor of Cheops: and in this account Herodotus is supported by Diodorus Siculus. Sesostris lived in the year 3032: so that the pyramids were erected scarcely one thousand years before the christian era; and many hundred years after the deaths of Jacob and Joseph: in regard to whom the practice of embalming is first mentioned in history. But Manetho

these structures were elevated by the same spirit which induced the Egyptians to embalm;—the desire to preserve and secure the bodies of the dead. This peculiar regard for the inanimate remains of their friends, arose from the extraordinary belief, that the soul did not quit its corporeal habitation at the time of death; but continued to be connected with the body, if it remained uncorrupted, until 3000 years were elapsed, at the end of which term, the soul was allowed to pass to another living body. If the body decayed at any time short of these 3000 years, the soul, having lost its place of residence, was compelled to inhabit the bodies of different animals in succession, until its full term was elapsed.

Subsequently to the time when embalming is spoken of in the holy scriptures, the first mention we find of it is in the historian Herodotus, more than a 1000 years after. This author, having himself visited and remained some time in Egypt, obtained from the priests of the country a multitude of curious facts, and among others a very minute account of the mode in which they embalmed.

"There are in Egypt," says he, "certain persons whom the law has charged with the operation of embalming, and who make a profession of it."—Having agreed about the price; in this manner they proceed to the most precious kind of embalming.—"First, they draw the brain through the nostrils, partly by means of a curved iron, and partly by washing it out with medicated liquids. Then with a sharp Ethiopian stone, they make an incision in the side, and thence draw out all the bowels; which, when they have cleansed and washed with palm wine, are covered with odoriferous

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places the building of the pyramids at a vastly earlier period, and attributes them, at least the two larger, to some of the first Egyptian kings. The third pyramid is said to have been the work of queen Nitocris, who reigned in the year of the world 2332. The learned seem to be of opinion that Manetho is most to be trusted, in regard to the time of the pyramids; because these vast structures are entirely destitute of hieroglyphics, within and without, and of course must have been made before the reign of Sesostris; for at, and after his time, the Egyptian edifices were uniformly covered with hieroglyphics, almost without exception. It must be considered that Herodotus was in Egypt soon after its conquest by Cambyses; and could hardly be mistaken in a remarkable fact, which happened only three or four centuries before; and that he expressly states there was an inscription on the first pyramid in Egyptian *letters*, mentioning the quantities of various articles of provision expended during this stupendous work. Belzoni has noticed, that some of the tombs, in the vicinity of the pyramids, contain stones placed with hieroglyphics upside down, as if they had belonged to another edifice; and it has been suspected that these might have formed the outer covering of the pyramids.

substances. Then they fill the cavity with pure myrrh bruised, cassia, and other odoriferous substances, except frankincense, and afterwards sew it up. When they have done this, they salt the body, by covering it with nitre (natron, or impure carbonate of soda) seventy days; for it is not lawful to salt it any longer. The seventy days being elapsed, they wash the body, and envelope it entirely with bands of cloth, covered with kommi, which the Egyptians commonly use for glue. It is then given up to the relations, who cause a wooden figure to be made with the likeness of the person, and having placed the dead body in it, they put it in a recess devoted to such purposes, standing straight up against the wall. In this way they prepare the dead in the most sumptuous manner.

"Those who wish to avoid expense, choose a middle sort of embalming. They fill syringes with an unctuous liquor, extracted from cedar, with this they inject the belly of the deceased, without making any incision, and without extracting the intestines. When this liquor has been introduced by the anus, it is stopped up to prevent the liquor from escaping; afterwards the body is salted, for the time prescribed. The last day they cause the injected liquor to issue from the bowels. This has so great power, that it dissolves the stomach and bowels, and brings them out with it. The natron consumes the flesh, and the skin and bones only of the dead person remain. When they have done this they return the dead, without further work.

"The third kind of embalming is for the poor. Having injected the bowels with surmaia, they salt it seventy days, and then deliver it to those who brought it.

"The wives of distinguished men, and such as are remarkable for their beauty, are not delivered to the embalmers until the third or fourth day*."

The account of Diodorus Siculus, who was in Egypt 450 years after Herodotus, confirms in a great measure the description of the latter, and gives some additional particulars.

"The manner of sepulture is threefold, the most costly, the moderate, and the most mean. The first costs a talent of silver; the second twenty minæ; the third almost nothing.

"Those who make a profession of burying the dead, have learnt it from their fathers.—The first, whom they call the scribe, the body being placed on the ground, marks about the left side how much should be cut. Then comes the para-

* Herodotus, lib. 2. sect. 86. Ed. Laing.

chist, or cutter, holding an Ethiopian stone, who, when he has cut as much as the law requires, immediately makes his escape, and is pursued by all those who are present, with stones and execrations, as if they would turn the sacrilege upon him.—They then proceed as soon as possible to the preparation of the body, and one, passing in his hand, removes all the viscera, except the heart and kidneys. Another washes them with palm wine and odoriferous liquids. Then they anoint the body for more than thirty days with cedar ointment, and having seasoned it with myrrh and cinnamon, not only to preserve, but to guard it from insects, they return it to the friends.—Hence many of the Egyptians, preserving the bodies of their ancestors in magnificent little edifices at their own houses, have wonderful satisfaction in looking at the bodies of those who have been dead for ages, but whose lineaments are so well preserved, that they seem as if they were still living."

The accounts of these ancient writers are in a great degree confirmed by the discoveries of modern travellers.—The incision is found on the left flank for removing the viscera, and the perforation in the ethmoid bone, for the extraction of the brain. We notice the appearance of odoriferous gums, of carbonate of soda, or some other saline substance; of bandages rolled many times round the body, and of the cases or coffins, carved into a resemblance of the deceased. Asphaltos or bitumen of Judea, so often found as the preserving substance, is not mentioned by either of these writers; for the kommi, spoken of by Herodotus, as the matter employed to glue on the bandages, must have been gum arabic. The use of asphaltos as an embalming substance is, however, mentioned by Strabo, and some other authors.

The effects of the cedria, the liquor extracted from the cedar, must have been misunderstood. At least we do not at present know in what way a substance, obtained from the cedar tree, could corrode the viscera so much, as to cause them to be discharged. It has been very naturally and judiciously suggested by M. Rouyer, that the corroding liquor was the natron, or carbonate of soda, rendered caustic and dissolved. Or we may come nearer to the account of the ancients, by supposing that the cedar tree was employed to produce a caustic potass, to which this name, cedria, was applied; and that, after the use of this, a resinous or pitchy substance, obtained also from the cedar, was thrown into the cavity of the abdomen.

As to the surmaia, employed to preserve the bodies of the poor, we are not able to determine its nature. It might have been the substance called pis-asphaltos, or possibly turpentine; though we cannot believe that either of these, merely thrown into the abdomen, would have preserved the whole body. Mummies of the poor have been found in abundance, placed in the sands near the sepulchral grottos of the great. Some of these are tolerably preserved; yet appear to have had no other embalming substance than a covering of powdered charcoal; while others were filled with pis-asphaltos. Probably these and the others on whom surmaia was employed, were subjected to the desiccating power of the carbonate of soda.

M. Rouyer, one of the *savans* who were in Egypt with Bonaparte, made an exact examination of a great number of mummies, with a view of ascertaining the nature of the embalming substances. He informs us that near the ruins of Thebes, and in the neighbouring mountain, he found a great many mummies entire and well preserved. "It would be impossible," says he, "for me to estimate the prodigious number of those which I have found heaped up, or scattered in the sepulchral chambers, and in the multitude of cavities in the interior of this mountain."

He distinguishes them from each other in a manner conformable to the account of Herodotus, into those which have an incision in the left side, and those without. The class which have the incision, are again divided into those dried by the aid of balsamic substances, and those which have been salted.

The mummies preserved by balsamic and astringent substances are filled, some with aromatic resins, others with asphaltos.

The mummies filled with aromatic resins are of an olive colour: the skin is dry and flexible, like tanned leather, and seems to form a common mass with the flesh and bones; the features appear to be the same as during life. The abdomen and chest are filled with friable resins, which have no particular odour, but when thrown on burning coals produce a thick smoke with a strong aromatic smell.—These mummies are very light, dry, and easy to break; they preserve their hair and teeth. Some of them are gilt over the whole surface of the body, others on the face and hands. They seem to have been prepared with great care, and are unalterable so long as they are preserved in a dry place; but when expos-

ed to the air, attract moisture, and in a few days exhale a disagreeable smell.

The mummies prepared with bitumen are of a black colour. The skin is hard and shining as if it had been varnished. The head, breast, and abdomen, are filled with a resinous black substance, which presents the properties of bitumen. These are heavy, unalterable, and do not attract humidity. Many of them are gilt like the first species.

The mummies which have an incision in the left side, and which have been salted, are likewise of two kinds, one filled with resins, and the other with asphaltos or bitumen. Both of these are very numerous. When exposed to the air they attract moisture, and are then distinguished from the species not salted, by being covered with a light saline efflorescence, which appears to be sulphate of soda.

The second class of mummies, which have not the incision on the left side, nor any other part of the body, but from which the viscera have been withdrawn through the anus, are also distinguishable into two sorts: first, those which have been salted and afterwards filled with a bituminous substance, and second, those which have been merely salted.

The first species of these are filled with a substance called pis-asphaltos,* less pure than the bitumen of Judea. Not only are all the cavities filled, but the surface is covered, and every part seems to be penetrated with it; so that it might be supposed the body had been immersed in a cauldron of the bitumen, while in a state of liquefaction. These are the most common of all: they are black, hard, heavy, difficult to break, and have a disagreeable penetrating smell. The bituminous matter is fat to the touch, less black and friable than asphaltos; dissolves imperfectly in alcohol; distilled, it gives an abundance of fat oil of a fetid smell.

The mummies, which are only salted and dried, are not so well preserved as those above-mentioned. It is rare to find them in an entire state; for most commonly the flesh is, to a greater or less extent, separated from the bones, leaving them quite clean and white. The skin is white and supple. The flesh, having been less dried, is sometimes converted into adipocire, and lumps of this matter are also found in the cavities.

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* The natural pis-asphaltos is, according to Dioscorides and others, a kind of bitumen flowing from certain mountains. It is found in various parts of the world.

They are strongly impregnated with a saline substance, which appears to be principally sulphate of soda.

Such is the result of the researches of M. Rouyer. Whence it appears that the most precious and most perfect mode of embalming, was, as stated by the ancient authors, with the resins. Next with asphaltos. The third with pis-asphaltos, The fourth and meanest with saline substances. It is probable, however, though M. Rouyer does not appear to be of this opinion, that the saline substance was equally employed in every mode; but that in the more perfect, it was carefully washed away before the resinous and bituminous substances were applied.

Whatever was the mode of embalming, he found the coverings of the bodies much the same: varying only in the number of thicknesses of bandage, or in the delicacy of its texture. Next the body there is found a close shirt, laced at the back and made tight at the neck. The head is covered with a square piece of linen of fine texture: the centre of which serves as a kind of mask; sometimes there are five or six of these, one over the other, and the last is gilt, and represents the countenance of the deceased person. Every part of the body is enveloped by separate bands, impregnated with resin; the legs are brought together and the arms crossed over the breast, and confined in this situation by bandages, curiously rolled round the whole body, to the number of fifteen or twenty thicknesses. The outer turns are covered with hieroglyphics, and secured by long bands artificially and symmetrically arranged.

Under the exterior bands are often found idols of gold, bronze, varnished earthen ware, painted or gilt wood, rolls of papyrus containing hieroglyphics, and many other objects which had a relation to religion, or were associated with circumstances dear to the individual while alive.

It is rare to find mummies enclosed in their cases; the pieces of these only being discovered. Many bodies were placed in the sepulchral caves, wells, and niches without; and those which had possessed cases, were generally thrown out of them. Those cases, which served, says M. Rouyer, for the rich, and for persons of great distinction, were double. That which enclosed the body was composed of a great number of thicknessses of a kind of pasteboard; and this was enclosed in a second, made of sycamore wood or cedar. They were accommodated to the shape of the body they enclosed. The outer case had a likeness of the individual. It was compos-

ed of two pieces only, an upper and under, joined by projecting parts, secured with cords, externally covered with a simple layer of plaster or varnish, and ornamented with hieroglyphical figures.

Belzoni says, that such as could afford it, probably had a case made to contain their bodies, on which was written a history of their life; while those in poorer circumstances had their lives written on papyri, rolled up and placed between their knees. In the appearance of the cases there is a great difference; some are plain, others very much wrought, and richly adorned with painted figures. The cases were generally made of sycamore, and always bear a human face, male or female. A few contain a second within them, of wood or plaster. The inner cases are fitted to the body of the mummy; though some of them appear to be merely covers, in form of a man or woman, easily distinguishable by the beard or breast. The wooden case is first covered with a layer of plaster or cement, not unlike plaster of Paris; and on this are sometimes cast figures in basso relievo, for which they made moulds. The whole case is painted, the ground generally yellow, the figures and hieroglyphics blue, green, red, and black, but the last colour is rarely used. Some of the colours appear to be vegetable, as they are evidently transparent; and the whole of the painting is covered with a varnish which preserves it effectually.

This traveller found, in some of the mummies, lumps of asphaltos, weighing two pounds. The entrails he saw bound up in linen and asphaltos; but Porphyry says, that after the entrails were removed from the body, the embalmer held them up to the sun, addressing to him a prayer, in the form of invocation; he declared, " that the body had not committed any crime during life; but that what faults might be imputed to it, ought to be charged to the bowels, which were then thrown into the Nile." For this account Porphyry has the support of Plutarch.

The mummies of the priests are supposed, by Belzoni, to be distinguished by the peculiar care with which they are arranged. The bandages are strips of white and red linen intermixed, covering the whole body, and forming a curious effect of the two colours. They have sandals of painted leather on their feet, and bracelets on their arms and wrists.— He found eight mummies in their cases, in the state in which they were originally deposited. The cases lay side by side, flat on the ground, facing the east, in two equal rows, imbed-

ded four inches deep in mortar; which must have been soft when they were deposited.

The preservation of so many of these mummies is partly attributable to the construction of the tombs in which they were deposited. The solid pyramids, the sepulchres of kings, were intended not more to prevent the intrusion of strangers, than to exclude air and moisture. The capacity of the catacombs under the city of Alexandria, now untenanted, even by the dead, has always excited the admiration of travellers. The numerous and profound excavations in the plains of Saccara were the cemeteries of Memphis; and the rocks of the Lybian mountains were penetrated to form the necropolis of Thebes.

In the last number of the Boston Journal of Philosophy and the Arts, there is an excellent description of some of the tombs. We can form a notion of the extent of these places from Belzoni, who says, he reached the inner apartments through passages, sometimes 300, and even 600 yards, or 1800 feet in length, formed in the solid rock. These passages are occasionally interrupted by thick walls, built for the purpose of closing them up; and they are broken by apartments of various dimensions, placed along their course, at different intervals, which served as separate depositories for the dead. They also present, in many places, square or rounded perpendicular excavations 30 or 40 feet deep, in the form of wells; on descending these, other horizontal passages and new apartments are found, some of which are ornamented in the most magnificent style. A part of the wells appear to have been intended to receive and carry off such moisture, as might accidentally find its way into the tombs.

The walls of these apartments and passages are so finely adorned with sculptures and paintings, that those travellers who view them, are at a loss for expressions of their admiration. The sculptures are generally raised from the rocky walls of the caverns, by cutting away the stone which surrounds the figure. The paintings are sometimes executed on the raised stone, sometimes on the plain surface of the rock, and often in a very fine plaster, applied to the walls of rock. The various figures represent Egyptian deities: the person buried in the tomb, perhaps a king or hero in his chariot, leading a triumphal procession, and followed by hosts of captive enemies; works of agriculture; of commerce; manufactures; feasts; games and sports; battles and victories; generally concluded with a funeral procession. These paintings

are very extensive; their colours are rich, and as fresh as if lately done; so that travellers hardly know which most to wonder at, the beauty of the work, or the perfectness of its preservation.

"It was not till after marching three quarters of an hour in this desert valley," says Denon, "that in the midst of the rocks we observed some openings, parallel with the ground, containing a door in a simple square frame, with a flattened oval on the upper part, in which are inscribed in hieroglyphics, a beetle, the figure of a man with a hawk's head, and two figures on their knees in the act of adoration. As soon as the first gate is passed, we discover long galleries cased with stucco, sculptured and painted; the arches of an elegant eliptical figure, are covered with innumerable hieroglyphics, disposed with so much taste, that notwithstanding the singular grotesqueness of the forms, the ceilings make an agreeable whole, and a rich and harmonious association of colours."— The sepulchral chamber is sometimes surrounded by a pilastered portico, whose galleries, bordered with recesses, supported in the same manner, and lateral chambers hollowed into the rock, are covered with a fine and white stucco, on which are coloured hieroglyphics, in a wonderful state of preservation; for, except two of the eight tombs, which have been injured by water trickling down, all the rest are still in full perfection, and the paintings as fresh as when they were first executed, the colours of the ceilings exhibiting yellow figures, on a blue ground, are executed with a taste that might decorate the most splendid saloons.

Among the subjects represented are sacrifices, and in one or more places are seen the figures of black men, decapitated, standing upright, with the head at the side of the body streaming with blood. Over the black men, stand one or more red men stretching out their arms in the attitude of invocation. These pictures concur with a multitude of other facts to prove, that the ancient Egyptians were not black but red; and that the black figures were made to represent Ethiopians. They can scarcely be intended for any thing but an exhibition of human sacrifices; and therefore lead us to suspect that Herodotus was misinformed on this subject; since he expressly says, the Egyptians never have human sacrifices. Or it is possible the practice might have been laid aside in his time; and that the figures allude to the habits of a much earlier period, which the Egyptian priests would be apt to deny

to Herodotus, after they had become obsolete and unfashionable, in consequence of the Persian conquest.

The finest of the tombs which have been lately opened, is that of king Psammis, discovered by Belzoni. This contains a long series of archways, corridors, halls, and chambers, to which M. Belzoni has given names; as the hall of pillars, the chamber of beauties, of mysteries, &c. It had never been opened by the moderns, though it appears that the Persians, Greeks, or Saracens had penetrated, and afterward closed it up. What the Persians spared, and the Greeks respected, M. Belzoni has contrived to carry off; for besides loading himself with the smaller objects, found in the tomb, he has got out a beautiful alabaster* sarcophagus, which had probably contained the remains of king Psammis, and this, together with the colossal head of the younger Memnon, and various other articles which no body else thought of disturbing, he has packed up and sent to England; and as if vexed at not being able to transport the tomb of king Psammis, with the rocky mountain which contains it, he has ingeniously formed, and set up in England, a representation of this tomb, with all its grottos, pillars, and paintings.

The most interesting among the groups, discovered in this place, is a military and triumphal procession of Egyptians, with their prisoners. The procession begins with four red men with white kirtles, followed by a hawk-headed divinity; these are Egyptians. Next follow four white men with thick black beards, and a simple white fillet round their black hair, wearing striped and fringed kirtles; these are Jews, and might, says the Quarterly Review, "be considered as portraits of those, who at this day walk the streets of London." After these are four negroes with hair of different colours, wearing large circular ear-rings, having white petticoats supported by a belt over the shoulder; these are meant to represent Ethiopians. Lastly, three white men with smaller beards and curled whiskers, bearing double spreading plumes in their heads, and wearing robes or mantles spotted like the skins of wild beasts; and these are Persians or Babylonians. Now it appears from the Bible† that Necho, the father of Psammis, went out of Egypt to fight with the Babylonians or Persians. In his way through Judea he was attacked by king Josiah, and though he contended with him reluctantly, he conquered

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* Since found by Dr Clarke to be arragonite.—*Ed. B. J.*

† 2 Chronicles, xxxv. 20.

and killed him, and carried his son Jehoahaz prisoner into Egypt. The historian Herodotus states the same facts in a manner singularly accordant with the holy scriptures, and moreover, says, that king Psammis himself made a warlike expedition into Ethiopia : and thus we have explained to us the representation of the prisoners of the three nations, the Jews, Babylonians, and Ethiopians.,

The Egyptians were not the only nation who preserved the bodies of the dead. The Guanches of the Canary Islands followed this practice to a considerable extent. They were conquered in the fifteenth century; yet there remain great numbers of bodies, prepared by them; a single cavern in Teneriffe, having been found, when first opened, to contain about a thousand bodies. Acosta and Garcillasso de la Vega inform us, that the Peruvians possessed this art, that the bodies of some of the Incas were found in a state of good preservation, and quite hard though light. The New Zealanders of the present day are wonderfully skilful in their preservations of the human body, though in other respects among the most ignorant and miserable of savages. The head of a chief or great warrior is thought to transfer to his enemies, if it happen to fall into their power, the courage and strength of the individual. They are therefore anxious to obtain and preserve such heads; and they are able to succeed so well in removing the causes of putrefaction, that the flesh is as solid and undecomposable as wood; possesses an aromatic odour like that of newly dried grass; and perfectly exhibits the features of the individual. I have one of these heads which belonged to a New Zealand chief; it might at first view be taken for carved work. The hair is wholly preserved; it was originally black, and somewhat finer than that of the American Indian, but is now red inclining to gray, from age. The forehead is narrow from side to side, and very oblique, though extensive. The jaws prominent; the teeth small. The skin is of a dark red or chocolate colour, tattooed over the whole face ; and the cartilages of the nose cut to a point, so as to give a frightful and ferocious aspect to the face, more like that of a wolf than of a man. The art of these people probably consists in first cleaning the part to be preserved, and expressing the blood; then exposing it for some time to the steam of certain herbs, and afterwards drying it in smoke. It is said that they can prepare entire bodies in the same manner; but of this I am not well satisfied.

Natural mummies are bodies preserved without the aid of artificial means. They have been found in various parts of the world, and under different circumstances. In the exhumations of the great cemetery at Dunkirk, in France, a number of bodies were found in a state of preservation, intermixed with others in full putrefaction. Particular soils have a preservative, or rather a desiccative operation, and they appear to be especially such as abound in limestone. In Toulouse, in France, there are one or more churches, the cemeteries of which are said to possess this power. The operation of such soils is illustrated by an experiment made on two tritons. These small salt-water animals were placed, one in an empty glass vessel, the other in one containing some muriate of lime. On the second day the latter was found to be completely dried up; while the other remained alive until the fourth. Heat and cold both prevent the process of decomposition, though in different ways. The bodies of travellers in the burning sands of Africa, when buried by violent winds, are frequently dried and converted into mummies. While, on the other hand, various individual cases have occurred in those who died in cold weather, and whose bodies remained frozen for some time, of a desiccation sufficient to prevent the progress of putrefaction. We have an opportunity of seeing this process in venison, frozen, and kept in our apartments, which becomes dried, and undecomposable to a certain extent. Whether we are to impute to the last cause, or to some other, the singular preservation of a gentleman's body near Boston, I am unable to determine. This body has been buried between twenty and thirty years, and is still so entire that the features of the face are at once recognised by those who knew him while living. I have examined it, and found the skin quite firm and strong. The flesh of the arms is solid. The walls of the abdomen are perfect, and emit a hollow sound, as if the viscera had been removed or decayed. The skin is of a brown colour, and is constantly moist, though not wet. The cellular membrane under it is not fat, nor in the state of spermaceti, but precisely resembles the grain of the under surface of leather. This gentleman died, I believe, in the winter. He was about 80 years old, and very fat. The body was not opened, nor were any means taken to preserve it; and other bodies placed in the same tomb long since, are completely decomposed, even to the separation of the bones. It is remarkable that there is no worm, nor insect of any kind, seen in the coffin, or on the

body. The tomb is in the open air, placed somewhat on the side of a hill, facing the west, and the soil is rather of a dry nature. Although the fatty substance has now entirely disappeared, it is probable it had a principal agency in the preservation of this body, penetrating and preserving the muscles and other parts, while the desiccating process was accomplished.—The greater part of natural mummies are formed by the conversion of the flesh into adipocire, or spermaceti. This transmutation which has, within the last thirty years, been discovered in various situations as the effect of accident, has also been successfully imitated by placing flesh in wet places, and especially by exposing it to a small stream of running water. This has the effect of converting it, after a considerable time, into a spermaceti, that may be advantageously employed in the arts. Manufactures of spermaceti, on a large scale, are successfully carried on in this manner, particularly in Spain*.—All kinds of bodies are not equally susceptible of this decomposition. I suppose that those abounding with fat, and in which the muscles are tender, are the most proper subjects; but I have noticed in thin as well as in corpulent persons, who had lived in a very sedentary manner, that the muscular flesh has been nearly converted into spermaceti *during life*, so as to be ruptured by a very slight violence.

False Mummy is a term originally applied to a substance fabricated so as to resemble the embalming matter of the true mummies. Some centuries since, the asphaltos and resins which had been used for embalming, obtained great reputation in Europe as medicinal substances, especially in hypochondriac and nervous affections. The consumption was so great as to exhaust the repositories of Saccara; and the necropolis of Thebes was not then opened to a considerable extent. The Arabs and Jews succeeded in preparing the bitumen of Judea in such a manner as to answer the purpose of genuine mummy, for a length of time, until the discovery of the fraud, and the improvements of a later age, entirely put a stop to this branch of commerce. Another kind of false mummy is a wooden effigy of a man or woman, which has

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* During the worst periods of the French revolution, when intercourse was cut off from the rest of the world, this fabrication was attempted in France; and it was thought a good revolutionary *bon mot*, in allusion to it, to say, "that some who had been of no use while alive might be made, after their death, to *illuminate* the world."

been sometimes discovered in the catacombs, arranged precisely in the way of the true mummies, and intermixed with them. Whether these were the falsifications of Egyptian embalmers, or whether it was one of the singular fancies of that people, which produced this kind of image, we are not informed*. A third false mummy is a poor attempt to imitate the true, by piecing together parts of different bodies, bundling them coarsely in rags, and enclosing them in a white-washed coffin. These boxes sometimes contained a bone or two, swathed in the form of a mummy. So gross an imposition actually passed, without being understood, for a considerable time. It does not appear that there ever has been a thorough and operose attempt to counterfeit a mummy with all its parts; nor in truth can such an attempt be profitable until the catacombs shall have been rifled, and emptied of thousands of bodies still remaining.

The science of the moderns has never been directed to the preservation of the dead, except for anatomical purposes; of course the practical perfection of the art of embalming does not exist in so high a degree, as among the ancient Egyptians. It is, however, probable that a due application of the discoveries in anatomy and chemistry, would admit of our accomplishing the process in a more perfect and elegant manner, than they have been able to do.—Some attempts of the kind have been made from time to time with sufficient success. The bodies of kings are generally embalmed in Europe, and we have examples of their having been well preserved for two or three centuries. When the remains of the French monarchs, in the Abbey St. Denis, were disinterred, under the inspection of the brutal Robespierre, the body of Henry IVth, who was assassinated in 1602, was found so perfectly preserved that the features of the face remained, and were seen to possess a decided likeness to his statue on the Pont Neuf in Paris. At the same period the body of Marshal Turenne presented itself in fine preservation, and it was thought worth while to exhibit it,

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* Perhaps these effigies are alluded to by Herodotus, where he speaks of an Egyptian custom, which might be revived at the present day, with salutary consequences. He tells us, "that in the feasts of the rich, when they depart from supper, some one carries round a wooden image of a dead man, painted and carved to an exact likeness, and showing him to each of the guests, says, 'Look on this, drink and take delight, for such shalt thou be after death.'"

in a glass case, for the space of a year, after which, some persons contrived to have it removed from the public gaze and deposited in a tomb in the splendid chapel of the Invalids. No account has been transmitted of the manner in which these bodies had been treated; and it was not even known until the period when it was disinterred that the body of Turenne had been subjected to the embalming process. The French surgeon Dionis, who lived at the time Turenne was killed, in 1675, gives a very particular account of the operation he performed for embalming the body of the Dauphiness of France. But this appears to have been so very inadequate that we can scarcely believe it to have accomplished its object, even for a few years. He opened the cavities and removed the viscera, then, after cleansing and washing the parts with alkohol, he filled them with an aromatic powder made of a multitude of herbs, and with another made of gums: the same was done with the limbs by making incisions in different parts: the surface of the body was anointed with a liniment of spirits of turpentine, styrax, &c., and then the body was swathed in bandages and placed in a leaden coffin. The aromatic plants could have the effect of only retarding the decomposition of the body a few days, by imbibing its moisture: and the anointing with the liniment could scarcely be expected to do as much.

Different operations may be employed for the preservation of the bodies of our departed friends. If it is desired to preserve the body for a short time only, in order to delay the period of its burial, the following course may be adopted. The viscera should be removed and placed in a separate receptacle. Then the limbs and neck must be compressed to expel the contents of the blood vessels, which are to be carefully absorbed by sponges and removed. After this is done, the body must be made as dry as possible; cloths dipt in a solution of corrosive sublimate, of the strength of two ounces to a pint of alkohol, are to be laid in all the cavities, and the skin is to be carefully sewed. This operation, which may be performed in an hour, will preserve the flesh from putrefaction for many days. The preservation may be rendered more perfect by throwing some of the mercurial solution into the principal blood vessels. If it is to be kept a considerable time, it should be immersed in a solution made of corrosive sublimate in spirit, placed in a wooden trough, the cavities being opened so as

to expose the viscera to the action of the liquid, and in this situation it may be preserved from putrefaction, for any length of time, provided fresh portions of sublimate are added from time to time, and the waste of liquid properly repaired.

By a more complicated and expensive process we are able to imitate and surpass the art of the Egyptians; to give not merely durability to the human frame, but even to revive its extinguished colour, and so far to restore the expression of the face, as to give some resemblance to life. This mode of embalming has also the advantage over that of the Egyptians, in allowing us to see and even touch the body, instead of its being swathed in bandages and covered for ever from the sight. It is to be remembered, however, that we do not possess the uniform temperature and the dry atmosphere of Egypt: circumstances that make an incalculable difference in the decomposition of all decomposable substances. In Egypt, it has been said, it never rains; and in fact the rains are very slight and rare. Hence is it that the monuments of that country have retained such wonderful perfection, while others equally solid erected a thousand years after, have long since crumbled into dust. Not only the mummies of Egypt, but their catacombs and even the pyramids, would probably have been torn in pieces long since by the frosts, heats, and rains of our climate. Having thus the inconvenience of climate to contend with, we cannot expect to gratify our ambition of excelling the Egyptians in the actual duration of our mummies; unless indeed we were to deposit them in deep and rocky recesses, rendered inaccessible to air and moisture, and to the variations in the temperature of the atmosphere.

The operations should be commenced as soon after death as may be; although they will succeed at any stage short of actual putrefaction. The chest is to be opened by sawing the sternum and introducing the pipe of an anatomical injection syringe into the left ventricle of the heart. A liquid is to be prepared, consisting of alkohol with corrosive sublimate dissolved in it, in the proportion of four ounces to a pint of liquid; and with this the vascular system is to be fully injected. On the following day, the pipe is to be opened, and as much of the liquid, as remains in the large vessels, allowed to escape by turning over the body. Then an injection is to be prepared of white spirit varnish with one-fifth part of turpentine varnish, coloured with vermilion, to be injected in the same manner as the first. In

three or four hours after, a coarse injection is to be employed, to fill the large arteries; and this may consist of the common cold injection, or the body may be immersed in warm water, and a hot injection thrown into the blood vessels. When the coarse injection has become hard, the abdomen is to be opened by an incision of the linea alba; all the viscera are to be removed, and after being cleansed they are to be deposited in a separate vessel, containing a solution similar to that in which the body is to be immersed. The brain is to be removed by an incision of the scalp and sawing the skull in the usual mode: then the brain is to be treated in the same manner as the other viscera, with the addition to a pint of the mercurial solution, of four or five ounces of muriatic acid. It might be supposed that the thickness of the brain would prevent the solution from penetrating deep enough to affect it; but I have sufficient evidence to the contrary, in a brain prepared in this manner, dried and varnished fifteen years ago, and which is now as perfect as when prepared. The viscera being disposed of, the body is then to be placed, with the face downward, in a wooden trough, containing a solution of corrosive sublimate in alkohol, in the proportions already named, that is, four ounces of the salt to a pint of the liquid; and some additional pieces of the salt are to be put in from time to time, in order to repair its consumption by the dead body. If the subject be adult, it must remain in the solution at least three months: at the expiration of this time it is to be removed and thoroughly washed. The orbits of the eyes, the organs having been removed, are to be moderately filled with pieces of linen; the cheeks are to be distended with the same substance; the other features to be arranged in as agreeable a manner as circumstances permit; the lips especially may be a little separated, to display the teeth. The great cavities must be made as dry as possible, and this is effected very easily, from the desiccating property of the oxymuriatic solution: then the organs, previously dried, are to be restored to their proper situations, and the remaining interstices filled with linen, dipt in spirits of turpentine, or some of the cheaper gums. Before the body has dried, the cavities are to be carefully sewed up, so as to present their natural shape, having a dependent orifice to each cavity to drain off the remaining moisture. After this, it is to be suspended on cords, in a current of air to dry it. The de-

siccative process goes on rapidly, and the parts must be constantly watched, to prevent their being distorted. When the drying is completed, eyes of enamel are to be placed, and if the features are not satisfactorily exhibited, they may be improved by the skilful addition of wax and paints, of proper colours. The hair will be preserved and is to be adjusted; then the body is to receive, at due intervals, three or four coats of turpentine varnish; and being invested in a becoming robe, is to be fixed in a glass case made air tight. No insects will approach a body prepared in this manner; and if it be newly varnished every few years, it will remain the same, for an unknown length of time.

In this way we might, for a moderate expence, preserve the appearance of those forms which have been associated in our minds with agreeable occurrences, and we might gratify the curiosity of a remote futurity, by transmitting to them the bodies and even the features of those who have been distinguished among us by their virtues, their patriotism, or public usefulness.

The mummy presented by Mr Van Lennep to the Massachusetts General Hospital was enclosed in a large deal box. On opening this, the outer coffin or sarcophagus appeared, as represented in the plate. It is a wooden box, seven feet long, and of a breadth proportioned to the length, like the proportion of the human body. The upper part of it is carved, in a very striking and peculiar style, to represent a human head; and, as it appears from the authors who have described the customs of the Egyptians, it was intended to be a likeness of the deceased person. The head is covered with a striped cloth or turban, on the upper part of which is painted a globe. The face has the character which has generally been considered as belonging to the Egyptians. The skin is of a reddish colour, the eyes black, nose broad, but not badly proportioned, mouth well formed. The face is broad and short; it has a very agreeable expression, approaching to a smile. The shoulders are invested with a highly ornamented mantle, on the fore part of which the turban is seen depending. Below the mantle, in the middle, is seen the winged globe, by some considered as the sign for eternity: by others as the emblem of Agathodæmon or Chnuphis of the Greek authors, the oldest representation of the divine power admitted by the Egyptians; and it may therefore be believed

to be significant of the immortality of the soul of the deceased, or else to be the symbol of the divine protection.—On each side of the globe are seen hieroglyphics.—In the second compartment or tablet, below the globe, we have the representation of a most singular group, exhibiting the last judgment of the deceased and his reception by various divinities. According to Diodorus the body of every person, from the king down, underwent this ceremony. Two and forty judges were collected on the banks of a canal, where the relations appeared; and a boat being prepared, before the body was put in it, any one might bring forward accusations against the deceased, which, being examined by the judges, if found to be true, prevented the body from possessing the honours of a public funeral: but if they were thought false, the accusers were severely punished; then the relations finished their mourning, pronounced the praises of the deceased, and declared him about to enjoy a happy eternity with the pious in the regions of Hades. In the rolls found with mummies, on the coffins and in the tombs, this judgment is almost always pictured by the figure of a balance in the form of a cross, near which two personages are standing and apparently weighing the merits of the deceased: seeming to officiate as his good and evil genius, each wishing to draw the scale to his own side. Finally the scale of the good genius preponderates; judgment is given in favour of the dead person, and he is then to be introduced to the company of the gods. As a preliminary to this honour, he is invested with some of the insignia of Osiris if a male, and of Isis if a female.

In this tablet, we notice four personages on the left, who are looking to the right, and two persons on the right, looking to the left. Behind the last of these, that is, on the extreme right, is seen the balance, in the form of a cross, with a Cerberus as the evil genius sitting on its left and a hieroglyphic representation of the friendly divinity on the right. In the second coffin, to be described afterward, this balance is more distinctly and fully represented; the Cerberus is seen on the left; but on the right of the balance appears the friendly divinity in person, bearing the head of a wolf. The figure next the balance without any other garment than a kirtle, is supposed to be that of the deceased, coming from judgment, under the protection of a divinity who has hold of his hand and seems to have taken him under his protection, in order to present him to the assem-

bly of deities. At the head of these is the serpent, supposed by some to have been regarded as the good angel by the Egyptians. Next follows the great Osiris, the principal deity of the Egyptians, designated by his mitre, and his staff or sceptre, the emblem of power; he has the attitude of receiving the new comer presented to him. After Osiris are seen four, or on the inner case five, other personages, bearing the heads of a dog, a baboon, a hawk, a wolf respectively, supposed to be representations of the important divinities Anubis, Macedo, and others. These paintings therefore confirm and illustrate the account of the judgment after death, transmitted to us by Diodorus Siculus.

The third tablet consists of hieroglyphic writing, arranged in columns, extended from above downward, as was the manner of the Egyptians.

The fourth, represents the hearse bearing the coffin of the deceased. The hearse has the form of a quadruped, perhaps a lion; a style of furniture very much affected by the Egyptians. The coffin is represented as carved at the head. Below the hearse are four vessels, containing resinous and odoriferous substances, employed in embalming. At the head and foot are seen the tutelary hawk, or vulture, with stretched out wings, as if to protect the hearse, and between them is an eye with a tear, the symbol for mourning.

The fifth tablet consists of hieroglyphics.

The sixth, placed on the projecting foot of the coffin, exhibits a series of red and white stripes, twenty in number, which may be supposed to indicate the age of the deceased; on the base, supporting these, stands the tutelary hawk, surrounded by hieroglyphics, and among them is distinguished the eye with a tear.

The second plate gives a view of the inside of this case. On the bottom is represented the figure of the great Osiris. He is here invested with the hawk's head, although sometimes he appears with a human head, but never that of any other animal. He is characterized also by his mitre, and by a staff with a crook at the lower end, the symbol of power. On each side is depicted the figure of a young female, intended probably to represent the deceased person in her new character of Isis; for the symbol of Isis, a throne, is seen on the head, and we cannot suppose the figure intended for Isis herself, as this goddess is seen on the inner coffin with different ornaments. In the manuscripts found with the mum-

mies, and in the coffins, the deceased individual is constantly represented in a new and more elevated character, on entering a new state of existence; and is therefore invested with the ornaments and attributes of Osiris if the subject were a male, and of Isis if a female. In this instance she appears with the throne, a form known to be symbolic of the goddess Isis. At the upper part of the coffin, on the inside, above the female figure, are seen a number of hieroglyphics, larger than the rest, and drawn with peculiar distinctness. At the top is the winged globe; below this, a knife or hook, the instrument by which the os ethmoides was perforated to extract the brain; next follows a hand, that of the operator or embalmer; and then a circular figure containing a cross, said to be the symbol of Egypt. The circular mark surrounding the figure of Osiris is that of a serpent beginning and ending in a globe, intended perhaps as symbolic of eternity.

The outer coffin described above, contains an inner coffin of the same form and of smaller size, bearing the principal figures seen on the outer. Instead of the winged globe and hawk, the top and bottom are ornamented with a figure of Isis with wings widely expanded, as a protecting deity. Some of the hieroglyphics of the outer case are replaced by figures, intended to represent priests, in various attitudes of adoration or supplication. The external surface of the inner coffin is covered on the sides and back with hieroglyphics of a large size executed with less care than those on the anterior surface.

Both of these coffins are composed of sycamore wood, in a state of fine preservation. It is decayed only where the plaster has been broken; and in such places the decay is limited, the decayed part being reduced to powder, while that which surrounds it is not affected. Both coffins are covered with cloth cemented to them by gum; the outside of this cloth is coated with a fine white plaster, on which all the figures are painted. The colours of the latter are yellow, red, blue and green on a white ground; they are well preserved and bright, especially those of the inner coffin. The bottom of the outer has no coating of cloth, but the wood bears marks of having been set in a bed of plaster, which, of course, sufficiently guarded it. Each of the coffins is dug out of two pieces of solid wood, one for the top, the other for the bottom; secured together by projecting pieces of the one received into corresponding cavities of

the other, as is seen pictured on the edge of the coffin in Plate II. Both of these cases had been opened by cutting through the cloth opposite the junctures of the cases. This was probably done by the Arabs who discovered them in the catacombs, in order to ascertain if any gold or other valuable reliques were enclosed with the body.

This mummy is about five feet long, heavy, and solid to the touch. A single cloth of a yellowish colour enveloped the whole body from head to foot, being confined closely and neatly to the body by a number of transverse bands of a white colour, under which lay the reliques of corresponding dark coloured bands, so much decayed as to crumble to atoms on being touched. The dark bands were broader than the white, so as to exhibit their edges and produce an ornamental effect; but the colouring substances had caused them to decay, while the others remained entire. At the feet lay a large heap of beads, composed of green and yellow porcelain, partly connected by threads, whose decay had caused the network to fall in pieces. A green network like this is seen covering the bodies of Osiris, in Plate I., and the winged Isis on the inner case: and there is no doubt it was intended to invest the whole of the body for some religious purpose. As the beads could not be shown in their disconnected state, they have been put together and placed on the mummy, though not in the original form, but as well as circumstances permitted. Some of the beads are still very firm, others crumble on a slight pressure.

In order to examine the state of the body, I cut through the external cloth, where it covered the head, and found a great many turns of bandages about three inches wide, rolled around, to the number of twenty-five thicknesses. The outer cloth and the outer turns of bandage were in fine preservation and of considerable strength. They exhibited marks of having been imbued with some glutinous substances, intended to preserve them; and to which is to be attributed the yellow colour. The inner turns were more decayed as they were nearer to the body; those next it were quite rotten, and so closely cemented to the surface as to be separated only by a laborious process. The cementing substance is asphaltos, the same in which the body is embalmed. This substance was quite dry, hard, and brittle. Imbedded in it, on the nose, was found a beetle, and near this another small insect, whose character could not be

determined. The beetle was a sacred animal, in high estimation among the Egyptians, and seems to have occupied a distinguished rank in their theology, from the conspicuous place assigned it in the zodiac of Tentyra and other great monuments. It is generally connected with and appears to be holding a globe between its claws, and has been supposed to be the symbol of fecundity.

The skin of the face being exposed, was dry, hard, of a black colour, and its texture readily distinguishable, although deeply imbued with the embalming bitumen. It was wrinkled as if it had been exposed to the action of great heat, or pressure while in a soft and yielding state; and the latter cause has produced a distortion of the features, from the right to the left side. The sockets of the eyes are filled up, the eyelids preserved; but the eyebrows, together with the other hair, is removed or destroyed near to the head, probably by the action of heat; just enough of it remaining however to show that it was not black nor crisped or woolly, but of a brown or reddish brown colour. The teeth are perfect, so far as they can be seen; quite white, and shaped like those of the European, contrary to the opinion of some learned men that the Egyptians had the incisor teeth pointed like the canine or dog teeth. (V. Blumenbach, &c.*) The ears are small, and well filled with embalming substance. The skin of the scalp has the same appearances as that of the face.—Being unwilling to disturb the coverings of cloth and bandage, I left every thing on the body in the same state as it issued from the sepulchre of Thebes. The bandages about the neck were afterwards cemented together, to prevent the air from entering, and the head of the mummy was invested with a cloth formed into something like those represented on the heads of the cases, instead of the turns of bandage which had originally enveloped it.—Every part examined was deeply impregnated with the embalming substance, which proved, on examination, to be asphaltos, the bitumen of Judea†. When the bandages were first opened, no great odour issued from the body; but after

* This subject will be adverted to hereafter.

† *Asphaltos* is a black, inflammable, bituminous substance, like pitch; chiefly found floating on the surface of the Dead Sea, or Lacus Asphaltites, in Judea, on the spot where stood anciently the cities of Sodom and Gomorrah.

it had been exposed a few days, a very strong and peculiar smell was perceived, and continued to exhale, until the body was enclosed in a case made very tight. The exposure to air did not, however, alter the skin otherwise, than to produce a whitish saline efflorescence on its surface, which consisted of sulphate and carbonate of soda, and this, being wiped off, did not re-appear when the body was placed in its case.

The appearances about this mummy accord so perfectly with those which have been generally described by travellers and authors, as to leave no doubt of its being genuine. The figures on the cases, the colours, the subjects, the characters, the plaster, the wood, the cloth investing the body, the arrangement of the bands, the embalming substance, the body itself, all agree with the descriptions which have been formerly published, and carry marks of the labours of ancient Egypt. Among the peculiarities not already noticed is the texture of the cloth; it is wrought in a very even and workmanlike manner, and the threads of which it is composed, are doubled and twisted. The painted colours retain that brightness, so often spoken of by those who have examined the catacombs. The style of the figures is truly Egyptian, and could hardly be imitated by modern art. For more perfect satisfaction, the different parts composing it were submitted to artists and men of science, who perfectly agreed in identifying them with the corresponding parts of other mummies. Professor Everett, whose extensive science and observation particularly qualified him as a judge, and my other colleagues, Doctors Jackson, Gorham, Channing, and Bigelow; also, George Blake, Esq. Dr Webster, and various other gentlemen, examined the different objects before they were enclosed in cases, and though some of them had been previously sceptical, they were perfectly satisfied after making their examination. I mention these circumstances because the accidental coincidence in time of its appearance in Boston, with the intelligence of an imposition in natural history lately practised in Europe, had rendered many persons suspicious of the true character of this mummy.—If, in addition to what is stated above, any farther confirmation of its genuineness were required, it might be obtained from the consideration of the facts that the British consul in Alexandria, who selected it, must undoubtedly have been an adequate judge in this case; and

that the fabrication of such a work by the ignorant and sluggish inhabitants of Thebes, and its Necropolis, would have been attended with greater difficulties, than the acquisition of many mummies from the catacombs.

Some mummies in the cabinet of Dresden, which have been described by Winckelman, corresponded generally with this; but had peculiarities not unworthy of notice. They were four in number; two only are particularly described, one a male, the other a female. The former had its bandages painted with the figure of a man in the prime of life, with a curled beard; his head enveloped with gilded bands, on which were represented precious stones. About the neck, a chain of gold was painted; various other ornaments in different parts, and the fingers were set off with rings. The feet and legs were naked, excepting that the former were covered with a kind of sandals. These appearances designate the body of a priest; for it is well known this order of men were most highly honoured by the Egyptians. They were the physicians, law-givers, and ministers of religion when alive, and on their death their bodies were treated with greater honours, and covered with more ornaments than others. The patera in the hand and the sandals on the feet, are especially appropriated to the mummies of the priests.

The most remarkable thing about this mummy is the inscription on the breast in Greek characters, *ΕΥΨΥΧΙ*. This inscription, or one very nearly like it, has been found in other places, as an epitaph or a valedictory address, or the conclusion to a letter; and appears to mean, Live happy! or perhaps in this instance, Be happy! The word is undoubtedly Greek, and a question arises, how it should come to be placed on the body of an Egyptian priest. Winckelman judiciously suggests that this might be the body of a Carian or Ionian, who had been naturalized in Egypt, and admitted to the mysteries of the priesthood; or is it not probable it might be intended to distinguish one of those Egyptians, whom king Psammetichus placed in the care of the Ionians and Carians, settled in Egypt, for the purpose of having them thoroughly educated in the Greek language? These, when grown up, served as interpreters, and as some of them probably belonged to the order of priests, the inscription might be placed on the body as a mark of distinction for this kind of learning.

All other inscriptions on the coffins, the bandages and the papyri of the mummies, are pure Egyptian. The latter are generally, I believe, in the common or enchorial characters, the former in the sacred or hieroglyphic. In the last Quarterly Review may be found an account of these two kinds of writing. It appears that the Egyptians had two kinds of writing, one which was used for common purposes, and the other sacred. The former, being in most common use, has been denominated *enchorial*, from greek words signifying *in the country;* this is found in the manuscripts or papyri, deposited in the coffins of mummies, and appears, when compared with the other, to be a sort of running hand. The hieroglyphic or sacred characters were employed for sacred and mysterious subjects; for inscriptions in the temples, on the obelisks, and other monuments. The hieroglyphic writing is well known to be symbolical; the pictures of objects are by it made to represent words or ideas; but as it appears probable that in many instances the same idea is expressed by different objects, and different ideas by the same object, the true meaning being gathered from the connexion of these objects, this writing would be difficult to decypher even if we understood the ancient Egyptian tongue. The enchorial characters have by some of the learned been thought to be alphabetical, like the modern languages of Europe; but a more close examination shows that they are in many instances the same as the hieroglyphics, of course there is strong reason to believe, that the enchorial letters are derived from and are probably a corruption of the hieroglyphics. We have therefore no more reason to expect to succeed in decyphering these than the others.

The Rosetta stone, discovered by the French in Egypt, which fell into the hands of the English, and is now deposited in the British Museum, contains a triple inscription; that is, an inscription in three different kinds of characters, hieroglyphic, enchorial and greek. It has been ascertained, that these different inscriptions are intended to express the same ideas, of course they afford an opportunity of comparing the two first with the last; and in this way the meaning of a considerable number of hieroglyphics has been satisfactorily made out. Among them are the names of deities, kings, animals, &c. A French author has gone

so far as to give us an alphabet of Egyptian letters, both enchorial and hieroglyphic. Although these discoveries are calculated to afford much gratification to the learned, it is not probable that they will unfold to us any profound views of the literature and science of Egypt, as well for reasons hinted at above, as because all its writings, so far as we can judge, are very limited in the nature of their subjects.

The inscriptions on the cases of the Hospital mummy are altogether hieroglyphic*. They are placed in columns, to be read from above downward, and from right to left. No attempt has been made to decypher them, from the belief that with our present means this would be impracticable. But as the attention of the learned is very much excited by the discoveries already alluded to, and great efforts are now making to enlarge the bounds of the knowledge acquired, it is not improbable that before long, some part of these inscriptions may be understood, and their meaning unfolded to the public.

Inquiries have been made, whether this mummy had originally and natively the black colour it now possesses; and this has led to the general question, what was the national colour and race of the ancient Egyptians? The question is not easily answered. There are few points in which the authorities for opposite opinions are so strong and distinct. The writings of the Greek historians and poets are in support of the opinion, that the Egyptians were negroes; while the paintings, the sculptures, the mummies, and their appendages, lead to a very different conclusion. These discordant facts and authorities have caused a corresponding difference of opinions among modern writers; some of whom appear convinced that this nation were genuine negroes, and others consider the facts abundantly sufficient to prove that they had no alliance to the sable race of Africans.

At the head of the authorities in support of the opinion that the Egyptians were negroes, is to be placed the historian Herodotus, whose famous passage relating to this point is generally known. After describing the expeditions of Sesostris, he makes a question, whether, when on his return, he left a part of his army on the river Phasis, at the eastern

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* I had supposed at first that some of them were enchorial; but am now satisfied that this is not the fact.

border of the Black sea, and settled a colony, from whom the Colchians were derived. For, says he, the Colchians appear to be Egyptians, and after mentioning some other reasons for his belief, he says it had occurred to him that this opinion was well founded, because the Colchians are of a "black colour and wooly haired." μελαγχροες εἰσι και οὐλότριχες. Of course it would follow that the Egyptians were of a black colour and woolly haired; and in another instance he alludes to the blackness of their complexion.

In the learned work, entitled "Researches into the Physical History of Man," by Dr Prichard, the Greek authorities are collected in support of this hypothesis. From him it appears that, besides what has been cited from Herodotus, there are two passages in Æschylus, one in Pindar, and one in Lucian, which speak of the Egyptians as black coloured. The passage in Lucian does not, however, appear to go so far as he thinks; it is the description of a young Egyptian;—"besides being black, he had thick lips and was too slender in the legs, and that his hair and the curls bushed up behind, marked him to be of *servile rank*." We should infer that if these appearances marked him to be of servile rank, the better class of Egyptians had not these marks, which were considered to be distinguishing traits of a "servile rank." Then the better sort of Egyptians were not black, but there were among them persons of this colour who lived in the capacity of slaves. Such seems to me to be the meaning of the passage; but I leave to others to determine whether this be the most correct construction.

Independently of Lucian the authorities mentioned above seem to lead us irresistibly to the conclusion that the Egyptians were of the negro race; especially when it is noticed that there is not a single ancient author to favour a different hypothesis. This conclusion we should therefore adopt, were there not, on the other side, evidences of a different character, derived from monuments, temples, statues, sculptures, paintings, and the Egyptians themselves, as represented by their mummies.

In the publications of Winckelman, Denon, and others, especially in the great French work, "Description de l'Egypte," there are many hundreds of Egyptian figures of persons in every rank of life. Scarcely any of them bear the features of the African race. The great sphinx near the pyramids is a remarkable exception; it is described by Denon and some others, as having the African character;

but the head of the grand and majestic statue of Memnon has not the slightest mixture of the negro; and may serve as a contrast to the former. The other figures with a few exceptions, which will be noticed, are all European; the capitals of columns, the statues about the temples, the figures in the tombs, both those in fresco and bas relief, are of the same character. What is perhaps more remarkable, because more distinct, that the *painted* figures of Egyptians are of a red colour and not black. This alone would be a very strong reason for believing that the red colour and not the black, predominated among the Egyptians. But we are more forcibly impressed by this, on noticing, in a few instances, individuals of a black colour. Such are seen among the captives of king Psammis, mentioned already; those which I have noticed are generally represented in a state of inferiority or punishment. One has his hands tied behind him to a post; others are seen decapitated; but I have not noticed any blacks among the representatives of kings and heroes. The faces carved on the coffins of our mummy are red. We conclude that these blacks were either captives or slaves.

The most convincing description of facts must be derived from the mummies themselves. The characteristic marks of the head of the negro are well known and discriminated; the prominent jaws, low forehead, and compressed temples, are among the peculiarities of this race, not to be mistaken. Some writer has said that we ought not to expect to see the most strongly marked characters of the negro in the Egyptian, but rather a sort of transition head, intermediate to the European and African races. These would be singular negroes, with a red complexion and a form of head like the whites.

On examining the head of our mummy we found the jaws not prominent like the negro's; the forehead not slanting and the breadth across the temples sufficiently ample. The remains of the hair are not woolly but strait, and of a yellow colour. A mummy at Roxbury, in the vicinity of Boston, belonging to Ward Nicholas Boylston, Esq. has a fine conformation of head. This was purchased by the possessor in Egypt and sent to England, where being opened at the custom house, it was so much exposed as to injure the covering, and the flesh has in a great measure decayed from the bones. The forehead is elevated and large, the jaws filled with fine teeth, not prominent, and the head altogether of the European or Caucasian form. The two Egyptian

skulls, represented by the distinguished Blumenbach in the Decades Craniorum, are also European*. The heads of the mummies in the "Description de l'Egypte" are drawn off nearly full size and with great distinctness. The complexion of these mummies is olive, the hair of the female is long, flowing, and handsomely arranged; that of the male is very much in the style of the hair of Roman heads; and the whole character of the head and face is more Roman than African. The most general and decisive facts are those stated by the celebrated Cuvier. "I have examined in Paris and in the various collections of Europe more than fifty heads of mummies, and not one among them presented the characters of the negro or the hottentot." We have therefore no difficulty in concluding that this celebrated people were not negroes, that the configuration of their heads was European, and their skin of a red colour, like that of the Hindoos. The few instances of black figure and formation are the representations of slaves or prisoners, brought to Egypt, as at the present day from the interior of Africa. The modern population of Egypt consists principally, it is well known, of Arabs, Turks, and of the swarthy Copts, the supposed descendants of the ancient Egyptians, with a small number of black slaves.

The antiquity of this mummy may be a subject of curious speculation, but we are not to expect to arrive at any very precise conclusions in regard to it, till the characters on the sarcophagi have been decyphered. In the beginning of this paper it has appeared that the operation of embalming was performed at a very early period of Egyptian history, earlier, than the era of the construction of the pyramids, and there can be no question it was continued until the conquest of Egypt by Cambyses. From the foundation of the monarchy by Menes or Misraim the son of Ham to the time of this conquest is about eighteen hundred years. The practice of embalming was perfectly established when Joseph

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* Blumenbach made a singular discovery in regard to the incisor teeth of some mummies. He says that the crown of their teeth instead of being sharp is thick like a truncated cone; and that the crowns of the canine teeth are like those of the grinders. Such forms, if it is pretended they are original, are contrary to all example and analogy. The incisor teeth of some of the natives of the South Sea Islands are filed so as to be pointed; and in many heads of those people, as well as in the aboriginals of our own country, the incisors, being worn down by long use, present the appearance described by Blumenbach.

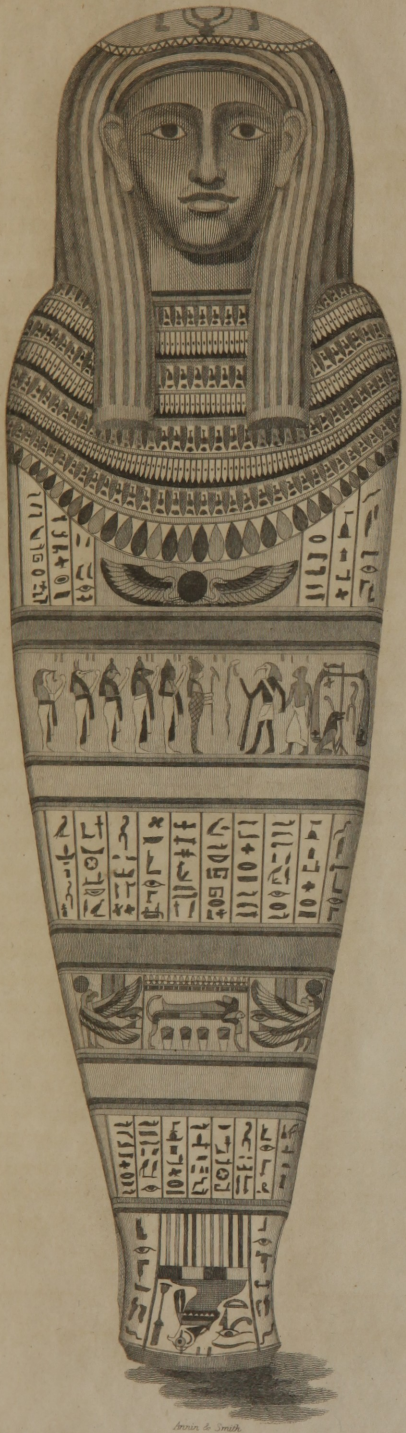
was in Egypt, in the year of the world 2262, that is six hundred years after the foundation of the monarchy; and it is fair to suppose, that it might have been in use three hundred years, that is, half the term from the first king to that time. In this way we shall get the number of about fifteen hundred years, as the term of the existence of this practice down to the Persian conquest. Some modern authors have believed that at that time a change was made in the national customs, that the use of embalming, and even the worship of their gods were totally abolished. The last opinion is evidently not well founded, since not only the Greeks adopted the Egyptian deities before and after the conquest by Alexander; but the Romans, it is well known, took a large number of Egyptian gods into their mythology, and some of them were treated with distinguished favour. Whether as much can be said of the preservation of the dead appears to me very doubtful. Winckelman is strongly inclined to the affirmative opinion, and quotes not only Herodotus, but Diodorus Siculus and Lucian, in support of his hypothesis. The two former, in speaking on this subject, employ the present time, as if the custom were actually existing; but it may be noticed that this form of expression is frequently used by them in the relation of customs which must have ceased to exist; as for example in the part of Diodorus, immediately preceding the passage where he describes the operation of embalming; he speaks of the Egyptians as actually paying divine honours to their kings, when in fact it is probable there were no kings existing in Egypt at the time he was there. For he was in that country, as well as we can judge, in the time of Julius Cæsar or of Augustus; before whom Egypt had been repeatedly in the possession of the Romans, and it does not appear that the shadows of kings set up by this people still existed; or if they did, it is not probable they were treated "as partakers of the divine nature, the sources of the greatest benefits*." Winckelman also cites a passage from St Athanasius to this effect, that "in Egypt they had the practice of enveloping the bodies of pious men in bandages, and especially the martyrs, and of keeping them in their houses, as the Egyptians had done." It appears quite as probable, that the custom alluded to is rather that which was practised by the Jews and the early Christians, of simply swathing the bodies in bandages; otherwise we

* V. D. Siculus, p. 101. Ed. Wesselingii.

should have had a more frequent and distinct mention of so remarkable a practice in the works of the fathers of the church. On the whole, it seems probable, that the use of embalming was in a great measure broken up by the Persian power, at the period of the conquest, although it might have been occasionally employed to a much later day.

The paintings and inscriptions on the sarcophagi of the mummy belonging to the Hospital, with all their accompaniment of bandages, sycamore wood, and sacred beetles, are in the purest Egyptian style; and although their fine condition prevents us from referring it to the earliest times, it was probably embalmed before the Persian conquest, or between this period and that of the acquisition of Egypt by the Macedonians.

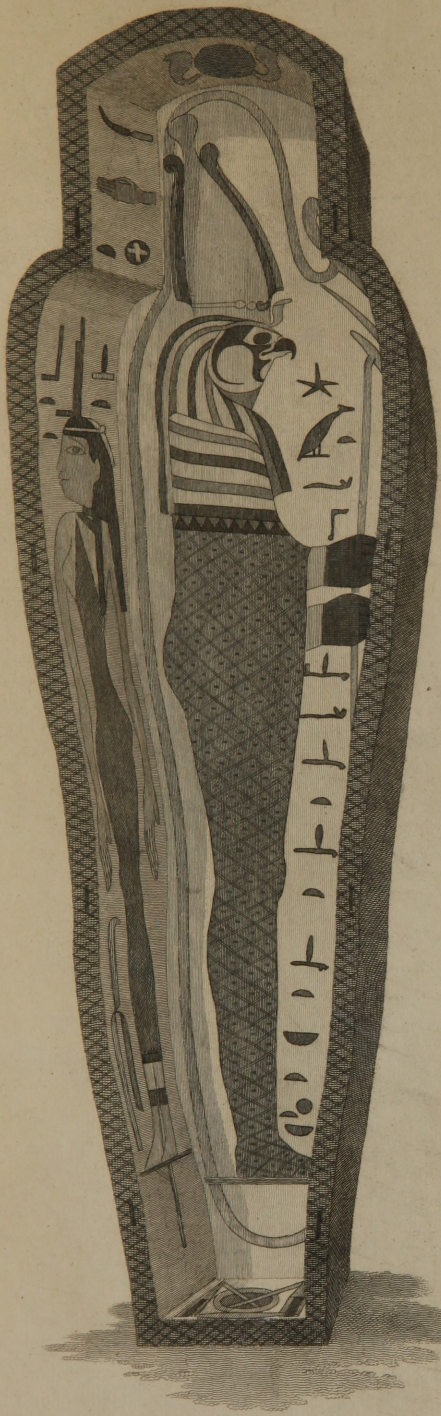
In adverting to the different topics, which have seemed to be connected with the original subject of inquiry, I have been led into details not at first contemplated. The remains of ancient Egypt are like the ruins of another world, and excite the most profound interest as well from their antiquity as their unparallelled magnificence and sublimity. All that relates to a people who could erect such works, and with science so inadequate as we suppose them to have possessed, is wonderful: yet scarcely more so than that the very individual artificers should be brought down in person to the present age. If we could for a short time bring back the spirit which once animated, and, according to the Egyptian doctrine, still inhabits these bodies, what wonders would be revealed; but unless such a miracle were to happen, we, and the generations that follow us, will be compelled to look to a different state of existence to unfold the arts, the sciences, the history, and the religion of this mysterious nation.



Annin & Smith.

COFFIN OF THE EGYPTIAN MUMMY,

External view



Anstis & Smith.

COFFIN OF THE EGYPTIAN MUMMY,

Inside view