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A fragment of an Ancient Egyptian cubit

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Abstract

The Cubit is a kind of linear measure used by many ancient people. It may have been originated in Egypt during the Old Kingdom. It is clear that a standard cubit already has been adopted by the pyramid builders of the Third and Forth Dynasties and it was this same measure that would continue to be used in Egypt through antiquity; thereafter became ubiquitous in the ancient world..

Unlike modern measures sticks, which are flat, Egyptian cubits were square or rectangular in cross section, with one edge beveled, thus giving each five sides. These of sides usually have hieroglyphic inscriptions show each of the subdivisions of the cubit.

The fragment under discussion is a part of a Royal Cubit that belongs to Dhuty-Hotep the seal-holder. It dates back to the Eighteenth Dynasty, New Kingdom. It is found in Tuna el-Gebel. It is very unique instrument because it has both a dedicatory texts and indicatiions of the divisions of the cubit which used by the Ancient Egyptians for different sorts of measures.

Key Words: Cubit, digit, palm, Tanis papyrus.

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During a recent visit to Malawy Museum,[1] I noticed a fragment of Egyptian cubit that is the unit of length used by the Ancient Egyptian to measure objects and short distances. It was made of black hematite, and of about eight digits, including seven complete ones (the complete cubit is consisting of 28 digits). The fragment which dating back to the New Kingdom Period has the following dimension: length 15 cm., width 6 cm. thickness 4 cm. It was discovered within the subterranean galleries of Tuna el-Gebel[2] (Hermopolis west). Thanks to the courtesy of the Malawy Museum,[3] I am able to reproduce this fragment.

This measurement unit has been found throughout Ancient Egyptian building works such as tombs, pyramids and temples, and actual Cubit Rules have been found which proves conclusively that this unit was indeed used. There is an evidence that the measurement unit known as the Cubit was already in use as much as one hundred years prior to the building of the Great Pyramid, and perhaps even somewhat earlier.[4]

There are many publications on the Egyptian cubit but among the best identification to it, which was given by Warren, C.: "The Cubit the most original linear measurements, as derived from the human body, came to have a fixed standard to endure for all time may never be discovered."[5] The *natural cubit* is based on the distance between thumb and another finger to the elbow on an average person.

The Ancient Egyptians employed two measures of length (cubits), the *Common* and the *Royal Cubits*. The first is the common cubit which consists of 6 palms and its length is about 45 cm.[6] This kind of cubits mentioned in the

[1] It is a small local museum in Malawy city that is situated about 45 kilometers to the south of Al-Minya city the capital of Al-Minya governorate in Middle Egypt.

[2] The site of Tuna el Gebel is situated about 5 kilometers north of Malawy city. It is the necropolis of the ancient city Hermopolis, the capital of the 15th province of Upper Egypt, worshiped Thoth, the god of science and writing whose special creature was the ibis and the baboon. The subterranean galleries is the cemetery where the Ancient Egyptian used to keep tens of thousands of mummified ibises in tiny coffins.

[3] I beg to thank the Mallawi Museum especially Mr. Ahmed Abd -el- Sabour the museum Director for its kindness in giving me the photograph used in this search.

[4] John A.R. Legon, "The Cubit and The Egyptian Canon of Art", *Discussions in Egyptology*, vol.35, Oxford, 1996, pp. 61-76.

[5] Warren, C. *The Ancient Cubit and our weights and measures*, London 1903, p.2.

[6] Nicholson, P. and Show, I. *The illustrated Dictionary of Ancient Egypt*, The American University in Cairo Press, Cairo, 2008, p.195.

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works of the ancient writers like Herodotus who declare the Egyptian cubit as: "an orgia is 6 feet, or 4 cubits; a foot is 4 palms and a cubit 6 palms." [7] (ii. 149), equal to the Greek cubit.[8]

The second is the royal cubit that is the most recent measure of the base of most the architectural projects in Ancient Egypt. The royal cubit has a length of about 52.4 cm. [9] (= 20.63 inches) and it is subdivided into 28 *fingers* (numbered from right to left), with each 4 of these fingers forming the intermediate unit known as the *palm*. In addition each digit is subdivided into further subdivisions, which could get up to a sixteenth of a digit, that giving accurate measurements down to 1.16 mm.

According to other examples described by Lepsius (1866), Schiaparelli (1927), Scott (1935), Sarton (1936), Roik (1993) and Schwaller de Luicz (1998) the royal Egyptian cubits were divided into seven palms of four digits each, but the fact upon which I wish to draw attention is the very curious subdivision of the digits. The first digit is divided into two parts, the second into three, and so on, until the fifteenth which is divided into sixteen. But I have a notice that the digits and its sub-divisions are sometimes unequal and have not all the same length.

This fragment shows the first eight digits of a solid royal cubit *mḥ nswt* of seven palms (the average length of the cubit could be from 52.3 to 52.5 centimeters)[10] of rectangular profile with a quadrangular section and a fifth side produced by chamfering the front top edge. Inscriptions painted in white decorate all the five longitudinal surfaces and the side-face.

Along the top face (a), the oblique (b), and the front face (c) there are scales of different divisions used for marking and numbering the single measurements. Both the undersurface (d) and the rear face (e) are inscribed by dedication inscriptions to the king Amenhotep III who had probably gave the cubit as a gift to its owner Dhuty-Hotep whose name is inscribed on the side-face (f). The measurements indicated consist originally of the 7 palms and each palm into 4 digits and their subdivisions, giving the standard total of 28 digits.

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[7] Herodotus, *The Histories*, translated by Godley, A.D., Cambridge, 1920, book 2, chapter 149.

[8] Among the Greeks the cubit was divided into 2 spans, or 6 hand-breadths, or 24 digits, and among the Romans into 12 feet, or 6 palms, or 24 thumb-breadths. Warren, C. op.cit, p.5.

[9] Diller, A. *The Ancient Measurements of the Earth*, Isis, vol.40, no.1, 1949, p.8.

[10] Not all the ancient measure instruments specially the cubits were not very standardized as those of the measures today.

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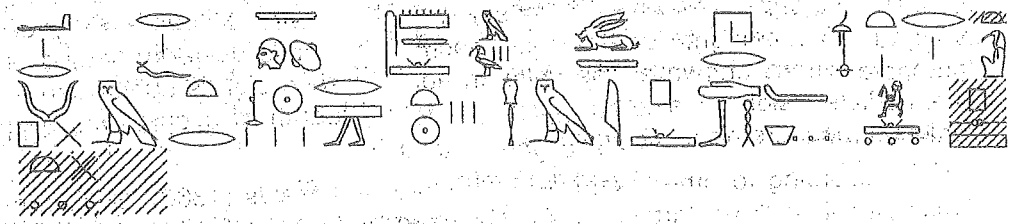
The top face (a):

The inscription on the top face (a) (fig.1) that runs a full-length the fragment consists of two registers above each other; the upper one is a praying text from Dhuty-Hotep the owner to the god of science in Ancient Egypt, Thoth.



mḥ r r .f tp-ḥsb smn m ȝḫw wn shri ḥmt-r [nt] ḏḥwty wpi m trw r šmt wnwtw sȝb m ip dbḥw špssw [psštw] ---

" A cubit concerning to standard his speech, the one who make the spirits to remain, who make the magic-spell content, Thoth, who distinguishes the seasons and make the hours movements terry, the reckoner of the funerary requirements, the costly offerings, [and the carpets] ---"

The inscription deals with imploring of the owner to the god Thoth who was depicted as god who controls and guards the spirits and keeps the magical spells going through the periods, the reckoner of all the kinds of the offerings, and finally the one who manage the seasons and the hours. He used his knowledge of mathematics and astronomy to measure the seasons and regulate time. These attributes led him to be the inventor of astronomy and to be the god of science and magic.

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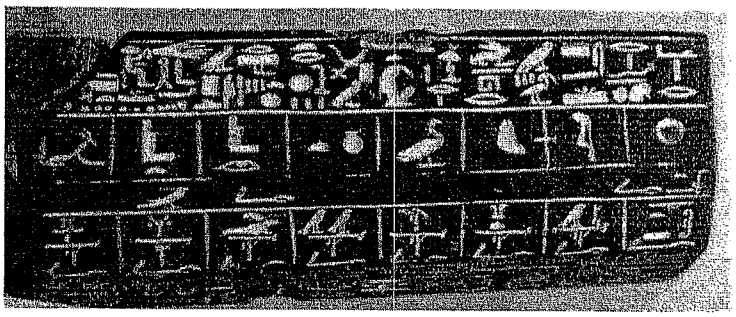

Fig.1: Malawy cubit, top-face and oblique.

The lower register on the same face has signs refers to some divinities. Each digit (its identification number is represented on the front face (c)) is associated with a particular god sacred it, and whose name is written just above it on the top face (a), starting from the right side with the god Ra represented as , belongs to the first digit, then the god Shu as  to the second digit, and so on for other gods Tefnut as  , Geb as  , Nut as  , Osiris as  , Isis as  , and finally Seth as  belongs to the ninth digit.

The strange thing about the decoration of this section that the god Ra not Amon leads the group of gods whose names are inscribed on the cubit, while the fragment hold the name of the king Amenhotep III of the 18th Dynasty (New Kingdom) not the Old Kingdom as it should be because of using Ra at the top of the cubit group of gods, which means that the inscriptions belong to a standard cubit dating back to earlier time. In any case, representing that big number of the deities is another indication of the religious connections with science.

The oblique (b):

The inscription on this beveled face (figs.1-2) is consisting of two parts; the upper one has the *measures* or we may call it the larger divisions of the royal cubit. This fragment is the right end side of a cubit and the end of its partition in the same time; it has the inscription  *mḥ nswt* that

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refers to the seventh palm (the last four digits) or the last measure of a royal cubit. Before *mḥ nswt*, to the left side there is the previous measure *mḥ* that refers to the sixth palm (cover another four digits) the one before the last measure of the royal cubit, while the rest of the cubit measures[11] are all missing.

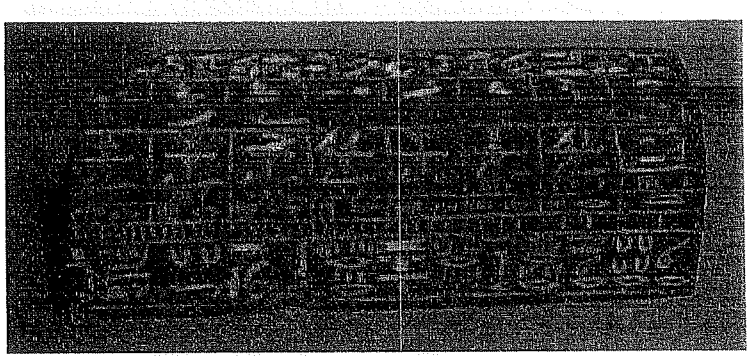

Fig.2: Top-face, oblique and front-face.

The lower part carries a list for some provinces' signs of Upper Egypt, and under each sign there is the measurement [12] *mḥ 1 šsp 3* or "1 cubit and

[11] The missing measures should be starts from the left side of the cubit by the (finger) which refers to the first digit, then for the second, to the third, a hand without the thumb over the fourth is written (those first four fingers refers to the first palm), over the fifth is hand, over the sixth is fist, over the seventh is one stretched finger hand, over the eighth is two stretched fingers hand or two palms, the small span over the third palm, the great span then over the fourth palm, the upper arm over the fifth palm, and by the end comes the two signs of our fragment the then over the sixth and the seventh palms.

[12] It should be read as .

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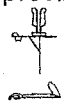
3 palms" that gives the measurements in both cubit and palms; but the strange thing that the measurements is fixed as 3 palms for all of the digits along the fragment on this side. I am not sure about the connection between the words "1 cubit and 3 palms" and the provinces, the matter which not any of the Egyptologists who studied the cubit before also understood. The provinces are

inscribed as the following: starting from the extremely right with the | 𓏏 *ꜣ sty*

"Elephantine" the First province of Upper Egypt, then | 𓏏 *wṯs ḥr* "Apollinopolis"



the Second province, | 𓏏 *nḫn* "Eilethyiapolis" the Third province, | 𓏏 *wꜣst*

"Latopolis" the Forth province, | 𓏏 *nṯrwy* "Coptos" the Fifth province, | 𓏏 *ity*

"Tentyris" the Sixth province, | 𓏏 *bꜣt* "Diospolis Prava" the Seventh province,

and finally | 𓏏 *ꜣ-wr* "Thinis" the Eighth province. These are the only eight provinces remained on the fragment of the cubit which should have the rest of the twenty-two provinces of Upper Egypt in the first twenty-two digits of the cubit on the missing part along the full-length of this side.

The front face (c):

On this vertical face (figs.2-3) beneath the bevel offers precious information; along this face there is a line divided it into two sections; the upper

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section has a group of numbers (stands as subdivisions of each digit) marked the digits started from the left with the first digit. They are all written inside rectangular shapes inscribed into two lines one above the another, while the lower section has a hieroglyph text.

The lower line of the upper section has a graduations (numbers) which show the division and the *measures* of the royal cubit, started with the number

 1 (first digit), then *2* (second digit), *3* (third digit), *4* (fourth digit), *5* (fifth digit),  *6* (sixth digit), *7* (seventh digit),  *8* (eighth digit). Those lines that refer to the number of the digits are divided it into small parts of the digit; so the first digit is divided into halves, the second into thirds, and so on to the eighth into nineteenths.

While on the upper line just above the last subdivisions the suitable fractions are written that marked as the subdivisions of the digits that run as the following: the character that has this shape  *gs* refers to 1/2 or half. The character in the shape of a mouth *r* designates a fraction, when it accompanied for example with three vertical strokes means third, and so on. In our piece we see  *r-3* the one-third,  *r-4* the quarter,  *r-5* one-fifth,  *r-6* one-sixth,  *r-7* one-seventh,  *r-8* one-eighth, and  *r-9* one-ninth digit, respectively divided each digit into half, then to third, until ninths. These fractions are all inscribed above each digit.

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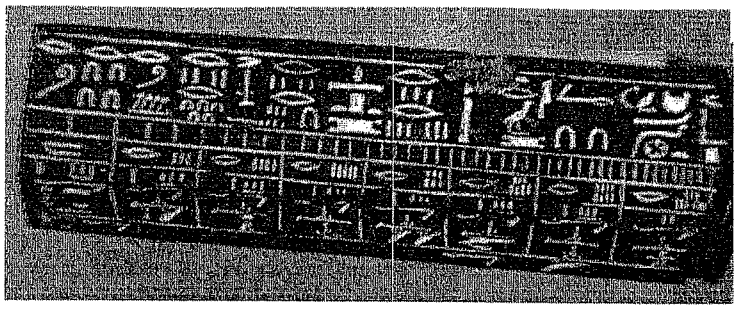
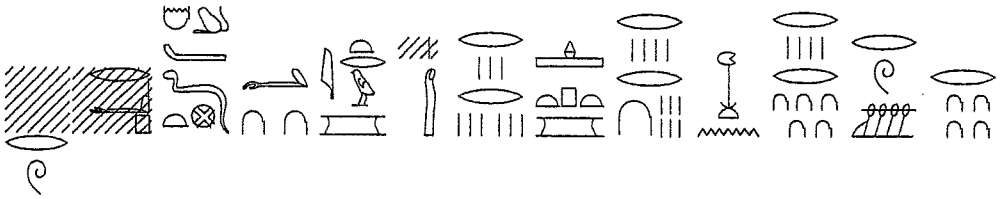


Fig.3: Oblique and front-face.

The Lower section of this face is inscribed by the following text:



----- *ḏḥww pḏt mḥ 20 itrw ḏbʿ r-3 r-6 ḥtpt itrw r-4 r-16 ḫ3 n r-4 r-60 r-100 šsp r-40 r-100*

> "---- the outer limits of Edfu are twenty cubits (from) the river - 10.000 - half (1/3 + 1/6 = 1/2) of graciousness schoenus[13] - (1/4 + 1/16 = 5/16) – 1000 - (1/4 + 1/60 = 4/15) – part 100 of a palm - part 40 (1/40) – part 100 (1/100). "

It is clear from the last text that the variety of the numbers and the fractions have not any apparently related matters while it is related to a certain town which is Edfu. The measurements are given in cubits, palms, and in *itrw* (a river measure), so I suggest that they could be measurements of the inundation or an astronomical proportion. Moreover, may be they have been copied by the scribe who understood them very well from an older one.

[13] It is a large linear measure called *itrw* "river-measure" which is measured about 4000 cubits, roughly 2 kilometers. Scott, N.E. "Egyptian Cubit Rods", *The Metropolitan Museum of Art Bulletin*, vol.1, no.1, New York, 1942, p.74.

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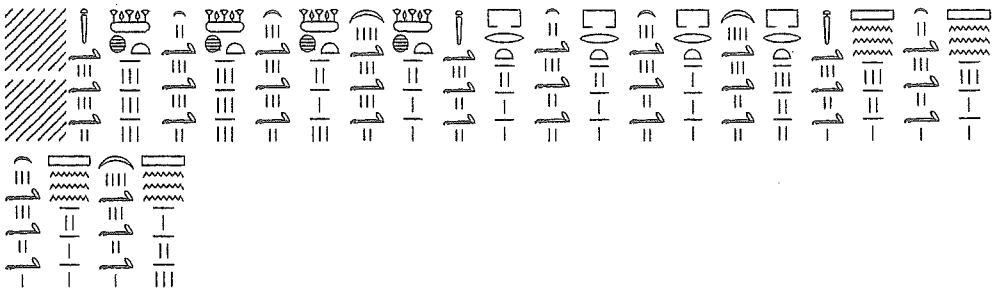
The undersurface (d):

The undersurface (fig.5) of the fragment is divided into two horizontal registers, each filled with an inscription. The text on the upper register is going like the following:



tpy (ꜣbd) ꜣḫt mḥ 3 šsp 3 mḥ 3 šsp 3 mḥ 2 šsp 3 ꜣbd 2 ꜣḫt mḥ 3 šsp 3 mḥ 3 šsp 3 mḥ 2 šsp 3 ꜣbd 3 ꜣḫt mḥ 3 šsp 2 mḥ 3 šsp 1 mḥ 2 šsp 3 ꜣbd 4 ꜣḫt mḥ 3 šsp 2 mḥ 3 šsp 1 mḥ 2 šsp 1 tpy (ꜣbd) prt mḥ 3 šsp 2 mḥ 2 šsp 1 mḥ 2 šsp 1 ꜣbd 2 prt mḥ 3 šsp 2 mḥ 2 šsp 1 mḥ 2 šsp 1 ꜣbd 3 prt mḥ 3 šsp 1 mḥ 2 šsp 1 mḥ 2 šsp 1 ꜣbd 4 mḥ 3 šsp 3 mḥ 2 šsp 2 mḥ 2 šsp 2 tpy (ꜣbd) šmw mḥ 3 mḥ 2 šsp 2 mḥ 1 šsp 1 ꜣbd 2 šmw mḥ 3 šsp 3 mḥ 2 šsp 1 mḥ 1 šsp 1 ꜣbd 3 šmw mḥ 3 šsp 2 mḥ 2 šsp 1 mḥ 1 šsp 1 ꜣbd 4 šmw mḥ 3 šsp 1 mḥ 2 šsp 2 mḥ 1 šsp 3

"First month of inundation, three cubits and three palms[14], three cubits and three palms, two cubits and three palms.

Second month of inundation, three cubits and three palms, three cubits and three palms, two cubits and three palms.

Third month of inundation, three cubits and two palms, three cubits and one palm, two cubits and three palms.

Forth month of inundation, three cubits and two palms, three cubits and one palm, two cubits and one palm.

First month of winter, three cubits and two palms, two cubits and one palm, two cubits and one palm.

[14] Read ⌒ as ⌒.

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Second month of winter, three cubits and two palms, two cubits and one palm, two cubits and one palm.

Third month of winter, three cubits and one palm, two cubits and one palm, two cubits and one palm.

Forth month of winter, three cubits and three palms, two cubits and two palms, two cubits and two palms.

First month of summer, three cubits and three palms, two cubits and two palms, one cubit and one palm.

Second month of summer, three cubits and three palms, two cubits and one palm, one cubit and one palm.

Third month of summer, three cubits and two palms, two cubits and one palm, one cubit and one palm.

Forth month of summer, three cubits and one palm, two cubits and two palm, one cubit and three palms."

This text is shown measurements in cubits and palms listed according to the seasons and the months of the year, starting with the four months of the *3ḫt* summer, then those of the *prt* winter and ended by the four months of the *šmw* summer. These measurements which Borchardt, L.[15] suggests that it is a table by which the ancient astronomer read the shadow-clock,[16] he also suggests that the cubit itself specially the one which has a rectangular profile with five sides (like our fragment) was used to placed vertically above the shadow-clock (fig.4) and used as a gnomon, and those measurements are the lengths of the shadow on the clock.

[15] Borchardt, L. "Die Altägyptische Zeitmessung," *Die Geschichte der Zeitmessung und ser Uhren,* band 1, Berlin, 1920, p.32.

[16] Borchardt mistakably mentioned this instrument as "sundial," but actually that shape of the sun-clock is called a "shadow clock" not "sundial".

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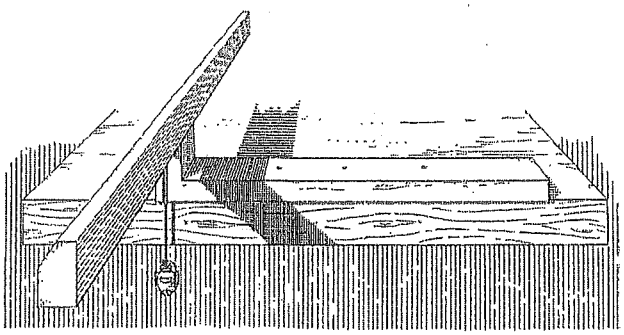

Fig.4: The reconstruction of Borchardt, L. for the first type of the shadow-clock. cf., Borchardt, *Zeit.*, p.33, abb.9.

In my opinion, the use of the cubit with the shadow-clock is reasonable if the astronomer will use it for measuring the length of the shadow not as a part of the gnomon (because of the fact that the inscription gives three different reading for each time, which is impossible to be given by the shadow) as Borchardt suggested, so I think that this table was used by the owner to determine the different levels of the water (inundation) – could be in three different relative places - from a month to another through the year.

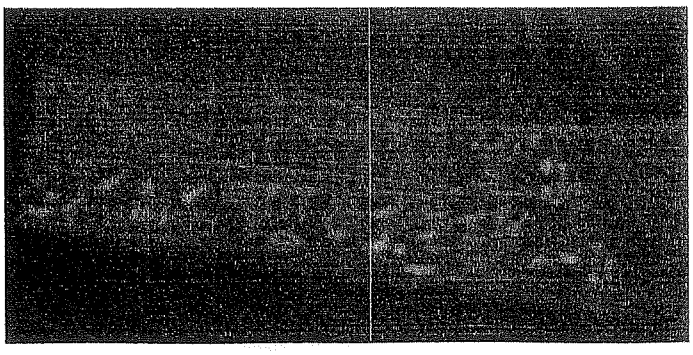

Fig.5: Undersurface.

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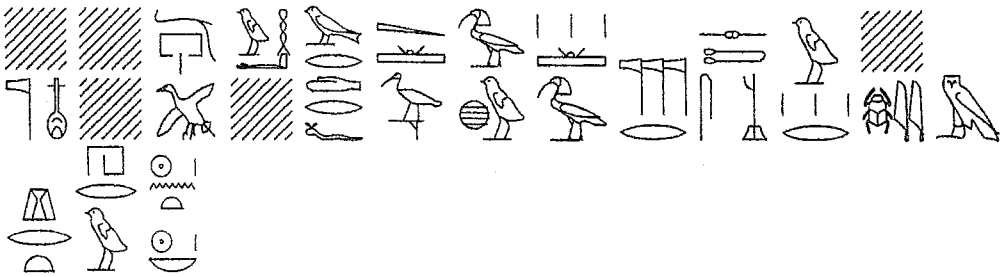
On the lower register there is another dedication inscription to the king Amenhotep III:



nṯr nfr --- imy-r pr pꜣ wḥꜥ --- wr drf ḏḥwty ꜣḫw ꜣḫ nṯrw r stsw --- ḫpry m ḫrt hrw nt rc nb

" --- the beautiful good --- the steward --- the one who investigate the great writing of Thoth, who rising up the power of the glorious gods (which) happened daily."

The text illustrated the great role that the king does in encouraging the science, which appears from the words of Dhuty-Hotep about him as the inspector of the Book of Thoth. That shows the responsibility of the king and his concerning about science during his period which is so clear from the big number of the scientific papyri, astronomical instruments, the cubits, etc that discovered dating back to his reign.

The rear (e):

The rear side (fig.6) of the fragment is divided into two horizontal registers, each filled with an inscription. The upper one carries a list for six provinces' signs of Lower Egypt, and under the first and the last ones there is the measurement  *mḥ 1 šsp 6* or "1 cubit and 6 palms", while under the others there is the measurement  *mḥ 1 šsp 5* or "1 cubit and 5 palms", which again like those who belong to the provinces of Upper Egypt it is very hard to know its identification..

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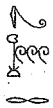
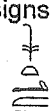
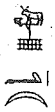
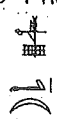
The inscriptions are starting from the right side of the fragment by  *1/64 1/32 1300 1/10 1/6* (*ḥḳ3t*) = 1/64+1/32+1300+1/10+1/6 *ḥḳ3t* = 1300 301/960 *ḥḳ3* = 1300.3135 *ḥḳ3t* .[17] Therefore, this sign is a kind of a measure of the capacity, but its connection to the cubit is not clear. After that comes the signs  which refers to the provinces of Lower Egypt in the middle and ended by *nswt mḥ m pr* "House of the Royal Cubit " which refers and parallels the first digit of the royal-cubit.

The provinces are started with the  *ỉb-ntrt* " Sebennytos " the Twelfth province of Lower Egypt, then,  *k3-ḥsb* "Pharbaethos" the Eleventh province,  *km-wr* "Athribis" the Tenth province,  *ʿnḏty* "Busiris" the Ninth province,    *ḥwy-ỉbty* "Heroonoplis" the Eighth province, and the  *ḥwy-imnty* "Metelis" the Seventh province.

[17] Both the two signs  and  are fraction of the *ḥḳ3t* which is a sort of the measure of the capacity.

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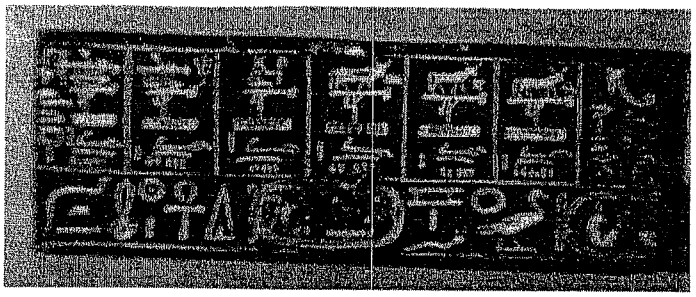
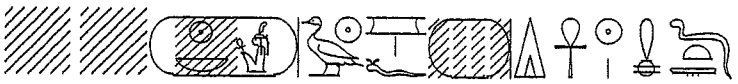


Fig.6: Rear-face.

As I mentioned before that on the oblique side (b) we should have the full twenty-two provinces of Upper Egypt along the side in the first twenty-two digits, which makes six digits of the royal-cubit remaining. The strange thing that on some other cubits like that of the architect Kha now in the Museum of Turin,[18] six of the provinces of Lower Egypt are represented in the remaining spaces of the list of Upper Egypt on the oblique side, but here on our fragment those of Lower Egypt are represented on different side not with the others of Upper Egypt, which keep the last six digits of the oblique side (b) empty or have any other kinds of inscriptions.

The lower register has a dedication inscription shows the name and the titles of the king Amenhotep III.



----- *(nb-mꜣᶜt-rᶜ)|sꜣ rᶜ mr .i .f (-----)| di ᶜnḫ mi rᶜ ḏt*

"--- (Neb-Maat-Ra)| son of Ra, his beloved (-----)| given life like the god Ra, eternally."

Because the so clear damaged that happened to the cartouches of the king and not for the rest of his titles, so I suggest that this cubit was belong originally to somebody (Dhuty-Hotep) lived during the reign of the king Amenhotep III, and reused by another person during the Greco-Roman Period in Hermopolis where it was discovered, that new owner who tried to get rid of the king -name.

[18] Scott, N.E. op.cit, p.72.

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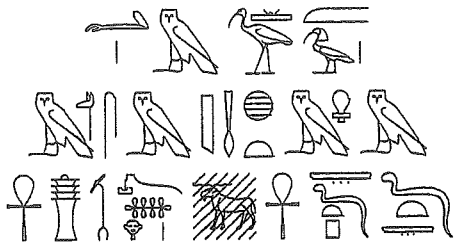
The side face (f):

On this side (fig.7) of the fragments, there is a small dedicatory hieroglyphic inscription in which Dhuty-Hotep is called a sealer or (a seal-holder), beside another imploring of the owner to the god Khnum who was inscribed as the god who described as the protector of life.



mḥ m ḏḥwty-ḥtp m ȝḫ m wsr snb mȝᶜ-ḫrw ḫtm n cnḫ ḏd wȝs stp-sȝ ḥr ḫnmw ᶜnḫ nḏt ḏt

" A cubit (dedicated) to the spirit of Dhuty-Hotep, (may he) strength and healthy, true of voice, the sealer, with the protection of life, stability and dominion from Knum, the protector of life, eternally."

Because all the dedicatory inscriptions on the cubit and also for the reason that the it is made of hematite which is very heavy stone makes it hard to carry it around, so I suggest that this cubit just a ceremonial one, rather than object intended to be buried with private individual, or just is used to keep it in a special place like a palace or a temple to be used rarely,

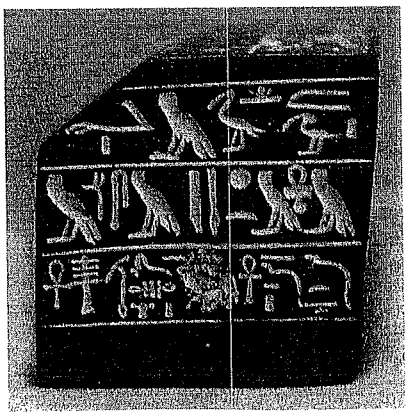


Fig.7: Side-face.

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The measurements which inscribed under each province-sign are given in cubits and palms, and they are vary from one cubit three palms to one cubit six palms, which is not a standard measures and different from a cubit to another.

The inscriptions on this fragment show clearly the signals of the deification of the cubit and the measurement. All of those extraordinary measurements inscriptions that we do not know the matter behind it or how the ancients used it, but because we found it decorated many cubits, so it seems that the scribes who wrote it depended on a kind of standard cubit or a papyrus through the periods, and may be all were of any practical use. It is also clear the importance of the cubit as a measuring tool used by the Ancient Egyptians.

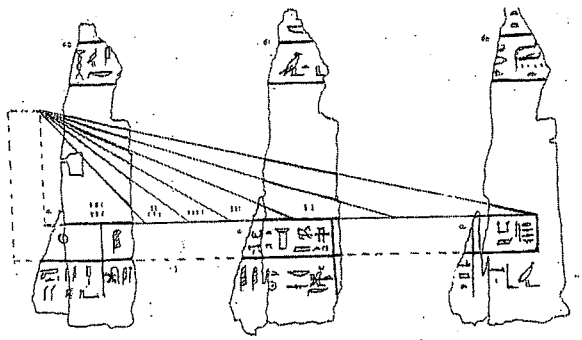

Fig.8: A part of Tanis Papyrus.

cf., Petrie, *Geogr.*, pl.xv, part 12.

As I mentioned before, the Egyptian gods played a great function with the cubit which show the importance of merging between the religion and the science, as clear it is from the big list of the deities that decorated the top face (a) of the cubit, but some of the same group of the gods are also represented on the side of the shadow-clock (just exactly after the gnomon) which drawing on one of the fragments of Tanis papyrus (fig.8),[19]

[19] The remains of this papyrus found in Tanis, and dating back to about the 1st Century A.D. Our papyrus that I discus here is depict a shadow clock, with the numbers of the hours marked above the rule and under them are names of these hours which are inscribed on the rule. The vertical end piece that casts the shadow is not shown but the rays proceeding from it to the hour marks are shown. The rays pointed to the six marks on the horizontal board of the shadow-clock which have the number of the second to the six hours. For more information about this

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The unusual thing is that both of the two lists are started with Ra, Shu, then there is a big part of the papyrus missing, and next we could recognize the symbol  of the goddess Nephtes. This show the great relation and the connection between the cubit and the shadow-clock.

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papyrus see Petrie, W.M.F. "The Geographical Papyrus," *Two Hieroglyphic Papyri from Tanis,* Trubner and Co., London, 1889, p.21, pl.xv.

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الملخص العربى

جزء من ذراع (وحدة قياس للأطوال) مصري قديم

لقياس الأطوال القصيرة أستخدم الإنسان القديم فى عدة حضارات حول العالم العديد من مقاييس الأطوال cubits أو ما يطلق عليه "الذراع" (نسبة الى الذراع الأدمى)، والتى أخترعها وأستخدمها المصريين القدماء بدء" من عصر الدولة القديمة حيث تم استخدامه فى المشاريع الضخمة مثل بناء أهرامات الأسرتين الثالثة والرابعة، وهو نفس المقياس الذى أستخدم فى مصر عبر تاريخها القديم.

قسم المصريون هذا المقياس الى أجزاء عدة منها (الأصبع- اليد- القدم- الكتف- وغيرها) وكان يوجد من هذه المقاييس نوعان (القصير- الملكي) بأطوال مختلفة، ولكل منها استخداماته المختلفة. وكان يستخدم فى صنعها مواد عدة تتراوح من الخشب الى عدة أنواع من الأحجار.

أما عن هذا الجزء محل الدراسة والذى وجد فى جبانة تونا الجبل فهو جزء من أحد المقاييس التى يطلق عليه لفظ (مقياس ملكي) وهو يخص حامل الأختام جحوتى-حوتب، ويرجح الى عصر الدولة الحديثة، حيث يحمل اسم الملك أمنحوتب الثالث أحد ملوك الأسرة الثامنة عشر. تعتبر هذه القطعة من أهم هذة المقاييس التى تنتمي الى هذة النوعية حيث أنه بجانب النقوش التى تستخدم فى أنواع القياس المختلفة، فأنه يحتوى أيضا على نصوص إهدائية مهداة الى الآلهة تحوت وخنوم بالإضافة الى الملك أمنحوتب الثالث الذى من المرجح أنه أهدى هذا المقياس الى جحوتى حتب.