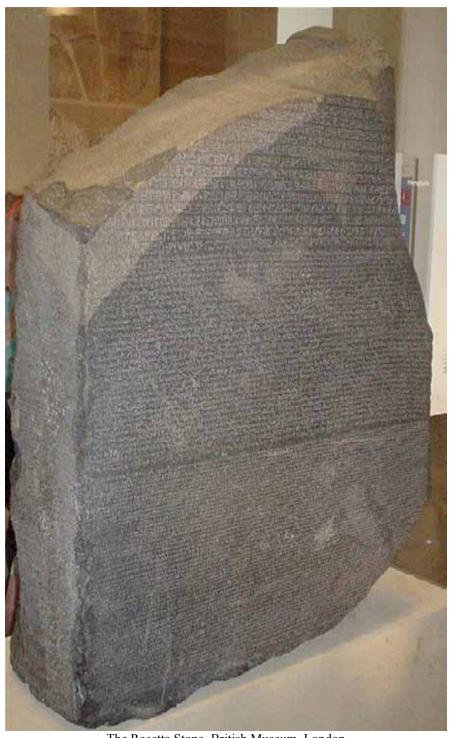
The Rosetta Stone

Languages: Egyptian and Greek, Using three scripts -- Hieroglyphic, Demotic Egyptian, and Greek.
Found 1799 by the French in Egypt
Originally from 196 B.C.



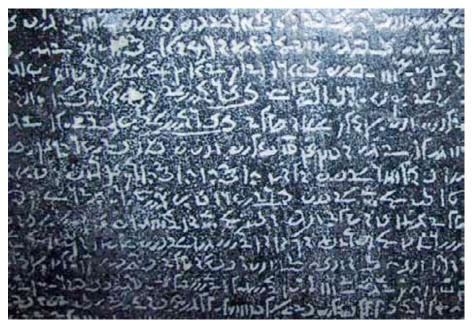
The Rosetta Stone, British Museum, London

Examples of Hieroglyphics				Æ	grain
M	king	4	boat, ship navigation	Loss	vine, fruit, garden
뤨	eat, drink speak, think, feel	1	air, wind, sail	A.	fire, heat, cook
Ì	mummy, likeness, shape	<u>A</u>	in, from, as with (of instrument)	Ŷ₩	live, life
٨	move backwards	3	goddess, queen	S _{ली}	calf
W.	snake, worm	\$12	enemy, death		envelop, embrace

Hieroglyphic, [from the Greek=priestly carving], type of writing used in ancient Egypt. Similar pictographic styles of Crete, Asia Minor, and Central America and Mexico are also called hieroglyphics. Interpretation of Egyptian hieroglyphics, begun by Thomas Young and J. F. Champollion and others, is virtually complete. The meanings of hieroglyphics often seem arbitrary and are seldom obvious. Egyptian hieroglyphics were already perfected in the first dynasty (3110-2884 B.C.), but they began to go out of use in the

Middle Kingdom and after 500 B.C. were virtually unused. There were basically 604 symbols that might be put to three types of uses (although few were used for all three purposes).

- 1) They could be used as ideograms, as when a sign resembling a snake meant "snake." [See chart above.]
- 2) They could be used as a phonogram (or a phonetic letter similar to our alphabet), as when the pictogram of an owl represented the sign or letter "m," because the word for owl had "m" as its principal consonant sound. [It would be like us using a picture of a snake for the letter "s."]
- 3) They could be used as a determinative, an unpronounced symbol placed after an ambiguous sign to indicate its classification (e.g., an eye to indicate that the preceding word has to do with looking or seeing). The phonograms provided a basis for the development of the alphabet.



Left - Demotic Egyptian detail

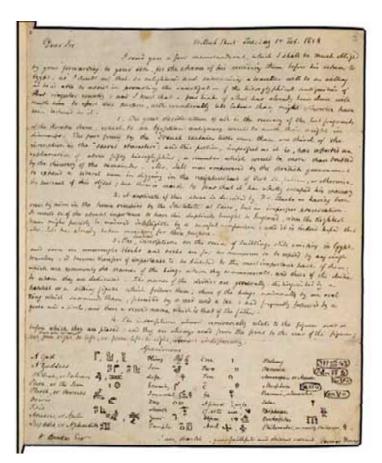
Demotic refers to both the ancient Egyptian script (derived from northern forms of hieratic used in the Delta) as well as the stage of the Egyptian language following Late Egyptian and preceding Coptic. (There is also a Demotic Greek, just to make things more confusing.) This language and script were well understood in the 19th century.

$A\alpha...\Omega\omega$

Greek	alphabet		
A a Alpha	В в Вета		
Γγ Gamma	Δ δ Delta		
E ε Epsilon	ZζZeta		
Hη Eta	Θ θ Theta		
l i lota	К к Карра		
Λ λ Lambda	МμМи		
N v Nu	ΞξXi		
O o Omicron	ПπРі		
P p Rho	Σσς Sigma		
TτTau	Y u Upsilon		
Φ φ Phi	X x Chi		
Ψ ψ Psi	Ω ω Omega		
obsole	te letters		
F F Digamma	M M San		
Q Q Qoppa	70 3 Sampi		

The Greek alphabet and language had never been forgotten and was well understood in the 19th century. The general structure of ancient Greek is somewhat similar to English.

Three Upper: Egyptian Hieroglyphics Middle: Egyptian Demotic Levels Script of Lower: Greek Text <--One of 5 times Ptolemy's name is mentioned Copyright 2000 by Joel A. Freeman, Ph.D.



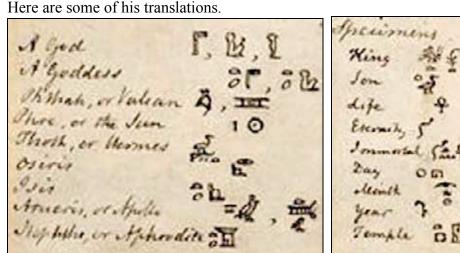
The English polymath Thomas Young (1773-1829) had been trying to decipher ancient Egyptian hieroglyphs since the French army discovered the Rosetta Stone in 1799. He wrote this letter to the father of William John Bankes (1786-1855), the English traveler and antiquary, in 1818. Bankes was traveling in Egypt at that time and Young was hoping that he would be 'able to assist in promoting the investigation of the hieroglyphical antiquities of that singular country'. This is Thomas Young's letter, from 1818, describing his first hieroglyphic observations. The following excerpts from this letter describe Young's realization that the Rosetta Stone was a key to figuring out Egyptian Hieroglyphics.

of the Kriethe diene, which to an Explain antiquency would be and their anight in dimension. The part fruit by the French contains little more than one third of the inscription in the "sacred obscusters"; and this pertien, imperfect no it is, has affected an explanation of above fifty hieroglyphics; a number which would be more than drubted by the discovery of the remainder. eller dall was empowered by the British government to expend a liberal sum in discovery in the neighbourhood of Vert it, bution, or otherwise, in pursuit of this object; but there is search. To favor that it has wholly escaped his memory,

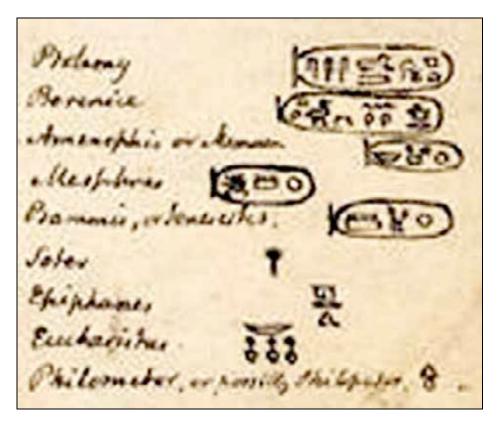
1. The great ?desideration? of all is the recovery of the last fragments of the Rosetta Stone, which to our? Egyptian antiquities? would be worth their weight in diamonds. The part found by the French contains little more than one third of the inscription in the "sacred characters"; and this portion, imperfect as it is, has afforded an explanation of above fifty hieroglyphics; a number which would be more than double by the discovery of the remainder. Mr. Salt? was empowered by the British government to expend a liberal sum in digging in the neighborhood of Fort St. ???????, or otherwise, in pursuit of this object; but there is reason to fear that it has wholly escaped his memory.

before which they are placed; and they are always send from the front to the var of the figures; but from right to less, or from less to right, whenever indifferently;

4. The inscriptions almost universally relate to the figures over or before which they are placed; and they are always read from the front to the rear of the figures; ??? from right to left, or from left to right, ??? indifferently. Here are some of his translations.



He found the hieroglyphic symbols for Ptolemy's name, but couldn't figure out how to read it phonetically.





Here is a detail from the stone itself... Ptolemy's name is shown here twice.



Ptolemy's name, which appears in the Rosetta Stone's Greek text as *Ptolemaios*, was the first word recognized in hieroglyphics (see above). But early attempts to interpret its eight symbols were stymied by the traditional belief that all hieroglyphics could be translated as pictures of words. Even after Thomas Young assigned sound values to several symbols, Champollion held to the belief that the lion (one of the symbols in the word) symbolized the Greek word for war.

Champollion eventually worked on the idea that Ptolemy might be read phonetically. He reconstructed the name, sound by sound, from the Greek and Coptic into demotic, then into an earlier hieratic script and finally into hieroglyphics. The sound he arrived at was "p-t-o-l-m-y-s," or "Ptolmis," and could be spelled both right-to-left or in other directions. This discovery paved the way for deciphering the rest of the hieroglyphic text on the Rosetta Stone.

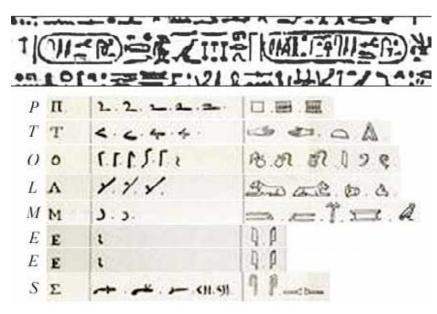
In 1822, a copy of the inscription from an obelisk at Philae, excavated seven years earlier, was made available to Champollion. He was stunned to see confirmed in its hieroglyphics a name he had reconstructed many times from a demotic papyrus: the cartouche of Cleopatra.



- Left - Autographed copy of the *Lettre a M. Dacier*, Paris, 1822

The young French scholar Jean-François Champollion (1790-1832) made a crucial step in understanding ancient Egyptian writing when he pieced together the alphabet of hieroglyphs that was used to write the names of non-Egyptian rulers. He announced his discovery, which had been based on analysis of the Rosetta Stone and other texts, in a paper at the Academie des Inscriptions et Belles Lettres at Paris on Friday, 27 September, 1822. The audience included his English rival Thomas Young (1773-1829), who was also trying to decipher Egyptian hieroglyphs. Champollion inscribed this copy of the published paper with alphabetic hieroglyphs meaning 'mon ami Dubois' ('to my friend Dubois'). Champollion made a second crucial breakthrough in 1824, realizing that the alphabetic signs were used not only for foreign names, but also for the Egyptian language and names. Together with his

knowledge of the Coptic language, which derived from ancient Egyptian, this allowed him to begin reading hieroglyphic inscriptions fully.



The picture to the left is Ptolemy's name extracted from Champollion's notes. On the far left, running vertically is PTOLMEES in our Latin alphabet. Next to that is the Greek. In the next column is the Demotic and in the last column are the Egyptian Hieroglyphics. As you can see, one letter in our alphabet may have several equivalent symbols in the Demotic script or the Hieroglyphics.

Hieroglyphics can be written in any number of directions, not just left to right or right to left. The following hieroglyphic has been reversed to accommodate Left-to-Right reading.

The word 'Ptolemy' is written in hieroglyphs thus:



The letters in the above cartouche are:



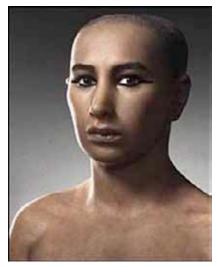
FIGURE 3. Count Rumford withThomas Young and Humphry Davy lecturing at the Royal Institution, by James Gillray, Cartoon No. 520 in The Works of Gillray from the Original Plates, London: Printed for Henry G. Bohn, York Street, Covent Garden, by Charles Whitting, 1851. (Is it possible that the man writing, in the foreground, could be Coleridge?)

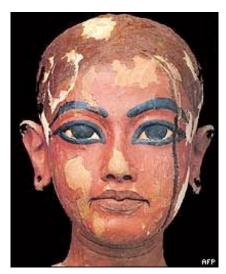
Forensic Tut Reconstruction

Nebkheperre **Tutankhamun** (alternate transcription **Tutankhamen**), named **Tutankhaten** early in his life, was Pharaoh of the Eighteenth dynasty of Egypt (ruled 1334 BC - 1325 BC), during the period of Egyptian history known as the New Kingdom.

The 1922 discovery by Howard Carter of his nearly intact tomb received worldwide press coverage and sparked a renewed public interest in Ancient Egypt, of which Tutankhamun remains the popular face.







In 2005, three teams of scientists (Egyptian, French and American), in partnership with the National Geographic Society, developed a new facial likeness of Tutankhamun. The Egyptian team worked from 1,700 three-dimensional CT scans of the pharaoh's skull. The French and American teams worked plastic molds created from these -- but the Americans were never told whom they were reconstructing. All three teams created silicon molds which are the most accurate replications of Tutankhamun's features since his royal artisans prepared the splendors of his tomb.