Key to Egyptian scripts that had remained undeciphered for centuries, the Rosetta Stone—depicted on this month’s cover—displays three parallel inscriptions, one in hieroglyphic, the ancient sacred script of Egypt (top); one in demotic, a popular script derived from hieroglyphic and used at the time the stone was inscribed (middle); and one in Greek, the language of the Egyptian dynasty established by Alexander the Great (bottom).

The message itself is a decree by the priests of Memphis in honor of Ptolemy V Epiphanes, king of Egypt from 205 to 180 BC. The deciphering of the Egyptian scripts illuminates the thinking behind the acts of writing and translating and perhaps sheds some light even on activities such as compi, writing.

The stone was found in August 1799, half-buried in the mud along a branch of the Nile near the Egyptian town of Rosetta, by an engineer in Napoleon’s army. After Napoleon abandoned Egypt in 1801, the stone passed as war booty to the British, who eventually placed it in the British Museum.

The discovery excited Europe, for the Greek inscription—which European scholars could read—stated that the decree was to be published in “sacred, domestic, and Greek characters.” Although certain that the inscriptions were indeed parallel, those attempting to decipher them still did not enjoy immediate success.

The challenge to the decipherers was considerable—something like discovering three programs designed to do the same thing, with two written in completely alien high-level languages. In effect, the Rosetta decipherers had to reconstruct the “compilers” for the unknown scripts. This involved lexical, syntactic, and semantic components—lexical, in that they had to establish the identity of the individual characters (i.e., whether they were alphabetic, syllabic, or, like Chinese characters, represented whole concepts); syntactic, in that they had to determine the way the characters combined to form meaningful units; semantic, in that they finally had to derive the correct message from these groupings.

Twenty-three years elapsed before the Egyptian inscriptions were fully deciphered. The earliest success went to a Swedish diplomat named Åkerblad, who worked with royal names known from the Greek text. From them he inferred the demotic signs standing for consonants, but not further because he assumed that the demotic script was strictly alphabetical. An English physicist, Thomas Young, succeeded in completely translating the demotic text and then turned to the hieroglyphs. Working with known proper names, just as Åkerblad had, he correctly established the phonetic values for six hieroglyphic characters.

Complete success fell to a young French scholar, Jean-François Champollion, who since childhood had dreamed of becoming the decipherer of the hieroglyphic script. Champollion employed what might be termed a “brute force” method—he collected every example of hieroglyphic writing available to him and compared the characters to demotic and hieratic ones. (Hieratic—another Egyptian script—was also descended from the hieroglyphic.) He thus gained a comprehensive view of the development of Egyptian characters. Taking the last great step, Champollion transcribed demotic proper names back into hieroglyphs and thence back into hieroglyphic. When he compared the hieroglyphic form he had derived—standing for the name “Ptolemy”—to the inscription on the Rosetta Stone, he discovered a group of characters identical in appearance—and, as it turned out, in meaning—to his.

Thus, in 1822, Champollion had found the key. By the time of his early death in 1832, he had translated a multitude of hieroglyphic inscriptions and texts. Champollion’s work was verified by later scholars, and by the turn of the century much of the surviving Egyptian literature had been translated.

Of interest: