Earthquake!

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Temple XVIII at Palenque once was adorned with a remarkable stucco inscription, originally placed on the back wall of the temple’s inner sanctuary, but now completely fallen away. Blom and La Farge (1926-7) recorded a few glyphs of the text still adhering to the wall in the 1920s, but soon thereafter nothing remained. The inscription was not a complete loss, however. Blom and later Ruz (1958) recovered a great many stucco glyphs during excavations just below the wall. The inscription has been studied by several epigraphers (Schele and Mathews 1979), and most completely by Ringle (1993). In this note I would like to call attention to just one hieroglyph that looks to be read yuk-(u)l-aj kab, “the earth was shaken,” and propose that this is a unique Pre-Columbian Maya record of an earthquake.

The glyph (Figure 1) appears as no. 439 in the Schele and Mathews (1979) catalog of Palenque’s bodega and consists of the signs yu-ku-la-ja KAB-. The final element (if indeed there was a distinct subfix) is missing but occupied a small space after the KAB logogram, written here in its personified form.

The suffix –la-ja strongly suggests that the first half of this glyph, before KAB, spells a positional verb. Positionals are an important verb class in Mayan languages describing the physical state, orientation or placement of a person or thing (Knowles 1986). Macleod (1984) was the first to discover positional verbs in the Classic inscriptions, and a good many are similarly spelled with the –la-ja ending. Certainly the most common positional verb in Maya texts is CHUM-la-ja, for chum-(u)l-aj, “he sits,” where the positional stem is chum-ul, “sitting.” The positional stem in the Palenque glyph ought then to be yuk-ul, giving the full form yuk-(u)l-aj.

The KAB sign would necessarily serve as the subject of this verb, with the well-established meaning of “earth, land” (kab, incidentally, was certainly its pronunciation at Palenque, as indicated by several cases where the logogram is replaced by ka-ba). Looking for a verb root yuk in Ch’olan languages, we find the following:

Proto-Mayan (Kaufman and Norman 1984):
* yuk, temblar

Colonial Yucatec (Martinez Hernandez 1929):
    *yukba, temblar la tierra, y temblor o terremoto

Proto-Ch’olan (Kaufman and Norman 1984):
    *yuḥk, shake (passive stem)

Ch’ol (Tumbala) (Aulie and Aulie 1978):
    yujčun, sacudir (planta, arbol)
    yujquetl, temblor

Ch’orti (Wisdom 1950):
    yuki, to shake something
    yuhk, shaking or trembling, spasm, convulsion
    yuhku bah, spasm or convulsion of the body, general convulsion
    yuhkrem, shaking, swaying
    yuhkremah, rock back and forth, sway
    yuhku, shake a thing, rock a thing back and forth
    yuhkur, shaking, trembling, rippling, convulsing

Before moving on, one important linguistic point needs to be addressed. Whereas the Palenque glyph looks to be a positional derivation, most of the Ch’olan forms listed above are not. The infixed –ḥ- in proto-Ch’olan *yuḥk and its descendant forms in Ch’ol and Ch’orti mark it as a passive stem. This was presumably derived from a transitive root *yuk, “to shake something,” that is no longer attested in many Ch’olan languages. It does seem to exist in Ch’orti, however (yuki), and is likely reconstructable for proto-Mayan (note Yuc. yukba, “manearse,” a reflexive construction derived from a transitive root yuk). Since there is considerable overlap among transitive roots and positionals (Kaufman and Norman 1984), it is reasonable to suppose yuḥ-ul, “shaking,” was once a positional stem in Classic times. The semantics of yuk, referring to a physical state of being, is fitting for a positional derivation even if not presently attested.

The Palenque glyph thus looks to read yuk(u)l-aj kab and can be reasonably translated as “the earth is shaken,” a clear reference to an earthquake (note Colonial Yucatec yukba, “terremoto,” and Ch’ol yujquetl, “temblor”). Unfortunately, due to the jumbled state of the Temple XVIII inscription, we lack a date to go with this intriguing verb and therefore cannot place the episode in the larger framework of Palenque’s history.

As noted earlier, the KAB logogram is anthropomorphized as a human profile. Glyphic signs very often are animated in this way—particularly in this inscription—but one may wonder if the profile KAB sign subtly indicates the Maya concept of the earth as a living entity capable of violent movement.
As many know, Palenque lies in a geological zone that continues to be seismically active. Three tectonic plates (the North American, Caribbean, and Cocos) converge in southern Mesoamerica near Chiapas, and their movements with respect to one another have shaped the mountainous terrain over many millions of years. Earthquakes were surely commonplace in Classic times as well.

If this decipherment is tenable, it reminds us that earthquakes were noteworthy events of record during Classic times, and that they may have affected history in ways not otherwise seen in the standard dynastic accounts. Violent tremors have left their clear mark in the archaeological record, perhaps the best example from the Maya area being the slumped Hieroglyphic Stairway of Copan (Gordon 1902), which in all likelihood came as the result of a powerful earthquake. We can therefore easily imagine that a tremor contributed to the destruction of this beautiful text from Temple XVIII, with its “earthquake” hieroglyph.

References

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Figure 1. The glyph *yu-ku-la-ja KAB-* from Palenque, Temple XVIII. Photograph by Linda Schele.