

## A lack of linguistic evidence for domesticated sunflower in pre-Columbian Mesoamerica

Lentz *et al.* (1) cite linguistic evidence supporting their hypothesis that *Helianthus annuus* was domesticated in Mesoamerica in pre-Columbian times. This consists, in part, of a list of names for sunflower collected from speakers of 14 contemporary native languages. They conclude that the fact that terms for sunflower in 11 of these languages do not phonologically resemble Spanish words for sunflower provides support for their understanding that the cultivation of sunflower in Mesoamerica today is not explained by its introduction from outside the region. However, the terms they cite are all descriptive in nature, e.g., Popoluca “big sun” and Nahuatl “shield flower.” Such semantically transparent names are typically used as alternatives to loanwords to designate newly encountered introduced things (2), e.g., “cacao bean of the earth” for peanut in both Popoluca and Nahuatl (peanut is a late introduction to Mesoamerica from South America).

The comparative method of historical linguistics reveals that many cultivated plants of contemporary Mesoamerica have names that reconstruct for languages ancestral to contemporary ones. I have investigated a set of 41 such plants, including *H. annuus*, all of which are known to be native to the New World. With the notable exception of sunflower, all of these plants have names in proto-languages that were spoken at least 2,000 years ago. In addition, no evidence indicates that a word for sunflower was present in any ancestral language spoken after 2,000 B.P. In summary, linguistic evidence does not indicate a substantial time depth for sunflower in Mesoamerica.

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1. Lentz DL, Pohl MD, Alvarado JL, Tarighat S, Bye R (2008) Sunflower (*Helianthus annuus* L.) as a pre-Columbian domesticate in Mexico. *Proc Natl Acad Sci USA* 105: 6232–6237.
2. Brown CH (1999) *Lexical Acculturation in Native American Languages* (Oxford University Press, New York).

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