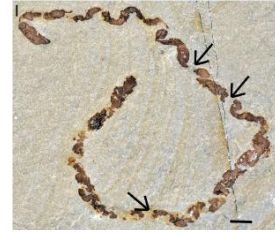# Bump-Headed Lace: A Scientific Tool Built from Words

by Heather L Montgomery

Sandra had a problem. Standing on a mountainside in Spain, she wanted to know about ancient animals — animals that lived right there 126 million years ago when that spot had been a swamp. She wondered: Who lived here? Who got chased? Who got eaten?
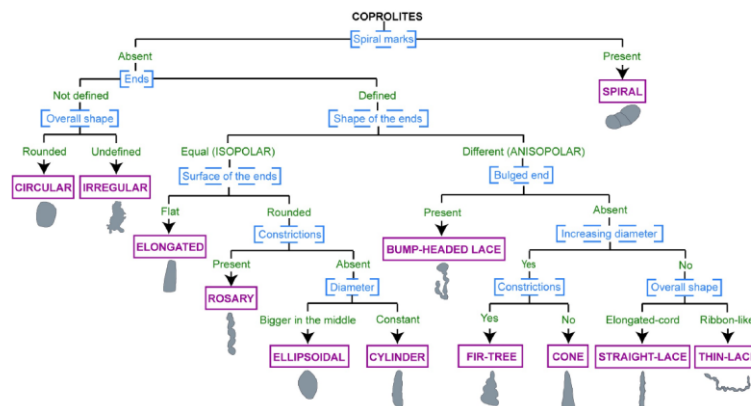
Her problem was, all she had was a pile of poop. Really!

Scientist had collected 2,000 coprolites — fossilized poops — from that site. Sandra wanted to know: Why were there so many? Which animals made the different shapes? And most importantly, could she read the stories of ancient animals hidden in their poo?

But, before Sandra could find those answers, she faced a more basic question: What do you even call them?

For centuries scientists have been finding fossilized doo-doo, and each and every time they used different language to describe the stuff. This is a problem. If everyone uses different words, how can people from across the globe discuss them intelligently? For example, if you found a coprolite, what words would you use to look it up to see if it's been found before?

So, Sandra Barrios de Pedro put her language skills to work. She described the shapes as fir trees, or spirals, or bump-headed lace. Sandra created a dichotomous key — a tool to unlock the mysteries of science — and she built it out of words.

From: Pedro, Sandra Barrios-De, et al. "Exceptional Coprolite Association from the Early Cretaceous Continental Lagerstätte of Las Hoyas, Cuenca, Spain." *Plos One*, vol. 13, no. 5, 23 May 2018, doi:10.1371/journal.pone.0196982.