

Table S1: General characteristics of the sampling site: location, depth, sampled push cores, corresponding habitat and analyses carried out on each push core.

Site name		Localisation	Depth	Type of environment	Habitat	Sediment cores for microbiological analyses	Core length	Numbers of analyzed layers for microbiological analyses	Sediment cores for geochemical analyses
Ayala	BIG14	27°35.5796N; 111°28.9879W	1560 m	seep	Vesicomylid	Pl. 1760-16 CT7	12 cm	5	Pl. 1760-16 CT5
Vasconcelos	BIG13	27°35.5887N; 111°28.9663W	1570 m	seep	Vesicomylid	Pl. 1757-13 CT8	10 cm	3	Pl. 1757-13 CT5
	BIG18	27°35.5770N; 111°28.9840W	1575 m	seep	Microbial mat	Pl. 1758-14 CT3	10 cm	4	Pl. 1758-14 CT1
Morelos	BIG10	27°00.5484N; 111°24.4219W	2007 m	vent	Vesicomylid	Pl. 1768-24 CT2 <i>closer to the microbial mat area than CT3</i>	12 cm	5	Pl. 1768-24 CT1
						Pl. 1770-26 CT8 <i>further from the microbial mat area than CT2</i>	12 cm	5	Pl. 1770-26 CT5
MegaMat	M27	27°00.4451N, 111°24.5298W	2000 m	vent	Microbial mat	Pl. 1766-22 CT3 <i>White mat</i>	12 cm	6	Pl. 1767-23 CT10
						Pl. 1767 GCT1 <i>Yellow mat</i>	12 cm	6	