

Supporting Information

Lehtovirta-Morley et al. 10.1073/pnas.1107196108

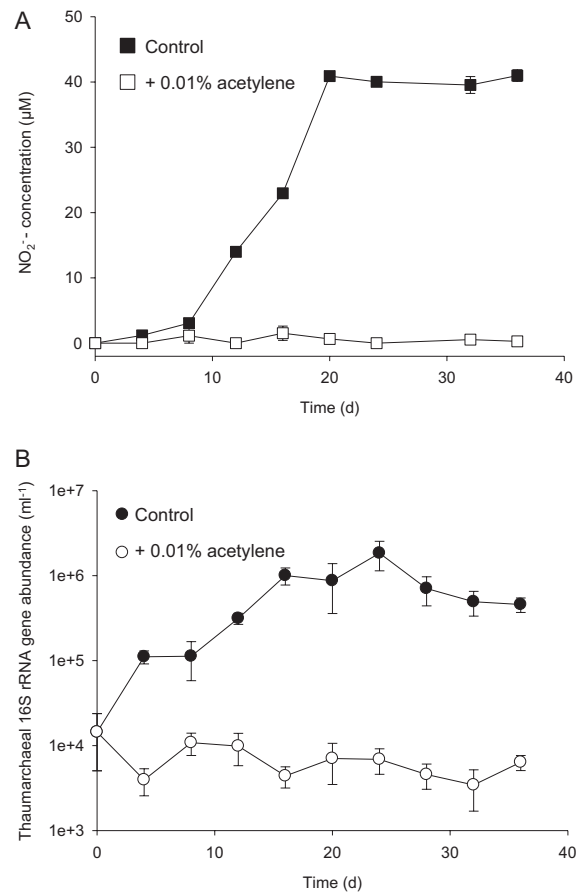


Fig. S1. Effect of acetylene on thaumarchaeal ammonia oxidation. Changes in (A) nitrite concentration and (B) thaumarchaeal 16S rRNA gene abundance in inorganic medium, pH 4.5, containing 500 µM ammonium in the presence and absence of 0.01% (10 Pa) acetylene. Data are presented as mean and SE of triplicate cultures for all growth experiments.

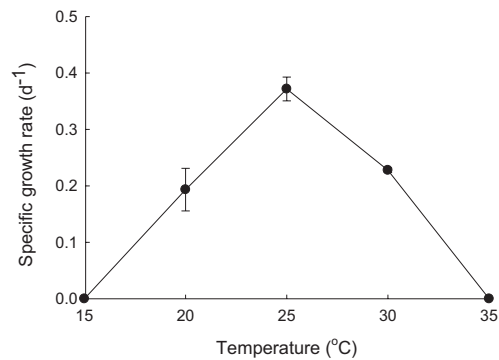


Fig. S2. Effect of temperature on thaumarchaeal growth. Specific growth rate was determined from increases in nitrite concentration during exponential growth of the thaumarchaeal enrichment during growth in inorganic liquid medium at pH 4.5 and containing 500 µM ammonium. Data are presented as mean and SE of triplicate cultures.

Table S1. Analysis of 45 bacterial 16S rRNA gene sequences derived from three independent cultures (15 per culture)

No. of sequences (n = 45)	Closest BLASTN hit (accession no.)	Identity (>700 bp), %	Source	Average genus <i>rrn</i> copy no. (1)
18	<i>Burkholderia</i> sp. Cs130 (FJ528269)	100	Root nodule	5.17
12	<i>Cupriavidus basilensis</i> (GU171379)	99	Soil	5
5	<i>Elusimicrobium</i> clone 49S1_2B_60 (DQ837258)	97	Coastal aquifer	1
3	<i>Mesorhizobium</i> sp. L-19-Leiria (EU652111)	99	Root nodule	2
2	<i>Mesorhizobium</i> sp. USDA 4318 (FJ617187)	99	Root nodule	2
1	<i>Hyphomicrobium</i> clone GASP-MA1W1_F10 (EF662656)	99	Soil	ND
1	Uncultured bacterium clone nbw311e06c1 (GQ088323)	98	Human skin	ND
1	<i>Sphingomonas mali</i> strain IMER-B2-38 (FJ772027)	99	Rhizosphere soil	ND
1	<i>Burkholderia</i> sp. D22(2010) (HM624029)	100	Root tissue	5.17
1	<i>Bradyrhizobium</i> sp. U26 (EU652239)	100	Root nodule	1.5

ND, not determined.

1. Klappenbach JA, Saxman PR, Cole JR, Schmidt TM (2001) rrnDB: The Ribosomal RNA Operon Copy Number Database. *Nucleic Acids Res* 29:181–184.