Supporting Information

Sul et al. 10.1073/pnas.1212424110

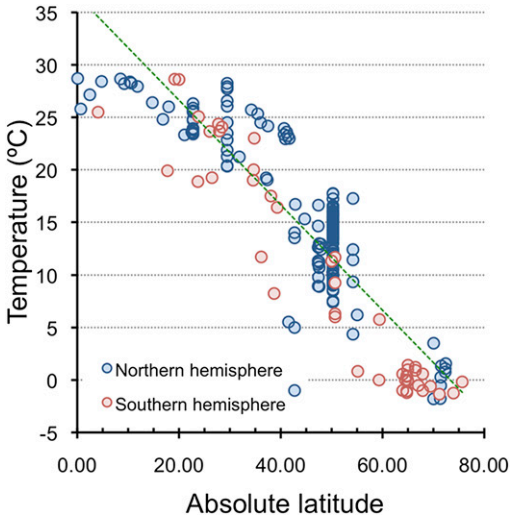

Fig. S1. Relationship between temperature and absolute latitude.

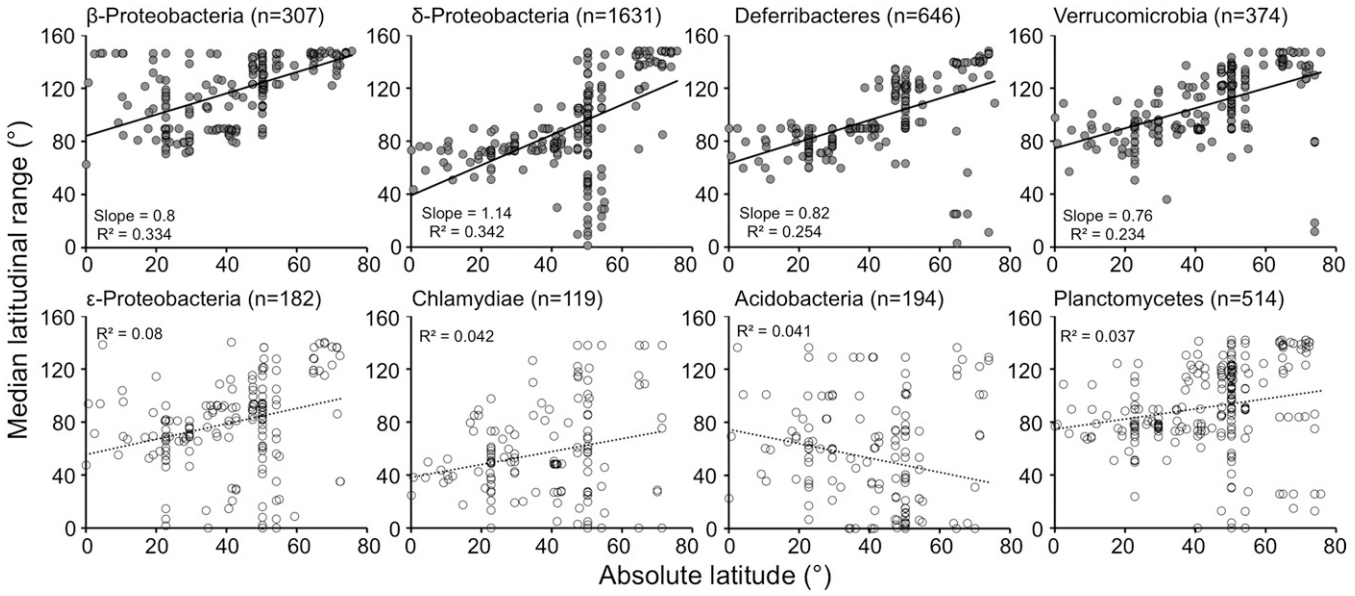

Fig. S2. Limited bacterial latitudinal ranges by taxonomic group. Relationship between bacterial latitudinal range sizes and latitude to test conformation to the Rapoport rule. Each point represents a median latitudinal range for each sample with taxa of a given taxonomy (*n* = numbers of taxa used in the calculation; "slope" indicates slope of linear regression).

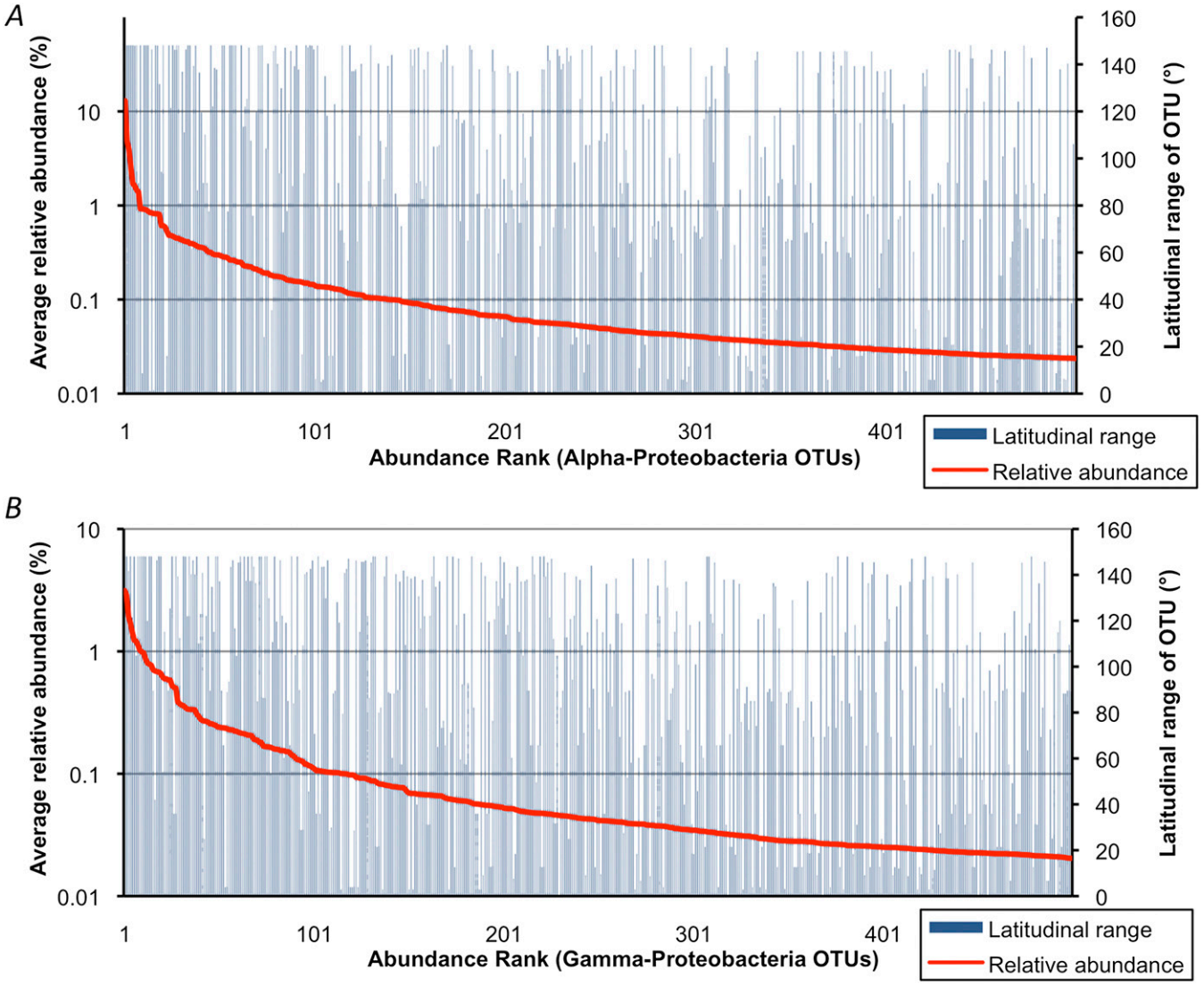

Fig. S3. Latitudinal range of abundant α- and γ-Proteobacteria operational taxonomic units (OTUs). Each OTU latitudinal range was ordered by the average relative abundance among the samples where a respective OTU was present. Plot shows the latitudinal ranges (*A*) of only the first 500 abundant α-Proteobacteria OTUs (out of a total of 2,456 α-Proteobacteria OTUs) and (*B*) of only the first 500 abundant γ-Proteobacteria OTUs (out of a total of 2,169 γ-Proteobacteria OTUs).

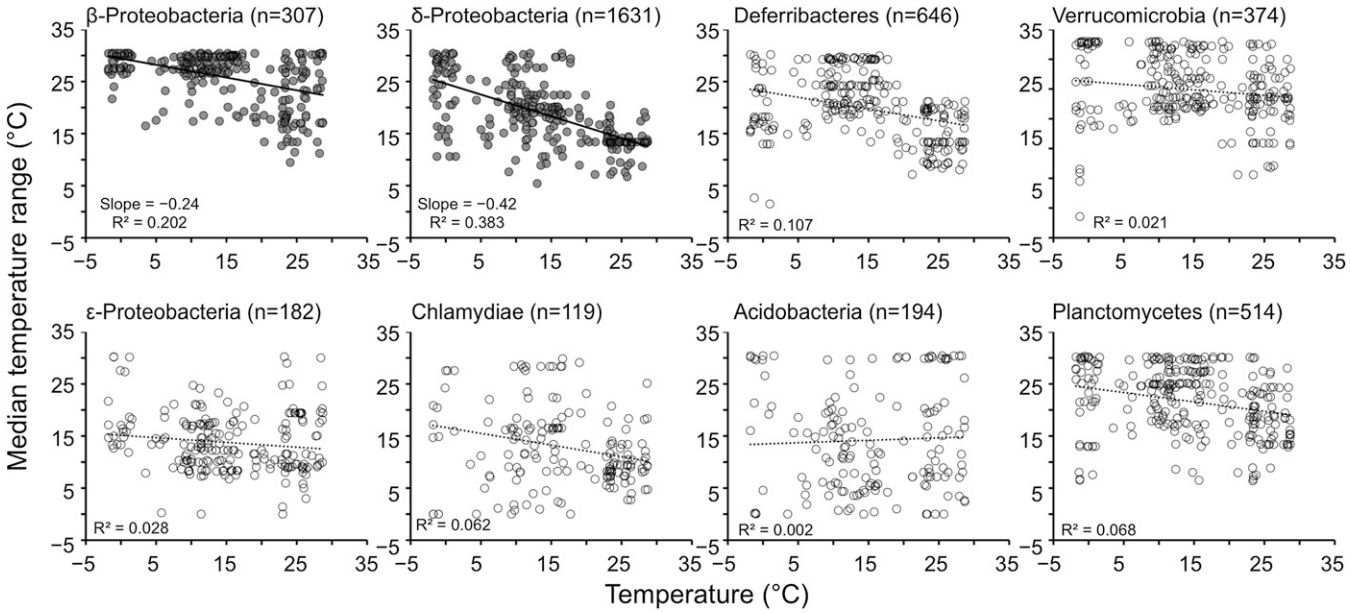

Fig. S4. Limited bacterial temperature ranges by taxonomic group. Relationship between bacterial temperature range sizes and temperature to see if broader mean temperature range sizes were measured in colder locations than in moderate or warmer locations. Each point represents the median temperature range for each dataset with taxa of a given taxonomy (*n* = numbers of taxa used in the calculation; "slope" indicates slope of linear regression).

Table S1. List of bipolar taxa with GAST-assigned taxonomy

Boundary latitude	Taxonomy
Above absolute latitude 70 (number of bipolar OTUs = 1)	Bacteroidetes; Flavobacteria; Flavobacteriales; Flavobacteriaceae; *Salinimicrobium*
Between absolute latitude 65 and 70 (numbe of bipolar OTUs = 7)	Deferribacteres; Deferribacteres; Deferribacterales; SAR406 Proteobacteria; Alphaproteobacteria Proteobacteria; Alphaproteobacteria; Rhizobiales; Phyllobacteriaceae; *Aliihoeflea* Proteobacteria; Deltaproteobacteria; Bdellovibrionales; Bdellovibrionaceae Proteobacteria; Gammaproteobacteria; Alteromonadales; Alteromonadaceae Proteobacteria; Gammaproteobacteria; Oceanospirillales; SAR86 Unclassified bacteria
Between absolute latitude 60 and 65 (number of bipolar OTUs = 31)	Actinobacteria; Actinobacteria; Acidimicrobiales Bacteroidetes; Sphingobacteria; Sphingobacteriales; Chitinophagaceae Bacteroidetes; Sphingobacteria; Sphingobacteriales; Saprospiraceae; *Aureispira* Bacteroidetes; Sphingobacteria; Sphingobacteriales; Sphingobacteriaceae; *Pedobacter* Deferribacteres; Deferribacteres; Deferribacterales; SAR406 (4 OTUs) Firmicutes; Clostridia; Clostridiales; Lachnospiraceae Fusobacteria; Fusobacteria; Fusobacteriales; Fusobacteriaceae; *Cetobacterium* OD1 Planctomycetes; Planctomycetacia; Planctomycetales; Planctomycetaceae; *Rhodopirellula* Proteobacteria; Alphaproteobacteria; Rhodobacterales; Rhodobacteraceae Proteobacteria; Alphaproteobacteria; Rhodobacterales; Rhodobacteraceae; *Loktanella* Proteobacteria; Alphaproteobacteria; Rickettsiales Proteobacteria; Deltaproteobacteria; Bdellovibrionales; Bdellovibrionaceae Proteobacteria; Deltaproteobacteria; Desulfobacterales Proteobacteria; Deltaproteobacteria; Desulfobacterales; Nitrospinaceae; *Nitrospina* (4 OTUs) Proteobacteria; Deltaproteobacteria; Desulfuromonadales; Geobacteraceae; *Geopsychrobacter* Proteobacteria; Deltaproteobacteria; SAR324 Proteobacteria; Epsilonproteobacteria; Campylobacterales; Helicobacteraceae; *Sulfurovum* Proteobacteria; Gammaproteobacteria; Oceanospirillales Proteobacteria; Gammaproteobacteria; Oceanospirillales; Oceanospirillaceae; *Balneatrix* Proteobacteria; Gammaproteobacteria; Salinisphaerales; Salinisphaeraceae Proteobacteria; Gammaproteobacteria; Thiotrichales; Piscirickettsiaceae Proteobacteria; Gammaproteobacteria; Thiotrichales; Piscirickettsiaceae; *Thiomicrospira* Verrucomicrobia; Opitutae; Puniceicoccales; Puniceicoccaceae (2 OTUs)

Taxonomy was described in order of Phylum; class; order; family; genus. GAST, Global Assignment of Sequence Taxonomy.

Other Supporting Information Files

Dataset S1. Contextual data, numbers of sequence reads, richness estimates, and Sequence Read Archive numbers of the 277 samples used in our study

Dataset S1