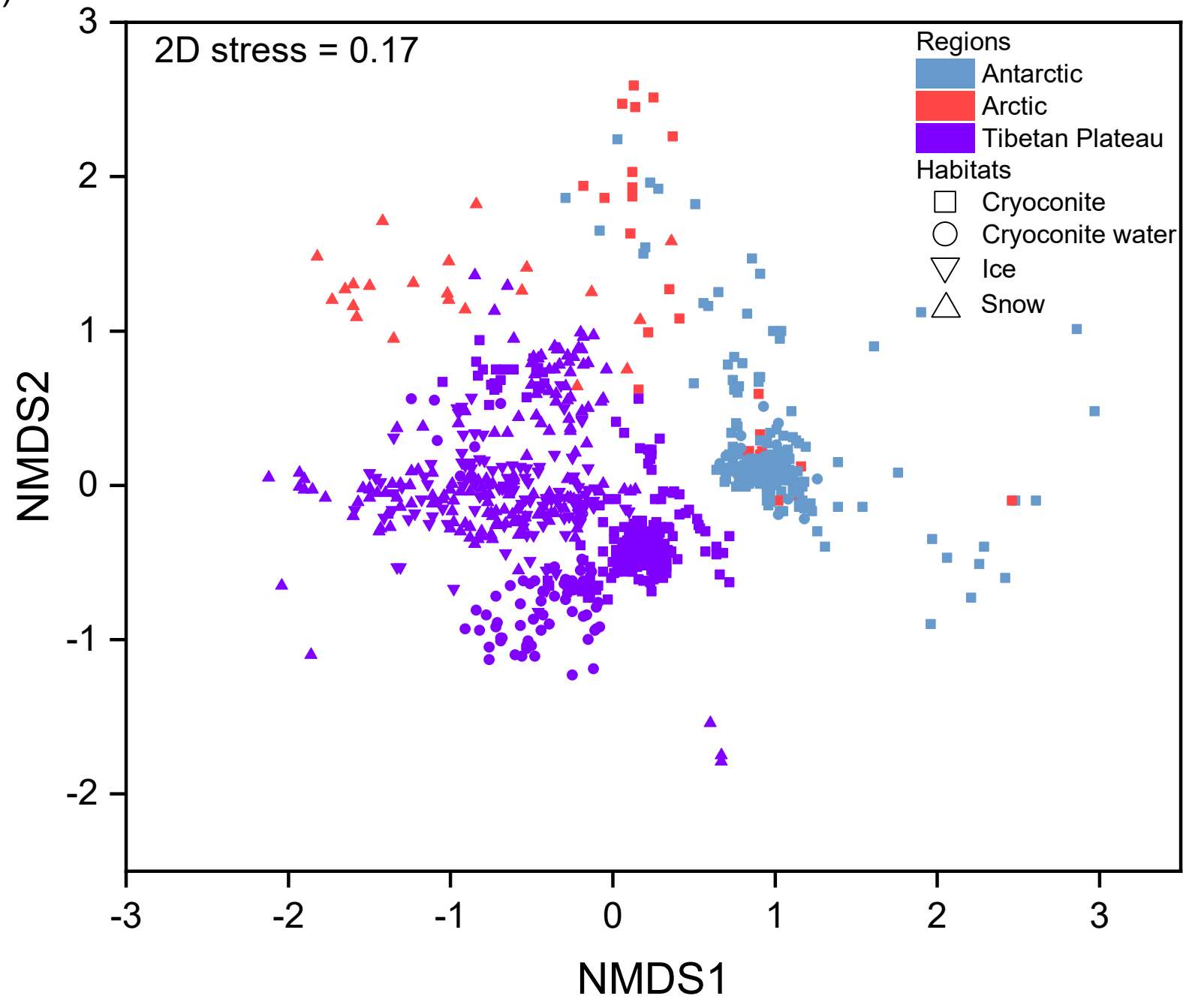
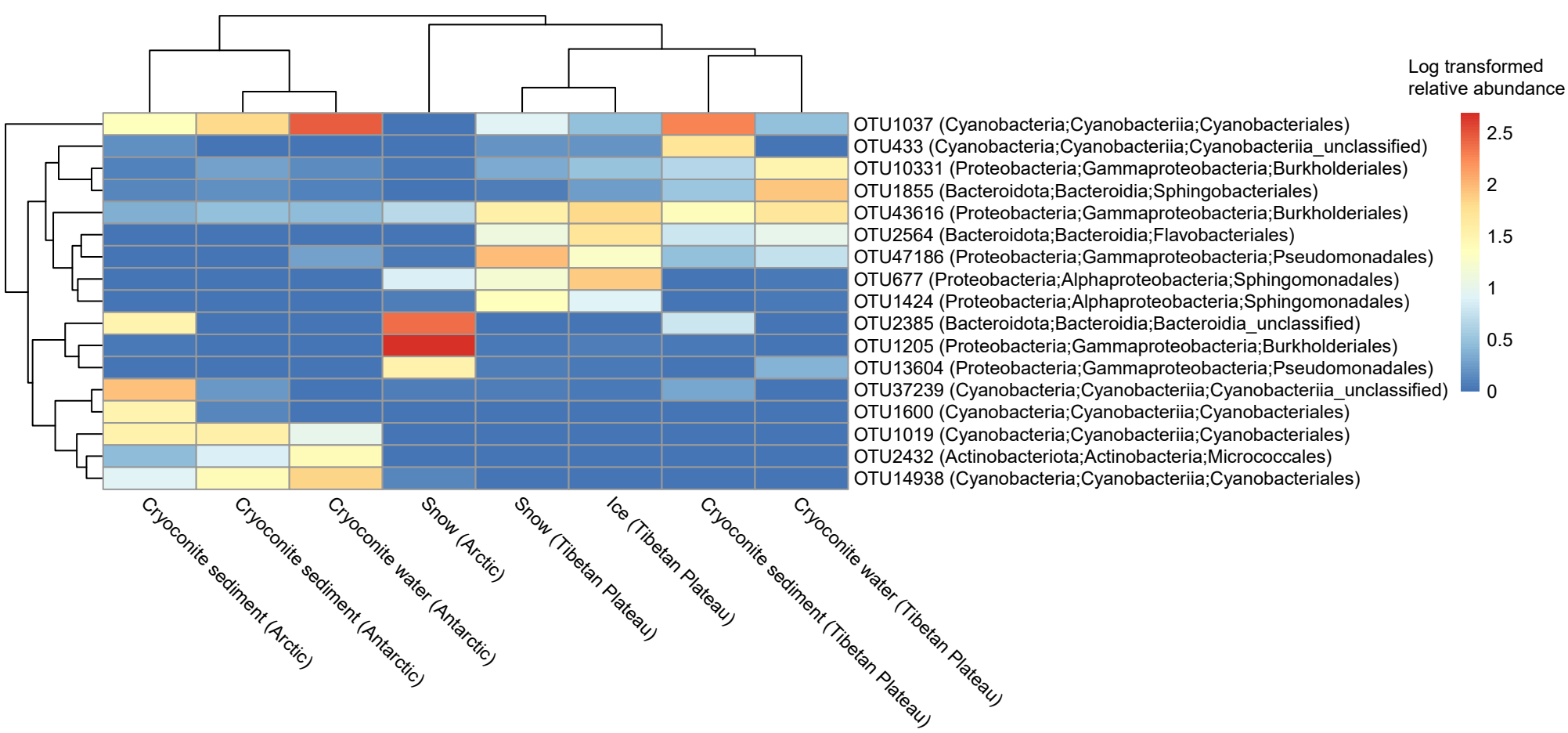
(a)


2D stress = 0.17
Regions
Antarctic
Arctic
Tibetan Plateau
Habitats
Cryoconite
Cryoconite water
Ice
Snow
NMDS2
NMDS1
3
2
1
0
-1
-2
-3
-2
-1
0
1
2
3

(b)


Log transformed relative abundance
2.5
2
1.5
1
0.5
0
OTU1037 (Cyanobacteria;Cyanobacteriia;Cyanobacteriales)
OTU433 (Cyanobacteria;Cyanobacteriia;Cyanobacteriia_unclassified)
OTU10331 (Proteobacteria;Gammaproteobacteria;Burkholderiales)
OTU1855 (Bacteroidota;Bacteroidia;Sphingobacteriales)
OTU43616 (Proteobacteria;Gammaproteobacteria;Burkholderiales)
OTU2564 (Bacteroidota;Bacteroidia;Flavobacteriales)
OTU47186 (Proteobacteria;Gammaproteobacteria;Pseudomonadales)
OTU677 (Proteobacteria;Alphaproteobacteria;Sphingomonadales)
OTU1424 (Proteobacteria;Alphaproteobacteria;Sphingomonadales)
OTU2385 (Bacteroidota;Bacteroidia;Bacteroidia_unclassified)
OTU1205 (Proteobacteria;Gammaproteobacteria;Burkholderiales)
OTU13604 (Proteobacteria;Gammaproteobacteria;Pseudomonadales)
OTU37239 (Cyanobacteria;Cyanobacteriia;Cyanobacteriia_unclassified)
OTU1600 (Cyanobacteria;Cyanobacteriia;Cyanobacteriales)
OTU1019 (Cyanobacteria;Cyanobacteriia;Cyanobacteriales)
OTU2432 (Actinobacteriota;Actinobacteria;Micrococcales)
OTU14938 (Cyanobacteria;Cyanobacteriia;Cyanobacteriales)
Cryoconite sediment (Arctic)
Cryoconite sediment (Antarctic)
Cryoconite water (Antarctic)
Snow (Arctic)
Snow (Tibetan Plateau)
Ice (Tibetan Plateau)
Cryoconite sediment (Tibetan Plateau)
Cryoconite water (Tibetan Plateau)