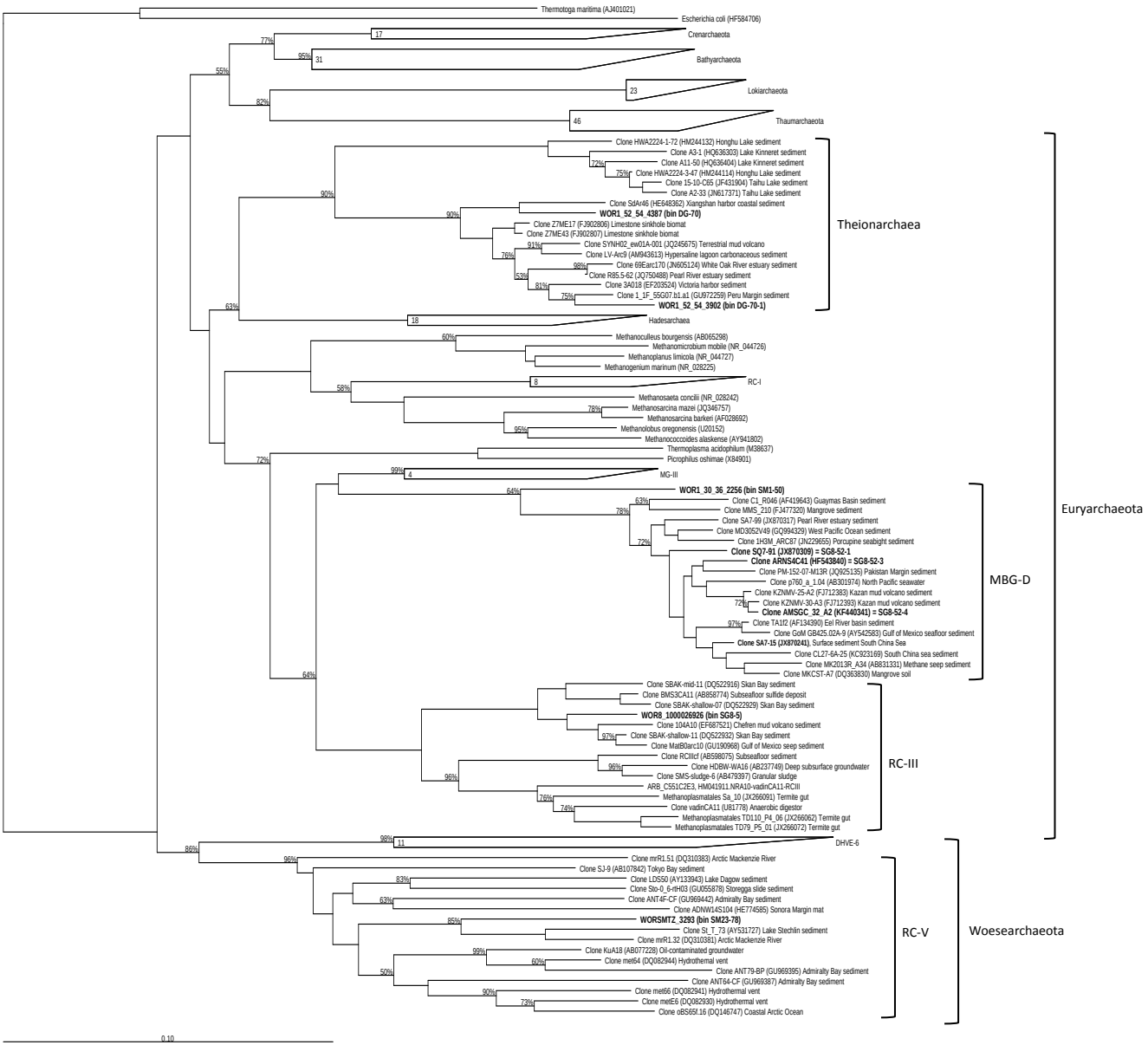
Thermotoga maritima (AJ401021)
Escherichia coli (HF584706)
Crenarchaeota
Bathyarchaeota
Lokiarchaeota
Thaumarchaeota
Clone HWA2224-1-72 (HM244132) Honghu Lake sediment
Clone A3-1 (HQ636303) Lake Kinneret sediment
Clone A11-50 (HQ636404) Lake Kinneret sediment
Clone HWA2224-3-47 (HM244114) Honghu Lake sediment
Clone 15-10-C65 (JF431904) Taihu Lake sediment
Clone A2-33 (JN617371) Taihu Lake sediment
Clone SdAr46 (HE648362) Xiangshan harbor coastal sediment
WOR1_52_54_4387 (bin DG-70)
Clone Z7ME17 (FJ902806) Limestone sinkhole biomat
Clone Z7ME43 (FJ902807) Limestone sinkhole biomat
Clone SYNH02_ew01A-001 (JQ245675) Terrestrial mud volcano
Clone LV-Arc9 (AM943613) Hypersaline lagoon carbonaceous sediment
Clone 69Earc170 (JN605124) White Oak River estuary sediment
Clone R85.5-62 (JQ750488) Pearl River estuary sediment
Clone 3A018 (EF203524) Victoria harbor sediment
Clone 1_1F_55G07.b1.a1 (GU972259) Peru Margin sediment
WOR1_52_54_3902 (bin DG-70-1)
Theionarchaea
Hadesarchaea
Methanoculleus bourgensis (AB065298)
Methanomicrobium mobile (NR_044726)
Methanoplanus limicola (NR_044727)
Methanogenium marinum (NR_028225)
RC-I
Methanosaeta concilii (NR_028242)
Methanosarcina mazei (JQ346757)
Methanosarcina barkeri (AF028692)
Methanolobus oregonensis (U20152)
Methanococcoides alaskense (AY941802)
Thermoplasma acidophilum (M38637)
Picrophilus oshimae (X84901)
MG-III
WOR1_30_36_2256 (bin SM1-50)
Clone C1_R046 (AF419643) Guaymas Basin sediment
Clone MMS_210 (FJ477320) Mangrove sediment
Clone SA7-99 (JX870317) Pearl River estuary sediment
Clone MD3052V49 (GQ994329) West Pacific Ocean sediment
Clone 1HGM_ARC87 (JN229655) Porcupine seabight sediment
Clone SQ7-91 (JX870309) = SG8-52-1
Clone ARNS4C41 (HF543840) = SG8-52-3
Clone PM-152-07-M13R (JQ925135) Pakistan Margin sediment
Clone p760_a_1.04 (AB301974) North Pacific seawater
Clone KZNMV-25-A2 (FJ712383) Kazan mud volcano sediment
Clone KZNMV-30-A3 (FJ712393) Kazan mud volcano sediment
Clone AMSGC_32_A2 (KF440341) = SG8-52-4
Clone TA1I2 (AF134390) Eel River basin sediment
Clone GoM GB425.02A-9 (AY542583) Gulf of Mexico seafloor sediment
Clone SA7-15 (JX870241), Surface sediment South China Sea
Clone CL27-6A-25 (KC923169) South China sea sediment
Clone MK2013R_A34 (AB831331) Methane seep sediment
Clone MKCST-A7 (DQ363830) Mangrove soil
MBG-D
Euryarchaeota
Clone SBAK-mid-11 (DQ522916) Skan Bay sediment
Clone BMS3CA11 (AB858774) Subseafloor sulfide deposit
Clone SBAK-shallow-07 (DQ522929) Skan Bay sediment
WOR8_1000026926 (bin SG8-5)
Clone 104A10 (EF687521) Chefren mud volcano sediment
Clone SBAK-shallow-11 (DQ522932) Skan Bay sediment
Clone MatBarc10 (GU190968) Gulf of Mexico seep sediment
Clone RCIIIcf (AB598075) Subseafloor sediment
Clone HDBW-WA16 (AB237749) Deep subsurface groundwater
Clone SMS-sludge-6 (AB479397) Granular sludge
ARB_C551C2E3, HM041911.NRA10-vadinCA11-RCIII
Methanoplasmatales Sa_10 (JX266091) Termite gut
Clone vadinCA11 (U81778) Anaerobic digestor
Methanoplasmatales TD110_P4_06 (JX266062) Termite gut
Methanoplasmatales TD79_P5_01 (JX266072) Termite gut
RC-III
DHVE-6
Clone mrR1.51 (DQ310383) Arctic Mackenzie River
Clone SJ-9 (AB107842) Tokyo Bay sediment
Clone LDSS0 (AY133943) Lake Dagow sediment
Clone Sto-0_6-tH03 (GU055878) Storegga slide sediment
Clone ANT4F-CF (GU969442) Admiralty Bay sediment
Clone ADNW14S104 (HE774585) Sonora Margin mat
WORSMTZ_3293 (bin SM23-78)
Clone St_T_73 (AY531727) Lake Stechlin sediment
Clone mrR1.32 (DQ310381) Arctic Mackenzie River
Clone KuA18 (AB077228) Oil-contaminated groundwater
Clone met64 (DQ082944) Hydrothermal vent
Clone ANT79-BP (GU969395) Admiralty Bay sediment
Clone ANT64-CF (GU969387) Admiralty Bay sediment
Clone met66 (DQ082941) Hydrothermal vent
Clone metE6 (DQ082930) Hydrothermal vent
Clone obS65f.16 (DQ146747) Coastal Arctic Ocean
RC-V
Woesearchaeota
0.10

Figure S1.