Denver Zoo Soil Rock Glass Metal Feces 0.9 p_Actinobacteria; f_Micrococcaceae 2.3 Concrete Log Plant Plastic Unknown p_Actinobacteria; g_Arthrobacter p_Actinobacteria; g_Corynebacterium 6.3 8.0 p_Bacteroidetes; g_Bacteroides 1.1 5.3 p_Bacteroidetes; o_Bacteroidales 1.8 p_Firmicutes; f_Bacillaceae 4.4 4.8 p_Firmicutes; f_Clostridiaceae 1.1 1.7 0.7 1.4 p_Firmicutes; f_Lachnospiraceae 2.9 p_Firmicutes; f_Peptostreptococcaceae 2.8 p_Firmicutes; g_Bacillus 7.6 2.8 0.6 4.8 p_Firmicutes; g_Clostridium 1.9 2.9 p_Firmicutes; g_Lactobacillus 3.3 p_Fusobacteria; g_Cetobacterium 2.9 1.7 4.7 3.2 0.5 7.5 p_Fusobacteria; g_Fusobacterium **0.1** 4.3 p_Proteobacteria; f_Enterobacteriaceae 3.5 4.1 p_Proteobacteria; g_Paracoccus 0.7 5.7 p_Verrucomicrobia; g_Akkermansia 0.4 Unassigned 8.6 1.2 0.3 0.2 Honolulu Zoo 0.1 **Enviroment** p_Actinobacteria; f_Microbacteriaceae p_Bacteroidetes ;g_Pedobacter 0.3 p_Bacteroidetes; g_Bacteroides 3.8 0.2 Feces Saliva Skin p_Cyanobacteria; o_Streptophyta 0.4 0.1 12.3 p_Firmicutes; f_Clostridiaceae 0.8 0.5 0.4 0.6 4.9 0.4 p_Firmicutes; f_Peptostreptococcaceae p Firmicutes; g Clostridium 0.7 5.5 p_Firmicutes; g_Staphylococcus 3.7 p_Fusobacteria; g_Cetobacterium 2.3 0.5 p_Proteobacteria; f_Enterobacteriaceae 0.9 6.8 0.4 11.1 p_Proteobacteria; f_Enterobacteriaceae 0.3 1.1 p_Proteobacteria; g_Agrobacterium 2.8 4.5 Soil p Proteobacteria; g Pseudomonas 0.5 10.8 Rock p_Thermi; g_Deinococcus 0.5 Glass p_Verrucomicrobia; g_Akkermansia Metal 1.4 Concrete Log Plant Plastic 1.2 В. ■ Feces Saliva Skin ■ Unknown 0.9 0.8 8.0 0.7 0.6 0.6 0.5 -0.4 0.4 0.3 0.2 0.2 -

Soil

Soil

Rock

Metal

Concrete

Log

Plant

Plastic

0.1

Tests of Source Independence

Identification of Source Microbiome for Each Environment Sample Type