**Supplementary Figure Legends**

**Supplementary figure 1**. **Non-metric multidimensional scaling analysis of Deltaproteobacteria**. Non-metric multi-dimensional scaling analysis of OTUs assigned to Deltaproteobacteria for whole, sediment-free *S*. *bromophenolosus*, *S*. *bromophenolosus* gut sediments, and various associated sediments. Dissimilarities based on Bray-Curtis distances; Kruskal’s stress = 0.033.

**Supplementary figure 2**. **Shannon index for animal and sediment microbial communities**. Shannon index for whole, sediment-free *S*. *bromophenolosus*, *S*. *bromophenolosus* gut sediments, and various associated sediments; mean, upper and lower quartiles and data extremes indicated. ANOVA: F = 5.995, p < 0.00033.

**Supplementary figure 3a**. **Hierarchical cluster analysis of animal and sediment microbial communities**. Hierarchical cluster analysis of animal and sediment sample OTUs based on the weighted UniFrac metric with Ward’s method for clustering. **3b**. **Hierarchical cluster analysis of sediment microbial communities**. Hierarchical cluster analysis of sediment sample OTUs based on Bray-Curtis dissimilarities with Ward’s method for clustering.