Earthworms drastically change fungal and bacterial communities during vermicomposting of sewage sludge

Jorge Domínguez**,** Manuel Aira, Keith A. Crandall, Marcos Pérez-Losada

Supplementary Figures

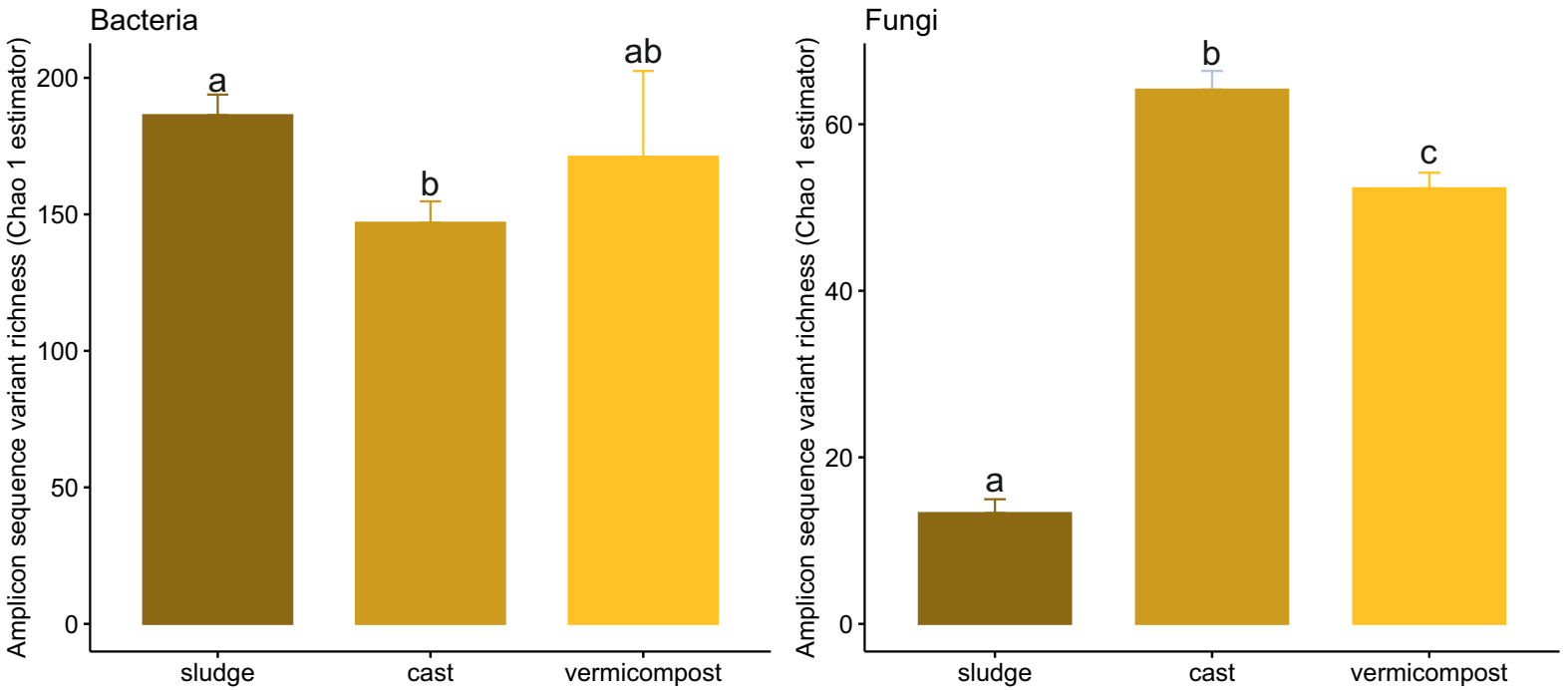


Figure S1: Changes in α-diversity of bacterial and fungal communities during vermicomposting of sewage sludge denoted by Chao 1 richness estimator.

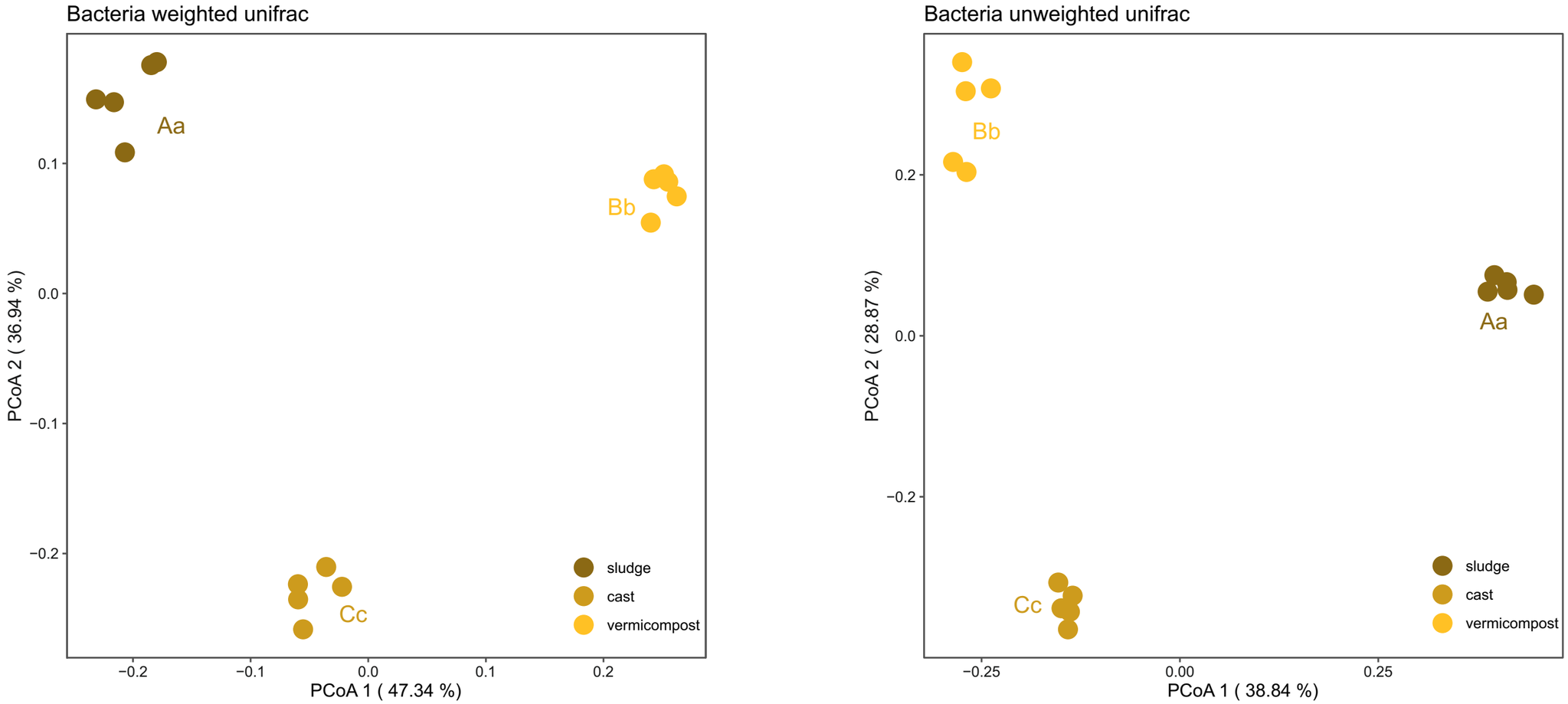


Figure S2: Changes in β-diversity of bacterial communities during vermicomposting of sewage sludge. Principal coordinate analysis with weighted and unweighted UniFrac distances. Different capital and lower-case letters indicate significant differences between sewage sludge, fresh earthworm casts and vermicompost in PCoA 1 and PCoA 2 scores respectively (paired Wilcoxon test, FDR corrected).

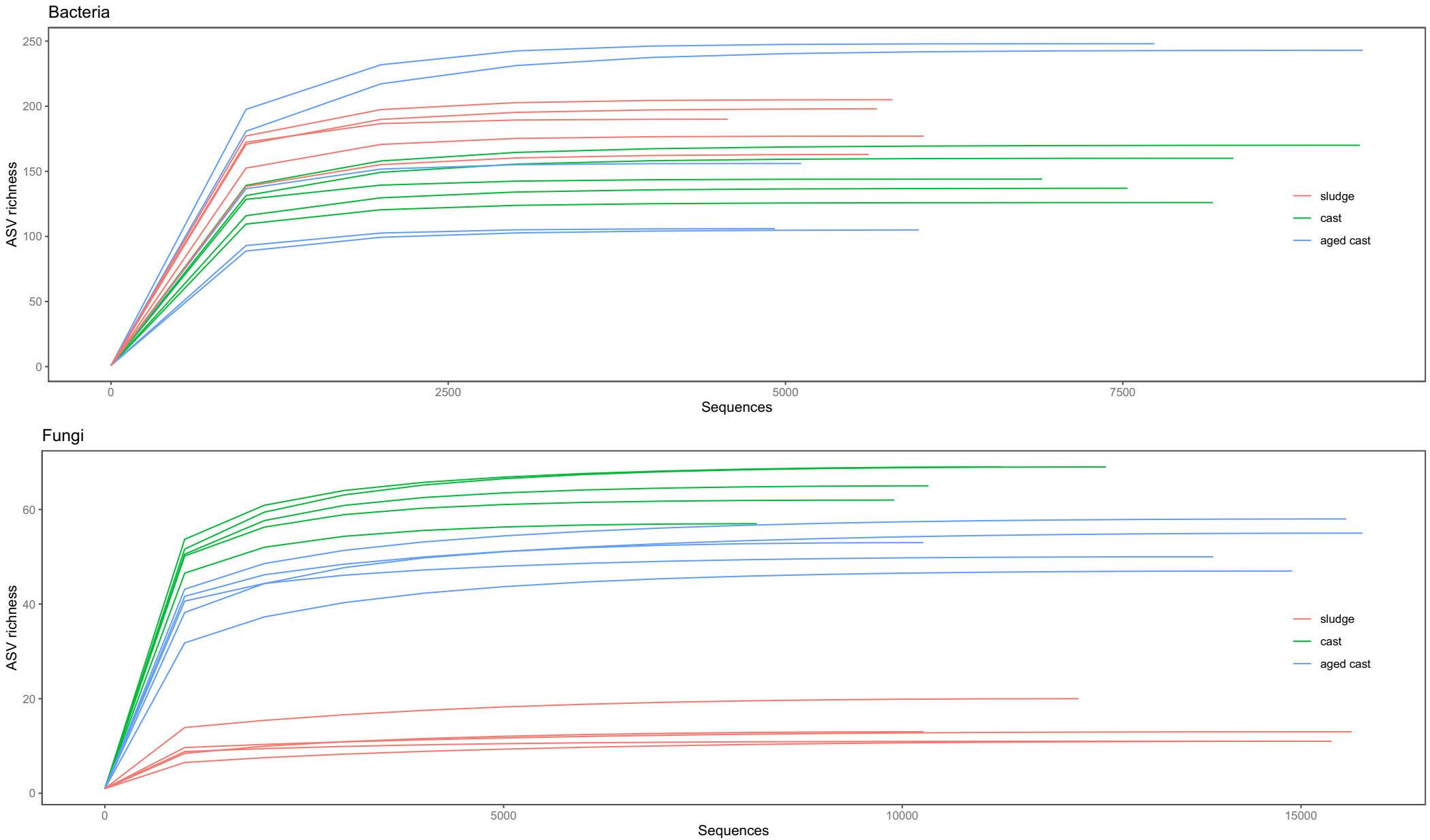
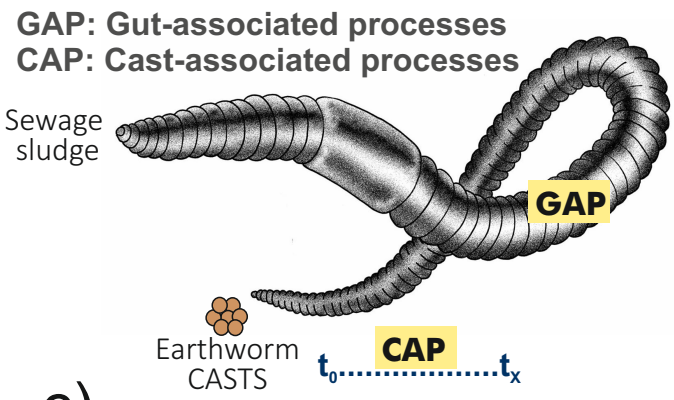


Figure S3: Rarefaction curves indicating the number of amplicon sequence variants (ASVs) of bacteria and fungi found in each sample of sewage sludge and earthworm casts and aged casts.

a)

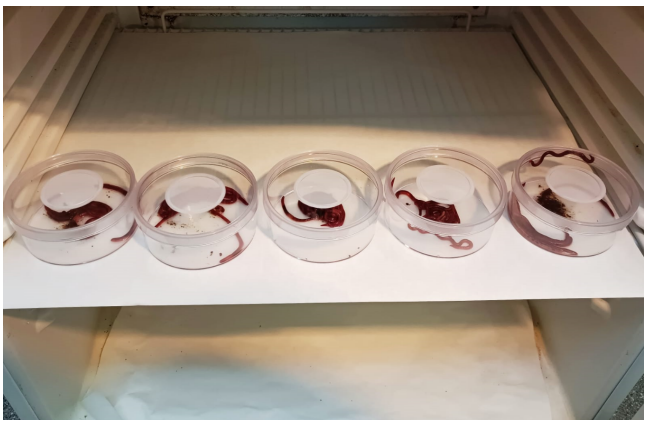


b)

c)

d)

e)



f)

g)

Figure S4: a) GAP and CAP processes during vermicomposting of sewage sludge. b) Rectangular plastic pilot-scale vermireactor (1.1 m long × 1.05 m wide × 70 cm high). c) Earthworms (*Eisenia andrei*) in the vermireactor. d,e) Sampling dishes to collect fresh earthworm cast samples. f) Fresh earthworm casts were collected from each sampling dish with a sterile spatula (flame sterilized between samples). g) Vermicompost derived from sewage sludge after 3 months of vermicomposting.