Papers to read for Thursday Nov 30

Christian & Danielle

Eckburg PB et al. (2005) Diversity of the human intestinal microbial flora. Science 308:1635-1638

Kevi n and Adrien

Fierer N, Jackson RB (2006) The diversity and biogeography of soil bacterial communities. Proceedings of the National Academy of Sciences of the United States of America 103:626-631

Jennifer and Grace

O'Brien HE, Parrent JL, Jackson JA, Moncalvo J-M, Vilgalys R (2005) Fungal community analysis by large-scale sequencing of environmental samples. Applied and Environmental Microbiology 71:5544-5550

Papers for Tues Dec 5

Landeweert, R., C. Veenman, T. W. Kuyper, H. Fritze, K. Wernars and E. Smit. 2003. Quantification of ectomycorrhizal mycelium in soil by real-time PCR compared to conventional quantification techniques. FEMS Microbiology Ecology **45:** 283-292.

Hughes, J. B. et al. (2001). "Counting the uncountable: Statistical approaches to estimating microbial diversity." Applied & Environmental Microbiology **67**(10): 4399-4406.

Singleton DR, Furlong MA, Rathbun SL, Whitman WB (2001) Quantitative comparisons of 16S rRNA gene sequence libraries from environmental samples. Applied and Environmental Microbiology 67:4374-4376

Papers for Thurs Dec 7

Venter JC, Remington K, Heidelberg JF, Halpern AL, Rusch D, et al. 2004. Environmental genome shotgun sequencing of the Sargasso Sea. *Science* 304: 66-74

Tyson GW, Chapman J, Hugenholtz P, Allen EE, Ram RJ, et al. 2004. Community structure and metabolism through reconstruction of microbial genomes from the environment. *Nature* 428: 37-43

Tringe SG et al. (2005) Comparative metagenomics of microbial communities. Science 308:554-557

Rules:

Everyone should read all three papers and be ready to discuss them.
Two people will be responsible for presenting each paper. The presentation should involve a short summary of what methods were used in the paper, any artifact or problems with the methods and how these were addressed, the basic findings and whether these finding were well supported by the data. In addition the people presenting the paper should produce three to four discussion questions that will be emailed out to the class by Tuesday night. On Thursday the names will be drawn at random to answer the proposed questions.

Both of the people that presented the paper should also turn in a **short** written summary of the paper. That should address how they would either improve or follow-up on this work. One page should be sufficient. This is due three days after the presentation and should be email to me at pogon@berkeley.edu.