Bi 1x, Spring 2010

Week 7

- **Session 2**
  - Plate count anomaly

Session 1 – Plate count anomaly

This "anomaly" was termed by Staley and Konopka in 1985 to describe the large discrepancy between the number of cells observed in natural environments by microscopy versus those that form colonies on solid media. During the first few weeks' activities, you got an idea of the characters that inhabit the pond water through microscopy. Today, you will examine the pond bacteria by growing them on agar plates containing different media.

Materials

- Plates of different types; You will given a selection of the following:
  - LB medium
  - Baxter pond water medium, with and without glucose
  - BBB pond water medium, with and without glucose
  - Chicken broth medium
  - Carrot medium, with and without vitamin B12
  - Egg plates
  - Sports-drink plates
- Liquid to dilute with
- Plating supplies

Protocol

1. Create serial dilutions of the pond samples according to the instructions given by the TAs (total volume, 1 ml each dilution).
2. Spread 100 µl of each dilution on a separate plate using plating beads.
3. Label your plates and place them upside down on your bench to incubate.

What do you expect to grow on the plates? Will there be differences between the ponds? with and without glucose? with and without B12?

Why are we using chicken broth? What's in it that's interesting?

Why are we using eggs? What nutrients does it supply that the others don't?
