**Results and Discussion**

The treatments had a significant effect on the benthic community

- PERMANOVA for differences between treatments (p<0.001 for both meio- and macrofauna)
- All treatments significantly different from each other except lab control and low TCS
- No significant difference between treatments in:
  - meiofaunal evenness
  - abundances of ostracods, meiofaunal amphipods, isopods, and cumaceans

Lab Controls suffered adverse effects from sedimentation

- Field controls more abundant and taxonomically rich (S) than lab controls (Figure 3a,b)
- Meiofauna: field control fields more diverse (FT) than lab controls (Figure 4a)
- “Smothering” effect (Thrush et al. 2004, Sandulli and De Nicola-Giudici 1990)
- Silty autoclaved sediment layer—little interstitial oxygen to penetrate into the sediment (Figure 4b)

Low triclosan levels (~14 ppm) did not impact the benthic communities more than Lab Controls

- Ordination plots did not differ between lab control and low TCS treatments (Figure 5)

High triclosan levels (~180 ppm) decreased abundance and negatively impacted community structure

- Lab Controls suffered adverse affects from sedimentation
- Overlying sediment (Figure 4a,b)
- “DNA-free” sediment added for genetic analysis (unlabeled L12, 2 cm)

Abundance (Figure 3a,b)
- All treatments significantly different from each other except lab control and low TCS
- No significant differences between treatments in:
  - meiofaunal evenness
  - abundances of ostracods, meiofaunal amphipods, isopods, and cumaceans

Conclusions

- The benthic community was adversely affected by high levels of triclosan (~180 ppm).
- However, many organisms also suffered from the additional sediment to the tops of the cores, thereby confounding the effects of triclosan on the communities.
- Efforts will focus on minimizing this effect in future experiments.

- Although the triclosan concentrations used in this experiment were higher than what is currently found in the environment, the use of triclosan is widespread and its popularity is increasing. Therefore, concentrations could reach levels that significantly affect benthic communities.

**References**


