Effects of N-enriched leaf litter and decreased temperatures on *Aedes aegypti* mosquito larvae development time and biomass

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Abstract: Current trends of increasing global CO2 levels and average global temperatures will have significant effects on organisms. For aquatic organisms more so than terrestrial ones, the effects will possibly be more severe due to comparatively quick homogenization of environmental effects over time. Mosquitos are one such organism which the effects of such changes in the climate will have a significant effect on. Also, mosquitos are responsible for millions of deaths annually, and due to this it is vital that the response of increased atmospheric CO2 and temperature is known. Mosquito larvae are cosmopolitan aquatic detritivores who feed on leaf litter and aquatic microorganisms. The effect of increasing CO2 on plants is known to increase the C:N ratio via increased photosynthetic carbon fixation. This has an effect on leaf litter decomposition due to the decreased microbial presence on and in the leaf litter. We intend to pursue the question of the effect of feeding leaf litter of different C:N ratios on the development time of *Aedes aegypti* larvae in different temperatures.