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Ecotoxicological dynamics subject to stoichiometric constraints

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The development of ecotoxicological models over the last couple decades has significantly contributed to interpreting how contaminants impact organisms and cycle through food webs. However, there is increasing evidence that organisms experience interactive effects of contaminant stressors and food conditions, such as resource stoichiometry and nutrient availability. *Stoichiometric Ecotoxicology* modelling efforts shed light on nutrient and chemical contaminant cycling and ultimately can help improve toxicological risk assessment protocols. We are formulating a series of empirically testable and robust models of algae-*Daphnia* population dynamics subject to concurrent nutritional and contaminant stressors. In parallel to developing the models, we are conducting laboratory experiments manipulating the nutritional content of algae fed to *Daphnia* exposed to Cadmium, Arsenic, and Copper. Here, we present modelling and empirical results and discuss the synthesis of the two approaches.

Primary authors: HASSAN, Md Nazmul (Texas Tech University);   THOMPSON, Kelsey (Texas Tech University);   VELAZQUEZ, Anahi (Texas Tech University);   HENSLEY, Loren (Texas Tech University);   Dr MAYER, Gregory (Texas Tech University);   PEACE, Angela (Texas Tech University)

Presenter: HASSAN, Md Nazmul (Texas Tech University)

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