



Sensitivity of *Eurytemora affinis* and *Pseudodiaptomus forbesi* to bifenthrin, chlorpyrifos, and copper

Yafen Zhen, Tomofumi Kurobe, Ching Teh, and Swee J Teh

Department of Anatomy, Physiology, and Cell Biology, School of Veterinary Medicine, University of California, Davis, Davis, CA



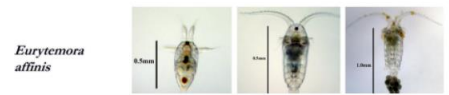
Introduction

Concerns are increasing regarding pesticides contaminating aquatic ecosystems and causing adverse effects on non-target aquatic species. Specifically in the Sacramento-San Joaquin River Delta (Delta), contaminants detected range from pesticides to pharmaceuticals and cyanotoxins. During the same time period, calanoid copepods residing in

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Objectives

1. To determine LC50 (lethal concentration at 50% mortality) of bifenthrin, chlorpyrifos, and copper using *Eurytemora affinis* and *Pseudodiaptomus forbesi*.
2. To compare sensitivity of *Eurytemora affinis* and *Pseudodiaptomus forbesi* to bifenthrin, chlorpyrifos, and copper.



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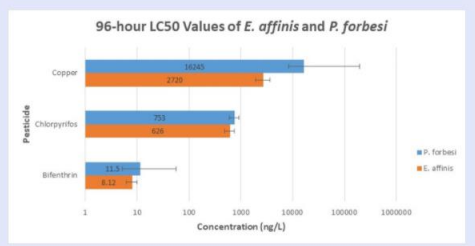
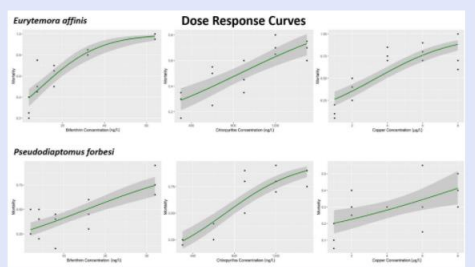
Methods

E. affinis and *P. forbesi* used for the study were obtained from mass cultures raised in the laboratory. Active juveniles were selected individually onto a petri dish using a 2mL pipette under a dissecting microscope.



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Results & Discussion



- *E. affinis* was more sensitive than *P. forbesi* across all three chemicals tested. Although not statistically significant, the trend was apparent and may provide helpful insights for future studies.
- Both species of copepods were most sensitive to bifenthrin (a PY), then chlorpyrifos (an OP), and least sensitive to copper. Bifenthrin belongs to the class of pyrethroids,

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Conclusion

- Pesticide contaminants in aquatic ecosystems harm non-target species.
- The effects of many pesticides on copepod species such as *E. affinis* and *P. forbesi* are largely unknown.
- We will further investigate sublethal effects such as growth and reproduction at environmentally relevant concentrations.

Acknowledgement

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