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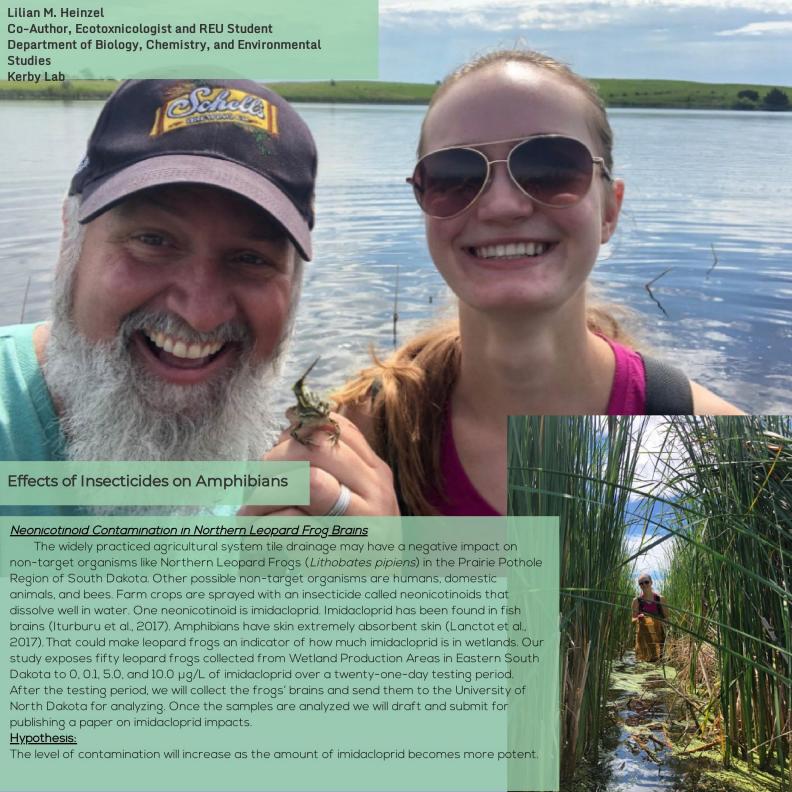
Effects of Insecticides on Amphibians

Lilian M. Heinzel

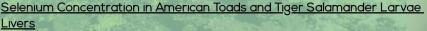
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American Toads (*Anaxyrus americanus*) and Tiger Salamander Larvae (*Ambystoma tigrinum*) are indicative species like Leopard Frogs. We were looking for Selenium concentrations in their livers. We collected toads from a few sample sites, some of them were controlled and some were tile drain sites. Tile drains are an agricultural technique to improve crop yield. The installation process involves digging trenches 3-4 feet into the field and placing drain pipe at the bottom then covering them up again to be planted over. The drains all lead to the nearest water source, in the prairie pothole region that source is wetlands. Selenium is naturally found in soil but this process results in excess amounts being deposited into wetlands.

We also tested wetland water, invertebrates in addition to toad and salamander larvae liver to track the Selenium concentration up the food web. My job was to capture the toads and salamanders and then remove their livers, an organ that was found to be indicative of Selenium concentrations in other studies. Those livers will be sent to the University of North Dakota for analysis.

References

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Iturburu, F.G., et al. 2017. Uptake, distribution in different tissues, and genotoxicity of imidacloprid in the freshwater fish Australoheros facetus. Env Tox and Chem 36(3):699-708.