Crayfish in the Spokane River Have Unusually Low Mercury Concentrations

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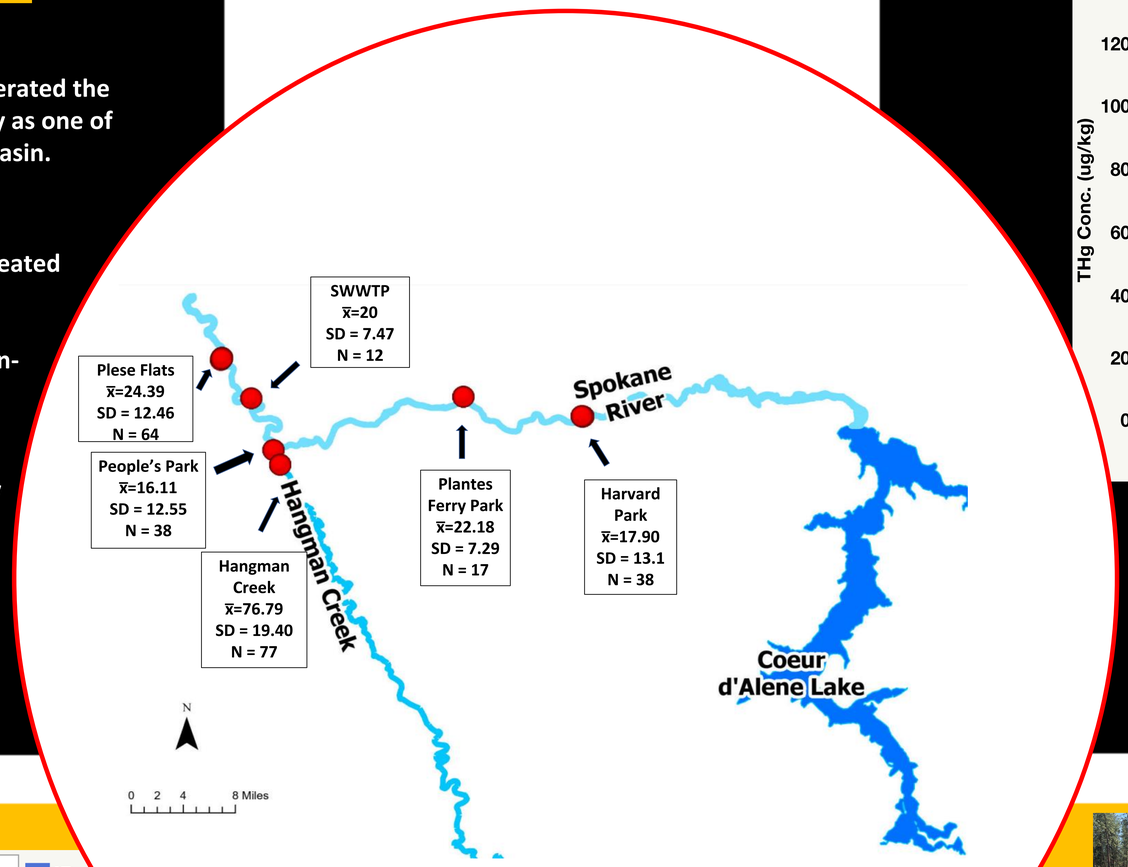
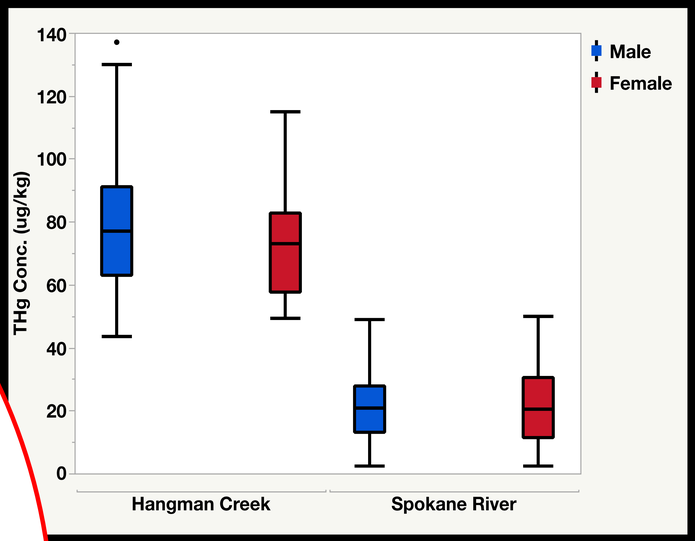
The Crayfish Mercury Project

In 2008, the U.S. Environmental Protection Agency generated the State of the River Report where they identified mercury as one of the four high priority chemicals in the Columbia River Basin.

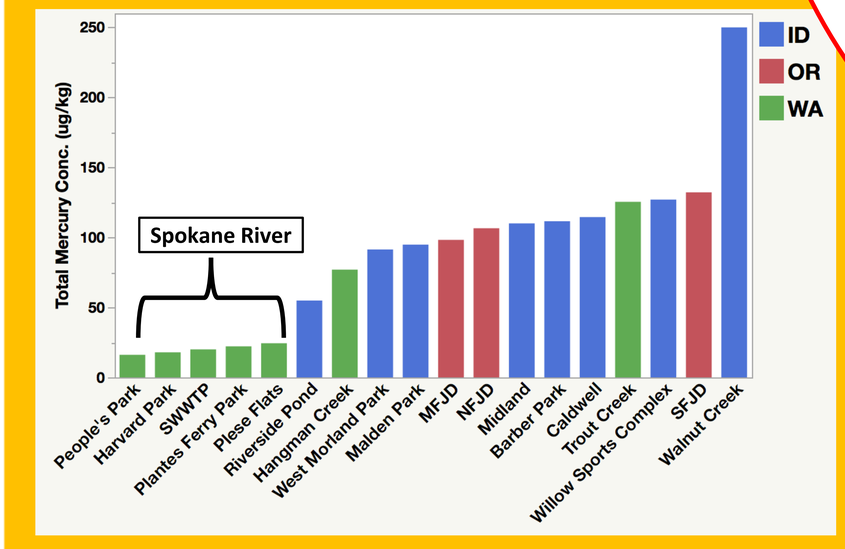
In response to this, the Crayfish Mercury Project was created to engage with citizen science groups to crowdsource a biological indicator organism, the signal crayfish (*Pacifastacus leniusculus*), to monitor mercury at a basin-level scale.

The objective of this poster is to highlight the unusually low mercury concentrations in crayfish collected from the Spokane River when compared to an adjacent site location (Hangman Creek) and the rest of the Columbia River Basin.





Box-plot comparison between average male (blue) and female (red) mercury concentrations after statistically adjusting for the covariate mass (g). No statistical differences between male and female signal crayfish in each of the sites (p>0.05).



Comparison of crayfish total mercury concentrations among different site locations sampled throughout the Columbia River Basin. Sites colored green are located in Washington, red in Oregon, blue in Idaho.

Crayfish in the Spokane River have unusually low mercury concentrations. One plausible explanation is that Lake Coeur d'Alene is functioning as an upstream mercury sink.

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The success of the Crayfish Mercury Project relies upon community organizations including the Boise River Enhancement Network and the Spokane Riverkeeper.

If you or a community organization are interested in collaborating on this project, contact us on our website (https://crayfish.nkn.uidaho.edu/)