

How Citizen Scientists are helping *The Dragonfly Project*

1. The research project you are helping with started like all science projects—with an observation and a question.



2. A high school student shared an observation about some of her dragonfly data: “Dragonfly larvae from certain locations always seem to have more mercury in them than dragonfly larvae from other locations.”



3. Scientists were intrigued by that observation and asked this research question: “What can mercury in dragonfly larvae tell us about ecosystem health?”



4. To help answer that question the scientists need dragonfly larvae from different environments. And they want to share their research and their curiosity for dragonflies and the environment.



5. This is where **you** come in! By collecting and identifying dragonfly larvae, you are invaluable to the research.



6. IMPORTANT! When collecting you have to be very careful to not contaminate the samples. Mercury is in the environment in very small amounts. You will use nets to collect the larva and then, with gloved hands, you will put each larva, individually, into a mercury-free plastic bag.



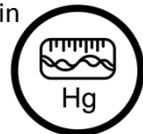
7. Once the larvae are in plastic bags they will be frozen and shipped to one of several research labs around the country.



8. At the lab each larva will be weighed, its identification confirmed, and then it will get turned to ash in a machine called a Direct Mercury Analyzer.



9. When the larva is turned to ash the mercury that was in the body gets picked up by the machine and the amount of mercury is recorded.



10. Scientists get the data from all of the samples from every participating national park across the United States and analyze the data to understand what mercury in dragonfly larvae tell us about ecosystem health.



11. And – because you and your teachers can access the data, you can make observations and ask research questions!



12. As with all scientific research the scientists will make observations about the larva and data you collect. They will ask new questions, which will start new research. Ask for the data and start your own research!

