

Thomas Student Swaps Mayfly Findings at Florida Conference

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Amber Rymer discusses her research poster with a colleague at the annual meeting of the Society for Freshwater Science in Jacksonville (FL).

Amber Rymer, a Southwestern Oklahoma State University student from Thomas majoring in biology, and her mentor, Dr. Peter Grant, recently presented a poster paper at the 61st annual meeting of the Society for Freshwater Science in Jacksonville (FL).

Rymer studied the feeding preference of a mayfly in Little Deep Creek and the Washita River.

Mayflies are aquatic insects. The species she studied, *Cercobrachys winnebago*, lives in sandy stream bottoms, a common habitat in western Oklahoma streams. Sand is an unusual habitat for mayflies, according to Grant. In fact, of the nearly 400 groups of mayflies in the world, only about a dozen live in or on sand.

Rymer's goal was to determine what type of food this animal consumes and compare it to the habitat in which it lives. If the content of the animal's gut and the habitat are the same, the animal shows no feeding preference. However, her analysis showed something different.

Fine organic matter (the result of decomposition of plant and animal parts in the stream) was found to be more common in the gut than the habitat, and sand was less common. This shows that the animal is not passively consuming material in its environment but is actually selecting certain types of food. This was true for both Little Deep Creek and the Washita River.

While most mayflies are very small organisms, they nevertheless occupy an important place in the food chain, according to Grant. For example, over 200 species of aquatic and terrestrial animals have been documented feeding on mayflies. Research on these small but ecologically important insects increases the understanding of how aquatic ecosystems operate.

"This is an especially important topic given the current state of water levels in our lakes and streams," Grant said.

Rymer was also one of 10 undergraduates selected to participate in the society's Instars Program. This program provides opportunities for undergraduates from under-represented groups who are interested in the study of freshwater biology. Students were paired with graduate student mentors to develop networking skills and explore career opportunities in freshwater science.