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Guest column: Graham teacher on expedition in Arctic

Editor's note: This is the first in a series of guest columns planned to cover a local teacher's trip to the Arctic.

By CHANTELLE ROSE

I have been aboard the United States Coast Guard Cutter Healy for nearly two weeks. I am aboard as part of a National Science Foundation-funded research expedition on Winter Sampling of the Bering, Beaufort and Chukchi Seas. This is one of the first ever voyages into the Arctic during winter to sample zooplankton. Zooplankton are free-drifting animals that represent an important link in the food web. It is very important for scientists to collect data on key species of zooplankton in order to better predict what may happen to the Arctic ecosystem due to global climate change.



Chantelle Rose

Calanus is one of the types of zooplankton for which we are sampling. They are copepods, which are marine crustaceans and a major food source in the Arctic for larger fish and whales. While copepods are found in nearly every body of water on Earth, we are looking specifically for Calanus, a rather large copepod that is abundant in Arctic waters. Scientists are seeking the answer to the question "What do Calanus do in the winter?"

In Ohio, animals can hibernate, migrate or have an annual life cycle in which they complete in one year. Scientists are curious as to what copepods do in the winter. Do they migrate to the Southern Seas in the Arctic basin? Do they drop to deeper waters, slow their metabolic functions and hibernate, or do they complete their life cycle in a year? It is a question for which we are seeking the answer!

In order to sample for copepods, we are using various pieces of scientific equipment. This is the first time I've been part of an authentic science research experience and there is much to learn! We have used a video plankton recorder (an underwater camera), ring net, bongo net and multi-net to collect samples. We have also deployed a CTD for use in learning the physical characteristics of the winter Arctic waters. In addition to studying zooplankton, there are scientists aboard studying phytoplankton - microscopic organisms capable of photosynthesis.

For more information, go to www.polartrec.com/expeditions/winter-sampling There you can access my Daily Journal, Photos, Resources and much more information about the expedition.

Chantelle Rose is a teacher in the Graham Local Schools District.