

**Jonathan Cote, M. Sc.**

University of Quebec, Rimouski
Rimouski, Q.C., Canada

CEROS Rises to the Challenge

At the University of Quebec in Rimouski, Jonathan Cote, along with his colleagues, is making headway in studying the mating habits of the three-spined stickleback fish — with the help of the CEROS.



However, before Cote could begin using the CEROS, one hurdle needed to be overcome. Since fish sperm must be studied at temperatures lower than mammalian sperm, the standard system setup could not be used. The CEROS installed in Cote's lab is a landmark — it was the first CEROS customized with a **cooling stage** so that the fish sperm would not be compromised.

In the stickleback population, males display one of two types of reproductive behavior. One is **territorial**, where the male fish stays near his nest and fertilizes eggs deposited by a female. The other is **"sneaky"**, meaning that the male stickleback raids another male's nest and deposits sperm there, hoping to fertilize a female's eggs.

The purpose of Cote's study is to determine if there are any differences between the sperm of the territorial and sneaky varieties. Using the CEROS allows him to identify even slight variations in sperm motion, velocity, and shape. His study will also determine if the reproductive behavior of the stickleback is fixed, or if the fish change their breeding method under different circumstances. If

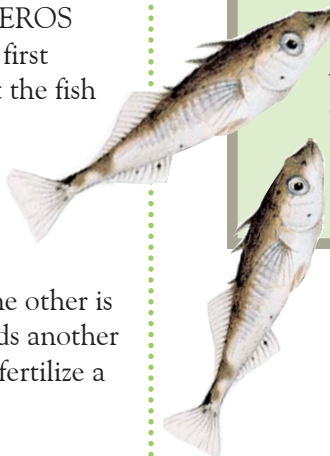
the fish switch behaviors, the CEROS will help determine if sperm qualities also change.

Cote says, "the CEROS makes assessing the motility parameters much easier, quicker, and accurate than doing so manually or by video analysis; it is more objective." He found that, "the CEROS was perfect for our purposes. Because of the nature of our study, we did not need an automated system."

Quick to point out the flexibility of the CEROS, Cote says, "the CEROS works easily with different sizes and different types of sperm."

Hamilton Thorne's customer service received high praise from Cote as "one of the most important points about Hamilton Thorne. They always respond as fast as they can to any concerns or questions we have. They stay in touch to make sure everything is working as it should."

More information on using the CEROS to analyze fish sperm may be found in the July/August 2002 issue of HT Insights.



Cote recommends the CEROS because "it makes it easy to get very accurate data. And the CEROS is more flexible than other systems. We will continue to use the CEROS in our future fish studies."

[Our thanks to Emily Baillie for recommending Mr. Cote for the Customer Profile.]