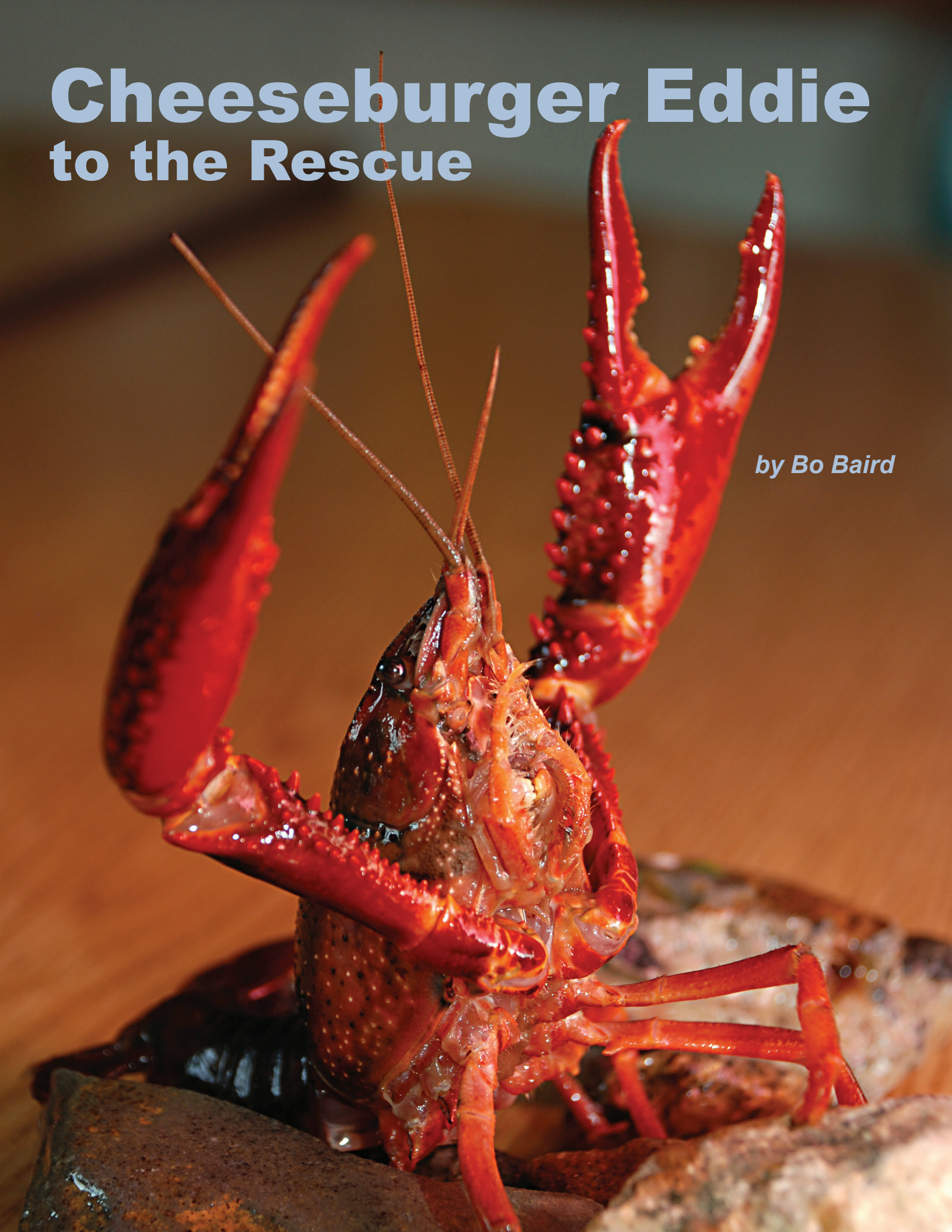
Cheeseburger Eddie
to the Rescue

by Bo Baird



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Far left: Fifth Grader Julia Hoyt with her crayfish catch. At left, Fourth Grader Anthony Lopez holds one of the crayfish in his palm for close observation.

Surviving the crayfish unit is challenging enough for the Fourth Graders, but what about for the crayfish? The heartiest individual last year made it through science boot camp and was placed in the specimen protection program. At year's end he found himself in Will Eichenberry's aquarium under the assumed identity of Cheeseburger Eddie.

Cheeseburger Eddie would have continued his life of quiet seclusion had this year's crayfish unit started without a hitch. But it didn't. The shipment of crayfish from Delta Supply was delayed. Ten years ago, when our science classes were more text-based, a lack of specimens would not have mattered. However, today our science program is based on hands-on investigations, whether it is learning about the life cycle of Atlantic salmon in Grade Three or what stream tables show about the forces of erosion in Grade Five. Children are developing their understandings through observation and inquiry—not by trying to penetrate inert concepts in a textbook. For the Fourth Graders to understand the structure of crayfish, requirements for their habitat, and their territoriality, Becky Miller needed specimens, and she put out the call.

Throwing caution to the wind, Cheeseburger Eddie signed up for a second tour of duty. The day the unit was to begin, Will carried him up the stairs to the Middle School at 8 a.m. Chattering students clustered around the familiar crustacean. He was clearly numb to his celebrity status and fortunately not preoccupied with thoughts that he alone was launching the new unit. But Julia Hoyt's arrival a few minutes later changed everything. She held containers filled with stream water, leaves, and more.

After hearing of Mrs. Miller's plight the day before, Julia dutifully spent an hour after school doing homework and then sang at chorus rehearsal for another hour and a half. It wasn't until 7:30 p.m. that she made her way to the stream where she hoped to find crayfish. She knew that this spot, with running water and a mud and gravel stream bed, was a haven for crayfish in the summer. But coldwater temperatures this April meant they would still be burrowed in the mud. "I had to dig down and then pick up the mud in my hands," said Julia. Then, with the daylight fading quickly, Julia sifted through the mud and leaves with the keen eye of a naturalist and plucked out her wriggling quarry time and time again. By the time she finished it was dark, and Julia had ten crayfish for Mrs. Miller.

The unit began seamlessly. Fourth Grade investigators made detailed observations of the specimens and wondered what functions the different structures had. Famed Harvard Professor Louis Agassiz, who taught that observation was the key to learning about organisms, would have been pleased to see how students studied the crayfish from antennae to tail flap. Questions poured forth in quick succession during the subsequent discussion. What do they use their tails for? How can you tell the male from the female? How many eggs survive? As the unit progressed, students gained understanding of what crayfish require for their habitat and what the stages are in their life cycle.

Interns who were teaching the unit this year added a new technology component to study their nocturnal behavior, when crayfish are most active. With the aid of an infrared light and a motion-sensitive camera, Fourth Graders were able to study the interactions of crayfish as they defended their territory. From time-honored practices of observation to the use of modern technology, students studied crayfish from every angle and used their curiosity to propel their learning.

Julia returned her crayfish—well, almost all of them—back to the wild. Cheeseburger Eddie returned to his safe house in Andover; so, like his namesake from the movie *The Longest Yard*, he is no longer doing hard time. In fact, Cheeseburger Eddie continues his prodigious growth, thanks in part to his favorite food—hotdogs.

Julia, Will, and Cheeseburger Eddie illustrate why our science program is thriving. Children are learning the concepts of science in ways that engage their curiosity and appreciation for our natural world. They know our science curriculum is not buried in textbooks—it surrounds them. The Pike woods and streams are essential features of our science classrooms. We are teaching children the big ideas of physics, chemistry, and biology, and they are becoming knowledgeable and caring stewards of our planet.

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