
Marine Biology: An Opportunistic Approach

Roy Andrews

When Professor Richard Fralick walked into his Marine Biology class last February to lecture on marine pollution, the Gulf War was raging and Saddam Hussein had just begun pumping crude oil into the water. Instead of lecturing, he stood in front of his students and asked, "How about if we try to find out what the impact of the oil spill is on the marine organisms of the Persian Gulf?" Says Fralick, "I didn't want to be lecturing from a textbook while what might be the biggest marine catastrophe ever was taking place." The students were interested, and within weeks the project, which would be, finally, about forty percent of the course, had built up an incredible momentum.

Says Fralick, "Every Friday we had a class meeting that evolved into something like a press conference, with each person reporting on their specialty." In the first meeting, suggestions were made about what needed to be studied, what organisms were probably being hit the hardest, and how information could be gathered and shared. It was decided that each student would choose an organism or marine community that was being affected by the oil spill—such as oysters, plankton, cormorants, coral—research their specialty, seek information about the impact of the oil spill, and write a chapter about their findings for a class book.

"The class," says Fralick, "tapped into a major pulse of fresh information coming out." By the second meeting students were bringing in sources, and they continued throughout the semester to find and share information from video copies of CNN special reports and network news coverage, newspaper and magazine articles, scientific articles on other oil spills, computer network printouts, marine biology books listing species, and database searches from Lamson Library. The class put up a map of the Persian Gulf and, using newspaper reports, charted the advance of the spill.

The class soon discovered that not all the information they collected made sense. They gathered wildly different reports about the amount of oil spilled and its impact. Says Fralick, "The students learned to recognize that data might be exaggerated for political reasons." For example, one report stated that oil covered fifty percent of the bird habitat and therefore fifty percent of the birds would be wiped out. But the class reasoned that this estimate was much too high because many of the birds would fly away or crowd into unpolluted areas. Critical discussions of mass media reports became a regular part of the weekly meetings.

Fralick says, "As momentum picked up, it was hard to keep a lid on the project." May 8th was chosen as the last day of research, but when the date arrived, students found it difficult to stop. Their communal clip file had grown to two bulging folders and they were finding more information daily. Their other problem was limiting the amount they wrote. They had so much to share that the size of the book was growing out of control. A limit of five pages per chapter was imposed, which meant some serious condensing had to be undertaken. Fralick explains, "Students learned from necessity to tighten their focus and prune away nonessential information."

The final product, *Oil in the Gulf*, has a sharp professional look. One student, who was skilled at drawing biological illustrations, sketched an oil-slickened bird for the cover. Another student put all the chapters on

one disk and laser printed it at Media Services. "There are some built in limitations to this kind of book," warns Fralick. "Each student writes differently, uses their own choice of format, and extracts data differently, so the end product is fourteen pieces put together, not a consistent whole. But for the time and effort, what they got is fairly comprehensive, and they chose the right organisms to study." A Copy of *Oil in the Gulf* is in the Lamson Library permanent collection.

"The secret to success for this class was opportunism," says Fralick. "I took the opportunity to cover the material in a pertinent way. If I was teaching an ecology class and an oil truck tipped over on the highway near here, I'd take the class there to observe, take measurements, and report. This is what we should be doing more of in science classes."

Each student received a copy of the book on the Friday of exam week. According to Fralick, they were pleased with what they had done. "This was the easiest class I ever taught in many ways," he says, "because the students did all the work."