

# *Observing the Orca & Discovering Humanity; Ripon Celebrates 15 Years of Killer Whale Research and Opportunity*

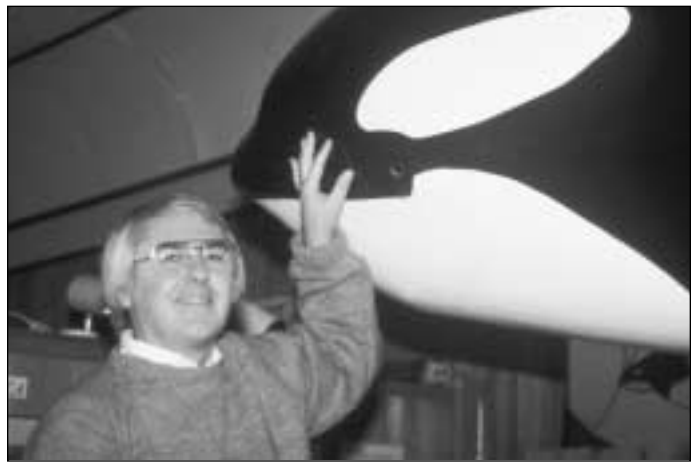


Who would guess that a private, liberal arts college in the heart of Wisconsin would serve as the gateway to a rare research opportunity — studying the behavior of killer whales thousands of miles away? Off the craggy shores of San Juan Island, Wash., from a historic lighthouse, Professor of Psychology Bob Otis has led scores of students — eager to observe and learn from the behavior of killer whales — on a life-altering adventure. Every summer, this Ripon professor exits his farm in Wisconsin to observe, study, mentor and share. In doing so, Otis enlightens himself and others to the beauty, power and behaviors of the orca.

He arrives at the lighthouse in May as the orcas move into Haro Strait between Vancouver, British Columbia, and San Juan Island and remains until September, when the whales pursue salmon, their primary food source, into the greater Pacific. For five months, several select students from Ripon College and universities around the world sit alongside Otis recording observations relating to boat activity and whale behavior. Globally, only a handful of similar research opportunities exist.

Despite growing up in Bellingham, Wash., with whales in his “front yard,” it wasn’t until after coming to Ripon College that this animal behaviorist discovered a passion for them. It happened during a 1988 visit to his hometown. “I saw an advertisement to go whale watching,” he says. “We did, but we didn’t see any whales. That really challenged me.”

Two years later, Otis took a semester sabbatical to study orcas via The Whale Museum in Friday Harbor, Wash., and Lime Kiln Point State Park — destinations for more than 200,000 visitors and whale watchers annually. Thanks to an offer by the park to use the lighthouse as his laboratory, Otis’



Bob Otis, an animal and human behavior psychology professor at Ripon, has documented orcas and vessel traffic for 15 consecutive summers. He has been quoted in numerous publications around the country including “National Geographic” magazine as well as the *Seattle Times*, *Philadelphia Inquirer* and numerous other newspapers.

research and community education continues.

“Ripon offers a person like me the opportunity to explore the things you’re passionate for,” says Otis. “I get a chance to bring in students from all over the world each summer. As the summer unfolds, other people join me.” Like an open book, Otis eagerly welcomes visitors to the lighthouse. Last summer alone, he gave 45 educational talks focused on the orca.

For Adam Weiss '03, a member of the Peace Corps in Ghana, Africa, the research opportunity was “as much about the whales as it was about us as individuals.” Weiss is among several Ripon College students to travel to the lighthouse as part of Otis' 15-day Maymester course, “The Ethology of Killer Whales.” “Bob’s research is the same way,” Weiss says. “If you want to understand anything about the world, try understanding the whales. It’s about relationships among all that exists.”

While some students, like Weiss, get only a week or two in May to observe the orcas, others benefit from summer-long



internships. All agree the experience takes them beyond whale behavior by also offering insight into humanity.

## *At the Lighthouse*

There is a community of killer whales that frequent the waters surrounding San Juan Island each summer. Otis and his student interns study three family pods, named J, K and L, which travel close to shore in front of the lighthouse. Observers discover that baby orcas remain with their mothers forever; that a pod consists of several older females with their children and children’s children; and that orcas are identified by their unique markings. “Each spring when I get back out there, I see Ruffles, Grannie and the kids who are growing up,” says Otis. “There’s a mystique to it that I just love.”

And he’s not alone. Diane Gardetto '92, of Friday Harbor, is a park interpreter at Lime Kiln Point State Park who first caught whale fever as a 2001 intern at the lighthouse. “The experience was life changing,” she says. At the onset of that summer, Gardetto maintains she didn’t expect that four years later she’d still be researching whales and educating the public about them. “Being out studying the whales gave me more information about whether I wanted to do field research,” she says. “I’ve dedicated my life to this stuff. I love it.”



Snapping photos of killer whales is a common occurrence. Otis says studying people’s reaction to the whales has been added to the research efforts.

*Sarah Sanford '06 photo*

**Otis’ research focuses on the area around this lighthouse in Lime Kiln Point State Park.**

*The Journal of the San Juan Islands photo by Richard Walker*



And so go other stories from students, friends and Ripon faculty who've either participated in Otis' research studies, or simply hung out and observed.

"The whales come by just about every day," Otis maintains. "We record everything we see and hear from the time the whales enter the study area until they leave." The data collected is used to evaluate a variety of questions, including whether or not the presence of boats affects orca behavior. A wide variety of boat and whale behaviors are recorded.

### *Do Increasing Numbers of Boats Affect Orca Behavior?*

"When we started, we were concerned about the possible effects boats had," says Otis. "Over the years, I've moved away from that question because I don't believe we have the science to definitively determine the effects of boats." Thus far, Otis hasn't found that the number or behavior of boats changes whale behavior. "But, that doesn't mean they are not being affected," he adds. From where Otis operates on San Juan Island, the issue remains a "hot potato."

There, whale watching is a dominant industry. According to Otis' research, the number of whale vessels "watching" orcas, which averaged 4.4 daily in 1990, rose dramatically to 20 in 1996. Since then, that number has dropped somewhat. Still, San Juan Islanders wonder whether whale watching contributes to a declining whale population.

There are around 85 killer whales visiting the area now. Ten years ago, there were more than 90. Over fishing, pollution and natural causes are more likely the culprits, suggests Otis. "We just had four babies in the last few months," he adds.

Are these births an early indication of a population rebound? Perhaps. But, the best way to protect the orcas and ensure a solid population, according to Otis, is through research and public education.



By continuing to gather and analyze data over a number of years, Otis and his students hope to ask and answer a variety of unknown questions related to the orca.

"We have a database now that allows us to ask questions we couldn't have dreamed of asking 15 years ago," he says. Doing such longitudinal research, he maintains, is today, a lost art in science.

### *Research Continues Back at Ripon's 'Dry Lab'*

The database also ensures the study of whale behavior continues even as the mammals depart Haro Strait toward the Pacific. Back on the Ripon campus, psychology students work to evaluate the meaning of various sounds and behaviors recorded during the summer. They gather around computers in a lab dedicated to orca research and pour over recordings and video. "We try to video tape and record the whales as they are going by," says Otis. "We can synchronize the video and vocalizations to see what was going on at the time." For every moment a whale passes by, students have also recorded how far offshore it is, the types and numbers of airplanes and boats present, the direction it swims, and its behaviors, such as breaching and eye hopping, among many others. In the lab, they align all the data to represent one moment in time.



Whale watchers study a display about current research near the Lime Kiln Lighthouse in Friday Harbor, Wash., where Bob Otis conducts his research.

The Journal of the San Juan Islands photo by Richard Walker

Three Ripon students are now evaluating specific whale vocalizations from the campus “dry lab.” There are 29 identified whale calls. By coincidence, the students discovered that while resting, an orca gave one call over and over again. “Maybe the meaning of the call has something to do with resting,” suggests Otis. Students are analyzing data to find out more. Ten years ago, this would not have been possible. It takes years of accumulated data, says Otis, to form and test educated questions.



### *Maymester at the Lighthouse*

At Ripon College, Otis tantalizes students with orca stories, urging them to join him for his Maymester course held at the lighthouse each May. “I have them present projects at night during the last few days,” he says. “I want them to do something beyond what they’ve done in the past.”

For her project, Amber Nikolay '02 of Winston Salem, N.C., led a class tour of Lime Kiln State Park, pointing out medicinal plants once used by native people. “It all relates to the killer whales and a culture dependent on the whales,” Otis maintains.

“Not only did we perform all of the research and spend time on San Juan Island,” adds Nikolay, “we also took the results of our data and presented them around the country.”

Weiss’ research focused on the local political structures on the island and the laws related to whale survival. “The experience brought the world into perspective,” says Weiss. “I’ve

changed in that I carry the experience with me everywhere I go.”

For 15 years, Otis hasn’t just researched orcas, he’s observed them in the midst of human reaction — people delighted by

“Mother Nature’s superstar.” An animal behaviorist, it seems Otis is also a

“human behaviorist.” Naturally, this professor’s intrigue extends beyond the orca to the mammal’s impact on humans. “People scream and yell when the whales come by,” he says. “It does something to them.” So, seven years ago, he and his students began gathering data on the reactions and behaviors of humans as a result of whale watching.

“When killer whales swim by, it doesn’t matter where you are from or your political background,” says Otis. “I like to think of them as the big equalizer. It doesn’t matter if you are rich or poor, everyone asks the same questions.”

### *Educating Others*

Smitten with the orca and its welfare, Otis is helping develop a new welcome center at Lime Kiln Point State Park pursuant to the park’s goal of preserving and interpreting the natural and cultural resources of the area. In particular, he’s assisting with exhibits dedicated to the orca. Visitors will learn about the natural history of the whales as well as the other marine mammals of Puget Sound and threats to their continued survival. Among the exhibits will be a 12-minute video on the local population, illustrating whale behaviors. The college’s own Jack Christ, professor of leadership studies, and his wife, Bev, are developing the orca video from their business studio, Video Age Productions in Ripon. Bev visited the lighthouse to experience the area’s natural wonders first hand. Once the whales pass by, she says, a fellowship develops among observers.

Thanks to Otis, who birthed among the worlds’ most unique orca research opportunities, the power and mystique of the killer whale is felt beyond the coastal communities it frequents, to a distant liberal arts college in Wisconsin. At Ripon, where the orca is the center of ongoing study, students are privy to rare research opportunities and experiences.

Otis, who receives hundreds of requests each year from students all over the world eager to intern at the lighthouse, considers Ripon students first. What he wishes, is that everyone on earth could share in the experience. **R**

*Haley Jorgensen*

*Jorgensen owns Public Image, a public relations firm in Ripon, Wis., and is a frequent contributor to Ripon Magazine.*



This Maymester group spent two weeks whale watching in 2002.