

The Malibu Times

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Life And Arts

Getting to know the S.M. Bay's residents

Friday, June 23, 2006

Scientists identify dolphins and other marine mammals off the Southern California coast and chart their behavior to better understand the ecosystems and determine the impact of human activities on the animals.

By Ryan O'Quinn / Special to The Malibu Times

The coffee is brewing and the doughnuts are fresh as a couple and their loyal Labrador retriever board a 50-foot Santa Cruz sailboat in Marina del Rey. They are spending another day sailing in the Santa Monica Bay. Like they do about twice a week, the plan is to travel out of the harbor, head north to Malibu and spend several hours at sea before returning to the dock and calling it a day.

This man-and-wife team is not sunbathing, fishing or even joyriding; they are working. They are also not alone. The crew for this voyage consists of three other scientists, this reporter and a photographer for The Malibu Times.

Dr. Maddalena Bearzi and her husband, Capt. Charles Saylan, have made it their life's work to study and identify mammals off the Southern California coast and to chart their behavior to better understand the marine ecosystems as well as determine the impact of human activities on the animals.

The Los Angeles Dolphin Project has been collecting data on the health and status of marine mammals in the Santa Monica Bay since 1996, and has identified nearly 3,300 individual bottlenose dolphins that call the Malibu coastline their seasonal home.



Above: Dr. Maddalena Bearzi and her husband, Capt. Charles Saylan, study marine mammals in the Santa Monica Bay; below: Porpoises are spotted close to the shore. Photos by Heather O'Quinn/TMT

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"We are doing different projects with dolphins," Bearzi explained. "We are studying aggregation between two species of six-foot-long, short-beaked and long-beaked common dolphins. There are 290 different dorsal fins. We take pictures over time so we can recognize the dolphins. We studied this in the past and we are determining if sea lions follow dolphins. And today we will also follow the migration of sea birds."

One of the scientists on board is Cal Tech Ph.D. student John Feenstra, who is an expert on birds. Feenstra carries a Palm Pilot to record his findings as well as high powered binoculars and a book on bird species for reference. Feenstra records data into the device and will give the findings to Bearzi at the end of the trip.

Two other students are on board and serve as data collectors during the trip. Every 10 minutes a loud timer sounds and the scientists record information into a laptop computer that is secured to the boat and tethered to power outlets in the galley. Once back in the lab, the information will be deciphered and plugged into the years of research in order to discover more about the dolphins.

"We take a log every 10 minutes," Bearzi said. "If there is anything at all unusual, we record it. Fish school, kelp, pinnipeds; and we will collect data on all the birds we see along the way."

The sailboat, named "Gone with the Wind," is more of a research vessel than a pleasure boat, equipped with navigation equipment, electronics and computers that allow for satellite images and weather changes to be downloaded and e-mail communication.

"We have an underwater video camera and acoustic equipment," Bearzi said. "We are better able to understand what is going on under the surface. We also have a plankton net and can analyze the fish scales and see what the dolphins and sea lions are feeding on."

We leave the Marina and make our way toward Malibu by sailing directly over one of three underwater canyons in the Santa Monica Bay. The scientists explain that this is an excellent area for study because the submarine canyons provide nutrient-rich feeding areas for the animals and we are likely to see more dolphins on this path.

When underway, the horizon is divided and each of the researchers take a section and scan the water for marine mammals. When one is spotted, a typical response is to say loudly the species type and the corresponding position relative to the boat.

"Pinniped 10 o'clock," Bearzi shouts as she looks through binoculars to relay behavioral information to the student logging the information into the laptop.

"We want to compare these different populations and take biopsy samples that determine pollutant levels, contaminate levels and genetics information," Bearzi said. "At the same time we collect behavioral data. After rainstorms you see this area of pollution with satellite imagery and we see how dolphins behave."

Encountering some of the dolphins during the outings is like running into an old friend. Because of photo identification, the scientists have seen the same "residents" over and over in the bay. One avenue of fundraising is to invite donors to adopt a dolphin, which includes receiving a certificate, a photograph of the dolphin and a list of sightings since 1996. Some regulars in the bay are named Coco, Ascia, Lucinda and Big Smile.

"Bottlenose dolphins live in societies and subgroups," Bearzi said. "They have culture and cognition. Dolphins, like primates, have a language, use tools and are self-aware."

With the above-water and underwater equipment, Saylan says, they have the ability to see and study various dimensions. On one recent outing they discovered sharks, birds and dolphins feeding together without bothering each other.

One of the students, Alice Hwang, recently graduated from UCLA and had a class with Bearzi.

"Her class was what got me interested in marine biology in the first place," Hwang said. "Grad school is probably the next step. I would like to go into marine biology."

Another undergraduate, Celia Baroso, also gave up her Saturday to spend the day browsing the horizon in the name of science.

"I'm interested in conservation and the damage that humans have done in this world," said the Cal State Long Beach senior. "It's great to be able to study a species that may very well be higher functioning in their environment than we are."

After several hours, we take a quick food break while still scanning the horizon and begin our return trek back to Marina del Rey. With Malibu a speck in the distance the sailboat is suddenly abuzz with activity when Bearzi spots a group of Dall's porpoises off the bow.

The researchers tell me these porpoises are a deep-water species and are usually found much further offshore. "These animals are very difficult to track and study," Bearzi said. "We try to study the dolphins without any disturbance at all from us or the boat. We are outside observers."

For the next hour, we follow the porpoises in the ocean just north of the Santa Monica Submarine Canyon. All on board are committed to searching the horizon and yelling coordinates when a group is spotted.

Once the animals are spotted, the logging interval is shortened to five minutes and the laptop logger asks a series of questions to Bearzi, who answers without removing her binoculars. The questions range from length of bottom time to behavioral pattern, to number of porpoises in the group.

Saylan goes below to retrieve the video camera to chart the migration, while Bearzi readies her digital camera to document the individuals.

Once the group decides the data is sufficient and we get farther from the porpoises, the sailboat heads for home with a satisfied crew on board.

It has been a good month for Ocean Conservation Society. In addition to the rare dolphins, they also had two sightings of gray whales on their return migration from Baja and a sighting of approximately 30 short-beaked common dolphins in aggregation with California sea lions.

Prior to Los Angeles Dolphin Project, no one had conducted a long-term study of the Santa Monica Bay's dolphins. Bearzi said besides the scientific data they have collected over the last decade, they have more than 15,000 photos that document the day-to-day life of the mammals.

Bearzi said the trips are decreasing in frequency due to a lack of funding and they will be starting a phase of applications for grant monies to continue the project.

Once back at the dock, we bid farewell to our new friends and vow to look for Lucinda, Big Smile or Coco while we are paddling out on our surfboards at Third Point.

For more information on the Los Angeles Dolphin Project, Ocean Conservation Society or adopting a dolphin, go to www.oceanconservation.org.