



Photograph © Maddalena Bearzi

in the WILD

written by Diane Buccheri

photographed by Maddalena Bearzi
author of *Beautiful Minds: The Parallel Lives of Apes and Dolphins*
published by Harvard University Press
www.oceanconservation.org

Maddalena Bearzi seeks the wild. She always has. Growing up in Italian city after city, nearby hills held a treasure trove of natural exploration, as did her own yard, her window into the world of the wild. There she spent time with frogs, snakes, lizards — creatures little girls usually shriek from. She took notes, old ecology style, and read books.

The Bearzi family summered on the Italian coast, always along an isolated shore where she was among wildlife. When she was old enough to go alone, she spent a lot of time in nature, her thirst for exploration unquenchable.

As an undergraduate student, the University of Padova did not encourage field animal research but she persisted, went into Tombolo Reserve in Pisa, and based her bachelor's thesis on the homing and home range of lizards.

With her Bachelor of Science degree in natural science, she worked as a freelance journalist. In her early twenties she traveled to Yucatan to study sea turtles and there, she began close observation of bottlenose dolphins. She furthered her research, trained research assistants and volunteers for field work, and analyzed data through Milan's Tethys Research Institute in the Mediterranean and Caribbean seas.

Maddalena came to California during her late twenties with her American husband Captain Charles Saylan after the two met in Italy. Sailing in Santa Monica Bay together, she was surprised the dolphins there had not been studied long term, though millions of people live by and enjoy the bay for recreation and commerce. Spending more and more days sailing eight, ten hours, she based her University of California Los Angeles (UCLA) Ph.D dissertation on the population and behavior of the bay's three most common species of dolphins and their interactions with sea lions.

Bottlenose dolphins, long beaked and short beaked common dolphins, whales, and sea lions swim the coastal waters of Southern California, sharing their habitat with a large population of swimmers, surfers, kayakers, and fishermen. They live in water used heavily by cities. How are they affected by the millions of people and their industries?

One determines the occurrence, distribution, abundance, and behavior of the cetacean species present in the study area. Do different species interact in any way? Do they prefer shallow or deeper waters? Do they avoid areas of pollution? What do they forage for and are they healthy?

Using detailed behavioral observations, photo-identification techniques, video cameras, bioacoustic equipment, and plotting her data with GIS, Maddalena has collected a variety of information on the local species in the bay over a decade.

Dolphins in some areas of the world can't find fish to eat because of commercial fishing lowering the stock levels. Dolphins caught in fishing gear are injured and often drown. The noise pollution from boats and ships interferes with their communication and navigation.

In her study area, Maddalena observed dolphins with skin diseases. These dolphins, in some way, are probably affected by contaminants, Maddalena says. As top predators, dolphins feed at the top of the food chain. They eat fish which eat smaller fish that eat smaller organisms. The pollutants in the smallest of creatures accumulate as they pass through the food chain in a process called biomagnification. Mothers can transfer pollutants to their calves through their fat-rich milk.

Thus, dolphins are a good indicator of the ecosystem's health. "If a dolphin is sick, we can get sick. Their protection and conservation is our protection," Maddalena points out. Concerns rise with increasing human impacts upon their habitats and food. In the last decade, stress related behaviors have become apparent. Monitoring their behavior protects the dolphins' well-being and populations, protects all the organisms of the ecosystem, and the ecosystem itself.

Though her extensive work in Santa Monica Bay is singular, she is one of a growing number of scientists since the last few decades seeking knowledge about marine mammals to better understand their populations, behavior, and intelligence with the ultimate goal of protecting their populations, habitats, and needs. Legislation and public awareness efforts have likewise developed in the most recent decades.

Co-founded in 1998 by Maddalena and her husband, the Ocean Conservation Society (OCS) offers education projects involving the general public: mentorship programs, kayak cleanups, marine mammal internships, as well as presentations on marine mammals and conservation in schools, universities, museums, etc. OCS provides curricula about marine mammals for teachers, and an adopt-a-dolphin program to support the research work on dolphins.

Wide ranging and fast moving below the surface in the vast waters, mostly hidden from our view, gathering details and understanding is a challenging task requiring stamina and strength, persistence, and most of all, passion.

Maddalena's is a lifelong passion, upon which she rides waves of the oncoming challenges. Her dedication garners a vast bank of experience and knowledge, driven by the need for more. With her days among the dolphins backgrounded by a sprawling metropolis, she spans the gap of intense human population and the wild world of dolphins, long time mysteries to us in the ocean we share.



Photograph © Maddalena Bearzi