

Debunking Captivity: 3 Reasons Not to Keep Dolphins in a Tank

April 8, 2014

A bottlenose dolphin in the wild. (Photograph by Maddalena Bearzi)

I have spent much time in the company of wild dolphins over the last twenty-something years. I've built a career following their everyday movements and observing their behavior both from shore and from research boats. When I began my studies, I knew these creatures primarily as the objects of my research but, as the years passed, I came to recognize them as single individuals, not solely for their unique dorsal fin notches, but also for their cognitive abilities, personalities, and emotions.

Spending thousands of hours at sea, I began to know some of them by sight and, like my human friends, they became an integral part of my life. I learned of their needs, not only for space but also for companionship, and I witnessed their fluid, complex societies, which in many ways are quite similar to our own.

I have also witnessed first-hand the very different lives of these animals in aquaria and marine parks and I cannot help wondering about the reasons for keeping such magnificent creatures captive. In my line of work, I've heard all kinds of justifications for keeping dolphins confined, the most frequent being education, conservation, and research. (See: ["First Person: How Far Will the Blackfish Effect Go?"](#))

Let's consider whether any of these reasons are valid. And let's do this keeping in mind that we are an allegedly intelligent and caring species with the ability to reflect and analyze *what we currently know about dolphins* and make sensible decisions based on these evaluations.

Keeping cetaceans (and personally I would stretch this to include other animals as well), in a restricted environment may have been more acceptable years ago, when we really didn't know any better; when we didn't have enough information about who these animals really are in the wild and what they need to live. But today, we know a lot more than we did back then.

So, what do we know about dolphins? Here, in a nutshell, are three important reasons why captivity and dolphins are incompatible.

1. Dolphins are large-brained, cognitive animals

If we consider ourselves as being at the pinnacle of intelligence, dolphins would come just after us, scoring even better than their great ape cousins. Looking at the Encephalization Quotient, which represents a measure of relative brain size and a rough estimate of the intelligence of an animal, dolphins possess a high EQ due to their

unusually large brain-to-body- size ratios.

The last two decades have seen the proliferation of anatomical and morphological investigations on cetaceans. Neuroanatomical studies of their brains have shown that dolphins possess an intricate and developed neocortex as compared to other species, including humans, and a distinctive folding of the cerebral cortex, which in cetaceans is even more prominent than in primates.

Why is this important? Because, simply stated, these structures are both associated with complex information processing. Dolphins also have spindle-shaped neurons, or *von Economo* neurons, which are key for social cognition and have been linked in humans to an ability to “sense” what others are thinking.

There is no doubt that intelligence is difficult to define and when we look into the animal world, almost any animal may be considered “smart” depending on what definition of intelligence we decide to apply. I can make a great case for any of my dogs... But only in a few species like dolphins, great apes, and humans, do we find brain complexity, social complexity, and ecological complexity closely linked, at least for now... (See: [“Schoolchildren and Musicians Boycott SeaWorld in ‘Blackfish’ Flap.”](#))

2. Dolphins live in complex societies in the open ocean

We have established that dolphins have large and complex brains, but what is all this brain capacity good for? This brain has allowed dolphins to develop complex and fluid societies in which they can flourish against the backdrop of a challenging, three-dimensional liquid environment.

Cetaceans such as the bottlenose dolphin (the most common species found in aquaria and marine parks today) have flexible and remarkable social and communication skills. They live in social networks characterized by highly differentiated relationships that often rely on precise memory of who owes whom a favor and who is a true friend. They engage in cooperative hunting and they partition resources such that prey is shared throughout the social group.

In some dolphin populations, males form coalitions in order to sexually coerce females or defeat other male coalitions. They care for each other; mothers and calves have long-term strong social bonds and a calf can spend up to two years next to its mother learning its place in the ocean. Dolphins play, bond, imitate, learn from each other and transfer information from generation to generation.

This ability to transfer learned behaviors to their progeny makes them cultural animals like us. And like us, they can recognize themselves as individuals and are self-aware, even if the extent of dolphin self-awareness still remains to be explored.

At sea, dolphins are always on the move, often traveling hundreds, sometimes thousands of miles. Their large brains likely help them to succeed in foraging on widely scattered and temporarily available resources. Dolphins, like some other animals, are essentially complex social mammals that need expansive space to live in. A tank can't even begin to address these needs...

3. Dolphins have emotions (and personalities)

We like to think of dolphins as happy animals with an omnipresent smile frolicking in the sea. We tend to anthropomorphize them, projecting our own attributes on them. But what we think is the blissful face of a dolphin can obscure the animal's true feeling, especially when we keep them confined. Let's not forget that dolphins also die smiling!

Dolphins, like us, have a limbic system and are able to experience a broad spectrum of emotions including joy, grief, frustration, anger, and love. Put a dolphin in an MRI scanner and you will see a large brain structure that allows for complex emotions. Looking closer at a dolphin's brain, once again, you will find those specialized *von Economo* neurons that in humans are linked to intuition and empathy.

But brains and neurons aside, it's spending time in company of these animals in the wild that will really make a case for them as emotional beings with diverse personalities. Anyone who has witnessed the compassion of a dolphin mother in taking care of her calf, an individual helping a companion in distress, or a dolphin grieving for hours, even days for the death of a next of kin, can't deny these animals have emotions.

Like intelligence, conscious emotion in these ocean-dwellers is difficult to understand, define, and measure. For comparison, just reflect upon how difficult it is to know what we ourselves are thinking or feeling at any given moment...

Now, let's try something different. Let's ignore all the scientific studies or *what we currently know about dolphins*. Let's also disregard the three above-mentioned assertions why keeping these animals in captivity is fundamentally wrong, and let's instead concentrate on debunking the favorite pro-captivity arguments: research, education, and conservation.

Research

Marine parks and delphinaria tend to play the "research card" every time there is a question about why we keep dolphins in captivity. It's true that, in the past, some captivity studies on dolphins have helped fuel our basic understanding of these animals; an understanding that researchers of that era could not have obtained at sea because of technical and logistical obstacles. But the world and science have changed and we now have the technology and means to more effectively study dolphins in their own habitats.

Generally speaking, because of the artificial settings, research in captivity provides little knowledge that can be applied to the protection and management of these species at sea. In fact, this kind of research can even be misleading. Many published studies on captive animals focus on training techniques and improvement of husbandry practices, which have no relevance to dolphins living in the wild. For example: captive studies on dolphin diseases have failed to predict outbreaks of viruses in wild populations that may often cause mass mortality.

Further, only a small fraction of the money coming from tickets sold at facilities that keep dolphins in captivity is used for research (if at all) and less than ten percent of delphinaria or zoos are involved in research conservation programs, either in situ or in the wild. (See: ["Opinion: SeaWorld vs. the Whale That Killed its Trainer."](#))

Education and Conservation

The most common claim of many delphinaria is that they provide great educational opportunities, which they contend may lead to public concern for dolphin conservation. But this just isn't true.

The big difference in opinion here rests on one's definition of educational value. Just think about taking a child to a marine park. This is not an educational experience because the child doesn't see or understand what these animals are really about. Jumping and splashing on command or catching a fish from the hand of a trainer during a performance is just stereotyped, *clown-esque* behavior that shows little if anything of these animals' everyday life. Deprived of their natural space and social structures, dolphins change. Captive dolphins have nothing in common with those I have come to know in the wild.

Instead, think about taking your child out to sea on a reputable whale-watching trip (which, by the way, will likely cost less than a ticket to a marine park). Even in a single trip out on the ocean, a child might have the chance to glimpse into the real life of wild dolphins. At sea, one can better understand who dolphins are and how they behave in company of their own "families." At sea, one will see why we need to protect not just them, but also the environment in which they live. These are truly important lessons in conservation for a child!

A second claim is that by keeping them in a tank we are saving them from pollution and overfishing, even extinction, and that captive breeding programs are for conservation motives. Removing dolphins from their natural habitat to live in tanks will not address environmental issues. And the statement that these programs help endangered or threatened species is faulty, especially considering that the endangered species are generally not the ones being kept in captivity. Captive breeding programs do provide one thing: a constant supply of dolphins for display and human amusement.

There are many other reasons why keeping these animals in captivity is wrong, such as the poor, often terrible, conditions in which dolphins are still kept in many facilities worldwide, and the high illness and mortality rate of captive animals. No state of the art captive aquarium or marine park can ever meet the complex physiological and psychological needs of a dolphin, or most other animals, for that matter. And we have not yet mentioned the number of individuals killed in the process of being captured, and the stress these animals go through when separated from their companions and social networks.

It's time we recognize that the only, true reason we still keep these magnificent, large brained and socially complex creatures captive is for our entertainment; entertainment for the motive of making money, and lots of it.

Dolphins are *who*, not *what*, and they deserve some rights. We humans should use our judgment and compassion toward these (and other) fellow animals and stop keeping them caged as our prisoners.

Maddalena Bearzi has studied the ecology and conservation of marine mammals for over twenty-five years. She is President and Co-founder of the [Ocean Conservation Society](#), and Co-author of [Beautiful Minds: The Parallel Lives of Great Apes and Dolphins](#) (Harvard University Press, 2008). She also works as a photo-journalist and blogger for several publications. Her most recent book is [Dolphin Confidential: Confessions of a Field Biologist](#) (Chicago University Press, 2012).

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