

**Written testimony of  
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**before the  
Subcommittee on Insular Affairs, Oceans and Wildlife  
Committee on Natural Resources  
U.S. House of Representatives**

**Oversight Hearing on  
"Marine Mammals in Captivity: What Constitutes Meaningful Public Education?"**

**Tuesday April 27 2010**

Good morning, Madam Chairwoman, Ranking Member Brown and members of the Subcommittee. Thank you for inviting me here today to speak at this hearing on what constitutes meaningful public education in relation to marine mammals in captivity. My name is Peter Corkeron and I am a Visiting Fellow at the Bioacoustics Research Program of the Cornell Lab of Ornithology. As someone who became a US citizen less than two years ago I am deeply honored to be invited to speak before a Subcommittee of the House.

I've been invited to speak to the points that by now I assume will have already been identified by my colleagues on the panel, so I won't list them here. As the hearing is about public education, I shall focus on that, rather than conservation.

As an ecologist, and a relatively recent immigrant to this country, my knowledge of the specifics of these issues in the US is less than that of most panelists here today. I believe that I was privileged with an invitation today because I wrote the entry on Captivity in the Encyclopedia of Marine Mammals, of which the second edition was printed last year. That article addressed the international generalities and history of the debate over keeping marine mammals in captivity, rather than a specifically US-centric view of this issue. I come to this as someone who has colleagues and friends on both sides of the debate on marine mammals in captivity, and who has worked with staff from zoos and aquaria (outside of the USA), and conservation NGOs. I am a marine ecologist, not an environmental educator.

I have never personally conducted research on captive marine mammals, apart a couple of projects I did for my undergraduate degree in the early 1980s. I have conducted field research off Australia on free-ranging marine mammals with staff from aquaria. I should also add that at the start of this year, I was given an appointment as Adjunct Senior Scientist at the New England Aquarium because I am about to start collaborating with New England Aquarium scientists, working on an aspect of North Atlantic Right Whale conservation science.

Before discussing the points I was asked to address, I'd like to briefly sketch out some ideas on how the way that we perceive animals affects the way in which we manage our interactions with them, how this fits with the historical development of attitudes towards marine mammals, and

where I see the situation today. The categorization I'm using was first proposed 25 years ago by a ecologist from New Zealand, Dr Graeme Caughley.

Put simply, the way that we perceive animals can be divided into four classes:

- "Nasties": that we fear or dislike and usually want to cull (that is, reduce the size of their population[s] to achieve a particular management end);
  - "Lovelies": that we like, revere or honor and want conserve;
  - "Commodities": domesticated animals, or wild animals that are hunted, (with the intent of hunting sustainably); and
- "Irrelevancies": animals that we don't think about or have strong feelings toward.

I became particularly interested in peoples' conceptions of marine wildlife during the four years I spent working in Norway. There, attitudes antithetical to those I had previously encountered were the norm and forced me to ponder why people hold the perceptions that they do. I have found Caughley's simple classification useful in that case, and I'm using it here to try to - briefly - think through the role of animals in captivity in changing peoples' conceptions of marine mammals.

Prior to the 1950s, dolphins were seen as Irrelevancies, although we don't have to go too far back in time to see that dolphins were Commodities - we used to hunt bottlenose dolphins for food and leather, for example. Killer whales were generally viewed as Nasties. From the 1950s to the 1970s, the number of aquaria and zoos displaying marine mammals increased rapidly to meet public demand, especially in Europe, North America, and Australasia. Simultaneously, technology and methods for the capture, transport, and maintenance of marine mammals improved with increasing knowledge and experience.

Now, US citizens view dolphins and killer whales as Lovelies. People became familiar with dolphins through shows at aquaria and from the TV show Flipper, in which a trained dolphin (apparently several trained dolphins) was portrayed as a free-ranging family friend. With this heightened awareness, people grew to understand that dolphins were intelligent marine mammals. The public view of killer whales changed radically at around the same time as they appeared in captivity, supporting the argument that there were situations in which captive animals could function as "ambassadors" for their species.

More recently, we are beginning to understand the true cognitive capacity and complex social lives of bottlenose dolphins and killer whales. In the case of bottlenose dolphins, this understanding has come from a combination of research on captive and free-ranging animals. For killer whales, almost all understanding in this area has come from free-ranging animals.

However, the MMPA includes more than cetaceans. The public perception of pinnipeds is less straightforward. In some parts of the country where seal populations are increasing, there are calls address problems of their effects on fishing and problems perceived as being created by the attraction that great white sharks show for seal colonies. So to some, pinnipeds are Nasties. On the other hand, the effort that goes into rehabilitating seals and sea lions suggests that to others, pinnipeds are Lovelies.

With that background, I address the specific points raised in my invitation:

**1. The adequacy of current professionally recognized standards for education or conservation programs at public display facilities**

No doubt Dr Boyle and Dr Schwaab will provide more information than I on this topic. My understanding is that the AZA's accreditation standards are the current professionally recognized standards for the USA. As a marine ecologist who works primarily on conservation issues, these standards seem adequate to me. Some work by members of the AZA - for example the Monterey Bay Aquarium through its Seafood Watch program – have achieved high standards in conservation education that are at least as good as those offered by any zoo or aquarium internationally.

**2. The need for regulations to be developed pursuant to Section 104(c)(2)(A)(i) of the Marine Mammal Protection Act to ensure sound standards for education or conservation programs;**

I feel somewhat uncomfortable passing comment on the need for regulations, as this is more of a policy decision than one for an ecologist. It seems to me that if there needs to be regulations, perhaps they could focus on oversight of the oversight provided through the accepted accreditation standards.

To give an example, there are aspects of the life history and behavior of cetaceans that inform arguments against keeping them in captivity. There are instances where the educational information provided by some facilities pertaining to these specific aspects of cetacean biology where the information provided is not to the high standards demonstrated by all members of the AZA. Given the trust placed in AZA membership by the public generally, it seems appropriate to me that some effort is made - if not through AZA oversight, then through some form of oversight of AZA oversight - in order to address this issue.

**3. Methods for evaluating education and/or conservation programs at public display facilities.**

No doubt Dr Boyle and Dr Marino will speak in detail to this question. I note that one of the findings of The Ocean Project work run by Dr Boyle is that US citizens generally, do not have a good understanding of our impacts on the oceans, and this illiteracy is not improving. I'd flag that as a problem, and direct my comments on methods for program evaluation in a more general manner.

First, some of the arguments made regarding the educational value of captive marine mammals are amenable to scientific testing, using the tools that social scientists have developed over the past few decades. Does the manner in which dolphin or killer whale shows are presented educate members the public about their conservation, and the conservation of marine biodiversity generally? Also, could this be done more effectively with different sorts of presentation? Does pool size and construction convey a perception of how we should interact with free-ranging

marine mammals, in a manner that increases visitors' interest in marine biodiversity conservation? These are testable hypotheses, and should be tested. I understand that some initial work along these lines has been supported by the AZA recently.

Second, and to return to the changes in attitudes towards marine mammals (however they were achieved). We no longer use the Air Force to hunt down killer whales, and people are clearly appalled when they learn about the brutality of drive fisheries for dolphins. But how have these changes influenced people's attitudes towards the conservation of marine biodiversity, which is a goal of public education at zoos and aquariums?

Humanity's deleterious impacts on marine ecosystems have progressively increased in recent years. Some of this is simply because there are more people on the earth, and they are moving into coastal cities. Some is due to technological developments, particularly in fishing, mass tourism, and improvements in our capacity to locate and extract hydrocarbons. Some impacts (e.g. increases in noise from shipping traffic) are exacerbated by increased globalization of world markets. There are also developing new impacts more specific to the USA, such as our desire for greater energy independence leading to the recent plans to reopen a substantial portion of the East Coast to offshore drilling.

We see marine mammals as animals to cherish, and it may be that experiencing animals in captivity can reinforce this emotion. However, there seems a disconnect between people loving dolphins, to then making the personal choices, and seeking the societal changes, that are needed to ensure healthy marine environments. When viewed from this broader perspective, conservation-related education by all those responsible for public education – government agencies, conservation NGOs, and public display facilities, to name a few - appears to be performing poorly. How do we instill, and enhance, a sea ethic in US citizens? Surely this is the issue that should command the attention of all of us concerned about healthy marine environments.

Thank you for your attention.