Journal of Marine Animals and Their Ecology
Vol 8, No 1, 2015
Printed in Canada

Letter to the Editor

Why the Extinction of the Vaquita Should Matter to All of Us- A Teenager's Perspective

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The vaquita (*Phocoena sinus*) is a species on the extreme brink of extinction. It is found in the very northernmost part of the Gulf of California, Mexico, and its population now likely numbers fewer than 90 individuals (4). Bycatch in both legal and illegal fisheries has been its primary threat for as long as we have known about the species, and before we know it, the vaquita could be extinct. The only way to prevent the vaquita's extinction is to remove all gillnets from the vaquita's entire range immediately (12). Doing this will give the vaquita a chance to slowly begin to repopulate, but it could hurt the fishermen in the region (9). So why should we possibly sacrifice the well-being of a community for a seemingly invisible porpoise?

The vaquita is near the top of the food web in its northern Gulf of California ecosystem (8). It is extremely likely that the decline in the vaquita population has already had negative impacts on the other species of the Gulf. If there are no vaquitas, there will be fewer animals to prey upon small and medium-sized fish, as well as squid and crustaceans. Vaquitas are opportunistic feeders, and have been known to eat dozens of species of fish and other fauna (6). An increase in the species that are prey of the vaquita would therefore cause a decrease in other specis such as small animals and plants like plankton, which would then cause a decrease in species like baleen whales. The vaquita is also a food source for multiple shark species, such as the great white shark, and possibly killer whales, so therefore the absence of vaquitas would make it more difficult for these predatory species to locate prey (3). Many species have undergone miraculous population recoveries after being pushed to the edge of extinction, such as the gray whale, whooping crane, bald eagle, nene goose, and California condor (1). If the vaquita begins to increase, it will help stabilize the ecosystem and bring a once-diverse environment back to its natural and health state.

The vaquita is a clear symbol of Mexico's natural diversity. This cetacean is the only species endemic to Mexican waters (13). It is no secret that Mexico has a negative public image, thanks to drug cartels, kidnappings, and other unsavory activities (7). The last thing one would expect the government of a country like this to be worried about is a species of marine mammal that is almost never seen. However, if Mexico shows that they care about their ecology by creating one of our greatest conservation success stories, it will tremendously help their reputation. If the vaquita goes extinct, there will likely be massive public outcry towards the Mexican government and fishermen, which at this point could be devastating to Mexico's economy. A healthy population of vaquitas would be great incentive for ecotourism. Ecotourism, which is environmentally friendly tourism oriented around seeing wildlife, would be an ideal career option for the affected fishermen, due to their knowledge of the environment and boating experience (14). This would help diversify the local economy. Adoption of more sustainable fishing techniques would also improve the economics of the fishing industry itself. Some gillnets have a bycatch rate of almost 60%, which means that more than half of the animals caught are not what the fishermen are trying to catch, and part of this 60% is the vaquita (5). Thankfully, trawl nets have been developed that allow fishermen to catch what they want without having bycatch like vaquitas (4). Utilizing technology like this will allow fishermen to join front lines of modern sustainable fishing as well as keep the Gulf of California ecosystem healthy and productive. Thus, the survival of the vaquita would benefit Mexico's economy.

We have known the cause of the vaquita's decline for over 50 years now, and yet the problem has

Received: March 23, 2015; Accepted: April 9, 2015.
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continued, if not intensified, to this day (4, 11). We have the moral duty to save the vaquita from a demise that is entirely anthropogenic in nature (12). In 2006, the extinction of the baiji river dolphin was announced, the first human-caused cetacean extinction (2). It was a wake-up call to conservationists all over the world. Now we are right on the cusp of losing another species only a few years later. As the most powerful species on the planet, we have the responsibility to protect all life, especially when it is because of us that they are in danger in the first place. Every organism has a fundamental right to exist, and our deprivation of this right is a moral crime. Killing an entire species is simply wrong. Furthermore, vaquitas are intelligent mammals, much like us (10). We simply cannot allow ourselves to kill off every last vaquita that will ever exist.

Lastly, saving the vaquita would have immeasurable global implications for other endangered species. The vaquita's situation mirrors that of countless other species that are losing the battle to human development and activities. If the vaquita is brought back from the absolute brink of extinction, it will show what can be done when humans work together towards a good cause. It will show that humans can bring a species back from the brink without the use of captive breeding, and that humans and animals can co-exist peacefully through the implementation of sustainable careers. The recovery of the vaquita would send a very strong message throughout the conservation community that we can save critically endangered species. The vaquita is the world's smallest and most endangered cetacean, and if we don't even have the will to save this cute little mammal, the future of generally less appealing animals like fish, insects, and reptiles does not look bright. Teenagers like William and me have to witness and live with the results of humanity's decisions for the rest of our lives. We do not want to live in a world without the irreplaceable creatures like elephants, tigers, pandas and vaquitas, and morale in the conservation community will dive to new depths if we let the vaquita slip away. We need the headlines to read "Vaquita Back from the Brink," and not "Vaquita Goes Down the Sink."

The vaquita is the most endangered marine mammal species on the planet, and will be extinct in the near future unless immediate, long-term action is taken to remove all gillnets in the species' entire range. We cannot afford to let the vaquita go extinct for the reasons outlined above. Environmentally, the vaquita is an important species, and its native ecosystem would be disrupted if the vaquita disappears. Economically, the loss of the vaquita would have a negative effect on Mexico. Furthermore, it is a moral crime to cause the extinction of an entire species. We have the power to save the vaquita, the same power that, until now, has been abused to such a degree that fewer than 90 vaquitas swim in the Gulf of California today. Finally, the vaquita's story will be heard around the world, regardless of it being a success or failure. If the vaquita is saved, it will inspire other conservationists to work to achieve similar results. We need to save the vaquita for the vaquita itself, for its ecosystem, for other endangered species, and for us. It is really not a question of if we can - the solution is plain, simple, and achievable. We just need to work together to make sure gillnets are out of the vaquita's range - for good.

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