

## **Hawaiian Monk Seals on the Road to Becoming Extinct**

The Hawaiian monk seals are listed on the State of Hawaii's endangered species list and on the U.S. endangered species list. Being overfished, invasive species, and a lack of source for food are just some of the reasons the monk seal population is down to approximately 1,300, but now, there is another threat to their survival. *Toxoplasma gondii* is an extremely destructive parasite that causes the disease toxoplasmosis. Toxoplasmosis can infect any warm blooded animal, including humans. However, the disease can only reproduce in a cat's digestive system and then the eggs are released into the environment through feces. According to DLNR ( the Department of Land and Natural Resources) a single cat can excrete 145 billion eggs per year. Streams and gutters carry the eggs to the ocean where the monk seals can get infected. As all eight Hawaiian islands have a high population of feral cats, Oahu alone has 300,000 to 350,000, toxoplasmosis is a serious reason that the number of Hawaiian monk seals is this low.

If we cannot do anything to try to stop the *Toxoplasma gondii* parasites from infecting the ocean, an entire species could be in danger. According to the nonfiction book "The Odyssey of KP2: An Orphan Seal, a Marine Biologist, and the Fight to Save a Species" written by Terrie William, in fifty years, by 2068, the Hawaiian monk seals are estimated to become extinct. A species that is believed to have come from the Caribbean about 10 to 11.6 million years ago, could now disappear and there won't be a way of getting them back. The Hawaiian monk seals have an important role in the ocean ecosystem, just like most animals do. These monk seals are important predators

and play a role in controlling the populations of prey and keep up a healthy and well balanced ecosystem. Monk seals are part of the food chain and if they disappear it could hurt lots of the live of different sea animals.

Science has not yet found a safe way to wipe out toxoplasmosis, either from waste or a mammals body. Cats are the only animal that can reproduce the disease, so, it only makes sense that reducing the number of feral cats will reduce the risk of infection, illness, or death for the monk seals. There are some small solutions like TNR (trap, neuter, return) which are not completely helpful because there are too many cats and too little people and money. Another small solution is to get everyone to stop feeding the cats, but some do not agree with this solution because they do not want to hurt or kill the cats. So, I am proposing a three-prong strategy to keep cats from spreading toxoplasma gondii parasites to the Hawaiian monk seals. The first approach would be that we have cat protection areas in places that the cat's waste can not make its way to the ocean so, the people who still want to feed and help the cats can work there. A different angle could be a hotline that anyone can call if they find cat feeding sites or a person feeding the cats and the cats could be taken to a cat protection area. The third idea would be to advise others about the dangers of toxoplasmosis and collect donations for TNR to continue to trap, neuter, and return because I believe that this strategy could still make progress if they had more money.

The theme I chose for my essay is toxoplasmosis and how it's spreading to the Hawaiian monk seals through feral cats. This theme ties in with Mr. Ching's vision and philanthropy. This is because Clarence T. C. Ching believed in dreaming big and making

Hawaii a better place. I know that if we can solve the problem of toxoplasma gondii parasites we will be making Hawaii a better place because these parasites are one of the many reasons for the Hawaiian monk seals becoming an endangered species and why they could become extinct if we fail to help them live in a toxoplasmosis-free environment. The theme of this essay fits in the contest theme and it connects with Mr. Ching's vision and philanthropy.

We need to act now to solve the problem at hand, toxoplasma gondii parasites are making their way to the ocean where they can infect Hawaiian monk seals. If we continue to work like this, these endangered animals could be gone in fifty years. According to Claire Simeone, the director of the Ke Kai Ola hospital for Hawaiian monk seals, "Females seem to be more likely to die from this disease, and from a conservation standpoint, that's very concerning." This is a problem because when a female dies, not only one monk seal dies but so do all of the monk seals she would be carrying in the future; causing the road to Hawaiian monk seal extinction to go faster. We will need to stop the cats from spreading this disease because it will make its way into the ocean and infect Hawaiian monk seals. My strategy will keep the cats alive, which meets many of the people's concerns, but it will also stop the dangerous parasites from spreading into the ocean. As citizens of Hawaii, it's important for us to work hard to stop toxoplasmosis and save an important species from extinction.

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