May 26, 2020

Via email

Ms. Katherine Fernandez Rundle
Miami-Dade State Attorney
katherinefernandezrundle@miamisao.com

Re: Request for Investigation Into Cruelty to Animals Regarding the Orca Lolita at Miami Seaquarium

Dear Ms. Fernandez Rundle:

I am counsel to People for the Ethical Treatment of Animals (PETA) and am writing on the organization’s behalf to request your office’s investigation and pursuit of appropriate charges against Miami Seaquarium and its employees responsible for causing the orca Lolita torment, excessive and repeated infliction of unnecessary suffering, and depriving her of necessary shelter in apparent violation of Florida’s cruelty to animals law.

As discussed further below, orcas are highly social, long-lived, far ranging, and psychologically and culturally complex apex predators. These attributes make them particularly vulnerable to suffering in inadequate captive conditions, such as the uniquely deficient conditions at Seaquarium. Despite her highly endangered status, Lolita is held in a small, shallow, barren concrete tank, without adequate protection from the sun and without appropriate companionship. These conditions prevent her from performing any behaviors natural to an orca (including diving, swimming any meaningful distance, seeking shelter from the sun, feeling ocean currents, and forming species-typical social relationships), and likely cause her to suffer chronic illness, various types of sun damage, and to sustain repeated injuries in the form of rakes to her flesh from the incompatible dolphins in her tank. As a result, Lolita manifests ongoing psychological injuries in the form of stereotypic (i.e., repetitive and abnormal) behavior—when not being manipulated to perform for guests by being fed dead fish.

Marine mammal experts can attest that the complete deprivation of all that is natural and important to Lolita causes her extreme and unnecessary stress, agitation, injury, and suffering, in what we strongly believe to be a violation of the cruelty to animals law, Fla. Stat. § 828.12. We stand ready to facilitate your contact with orca experts and to otherwise assist in any way in your investigation.
I. Florida Cruelty to Animals Law

Misdemeanor animal cruelty occurs when a person—including a corporation—unnecessarily torments or causes an animal to be tormented, or deprives or causes an animal to be deprived of necessary shelter. Fla. Stat. § 828.12(1). “Torment” is defined to “include every act, omission, or neglect whereby unnecessary or unjustifiable pain or suffering is caused … permitted, or allowed to continue when there is reasonable remedy or relief.” Id. § 828.02.

Felony aggravated animal cruelty occurs when a person intentionally commits an act, or fails to act, which results in the “excessive or repeated infliction of unnecessary pain or suffering.” Fla. Stat. § 828.12(2). As used in either of these statutes, “unnecessary” means “not necessary,” and therefore not “absolutely needed” or “required.”

Animal cruelty is a general intent crime. “[T]he statute does not require a specific intent to cause pain, but rather punishes an intentional act that results in the excessive infliction of unnecessary pain or suffering.” State v. Avella, 275 So. 3d 207, 210 (Fla. Dist. Ct. App. 2019); see also Reynolds v. State, 842 So. 2d 46, 48 (Fla. 2002). Accordingly, to support a conviction, Seaquarium need only have intended to confine Lolita in the conditions in which they do, which is undeniably the case. Seaquarium need not have intended to inflict or permit unnecessary suffering, although the company has been at all times fully aware of the consequences of her confinement.

As discussed herein, Seaquarium confines Lolita in conditions that inflict such psychological harm that they lead to stress, abnormal repetitive behaviors, and physical injuries from attacks by other animals. Moreover, this suffering cannot reasonably be considered “necessary” under any definition of the word. In no way is Seaquarium’s confinement of Lolita with incompatible animals for mere human entertainment to maximize corporate profit in any way needed, required, essential, or required to be done.

Seaquarium’s confinement of Lolita to these harmful conditions is subject to prosecution even absent any overt physical injury. In C. E. Am., Inc. v. Antinori, 210 So. 2d 443, 444 (Fla. 1968), for example, the Florida Supreme Court rejected the event organizer’s harmless description of so-called “bloodless bullfights,” in which bulls are brought into an arena and forced to participate in a performance for public entertainment, as “contrary to common sense and common experience” and “unreliable in the light of reason,” and held that the performances violate the anti-cruelty law. The court concluded that this harassing and traumatic spectacle for public entertainment—contrary to the bull’s inherent nature, though not resulting in physical harm to the animal—“shocks the sensibilities of any person possessed of humane instincts.” Id. at 446.

II. The Conditions of Captivity at Seaquarium Cause Lolita to Unnecessarily Suffer

Orcas are highly intelligent and social apex predators, and living in small tanks in captivity causes them extensive physical and psychological harm. Among other things, the physical constraints of the

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2 Note that Seaquarium’s license to exhibit animals under the federal Animal Welfare Act (AWA) is irrelevant to determining whether it has violated state law. The AWA is abundantly clear that it does not preempt more protective state and local laws, 7 U.S.C. § 2143(a)(8), and state cruelty charges are routinely brought against licensed exhibitors.
artificial enclosure at Seaquarium limits Lolita’s ability to exercise, disperse from incompatible pairings or during conflicts, or engage in natural behaviors such as swimming at high speeds or diving, causing extreme stress and frustration.

The stress of the captive environment often manifests in orcas by “physiological and behavioral abnormalities indicative of psychological distress and emotional disturbance,” including stereotyped behavior, excessive submissiveness, self-inflicted physical trauma and mutilation, compromised immunology, all of which Lolita exhibits at Seaquarium.

A. Orcas Are Highly Intelligent Mammals Whose Brains Are Highly Developed in Areas Responsible for Complex Cognitive Functions

Orca brains share—and, in some respects, exceed—a number of important features with human brains that are associated with complex intelligence.

As with the human brain, orca brains are much larger than expected for their body size. Orcas therefore have more brain tissue available to serve complex cognitive functions, such as self-awareness (sense of self identity), social cognition, culture, and language. In addition, the neocortex (the outer wrinkled surface of the cerebrum) of the orca brain even surpasses the human brain in degree of convolutedness—a measure of surface area indicating the amount of information processing possible. The neocortex is involved in integrating information from the different senses to form mental representations of objects and thoughts and is also part of the cerebral cortex—the system that processes higher-order thinking and complex and abstract processes, such as language, self-awareness, metacognition (the ability to think about your own thoughts), social cognition, and theory of mind (the ability to think about and infer the thoughts of others).

The orca brain also contains spindle-shaped cells known as von Economo neurons in the same areas of the brain as humans. These spindle cells are found in the parts of the brain that are thought to be involved in high-level cognitive processing, such as social and emotional cognition, awareness, and intuition. This includes “feelings of empathy, guilt, embarrassment, and pain, as well as judgement [sic], social knowledge, and consciousness of visceral feelings.”

Finally, orca brains possess a highly developed paralimbic region, which is believed to be involved in processing and integrating emotional information with other thought processes. This suggests that the orca brain may have evolved certain kinds of sophisticated or complex functions and

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3 Lori Marino & Toni Frohoff, Toward a New Paradigm of Non-Captive Research on Cetacean Cognition, 6(9) PLOS ONE 3 (2011).
6 Camilla Butti et al., Total Number and Volume of Von Economo Neurons in the Cerebral Cortex of Cetaceans, 515 J. Comp. Neurology 243, 244 (2009).
7 Id.
8 Id. at 257 (citations omitted).
9 Marino, Neuroanatomy of the Killer Whale, supra.
thought processes related to emotion-processing that did not evolve in the human brain—or at least not to the same extent.

B. Lolita Is Deprived of Every Facet of Her Culture and the Ability to Engage in Natural Behaviors, Causing Extreme Stress, Torment, and Suffering

In accord with their complex intelligence and cognitive abilities, orcas are among the most highly social, far-ranging, communicative and culturally complex mammals on the planet. Orca populations are distinguishable by diet, morphology, dialect, social structure, genetics, and other behaviors. Their transmission of these group-specific vocal and physical behaviors from generation to generation in complex multicultural societies is recognized as a form of culture that is unique outside humans.

Seaquarium causes unnecessary suffering and torment by depriving Lolita of, among other things, adequate space, environmental enrichment, conspecific social interaction, and the opportunity to perform natural behaviors such as swimming long distances, diving, and foraging. This deprivation is physically and psychologically harmful to her, and causes her to display indicators of stress and trauma.

i. Seaquarium keeps Lolita in a grossly inadequate tank.

The barren tank in which Seaquarium confines Lolita provides her woefully inadequate space. Orcas are one of the fastest animals in the sea, traveling at speeds of up to nearly 28 miles per hour.\(^\text{10}\) They are also adapted for swimming extended distances and durations. Individual orcas have been recorded traveling up to 140 miles in a day\(^\text{11}\) and many thousands of miles over time.\(^\text{12}\) They regularly dive 200-300 meters (656-984 feet),\(^\text{13}\) and spend 95% of their time submerged.\(^\text{14}\) In the wild, orcas swim almost continuously.\(^\text{15}\)

According to a reference book for zoos, aquaria, and wildlife parks and a standard course textbook for zoo biology students, the design and construction of marine mammal habitats “should consider the natural history and behavior of the species to be maintained and should permit the performance of most, if not all, of their natural behaviors.”\(^\text{16}\) In addition, it “must meet the physical, psychological

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\(^{10}\) See, e.g., Terrie M. Williams, *Swimming*, in Encyclopedia of Marine Mammals 1140, 1145 (William F. Perrin et al. eds. 2008) (orcas swim at an average ‘casual’ speed of 8.05 mph and ‘sprint’ at up to 27.96 mph).


\(^{12}\) Id. (5,075 nautical miles in 42 days).

\(^{13}\) Craig O. Matkin et al., *Expanding Perspectives: Investigating Pod Specific Killer Whale Habitat with ARGOS Satellite Telemetry*, Presented at the Alaska Marine Science Symposium, Anchorage, Alaska (Jan. 2012) (orca for whom “regular dives of 200-300 m were recorded and one dive of 400 m was logged”); Robin W. Baird et al., *Factors Influencing The Diving Behaviour of Fish-Eating Killer Whales*, 83 Can. J. of Zoology 257, 262-63 (2005) (a population that uses “primarily near-surface waters” still dives “below 150 m on a regular basis” and up to 264 m).


and behavioral needs of the animals.”

Put simply, “Marine mammals need enough space to allow them to perform natural behaviors with freedom of movement.”

Lolita is twenty feet long and weighs approximately 8,000 pounds. At Seaquarium, she is confined to a tank that measures only eighty feet across at its widest point, allowing her to swim a maximum of sixty feet in a single direction. Her movement is further restricted by a solid concrete structure extending from the water’s surface to the floor, which she must swim around to access the rear portion of the tank. Lolita does not even have access to this back area of the tank at all times, as gates on either side of the platform are often closed, restricting her to only one side of the already historically small tank. Even with the gates open, Lolita would have to swim the circumference of her tank 1,672 times in a single day to approximate the distance she may have swam in that time in the wild before she was captured.

Lolita is also completely unable to dive, as her tank is only as deep as she is long: it measures twenty feet at its deepest point and, in many areas, is only twelve feet. In addition, the water levels in Lolita’s tank are frequently dropped several feet. She is forced to spend a majority of her life on, or just below, the surface of the water. These particularly harmful conditions are unique even within the captive marine mammal industry.

Small enclosures have been shown to induce stress in various species, and “[a]mong the carnivores, naturally wide-ranging species,” such as orcas, “show the most evidence of stress and/or psychological dysfunction in captivity.”

### ii. Seaquarium deprives Lolita of critical companionship.

Seaquarium utterly disregards the importance of orcas’ complex familial and sociological bonds. Long-term studies of wild orcas have shown that most populations live in stable social groups with strong and long-term associations and some individuals stay together for life. In resident orca populations of the Pacific Northwest—from which Lolita was taken—orcas live in “highly stable matrilineal pods averaging 12 animals” and “there is no known case of individuals changing pods.” In fact, these close relationships are so crucial that even adult offspring of a post-reproductive orca mother have been shown to have a significantly increased mortality risk in the year after their mother’s death.

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17 Id.
18 Id. at 183; see also Laurence Couquiaud, *Special Issue: Survey of Cetaceans in Captive Care*, 31(3) Aquatic Mammals 279, 327 (2005) (“Enclosures in which cetaceans are housed should be as naturalistic as possible, considering the fundamental needs of the animals before aesthetic considerations.”).
23 Rendell & Whitehead, *supra*, at 314 (citations omitted).
Orcas are also highly acoustic animals who use a range of signals for distinct purposes,\textsuperscript{25} including clicks for echolocation to navigate and detect environmental objects and prey,\textsuperscript{26} and whistles and pulsed calls for social communication.\textsuperscript{27} Orca pods have distinctive sets of discrete call types known as dialects that are passed down through vocal learning\textsuperscript{28}—i.e., the dialect is learned by calves through contact with their mothers and other pod members. Indeed, in the population from which Lolita was taken, family-specific call types dramatically increase in the days following a birth, which indicates that “discrete calls in orcas indeed function as family badges and suggests that the family may actively enhance vocal learning of a signal that is crucial for recognizing and maintaining contact with the family.”\textsuperscript{29}

In contrast to orcas’ social structure in nature, Lolita has been held without another orca since 1980, a circumstance that is unique within the captive marine mammal industry. No orca in history has ever been held without another member of their species for as long as Lolita.

Rather than providing appropriate companionship, Seaquarium confines Lolita with socially incompatible Pacific wife-sided dolphins who frequently aggressively gang up on her and “rake” her flesh by dragging their teeth across her body. Some of these rakes are so severe that they apparently required antibiotics to prevent infection. The dolphins also exhibit unnatural sexual behavior toward Lolita. She has learned to anticipate these behaviors and shows physical signs of stress when the dolphins approach. As a result of these behaviors, and apparently acknowledging their harm to Lolita, Seaquarium often separates the animals by confining Lolita to only one side of the tank.

The artificial groupings of captive marine mammals are, according to one expert, “a tremendous violation of the basic premise of the pod” and result in “constant stress.”\textsuperscript{30} Research has shown that social instability—such as changes in group dynamics, competition over resources, and unstable dominance hierarchies—is a major stressor that is believed to have even caused the deaths of several captive dolphins.\textsuperscript{31} Lolita is not only deprived of the stable, nurturing social family and pod structure that was so central to her life in the wild, but exposed to the additional harm of being confined with incompatible animals who stress and injure her.

Seaquarium’s disregard for orcas’ stable social structure also strips Lolita of the ability to develop and transmit dialects—their principal form of communication and a crucial component to their identity. Additionally, the tanks at Seaquarium likely cause Lolita’s use of any communicative abilities to be highly distressing. Dr. Hal Whitehead, an expert on cultural transmission in cetaceans, compares the experience of a “highly acoustic cetacean” such as an orca “living in a tank with acoustically reflective walls, to that of a visually oriented animal, like a human, living captive in a room covered with mirrors on all walls and the floor. The experience is likely to be profoundly


\textsuperscript{27} Id.

\textsuperscript{28} Rendell & Whitehead, supra, at 314 (citations omitted).


\textsuperscript{30} Mike Thomas, \textit{Tilikum’s Captivity May Be Problem, But He’s Important for Conservation}, Orlando Sentinel, Feb. 25, 2010 (quoting marine-mammal biologist Fred Felleman); Marino & Frohoff, supra, at 3.

\textsuperscript{31} Kelly A. Waples & Nicholas J. Gales, \textit{Evaluating and Minimizing Social Stress in the Care of Captive Bottlenose Dolphins (Tursiops aduncus)}, 21 Zoo Biology 5 (2002).
disturbing, especially over the long term.”\(^\text{32}\) Similarly, oceanographer Jean-Michel Cousteau compared the keeping of orcas in tanks to “a person being blindfolded in a jail cell.”\(^\text{33}\)

iii. Lolita is deprived of necessary shelter

Lolita lives in shallow water under the hot Florida sun, in conditions very different from her native Pacific Northwest. Nevertheless, the only shade over Lolita’s tank comes from the surrounding stadium seating, which does not extend over the water. Rather, the tank is completely exposed to the sun and provides no opportunity for Lolita to shield herself during the most intense heat of the day, when the sun is highest, hottest, and no shadows are cast in the tank. Further, since the tank’s maximum depth is only as deep as Lolita is long, and the water level is often dropped, Lolita cannot dive to seek shade. Lolita suffers from injuries that can be caused by overexposure to the sun, including blisters, wrinkles, cracked skin, burns, and an eye condition known as pterygium, and this exposure can also act as an immunosuppressant, exposing her to further harm. The Seaquarium’s daily use of eye drops and occasional steroid drops suggest that her eyes are in a constant state of irritation, and she has been documented on many occasions closing one or both eyes during shows. Yet her tank remains without adequate shade.

iv. The conditions of Lolita’s confinement cause her to sustain other physical and psychological injuries.

Female orcas from the population from which Lolita was taken can live up to ninety years. According to a foremost expert on the wild population, Lolita can live long beyond the average 50-year life expectancy of the population, which factors in juvenile mortality. However, continuing to keep Lolita in the conditions at Seaquarium will “reduce her likelihood of realizing her potential lifespan in the wild.” Indeed, Lolita already suffers from many chronic physical health problems. She is given a variety of medications on a more frequent basis than would be done for a healthy animal—virtually daily, indicating that she isn’t healthy, and all from ailments caused by her captivity. She appears to have been treated for recurrent respiratory infections, has decreased kidney function and has also been found to have excessive pathogens in her system.

As a result of inadequate conditions, captive orcas also often display behavioral indicators of severe stress and trauma. In 2005, a special edition of the journal Aquatic Mammals was published, featuring the results of a decade-long project by Laurence Couquiaud, a dolphin researcher with a degree in architectural design who has specialized in examining the design of captive facilities and husbandry. In the study, which made recommendations for the design of tanks and enclosures at captive facilities, Couquiaud observed that “some behaviours tend to occur when space is limited; the environment does not provide occupational activity; and when animals are kept alone, deprived of stimulus diversity, or are subject to environmental stress.”\(^\text{34}\) Another study on animal boredom acknowledged that “[s]tereotyped behavior patterns … tend to emerge when the animal cannot engage in behavior it is highly motivated to perform, such as searching or hunting for food, seeking social interaction, or just trying to escape.”\(^\text{35}\) Other research and history has shown that orcas’


\(^{33}\) Tyler Haden, Cousteau on SeaWorld Tragedy, The Independent (Feb. 27, 2010).

\(^{34}\) Couquiaud, supra at 297.

inability to carry out even the most rudimentary behaviors that they would in nature causes cause abnormal, repetitive behaviors.\textsuperscript{36}

As discussed above, wild orcas regularly spend 95\% of their time submerged and swim almost constantly. In contrast, Lolita floats listlessly and lies motionless near an inflow valve in her tank for substantial period of time. She exhibits other behaviors identified by experts as stereotypes including bobbing at the surface of the water, swimming in the same patterns repeatedly, and rubbing her body against the sides of her tank. She also exhibits significant wear in several teeth, which is uncommon in wild members of her population and could result from the stereotypic behavior of biting on her tank or its gates.\textsuperscript{37} Marine-mammal veterinarians recommend avoiding any deliberate cutting and drilling of the teeth to expose the pulp cavity, yet Seaquarium drilled into Lolita’s sensitive teeth more than a dozen times to address the damage, likely exposing nerve tissue and causing her considerable pain.

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The conditions of Lolita’s confinement at Seaquarium are physically and psychologically devastating, as demonstrated by her frequent displays of abnormal behaviors that are known to result from particularly damaging captive environments. These circumstances clearly cause Lolita excessive and repeated unnecessary suffering, to which he has been subjected by Seaquarium for nearly 50 years. Despite Lolita’s documented health concerns and stereotypic behavior, Seaquarium continues to have her perform daily when the amusement park is operational, including when she was not able to keep her eyes open or had recently undergone invasive procedures.

We request that your office investigate this matter thoroughly, with the assistance of orca experts unaffiliated with the captive orca entertainment industry, and bring appropriate cruelty charges. Again, we stand ready to assist your office in furtherance of its investigation.

Very truly yours,

Jared Goodman
Vice President and
Deputy General Counsel for Animal Law


\textsuperscript{37} See John Jett et al., \textit{Tooth Damage in Captive Orcas (Orcinus orca)}, 84 Archives of Oral Biology 151 (2017).