

RIP Sake, the sea lion 1987-2016

Sake, an extraordinary California sea lion, died serenely in my arms on June 23, 2016. At the age of 29, Sake outlived her oldest wild counterparts by at least 4 years, and her long and inspiring journey is now a legend in the animal world. It is my hope to share her story so that the final force of her life will spread as wide and as far as it can reach, that the last ripples of her story will uplift each of you with joy and awe, as she has done for me all these years. Her story must certainly stand contrary to the simple-minded swell of anti-zoo rhetoric that currently confuses the most well-intentioned animal lover. Sake worked free in the open ocean, she worked free in all her care, and her life mattered to science and to the public in general. Sake could not have survived on her own in the wild, and yet she led an almost Forest-Gump-like life. I am blessed to say I got to go along for the ride.

Sake's early life began as a stranded sea lion pup during an El Nino event in 1988. After her rescue and rehabilitation at a stranding center she was transferred to the University of California, San Diego Scripps Institute of Oceanography to the laboratory of world-renowned marine mammal scientist, Dr. Gerald Kooyman. This resulted in the first of many revealing insights into the physiology of sea lions (Williams et al. 1991), which helped to shape the careers of marine biologists and the science that followed.

When I finally met Sake, Dr. Kooyman had transferred her to one of his distinguished students (and my future mentor), Dr. Daniel Costa, at Long Marine Laboratory at the University of California at Santa Cruz. She was a feisty little thing who learned quickly and seemed different from the 30 or so other seals and sea lions I had so far worked with in my young career (nine years) in 1989. In those days, Sake and I were free to try lots of new behaviors and experiences - it was still a year or two from the research project Dr. Costa intended her to participate in. She was smart and eager, and we formed the communication matrix that would last a lifetime. I can remember back in those days sleeping overnight with her and having her slowly creep in closer and closer to me as the night grew colder. My lasting memory was what restless bedfellows sea lions make, as Sake's seemingly constant fidgeting kept me awake all night long, but in hindsight it was a very special beginning of our connection.



In her younger years, she learned to participate in my PhD thesis research, wearing harnesses and heart rate monitoring equipment and learning to dive on cue in various surface/dive pattern intervals and for durations up to 5 minutes. Sake amazed others in the marine mammal field by willingly stationing in a respiration chamber for up to one hour while freely able to leave at any time. Thanks to Sake and several other animals, we came to understand how profoundly flexible the metabolic rate of the sea lion was and how this helped them adapt to the challenges of living as a mammal in the ocean (Hurley and Costa 2001). During this time she helped several other researchers determine the specific gravity of a sea lion (Williams) and the turning acceleration and general swimming mechanics of sea lions (Fish et al. 2003), just to mention a few.

When this research was complete, Sake and I were fortunate enough to encounter a visionary and exceptional scientist, Dr. Jim Harvey (who eventually became the director of Moss Landing Marine Laboratories at California State University, where Sake eventually lived out the rest of her days with me in my facility). Dr. Harvey was a whale scientist, who, after struggling for years to get adequate underwater data on the lives of whales, came up with the curious idea that perhaps a sea lion might make a better witness of it (Harvey et al. 2001). And so began an odyssey of work with Sake released and free swimming in the open ocean, wearing video cameras and filming the underwater world and the creatures within. Unsurprisingly, this idea tickled the fancy of the press and the public and what ensued was a blizzard of media and attention. Sake was featured in two National Geographic documentaries, a report on Dateline, NBC, the cover of the Science section of the NY Times, several BBC programs and dozens if not hundreds of other reports. By the time Peter Benchley, having read about us in the New York Times, fictionally immortalized the story in his best-selling book *White Shark*, which was eventually made into a mini-series called *Creature*, I was sick of fame. Sake, however, took it all in stride, and truthfully seemed to truly relish the cameras.... she loved the attention!



Eventually, Sake was chosen by the United States Information Agency as the official mascot for the U.S. Pavilion at the World's Fair in Portugal in 1998. The theme of that year's World Fair was "Oceans" and Sake's amazing story was told in video and signage, leading millions of visitors through our pavilion's highlights of American excellence in the ocean world. In preparation, Dr. Sylvia Earle came to film welcome greetings with Sake, and Sake's photo was featured on cornflakes boxes all over Europe.



Though the whale project ran out of funding and interest before it could produce much more than a concept, Sake and her friends were really the first creatures in what became a very prolific industry of "Crittercams" (which, thankfully, technology eventually improved enough to make much easier).

But Sake's career in the ocean did not end there, she worked at sea in a comparison study with some of the best human free divers in the world: Pierre Frolla and Loic Leferme. This study compared the heart rate of the similarly-sized human/sea lion divers. My lasting memory of that experience was about how much the mind controlled the humans and their abilities. They required long peaceful minutes at the surface, centering themselves before every dive. Sake could not understand what was taking so long. Why all the waiting? In boredom, she would routinely find gifts for me from the bottom of the ocean and bring them back in order, it seemed, to inspire activity and a change of pace. Earlier, I had at one time responded in delight when she brought up a Chiton shell from the sea floor. This evolved to bringing back gifts whenever she felt bored or wanted attention, or sometimes, I think, she did it just to be helpful. She would often watch us struggling to retrieve an object from the bottom of her pool and simply grab it and deliver it to us, helpfully. Her favorite gift was sand dollars, who lived in beds of thousands, right along our shoreline. On video once, we watched as she engaged in this behavior, swimming down to the bed, her head turning side to side as if she was trying to choose just the right sand dollar from hundreds, then suddenly she would strike, and before you knew it, she was at the surface. The delight on my face with her offering was clear on the video and most likely how the behavior was rewarded and perpetuated. I did feel bad sometimes for those poor sand dollars, but what a thoughtful present!



Although cooperative research was always a part of her life, (even in recent times her contributions to science continued, whether it was in helping to understand the growth patterns of sea lion whiskers (McHuron et al 2016, in press) or the effects of prey encounter rates on foraging strategies (Norell et al 2016, in press)), my life with Sake eventually became more focused on education than science, since soft money available for research became too inconsistent to reliably purchase fish.

I can remember years when my parents and grandparents helped to cover the basic cost of keeping sea lions alive - fish and veterinary care - since I was determined to hold onto Sake, care for her, and maintain her happiness at all costs. It was out of this desperation that a program and hundreds of careers were born. This was the reason I founded SLEWTHS: Science Learning and Exploration With the Help of Sea lions. It could really have been called "Science Learning and Exploration With the Help of Sake", not to take anything away from the several other wonderful animals and many people that also contributed significantly, but if it wasn't for Sake, I think I can say that I wouldn't have bothered.

SLEWTHS (and later, Animal Training and Research International) was a program founded to show people who wanted to work with animals, how to do so with compassion, communication, and above all, to live a life of service and dedication. Through the Sea Lion Stewards program, Sake taught thousands of school children to clean up beaches and cherish the ocean world. Through our public outreach she got to see the western US, always traveling in style like a superstar, arriving to a 3600 sq ft, two-tank salt-water facility, to greet her adoring fans and inspire them to care for the planet and learn about her world. Sake was a special guest on the Tonight show with Jay Leno, she was featured on the Discovery Channel's shark week, and she swam with world famous ocean swimmer, Lynne Cox.



Sake's picture is on the cover of Animal Training 101 (my book) and her gentle intelligent nature helped to establish the careers of so many prominent members of the animal community, including the current president of the International Marine Animal Trainers Association.

Through it all, Sake crossed the most unbelievable boundaries. Like an Olympic athlete of partnership and trust between human and animal, her triumphs helped to prove to others the level of what could be accomplished as a team. As far back as 1990, IMATA presentations about her cooperation in voluntary blood sampling, stomach entubation and anesthesia opened the doors to the world of possibility of what can be accomplished with trust and consent. Today, these ideas are all over the industry, back then it was revolutionary.

Over the course of her life, Sake stood calmly and without restraint to have her gums injected 19 times with lidocaine in order to remove a rotten tooth without the harmful risks of anesthesia. On another occasion she allowed 15 stitches to be placed to sew up a torn flipper, while she patiently and trustingly waited, unrestrained and free to leave at any moment. When it was time to remove the painful cataracts that had developed in her aged eyes, she traveled voluntarily an hour by car, and placed herself on cue into an anesthetic mask and breathed calmly for 4 mins of induction before falling asleep, then waking up with what would be much improved vision, but a painful post-operative eye. And yet she eagerly repeated the entire process in full knowledge of the outcome, only a few years later, for the other eye. Like the saying goes "Fool me once, shame on you, fool me twice shame on me." Sake was no fool. I believe that Sake knew and understood exactly what the probable and painful eye surgery would entail (it took over 6 weeks to recover the first time), and yet she willingly and even eagerly cooperated fully in the second procedure. Why would this be? A consistent lifetime of partnership and trust. A lifetime without force, but with positive reinforcement and elaborate and careful communication. This was the foundation that was born from a life of ethical and steadfast treatment, thanks to revolutionary veterinary care from her friend, Dr. Casper and the freedom that comes from not having to compromise the quality of care, over some other objective.



For me, Sake was the single greatest good fortune of my life, and I am overjoyed that the adventure lasted for as long as it did. Twenty-seven years is a long time to know anyone, and in that time Sake accomplished more than most of us would dream was possible. She was my

most steadfast friend, my greatest teacher, and the best partner I will ever know. She made my dreams come true and she fulfilled my deepest childhood wish to be able to truly "talk" to animals.

For as long as I can remember as a child I harbored that secret fantasy (initially I imagined a cat with a magic collar that allowed it to talk....). Eventually, my relationship with Sake was the kind that inspired others to work with animals differently, to believe in the magical connection that is possible to develop with a constant and lifelong investment in kindness, connection, communication, and above all: consent. This was the relationship that everyone who loves animals truly wants to have and we got to live it and show others how to turn that fantasy into reality. When Sake and I were together, it would appear as though she understood what I was saying, even very nuanced and abstract ideas seemed to somehow be interpreted and understood at some level by her, or at least, it was clear she was working very actively to understand and reflect on my communication with her. It was as close to being Dr. Doolittle as anyone can get, and while I know it wasn't magic, and while I know it wasn't mind-reading, it felt just as good as if it was.

Clearly, the biography of Sake's life would have to be considered exceptional by any standard, human or animal. In the end, I am overwhelmed to really sit and recognize who she was and what she got to see and do, how many she touched and just how amazing it all was.

You might certainly think it was I who trained her, I who accepted the challenges and studies we undertook, and I who chose the path that led us down this trail; and yet as I look back, I know with certainty that it was her unique qualities that somehow made it all possible. I have known many animals (humans included), but she was truly a special creature, without whom my life, indeed the lives of many of my closest friends, and even an entire industry, would never have been the same.

So long, my dear, dear girl, everything I needed to know about life, I learned with you.