

TRACES OF THE ANIMAL PAST: METHODOLOGICAL CHALLENGES IN ANIMAL HISTORY

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Tuffy's Cold War: Science, Memory, and the US Navy's Dolphin

Jason M. Colby

The news reports appeared in August 1965. A US Navy-trained bottle-nose dolphin named Tuffy would be assisting American aquanauts aboard Sealab II, an underwater habitat stationed off La Jolla, California. Navy spokesmen explained that the young animal would deliver messages to the station as well as possibly protect divers from shark attacks. Appearing amid the surging popularity of marine parks and the *Flipper* television series (1964–1967), the story captured broad public interest, and when the operation launched the following month, newspapers closely followed Tuffy's involvement. Yet it was just one part of the young dolphin's journey. Captured off Gulfport, Mississippi, in 1962, he had spent two years performing at a waterfront marine park in Santa Monica before being moved to the US Naval Missile Center at Point Mugu, California. There, he became one of the first non-human inductees into the US Navy Marine Mammal Program. Trained by his Navy handlers, he made cutting-edge research in diving physiology possible, helped the Navy develop a new deep-sea ordnance recovery program, and became the first cetacean in history to perform tasks on command in open water—leading to his assignment to Sealab II.

But what did Tuffy make of all this? Captured at a young age and torn from his environment and social connections, he found himself confined to small tanks with strange dolphins, swimming in unfamiliar waters, and placed in dangerous situations in order to fit the research and operational needs of the US Navy. He nearly drowned in his sea pen during a storm off the California coast, became the first cetacean to fly aboard a helicopter, and briefly escaped captivity only to return to his handlers. In the end, Tuffy died understanding neither the Cold War politics that had conscripted him nor the impact of his life on human science and culture. Yet in the memories of the people who knew him best, Tuffy was an eager and essential contributor to the early work of the Navy Marine Mammal Program, which continues to this day.

This chapter grapples with the challenge of finding Tuffy in the archive. The attempt to know any individual non-human animal—particularly a dead one—can seem like an exercise in scholarly hubris. Yet as Nigel Rothfels shows in his exploration of the captive elephant Tusko (Chapter 10), the biography of one celebrity animal, however contested the facts and interpretation, can tell us much about shifting human relations with a species or group of species. In Tuffy's case, sources are abundant, but the record is entirely human, consisting of veterinary notes, scientific papers, grainy videos, and hazy memories. This is a problem. Despite countercultural dreams of inter-species communication, and the confident claims of his Navy handlers, we can't know what Tuffy thought and felt. To be sure, we can examine his recorded interactions with people and draw tentative conclusions, but here, too, perils present themselves. Both oral history and the written record contain vexing silences, particularly when dealing with a subject as politically charged as the military use of marine mammals. Interviewees have hidden motives and varied understandings of consent and captivity. And memory is a fickle thing. In the case of the Marine Mammal Program, the legacy of military science and secrecy competes with the very human reflections and emotions that captive encounters evoke. It is here, at the nexus of human culture, animal agency, and Cold War science, that we search for Tuffy.

Dreams of befriending dolphins have deep roots. Writing in the first century CE, the Roman naturalist Pliny the Elder asserted that the dolphin “does not dread man, as though a stranger to him, but comes to

meet ships, leaps and bounds to and fro,” and he cited stories of dolphins carrying drowning children to safety.¹ In later centuries, although many European and North American fishers viewed various species of dolphins as pests—“herring hogs”—some dreamed of using them to herd fish, and naturalists and casual observers alike were transfixed by the graceful movement of dolphins through water. In the early decades of the twentieth century, most marine mammal research dealt with dead specimens. This included animals killed in the Cape Hatteras bottlenose dolphin fishery, which extracted oil from their heads for use in precision timepieces. Beginning in the 1930s, however, scientists had the opportunity to observe dolphins alive in captivity, particularly at Marineland in St. Augustine, Florida.² In the process, some researchers began to suspect, like fishers before them, that dolphins use sound to navigate brackish coastal waters—an ability that might offer insight for human efforts to develop systems of “sound navigation and ranging”—or sonar—during World War II.

With the coming of the Cold War, these prospects became even more compelling. In response to the rapid expansion of the Soviet submarine fleet, the new Office of Naval Research channelled funds into oceanographic studies, some of which looked to marine mammals for innovation and inspiration.³ One area of focus was hydrodynamics. Scientists had long noted that dolphins appeared to move through water with greater ease than their muscle mass should allow, and some theorized that the study of their bodies could lead to more efficient torpedoes and submarines. Among the earliest to explore this possibility was Max Kramer, a former Nazi engineer brought to the United States after World War II. Funded by the US Navy, he began studying dolphin anatomy in the late 1940s and later invented a synthetic material modelled on dolphin skin. Other researchers examined the shape of dolphin bodies to improve submarine design.⁴

The second area of emphasis was marine acoustics. With the growth of the Soviet fleet, the Navy was keen to develop its capacity for active sonar, and some officials believed dolphins held the key. In 1959, researchers at Marineland of the Pacific in California proved conclusively that bottlenose dolphins use biosonar to echolocate.⁵ Meanwhile, a neuroscientist named John Lilly had received funding from the Navy and NASA to build an experimental laboratory for captive dolphins on Saint Thomas in the

US Virgin Islands. In 1961, he published his initial findings in *Man and Dolphin*, which predicted that communication between dolphins and humans would soon become possible. In doing so, he speculated on how cetaceans might view human politics. “If dolphins come to understand our cold war and similar quarrels between large segments of the human race, we don’t know how they will proceed to operate,” Lilly mused. “They may all be pacifists; on the other hand, they may be highly military types.” At the very least, Lilly believed cetaceans “might help in rescuing survivors of plane crashes and shipwrecks. They might search for survivors, protect them from sharks, provide them with food.” But he also suggested military applications for dolphins, including surveillance, deep sea retrieval, and even tactical Naval operations.⁶

Amid rising Cold War tensions, these suggestions piqued the interest of William B. McLean, head of the Naval Ordnance Test Station at China Lake, California. Having invented the heat-seeking Sidewinder missile in his garage, McLean embraced innovation, and he hoped dolphins might help Navy engineers design faster and quieter torpedoes. In 1960, his team acquired a female Pacific white-sided dolphin named Knotty and began studies of her locomotion at the Convair Laboratory in Southern California. Soon after, Bill Evans, an acoustic engineer at Lockheed, used the cadaver of a spinner dolphin to assess the directional capabilities of its biosonar.⁷

In the fall of 1962, just after the Cuban Missile Crisis, the Navy opened a cetacean research facility at the Naval Missile Center at Point Mugu, California. Among its first hires was Sam Ridgway, a twenty-six-year-old veterinarian from South Texas who had previously cared for dogs in the Air Force and had never before seen a dolphin. Inspired by the engineers and scientists he met, some of whom believed marine mammals could help Americans colonize the seafloor, Ridgway took charge of medical care for the Navy’s growing assortment of marine mammals.⁸ Initially, the program’s cetaceans consisted only of Pacific white-sided dolphins, but Ridgway and his assistants struggled to keep the species alive in captivity, owing particularly to water quality problems at the Point Mugu facility. Taking their cue from the marine park industry, Navy officials soon turned to bottlenose dolphins, which seemed to thrive in captivity.⁹ And as luck would have it, they were about to acquire a star.



Fig. 9.1 “Tuf Guy” arrives at Point Mugu, May 1964. Courtesy of the US National Archives.

In March 1964, Pacific Ocean Park on the Santa Monica pier closed, prompting two of the facility’s trainers—Wally Ross and Morris Wintermantel—to accept jobs with the Navy Marine Mammal Program. They brought with them an adult male bottlenose dolphin whom park staffers had dubbed “Tuf Guy,” owing to what they perceived as his belligerent attitude toward humans. At seven feet long and two hundred and seventy pounds, “Tuf Guy” was a bit of a runt, and his time in captivity had not been kind to him. As Ridgway observed, the “emaciated” dolphin had “lost so much weight that the transverse spines of vertebrae appeared as bumps protruding in a row on either side of his body.” Equally troubling, his skin was crisscrossed with scratches and scars made by the teeth of his fellow dolphins in the marine park tank. Over the following weeks, Ridgway and other staffers nursed him back to health, but the young dolphin—increasingly referred to as “Tuffy”—didn’t seem happy in his new

home. Despite the presence of the familiar Ross and Wintermantel, he avoided human contact and chased away anyone who attempted to enter the water with him. “When he was not hungry,” Ridgway noted, “the dolphin kept his distance, eyeing people suspiciously from the center of the pool.”¹⁰

Speaking to me more than fifty years later, Ridgway reiterated this first impression of Tuffy’s personality. “He was a very pugnacious animal,” Ridgway recalled. “Unlike the average dolphin, which is very docile and quiet, this guy didn’t take anything from people.”

“Sort of an alpha male?” I asked.

“No, more of a feisty little guy,” responded Ridgway. “He was very small. He just didn’t want to be picked on.”¹¹

In fact, the young dolphin was almost surely traumatized by the experience of capture, transportation, captivity, and now an unfamiliar home with new schedules and demands. “Unlike most bottlenose dolphins, he was irascible and even downright dangerous,” wrote program director Forrest Wood. “When upset about anything—and it didn’t take much—he would bite or butt.”¹² Soon trainers were refusing to work with him, and Wood feared the dolphin would be of little use to the Navy. Then Tuffy made a friend.

In the early summer of 1964, Ridgway hired a young biology student named Deborah Duffield as his research assistant. Although her primary task was assisting Ridgway in his laboratory, she repeatedly asked to spend time with Tuffy outside her work hours. The all-male crew of trainers was skeptical, warning Duffield to stay clear of Tuffy, but she was determined to make a connection. Over the next three weeks, she hand-fed the wary dolphin and patiently conditioned him to her presence in his pool, even coaxing him to accept her touch. There were hitches along the way. On one occasion, a zipper on her wetsuit caught Tuffy’s fin. He immediately turned and bit Duffield’s hand, leaving eleven puncture wounds. Nevertheless, the tenacious student continued to work with Tuffy, training him to retrieve objects at the bottom of his pool and even swim blindfolded through rings upon command. This critical interlude in Tuffy’s life was captured in the short publicity film *The Dolphins That Joined the Navy* (1964), narrated by actor Glenn Ford. Among other things, the film shows Duffield running Tuffy through swimming drills in his pool. “Quick as a flash, he is off, and

speeding through the hoops with unerring accuracy,” intones Ford. “Tuff Guy is also trained to retrieve this weighted disk from the bottom of the pool. He pounces upon it and returns it with his usual self-assurance.”¹³

Today, Dr. Deborah Duffield is a distinguished marine mammalogist. She runs the Marine Mammal Laboratory at Portland State University and is the director of the Marine Mammal Stranding Network for the National Oceanic and Atmospheric Administration for the Pacific Coast. Jars and instruments fill her massive lab, and when I visited in February 2018, she had just finished dissecting a sea lion in an adjoining abattoir. It had been more than half a century since she worked with Tuffy at Point Mugu, but the experience had clearly left an impression. Photographs and memorabilia of the feisty dolphin adorned the walls as she reflected on her connection to him.

“Tuffy came along so fast,” she recalled.

“What explains that—his progress with you?” I asked.

“Well, the one thing that made a difference in my ability to train him versus what they were doing with the other animals was that . . . I really thought that you needed the training time, but then you’d have a free period when the animal decides what to do, not you just ordering the animal. I did that with Tuffy, and it made a huge difference.”

“In your relationship with him?”

“Oh, totally,” she explained. “There would be times when we had a schedule and other times when I would be standing in the pool. And if there was something he wanted to do, we’d do it. That really altered how we worked our way through what we were doing. Within a very short period of time, he was wearing a harness and working easily with us.”

“So your work with him made him more cooperative for the program?”

“Well, not just that,” she reflected. “He was a unique, individual animal. He was curious, and he didn’t like to do that same thing over and over. He was engaged.”¹⁴

When summer ended, Duffield returned to university. But her success with Tuffy convinced Ridgway that the spirited dolphin might be trained to perform dive work in open water. Late that autumn, trainers moved Tuffy from his tank to a small sea pen. He was still in the new enclosure weeks later when Duffield returned to Point Mugu for a visit during her winter break. Eager to see Tuffy, she pulled on her wetsuit and climbed into



Fig. 9.2 Tuffy takes fish from a Navy trainer, 1965. Courtesy of the US National Archives.

his old pool. To her disappointment, however, the dolphin in the murky water kept its distance. Meanwhile, she could see another dolphin in a floating pen out in the lagoon. “The dolphin in that pen was jumping and landing on its side, splashing water high into the air,” recalled Ridgway. “She could hear the animal snort and slap its tail repeatedly against the surface of the water in its excitement.” It was only after a trainer informed Duffield that the agitated animal in the distant pen was, in fact, Tuffy that she realized her error and rushed to see him. “It was hard to tell who was more excited,” joked one of the trainers, “the girl or the porpoise.”¹⁵

In February 1965, Tuffy began his open water work. At first, trainers rigged up a leash with Wally Ross holding one end from a skiff. Soon after, they began allowing him to swim freely alongside the boat. “We simply stopped using this last vestige of our physical power over the dolphin,” Ridgway later wrote, speculating that “some less-tangible bonds held Tuffy.”¹⁶

After moving the dolphin's pen into deeper water, about two hundred metres from shore, staffers began trials that attempted to assess his maximum diving depth. At the time, most researchers assumed dolphins dove no more than about seventy metres, but they hoped to push Tuffy deeper. The following month, the *San Diego Union* published a feature on the Navy program, emphasizing Tuffy's willingness to follow a boat and dive on command. When asked about the purpose of the research, base commander Captain Carl O. Homquist explained, "it is part of the Navy's business to know about anything that goes on in the ocean, and to make use of any possible means to achieve its military missions." As reporter Bryant Evans noted, this included plans to develop "a hand-held sonar that works on the porpoise system."¹⁷ Just days later, the program had a scare when heavy seas hit Point Mugu. Unable to approach Tuffy's pen by boat, Ridgway convinced the base commander to allow him to use a helicopter to drop fish to the hungry dolphin. Although the manoeuvre worked, Ridgway fretted that the pen would break apart, entangling Tuffy in his containment net. Even if the pen remained intact, the high waves made it difficult for the dolphin to manoeuvre and surface to breathe. When the storm finally passed, Ridgway and several trainers sped out to the pen. To their relief, they found a hungry, but uninjured, Tuffy.

In the summer of 1965, Tuffy began training for Sealab II. Although his primary task consisted of carrying messages to and from the station, some handlers also envisioned him protecting the divers from sharks. As the *Los Angeles Times* informed readers, "a pugnacious porpoise named Tuffy will get a chance soon to play bodyguard, shark-fighter and rescuer for divers in the Navy's underwater hut, Sealab II." In the process, the paper offered a partly fictionalized biography of Tuffy. "Now about 10 years old, the shark-scarred Tuffy was captured in the Atlantic three years ago and spent two years in oceanariums. Brought here in April 1964, he frequently attacked trainers and earned the nickname Tuf Guy." For their part, Navy handlers were confident in Tuffy's ability to complete his tasks. "He's so well-trained he can come down, tap a lost diver on the shoulder, and hand him a life line," observed one Navy torpedoman.¹⁸

In late August 1965, Sealab II was lowered seventy metres to the sea-floor off La Jolla. Its crew consisted of three teams of aquanauts, each of which would rotate there for twelve days. In command was former

astronaut Scott Carpenter, who would remain in the habitat for the full forty-five days.¹⁹ Tuffy's work began with the second team, which descended to Sealab II on 12 September 1965. On the following day, Tuffy flew from Point Mugu to Mission Bay in San Diego aboard a Navy helicopter. From there, a boat delivered him to his sea pen near Sealab II. In his first attempt, Tuffy descended only part of the way to Sealab II. In his second, he approached the facility but failed to deliver his package of mail. As one reporter noted, "aquanaut John Reaves, who was about 50 feet from the lab, clicked his photographic strobe light, and Tuffy swam to him, but wouldn't approach close enough for his load to be unhitched." Worried trainers struggled to explain the dolphin's reluctance. "Porpoises are afraid of being trapped under water because they'll drown if they don't surface within five minutes," noted a nervous Navy spokesman. "Apparently Tuffy thought the wires and cables were some kind of a net."²⁰

The following day, things turned around. Tuffy made two successful deliveries in rapid succession and then consistently completed his tasks over the following nine days.²¹ On the tenth day, however, the divers stopped rewarding him with fish, and he immediately balked at trainers' commands.²² In all, Tuffy made seven successful trips to Sealab II. "Aquanauts crowded about the portholes of their 12-by-58-foot capsule home 205 feet below the surface to wave goodbye as Tuffy made his final dive," noted one reporter. "In recognition of his nearly flawless service, Tuffy was made an honorary member of the Sealab crew."²³

Tuffy's exploits hardly passed unnoticed. The following month, Navy officials asked program director Forrest Wood if the dolphin could assist in the recovery of Regulus II missile cradles, which often splashed down in water too deep for Navy divers to reach. With each cradle worth \$4,700, officials hoped Tuffy might be able to locate the items at open sea if acoustic buzzers were attached. Once again, he succeeded, gaining notice from the *Los Angeles Times*. Noting the "famed" animal's role in Sealab II the previous summer, the newspaper explained that "with unerring accuracy the dolphin led a squad of Navy frogmen to the buzzing cradle, resting in 50 feet of water." According to the newspaper, thrilled Navy officials were already making plans to train another dolphin—Buzz Buzz—"to assist Tuffy in future recoveries."²⁴ Soon after, Tuffy enabled the recovery of a rocket-launched depth charge off San Nicolas.²⁵ So useful had the dolphin



Fig. 9.3 Tuffy breaching in open water near Point Mugu, 1966. Courtesy of the US National Archives.

become that general panic ensued at Point Mugu in July 1966 when Tuffy and another Navy dolphin vanished from their sea pen, apparently released by recreational boaters. A day later, after an intensive search, trainers located Tuffy fifty kilometres up the coast, off Carpinteria.²⁶

Over the following two years, Tuffy remained the centrepiece of the Navy Marine Mammal Program. In spring 1967, staffers began studies for the potential use of marine mammals for harbour defence, particularly in the interdiction of enemy divers. In May 1967, the Navy flew Tuffy to the Mine Defense Laboratory at Panama City, Florida, where he joined two other bottlenose dolphins, two sea lions, and a harbour seal. For six weeks, the animals ran harbour defence drills. Upon his return to Point Mugu, Tuffy was the main subject in a deep diving study. By 1968, trainers had conditioned him to descend to prescribed depths and exhale into an underwater funnel, enabling Ridgway and others to complete some of the first scientific analyses of cetacean diving physiology.²⁷ Such trials were

especially important as the Navy hoped to use Tuffy for the upcoming Sealab III expedition, which would be placed three times deeper than its predecessor. In June 1968, he made his deepest recorded dive—more than two hundred metres—deep enough to reach Sealab III. Although funding shortages scuttled the project, his Navy handlers had big plans for Tuffy, and in their eyes, much of his usefulness stemmed from the pugnacity they had once considered an impediment. As Wood reflected:

We had known that there is great individual variation in temperament and trainability, but it was now forcefully brought home to us that for future open-sea work some technique for selecting likely candidates was desirable. It was interesting that the ‘feisty’ animals, of which Tuffy was a prime example, seemed to be smarter and more reliable than the ones of placid temperament.²⁸

But the program’s time with their star subject was running out. In the spring of 1970, trainers noticed an oozing wound on Tuffy’s underside. Ridgway immediately treated it and administered antibiotics, but the infection spread quickly, paralyzing the dolphin’s lower half. “Tonight, as I watched Tuffy drift around his pool, I was heartsick,” Ridgway later wrote. When the dolphin died shortly after, the young veterinarian was despondent. “All of us who had worked with him grieved for the loss of his marvelously complex life,” he reflected. “For me it was not so much that I had lost a valuable research animal. . . . Far more important was that I had lost a beloved friend who had helped me to learn more about my world and his.”²⁹

Later that year, Ridgway took a temporary leave from the program, accepting a fellowship to pursue doctoral studies at Cambridge University. Meanwhile, Tuffy’s legacy lived on. That same autumn of 1970, the Navy deployed trained dolphins to South Vietnam. Dubbed Project Short Time, their mission was to protect the military depot at Cam Ranh Bay from Vietnamese sappers who might approach by water and attempt to plant explosives.³⁰ By that time, the Marine Mammal Program had become classified, and few in the public seemed to remember the Navy dolphin who had once garnered headlines. And over the following decades, as the

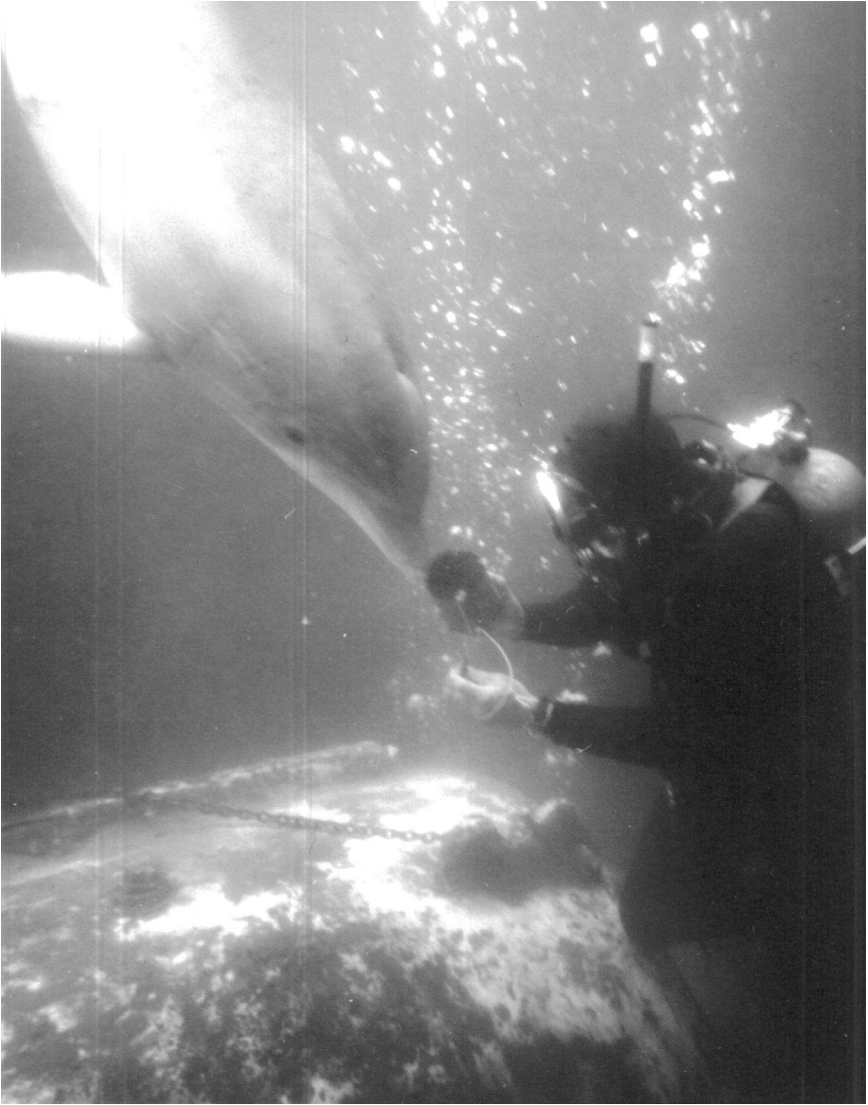


Fig. 9.4 Tuffy assists Navy diver, 1969. Courtesy of the US National Archives.

politics surrounding marine mammal captivity shifted, those who knew him best revised their thoughts about his life and legacy.

In early 2016, forty-six years after Tuffy's death, I set out to convince Sam Ridgway to sit for an interview with me. It wasn't an easy task. The release of the documentary *Blackfish* (2013) had altered the political landscape, and those involved in marine mammal captivity were leery of public attention. Although SeaWorld had taken most of the heat, some activists had the Navy Marine Mammal Program in their sights. In May 2014, author Philip Hoare had published an op-ed in the *New York Times* calling for an end to the Marine Mammal Program. Ridgway had responded with a letter to the editor defending the program. "We do not take dolphins from the wild," he asserted, adding that "our animals seem happy to reproduce. They work with us in the open sea, where they could easily swim away. To me they seem happy and enthusiastic. They like their jobs."³¹

It was surprisingly unscientific language for the distinguished researcher—"to me," "happy," "enthusiastic." Clearly, the criticism had touched an emotional nerve in Ridgway's own understanding of the program—one which I hoped to explore, if I could find him. He was listed as director of the Marine Mammal Foundation—but what and where was that? When I tracked its location using Google Earth, I came to an empty office in an isolated San Diego marina staffed by a lone, suspicious secretary. It was likely only the presence of my young sons with me that convinced her to answer the door when I knocked.

"Hi there," I smiled. "Is this the Marine Mammal Foundation?"

"Who are you, and why do you want to know?" she asked, barely cracking the door. I explained that I was a historian looking for Dr. Ridgway, and passed my contact information to her on scrap paper. I assumed it would go directly into the bin. But much to my surprise, Ridgway phoned me a few weeks later, and soon after we sat down at a San Diego restaurant. I had a lot of questions.

"You dedicated your widely used 1972 textbook, *Mammals of the Sea*, to Tuffy, and I wanted to ask why. What did Tuffy mean to you?"

"He worked with us in the open ocean," responded Ridgway. "He allowed us to determine that they could dive to a thousand feet, which was a good demonstration for the Navy."

"Because nobody thought they could dive that deep?"

“That’s right. And he would stay with us in the open ocean. He could swim with us and he would work on command in the open ocean.”³²

From where Ridgway sat, it was a logical, if subdued, response. It was just three years since *Blackfish*, and the Navy program was under heavy scrutiny. On the surface, it also seemed in character. In recent years, Ridgway had publicly scoffed at the sentimental assertions of animal rights activists and their demands for the release of captive cetaceans, implicitly contrasting such emotionalism with the presumed objectivity of science. Yet Ridgway’s time with Tuffy had clearly affected him in profound ways, as his 1987 memoir, *Dolphin Doctor*, makes clear. “When Tuffy died, I grieved almost as much as if he had been a beloved family member,” he had then written, describing the book itself as “an encomium—an unabashed story of praise—about one special dolphin whom I still regard as my friend from the sea.”³³

In our interview, Ridgway wasn’t willing to explore such emotional depths. He reiterated that Tuffy had been useful to the Navy and his research, but he had little time for the anthropomorphizing that he believed drove his critics. Yet once again, his earlier memoir told a different story. “As time passed I began to realize that in my musings about Tuffy, I often assumed that some intellectual process akin to human thought churned inside his gray head,” he had written:

Of course, I may have been guilty of allowing my emotions about the animal to cloud my perception and credit the animal with humanlike characteristics. Yet this anthropomorphic attitude is difficult to avoid when we observe and work with animals that we come to know as friends. . . . Based on my scientific knowledge and my intuition about dolphins, I could not help believing that some form of silent thought ticked behind Tuffy’s large, alert eyes as he stared back at me from his world.³⁴

What accounts for this change? Had Ridgway’s identity as a scientist prompted him to re-evaluate the dolphin’s meaning to him since the writing of his memoir? Had the passage of time and debate over captivity caused him to repress his emotional response to Tuffy? Or was he simply unwilling to open himself up to a researcher whom he barely knew?

In the end, such questions are likely unanswerable. But they left me with a conundrum familiar to oral historians, and particularly vexing in animal history, when non-human experiences are invariably mediated through human perception and memory. “Remember,” another interviewee had once cautioned me when describing his encounters with orcas, “I’m not remembering events and feelings as they happened. I’m remembering my memories.”³⁵ That warning seemed particularly pertinent for my approach to Ridgway. How could I navigate the maze of human memory and emotion at the heart of Tuffy’s story? What was my most reliable source: Ridgway’s published research? His written account, crafted somewhat apart from his identity as a scientist? His responses to me now, mediated by time, controversy, and caution? Duffield’s memories? And could any of them get me closer to Tuffy’s lived experience as a Navy dolphin?

Perhaps not. But what was undeniable was the impact of this singular dolphin on the people he encountered as well as his larger impact on human science and culture. Pulled at random from the waters of Mississippi in 1962, at the height of the Cold War, Tuffy had survived travel across the country, captivity on the Santa Monica Pier, and acclimation to life on a US Naval base. Scarred and wary, he had resisted the demands of trainers until he found a tender connection with young Debbie Duffield, in the process helping to inspire her career as a marine mammalogist. His subsequent cooperation with Ridgway and other researchers broadened the horizons for marine mammal research while helping the fledgling Marine Mammal Program extract support and funding from the US Navy. And even if he hadn’t understood the human politics that had conscripted him, his unique personality left its mark on history. The same feistiness that had once seemed a liability earned him a leading role in projects such as Sealab II, which helped reframe public views of human relations with dolphins and other marine mammals.

NOTES

- 1 *The Natural History of Pliny*, trans. John Bostock and H. T. Riley (London: Henry G. Bohn, 1855), vol. 2, chapter 8.
- 2 David S. Cecelski, "Of Time and the Sea: Nye's Clock Oil and the Bottlenose Dolphin Fishery at Hatteras Island, North Carolina, in the Early Twentieth Century," *North Carolina Historical Review* 92, no. 1 (2015): 49–79; D. Graeme Burnett, *The Sounding of the Whale: Science and Cetaceans in the Twentieth Century* (Chicago: University of Chicago Press, 2012), 192–96; Gregg Mitman, *Reel Nature: America's Romance with Wildlife on Film* (Seattle: University of Washington Press, 1999), chapter 7.
- 3 Jacob Darwin Hamblin, *Oceanographers and the Cold War: Disciplines of Marine Science* (Seattle: University of Washington Press, 2005).
- 4 Joshua Horwitz, *War of the Whales: A True Story* (New York: Simon and Schuster, 2014), 232–34.
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