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Study finds marine mammals dying in captivity
(Sun-Sentinel/Angel Valentin)

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This is the second in a series of stories called Marine Attractions: Below the Surface.

Four decades ago, hunters off the coast of Washington found the perfect young killer whale specimen swimming with its mother. They fired a harpoon, hoping to attach a buoy to the bigger animal that would make trailing them easier. But the spear went in deep and the mother whale drowned.

The crew made a deal for the young whale with SeaWorld. The company today says it did not know about the capture but it did calculate correctly that crowds would come to its San Diego park for the chance to see a killer whale up close.

The modern marine park industry began with the killing of Shamu's mother.

Since then, the splashing stars have delighted millions. That entertainment, built on a public convinced that sea stars enjoy performing for people, has come at a continuing price to animals even while turning parks and aquariums into a thriving international business. Florida is the center of the U.S. industry with 13 marine attractions and 367 sea animals, more than any other state.

Over nine months, the South Florida Sun-Sentinel examined the history and records of the industry, including more than 30 years' worth of federal documents on 7,121 marine animals the government collected but never analyzed. The investigation found:

More than 3,850 sea lions, seals, dolphins and whales have died under human care, many of them young. Of nearly 3,000 whose ages could be determined, a quarter died before they reached 1, half by the age of 7.

Of about 2,400 deaths in which a specific cause is listed, one in five marine mammals died of uniquely human hazards or seemingly avoidable causes including capture shock, stress during transit, poisoning and routine medical care. Thirty-five animals died from ingesting foreign objects, including pennies, plastic balls, gravel or licorice.

Dolphins and whales have become so valuable, some worth up to \$5 million each, that attractions take out life insurance and transport them worldwide for the chance to breed more. About 2,335 marine mammals have been moved one or more times, 11 animals, at least a dozen times. Duke, a sea lion owned by a Mississippi company, holds the record: 19 moves.

More than 1,600 marine mammals, including the original Shamu, were taken from U.S. waters for attractions worldwide. American parks and zoos have not applied for a capture permit in more than a decade but do not rule that out for fresh genetic material.

Other countries still take dolphins and whales from the wild, particularly in the Caribbean, where swim-with-the-dolphins attractions have become increasingly popular. Cuba is now the world's leading exporter of bottlenose dolphins.

Marine mammals in U.S. parks and zoos are federally protected, but inspectors have been slow to enforce regulations on everything from water quality to veterinary care, even after they document animal deaths. The National Marine Fisheries Service has kept an inventory on captive marine mammals since 1972 but does not fully enforce rules on the reporting of births, deaths and moves of animals, relying on the parks for information. In hundreds of cases, the inventory does not say why animals died or even that they have died.

"We've never really had the time and energy to do this sort of analysis," said Steve Leathery, head of marine mammal permitting for the Fisheries Service. "This is the first effort to really take a hard look from the outside."

U.S. Rep. Peter Deutsch, ranking Democrat on the oversight and investigations subcommittee, called the findings "a wake-up call to all of us."

"I don't think there's any question we need to do better," said Deutsch, of Fort Lauderdale. "You found things that, even with oversight, the government has not really focused on."

U.S. Rep. Frank Pallone Jr. of New Jersey, the ranking Democrat on the Fisheries, Wildlife and Oceans subcommittee, said, "Congress hasn't taken on the responsibility of looking at this problem effectively."

"There's no place on Earth like SeaWorld® Orlando!" the company's Web site says. "Feed the dolphins, take in an incredible performance, and just try to stay dry when the world famous Shamu® comes a-splashing! SeaWorld Orlando -- it just doesn't get any closer than this."

SeaWorld has become the world's largest and most recognized marine park. Company executives say animal care and knowledge has improved enormously since the industry's beginnings.

"If you go back 40 years or 50 years ago, people went out and collected dolphins from the wild and didn't know how to take care of them," said Jim McBain, senior veterinarian for the company. "They didn't have very good luck. As they learned, they got better at it."

Industry officials say that while some animals have not fared well, they've served a higher purpose: educating and instilling a respect for marine life in millions of park visitors.

"The number of people in the public that are exposed to these animals and know about them that wouldn't otherwise pay any attention to them whatsoever, I think you can make the argument that they are true ambassadors," said Michael Hutchins, director of conservation and science for the American Zoo and Aquarium Association (AZA). "So you have to weigh that against the cost to individuals."

From the Panhandle to the Florida Keys, this scene is familiar: Delighted visitors cheer as splashing stars jump, "tail walk" and flip on command.

From the slick public relations mastery at big parks such as SeaWorld to lower-key zoos with just a few marine mammals, the parks put forth an idyllic picture.

"We provide the animals here with the best of care," says the Web site for Theater of the Sea in Islamorada. "Man keeps many animals in his care; few if any are treated as well as marine mammals."

What parks and zoos do not say is that many of those animals have not lived long. Over the past 30 years, the federal data show, fewer than half of the dolphins and sea lions reached the industry's own projections of life expectancy of 20 and 14 years respectively.

What is certain are the deaths of some 3,850 marine mammals under human care that have been reported to the Fisheries Service's Marine Mammal Inventory Report, the only official record of how sea animals have fared.

The inventory shows that 1,127 bottlenose dolphins -- Flipper's species -- have died over more than 30 years. Of the 875 whose ages can be determined, more than half never reached 10 and 83 percent were dead before 20.

Of California sea lions, the species most commonly found in parks and zoos, 1,262 with known or estimated ages have died, half before the age of 5 and 77 percent before 14.

Among killer whales, the most dramatic of the theme park mammals, the inventory shows 24 have died after living to 10.2 years on average. Of 43 the records show now alive in captivity, the average age is 15.7 years. According to SeaWorld Orlando's Web site, researchers in the Pacific Northwest believe female whales that make it past the first few vulnerable months will live to 50 and males to 30. Some whales have been tracked in the wild into their 90s, according to a researcher who follows them in Puget Sound.

Industry officials say captive animals are living longer now with better nutrition, veterinary care and knowledge of what it takes to keep them healthy.

In response to questions from the newspaper, the AZA asked a member, conservation biologist Kevin Willis, to calculate life expectancy. Using the experience of the dead animals but also the better prospects of the living, Willis projected that dolphins live to 20 on average and sea lions to 14.

Of those now living, 42 percent of dolphins and 60 percent of sea lions have made it to those projections.

It will take another 30 years or so, industry officials say, to know longevity of animals in parks and zoos for certain.

Pinning down how long sea mammals should live or do live compared to their

wild counterparts is difficult, according to the industry, marine biologists and the federal government. They all say studies of life in the wild are limited, following small populations over too short a period and too small a geographic area.

One study frequently cited has tracked bottlenose dolphins in Sarasota Bay for 34 years. Scientists are still unwilling to assign an average life span to the dolphins but at least four of 140 they are following are in their 50s.

Of some 1,500 dolphins in captivity over the past 30 years, both alive and dead, just one -- Nellie at Marineland of Florida -- made it to 50.

The federal records also show that marine mammals that have never been in the wild, that have been bred specifically for display, died significantly younger. Even beached animals put into marine attractions because they were sick or injured lived longer than those born at parks and zoos.

Captive-bred sea lions, for instance, died at 3.5 years on average. Sea lions captured from the wild, in contrast, survived 11.4 years and those found stranded, 10.5 years on average. The pattern held true for dolphins, whales and seals.

Making sweeping comparisons between facilities is difficult because of variables including differences in the number of animals and where they came from. The federal inventory also does not contain enough detailed information to determine the significance of such things as the expertise of staff, how often animals are checked for health problems, diet, the size of enclosures or whether they are filled with natural or chemically treated water.

Visit a marine attraction, however, and you'll hear none of these uncertainties or any discussion of the variables. The standard message of park employees is that their animals are healthy, happy and live at least as long as wild counterparts.

Miami Seaquarium said on its Web site that captive dolphins "have a much greater lifespan." The Seaquarium based that on the Web site of a rival attraction in the Keys, officials told the newspaper.

Seaquarium has lost 64 of 89 dolphins since 1972. Of those whose age could be determined, more than half died at 10 or younger, including 16 in their first year. Of the 25 dolphins there now, one-third are over 20.

"There is a PR [public relations] aspect to this," said U.S. Rep. Tom Lantos, D-San Mateo, Calif. "They want their customers to feel good about what they're doing."

The Texas State Aquarium in Corpus Christi boosted attendance by 50,000 last year and raised \$12 million for a tank in a new exhibit to hold what its Web site described as "non-releasable dolphins ... [that] lack the necessary skills to survive in the wild."

The nonprofit aquarium's dolphins, Sundance and Kimo, were not injured or

sick. Captured off Florida in 1988, they are now "non-releasable" because they've spent so much time in human care.

"That's probably not the best term to use," aquarium executive director Tom Schmid said.

Parks and zoos "want you to think that God put them there or they rescued them," said Ric O'Barry of Miami, a dolphin trainer on the Flipper television series (which ran from 1964 to 1967) who now campaigns against keeping marine mammals in captivity.

"If people knew the truth, they wouldn't buy a ticket. It's all about money."

By law, facilities housing marine mammals must be licensed and inspected, but the Sun-Sentinel found the government does little to enforce rules and rarely levies fines or closes facilities. Attractions have little incentive to fix problems that inspectors cite or to report information to the Fisheries Service.

Federal law requires that the government keep a record of marine mammals births, deaths and transfers, including animals and their progeny sent from the U.S. to foreign countries. The Fisheries Services relies on the parks to turn over this information but many facilities interpret the law to mean they do not have to report stillborns or newborn deaths.

Some report even less to the government.

The newspaper found hundreds of animals that simply vanished from the records once they were moved, others listed as living in marine parks that closed as long as a decade ago, and births and deaths of which federal officials were unaware.

Nemo, a California sea lion at Seneca Park Zoo in Rochester, N.Y., died in June 2000, according to the zoo's Web site. He was still listed in government records three years later as alive.

"I'd have to say it was a clerical error," said zoo director Larry Sorel.

Dolphin Research Center in Grassy Key did not tell the government about the March 2001 birth and death of Destiny. It did not report Tanner, a dolphin born, according to its Web site, in 2002. Center officials declined to comment.

The Fisheries Service lacks the resources to ensure the accuracy of reports from parks and zoos, said Leathery, head of marine mammal permitting. "There's a lot of competing and conflicting demands. Our real focus is those animals out in the ecosystem, in the wild."

Marineland near St. Augustine, conceived as an underwater movie studio, calls itself "the pioneer of American marine-life theme parks." It opened to 20,000 visitors in 1938.

Theater of the Sea, Miami Seaquarium, and Florida's Gulfarium in Fort Walton

Beach followed. In the 1960s the parks boomed, thanks to Flipper, the 1963 movie and the TV series, and the fortuitous introduction of killer whales.

The Vancouver Aquarium commissioned a sculpture of a killer whale in 1964 but instead got a real-life exhibit. Hunters harpooned a whale to use as an artists' model, but it unexpectedly survived. The aquarium put him on display, mistaking his gender and calling him Moby Doll. The whale lived three months, during which visitors and the media flocked to see the black and white behemoth.

"Our experience with Moby Doll had allowed us to make great strides in understanding marine mammals," the aquarium's then director Murray Newman wrote in a 1994 autobiography. "But at the same time, we had unwittingly opened the way to a new kind of commercialism."

Today, more than 1,200 whales, dolphins, seals and sea lions live in U.S. marine parks, aquariums and zoos, federal records show, with hundreds more overseas.

In the Caribbean, swim-with-the-dolphins attractions catering to tourists, primarily American cruise ship passengers, are opening at the rate of two a year.

The parks have hit on a profitable formula. Admission can cost up to \$130, not counting heavily promoted extras.

Be a dolphin trainer for a day for \$650. Hold a T-shirt and let a dolphin paint it for \$55. Send a handicapped loved one to dolphin "therapy" swim sessions for upward of \$2,000 a week.

Just how big the industry has become is impossible to say because most marine attractions don't release attendance or revenue figures.

But, according to an industry trade publication, SeaWorld alone attracted 11 million visitors last year.

Using public records, Web sites and information that some facilities provided, the Sun-Sentinel estimated that more than 50 million people visited facilities featuring sea animals last year, spending at least \$1 billion.

In the bays off the Keys and Florida's west coast, bottlenose dolphins leap, swim after boats and glide like torpedoes through the water. Hundreds were plucked from these waters from the 1960s through the 80s to populate marine parks.

"Healthy, alert dolphins, bright, show-quality," read a brochure for Dolphin Services International, a company co-directed by veterinarian Jay Sweeney, who caught at least 80 dolphins in the 1980s. "Will deliver to your size and sex specifications ... 90-day replacement guarantee."

Sweeney offered an experienced "collecting crew," show training and transportation with "swift routing from Miami International Airport."

Florida dolphins he captured wound up in parks in the United States, Switzerland, Finland, England, Israel and Canada. Nineteen died within five years, 10 surviving less than a year, the Sun-Sentinel found.

Sybil, captured in 1983, died seven weeks after arriving at Knowsley Safari Park near Liverpool, England.

Amit, another dolphin Sweeney captured, spent nearly four years at the Tel Aviv Dolphinarium before being sent to Knie's Kinderzoo in Switzerland in 1986. She died of cardiac arrest two days after that move, records show.

Sweeney caught six dolphins for Walt Disney World's Epcot Center in Orlando in 1985. Geno survived less than a year. Three others were dead by 1990.

Sweeney said he was "unfamiliar with the case histories of the animals."

"The mortality of individual animals, like that of individual humans, may be influenced by a wide variety of factors...and it is not always possible to pinpoint a reason for the loss of an individual," he said.

Sweeney founded Dolphin Quest in the 1980s, a company that operates swim-with-the-dolphins attractions in Hawaii, French Polynesia and Bermuda.

Ted Griffin talks freely about his past as a whale collector. In seven years starting in the mid 1960s, when there were few legal controls on hunts, Griffin estimates he and his crew "captured and shipped somewhere around 30 to 34" killer whales. That includes Hugo, who survived until 1980 at Miami Seaquarium, and Lolita, still there at an estimated age of 37.

Even for experienced collectors like Griffin, hunts did not always go right.

In 1970, in an area off Washington known as Penn Cove, Griffin's crew trapped 40 killer whales. In the darkness, three or four became entangled in his net and died, he recalled in a telephone interview from his home in Bellevue, Wash.

With a state game warden on board, Griffin said, his crew hid the deaths until they could quietly dispose of the bodies.

Previously, they had sent bodies to the state for research -- until a government official told him, "We are not the dumping ground for your dead whales," Griffin said.

Rendering plants, happy to have massive carcasses, had turned other dead whales into fertilizer or dog food, but they sometimes alerted the media, Griffin said. The hunters did not want to take that chance.

"We secured anchors and rocks to their tails and we sank them in the bay," Griffin said.

That's also how they had disposed of Shamu's mother, five years earlier, in 1965.

Griffin said he and his partner were in a helicopter on the lookout for a

killer whale in Puget Sound for Griffin's Seattle Aquarium. They spotted a juvenile with its mother and another whale.

He blames "a bad shot" for how that hunt turned out. "You hope the whale surfaces just as the harpoon hits the water," he said. "It's tricky. The female rolled to the surface and impacted the harpoon."

The mother died and the young whale proved too aggressive toward Griffin. SeaWorld wanted a whale for its San Diego park and agreed to lease the whale for \$2,000 a month, Griffin said. SeaWorld named the whale Shamu.

"They were concerned the whale would not do well," Griffin said. "I had agreed if the whale died through no act of negligence I would replace it."

Shamu did very well.

"The attendance began to grow in staggering proportions," Griffin said. "Other oceanariums realized they could have the same attendance. Everybody wanted them."

Shamu, the first of 51 SeaWorld whales with that name, died six years after being captured.

SeaWorld officials said they had no records on hand of the capture and knew of no employees familiar with it.

It's unknown how many whales and dolphins perished during capture. Federal records show at least 22.

But the federal government rarely exercised its authority to send observers to ensure humane captures, and as Griffin's experience shows, hunters hid deaths.

Two-thirds of the marine mammals caught in the 1970s and 1980s are dead, records show.

Three Northern right whale dolphins captured for SeaWorld in 1982 were dead in about two weeks. Six of eight Pacific white-sided dolphins the company acquired in 1973 died by the end of the year, records show.

"I couldn't even begin to speculate to tell you what happened," said Brad Andrews, senior vice president for zoological operations for Busch Entertainment Corp., a subsidiary of Anheuser-Busch, which owns SeaWorld. "Whatever it was, it's unacceptable."

Dolphin Research Center posts plaques of each of its dolphins. For those that came from the wild, the center lists "origin" as the previous aquarium where the dolphin lived.

Protective of their public image, parks and aquariums have not applied for a permit to capture whales or dolphins in more than a decade, though they don't rule out going back to the sea in the future.

Currently, records show, nearly two-thirds of the marine mammals displayed

in U.S. parks were born in captivity.

Another 11 percent came off beaches too ill or injured to be returned to the wild. The rest, except for 4 percent of unknown origin, are animals captured more than a decade ago.

U.S. Rep. Adam Putnam, R-Bartow, in central Florida, said marine parks need to "play by the rules" of animal care, but he is reluctant to criticize them.

"Our larger, more well-established, well-funded parks are doing more than just teaching a dolphin to fetch a ring," he said. "Every time there is a marine mammal crisis, a whale beaches itself, a manatee gets hit by a boat or a bottlenose dolphin turns up sick, the first people that are called are some of our top parks that are also involved in cutting-edge marine biology research."

Studies by park and zoos, said Marilee Menard, executive director of the Alliance of Marine Mammal Parks and Aquariums, "have led to improvements in diagnosing and treating diseases, techniques for anesthesia and surgery, tests for toxic substances and their effects on wild marine mammals, and advancements in diet, vitamin supplementation and neonatal feeding."

She estimates Alliance members spend about \$1 million a year rescuing and rehabilitating stranded mammals.

The AZA's Hutchins estimates that its members spend more than \$50 million a year on research. "It's very hard to nail down an exact amount."

SeaWorld inspired young visitors to become vets, conservationists and environmental researchers. "Somewhere along the line, we've touched them enough to go out and do something, and I think that's pretty neat," Andrews said.

Rep. Lantos said he thinks marine parks "can do the positives without incurring the negatives."

"I don't accept the juxtaposition that they're doing some useful things even though the treatment of animals is a long way from being perfect."

Staff researcher Barbara Hijek contributed to this report.