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North Vancouver,  
B.C., V7P-2E2

November 1, 2011

To Whom It May Concern

I have been involved in field studies of wild killer whales in British Columbia and Alaska since the mid 1980's. My research focuses on killer whale acoustic behaviours (particularly echolocation), genetic population structure, and feeding ecology. I head the Vancouver Aquarium's Marine Mammal Research Program and also serve as an adjunct professor in the Zoology Department at the University of British Columbia.

I was one of a number of experts who help plan and conduct the successful operation to capture, rehabilitate, and release the orphaned killer whale Springer (A73) in 2002 and I lead the effort to monitor her health and social reintegration after she was returned to the wild in British Columbia. I subsequently served on an advisory panel to plan a similar operation for the isolated killer whale Luna (L98). This project was long delayed and eventually cancelled and Luna was struck and killed by a ship's propeller in 2006.

When I heard of the case of the rescued killer whale 'Morgan' off the Dutch coast in 2010 I thought that there was little chance that she could be successfully reintegrated into the wild. This opinion was based on the observation that throughout most or possibly all of their range killer whales live in stable kin groups that rarely accept immigrants. Since little was known of Morgan's origins, finding her natal group seemed unlikely. In some killer whale populations, including that studied for many years off the Norwegian coast, kin groups have distinctive call repertoires, but I understood that Morgan seldom if ever vocalized and this powerful method for determining group membership was therefore unavailable. Identifying her natal group using genetic methods alone would have required extensive biopsy sampling of wild killer whales and was clearly impractical. Her probability of surviving in the wild by herself was low, and if she did there was a reasonable probability that she would develop an attraction to humans and boats, as did Luna and the well-known released whale Keiko. Such an attraction would expose her to risks and other attendant problems.

I understand that Morgan became more vocal after some months in captivity and that her calls have been shown to closely resemble those of an identified social group of killer whales off Norway. In my view, this finding changes the prospect of a successful reintegration greatly. The Springer case demonstrated that social acceptance of a young killer whale by kin after an extended period of absence and captivity is possible. A great deal was learned during her rehabilitation in a sea pen and after her return to the wild, much of which could be brought to bear in the case of Morgan.<sup>1</sup>

I saw Springer in the course of my research several times this summer, a full nine years after her release. She is strong, healthy, and socially integrated. Scars from a serious skin condition prior to her capture

have faded and worrisome behaviours that developed during her period of isolation, including a strong attraction to boats, disappeared almost as soon as she rejoined her kin. My colleagues and I will continue to monitor her over the coming years, but as far as we can see she is for all intents and purposes a normal, healthy wild killer whale again.

I urge you to consider setting of course of action in place for Morgan that preserves the possibility of returning her to the wild. The first step would likely be to move her to a sea pen where she is in a more natural acoustic environment than a tank. I would be pleased to offer advice and insights and am confident that I could enlist the help several colleagues here with extensive experience with killer whale behaviour in both captive and wild settings.

Please note that the opinions expressed in this letter are my own, and are not made on behalf of the Vancouver Aquarium.

Sincerely,



Lance Barrett-Lennard, PhD

Head, Cetacean Research Program  
Vancouver Aquarium Marine Science Centre  
& adj Professor, Zoology Department, University of British Columbia

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<sup>1</sup> For details of the Springer case see Francis, D. and G. Hewlett (2007). *Operation Orca: Springer, Luna and the Struggle to save West Coast Killer Whales*. Madeira Park, British Columbia, Harbour Publishing. 280pp.

Jim Borrowman  
Box 2-1, Telegraph Cove, British Columbia V0N 3J0

- Director – Johnstone Strait Killer Whale Interpretive Centre Society
- Director – NIMMSA – North Island Marine Mammal Stewardship Association
- Volunteer Warden Dr. Michael Bigg Ecological Reserve at Robson Bight
- Former owner of British Columbia's first whale watching company (Stubbs Island Whale Watching) 1980 – 2011 (Erich Hoyt's research claims first company in the world to take the public to see killer whales in the wild)

November 1, 2011

To Whom It May Concern:

Growing up in the 1950's and 1960's in Victoria, British Columbia, Canada, and spending much of my youth on the waters in the area and around southern Vancouver Island, I observed wild killer whales many times and witnessed the first capture of wild killer whales in southern BC waters. Many whales died during their captures or during their time in aquariums. Nobody could argue against all the positive aspects of these early days in captivity, as we learned more about their social lives, their diets, acoustics and so much more.

As the owner of British Columbia's first whale watching company, Stubbs Island Whale Watching (1980 – 2011), and having taken more than 10,000 people each year from all over the world to see whales in the wild, I feel very qualified to discuss whether or not any killer whale should ever be kept in an aquarium. In more than three and a half decades of working with wild whales the shift from some acceptability in the aquarium atmosphere has completely shifted to total unacceptability in any situation that can threaten these small, unique and fragile populations of the planet's most amazing and still unknown animal.

After Dr. Michael Bigg's 1970 – 1972 census on the British Columbia coast revealed a very small population of killer whales he recommended that these captures be stopped. We have been made painfully aware of the plight of the whales remaining in captivity since this time.

Since Springer (A73) was released back to her family in BC waters (2002), we realize this has been the most successful operation to date and came at great cost with no guarantees. Nobody could say if everything would line up, but relocation has been very successful and we have been very fortunate to see Springer every summer since. We are currently planning our 10<sup>th</sup> reunion to celebrate this special whale and her family.

In Morgan's case, I realize the logistics of reuniting her with her family are more remote than Springer, but having learned more about Morgan's family in the last year makes this an absolute must do. Forcing this whale to live its remaining days in an aquarium is not acceptable. Knowing what we now know about Morgan, a relocation programme similar to Springer allows for a far greater chance of survival and natural life span.

I sincerely hope that the powers that be decide to relocate Morgan to the wild.

Best regards,

Captain Jim Borrowman  
Telegraph Cove, British Columbia, Canada  
Orcella Expeditions

Post Office Box 1423

Friday Harbor, WA 98250, USA

01 November 2011

Dear Madam/Sir,

I am writing to express my concern regarding the current and future fate of *Morgan*, the rehabilitated Orca currently housed in the *Dolfinarium Harderwijk*, The Netherlands.

This whale was saved from certain death when it was first taken in from the coastal waters off the Netherlands in June 2010. Its subsequent successful rehabilitation is a testament to the dedication of the Dutch government and the professionalism of the attending animal care staff. However, this rehabilitation now appears to be more than complete, and the animal appears to be in excellent health. This, in my view, is unlikely to continue should the animal continue to be held indefinitely in captivity.

The Dutch government is to be applauded for its brave decision to allow and support the original capture to save the Orca's life as well as for its plan to ensure subsequent release into the wild. Such a decision is never easy due to the likelihood of unforeseen circumstances as could be witnessed also in *Morgan's* case. Nonetheless, a soft re-introduction into the wild appears to be the only possible alternative for the near future, if one wants to continue the path so courageously begun by the Dutch government. Any other way forward, i.e., keeping the animal in captivity, would unnecessarily taint the diligent approach of the Dutch authorities.

The Dutch government has proven its determination to pursue the conservation of cetaceans repeatedly in past decades. It has been at the forefront of discussing and introducing fisheries measures to mitigate by-catch of cetaceans. Recently, the Dutch government went ahead and created marine *Natura 2000* reserves for cetaceans as well as a conservation plan to achieve a favorable conservation status for the harbor porpoise population in the southern North Sea. Previous to these efforts, The Netherlands were

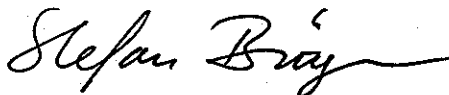
instrumental in the conservation of small cetaceans in Northwest Europe under the ASCOBANS agreement, in particular in the creation of the ASCOBANS conservation plan for the harbor porpoise in the North Sea.

This well-earned reputation might be easily tarnished by the decision to keep *Morgan* in captivity and possibly to put her even on display in an amusement park. Furthermore, this decision would likely set an unfortunate precedent for delphinaria in how to obtain 'fresh blood' for their display collections. Therefore, the Dutch government's decision to veer away from its original plan of release after rehabilitation might be misinterpreted easily by the conservation-minded public in The Netherlands and in neighboring countries. Moreover, in fora such as ASCOBANS, CMS, IWC, and even CITES it may lead to unpleasant questions. Understandable as that may be, it would not do justice to the strong support The Netherlands have shown for the conservation of cetaceans worldwide!

With an international cadre of respected scientists and a broad coalition of international conservationists standing ready to support all aspects of a soft release, even an uncertain outcome of this release might be better for both, *Morgan* and The Netherlands' reputation. This scenario should only leave few questions open, and I have been assured that the complete necessary funding as well as the essential support in Norway is currently being secured. Once these are in place, it would be surprising, if this win-win situation were not to be taken advantage of.

Should a decision be made to move *Morgan* to a sea pen for long-term study or for an attempt to rehabilitate her to the wild, I would be pleased to provide advice if requested and would be interested in collaborating on future research projects.

Sincerely,

A handwritten signature in black ink, reading "Stefan Bräger". The signature is fluid and cursive, with a long horizontal stroke extending from the end of the name.

Stefan Bräger, PhD

E-mail: [Stefan.Braeger@gmx.net](mailto:Stefan.Braeger@gmx.net)



JOSHUA  
RECORDS

2435 SW 5th Ave.  
Suite # 201  
Portland OR 97201

October 31, 2011

To Whom It May Concern:

My name is Theresa Demarest. I am the Producer and Filmmaker for the recently released documentary movie titled: *Keiko The Untold Story* (see [www.keikotheuntoldstory.com](http://www.keikotheuntoldstory.com)). This movie is about the life of Keiko, the orca star of the 1993 blockbuster hit movie *Free Willy* and focuses on Keiko's rehabilitation, release from captivity, and re-introduction into his home waters after filming for *Free Willy* was completed. I am enclosing a DVD copy of *Keiko The Untold Story* with this letter.

Keiko's story is important. To date, Keiko is the only orca whale to have been rehabilitated, released from captivity and re-introduced into the ocean. When asked, most individuals do not know the truth about what really happened to Keiko after he was moved to Iceland. All too often Keiko's re-introduction into the ocean is sited as a failed project and the reason that other captive orca, such as Morgan, should not be similarly re-introduced to the wild.

And yet, as *Keiko The Untold Story* so clearly demonstrates, Keiko thrived for five years after his re-introduction into the wild, interacting with wild orcas including females, regularly leaving on his own for days at a time, traveling on his own from Iceland to Norway, arriving fat and healthy, and eventually dying of old age. Keiko was the second longest lived captive orca in history.

The question of whether or not the mission was successful continues to fuel a worldwide debate regarding the fate of the other orcas still in captivity. *Keiko The Untold Story* asks the audience to follow Keiko's full story and decide for themselves. In this vein, I encourage you to watch *Keiko The Untold Story* before making your final decision regarding Morgan.

Respectfully,

Theresa Demarest

TD:jms  
Enclosure

Theresa Demarest/Producer/ Filmmaker  
<http://www.keikotheuntoldstory.com>

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## DAGMAR CATHERINE FERTL

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### EDUCATION:

Master of Science. Texas A&M University, College Station, TX (1994).  
Major: Wildlife and Fisheries Sciences

Bachelor of Science. Trinity University, San Antonio, TX (1988).  
Major: Biology

### RESEARCH/PROFESSIONAL EXPERIENCE:

Senior Environmental Scientist; HDR EOC; Dallas, TX (April 2010 – current):

**U.S. Navy Marine Species Monitoring, U.S. Waters (April 2010-Present).** This indefinite-delivery/indefinite-quantity multi-year contract provides marine and biological resources monitoring and management services for the U.S. Navy. Marine species monitoring, evaluations, and/or assessments are conducted at various locations within the Naval Facilities Engineering Command (NAVFAC) Atlantic (including Gulf of Mexico) and Pacific areas of responsibility. Specific tasks conducted under this contract include aerial and shipboard surveys; passive acoustic monitoring; behavioral studies; and management and coordination of complex projects. Ms. Fertl assists with report preparation for monitoring effort task orders.

**Environmental Support to Naval Surface Warfare Center Panama City Division (NSWC PCD) (July 2011-present).** HDR assists the Environmental Office of NSWC PCD in implementing and managing the NSWC PCD Mission Activities EIS/Overseas Environmental Impact Statement (EIS/OEIS). This document addresses eight mission areas for proposed research, development, test and evaluation (RDT&E) activities in Gulf of Mexico and St. Andrew Bay. HDR provides coordination and input to NSWC PCD staff on reporting and marine observer requirements and training under ESA and MMPA permits and on environmental review processes such as tracking actual operational tempos versus preferred alternative tempos. Ms. Fertl worked to provide input into MMPA/ESA documentation and to develop environmental planning documents such as annual renewal applications for the NMFS-issued LOA and participated as internal QA/QC reviewer for individual sonar testing events. Ms. Fertl assisted with preparation of the annual report for NSWC PCD monitoring that presented the U.S. Navy's level of effort, regulatory compliance, scientific accomplishments, and preliminary data obtained from marine mammal monitoring from August 2, 2010 through August 1, 2011 in the NSWC PCD Study Area.

**Reedsport OPT Wave Park, Oregon, Ocean Power Technologies, Inc. (July 2011-present).** OPT is developing the first commercial wave park on the West Coast of the U.S., located 2.5 miles offshore near Reedsport, Oregon. The project will consist of 10 wave energy converters. Ms. Fertl assisted with preparation of the marine mammal take permit application (Incidental Harassment Authorization) to be submitted to NMFS.

**Susitna Hydro Evaluation Project (May 2011).** HDR Alaska prepared an aquatic data gap analysis in order to identify information needs and data gaps to be addressed for the Federal Energy Regulatory Commission (FERC) licensing of the Susitna Low Watana Hydroelectric Project in Cook Inlet. Ms. Fertl provided QA-QC review of the analysis prepared for the Cook Inlet beluga whale and other marine mammal species.

**Point Thomson Project Third-Party EIS.** HDR Alaska is preparing a third-party EIS for the Point Thomson Project on the North Slope of Alaska. The lead Federal agency for the project is the U.S. Army Corps of Engineers and the Applicant is Exxon Mobil Corporation. The Point Thomson Project proposes to develop hydrocarbon resources within the Thomson Sands reservoir. Project infrastructure would be located on land adjacent to the coast east of Prudhoe Bay and adjacent to the Arctic National Wildlife Refuge boundary. provided technical review for marine mammals for the PDEIS and was the subject matter expert for marine mammals for the DEIS. She also assisted in efforts to review available data for marine ambient noise levels off the North Slope; provided technical review of the BAs prepared by outside contractors; and assisted in preparation of the consultation letters..

**Knik Arm Crossing Project, Knik Arm Bridge and Toll Authority, AK.** Provided regulatory compliance support to the Knik Arm Bridge and Toll Authority (KABATA) in its proposed construction of the Knik Arm Crossing (KAC) Project in Upper Cook Inlet. A Biological Assessment (BA) for the recently listed Cook Inlet beluga whale and marine mammal permit application (Letter of Authorization [LOA]) were prepared. Work on these two deliverables included estimating beluga whale densities in the Knik Arm and calculating takes associated with the construction. There was interface with the Client and regulatory agencies (e.g., NMFS and Federal Highway Administration) on a continual basis and support provided to the Client for Section 7 Consultation with the NMFS. Ms. Fertl's responsibilities included preparation of the BA and LOA application, as well as assisting in responding to comment letters on the LOA application. Additionally, Ms. Fertl provided input to the marine mammal components of the technical provisions document.

**Acoustic Monitoring Studies for the Knik Arm Crossing Project, Knik Arm Bridge and Toll Authority, AK.** (1) Acoustic monitoring was conducted during Summer 2010 to collect baseline ambient noise data for the proposed KAC project area. (2) Measurements were made in January 2011 of an oscillator being used for pile-placement of the Gilmerton Bridge replacement project in Chesapeake, Virginia, to provide baseline noise data for applicability for the proposed KAC project. (2) (3) A Proof of Concept study was conducted to test the feasibility of proposed acoustic monitoring for belugas in Knik Arm for construction monitoring program. Ms. Fertl's responsibilities included field work and report preparation for the ambient noise monitoring study and report preparation for the oscillator and Proof of Concept studies.

**Beluga Whale Proposed Critical Habitat Consultation with Knik Arm Crossing Project, Knik Arm Bridge and Toll Authority, AK.** An assessment was conducted for KABATA regarding the NMFS' proposed designation of critical habitat for the Cook Inlet beluga whale. This information assisted KABATA in providing informed responses to the proposed designation, which in turn might have assisted the NMFS in their final determination of critical habitat. Ms. Fertl's responsibilities reviewed pertinent background information on the distribution, ecology, and behavioral biology of the Cook Inlet beluga whale and provided recommendations for how to respond to the published proposed critical habitat. .

**Beluga Whale Proposed Critical Habitat Consultation with ConocoPhillips Alaska, Inc.** An assessment was conducted for ConocoPhillips Alaska, Inc. (CPAI) regarding the NMFS' proposed designation of critical habitat for the beluga whale. The focus of the work was evaluation of NMFS' habitat delineation; beluga occurrence in CPAI's operating area within Cook Inlet; as well as CPAI's current best management practices for the beluga whales. Recommendations for how to respond to the published proposed critical habitat were provided. This information assisted CPAI in providing informed responses to the proposed designation, which in turn might have assisted the NMFS in their final determination of critical habitat. Work products included a written report and compiled literature submitted in PDF format to CPAI. Ms. Fertl's responsibilities included recommendations for how to respond to the published proposed critical habitat.

**Polar Bear Proposed Critical Habitat Consultation with ConocoPhillips Alaska, Inc. (2009).** An assessment was conducted for CPAI regarding the U.S. Fish and Wildlife Service's (USFWS)



proposed designation of critical habitat for the polar bear. Pertinent background information was reviewed on the distribution, biology, and behavioral biology of the polar bear in Alaska. The focus of the work was evaluation of maternal denning distribution by the species in CPAI's operating area (North Slope), as well as CPAI's current best management practices for the polar bear. Recommendations for how to respond to the published proposed critical habitat were provided. This information assisted CPAI in providing informed public comments on the proposed designation. Work products included a written report and compiled literature submitted in PDF format to CPAI. Ms. Fertl's responsibilities included recommendations for how to respond to the published proposed critical habitat.

**Guam and CNMI SUA Feasibility Assessment. SunTemple Helgren and WWB Consultants for Naval Facilities Engineering Command Pacific (NAVFACPAC) and Marine Forces Pacific (MARFORPAC).** This Feasibility Assessment (FA) was conducted primarily to support preliminary decisions by the U.S. Marine Corps (USMC) as they transition from bases in Okinawa to Guam. The FA was for the allocation of necessary Special Use Airspace (SUA) to support the USMC as well as other necessary Department of Defense (DoD) airspace restrictions at Guam and the Commonwealth of the Northern Mariana Islands (CNMI). The USMC needed to establish training (firing) ranges on Guam, Tinian, and Pagan for use of .50-caliber guns, requiring designation of SUA. Based upon readiness training requirements and their subsequent effects to non-participant aircraft use of airspace, Marine Forces Pacific (MARFORPAC) will make decisions that shape their ranges and training activities to minimize impacts to the fullest extent practicable. The results of these decisions will feed into overall DoD airspace restriction proposals that will be submitted to Federal Aviation Administration (FAA) for their determinations on allocating the necessary SUA to support USMC as well as other necessary DoD airspace restrictions at Guam and CNMI. Ms. Fertl reviewed marine mammal and sea turtle information for the region to determine whether it was adequate for impact analysis and provided suggestions for how USMC/FAA might acquire data adequate for sufficient analysis.

**Safe Harbor Energy License Application EIS, US Coast Guard, NY.** Atlantic Sea Island Group LLC proposed to construct a deepwater port (Safe Harbor Energy) that included an island approximately 13.5 miles south of the City of Long Beach, New York, on Long Island and 23 miles southeast of the New York Harbor entrance; an LNG receiving, storage, and regasification facility; and a subsea pipeline that would transport the natural gas to a connection with an offshore natural gas pipeline (Transco Pipeline). Ms. Fertl's responsibilities included preparation of the marine mammal sections for the project and coordination of the Biological Resources Team.

**Programmatic Environmental Assessment of Nationwide Use of High Frequency (HF) and Ultra High Frequency (UHF) Active Sonar Technology (SONAR PEA), US Coast Guard, Nationwide.** The USCG is proposing the nationwide use of active SONAR technologies that operate at frequencies of 50 kilohertz (kHz) and higher, from mobile platforms. Ms. Fertl's responsibilities included preparation of the marine mammal sections for the project and technical review of the Biological Resources section.

**Port Dolphin Liquefied Natural Gas (LNG) Deepwater Port License Application EIS, USCG, FL.** The Applicant proposed constructing an operating an LNG receiving deepwater port 45 km southwest of Tampa, Florida in the Gulf of Mexico, in water with a bottom depth of approximately 30.5 m (100 feet). Ms. Fertl's responsibilities included addressing comments to the marine mammal and acoustic impact sections for the project.

Consultant, Ziphios EcoServices, Plano, TX (December 2007 – April 2010): Miscellaneous non-disclosure assignments as subcontractor including literature reviews for marine mammal take permit applications and review of bowhead whale research efforts in Beaufort Sea for NMFS contract.

Senior Environmental Scientist; Principal Investigator for Marine Mammals and All Protected Species, Geo-Marine, Inc., Plano, TX (August 2000 – December 2007): Marine resources assessments (MRAs) of protected and commercial marine resources in the following Navy Operating Areas (OPAREAs):

- Virginia Capes OPAREA
- Cherry Point OPAREA
- Charleston-Jacksonville OPAREA
- Puerto Rico OPAREA and St. Croix Testing and Training Range
- Gulf of Mexico and Key West OPAREA
- Northeast Operating Areas (Boston, Narragansett Bay, Atlantic City)
- Southern California OPAREA
- Hawaiian Islands OPAREA
- Japan/Okinawa Complexes OPAREA
- Guam and Northern Mariana Islands OPAREA
- Pacific Northwest OPAREA (including Greater Puget Sound)
- Gulf of Alaska OPAREA
- Mediterranean Study Area
- Guantanamo Bay OPAREA
- Southern Florida and AUTEC/Andros Island

Co-Project Manager additionally for assessment of Virginia Capes OPAREA; Co-Project Manager for Southern California and Hawaiian Islands MRAs.

Part of team to prepare biological assessment for Vieques Island, Naval Station Roosevelt Roads, Puerto Rico (responsible for marine mammal and sea turtle sections).

Team member for BA, EFH Assessment, EA, and marine mammal take permits for mine warfare sites in the western and eastern Gulf of Mexico.

Project manager for BA, OEA, and marine mammal take permits for use of VAST/IMPASS system by the Navy in its Atlantic Fleet Operating Areas.

Biologist, Minerals Management Service, New Orleans, LA (April 1995-August 2000): Worked in Office of Leasing and Environment with the MMS, preparing input to NEPA documents in the areas of marine mammals, sea turtles, and birds, relative to oil and gas exploration in the Gulf of Mexico. Contract Inspector for GulfCet I and GulfCet II studies. Technical lead for MMS Marine Protected Species Workshop held 15-17 June 1999 in New Orleans. Public outreach includes development of educational materials on Gulf marine mammals; national recognition in form of a Department award.

Internet Visiting Scientist, WhaleNet (website via Wheelock College) (1995-present): Visiting scientist for one two-week period every 6-12 months. Answer marine mammal and marine science questions that are sent to the website.

Research Assistant, Ripley's Publishing Company (Apr-June 1999): Research assistant to Doug Perrine for children's book on whales and dolphins; researched topics as requested and reviewed draft manuscript.

Visual Observer, National Marine Fisheries Service, Gulf of Mexico (Apr-May 1999): Part of visual team for cetacean surveys in Gulf of Mexico as part of Interagency Agreement between MMS and NMFS; also assisted with ichthyoplankton collection.

Cooperator, National Marine Fisheries Service, U.S. Atlantic (Aug 1998): Assisted with ichthyoplankton collection in U.S. Atlantic.

Visual Observer, Marine Mammal Research Program, Texas A&M University, Galveston, TX (Apr 1992, Aug 1992; Oct. 1996; Aug. 1997): Part of visual team for cetacean surveys (GulfCet I and II) in the Gulf of Mexico.

Volunteer, The New England Aquarium, Boston, MA (Feb. 1996): Assisted with aerial surveys for northern right whales off northern Florida/southern Georgia.

Coordinator of University Research, Texas A&M University, Galveston (Aug. 1994 - March 1995): Responsible for research proposal routing and disseminating grant information to principal investigators.

Instructor, Duke University, Texas A&M University, Galveston Marine Lab (Summer 1994): Coordinated and taught a behavioral ecology course for Duke University's Talent Identification Program for gifted and talented 7th and 8th graders.

Participant, Oiled Wildlife Rehabilitation Workshop, Oil Spill School, Texas Engineering Extension Services, Texas A&M, Galveston (May 1994): Completed 24-hr course on oiled wildlife rehabilitation and presented "Marine Mammals and Oil: Assessing the Risks".

Teaching Assistant, Texas A&M University, Galveston, TX (Fall 1993): Coordinated and taught laboratory sections for Introd. to Biology lab.

Teaching Assistant, Texas A&M University, Galveston, TX (Spring 1993): Coordinated and taught laboratory section for Biology of Marine Mammals and Introd. to Biology lab.

Principal Investigator, National Marine Fisheries Service, Southeast Fisheries Science Center (Dec 1990 - Dec 1992): Contracted to study the association of bottlenose dolphins with shrimp boats in Galveston Bay. Techniques included photo-identification and behavioral observations.

Instructor, Galveston Bay Foundation, Galveston, TX (1992-1996): Coordinated and taught Dolphin Discovery workshop; naturalist on boat trip to view bottlenose dolphins and their habitat.

Attendee, Galveston Bay Natural Resources Mapping Workshop, Houston, TX (Dec 1992): Provided information on location of dolphin habitat in Galveston Bay and its importance. Workshop coordinated by Texas Parks & Wildlife to provide information for oil spill response teams.

Student Research Assistant, Marine Mammal Research Program, Texas A&M University, Galveston, TX and National Marine Fisheries Service (July 1992): Assisted with live captures and radio-tracking of bottlenose dolphins in Matagorda Bay, TX. Techniques included restraining dolphins, assisting with veterinary procedures, and radio-tracking.

Volunteer Assistant, Oceanic Society Expeditions, Bahamas (17-24 July 1992): Assisted with data collection on Atlantic spotted dolphins in the Bahamas. Techniques included photo-identification, transect surveys, and underwater behavioral data collection. Other duties included assisting the crew and passengers.

Research Assistant, National Marine Fisheries Service, Southeast Fisheries Science Center (May 1992): Aerial surveys for bottlenose dolphins in response to the Texas die-off.

Student Research Assistant, Marine Mammal Research Program, Texas A&M University, Galveston, TX (Feb 1992): Assisted with biopsy work on bottlenose dolphins in Galveston Bay. Techniques included surveys and photo-identification of dolphins.

Student Research Assistant, Marine Mammal Research Program, Texas A&M University, Galveston, TX (Jan 1991 - Feb 1996): Assisted with photo-identification and transect surveys of bottlenose dolphins in Port Aransas, TX for National Marine Fisheries Service contract "Long Term Monitoring of Bottlenose Dolphins", as well as in Matagorda Bay.

Volunteer, National Marine Fisheries Service, Pascagoula, MS (June 1991): Transect and photo-identification surveys of bottlenose dolphins in Mississippi Sound.

Student Research Assistant, Marine Mammal Research Program, Texas A&M University, Galveston, TX (April 1991): Cetacean surveys in Gulf of Mexico done in conjunction with National Marine Fisheries Service plankton research cruise.

Student Research Assistant, Marine Mammal Research Program, Texas A&M University, Galveston, TX (Oct 1990, March 1991): Cetacean surveys in Gulf of Mexico done in conjunction with oceanographic team.

Researcher/Instructor, School for Field Studies, Beverly, MA (July - Aug 1990): Biology and Behavior of Bottlenose Dolphins, Beaufort, NC: Photo-identification, behavioral data collection, and boat operation; lectures on science and marine mammal biology.

Student Research Assistant, Marine Mammal Research Program, Texas A&M University, Galveston, TX (June - July 1990): Transcription of video taken of bottlenose dolphin behavior, orientation, and respiration rates in the *Mega Borg* oil spill

Teaching Assistant, Texas A&M University, Galveston, TX (1989-1991): General Biology, Scientific Methods (marine mammal section), and bottlenose dolphin lectures for schools and marine mammal workshops.

Volunteer Assistant, Texas Marine Mammal Stranding Network, Galveston, TX (1989-1995): Assisted in husbandry of live-stranded cetaceans and in retrieval of dead cetaceans.

Principal Investigator, Universal Energy Systems, Xenia, OH working with Brooks Air Force Base, San Antonio, TX (June-Aug 1989): Contracted to do a literature review on magnetodetection by organisms to determine the feasibility of using blowfly photodetectors as a model to develop a smaller magnetic field detector to use in the medical field.

Student Research Assistant, Texas A&M University, College Station, TX (October 1988): Assisted with small mammal transects in Bastrop State Park.

Intern, Marine Biomedical Institute, Galveston, TX (June-Aug 1988): Scanning electron microscope study of the epidermal lines of cephalopods.

Independent Research, Trinity University, San Antonio, TX (Jan-May 1987; Aug-Dec 1987): The effect of antibiotics on *Chlamydomonas* growth; growth curves of axenic and contaminated *Chlamydomonas reinhardtii*.

Intern, Kewalo Basin Marine Mammal Laboratory, Honolulu, HI (Aug-Dec 1986): Husbandry of captive dolphins, dolphin training, data collection for projects concerning sentence comprehension by dolphins, video-taping of research experiments involving dolphins, and bibliographic searches for the lab.

Independent Research, Thorman Cancer Research Laboratory, Trinity University, San Antonio, TX (Aug-Dec 1985; Jan-May 1986): Determine *in-vivo* effects of recombinant DNA containing viral oncogenes in animals; tested a recombinant DNA vaccine on mice and hamsters.

## **PUBLICATIONS:**

### Scientific

Jefferson, T., B. Würsig, and D. Fertl. 1992. Cetacean detection and responses to fishing gear. Pages 663-684 in J. Thomas, R.A. Kastelein, and A. Ya. Supin, eds. New York: Plenum Press.

Fertl, D. and A. Schiro. 1994. Carrying of dead calves by free-ranging Texas bottlenose dolphins (*Tursiops truncatus*). *Aquatic Mammals* 20:53-56.

Fertl, D. 1994. Occurrence patterns and behavior of bottlenose dolphins (*Tursiops truncatus*) in the Galveston Ship Channel, Texas. *Texas Journal of Science* 46:299-317.

Fertl, D. and B. Würsig. 1995. Coordinated feeding by Atlantic spotted dolphins (*Stenella frontalis*) in the Gulf of Mexico. *Aquatic Mammals* 21:3-5.

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Visser, I.N., D. Fertl, and L.T. Pusser. 2004. Melanistic southern right-whale dolphins (*Lissodelphis peronii*) off Kaikoura, New Zealand, with records of other anomalously all-black cetaceans. New Zealand Journal of Marine and Freshwater Research 38:833-836.

Fertl, D., N.B. Barros, R.A. Rowlett, and M. Richlen. 2004. An update on anomalously white cetaceans, including the first account for the pantropical spotted dolphin (*Stenella attenuata graffmani*). Latin American Journal of Aquatic Mammals 3(2):163-166.

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### Book Reviews

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Fertl, D. 2003. Book review: *Oceans of noise: A WDCS science report*. Marine Turtle Newsletter 102:25-26.

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Fertl, D. 2009. Book review: *Marine wildlife and tourism management: Insights from the natural and social sciences*. Aquatic Mammals 35(1):130-131.

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Le Boeuf, N. and D. Fertl. 1995. Sharing the sea. Tide - Magazine of Gulf Coast Conservation Association. March/April:6-8, 50-51.

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Fertl, D. 2005. Geographic distribution and species diversity of cetaceans on postage stamps. Spyhopper (Newsletter of the American Cetacean Society) Spring:9-10.

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Stoops, E.D. and D. Fertl. 1997. *Wolves & Their Relatives*. Sterling Publications, NY. (children's non-fiction book)

Fertl, D., M. Reddy, and E.D. Stoops. 2000. *Bears*. Sterling Publications, NY. (children's non-fiction book)

#### Contract Reports:

Fulling, G. L., J. Foster, D. C. Fertl, and T. Fagin. 2008. Pilot survey of coastal small cetaceans in the waters of Guinea-Bissau. *Prepared for Truk Bissau*.

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Avent, R.M. and D. Fertl. 1996. Surprising cetaceans. The Gulf of Mexico Alligator (Newsletter of Gulf of Mexico Regional Office of Minerals Management Service) 12(2):1,3.

Fertl, D. and B. Lang. 1998. Marine mammal research in the Gulf of Mexico. MMS Today 8(1): 7.

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Deslarzes, K.J.P., ed. 1998. The Flower Garden Banks (Northwest Gulf of Mexico): Environmental Characteristics and Human Interaction. OCS Report MMS 98-0010. New Orleans: U.S. Dept of Interior, Minerals Management Service. (Contributor for sections on marine mammals and sea turtles)

Lang, W. and D. Fertl 2001. Introduction. Pages 1-7 in McKay, M., J. Nides, W. Lang, and D. Vigil. Gulf of Mexico Marine Protected Species Workshop, June 1999. U.S. Dept of the Interior, Minerals Management Service, Gulf of Mexico OCS Region, New Orleans, La. OCS Study MMS 2001-039.

Smultea, M. A., D. Fertl, D. J. Rugh, and C. Bacon. 2011. Summary of systematic bowhead surveys conducted in the U.S. Beaufort and Chukchi seas 1975-2008. Pp. 62-95 in Bowhead Whale Feeding Ecology Study (BOWFEST) in the western Beaufort Sea: 2010 annual report. A project provided to: Bureau of Ocean Energy Management, Regulation and Enforcement, Anchorage, Alaska. Submitted through: National Marine Mammal Laboratory, Seattle, Washington.

Department of the Navy. 2011. Marine mammal monitoring for the U.S. Navy's Hawaii Range Complex and Southern California Range Complex - Annual Report 2011. Department of the Navy, U.S. Pacific Fleet. Authors: M.A. Smultea, C. Bacon, D. Fertl, and K. Ampela.

#### In Prep:

Fertl, D. and T. Pitchford. Humpback whale (*Megaptera novaengliae*) occurrence in the Gulf of Mexico.

Whitt, A.D., T.A. Jefferson, D. Fertl, and D. Rees. An annotated checklist of marine mammals of Cuba.

#### **PRESENTATIONS:**

A total of 38 conference presentations.

Fulling, G.L., D. Fertl, K. Ampela, D. Engelhaupt, T.A. Jefferson, J.R. Mobley, Jr., and M.A. Smultea. 2011. An integrated approach by the U.S. Navy for protected marine species monitoring during military readiness exercises. National Association of Environmental Professionals 36<sup>th</sup> Annual Conference, Denver, Colorado, 26-29 April 26-29. (Abstract-talk)

Norris, J., G. L. Fulling, D. Fertl, and V. Whalon. 2010. Ambient noise measurements in the Knik Arm near the proposed Knik Arm crossing site. Cook Inlet Beluga Whale Science Conference, Anchorage, Alaska, 11-12 October. (Abstract)

Smultea, M.A., D.J. Rugh, and D. Fertl. 2010. Review of systematic surveys involving bowhead whales in the U.S. Beaufort and Chukchi seas 1975 - 2009. Alaska Marine Science Symposium, Anchorage, Alaska, 18-22 January (Abstract – poster).

Smultea, M.A., D. Fertl, G.A. Green, and R.A. Rowlett. 2010. Polar bear reactions to icebreakers. Alaska Marine Science Symposium, Anchorage, Alaska, 18-22 January (Abstract – poster).

Fertl, D., T. A. Jefferson, C. D. MacLeod, and T. D. Fagin. 2009. Common dolphins (*Delphinus* spp.) in the Eastern Atlantic Ocean: A critical review of distribution. 18<sup>th</sup> Biennial Conference on the Biology of Marine Mammals, Quebec City, Canada, 12-16 October (Abstract – poster).

Fertl, D., and T.A. Jefferson. 2007. Common dolphins (*Delphinus* spp.) are not common south of Cape Hatteras, nor in the Gulf of Mexico or Caribbean. 17<sup>th</sup> Biennial Conference on the Biology of Marine Mammals, Capetown, South Africa, 29 November-3 December (Abstract – poster).

Whitt, A.D., T.A. Jefferson, D. Fertl, and D. Rees. 2007. An annotated checklist of marine mammals of Cuba. 17<sup>th</sup> Biennial Conference on the Biology of Marine Mammals, Capetown, South Africa, 29 November-3 December (Abstract – poster).

Fulling, G.L., W. Hoggard, D. Fertl, K. Knight, C. Watterson, A. Kumar, and K.D. Mullin. 2006. Distribution of Molidae in the northern Gulf of Mexico, with preliminary abundance estimates for the ocean sunfish (*Mola mola*). 59<sup>th</sup> Annual Gulf and Caribbean Fisheries Institute Conference, Belize City, Belize, 6-10 November. (Abstract-talk)

Fertl, D., and G.L. Fulling. 2006. Interspecific interactions between marine mammals and sea turtles. American Society of Ichthyologists and Herpetologists, New Orleans, LA, 12-17 July. (Abstract - poster)

Fertl, D., and G.L. Fulling. 2005. Interspecific interactions between marine mammals and sea turtles. 16<sup>th</sup> Biennial Conference on the Biology of Marine Mammals, San Diego, CA, 12-16 December. (Abstract - poster)

Zoidis, A.M., M.A. Smultea, D. Fertl, A.J. Day, D. DenDanto, A.S. Ertl, J. Hayes, and A.D. Whitt. 2005. Can you hear me now? Social sounds and underwater behaviors of Hawaiian humpback whale (*Megaptera novaeangliae*) calves. 16<sup>th</sup> Biennial Conference on the Biology of Marine Mammals, San Diego, CA, 12-16 December. (Abstract - poster)

Fertl, D., and G.L. Fulling. 2005. Interspecific interactions between marine mammals and sea turtles. 33<sup>rd</sup> Conference of the European Association for Aquatic Mammals, Harderwijk, Netherlands, 11-14 March. (Abstract – poster)

Fertl, D., and G.L. Fulling. 2005. Interspecific interactions between marine mammals and sea turtles. 25<sup>th</sup> Annual Symposium on Sea Turtle Biology and Conservation, Savannah, GA, 18-22 January. (Abstract - poster)

Fertl, D. and S. Pomes. 2003. Occurrence and species diversity of cetaceans...on postage stamps. 15<sup>th</sup> Biennial Conference on the Biology of Marine Mammals, Greensboro, NC, 14-19 December. (Abstract - poster)

Fertl, D., T.A. Jefferson, A.N. Zerbini, and I.B. Moreno. 2001. A review of the distribution of the Clymene dolphin (*Stenella clymene*). 14<sup>th</sup> Biennial Conference on the Biology of Marine Mammals, Vancouver, B.C., 28 November – 3 December. (Abstract - poster)

Smultea, M.A., J.R. Mobley, and D. Fertl. 2001. Sperm whale (*Physeter macrocephalus*) reactions to small fixed-wing aircraft. 14<sup>th</sup> Biennial Conference on the Biology of Marine Mammals, Vancouver, B.C., 28 November – 3 December. (Abstract - poster)

Smultea, M.A., J.R. Mobley, and D. Fertl. 2000. Sperm whale (*Physeter macrocephalus*) responses to a fixed-wing aircraft. ACS Whales 2000 Conference, Monterey, CA, 17-19 November. (Abstract - poster)

Visser, I.N. and D. Fertl. 2000. Stranding of a New Zealand killer whale (*Orcinus orca*) and information on post-stranding sightings, including a probable boat strike of the individual. 14<sup>th</sup> European Cetacean Society Annual Conference, Cork, Ireland, 2-5 April. (Abstract - poster)

Fertl, D. and A. Landry. 1998. First record of a sharksucker (*Echeneis naucrates*) on a cetacean, with comments on previous reports of the whalesucker (*Remora australis*). Combined meeting of LA and MS chapters of the American Fisheries Society, Bay St. Louis, MS, 4-6 February. (Abstract - poster)

Fertl, D. and A. Landry. 1998. First record of a sharksucker (*Echeneis naucrates*) on a cetacean, with comments on previous reports of the whalesucker (*Remora australis*). 12th Biennial Conference on the Biology of Marine Mammals, Monaco, 20-24 January. (Abstract - poster)

Schiro, A.J, D. Fertl, L.P. May, G.T. Regan, and A. Amos. 1998. West Indian manatee (*Trichechus manatus*) occurrence in U.S. waters west of Florida. 12th Biennial Conference on the Biology of Marine Mammals, Monaco, 20-24 January. (Abstract-poster)

Fertl, D., L.T. Pusser, and J.J. Long. 1997. First record of an albino bottlenose dolphin (*Tursiops truncatus*) in the Gulf of Mexico, including a review of anomalously white cetaceans. European Association for Aquatic Mammals, Duisburg Zoo, Germany, 14-17 March. (Abstract - poster)

Fertl, D., L.T. Pusser, and J.J. Long. 1996. First record of an albino bottlenose dolphin (*Tursiops truncatus*) in the Gulf of Mexico, including a review of anomalously white cetaceans. American Cetacean Society Conference, San Pedro, CA, 8-11 November. (Abstract - poster)

Schiro, A., D. Fertl, and L. May. 1996. Manatee occurrence in the northwestern Gulf of Mexico. American Cetacean Society Conference, San Pedro, CA, 8-11 November. (Abstract - poster)

Fertl, D., A. Acevedo-Gutierrez, and F.L. Darby. 1995. Report of an attack by killer whales (*Orcinus orca*) on a carcharhinid shark, with a review of killer whale predation on elasmobranchs. 11th Biennial Conference on the Biology of Marine Mammals, Orlando, FL, 14-18 December. (Abstract - poster)

Weller, D.W., V.G. Cockcroft, B. Würsig, S.K. Lynn, and D.C. Fertl. 1995. Behavioral responses of bottlenose dolphins to remote biopsy sampling and observations of surgical biopsy wound healing. 11th Biennial Conference on the Biology of Marine Mammals, Orlando, FL, 14-18 December. (Abstract - poster)

Fertl, D. and S. Leatherwood. 1995. A review of cetacean interactions with trawls. NAFO/ICES Symposium - The role of marine mammals in the ecosystem, Dartmouth, Nova Scotia, 6-8 September. (Abstract - poster)

Fertl, D., A. Acevedo-Gutiérrez, B. Würsig, R.W. Baird, and T. Kieckhefer. 1995. Cooperative feeding in delphinids: possible costs, benefits, and causes. XX Reunion Internacional Para el Estudio de Los Mamíferos Marinos, La Paz, Mexico, 18-22 April. (Abstract - talk)

Jackson, M.A. and D.C. Fertl. 1995. Occurrence of river otters (*Lutra canadensis*) in Galveston. Texas Academy of Sciences, Waco, TX, March 3. (Abstract - poster)

Fertl, D. 1995. Occurrence, movements, and behavior of bottlenose dolphins (*Tursiops truncatus*) in association with the shrimp fishery in Galveston Bay, Texas. Texas Academy of Sciences, Waco, TX, March 3. (Abstract - talk)

Fertl, D. 1993. Occurrence, movements, and behavior of bottlenose dolphins (*Tursiops truncatus*) in association with the shrimp fishery in Galveston Bay, Texas. 10th Biennial Conference on the Biology of Marine Mammals, Galveston, TX, Nov. 12-15. (Abstract - talk)

Fertl, D. and S. Leatherwood. 1993. A review of cetacean interactions with trawls. XVIII Reunion Internacional Para el Estudio de Los Mamiferos Marinos, La Paz, Mexico, 5-7 May. (Abstract - talk)

Fertl, D. 1992. Cetaceans and trawls: The good, the bad, and the ugly. American Cetacean Society, Monterey, CA, 6-8 Nov. (Abstract - poster)

Fertl, D. 1992. The effects of shrimp fisheries on the ecology of bottlenose dolphins (*Tursiops truncatus*) in Galveston Bay, Texas. Texas Society of Mammalogists Conference, Junction, TX, Feb. 22. (Abstract - talk)

Fertl, D. 1991. The effects of shrimp fisheries on the ecology of bottlenose dolphins (*Tursiops truncatus*) in Galveston Bay, Texas. 9th Biennial Conference on the Biology of Marine Mammals, Chicago, IL, Dec. 5-9. (Abstract - poster)

Moyer, R.C., W.F. Schroeder, J. Taboada, D. Fertl, and W. Nyugen. 1987. Effect of higher plant hormones on phototaxis of the unicellular eukaryotic green alga, *Chlamydomonas reinhardtii*. Lost Pines Molecular Biology Conference, 20-22 Nov. (Abstract)

#### **GRANTS, SCHOLARSHIPS, CONTRACTS:**

- 1990 Contract with National Marine Fisheries Service  
\$500 grant from Cetacean Society International  
\$500 grant from Los Angeles chapter of American Cetacean Society  
\$987 grant from American Museum of Natural History  
Scholarship from International Women's Fishing Association
- 1991 National Marine Fisheries Service (contract renewed)  
\$500 grant from American Cetacean Society - National  
Scholarship from International Women's Fishing Association
- 1992 Scholarship from International Women's Fishing Association

#### **AWARDS:**

- 1993 John G. Shedd Aquarium Outstanding Student Award, 10th Biennial Conference on the Biology of Marine Mammals
- 1996 Spot Award (Team participation in preparation of educational poster about cetaceans of the Gulf of Mexico), Minerals Management Service
- 1996 Spot Award (Improvements in the marine mammal analyses for EIS's, combined with a very productive meeting with the Marine Mammal Commission to discuss their comments and concerns), Minerals Management Service
- 1997 Time Off Award (Ingenuity in suggesting the creation of teacher's packets to support the "Whales and dolphins of the Gulf of Mexico" and the "Islands of Life" posters prepared by MMS. Also in appreciation for design and writing of the "Whales and dolphins of the Gulf of Mexico - Teachers Companion"), Minerals Management Service
- 1998 Spot Award (Initiative in suggesting and creating the MMS publication titled "Whales and Dolphins of the Gulf of Mexico: A Teacher's Companion". The document is an excellent example of constructive Agency outreach), Minerals Management Service

1999 Department of Interior Unsung Hero Award - Regional MMS Award and Agency-wide MMS award (for public outreach regarding marine mammals). Gave speech on stage with President Clinton and Secretary Babitt.

**SPECIAL SKILLS:**

Photography, black and white photographic print and film processing, small boat handling (Coast Guard Boating and Seamanship Certified), PADI SCUBA certified (Advanced Open Water), fluent in conversational German

**MEMBERSHIPS:**

Society for Marine Mammalogy (1988-present)  
European Cetacean Society (1994-present)  
International Sea Turtle Society (2000-present)  
American Cetacean Society (Conservation Chair, 1997&1998) (member 1986-1998)  
Texas Marine Mammal Stranding Network (1995-2002)  
Louisiana Marine Mammal Stranding Network (1989-2000)  
International Bear Association (1998-2001)

3 November 2011

Dear Sir/Madam,

I was recently alerted to the situation surrounding the young female killer whale known as "Morgan." I have been made aware that she has been in captivity for more than 16 months, despite her extended family being identified acoustically. I understand the difficulty the Netherlands Government faced when presented with this young animal in need of help, and they are to be commended for rescuing the individual and starting her on her road to returning to her family.

I have been researching cetaceans for more than 15 years and my field of expertise is cetacean behavioral ecology and assessment of anthropogenic impacts to said species. I am an environmental consultant in the field of marine mammals. I have published scientific peer-reviewed manuscripts, as well as authored and co-authored both scientific and general public books and chapters in books regarding cetaceans.

With the research and technological advances that have been made in recent years - to both study and understand cetaceans - it does not make sense to commit this young female to a life in captivity. She has been identified as a member of the Norwegian population of killer whales, which were harvested extensively in the past (Christensen 1982, 1984). Given that 2,435 killer whales were caught in the North Atlantic during 1960-1979 (with 64% of these caught off Norway), such harvesting is likely to have had effects on reproduction and social behavior in the present Norwegian killer whale community (Vongraven & Bisther, 1995). The return of "Morgan" to the native population may very well have long-term conservation implications, since is a young female and could be expected to provide important reproductive input to the population. Additionally, females play an extremely important role in killer whale social organization, as a matrilineal-based society where genetically-related individuals feed, travel, and socialize for a long life-span (Deecke, Barrett-Lennard, Spong, & Ford, 2010; Matkin, Ellis, Olesiuk, & Saulitis, 1999; Whitehead, 1998).

In light of this information, I hope that the Netherlands Government will fulfil their commitment to her welfare and return her to her native waters. The rehabilitation and release plan provided to the Government, by the Free Morgan Foundation has obviously been carefully formulated. I am also aware that the Free Morgan Foundation has received numerous pledges of advice and help from at least 15 killer whale biologists, outside of their own Expert Board. This is a remarkable compilation of experts who truly have Morgan's welfare at heart. In the spirit of this collaboration and in the spirit of why "Morgan" was rescued in the first place, I too, would like to offer my services and contribution towards the scientific projects which should be conducted during her rehabilitation. I hope that the Netherlands Government will also see the benefits of such collaboration, and will determine that "Morgan" should be returned to Norway.

With Respect,



Dagmar Fertl  
Ziphius EcoServices

8112 Springmoss Drive  
Plano, Texas 75025 USA

Cited Literature:

- Christensen, I. (1982). Killer whales in Norwegian coastal waters. *Reports of the International Whaling Commission*, 32, 633-642.
- Christensen, I. (1984). Growth and reproduction of killer whales, *Orcinus orca*, in Norwegian coastal waters. *Reports of the International Whaling Commission, Special Issue 6*, 253-258.
- Deecke, V. B., Barrett-Lennard, L. G., Spong, P., & Ford, J. K. B. (2010). The structure of stereotyped calls reflects kinship and social affiliation in resident killer whales (*Orcinus orca*). *Naturwissenschaften*, 97, 513-518. doi: 10.1007/s00114-010-0657-z
- Matkin, C. O., Ellis, G. M., Olesiuk, P., & Saulitis, E. (1999). Association patterns and inferred genealogies of resident killer whales, *Orcinus orca*, in Prince William Sound, Alaska. *Fishery Bulletin*, 97(4), 900-919.
- Vongraven, D., & Bisther, A. (1995). Possible effects of previous catch on the present population of Norwegian killer whales (*Orcinus orca*). In A. S. Blix, L. Walløe & Ø. Ulltang (Eds.), *Whales, seals, fish and man* (pp. 177-179): Elsevier Press.
- Whitehead, H. (1998). Cultural selection and genetic diversity in matrilineal whales. *Science*, 282(5394), 1708 - 1711.





Connecting whales and people  
in the Pacific Northwest

To whom it may concern:

25 October 2011

I am a founder and president of Orca Network, an educational and advocacy organization based in Washington State, in operation since 2001 to bring about greater public awareness of orcas, locally and worldwide. Our organization contributes to field studies conducted by NMFS researchers, the Center for Whale Research and others, and communicates with thousands of people on a daily basis through our whale sightings reports and a variety of other educational programs.

I understand that a wild orca known as Morgan, from the Norwegian herring-eating population, may be put on permanent display in a marine park, rather than be gradually rehabilitated and eventually reintroduced to her natal community. Relocation of this orca to a sea pen in Norway would be far better for her health, welfare and longevity, and would be far more valuable for research purposes. It would be morally indefensible to place this orca in a concrete enclosure. Orcas are simply too wide-ranging, too large and are thoroughly adapted to living as members of complex inter-related social groups, and are unable to survive long in captivity. Indeed the mortality rates in captivity - about 8.5 years on average - show that survival in tanks is greatly impaired.

We believe Morgan should be rehabilitated and ultimately reunited with her family group. As we saw with Keiko, Morgan can be expected to regain good health in a sea pen, and as we saw with Springer, if she is united eventually with her extended family, she is likely to resume her life among them indefinitely.

As a research subject, beginning immediately Morgan should be tested for metabolic parameters and cardiovascular rates on a daily basis. This testing should be continued before, during and after her transport to a sea pen, and continued as long as possible. In this way her vital signs could be compared as she returns to normal functioning in open water, to gauge how confinement has affected those functions and parameters and to establish normal rates. Morgan's situation presents us with an invaluable opportunity to measure those rates and functions at various stages prior to, during and after return to a natural habitat, and could give us important information about orca metabolism.

Morgan's vocalizations have been matched to killer whales from Norway, but those calls should be recorded systematically now so they can be compared to her calls as she is returned to a natural setting, and again as she encounters her natal family. This would provide great insight into the social function of orca communications.

These are just a few of the possibilities for using this opportunity to learn from Morgan's situation, and to help her resume a normal life. We ask that all parties involved in Morgan's fate consider the value to her, to the scientific community and to public awareness, of Morgan's repatriation to her native habitat and her natural family, and not condemn her to confinement in a tank.

Sincerely,

Howard Garrett  
President, Orca Network

## Curriculum Vitae

Thomas Allen Jefferson, Ph.D.  
 5495 Camino Playa Malaga  
 San Diego, CA 92124 USA  
 (858) 278-4240 (tel.)  
 (858) 278-3473 (FAX)  
 Email: [Sclymene@aol.com](mailto:Sclymene@aol.com)

### PERSONAL

Birthdate- April 13, 1962  
 Marital status- married

### EDUCATION

September 1991 to May 1995- Texas A&M University, College Station, TX. Ph.D. in Wildlife and Fisheries Sciences received May 12, 1995.  
 August 1986 to May 1989- Moss Landing Marine Laboratories, Moss Landing, CA. M.Sc. in Marine Science received August 18, 1989.  
 September 1981 to March 1986- University of California, Santa Cruz, CA. B.A. in Biology received March 24, 1986.

### WORK EXPERIENCE

- Independent Researcher** May 1998 to present - Southwest Fisheries Science Center, NOAA Fisheries, National Oceanic and Atmospheric Administration. Conducting research on the population biology and conservation of small cetaceans, primarily in southeast Asia and the eastern North Pacific.
- Honorary Assistant Professor** July 2002 to present – University of Hong Kong. Co-advising a number of graduate students on marine mammal thesis projects.
- Foundation Co-Director** July 1996 to March 2001 - Ocean Park Conservation Foundation. Responsible for administration of OPCF activities, including implementation of the 11 projects in the OPCF Action Plan, and development of new projects.
- Research Associate** September 1995 to November 2002 - Ocean Park Conservation Foundation. Principal Investigator responsible for overseeing and coordinating a long-term research and monitoring program on humpback dolphins (*Sousa chinensis*) and finless porpoises (*Neophocaena phocaenoides*) in Hong Kong waters.
- Researcher/Consultant** May to June 1995- National Taiwan Ocean University, Marine Mammal Program. Responsible for training students and staff in marine mammal identification, survey methods, and line transect analysis.

- Naturalist/Researcher** March 1993 to August 1994- Amazon Dolphin Project, Oceanic Society Expeditions. Responsible for data collection and supervision of participants in research on Amazon River dolphins (*Inia geoffrensis*) and South American dolphins (*Sotalia fluviatilis*) in tributaries of the Amazon River in Peru.
- Visual Survey Leader** August 1992 to December 1994- GulfCet Program, Minerals Management Service-sponsored research project on distribution and abundance of cetaceans in the offshore waters of the northwestern Gulf of Mexico. Responsible for ship-based marine mammal survey data collection and analyses, and supervision of six-person visual survey team.
- Biological Technician** July to October 1993- National Marine Fisheries Service, Southwest Fisheries Science Center, La Jolla, CA. Responsible for observer training, data analysis, and coordination of marine mammal stranding program for San Diego County.
- Research Associate** July 1989 to July 1991- Marine Mammal Research Program, Texas A&M University, Galveston, TX. Duties included lab organization and supervision, equipment purchasing, cataloging and indexing of reprint collections, supervision of interns, and assistance with field work and data analysis for various research projects.
- Researcher/Instructor** June to July 1989- Spinner Dolphin Social Ecology course offered by The School for Field Studies on Kaua'i, HI. Duties included photo-identification, behavioral data collection, and theodolite-tracking of Hawaiian spinner dolphins (*Stenella longirostris*).
- Program Coordinator** January 1987 to May 1989- Moss Landing Marine Labs marine mammal stranding program. Recovery and biological examination of dead strandings, assistance in rescue of live strandings, and record-keeping were involved.
- Naturalist/Researcher** June to July 1988- Intersea Research studies of humpback whale (*Megaptera novaeangliae*) feeding behavior in southeast Alaska. Acted as naturalist aboard two research vessels, supervising data collection and giving slide presentations on marine birds and mammals.
- Biological Technician** July to December 1987- Southwest Fisheries Center's Tuna/Porpoise Program (NMFS, NOAA). Duties included marine mammal sighting surveys, collection of data on fishing activities of tuna purse-seiners, and biological examination of spotted and spinner dolphins (*Stenella attenuata* and *S. longirostris*).
- Biological Technician** May to August 1985 and 1986- National Marine Mammal Laboratory's Dall's Porpoise Program (NMFS, NOAA). Duties included sighting surveys for marine mammals in the northwestern North Pacific Ocean and Bering

Sea, observation of fishing activities aboard Japanese driftnet vessels, and dissection and collection of specimens from Dall's porpoises (*Phocoenoides dalli*). In 1986, selected as team leader, supervising two other observers.

**Research Assistant** January to March 1985 and 1986- Studies of northern elephant seals (*Mirounga angustirostris*) at Año Nuevo State Reserve, CA. Duties included visual censuses, tagging seals, assisting in weighing of pups, and photogrammetric measurement of seals.

**Research Assistant** June to September 1984- Behavioral observation, theodolite-tracking, and acoustic recording of wild killer whales (*Orcinus orca*) and Dall's porpoises in Johnstone Strait, British Columbia, Canada.

### TEACHING EXPERIENCE

*Observer Training Courses* (Ocean Park Conservation Foundation) - Training Coordinator, 1996-2002.

*Marine Mammal Survey Observer Training* (National Taiwan Ocean University)- Training Instructor, May-June 1995.

*GulfCet Marine Mammal Observer Training* (Texas A&M University)- Training Instructor (with S. Leatherwood), March 1992.

*Zoology* (Texas A&M University)- Teaching Assistant, Fall 1991.

*Marine Mammal Biology* (Texas A&M University at Galveston)- Substitute Instructor for B. Würsig, first half of Fall 1989 semester.

*Spinner Dolphin Social Ecology* (School for Field Studies, Kaua'i, HI)- Associate Instructor, Summer 1989.

*Marine Birds and Mammals* (Moss Landing Marine Labs)- Teaching Assistant, Spring 1989.

### SKILLS

Experienced in shipboard marine mammal sighting survey techniques (including use of 25X "big eye" binoculars), aerial surveys, small boat operation, crossbow biopsy sampling, theodolite-tracking, radio-tracking, 35-mm photography, acoustic recording, marine mammal dissection, dolphin tooth aging, mark-recapture analysis, and line transect analysis.

### PRIMARY RESEARCH INTERESTS

Population biology and conservation of small cetaceans; identification of diagnostic characters for marine mammal identification; ecology and stock discrimination of small cetaceans.

### GRADUATE STUDENT ADVISORY COMMITTEES

Isabel Beasley - Ph.D. thesis, James Cook University, Townsville, Australia (completed 2007).

Mark Cotter - Ph.D. thesis, University of Massachusetts, Dartmouth (currently in progress).

Samuel K. Hung - M.Sc. thesis, University of San Diego (completed 2000).  
Ph.D. thesis, University of Hong Kong (completed 2008).

Lawman Law - M.Sc. thesis, City University, Hong Kong (completed June 2001).  
 Dipani Sutaria - M.Sc. thesis, University of Massachusetts, Dartmouth (completed 2003). Ph.D. thesis, James Cook University, Townsville, Australia (completed 2010).

### REVIEWER FOR SCIENTIFIC JOURNALS

<i>Canadian Journal of Zoology</i>	<i>Scientific Reports of Cetacean Research</i>
<i>Marine Mammal Science</i>	<i>NOAA Technical Report NMFS</i>
<i>Mammal Review</i>	<i>Journal of the Marine Biological Assoc. U.K.</i>
<i>Raffles Bulletin of Zoology</i>	<i>Asian Marine Biology</i>
<i>Mammalia</i>	<i>Occasional Papers of the IUCN Species Survival Commission</i>
<i>Journal of Mammalogy</i>	<i>Journal of Zoology, London</i>
<i>Aquatic Mammals</i>	<i>European Research on Cetaceans</i>
<i>Animal Behavior</i>	<i>Marine Ecology Progress Series</i>
<i>Mammalian Species</i>	<i>Caribbean Journal of Science</i>
<i>Biotropica</i>	<i>African Journal of Marine Science</i>
<i>Pacific Science</i>	<i>South African Journal of Marine Science</i>
<i>Acta Zoologica</i>	<i>Environmental Management</i>
<i>Gulf of Mexico Science</i>	<i>Journal of Cetacean Research and Management</i>
<i>Behaviour</i>	
<i>Fishery Bulletin (U.S.)</i>	

### COMMITTEES AND BOARDS

American Cetacean Society, Galveston Chapter, Board of Directors (1990-1991).  
 IUCN Species Survival Commission's Cetacean Specialist Group (1993-present).  
 Hong Kong Marine Mammal Conservation Working Group (1995-2003).  
 Pacific Cetacean Group Advisory Board (1995-present).  
*Workshop to Develop a Conservation Action Plan for the Yangtze River Finless Porpoise, Ocean Park, Hong Kong*, Conference Convenor and Head of Local Organizing Committee (1997).  
 Wuhan Baiji Conservation Foundation Advisory Council (Honorary) (1997-present).  
 Ocean Park Conservation Foundation Scientific Advisory Committee (1997- 2002).  
 UNEP Regionally Based Assessment of Persistent Toxic Substances Project, Region VII (2001-present).  
 WWF US Cetacean Bycatch Task Force (2002-present).  
*Cetacean Systematics: Meeting the Needs of Conservation and Management*, Steering and Local Organizing Committee (2003-2004).  
 American Cetacean Society National, Scientific Advisory Panel (2003-present).  
 Hong Kong Dolphin Conservation Society, Honorary Advisor (2004-present).  
 Cetos Research Organization, Scientific Advisory Board (2006-present).  
 Eastern Taiwan Strait *Sousa* Technical Advisory Working Group (2007-present).  
 Society for Marine Mammalogy, Ad Hoc Committee on Taxonomy (2009-present).  
 ¡VIVA Vaquita! (a collaborative effort of Cetos Research Organization, ACS, and Save the Whales), Director, (2009-present).  
 TAMUG Bernd Wursig Marine Mammal Behavioral Ecology Lab, Research Associate (2011-present).

### MEMBERSHIPS

American Zoo and Aquarium Association (1995-2000); Ottawa Field-Naturalists' Club (1990-1993); Whale and Dolphin Conservation Society (1990-1994, 1997-2002); American Society of Mammalogists (1989-present); Society for Marine Mammalogy (1985-present); American Cetacean Society (1983-present).

### AWARDS AND HONORS

- 2008 Selected for inclusion in *Who's Who Among Executives and Professionals 2008-2009* (Honors Edition, 2009).
- 1998 Selected for inclusion in *Who's Who in the World* (16<sup>th</sup> Edition, 1999).
- 1997 Appointment as Honorary Assistant Professor in the Department of Ecology and Biodiversity, University of Hong Kong.
- 1994 Awarded the Max Coan Scholarship by the Trustees of the International Women's Fishing Association.  
Inducted into *Gamma Sigma Delta*, the Honor Society of Agriculture.
- 1989 Best Student Paper award for presentation at the Fourteenth Annual Mexican Marine Mammal Conference.
- 1986 Senior Thesis Honors awarded at University of California, Santa Cruz.

### MAJOR RESEARCH FUNDING ACQUIRED (>\$5,000)

- 2010 Misc. Funding Sources, "Photo-Documenting the Vaquita: The World's Most Endangered Cetacean." US\$30,037.

Marisla Foundation, "Aiding the Recovery the Vaquita: The World's Most Endangered Cetacean." US\$20,000.

- 2009 Ocean Park Conservation Foundation–Hong Kong, "Age Determination of Dolphins and Porpoises Stranded in Hong Kong and the Pearl River Estuary," US\$7,923.

Marisla Foundation, "Education and Community-Awareness to Help Save the Vaquita: The World's Most Endangered Cetacean." US\$15,000.

- 2008 Hong Kong Cetacean Research Project, "Biopsy Sampling of Indo-Pacific Humpback Dolphins in Hong Kong." US\$11,500.

Maunsell Consultants Asia, Ltd., "Assessment of the Tuen Mun-Chek Lap Kok Link on Dolphins in Hong Kong," US\$22,930.

Marisla Foundation, "Photo-Documenting the Vaquita: The World's Most Endangered Cetacean." US\$40,000.

Worldwide Fund for Nature (WWF-US), "Photo-Documenting the Vaquita: The World's Most Endangered Cetacean." US\$5,775.

- Whale and Dolphin Conservation Society, “Photo-Documenting the Vaquita: The World’s Most Endangered Cetacean.” US\$6,000.
- 2006 Environmental Resources Management (Hong Kong), “Impact Assessment Study of a Proposed Port Development at Northwest Lantau, Hong Kong.” US\$44,100.
- World Conservation Union (IUCN), “Red List Assessment Documentation for Small Cetaceans and Pinnipeds.” US\$15,000.
- 2005 Agriculture, Fisheries and Conservation Department, Hong Kong SAR Government, “Chinese White Dolphins in Hong Kong: Biopsy Sampling and Population Data Analysis.” US\$58,600.
- Environmental Resources Management (Hong Kong), “Impacts of a Liquefied Natural Gas Receiving Terminal and Associated Facilities on Cetaceans of Hong Kong.” US\$113,000.
- 2004 Hong Kong Dolphin Conservation Society, “Trial Biopsy Program on Indo-Pacific Humpback Dolphins in Hong Kong.” US\$12,000.
- 2002 Alfred Sloan Foundation (subcontract through Duke University, in cooperation with the National Ocean Partnership Program), “Digital Archival of Marine Mammal/ Bird/Turtle Data for OBIS.” US\$25,600.
- Agriculture, Fisheries and Conservation Department, Hong Kong SAR Government. “Monitoring of Chinese White Dolphins (*Sousa chinensis*) in Hong Kong Waters - Data Analysis.” US\$ 135,000.
- 2001 Agriculture, Fisheries and Conservation Department, Hong Kong SAR Government. “Monitoring of Chinese White Dolphins (*Sousa chinensis*) in Hong Kong Waters.” US\$ 111,475.
- 2000 Ocean Park Conservation Foundation, Hong Kong. “Long-term Conservation of Dolphins and Porpoises in Hong Kong Waters.” US\$ 134,600.
- 1999 Aviation Fuel Supply Consortium Ltd., Hong Kong. “North Lantau Dolphin Monitoring, Operational Phase.” US\$ 49,500.
- 1998 Agriculture and Fisheries Department, Hong Kong SAR Government. “A study on the conservation biology of the finless porpoise (*Neophocaena phocaenoides*) in Hong Kong.” US\$ 1,039,000.
- 1997 Civil Engineering Department, Hong Kong SAR Government. “Distribution and density of Indo-Pacific hump-backed dolphins in the East Lantau area: Potential effects of Container Terminal 10/11.” US\$ 45,000.

- 1996 Agriculture and Fisheries Department, Hong Kong SAR Government. “Multi-disciplinary research program on the Indo-Pacific hump-backed dolphin population.” US\$ 520,000.
- 1995 Provisional Airport Authority, Hong Kong. “Indo-Pacific hump-backed dolphins in Hong Kong waters: A program for collaborative research.” US\$ 208,000.

### CONFERENCE PRESENTATIONS

- 2009 Photo-identification of the World’s most endangered cetacean – The vaquita (*Phocoena sinus*). Paper presented at the Eighteenth Biennial Conference on the Biology of Marine Mammals, Quebec City, Canada, 12-16 October 2009.
- 2007 What beaked whale is that? Identification of ziphiids at sea and on the beach. Paper presented at the Seventeenth Biennial Conference on the Biology of Marine Mammals, Cape Town, South Africa, 28 November-3 December 2007.

Conservation of Indo-Pacific humpback dolphins *Sousa chinensis* in Hong Kong. Working paper presented at the Second International Workshop on Conservation and Research Needs of the Eastern Taiwan Strait Population of Indo-Pacific Humpback Dolphins, *Sousa chinensis*. Changhua City, Taiwan, 4-7 September 2007.

An updated review of the biology of the Indo-Pacific humpback dolphin *Sousa chinensis* (Osbeck, 1765). Working paper presented at the Second International Workshop on Conservation and Research Needs of the Eastern Taiwan Strait Population of Indo-Pacific Humpback Dolphins, *Sousa chinensis*. Changhua City, Taiwan, 4-7 September 2007.

- 2005 Strandings, mortality, and morbidity of Indo-Pacific humpback dolphins (*Sousa chinensis*) in Hong Kong, 1995-2004. Paper presented at the Sixteenth Biennial Conference on the Biology of Marine Mammals, San Diego, CA, USA, 12-16 December 2005.

An overview of the biology and status of the finless porpoise *Neophocaena phocaenoides*. Working paper presented at the 57<sup>th</sup> Annual Meeting of the International Whaling Commission, Ulsan, Korea, 30 May-10 June 2005.

- 2004 Systematics of coastal, tropical small cetaceans: A review. Paper presented at Cetacean Systematics: Approaches in Genetics, Morphology, and Behavior, La Jolla, CA USA, 28-29 April 2004.

A review of the biology of the Indo-Pacific humpback dolphin *Sousa chinensis* (Osbeck, 1765). Working paper presented at the First Workshop on Conservation and Research Needs of Indo-Pacific Humpback Dolphins, *Sousa chinensis*, in the waters of Taiwan. Wuchi, Taiwan, 25-27 February 2004.



- 2002      Abundance and trends in size of the Indo-Pacific humpback dolphin population in the Pearl River Estuary. P.R. China. Paper presented at SEAMAM II - Second International Conference on the Marine Mammals of Southeast Asia, Dumaguete, Philippines, July 22-23 2002.
- A review of the status of the Indo-Pacific humpback dolphin in China. Working paper presented at the 54<sup>th</sup> Annual Meeting of the International Whaling Commission, Shimonoseki, Japan, 27 April-9 May 2002.
- A preliminary analysis of geographic variation in skull morphology of humpback dolphins (genus *Sousa*). Working paper presented at the 54<sup>th</sup> Annual Meeting of the International Whaling Commission, Shimonoseki, Japan, 27 April-9 May 2002.
- 2001      The taxonomic status of the nominal dolphin species *Delphinus tropicalis* Van Bree, 1971. Paper presented at the Fourteenth Biennial Conference on the Biology of Marine Mammals, Vancouver, B.C., Canada, 29 November-3 December 2001.
- 2000      Review of knowledge on the global status of the finless porpoise (*Neophocaena phocaenoides*). Working paper presented at the 52<sup>nd</sup> Annual Meeting of the International Whaling Commission, Adelaide, Australia, 14-26 June 2000.
- Distributon and abundance of finless porpoises (*Neophocaena phocaenoides*) in waters of Hong Kong and adjacent areas of China. Working paper presented at the 52<sup>nd</sup> Annual Meeting of the International Whaling Commission, Adelaide, Australia, 14-26 June 2000.
- 1999      Growth and geographical variation of finless porpoises (*Neophocaena phocaenoides*) from the South China Sea: Preliminary observations. Paper presented at the Thirteenth Biennial Conference on the Biology of Marine Mammals, Maui, HI, 29 November-3 December 1999.
- 1998      Population biology of Indo-Pacific hump-backed dolphins (*Sousa chinensis*) in Hong Kong. Paper presented at the World Marine Mammal Science Conference, Monaco, 20-24 January 1998.
- Preliminary report on the ecology of the finless porpoise in Hong Kong waters. Paper presented at the 10<sup>th</sup> Annual International Symposium of the International Marine Biological Research Institute, Kamogawa, Japan, 31 January-1 February 1998.
- 1996      Distribution and abundance of Indo-Pacific hump-backed dolphins (*Sousa chinensis*) in Hong Kong: Preliminary estimates and future research. Paper presented at the Third International Conference on the Marine Biology of the South China Sea, Hong Kong, 28 October-1 November 1996.

Population ecology of the Indo-Pacific hump-backed dolphin (*Sousa chinensis*) in Hong Kong waters: a progress report through June 1996. Paper presented at Development of a Management Strategy for Chinese White Dolphins: A Colloquium, Hong Kong, 1-3 July 1996.

Potential acoustic methods of reducing marine mammal/fishery interactions: what have we learned so far? Paper presented at the Workshop on Acoustic Deterrents, Seattle, WA, 20-22 March 1996.

- 1995 Estimates of abundance of cetaceans in offshore waters of the northwestern Gulf of Mexico, 1992-1993. Paper presented at the Eleventh Biennial Conference on the Biology of Marine Mammals, Orlando, FL, 14-18 December 1995.

Small cetaceans of Vietnam: a preliminary checklist. Paper presented at the Symposium on the Biology and Conservation of Small Cetaceans of Southeast Asia, Dumaguete, Philippines, 26 June 1995.

An introduction to estimating cetacean abundance from shipboard surveys: theory, field methods, and analysis techniques. Paper presented at the Third Symposium on Cetacean Ecology and Conservation, Taipei, Taiwan, 15-16 June 1995.

Cetacean conservation worldwide: the activities of the IUCN Cetacean Specialist Group and the Ocean Park Conservation Foundation. Paper presented at the Third Symposium on Cetacean Ecology and Conservation, Taipei, Taiwan, 15-16 June 1995.

Registros historicos de cetaceos de la costa del Golfo de Mexico. (In Spanish). Paper presented at the XX Reunion Internacional para el Estudio de los Mamiferos Marinos, La Paz, B.C.S., Mexico, 18-22 April 1995.

- 1994 Historical overview of cetaceans in the Gulf of Mexico. Paper presented at the Gulf of Mexico Minerals Management Service Information Transfer Meeting, New Orleans, Louisiana, November 15-17, 1994.

- 1993 Biology of the Clymene dolphin (*Stenella clymene*) in the Gulf of Mexico. Paper presented at the Tenth Biennial Conference on the Biology of Marine Mammals, Galveston, TX, November 11-15, 1993.

- 1991 A review of interactions between porpoises and gillnets. Paper presented at the Ninth Biennial Conference on the Biology of Marine Mammals, Chicago, IL, December 5-9, 1991.

Cetacean detection and responses to fishing gear. Paper presented at the Sensory Systems and Behavior of Aquatic Mammals International Symposium, Moscow, U.S.S.R., October 16-22, 1991.

- 1990 Harbor porpoise mortality in the Monterey Bay halibut gillnet fishery, 1989. Paper presented at the IWC Symposium on Mortality of Cetaceans in Passive Fishing Nets and Traps, La Jolla, CA, October 20-21, 1990.
- A review of killer whale interactions with other marine mammals: Predation to co-existence. Paper presented at the Third International Orca Symposium, Victoria, B.C., Canada, March 9-12, 1990.
- 1989 Observations on the behavior and distribution of Dall's porpoise in the Monterey Bay area, California. Paper presented at the Eighth Biennial Conference on the Biology of Marine Mammals, Monterey, CA, December 7-11, 1989.
- Visual displays for communication in cetaceans. Paper presented at the Fifth International Theriological Congress, Rome, Italy, August 22-29, 1989.
- Indicadores externos del sexo y la categoria de edad en la marsopa de Dall. (In Spanish). Paper presented at the XIV Reunion Internacional Para el Estudio de los Mamiferos Marinos, La Paz, B.C.S., Mexico, March 28-31, 1989.
- 1987 External indicators of age and sex in Dall's porpoise (*Phocoenoides dalli*). Paper presented at the Seventh Biennial Conference on the Biology of Marine Mammals, Miami, FL, December 5-9, 1987.
- 1985 Behavior and ecology of Dall's porpoise (*Phocoenoides dalli*) in the Johnstone Strait, British Columbia. Paper presented at the Sixth Biennial Conference on the Biology of Marine Mammals, Vancouver, British Columbia, Canada, November 22-26, 1985.

#### ELECTRONIC MEDIA

- 1996 **Jefferson, T. A.**, S. Leatherwood, and M. A. Webber. *Marine Mammals of the World*. CD-ROM, ETI Multimedia Interactive Software (Macintosh and PC Versions 1.0).

#### EDITED VOLUMES

- 2010 **Jefferson, T. A.** (guest ed.). Porpoises in Peril: The Vaquita and Its Relatives. *Whalewatcher (Special Issue)* 39(1), 33 pp.
- 2004 **Jefferson, T. A.** (guest ed.). Biology and Conservation of Humpback Dolphins (*Sousa* spp.). *Aquatic Mammals* 30(1) (*Special Issue*), 207 pp.
- 2002 **Jefferson, T. A.** and B. D. Smith (guest eds.). Facultative Freshwater Cetaceans of Asia: Their Ecology and Conservation. *Raffles Bulletin of Zoology, Supplement* No. 10, 187 pp.

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2 November 2011

RE: Freedom for Morgan

To Whom It May Concern,

I am a marine mammal biologist who has been studying these animals since 1983, when I was an undergraduate. My main interests are the development of marine mammal identification aids, and the systematics and population ecology of the more poorly-known species of dolphins and porpoises. Essentially all of my work for the past 28 years has been related to conservation and management of marine mammals threatened by human activities. I have been involved in a number of field studies of killer whales (*Orcinus orca*) and feel I am quite knowledgeable about these animals.

I know of Morgan's story. The history of well-documented cases of killer whale releases, translocations and reintroductions into the wild provides a good background to use with Morgan. I believe that releasing Morgan into the wild to be with the natal pod is a good option, and I would support efforts to do this, as long as it was scientifically documented.

In my opinion, we have the knowledge to do this right, and to maximize the chances of success of such an operation with Morgan. I strongly urge you not condemn this whale to a life in captivity.

Best wishes,

Dr Thomas A. Jefferson, Ph.D.  
Marine Mammal Biologist

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## **EDUCATION**

B.A. in Biology, University of California, Santa Cruz (1974)  
M.S. in Zoology, University of Alaska Fairbanks (1980)

## **PROFESSIONAL EXPERIENCE**

### **Executive Director, North Gulf Oceanic Society, Homer, Alaska, (1982-present)**

Supervise and conduct research on cetaceans, primarily killer whales and humpback whales, oversee stranding network and educational operations, operate and outfit research vessels. Maintain collaborations with numerous institutions and oversee fiscal operations of NGOS.

### **Adjunct faculty, University of Alaska, Kenai Peninsula College, Kachemak Bay Campus, Homer, Alaska (1999-present)**

Teaching of marine mammal classes and guest lectures on marine topics. Participation in elder hostel program.

### **Commercial Fisherman, Gulf of Alaska, Alaska (1977-1997)**

Outfitting and operation of commercial fishing vessels harvesting, salmon, herring and various species of crab. Participation on boards of various fishing organizations.

## **RELATED EXPERIENCE**

Mr. Matkin has conducted research on marine mammals in southern Alaska since 1977. He completed work on harbor seals and Steller sea lions and their interactions with fisheries in 1977-79 leading to an M.S. degree. He initiated photo-identification work of killer whales and humpback whales in Prince William Sound in 1977. Since 1982 he has worked as executive director of the North Gulf Oceanic Society, acted as principal investigator on numerous contracts from the National Marine Mammal Laboratory, National Marine Fisheries Service; the U.S. Fish and Wildlife Service; Sea Grant Marine Advisory Program; Alaska Council on Science and Technology, U.S. Marine Mammal Commission; Hubbs Sea World Research Institute, the *Exxon Valdez* Trustee Council, the North Pacific Universities Marine Mammal Research Consortium and the Alaska Sea Life Center. He has directed the NGOS long-term photo-identification project examining killer whale population dynamics in Alaska since 1984. He has conducted population/distribution/genetics research on humpback whales from southeast Alaska to the Aleutian Islands and western Alaska, most recently as part of the SPLASH program. He has specialized in biopsy sampling of various cetaceans including killer whales, humpback whales, fin whales and sperm whales. Using the biopsy sampling technique he has investigated population genetics and environmental contaminant levels in killer whales and humpback whales, and most recently, feeding habits using stable isotopes and lipid/fatty acids. With collaborators he has developed small telemetry packages for remote attachment to killer whales and other cetaceans and applied ARGOS satellite systems to tracking killer whales. He directed work for the past 20 years (1989-present) contracted by the *Exxon Valdez* Oil Spill Trustee Council and National Marine Fisheries Service assessing the long-term impacts of the *Exxon Valdez* Oil Spill on killer whales. He currently supervises a killer whale research program that extends from southeastern Alaska to the Eastern Aleutians. He has participated in marine mammal stranding work since 1986 as a designated agent of the National Marine Fisheries Service, providing field response and reports. Recently he has reviewed the status of the Cook Inlet beluga whale and provided recommendations to the National Marine Fisheries Service and he is the scientific reviewer for the Eagle River Flats beluga studies.

## MEMBERSHIPS

**Alaska Scientific Review Group** (Advising the National Marine Fisheries Service on marine mammal stock issues)

**Society for Marine Mammalogy** (Active group of Marine Mammal Scientists)

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To whom it may concern:

23 October 2011

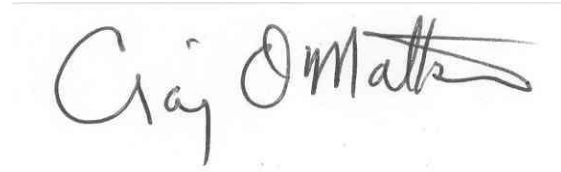
I am a research biologist who has studied wild killer whales for over thirty years, primarily in Alaskan waters. Our research group has worked on population dynamics, genetics, acoustics, feeding habits and behavior of killer whales from the Bering Sea/Aleutian Islands to southeastern Alaska. I am very concerned at learning a wild killer whale from the Norwegian population, is slated to be put in an oceanarium, rather than be eventually repatriated to the wild. Keeping the animal in a sea pen, as was done with Springer in British Columbia, Canada makes much more sense both from an ethical standpoint and a research standpoint. It is really completely unethical to remove this animal from the wild and maintain it in a small concrete tank for the rest of its days. Whether it does or does not survive in the wild in the long run is beside the point. Wild killer whales are too large, too dependent on long range movement, and on habitat diversity to be confined in that manner indefinitely, and as we saw with Keiko, once held in a concrete enclosure for long enough, they stand no chance of successful repatriation to the wild. Lets move Morgan toward rehabilitation and reunification with next of kin. As we saw with Springer, if she is not held in an oceanarium, can be united eventually with related whales, she stands a good chance of ultimate wild survival.

While she is held in the sea pen, a number of research endeavors can be launched that may provide some unique data from a wild killer whale after released, as well as important information while she is captive. I am very interested in looking at metabolic rates in wild killer whales, but without a captive whale that can be properly instrumented before release, it is essentially impossible to get this data. Metabolic information from captive whales does not really tell us about the behavioral adaptations that wild whales are likely to use to conserve energy and reduce metabolic costs. Instrumented studies of metabolic rate both while captive and thereafter would be quite insightful and help us come to a better idea of food consumption rates (predation) in the wild and how they differ from the captive situation. The metabolic rates of wild whales are unknown and highly debated due to their direct bearing on the impact of killer whales on their prey. There are a host of other types of studies that could be started in captivity and potentially continued in the wild.

The fact that acoustics has given us a very clear idea of her closest relatives, makes the possibility of successful repatriation even greater. This is a golden opportunity to take the lessons learned from the success with Springer and take it a step further. I am very hopeful that this wild animal will not be

confined to a tank, but will contribute to scientific study of wild killer whales and eventually live the life of a wild whale.

Sincerely,

A handwritten signature in black ink, reading "Craig Matkin". The signature is written in a cursive style with a horizontal line extending from the end of the name.

Craig Matkin, Executive Director

31 October 2011

To the Free Morgan Foundation,

RE: "MORGAN" the killer whale and her potential for research.

I am sending you this letter in support of the rehabilitation and release of the killer whale (*Orcinus orca*) currently held in captivity in the Netherlands.

I have researched killer whales in the wild, primarily in the waters of Glacier Bay, Alaska, for more than 26 years. The focus of my research is transient killer whale predation trends. In my role as a researcher and whale biologist, I see the case of "MORGAN" as a prime opportunity for the advancement of our knowledge about this species. Killer whales are an apex predator in the marine environment and they are instrumental as indicator species, yet for many aspects of their ecology our knowledge is woefully scant.

It is my understanding that Morgan's DNA has indicated that she is from either Norwegian or Icelandic stock and that matches to her calls have indicated that she is from either P or NP pods (or closely related to these groups) from Norway. Given the success of the reintroduction of the killer whale known as "SPRINGER" and to a lesser extent the success of the reintroduction of the killer whale known as "KEIKO" it seems only logical, given that Morgan's origins are known, that she is rehabilitated and returned to her native waters.

There are many issues which killer whales, as a species, have to face which are having an impact on their conservation. *Inter alia* this is acoustic pollution, chemical pollution, over-fishing of their food sources and harvesting. During the rehabilitation of Morgan, it could be possible to investigate ways in which some of these issues could be mitigated – to the advantage of not only Morgan and the Norwegian killer whales, but also for killer whales around the world. Furthermore, the Norwegian stock of killer whales has been harvested in the past, and therefore returning Morgan to this population would be a step forward for the conservation of this population. Given that female killer whales are known to live for decades, a young female such as Morgan could become an integral part of the breeding stock.

However, if integration is not possible, then I believe that long-term care may be necessary for Morgan. This could be as simple as leaving her to swim where she wished and only providing her provisioning (as was done for Keiko near the end of his life), but may also extend to include a part-time sea-pen where she is housed and perhaps taken on 'boat-swims' – allowing her to accompany a research vessel and collect data – as was done for a killer whale off Hawai'i with the USA government and for Keiko in Iceland.

There are clear examples of displaced orca integrating into extended families (or possibly even into groups which are not family), such as the Norwegian orca "STUMPY" who was seen to be provided fish by the other orca. It is important that Morgan is given her chance to integrate back with her extended family. She does not belong in an artificial and human control entertainment park, where she will be used to breed orca to sustain a profit-making company. She belongs back in her native waters of Norway.

Sincerely,

Dena Matkin

North Gulf Oceanic Society, PO Box 22, Gustavus, Alaska 99826, (907) 697-2277



1<sup>st</sup> November 2011

Dear Ingrid,

We are writing to you in support of your campaign to have Morgan go to a sea-pen in Norway than to be shipped to Loro Parque in Spain for release to a Dolphinarium, as is being currently debated in the courts of Netherland. It appears that through information collected about Morgan, particularly her acoustic associations with wild killer whale groups in Norway and current health, that she would have a high chance of rehabilitation and even return to her natal group. In addition there is a clear opportunity for major advances in our understanding of wild killer whale biology and behaviour during her rehabilitation process and subsequent monitoring post release, which would certainly improve survivability chances for other stranded and compromised killer whales in the future. This includes the tracking of her movements and other methods which will provide measures of successful re-introduction to the wild.

Kind regards,

Margie Morrice and David Donnelly  
Australian Orca Database (AOD, [www.ozorcas.com](http://www.ozorcas.com))



October 30, 2011

**Raincoast Research Box 399, Sointula, B.C. V0N 3E0 Canada**

To Whom it May Concern:

I am a biologist who studied killer for 20 years and I am now working to protect their habitat and food source in British Columbia, Canada. Everything we have learned about these whales suggests a highly-intelligent creature who places social contact with kin above all else. I began my work studying whales in captivity and saw that captivity was not only disturbingly cruel, but also that it damaged our children's vision of humanity's role on this planet. I watched children trying to throw popcorn down their blowholes, and argue as to whether they were real or not. They thought themselves supreme over these magnificent creatures. This was not education it was perversion.

In a world where we are routinely horrified by acts of violence, the opportunity to give young Morgan a chance at freedom, family and a good life is something people want and need far more than another whale dying in a circus.

I was there when Springer went free. It drew together two countries and thousands of people.

Releasing a whale is a symbolic gesture of intelligence on our part, recognition of the value of life. It is an immense opportunity to learn about what whales are, how they express themselves and the ability for humanity to be humane.

Thank you for considering the opportunity to put Morgan back where she belongs and make something right that was wrong.

Alexandra Morton  
Director



Fisheries  
and Oceans

Pêches  
et Océans

Pacific Region

Nov 1, 2011

Dear Sir/madam:

I am writing to express my concern regarding the current and future health and well-being of *Morgan*, the rehabilitated killer whale currently housed in the *Dolfinarium Harderwijk*, The Netherlands.

This whale was saved from what appears to have been near-certain death when it was first captured in the coastal waters off the Netherlands in June 2010. Its subsequent successful rehabilitation is a testament to the dedication and professionalism of the attending veterinary and animal care staff.

However, this rehabilitation now appears to be more than complete, and the animal appears to be in excellent health. This, in my view, is unlikely to continue should the animal continue to be held indefinitely at *Harderwijk*, or be transferred to another facility. Past records show that killer whales do not thrive in captivity, where they lack social opportunities, face health problems associated with poor water quality and disease, and suffer from ill health associated with stress, condition and nutrition.

While the release of a rehabilitated killer whale appears on the surface to be a worthy enterprise, especially in light of the many problems it would likely face in captivity, a decision to release also entails risks. These risks may be to the individual itself, or to the receiving population.

Firstly, the individual may face physical or psychological trauma associated with transport, husbandry, training, and/or reintroduction efforts. The individual upon release may be harmed or killed by human interactions, such as ship strikes. While such risks can be reduced by the adoption of appropriate protocols, there are attendant and unmanageable risks associated with life in the natural environment, such as starvation or disease. I do not comment further on the last point, as such is the way of the natural world.

Secondly, the release of *Morgan* could expose the receiving population of killer whales to risks. Of particular concern would be the acquisition by *Morgan* of an infectious pathogen in captivity which might then be transmitted upon release to other wild killer whales. This second category of risk is of course a greater concern as this could present a conservation threat to a wild population of whales.

Canada

Both of these risk categories can be rigorously evaluated in order to provide decision makers with a defensible, low-risk decision protocol. There is never a guarantee of a successful outcome, but a series of well-documented cases of killer whale releases, translocations and reintroductions around the world provides a significant amount of technical, logistical and scientific guidance for the current case with *Morgan*. In my view, there is ample experience to generate a solid release framework and decision tree, and unlike many other captive killer whales, *Morgan* appears to be an excellent candidate for release.

As Head of the Veterinary Panel which oversaw the health and disease risks associated with two previous killer whale translocation cases in British Columbia (L98 *Luna* and A73 *Springer*), I would be pleased to provide advice for *Morgan*. The decision and screening protocols that we used in these cases may serve to complement those that currently exist for *Morgan*.

A decision to release a captive cetacean is not an easy one. *Morgan* may ultimately prove to not be releasable, or may not survive in the wild. However, the alternative (captivity) defies reasonable scientific scrutiny and will expose *Morgan* to grave risks and to the likelihood of a shorter lifespan than expected in the wild.

In my view, science possesses the tools to minimize release-associated risks to the individual (*Morgan*) or to the receiving population of killer whales, and to maximize the chances of success of such an operation.

I remain open for advice on release protocols (health and disease) as well as for research opportunities that may arise during the future (toxicology, health).

Sincerely,

A handwritten signature in black ink, appearing to read 'P. Ross', with a stylized flourish at the end.

Peter S. Ross  
Marine Mammal Toxicologist  
Institute of Ocean Sciences

[Peter.s.ross@dfo-mpo.gc.ca](mailto:Peter.s.ross@dfo-mpo.gc.ca)

**Eva Lucia Saulitis**  
**2030 Mary Allen Ave.**  
**Homer, Alaska 99603**

## **Education**

~M.F.A., Creative Writing, University of Alaska, Fairbanks, 1999  
~M.S., Marine Biology, University of Alaska, Fairbanks, 1994  
~B.S., Fish and Wildlife Biology, SUNY College of Environmental Science and Forestry, Syracuse, NY

## **Recent Employment**

~Associate Professor, Low-Residency MFA Program, University of Alaska, 2008-present  
~Faculty, Kachemak Bay Writers' Conference, Homer, Alaska, 2002-present  
~Adjunct Professor, English and Creative Writing, Kenai Peninsula College, 1999-present  
~Research Biologist, North Gulf Oceanic Society, Homer, Alaska, 1987-present

## **Creative Non-Fiction Publications**

~ "Black Friday Invitation," (*Connotations*, Spring 2009)  
~ "Wondering Where the Whales Are," in *Crosscurrents North: Alaskans on the Environment*, ed. by Anne Coray and Marybeth Holleman, University of Alaska Press, 2008  
~*Leaving Resurrection* (memoir), Boreal Books/Red Hen Press, 2008  
~Contributor to *Homeground: Language for an American Landscape*, ed. by Barry Lopez, Trinity University Press, 2007  
~ "Letter to Emily" (*Connotations*, Spring 2007)  
~ "Crossing the Entrance" (*Northwest Review*, January 2002)  
~ "And Suddenly Nothing Happened" (*Connotations*, Spring 2001)  
~ "Into the Wilderness" (*Quarterly West*, Fall 2000)  
~ "Walking on Carlson Lake With Bill" (*Under Northern Lights*, Ed. by Frank Soos and Kes Woodward, University of Washington Press, 2000)  
~ "Leaving Resurrection Bay" (*Prairie Schooner*, Fall 1999; reprinted in *American Nature Writing 2000*, Oregon State University Press, ed. by John Murray)  
~ "Ghosts of the Island" (*Prairie Schooner*, Fall 1998)  
~ "The Burden of the Beach" (*American Nature Writing 1996*, ed. by John Murray, Sierra Club Books, reprinted in *Intimate Nature: The Bond Between Women and Animals*, ed. by Linda Hogan, Deena Metzger and Brenda Peterson, Fawcett-Columbine)

## **Scientific Publications**

Saulitis, E., C. O. Matkin and F.H. Fay. 2005. Vocal repertoire and acoustic behavior of the isolated AT1 killer whale subpopulation in Southern Alaska. *Canadian Journal of Zoology* 83: 1015-1029.



Saulitis, E.L., C.O. Matkin, K. Heise, L. Barrett Lennard, and G.M. Ellis. 2000. Foraging strategies of sympatric killer whale (*Orcinus orca*) populations in Prince William Sound, Alaska. *Marine Mammal Science* 16(1):94-109.

Matkin, C.O., E.L. Saulitis, G.M. Ellis, P. Olesiuk, J. Rice. 2008. Ongoing population-level impacts on killer whales *Orcinus orca* following the Exxon Valdez oil spill in Prince William Sound, Alaska. *Marine Ecological Progress Series* 356: 269-281.

Matkin, C.O., Ellis, G.M., Saulitis, E.L., Barrett-Lennard, L.G., & Matkin, D. 1999. *Killer Whales of Southern Alaska*. North Gulf Oceanic Society, Homer, Alaska.

Matkin C.O., Saulitis E.L. 1994. Killer Whale (*Orcinus orca*) Biology and Management in Alaska, NGOS Report, prepared for the Mar. Mamm. Comm., Contract Number T75135023.

Scheel, D., Matkin, C.O., Saulitis, E.L. 2001. Distribution of killer whale pods in Prince William Sound, Alaska 1984-1996. *Marine Mammal Science*, 17(3):555-569.

### **Poetry Publications**

- ~"hydro-ax" (*Ice-Floe*, Winter 2003)
- ~"Married Couple, Singing" (*Alaska Quarterly Review*, Summer 2004)
- ~"Before the Grace of You Go I" "Husbandry" (*Ice-Floe*, Winter 2004)
- ~"Love, Be With Me When I Die" (*Anchorage Daily News*, Spring 2005)
- ~"What Endures" Alaska State Arts web-site (Spring, 2005) and Ice-Floe (Summer 2006)
- ~"You Darkness," "If Only the Mind" (*Crazyhorse*, Summer 2005)
- ~"It Goes Out: A Prayer" (*Cimarron Review*, Fall 2005)
- ~"Many Ways to Say It" (*Carnet de Route*, Fall 2005)
- ~"On the Continuum of Beauty," "Memory is All" (*Seattle Review*, Spring 2006)
- ~"Prayer," "Sky," (in *Kachemak Bay*, Homer Foundation, 2006)
- ~"Facing the Window," (*Anchorage Daily News*, April 2006)
- ~"Naturalist's Prayer," Alaska State Arts Council web-site (Spring, 2006)
- ~"It Begins in Ice" (*Alaska Quarterly Review*, Fall 2006)
- ~"Her Picture Postcards, 1944" (*Kalliope*, Fall 2006)
- ~"What Endures" (*Ice-Floe*, Fall 2006)
- ~"March 21, 2001" (*Sow's Ear Poetry Review*, Fall 2007)
- ~"Heaven and the Fallen World," "Song of the Jealous Bird, (*Alaska Quarterly Review*, Fall, 2009)

### **Awards, Grants and Fellowships**

- ~Finalist, Fore Word Non-Fiction Book Prize, 2009
- ~Nomination, Orion Book Award, 2009
- ~Nomination, *Best New Poets*, 2007
- ~Rasmuson Individual Artist Grant, 2007

- ~Residency Fellowship, Ventspils House International Writers and Translator's Center, Ventspils, Latvia, March 2007, April-May 2009
- ~Finalist, *Crazyhorse* Poetry Prize, 2006
- ~Finalist, 2002 Creative Nonfiction Book Prize, Tupelo Press
- ~Connie Boochever Creative Writing Fellowship, Alaska State Council on the Arts, 2002-2003
- ~Resident Creative Writing Fellow, The Island Institute, Sitka, Alaska, January 2001
- ~The Isaak Dinnessen Non-Fiction Award, The Writer's Workshop, Durham, North Carolina, 2000
- ~The Henry McCracken Non-Fiction Award, University of Alaska, 1999

### **Public Readings and Seminars**

- ~Panelist, Reading of Alaskan Writers, Non-Fiction Now Conference, Iowa City, Iowa, November 2010
- ~Reading with Miranda Weiss, River City Bookstore, Soldotna, Alaska, May 2009
- ~Presenter, Exxon Valdez Oil Spill Trustee Council 20<sup>th</sup> Anniversary, January 2009
- ~Visiting Writer, Public Reading, University of Alaska Fairbanks Creative Writing Department, January 2009
- ~Visiting Writing, Public Reading, Fredonia State University Creative Writing Department, January 2009
- ~Public Reading with Peggy Shumaker, Volcano Arts Center, Volcano, Hawaii, January 2008
- ~National Poetry Month Reading with Liz Bradfield and Derick Burleson, Title Wave Books, Anchorage, Alaska, April 2008
- ~Alaska Book Festival, Panelist and Reader, June 2008
- ~Public Reading, Bunnell Street Gallery, Homer, Alaska, March 2008
- ~Public Reading, Ruskin Art Club, Los Angeles, CA, March 2008
- ~Public Reading, Venice Grind, Venice Beach, CA, March 2008
- ~Artist in the Schools, Nome, Alaska, February 2008
- ~*Alaska Quarterly Review* 25<sup>th</sup> Anniversary Reading, Nome, Alaska, February 2008
- ~Reading with Peggy Shumaker, Jennifer Brice, Wells College, Aurora, NY, February 2008
- ~Associated Writing Programs, panelist and reader, January 2008
- ~Public Reading, Red Hen Press Authors, Cornelia Street Café, NYC, January 2008
- ~Public Reading with Peggy Shumaker, Colgate University, January 2008
- ~Public Reading, Northern Lights Reading Series, Fairbanks, Alaska, December 2007
- ~Public Reading and Book Signing, Bunnell Street Gallery, Homer, Alaska, November 2007
- ~*Alaska Quarterly Review* 25<sup>th</sup> Anniversary Reading, Homer, Alaska, October 2007
- ~Kachemak Bay Writers' Conference Reading with James Stevens and others, June 2006, Homer, Alaska
- ~Poetry reading/workshop with Peggy Shumaker, YWCA celebration of Alaska women writers, September 2006
- ~Homer Public Library grand opening reading of local writers' works in progress, with Nancy Lord, Tom Kizzia and others, September 2006

- ~“Writing the Body,” poetry workshop, Bunnell Street Gallery, March 2006, Homer, AK
- ~“Image Meets Poem,” with Asia Freeman, Homer Council on the Arts Sunday Seminar Series, September 2005, Homer, AK
- ~Kachemak Bay Writers’ Conference Reading, June 2006, Homer, AK
- ~Kachemak Bay Writers’ Conference Faculty Reading, 2005, Homer, AK
- ~Title Wave Bookstore, National Poetry Month Reading with Arlitia Jones and Anne Caston, April 2005, Anchorage, AK
- ~Fireside Bookstore Reading with Arlitia Jones, April 2005, Palmer, AK
- ~Bunnell Street Gallery Reading with Molly Lou Freeman, July 2004, Homer, AK
- ~Kachemak Bay Writers’ Conference Faculty Reading, 2004, Homer, AK
- ~Kachemak Bay Writers’ Conference Faculty Reading, 2003, Homer, AK
- ~Homer Bookstore Reading with Tracy Philpot for National Poetry Month, April 2001
- ~Bunnell Street Gallery Reading with Wendy Erd, Fall 1999, Homer, AK

Oct 30, 2011

**TO WHOM IT MAY CONCERN, RE Morgan THE KILLER WHALE**

I have recently become aware of the situation involving Morgan a female killer whale who was taken into captivity under the auspices of a rehabilitation and release permit. I am a research biologist, based out of Homer, Alaska and I have researched wild killer whales for over 20 years. I have published scientific articles regarding this species, presented findings at conferences and authored / co-authored books which focus on killer whales.

It was with great unease that I heard that Morgan was to be shipped to an entertainment park in Spain, which has concrete tanks for killer whales. These facilities do nothing to address the physical or mental requirements of killer whales and invariably the animals lead stressful lives which are dramatically shortened compared to their life-spans in the wild. Although such facilities often purport to provide education to their paying visitors – the focus is clearly on entertainment and little, if any, educational material is typically presented. This lack of educational material has been demonstrated scientifically (Marino et al., 2010).

Furthermore, these facilities often promote 'research' as their justification. Although in some instances husbandry techniques are the focus towards increasing the longevity of these animals in captivity (i.e., for profit), very little, if any, research which contributes directly to the conservation of the species in the wild, is conducted. In recent times there is a strong trend towards a more ethical approach to our research with cetaceans, including 'friendly' wild individuals and those who are held in more natural conditions (Marino and Frohoff, 2011).

Morgan would be a prime example of both, if she was to be rehabilitated in a sea-pen off Norway. She is already trained for husbandry requirements and appropriate research projects may provide her with mental stimulation. For instance, although we know the approximate speed a killer whale can travel, in captivity is 28.4 km (Fish, 1998) we have not yet reliably 'clocked' an killer whale in the wild (although it has been calculated at 45 km per hour, using the Fineness Ratio) (Williams, 2008).

Morgan could be taught to swim a 'measured mile' and her speed recorded. This could not only be a measure of speed, but also of her increasing fitness as she readapts from the extreme confinement of her concrete tank, to the sea-pen and then ultimately to the open ocean. Another example is the maximum depth to which these species dive – so far it is recorded as 264 m for an adult female. A three year old female dived to 135 m (Baird et al., 2005). Morgan's diving ability, as she

readapted from a tank which is shallower than she is long to the sea-pen and to the open ocean could be measured and provide us with metabolic and fitness data.

The distances that individual killer whales swim, in their daily routines has been a source of much research. Individuals have been tracked predominantly through resightings of photographically identified and uniquely marked killer whales. With the development of small satellite tags we are now, only recently, coming to understand more about their long-range movements.

For instance, one killer whale in the high Arctic of Canada (Admiralty Inlet) was tagged. It travelled south and was tracked to just north of the Azores Island, in the subtropical Atlantic (when the tag stopped transmitting). This was a trip of over 5,100 km in 90 days (Petersen et al., 2009). A paper published on the 26<sup>th</sup> of October 2011 (i.e., 4 days prior to this letter of concern) discussed the round trip of one killer whale from Antarctica to the waters off Uruguay and Brazil (a water temperature range from -1.9°C to 24.2° C) and a range of almost 9400 km. This complete journey was conducted in 109 days (Durban and Pitman, 2011).

These remarkable trips show that although Morgan may appear to have travelled outside her 'home range' – she may in fact have just been 'passing by'. There is no way to establish why she was found alone and in an area which has not seen killer whales for decades, but the extensive home ranges we are now discovering only serve to illustrate why it is important that more research is done on these animals and by giving Morgan the opportunity to return to her native waters we can also learn from her and with her. I would strongly encourage research which helps to understand this species, supports and supports ocean conservation.

Lastly I would strongly oppose Morgan being sent to a concrete tank, when there are clearly better options for her; i.e., a rehabilitation and release program with a strong scientific grounding. This would not only give Morgan her best chance at a return to her family, but also offer us the chance to enhance our understanding of the species. The Free Morgan Foundation has such a plan in place and their extensive membership is comprised of a panel of scientific, welfare, conservation and rehabilitation experts who clearly have Morgan's best interests at heart.

Sincerely,

A handwritten signature in black ink, appearing to read 'Eva Saulitis', with a long, sweeping horizontal line extending to the right.

Eva Saulitis

## SCIENTIFIC REFERENCES REFERED TO IN THIS LETTER OF CONCERN:

- BAIRD, R. W., HANSON, M. B. & DILL, L. M. 2005. Factors influencing the diving behaviour of fish-eating killer whales: sex differences and diel and interannual variation in diving rates. *Canadian Journal of Zoology*, 83, 257-267.
- DURBAN, J. W. & PITMAN, R. L. 2011. Antarctic killer whales make rapid, round-trip movements to subtropical waters: evidence for physiological maintenance migrations? *Biology Letters*, published online.
- FISH, F. E. 1998. Comparative kinematics and hydrodynamics of odontocete cetaceans: morphological and ecological correlates with swimming performance. *Journal of Experimental Biology*, 201, 2867-2877.
- MARINO, L. & FROHOFF, T. G. 2011. Towards a new paradigm of non-captive research on cetacean cognition. *PLoS ONE*, 6, e24121.
- MARINO, L., LILIENFELD, S. O., MALAMUND, R., NOBIS, N. & BROGILO, R. 2010. Do zoos and aquariums promote attitude changes in visitors? A critical evaluation of the American Zoo and Aquarium study. *Society and Animals*, 18, 126-138.
- PETERSEN, S., BORTOLUZZI, T. & FERGUSON, S. H. 2009. Aarluk News. Fall. In: ARCTIC, O. O. T. C. (ed.). Manitoba, Canada: Ferguson, Steven H.
- WILLIAMS, T. M. 2008. Swimming. In: PERRIN, W. F., WÜRSIG, B. & THEWISSEN, J. G. M. (eds.) *Encyclopedia of Marine Mammals*. San Diego: Academic Press.

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October 31, 2011

To whom it may concern,

My husband, Roger Shaw, and I graduated from Louisiana State University School of Veterinary Medicine in 1982 and 1983. We opened our mixed animal practice in Arkansas shortly after my graduation in May of 1983. We share a deep respect and compassion for the animals which have been entrusted into our care. Through our 20 year old daughter who has a passion for marine mammals, we have learned a great deal about the ocean and the creatures therein. We followed the plight of Keiko and supported the efforts to rehabilitate him and are now following the plight of Morgan.

Morgan, a young wild orca who is currently being held in captivity in the Netherlands, does not belong in a tank. She belongs in the ocean. The Dolfinarium Harderwijk is to be commended for helping Morgan regain her health, but the time has come to free her from imprisonment, to take her off display, and to continue the rehabilitation process. Morgan should immediately be removed from the Dolfinarium Harderwijk and housed in a long-term sea-pen holding facility. She does not belong to a private company which can profit financially from her. Morally and ethically, it is time to take the next step to return her to the ocean.

The argument to send Morgan to Loro Parque for research and adoption into the existing family contains flaws in the reasoning. Loro Parque is an entertainment facility, not a research facility. Science at Loro Parque will be limited to a concrete tank. Scientific research could be done at a much greater level in a sea-pen with more real world applications. In addition, less bias would be introduced in the natural environment as opposed to the artificial environment of a concrete tank. Morgan could be tagged, monitored, provided health care, and receive companionship in a natural environment until she could be reintegrated. During this time period, she could contribute significantly to the existing knowledge of orcas. Risks in releasing Morgan into a sea-pen do exist just as there are risks in keeping her in captivity. Risks exist in either situation. However, these risks should not stop Morgan from being transported to a sea-pen and having excursions to find her extended family. The median age for an orca in the wild is more than double the days of survival in captivity. If Morgan goes to a concrete tank, her life-span is statistically reduced dramatically.

Sending Morgan to Loro Parque for adoption into the existing family is riddled with problems. She does not communicate in the same dialect as those orca. 92% of the calls made by Morgan were matched to a Norwegian orca group. Logically, efforts should be

made to return her to her extended family. Also, if Morgan does manage to establish communication with the orca at Loro Parque, no guarantee exists that she will be socially accepted by them. Currently, problems exist at Loro Parque in integrating an orca that is one of their own with this resident orca being constantly kept apart from the others due to safety issues. Loro Parque is not an appropriate location for Morgan. Obviously, connecting Morgan with her known extended family would be the wisest choice for her. Morgan's best option for successful rehabilitation can be accomplished by moving her to a sea-pen now.

Orcas in captivity are prisoners. They cannot form complex social groups. They suffer from diseases and experience a significantly shorter lifespan. Instead of being in their natural home, captive orcas must live in a concrete box unable to explore and live free in the wild. Morgan's rescue was admirable, but the time has come for her rehabilitation to continue in her native waters. A plan exists to release her through a slow, monitored reintroduction back to her habitat. This plan is the right course of action for her. Historically, keeping captive whales and dolphins was the thing to do. These actions are no longer acceptable. The time has come to step up and do the right thing for these magnificent creatures. We must make every reasonable effort to take action on Morgan's behalf and not our own. We must put selfish motives behind us and realize taking financial advantage of these creatures is wrong.

We can make a difference in Morgan's fate. We can stop her captive status by taking the next step in her rehabilitation. Orcas are beautiful intelligent creatures who do not belong in concrete tanks for amusement or financial gain. Orcas belong in their natural environment where they can thrive in the ocean and fulfill their destiny as apex predators. Further delays must cease. Morgan's welfare dictates that she be allowed to return to her family by taking the next step of releasing her to a sea-pen for further rehabilitation immediately.

Sincerely,  
Donna Shaw, DVM  
Roger Shaw, DVM  
Shaw Veterinary Clinic  
Highland, Arkansas  
United States  
1-870-856-3243  
[shawvet@centurytel.net](mailto:shawvet@centurytel.net)



## **CURRICULUM VITAE**

**Name:** Anna Tiu Kristiina Similä

**Born:** 15.10.1960 Helsinki, Finland

### **Education:**

MSc in biology, University of Helsinki, May 1989. Degrees in hydrobiology, plant ecology and environmental science.

Dr. scient, Norwegian College for Fishery Science, University of Tromsø, 1997.

Course " grunnkurs i bruk av hest i terapi" 2007

Level I trainer in Centered Riding 2007.

Courses I and II “ Handikapleder”

Associate member of EAGALA (equine assisted growth and learning association) since 2008 and taken part I and II to work as a certified equine specialist in EAP (equine assisted psychotherapy)

### **Research activities:**

Scholarship 1985-86 from the Maj and Tor Nessling foundation for studying the effects of acidification on phytoplankton in humic lakes.

Research assistant 1986-88 at Lammi biological station working on a project studying the ecology of humic lakes.

Leader of the WWF long-term research project studying killer whales in northern Norway since 1987.

In 1990-97 PhD student at the University of Tromsø, Norway, studying behavioral ecology of killer whales. The study has been funded by Academy of Finland, the Norwegian Research Council and World Wide Fund for Nature.

Since 1993 participating in an Icelandic photoidentification research project on killer whales (directed by the Icelandic institute of Marine Research).

In 2000-2002 working at the Norwegian Institute of Marine Research on a project on satellite tracking killer whales in the Norwegian Sea (funded by the Norwegian Research Council).

Since 2000 participant in the EU project “Euophlukes”, a project developing a European Cetacean Photo-ID system and Database ([www.euophlukes.net](http://www.euophlukes.net)).

### **Other working experience:**

Teacher on courses on hydrobiology, plankton ecology and limnology, University of Helsinki, Finland 1985-88.

Project leader at the Nature Protection Society, Finland, 6 months 1988.

Involved in the establishment and development of the Whale Centre in Andenes, Norway since 1987-1995. The centre combines whale-watching, educational and research activities. My work has included guiding, planning of the whale museum and coordinating research on killer whales.

Involved in establishment of whale-watching on killer whales, Tysfjord Turistsenter, Norway, since 1992. Responsible for research conducted onboard the whale-watching vessels and for updating of information on killer whales given to the passengers.

Organising committee: Fourth International Orca Symposium and Workshop, 23-28.9. 2002, Chize, CEBC – CNRS, France.

Project leader: “Development of Nature Tourism in Tysfjord Region” 15.10.05 – 15.05.2006. Funded by Innovation Norway and Norwegian research council.

Since 2006 owner and manager of the equine centre Bjørkengen Gård in northern Norway, which focuses on working with horses and mental and physical health of humans.

Scientific consultant for nature documentary films produced by BBC, National Geographic Society, Australian Broadcasting Corporation, Discovery Channel, Swedish, Finnish and Norwegian National TV companies.

### **Publications:**

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## **Reports:**

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## **Conferences:**

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Similä, T. 1994. Behavioral ecology of killer whales in northern Norway. International Symposium on the Biology of Marine Mammals in the Northeast Atlantic. Tromsø, Norway, 29.11-1.12.1994.

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November 01, 2011

TO WHOM I MAY CONCERN

The situation involving Morgan, a young female killer whale, found in the Wadden Sea and brought into captivity, with the aim of rehabilitation and release, has recently been brought into my attention. To my dismay it appears that the current plan is not rehabilitation and release, but transfer to a Spanish entertainment park.

I have studied killer whales in Northern Norway since 1986. My PhD dissertation "*Behavioral Ecology of killer whales in Northern Norway*" (1997, University of Tromsø, Norway) focused on social structure, seasonal distribution patterns and feeding behavior of killer whales in the waters around the islands of Lofoten and Vesterålen, north of the Arctic circle. After my dissertation I have been involved in several projects studying killer whales in Norway including satellite tracking of movements and diving behaviour, studies on feeding behaviour using underwater cameras and D-tags (which record swim speed, dive depths and vocalizations), genetic analysis and a study on chlorinated and brominated contaminants.

Analysis of Morgan's vocalizations indicate that she is part of the population which has Norwegian spring spawning herring as their main prey, following the movement of this fish stock between coastal and offshore waters.

With the background of my knowledge of the behaviour of this species in the wild, I strongly oppose the idea of confining Morgan into a concrete tank. The acoustic environment and limited space (killer whales in the wild are almost constantly moving and we have recorded several dives exceeding 200 meters in the Norwegian waters), presents an environment not suitable for any killer whale.

A sea pen would be a much better option and together with a solid scientific program would offer a chance of learning about several aspects of killer whale behaviour; in particular development of vocalizations and feeding behaviour. Learning is an essential element in the life of killer whales; hunting strategies, habitat use and vocal and social behaviour all have a strong aspect of learning. Observations of a lone young female killer whale as she transitions back into the wild, present several unique possibilities for understanding these mechanisms better.

The best option for this whale, obviously, would be to be reunited with the population she originates from. It is beyond any doubt that a sea pen would offer this whale a much more stimulating and healthier environment than a concrete tank.

I have followed, for years, a young killer whale in Norwegian waters with a spine deformation who is unable to dive and swim like others. This whale has been taken care of by several different family groups (that swim with her and feed her herring) (Stenersen & Similä, 2004). This observation suggests that it could be possible for Morgan to be "adopted" by a group which is not related to her.

I am willing to provide advice, existing data or other information needed for the best possible rehabilitation of Morgan into a sea pen, for the conducting of scientific research and eventual release of her into the wild.

Please contact me for any further information

Tiu Similä, PhD

October 30, 2011

To Whom It May Concern:

As a research biologist, and associate professor of marine biology at the University of Alaska Southeast in Sitka, Alaska, I have studied humpback and killer whales in the wild for over 30 years. I am writing to support the plan to rehabilitate Morgan, the killer whale captured in 2010, for her to be released to the wild and join her natal population. It is apparent that her treatment thus far has not in her best interest, living in substandard 3x7x20 m tank for 16 months where she barely has room to turn around and swim. Her future in an oceanarium is bleak and the welfare of this animal is at stake.

By contrast, there is a solid plan in place for rehabilitation and release into the wild. This is a robust, multi phased plan with contingencies while waiting to find the correct population. Morgan is a promising candidate for release. She is healthy, gaining weight and sufficient information exists through genetics and vocal repertoire to link her to her North Atlantic family. During rehabilitation and after release, Morgan would contribute extensively towards our understanding about killer whales and the conservation of her species. Numerous research proposals are already in place.

This opportunity needs to happen not only for the sake of Morgan but for the future killer whales released to the wild. During each prior case much was learned about releasing stranded animals to the wild and Morgan will gain from these experiences. This will give Morgan even a better chance of survival and joining her relatives.

Sincerely,

Jan Straley  
Associate Professor of Marine Biology

**Special Exhibit RE: The orca named Morgan**

October 26, 2011

To the Dutch Ministry and Henk Bleker via the Free Morgan Foundation:

To obtain a glimpse of the rationale used for the confinement and trade of the orca Morgan at the Dolfinarium Hardervijk, one must only read a phrase from one of the experts hired to ensure her captivity, and included in the initial report. Mardik Leopold's first two words (pg. 19) are, "Finders' keepers?"

At a time when "Occupy" movements are spreading globally as a reaction to corporate greed, it's remarkable that Morgan's future is being determined by economics and greed from the three marine parks and governments that will benefit from the economic windfall created by her trade, her ability to sell tickets, to generate tourism, and her genetic material and or ability to produce offspring.

I co-authored a paper (2011) that included some statistical analyses. John Jett PhD and I determined, using the Kaplan-Meier (KM) method of examining captive orca survival that the median duration of captivity for all orcas that have lived and died in captivity equals 8.5 years ( $n = 193$ ). This includes a half-dozen whales that have managed to approach average age and are still living (these whales are statistical outliers). Free-ranging female killer whales typically live to 50, and some to 80 or more. To see the derivation of the Median Duration of Captivity, I invite you to read the paper:

<http://theorcaproject.wordpress.com/2011/01/20/keto-tilikum-express-stress-of-orca-captivity/>

One rationale for shipping Morgan to Loro Parque is to provide her with more space. That's reasonable, but it's unclear why the ocean or a sea pen would not be superior to a featureless concrete enclosure. As above, we know that her expected duration of survival at Loro Parque (or SeaWorld) is 8.5 years.

As Mardik Leopold stated, this is a simple case of finders' keepers. Morgan deserves a chance.

In regard to teaching Morgan separations to improve her current spatial needs, I've learned that she will not separate into another pool secondary to fear, thus possibly justifying her transport to a larger facility. This is either a self-serving attempt to move forward with her transport, or a case of trainers that don't understand the basics of operant condition. (The latter of which is unlikely). Using operant condition and making Morgan's primary food rewards contingent upon her changing pools, this is easily accomplished.

If B.F Skinner can train a pigeon to "make a complete turn" in one session using only seeds and a light, I find it unbelievable (or misleading) that Morgan can't learn to separate within 48 to 72 hours.

<http://youtu.be/TtfQlGwE2U>

Give science, and Morgan, a chance. The world is watching.

Jeffrey Ventre MD DC

Co-Author of "Keto & Tilikum Express the Stress of Orca Captivity"

SeaWorld Trainer 1987 – 1995





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November 1, 2011

**To whom it may concern**

I am a scientist who has studied the behavioural biology, especially social structure and culture, of wild whales for 35 years. I have reviewed information regarding the situation of the killer whale *Morgan*, as well as opinions about how she should now be treated.

The two options being considered are to keep her in oceanaria for her life, and in particular at the Loro Parque in Spain, or to transfer her to a sea pen with the eventual intention of releasing her into the wild.

Two killer whales have been released into the wild following captivity. The release of one whale, *Keiko*, was unsuccessful, with *Keiko* never integrating with wild killer whales and eventually dying. The other, *Springer*, successfully reintegrated into her natal group, and seems to be thriving. *Morgan*'s situation is quite a close match with that of *Springer* in age, sex and amount of association with humans, and very dissimilar to the older, male *Keiko* who had spent many years in tanks, often alone. While *Morgan*'s prospects for a successful release seem a little more challenging than *Springer*'s—we do not know exactly which pod she came from, and she seems to have had more direct contact with humans—the parallels are close. The situations are sufficiently similar that, with the important experience gained from *Springer*'s reintroduction, there is a reasonable chance that *Morgan* will reintegrate into the wild.

The alternative, keeping *Morgan* in oceanaria for her life time, has little to recommend it. We now realize that oceanaria are not suitable habitats for killer whales. Fundamentally they are many orders of magnitude too small to mimic in any reasonable way the true habitat of this species. In consequence they force the animals to endure unrealistic diets, social systems, acoustic environments, interactions with humans, etc. Most reasoning scientists have become convinced that killer whales should not be kept in captivity, except perhaps for short-term rehabilitation. I understand that the Loro Parque has a particularly poor reputation for caring for the killer whales that it holds.

*Morgan's* release into the wild may not be successful, but it would be unethical not to attempt it.

Yours sincerely

A handwritten signature in blue ink that reads "Hal Whitehead". The signature is written in a cursive style with a large, stylized 'H' and 'W'.

Hal Whitehead, PhD, University Research Professor



31 October 2011

To Whom It May Concern:

I have studied wild killer whales in Canada since 1995. During that time, my colleagues and I have published extensively on killer whale behaviour, activity budgets and use of critical habitats. Many of my colleagues have no doubt written to you about what is best for Morgan. Her welfare is of key concern, and in my personal opinion, rehabilitation to the wild is the preferred option for that whale. But it is also important to remember that a population of whales off Norway has lost an individual, and in my professional opinion, rehabilitation to the wild is also best for her population.

In my own research, I have asked what lessons might be learned from the historic live-capture fisheries of killer whales in British Columbia and Washington state. We used our data to construct a social network, and simulated what might happen if we re-ran that live-capture fishery today (Williams & Lusseau 2006). We found in our field and analytical studies that individuals play irreplaceable roles in their social networks. The whales' social network was robust to random removals that mimic the deaths that normally occur in a population, but the network was especially vulnerable to removal of juvenile females. When a cluster of juvenile females was removed, the resulting network fragmented. As you know, we have witnessed the successful re-introduction of an orphaned killer whale, Springer, in BC. Our long-term monitoring of killer whales in Johnstone Strait shows nicely that that individual has been re-integrated into her extended family unit, and this remains the case nearly a decade after that intervention.

While there may not be any major concern about the current conservation status of the Norwegian killer whale population to which Morgan belongs, the evidence to date suggests that the population is likely small – in the low hundreds (Similä et al. 1996; Kuningas et al. 2007). A young female like Morgan represents important lifetime reproductive potential to her population, which is an important consideration in a long-lived, slowly reproducing species like killer whales. This conservation value cannot be overstated, given what we know of the biology of the species worldwide, namely that populations are usually small and social bonds among family members are exceptionally strong.

If there is any possibility of successfully returning this whale to the wild, I would encourage giving this option serious consideration. The next steps, while complicated, could benefit from lessons learned here in the northeast Pacific, both from a successful release plan (Springer) and a failure (Luna). A well-thought-out release plan with post-release monitoring would offer valuable lessons that could be applied to rehabilitation of injured or stranded wild whales around the world. In my professional opinion, rehabilitation to the wild is the better option both for the individual whale and to her natal population. I would be happy to offer any advice or expertise to that endeavour.

Sincerely,

A handwritten signature in black ink, appearing to read 'Rob Williams'.

Rob Williams, PhD  
Marie Curie International Incoming Fellow, University of St Andrews  
Marine Conservation Biologist & Co-founder, Oceans Initiative  
E-mail: [rob@oceansinitiative.org](mailto:rob@oceansinitiative.org)  
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