

STEPHANIE A. NORMAN, DVM, MS, PhD
MARINE-MED: MARINE RESEARCH, EPIDEMIOLOGY, AND VETERINARY MEDICINE
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EDUCATION

Ph.D., Wildlife Epidemiology, University of California, Davis

Dissertation: **Conserving endangered** wildlife species: the plight of Cook Inlet, Alaska beluga whales
(*Delphinapterus leucas*)

Master of Science, Epidemiology, University of Washington

Thesis: *Risk factors for an outbreak of leptospirosis in California sea lions (Zalophus californianus) in California, 2004*

Doctor of Veterinary Medicine, Texas A&M University

Bachelor of Veterinary Science, Texas A&M University

RESEARCH INTERESTS

- Epidemiology of marine faunal health and diseases
- Clinical care, husbandry, and conservation of aquatic species
- Investigations of marine mammal strandings and mortality events
- Geographic Information Systems/ spatial epidemiology

APPOINTMENTS

Conservation Medicine Veterinarian, World Vets, Gig Harbor WA, 08/18-Present.

- 1) Consulting veterinarian for marine mammal stranding investigations.
- 2) Develop and design studies assessing the influence of anthropogenic and environmental factors on aquatic wildlife population health and diseases, and the interface with public health.

Affiliate Instructor, Department of Epidemiology, University of Washington, Seattle, WA, 03/18-present.

Focus: Graduate student (MPH and PhD) advising, will co-teach courses in Departments of Epidemiology; Environmental and Occupational Health Sciences; and Comparative Medicine

Research Associate, Cascadia Research Collective, Olympia, WA, 03/13-present.

- 1) Design and implement epidemiological and environmental studies of aquatic wildlife species, including emerging and zoonotic diseases, population health, environmental and climatic influences on wildlife disease occurrence, and topics related to wildlife resource management and recovery.

RESEARCH EXPERIENCE

Postdoctoral Research Fellow, Departments of Environmental Science and Biology, Baylor University, September 2015–September 2016

- 1) Epidemiological quantitative modeling of hormone and contaminant profiles of large baleen whales with applications toward species conservation, recovery, and assessing anthropogenic impacts.
- 2) Assisted PhD graduate students with grant applications, manuscript preparations, and study designs.
- 3) Participate in grant applications and manuscript writing.

Wildlife Veterinarian and Epidemiologist, Augusta University, Augusta, GA, 05/15-05/17.

- 1) Incorporate veterinary epidemiological tools into developing evidence-based strategies to improve disease detection and response capacity, focusing on ‘hotspot’ regions where novel diseases are likely to emerge at the human-animal-environment interface.

Wildlife Veterinarian and Epidemiologist, NOAA, National Marine Fisheries Service, Alaska Fisheries Science Center, National Marine Mammal Laboratory, Seattle, WA, 9/07-8/15.

- 1) Designed and implemented environmental studies of various aquatic wildlife species, including emerging and zoonotic diseases, population health, environmental and climatic influences on wildlife disease occurrence, and topics related to wildlife resource management, conservation and recovery.
- 2) Developed models to assess the impact of environmental and anthropogenic threats on wildlife population trajectories.

Member, *Cryptococcus gattii* Public Health Working Group of the Pacific Northwest, Centers for Disease Control and Prevention, Atlanta, Georgia, 4/12-present

Assist with surveillance, reporting, and analysis of *C. gattii* cases and outbreaks

Wildlife Veterinarian, Central Puget Sound Marine Mammal Stranding Network, Whidbey Island, WA, 6/06-present.

- 1) Consulting veterinarian for aquatic animal population health and disease investigations.
- 2) Conduct health assessments of live stranded animals and necropsy of dead marine mammals.
- 3) Conduct training workshops on health assessment and necropsy/tissue sampling techniques.
- 4) Implement and maintain relational stranding and disease database for organization.

Wildlife Veterinarian, United States Navy, Mayport, FL, 04/01-06/01

- 1) Lead veterinarian of the Marine Animal Recovery Team, a component of an environmental mitigation plan to minimize the impact of a US Navy destroyer shock trial on marine mammals and sea turtles.
- 2) Developed shipboard marine animal survey track lines, photo-identification of cetaceans and helped develop protocols for tending to any injured/dead animals encountered during the trial.

Marine Mammal Research Veterinarian, NOAA, National Marine Fisheries Service, Alaska Fisheries Science Center, National Marine Mammal Laboratory, Seattle, WA, 5/99-present.

Provide veterinary medical services to various marine mammal research projects being conducted by NMML such as aerial surveys, cetacean and pinniped health assessments.

Veterinarian and Epidemiologist, NOAA, National Marine Fisheries Service, Protected Resources Division, Seattle, WA, 3/99-7/06

- 1) Coordinated collaborative research efforts assessing influence of anthropogenic and environmental factors on aquatic wildlife population health and diseases, and public health.
- 2) Helped coordinate response to marine mammal strandings (including threatened and endangered species) in Washington State.
- 3) Participated in high-profile stranding investigations including ship strikes, noise disturbance, and other environmental and anthropogenic threats.
- 4) Coordinated and participated in outreach conference calls, workshops, and produced outreach products such as brochures, stranding response training manuals, and other informational materials.

Field Research Veterinarian, Fullerton College, Fullerton, CA, 6/93-7/93

- 1) Marine mammal veterinarian for behavioral and contaminant research studies of California sea lion rookeries on Isla Angel de la Guardia in the Gulf of California, Mexico.
- 2) Performed physical exams, collected blood and blubber samples from pups.

CLINICAL EXPERIENCE

Wildlife Veterinarian, NOAA West Coast Region Marine Mammal Stranding Network, Seattle, WA, 3/99-present

- 1) Provide wide range of veterinary services to the stranding network in Washington State (health

assessments, triage and stabilization, disentanglements, necropsies, and disease outbreak investigations) as requested by stranding response groups and NOAA Regional Stranding Coordinator.

Head Veterinarian, Humane Society for Seattle/King County, Seattle, WA, 3/99-3/01

- 1) Director of Veterinary Medicine at a large privately funded humane society.
- 2) Oversaw the health care of a variety of domestic pets and livestock awaiting adoption.
- 3) Directed the spay/neuter program and treatment of in-house animals.

Small Animal Relief Veterinarian, Multiple clinics in the Puget Sound region, 3/93-present

Provide medical and surgical services to small animal clinics and hospitals.

Associate Veterinarian, Pacific Marine Mammal Center (formerly Friends of the Sea Lion Marine Mammal Center), Laguna Beach, CA, 1/92-4/95

- 1) Responded to stranded cetaceans and pinnipeds and provided veterinary care to animals in rehabilitation (exams, blood draws, surgery, medicating, euthanasia and necropsies).
- 2) Performed disease investigations to help identify the etiologies of strandings.

Clinical Marine Mammal Veterinarian, Six Flags/Magic Mountain Park, Los Angeles, CA, 6/91-1/92

Provided veterinary care for the park's California sea lions and bottlenose dolphins.

Clinical Wildlife Veterinarian, Pacific Wildlife Project, Laguna Niguel, CA, 6/91-6/92

Provided medical and rehabilitative care for multiple wildlife species, particularly birds.

TEACHING EXPERIENCE

Laboratory Coordinator, BIO 3422, Human Physiology Laboratory, Baylor University, Fall 2016

Coordinated ten undergraduate human physiology laboratory sections and three graduate student teaching assistants.

Instructor, BIO 1306, Modern Concepts of Bioscience, Baylor University, Spring 2016

Undergraduate semester course in the study of biological concepts, emphasizing plant and animal form and function, ecology, and evolution. Prerequisite for all biology majors (includes pre-med and vet).

Guest Instructor, ENV 4333, Coastal Zone Management, Baylor University, Spring 2016

Graduate semester course covering strategies for managing beaches, deltas, barrier islands and coastal seas, including issues in flood and storm risk, pollution and disease mitigation, recreational development and fisheries exploitation.

Instructor, MARVET Marine Veterinary Course for veterinary students and veterinarians, Playa del

Carmen, Mexico, every summer since 2012

Teaching Assistant, Introductory Microbiology Laboratory, UC Davis, 09/08-06/11

Demonstrated techniques and assisted students in everyday laboratory routines. Oversaw 2 sections (24 students each) per quarter (3 quarters/year). Dr. Eric Mann, Department of Microbiology.

Marine Mammal Stranding Response Trainer, National Marine Fisheries Service, 3/99 – present

Conduct workshops to train volunteer marine mammal stranding responders (usually twice yearly).

PEER-REVIEWED PUBLICATIONS

Schwind JS, Norman SA, Santangelo SL, Brown R, Frances RH, Koss E, Karmacharya D. 2019.

Prevalence of earthquake exposures and mental health outcomes among villagers in the Sindhupalchowk

district after the 2015 Nepal earthquakes. *Community Mental Health Journal*. doi 10.1007/s10597-019-00404-w

Trumble SJ, **Norman SA**, Crain D, Mansouri F, Winfield Z, Sabin R, Potter CW, Gabriele C, Usenko S. 2018. Baleen whale cortisol levels reveal a physiological response to 20th century whaling. *Nature Communications* 9:4587.

Warwick AJ, Duffield DA, Lambourn DM, Jeffries SJ, Rice JM, Gaydos JK, Huggins JL, Calambokidis J, Lahner LL, Olson J, D'Agnese E, Souze V, Elsby A, **Norman SA**. 2018. Spatio-temporal characterization of pinniped strandings and human interaction cases in the Pacific Northwest, 1991 – 2016. *Aquatic Mammals* 44(3):299-318.

Shelden KEW, Goetz K, Hobbs R, Hoberecht LK, Laidre KL, Mahoney BA, McGuire TL, **Norman SA**, O'Corry-Crowe G, Vos DJ, Ylitalo GM, Mizroch SA, Atkinson S, Burek-Huntington KA, Garner C. 2018. Beluga whale, *Delphinapterus leucas*, satellite-tagging and health assessments in Cook Inlet, Alaska, 1999 to 2002. U.S. Dep. Commer., NOAA Tech. Memo. NMFS-AFSC-369, 227p.

Rickman BH, Morgan T, Klope M, Berta S, Dubpernell S, Garrett H, Adams MJ, **Norman SA**. 2018. Multicentric plasmacytoma in a harbor porpoise (*Phocoena phocoena*) off the coast of Whidbey Island, Washington State, U.S.A. *Diseases of Aquatic Organisms* 127(3):225-230. doi:10.3354/dao03204.

Norman SA, Hanson MB, Huggins JL, Lambourn DM, Calambokidis J, Cottrell P, Greene A, Raverty S, Berta S, Dubpernell S, Klope M, Olson J, Jeffries SJ, Carrasco M, Souze V, Elsby A, McLean C, Carlson B, Emmons C, Gaydos J. 2018. Conception, fetal growth, and calving seasonality of harbor porpoises (*Phocoena phocoena*) in the Salish Sea waters of Washington State, USA and southern British Columbia, Canada. *Canadian Journal of Zoology* 96(6):566-575. doi:10.1139/cjz-2017-0155.

Norman SA, Flynn K, Zerbini AN, Gulland FMD, Moore M, Raverty S, Rotstein D, Mate BR, Hayslip C, Gendron D, Sears R, Douglas A, Calambokidis J. 2018. Assessment of wound healing in long-term follow-up of tagged gray (*Eschrichtius robustus*) and blue (*Balaenoptera musculus*) whales in the eastern North Pacific using photographs. *Marine Mammal Science* 34(1):27-53.

Norman SA, Delaney M, Haman K, Thomas A, Godfroid J, Larsen AK, Nymo IH, Robbe-Austerman S, Quance C, Rhyan J, Lambourn DM, Jeffries S, Rabinowitz P. 2017. Application of real-time PCR assays for detecting marine *Brucella* spp. in fish. *Journal of Veterinary Diagnostic Investigation* 30(1):150-154.

Norman SA, Winfield Z, Rickman BH, Usenko S, Klope M, Berta S, Dubpernell S, Garrett H, Adams MJ, Lambourn D, Huggins J, Lysiak N, Clark A, Sanders R, Trumble SJ. 2017. Persistent organic pollutants, stress and sex hormones in harbor porpoise (*Phocoena phocoena*) with B-cell lymphoma. *Archives of Environmental Contamination and Toxicology* 72(4):596-605.

Cornick LA, Quakenbush L, **Norman SA**, Pasi C, Maslyk P, Burek-Huntington K, Goertz CEC, Hobbs R. 2016. Seasonal and developmental differences in blubber stores of beluga whales in Bristol Bay, Alaska using high resolution ultrasound. *Journal of Mammalogy* 97(4):1238-1248.

Norman SA, Hobbs RC, Goertz CE, Burek-Huntington KA, Shelden KEW, Smith WA, Beckett LA. 2016. Potential natural and anthropogenic impediments to the conservation and recovery of Cook Inlet beluga whales. *Marine Fisheries Review* 77(2):89-105.

Huggins JL, Raverty S, **Norman SA**, Calambokidis J, Gaydos JK, Duffield DA, Lambourn DM, Rice J, Hanson MB, Wilkinson K, Jeffries SJ, Norberg B, Barre L. 2015. Increased harbor porpoise mortality in the Pacific Northwest, USA: understanding when higher levels may be normal. *Diseases of Aquatic Organisms* 115:93-102.

Huggins JL, Leahy CL, Calambokidis J, Lambourn D, Jeffries SJ, **Norman SA**, Raverty S. 2013. Causes and patterns of harbor seal (*Phoca vitulina*) pup mortality at Smith Island, Washington, 2004-2009. *Northwestern Naturalist* 94:198-208.

Norman SA, Miller WA, Wuertz, S, Melli A, Maki M, Beckett LA, Chouicha N, Hobbs RC. 2013. Occurrence of fecal pathogens in water and sediment samples collected from the upper Cook Inlet, Alaska ecosystem. *Environmental Science: Processes & Impacts* 15(5):1041-1051.

Norman SA, Beckett LA, Miller WA, St. Leger J, Hobbs RC. 2013. Variation in hematological and serum biochemical values of captive belugas (*Delphinapterus leucas*). *Journal of Zoo and Wildlife Medicine* 44(2):376-388.

Norman SA, Huggins J, Carpenter TE, Case JT, Lambourn DM, Rice J, Calambokidis J, Gaydos J, Hanson MB, Duffield D, Dubpernell S, Berta S, Klope M. 2012. The application of GIS and spatio-temporal analyses to investigations of unusual marine mammal strandings and mortality events. *Marine Mammal Science* 28(3):E251-E266.

Norman SA, Goertz CE, Burek KA, Quakenbush LT, Cornick LA, Romano T, Spoon T, Miller WA, Beckett LA, Hobbs RC. 2012. Hematology and serum chemistry of wild beluga whales (*Delphinapterus leucas*) in Bristol Bay, Alaska. *Journal of Wildlife Diseases* 48(1):21-32.

Norman SA, Garner MM, Berta S, Dubpernell S, Klope M. 2011. Vaginal calculi in a juvenile harbor porpoise (*Phocoena phocoena*). *Journal of Zoo and Wildlife Medicine* 42(2):335-337.

Norman SA, Raverty S, Zabek E, Ethridge S, Ford J, Hoang LMN, Morshed M. 2011. Maternal-fetal transmission of *Cryptococcus gattii* in harbor porpoise (*Phocoena phocoena*). *Emerging Infectious Diseases* 17(2):304-305.

Zuerner RL, Cameron CE, Raverty S, Robinson J, Colegrove KM, **Norman SA**, Lambourn DM, Jeffries S, Gulland FMD. 2009. Geographical dissemination of *Leptospira interrogans* serovar Pomona during seasonal migration of California sea lions. *Veterinary Microbiology* 137:105-110.

Norman SA. 2008. Spatial epidemiology and GIS in marine mammal conservation medicine and disease research. *EcoHealth* 5(3):257-267.

Norman SA, DiGiacomo RF, Gulland FMD, Meschke JS, Ylitalo GM, Lowry M. 2008. Risk factors for an outbreak of leptospirosis in California sea lions (*Zalophus californianus*) in California in 2004. *Journal of Wildlife Diseases* 44(4):837-844.

Douglas AB, Calambokidis J, Jeffries SJ, Lambourn DM, **Norman SA**. 2008. Incidence of ship strikes of large whales in Washington State. *Journal of the Marine Biological Association of the United Kingdom* 88(6):1121-1132.

Cameron CE, Zuerner RL, Raverty S, Colegrove KM, **Norman SA**, Lambourn DM, Jeffries SJ, Gulland FMD. 2008. Use of polymerase chain reaction to detect *Leptospira* infection amongst pinniped populations during a 2004 outbreak along the west coast of North America. *Journal of Clinical Microbiology* 46(5):1728-1733.

Clarke J and **Norman SA**. 2005. Results and evaluation of Navy shock trial environmental mitigation of marine mammals and sea turtles. *Journal of Cetacean Research and Management* 7(1):43-50.

Norman SA, Bowlby CE, Brancato MS, Calambokidis J, Duffield D, Gearin PJ, Gornall TA, Gosho ME, Hanson B, Hodder J, Jeffries S, Lagerquist B, Lambourn DM, Mate B, Norberg B, Osborne RW, Rash JA, Riemer S, Scordino J. 2004. Cetacean strandings in Oregon and Washington – 1930-2002. *Journal of Cetacean Research and Management* 6(1):87-99.

Norman SA, Hobbs RC, Foster J, Schroeder JP, Townsend FI. 2004. A review of animal and human health concerns during capture-release, handling and tagging of odontocetes. *Journal of Cetacean Research and Management* 6(1):53-62.

Moore M, Rubinstein B, **Norman SA**, Lipscomb T. 2004. A note on the most northerly record of Gervais' beaked whale from the western North Atlantic. *Journal of Cetacean Research and Management* 6(3):279-281.

Norman SA and Mead JG. 2001. *Mesoplodon europaeus*. *Journal of Mammalogy: Mammalian Species* 688: 1-5.

REPORTS AND PRESENTATIONS

Usenko S, Trumble SJ, Mansouri F, Crain D, Winfield Z, **Norman SA**, Fulton J, Sabin R, Potter C. 2019. Plugging into marine mammal science: the power of the earplug. Presented at the 2nd World Marine Mammal Conference, 9-12 December 2019, Barcelona, Spain.

Goertz CEC, Burek-Huntington K, Andrews RD, . . . , **Norman SA**, Moors A, Gaglione E, Christen D, Binder T, Hobbs R. 2019. Collaborative Interdisciplinary Studies to Understand Beluga Whale Health, Physiology, and Life History in Bristol Bay, Alaska. Presented at the 2nd International Workshop on Beluga Whale Research and Conservation, 12-14 March 2019, Mystic, CT.

Norman SA. 2019. Harbor porpoise in the inland waters of Washington State: an overview of the health and diseases of our Salish Sea neighbors. Presented at the Ways of Whales Workshop, 26 January 2019, Coupeville, WA.

Huggins JL, Lambourn DM, Raverty SA, Hanson MB, Rhodes LD, **Norman SA**, Gaydos JK, Olson JK, Haulena M, Garner MM. Mucormycosis: an emerging disease of marine mammals in the Pacific Northwest. Presented at the 49th Annual Conference of the International Association for Aquatic Animal Medicine, 19-23 May 2018, Long Beach, CA.

Norman SA, Kirkpatrick A, Neises V, Trumble SJ, Rice J, Huggins JL, Lambourn D, Olson JK, Souza V, Elsbey A, Willoughby D. Bone mineral density using Dual Energy Xray Absorptiometry (DXA) - a potential new technique for aging stranded cetaceans. Presented at the 22nd Biennial Conference on the Biology of Marine Mammals, 22-27 October 2017, Halifax, Nova Scotia.

Huggins JL, Lambourn DM, Raverty SA, Hanson MB, Rhodes LD, **Norman SA**, Gaydos JK, Olson JK, Garner MM. Mucormycosis: an emerging disease of cetaceans in the Salish Sea. Presented at the 22nd Biennial Conference on the Biology of Marine Mammals, 22-27 October 2017, Halifax, Nova Scotia.

Norman SA. 2017. From Polyps To Reefs: Applying Epidemiological Tools To Coral Disease Research. (Poster). Presented at the 48th Annual Conference of the International Association for Aquatic Animal Medicine, 20-24 May 2017, Cancún, MX.

Norman SA, Usenko S, Trumble SJ. 2017. Lend Me Your (Whale) Ears: Or Why You Should Bother Collecting a Whale's Earwax. Presented at the 48th Annual Conference of the International Association for Aquatic Animal Medicine, 20-24 May 2017, Cancún, MX.

Norman SA. 2016. Paws, claws, and fins – One Health from a veterinary epidemiological perspective. Presented at the Harte Research Institute, 22 April 2016, Corpus Christi, TX.

Norman SA, Calambokidis J, Flynn K, Zerbini A, Gulland F, Moore M, Raverty S, Rotstein D, Mate B, Hayslip C. 2015. Quantitative assessment of wound healing in long-term follow up of tagged gray and blue whales in the eastern North Pacific. Presented at the 21st Biennial Conference on the Biology of Marine Mammals, 13-18 December 2015, San Francisco, CA.

Norman SA. 2014. Zoonotic diseases of aquatic organisms. Oral presentations at the 2014 Washington State Department of Health Annual Zoonotic and Vector-Borne Disease Workshop, 8 and 10 April 2014, Olympia and Moses Lake, WA.

Pasi C, Cornick L, Goertz C, Huntington KB, **Norman SA**, Quakenbush L, Hobbs R. 2013. Blubber volume estimates of beluga whales (*Delphinapterus leucas*) from Bristol Bay, Alaska (Poster). Presented at the Alaska Marine Science Symposium, 20-24 January 2014, Anchorage, AK.

Norman SA. 2012. The application of epidemiological tools to aquatic animal practice and research. Presentation at the 2012 AVMA Annual Convention, 3-7 August 2012, San Diego, CA.

Norman SA, Beckett LA, Miller WA, St. Leger J, Hobbs RC. 2012. Variation in hematological and serum biochemical values of captive belugas (*Delphinapterus leucas*) (Poster). Presented at the 43rd Annual Conference of the International Association for Aquatic Animal Medicine, 12-16 May 2012, Atlanta, GA.

Norman SA, Hobbs RC, Wuertz S, Melli A, Beckett LA, Chouicha N, Kundu A, Miller WA. 2012. Fecal pathogen pollution: sources and patterns in water and sediment samples from the upper Cook Inlet, Alaska ecosystem (Poster). Presented at the Alaska Marine Science Symposium, 17-21 January, 2012, Anchorage, AK.

Norman SA. 2011. Nonlethal anthropogenic and environmental stressors in Cook Inlet beluga whales (*Delphinapterus leucas*). Report prepared for NOAA Fisheries, National Marine Fisheries Service, Anchorage, Alaska. NMFS contract no. HA133F-10-SE-3639. 113 p.

Hobbs RC, Shelden KEW, Rugh DJ, **Norman SA**. 2008. 2008 status review and extinction risk assessment of Cook Inlet belugas (*Delphinapterus leucas*). AFSC Processed Rep. 2008-02, 116 p. Alaska Fish. Sci. Cent., NOAA, Natl. Mar. Fish. Serv., 7600 Sand Point Way NE, Seattle WA 98115.

Gaydos JK and **Norman SA**. 2008. Was Navy Sonar involved in the stranding of 15 harbor porpoise in Washington State? *Whalewatcher* 37(1):12.

Norman SA. 2008. Strandings in the Pacific Northwest. *Whalewatcher* 37(1):19-21.

Huggins JL, Wilkinson K, Raverty SA, Hanson MB, **Norman SA**, Gaydos JK, Duffield DA, Lambourn DM, Rice J, Calambokidis JA, Norberg JB, Barre LM, Riemer SD, Rowles TK, Spradlin TR. 2007. Marked increase in harbor porpoise mortality in the Pacific Northwest, 2006-2007 (Poster). Presented at the 17th Biennial Conference on the Biology of Marine Mammals, 29 November – 3 December 2007, Cape Town, South Africa.

Calambokidis J, Raverty SA, Lambourn D, Jeffries S, **Norman SA**. 2006. Post mortem findings of juvenile stranded gray whales (*Eschrichtius robustus*) in the northeastern Pacific, April to May 2005 (Poster). Presented at the 20th Conference of the European Cetacean Society, 2-7 April 2006, Gdynia, Poland.

Raverty SA, Hanson MB, **Norman SA**, Calambokidis J, Lambourn DM, Jeffries SJ, Hall A, Osborne R, Gaydos JK. 2005. An overview of small cetacean strandings in the Pacific Northwest, 1999-2004 (Poster). Presented at the 16th Biennial Conference on the Biology of Marine Mammals, 12-16 December, 2005, San Diego, CA.

Lambourn DM, Jeffries SJ, Raverty SA, Garner MM, **Norman SA**, Gaydos JK, Calambokidis J, Miller MA, Conrad PA, Cameron CE. 2005. Primary Diseases of Concern in Pinnipeds of Washington and Oregon for 2004 (Poster). Presented at the NOAA/National Marine Fisheries Service National Stranding Conference, 4-6 April 2005, Landsdowne, Virginia.

Gaydos JK, **Norman SA**, Lambourn D, Jeffries S, Raverty S, Leslie M, Lockwood S, DeGhetto D, Huckabee J, Ewalt D, Whaley J, Rowles T. 2005. Should harbor seals with antibodies to *Brucella* be rehabilitated? In *Proceedings of the 2005 Annual Conference of the International Association of Aquatic Animal Medicine*, Seward, AK, May 2005. Pages 202-205

Gulland FMD, H Pérez-Cortés M, J Urbán R, Rojas-Bracho L, Ylitalo G, Weir J, **Norman SA**, Muto MM, Rugh DJ, Kreuder C, Rowles T. 2005. Eastern North Pacific gray whale (*Eschrichtius robustus*) unusual mortality event, 1999-2000. U.S. Dep. Commer., NOAA Tech. Memo. NMFS-AFSC-150, 33p.

Norman SA, Raverty S, McLellan B, Pabst A, Ketten D, Fleetwood M, Gaydos JK, Norberg B, Barre L, Cox T, Hanson B, Jeffries S. 2004. Multidisciplinary investigation of stranded harbor porpoises (*Phocoena phocoena*) in Washington State with an assessment of acoustic trauma as a contributory factor (2 May – 2 June 2003). U.S. Dep. Commerce, NOAA Tech. Memo. NMFS-NWR-34, 120 p.

Raverty S, **Norman SA**, Fleetwood M, Gaydos J, Ketten D, Pabst A, McLellan W, Barre L, Hanson B, Jeffries S, Lambourn D, Cramer S, Cox T, Norberg B. 2004. Pathologic findings in harbor porpoises (*Phocoena phocoena*) stranded in Washington State 2 May to 2 June 2003 coincident with the mid-frequency sonar exercises by the *USS Shoup* (Presentation). Presented at the 55th Annual Meeting of the American College of Veterinary Pathologists-ACVP and the 39th Annual Meeting of the Society for Veterinary Clinical Pathology-ASVCP, 13-17 November 2004, Orlando, Florida.

Hobbs RC, **Norman SA**, Teilman J, Martin AR, Hanson MB. 2003. Organized workshop entitled “Capture and handling techniques for small odontocetes during tagging, health assessment and sample collection”. Offered at the 15th Biennial Conference on the Biology of Marine Mammals, 14-19 December 2003, Greensboro, North Carolina.

Norman SA and Lopez AL. 2002. Update on marine mammal interactions with undersea cables. U.S. Dep. Commer., NOAA, Nat. Mar. Fish. Serv., Alaska Fish. Sci. Cent., 7600 Sand Point Way NE, Seattle, WA 98115. Unpubl. doc., 19p.

Waite JM, **Norman SA**, Kinzey D. 2001. Eastern Bering Sea cetacean line-transect survey aboard the NOAA Ship Miller Freeman, June and July 2002. Cruise Report, National Marine Mammal Laboratory, Alaska Fisheries Science Center, NMFS, NOAA, Seattle, Washington.

Norman SA, Muto MM, Rugh DJ, Moore SE. 2000. Gray Whale strandings in 1999 and a review of stranding records in 1995-1998. Document submitted to the Scientific Committee of the International Whaling Commission, SC/52/AS5.

ACADEMIC AND PROFESSIONAL SERVICE

- Reviewer for *Aquatic Mammals*
- Reviewer for *Diseases of Aquatic Organisms*
- Reviewer for *International Journal of Geographic Information Science*
- Reviewer for *Journal of Zoo and Wildlife Medicine*
- Reviewer for *Latin American Journal of Aquatic Mammals*
- Reviewer for *Marine Mammal Science*
- Reviewer for *PLoS One*
- Council Member, International Society for Reef Studies (2013-2017)
- Member, Conservation Committee, Society for Marine Mammalogy
- Member, Conservation Committee, International Society for Reef Studies (2017-present)

PROFESSIONAL DEVELOPMENT

Assessing Species' Extinction Risk Using IUCN Red List Methodology, IUCN Red List Training Course, October 2013-January 2014

24-Hour Hazardous Waste Operations and Emergency Response (HAZWOPER) Training, NOAA, Northwest Region, Seattle, Washington, 13-15 March 2013

Training for Remote Chemical Immobilization of Animals: Free-Ranging & Captive Wildlife, Safe-Capture International, Port Townsend, Washington, November 2012

SQL Database Training, University of Washington, March-April 2012

Mathematical Modeling of Infectious Diseases, Stochastic Models and Inference, Stochastic Simulation Methods for Infectious Diseases courses, Summer Institute in Statistics and Modeling in Infectious Diseases, University of Washington, 45 contact hours, June 2010

Spatial Epidemiology (GIS) and Analysis course, Summer Public Health Institute, University of Minnesota, 30 contact hours, May 2007

Geographic Information Systems courses, University of Washington, 09/06-06/07

Wildlife Oil Response and Hazardous Communication Training (12-Hours), NOAA/Marine Mammal Health and Stranding Response Program and UC Davis Wildlife Health Center, 2005

Small Boat Safety/Water Wise Safety Course, NOAA, National Marine Fisheries Service, Seattle, 2003

Large Whale Disentanglement Training, Center for Coastal Studies and NOAA/Marine Mammal Health and Stranding Response Program, 2000

PROFESSIONAL AFFILIATIONS

- Association for Veterinary Epidemiology and Preventive Medicine
- Species Survival Commission, IUCN/World Conservation Union, Wildlife Health Specialist Group
- Society for Marine Mammalogy
- International Association for Aquatic Animal Medicine
- American Veterinary Medical Association
- Wildlife Disease Association
- World Aquatic Veterinary Medical Association
- International Society for Reef Studies

AWARDS

- Recipient, International Association of Aquatic Animal Medicine Student Travel Award, 2011
- Recipient, International Association of Aquatic Animal Medicine Student Travel Award, 2007
- Recipient, Washington State Business and Professional Women's Foundation Scholarship, 2005-2007

CURRENT LICENSES

- Washington State Veterinary License
- Private Pilot
- Texas Veterinary License
- California Veterinary License
- United States Department of Agriculture Accredited Veterinarian
- Certified Advanced SCUBA Diver (PADI)
- Dual citizenship – USA, Italy