

File No. 16632 Appendix I: Qualifications of Personnel

Charles Littnan, Ph.D.

Principal Investigator

Dr. Littnan is head of the Hawaiian Monk Seal Research Program of the PIFSC Protected Species Division, and was previously head of the Hawaiian Monk Seal Foraging Research Group. He has 10 years experience capturing, restraining, tagging, and attaching instruments to Hawaiian monk seals. Dr. Littnan leads the program and may execute all permitted activities excluding those procedures that must be performed by an attending veterinarian.

Selected Publications

Littnan C, Hill M, Hargrove S, Keller KE, Anders AD. 2009. Marine protected species. In: Friedlander A, Keller K, Wedding L, Clarke A, Monaco M (eds.). A marine biogeographic assessment of the Northwestern Hawaiian Islands, Chapter 6, pp. 191-234. NOAA Technical Memorandum NOS NCCOS 84. Prepared by NCCOS's Biogeography Branch in cooperation with the Office of National Marine Sanctuaries Papahānaumokuākea Marine National Monument, Silver Spring, MD. 363 p.

Littnan CL, Baker JD, Parrish FA, Marshall GJ. 2004. Effects of video camera attachment on the foraging behavior of immature Hawaiian monk seals. *Marine Mammal Science* 20(2): 345-352.

Littnan CL, Stewart BS, Yochem PK, Braun R. 2006. Survey for selected pathogens and evaluation of disease risk factors for endangered Hawaiian monk seals in the main Hawaiian Islands. *EcoHealth* 3(4): 232-244.

Jason Baker, Ph. D.

Co-Investigator

Dr. Baker is a zoologist with the Hawaiian Monk Seal Research Program . He has 13 years experience capturing, restraining, tagging, and attaching instruments to Hawaiian monk seals, and 25 years experience conducting field research on a variety of pinniped species. Dr. Baker may execute all permitted activities excluding those procedures that must be performed by an attending veterinarian.

Selected Publications

Baker JD, Becker BL, Wurth TA, Johanos TC, Littnan CL, Henderson JR 2011. Translocation as a tool for conservation of the Hawaiian monk seal. *Biological Conservation*, Volume 144:2692-2701.

Baker JD, Harting AL, Wurth TA, Johanos TC. 2011. Dramatic shifts in Hawaiian monk seal distribution predicted from divergent regional trends. *Marine Mammal Science* 27:78–93.

Baker JD, Westgate A, Eguchi T. 2010. Vital rates and population dynamics. Pages 119-143 in Boyd IL, Bowen WD and Iverson SJ (Eds.) *Marine mammal ecology and conservation: A handbook of techniques*. Oxford University Press, 480 p.

Baker JD. 2008. Variation in the relationship between offspring size and survival provides insight into causes of mortality in Hawaiian monk seals. *Endangered Species Research* 5:55-64.

Baker JD, Polovina JJ, Howell EA, 2007. Apparent link between survival of juvenile Hawaiian monk seals and ocean productivity. *Marine Ecology Progress Series* 346:277-283.

Baker J.D. and P.M. Thompson. 2007. Temporal and spatial variation in age-specific survival rates of a long-lived mammal, the Hawaiian monk seal. *Proceedings of the Royal Society B* 274:407-415.

Baker J.D., C. L. Littnan, and D. W. Johnston. 2006. Potential effects of sea-level rise on the terrestrial habitats of endangered and endemic megafauna in the Northwestern Hawaiian Islands. *Endangered Species Research* 4:1-10.

Baker J.D., A.L. Harting, and T.C. Johanos. 2006. Use of discovery curves to assess abundance of Hawaiian monk seals. *Marine Mammal Science* 22:847-861.

Baker, J.D., and T.J. Johanos. 2004. Abundance of the Hawaiian monk seal in the main Hawaiian Islands. *Biological Conservation* 116:103-110.

Baker, J.D. 2004. Evaluation of closed capture-recapture methods to estimate abundance of Hawaiian monk seals, *Monachus schauinslandi*. *Ecological Applications*: 14:987-998.

Baker, J.D. and T.J. Johanos. 2002. Effects of Research Handling on the Endangered Hawaiian Monk Seal. *Marine Mammal Science* 18:500-512.

Michelle Barbieri, DVM, MS

Co-investigator

Dr. Barbieri is the Conservation Medicine/Hawaiian Monk Seal Health Program Coordinator. She has 15 years experience working with marine mammals including population surveys, restraint, tagging, biological sampling, health assessments, and stranding response (disentanglements, rehabilitation, surgery, and necropsies). Dr. Barbieri has performed field anesthesia for health assessments, sampling and disentanglement of Steller sea lion pups, Northern fur seals, California sea lions, Northern elephant seals, and Hawaiian monk seals. Dr. Barbieri may execute all permitted activities including those procedures that must be performed by an attending veterinarian.

Brenda Becker

Co-Investigator

Ms. Becker is a Wildlife Biologist with the Hawaiian Monk Seal Research Program. She has over 25 years experience working with Hawaiian monk seals, including extensive field presence in the NWHI observing, capturing and tagging seals. She has also assisted in maintenance and feeding of monk seals in captivity. Ms. Becker may execute all permitted activities excluding those procedures that must be performed by an attending veterinarian.

Selected Publications

Becker BL, Ching PA, Hiruki LM, Zur SA. 1994. The Hawaiian Monk Seal on Laysan Island, 1987 and 1989. U.S. Dept. of Commerce, NOAA Technical Memorandum NOAA-TM-NMFS-SWFSC-213.

Becker BL, Morrow RJ, Leialoha JK. 1989. Censuses and interatoll movements of the Hawaiian monk seal Laysan Island, 1985. U.S. Dept. of Commerce, NOAA Technical Memorandum NOAA-TM-NMFS-SWFC-135, 25 p.

Becker BL, O'Brien KE, Lombard KB, Laniawe LP. 1995. The Hawaiian monk seal on Laysan Island, 1991. U.S. Dept. of Commerce, NOAA Technical Memorandum NOAA-TM-NMFS-SWFSC-214, 16 p.

Robert Braun, DVM, MS

Co-Investigator

Dr. Braun is a veterinarian contracted to PIFSC. He has 25+ years of experience working with health issues of marine mammals. He has over 10 years experience working with Hawaiian monk seals, including sedation, physical examinations, surgeries, and oversight of captive care. Dr. Braun may execute all permitted activities including those procedures that must be performed by an attending veterinarian.

Shawn Farry

Co-Investigator

Mr. Farry is a seasonal biologist with the Hawaiian Monk Seal Research Program. He has over 10 years experience in field research teams in the NWHI, in most cases leading field teams. He has extensive experience capturing, restraining, translocating and tagging monk seals. He is a past coordinator of seal response on Kauai. Mr. Farry may execute all permitted activities excluding those procedures that must be performed by an attending veterinarian.

John Henderson, MS

Co-Investigator

Mr. Henderson is a Fisheries Biologist with the Hawaiian Monk Seal Research Program. He has worked with Hawaiian monk seals since 1981 and has extensive experience observing, restraining, and tagging Hawaiian monk seals, both in the NWHI as well as the MHI. He has also assisted in transport and captive care of Hawaiian monk seals. Mr. Henderson may execute all permitted activities excluding those procedures that must be performed by an attending veterinarian.

Selected Publications

Henderson J, Austin SL, Pillos MB. 1987. Summary of webbing and net fragments found on Northwestern Hawaiian Islands beaches. 1982-86. Southwest Fisheries Science Center Administrative Report H-87-11, 15 p.

Henderson JR. 2001. A pre- and post-MARPOL Annex V summary of Hawaiian monk seal entanglements and marine debris accumulation in the Northwestern Hawaiian Islands, 1982-1998. Marine Pollution Bulletin 42(7): 584-589.

Henderson JR. 1991. Recent entanglements of Hawaiian monk seals in marine debris. In: Shomura RS and Godfrey ML (eds.). Proceedings of the Second International Conference on Marine Debris, April 2-7, 1989, Honolulu, Hawaii, p. 540-543. U.S. Dept. of Commerce, NOAA Technical Memorandum NOAA-TM-NMFS-SWFSC-154.

Henderson JR. 1985. A review of Hawaiian monk seal entanglements in marine debris. In: Shomura RS and Yoshida HO (eds.). Proceedings of the Workshop on the Fate and Impact of Marine Debris, 26-29 November 1984, Honolulu, Hawaii, p. 326-335. U.S. Dept. of Commerce, NOAA Technical Memorandum NMFS-SWFC-54, 580 p.

Henderson JR. 1984. Encounters of Hawaiian monk seals with fishing gear at Lisianski Island, 1982. *Marine Fisheries Review* 46(3): 59-61.

Henderson JR, Finnegan MR. 1990. Population monitoring of the Hawaiian monk seal, *Monachus schauinslandi*, and captive maintenance project at Kure Atoll, 1988. U.S. Dept. of Commerce, NOAA Technical Memorandum NOAA-TM-NMFS-SWFSC-150, 24 p.

Henderson JR, Gilmartin WG. 1984. The Hawaiian monk seal: A synopsis of research. In: Grigg RW and Tanoue KY (eds.). Proceedings of the Second Symposium on Resource Investigations in the Northwestern Hawaiian Islands, Vol. 1, May 25-27, 1983, University of Hawaii, Honolulu, Hawaii, p. 95-96. UNIHI-SEAGRANT-MR-84-01.

Henderson JR, Johanos TC. 1988. Effects of tagging on weaned Hawaiian monk seal pups. *Wildlife Society Bulletin* 16: 312-317.

Henderson JR, Pillos MB. 1985. Accumulation of net fragments and other marine debris in the Northwestern Hawaiian Islands. In: Shomura RS and Yoshida HO (eds.). Proceedings of the Workshop on the Fate and Impact of Marine Debris, 26-29 November 1984, Honolulu, Hawaii, p. 197. U.S. Dept. of Commerce, NOAA Technical Memorandum NMFS-SWFC-54.

Thea Johanos, MS

Co-Investigator

Ms. Johanos is a biologist with the Hawaiian Monk Seal Research Program, and has worked with Hawaiian monk seals since 1982. She has extensive experience observing, restraining, and tagging monk seals. Ms. Johanos may execute all permitted activities excluding those procedures that must be performed by an attending veterinarian.

Selected Publications

Johanos TC. 1984. Hawaiian monk seal association patterns on Lisianski Island: 1982 pilot study results. Southwest Fisheries Science Center Administrative Report H-84-18, 12 p.

Johanos TC, Austin SL. 1988. Hawaiian monk seal population structure, reproduction, and survival on Laysan Island, 1985. U.S. Dept. of Commerce, NOAA Technical Memorandum NOAA-TM-NMFS-SWFC-118, 38 p.

Johanos TC, Baker JD. 2007. The Hawaiian monk seal in the Northwestern Hawaiian Islands, 2003. U.S. Dept. of Commerce, NOAA Technical Memorandum NOAA-TM-NMFS-PIFSC-9,

Johanos TC, Baker JD. 2005. The Hawaiian monk seal in the Northwestern Hawaiian Islands, 2002. U.S. Dept. of Commerce, NOAA Technical Memorandum NOAA-TM-NMFS-PIFSC-5, 154 p.

Johanos TC, Baker JD. 2004. The Hawaiian monk seal in the Northwestern Hawaiian Islands, 2001. U.S. Dept. of Commerce, NOAA Technical Memorandum NOAA-TM-NMFS-PIFSC-1, 134 p.

Johanos TC, Baker JD. 2002. The Hawaiian monk seal in the Northwestern Hawaiian Islands, 2000. U.S. Dept. of Commerce, NOAA Technical Memorandum NOAA-TM-NMFS-SWFSC-340, 125 p.

Johanos TC, Baker JD. 2001. The Hawaiian monk seal in the Northwestern Hawaiian Islands, 1999. U.S. Dept. of Commerce, NOAA Technical Memorandum NOAA-TM-NMFS-SWFSC-310, 130 p.

Johanos TC, Baker JD. 2000. The Hawaiian monk seal in the Northwestern Hawaiian Islands, 1998. U.S. Dept. of Commerce, NOAA Technical Memorandum NOAA-TM-NMFS-SWFSC-292, 125 p.

Johanos TC, Becker BL, Baker JD, Ragen TJ, Gilmartin WG, Gerrodette T. 2010. Impacts of sex ratio reduction on male aggression in the Critically Endangered Hawaiian monk seal *Monachus schauinslandi*. *Endangered Species Research* 11: 123-132. DOI: 10.3354/esr00259.

Johanos TC, Becker BL, Brown MA, Choy BK, Hiruki LM, Brainard RE, Westlake RL. 1990. The Hawaiian monk seal on Laysan Island, 1988. U.S. Dept. of Commerce, NOAA Technical Memorandum NOAA-TM-NMFS-SWFSC-151, 34 p.

Johanos TC, Becker BL, Ragen TJ. 1994. Annual reproductive cycle of the female Hawaiian monk seal (*Monachus schauinslandi*) *Marine Mammal Science* 10:13-30.

Johanos TC, Henderson JR. 1986. Hawaiian monk seal reproduction and injuries on Lisianski Island, 1982. U.S. Dept. of Commerce, NOAA Technical Memorandum NOAA-TM-NMFS-SWFSC-64, 7 p.

Johanos TC, Hiruki LM, Ragen TJ (eds.). 1995. The Hawaiian monk seal in the Northwestern Hawaiian Islands, 1992. U.S. Dept. of Commerce, NOAA Technical Memorandum NOAA-TM-NMFS-SWFSC-216, 128 p.

Johanos TC, Kam AKH. 1986. The Hawaiian monk seal on Lisianski Island: 1983. U.S. Dept. of Commerce, NOAA Technical Memorandum NOAA-TM-NMFS-SWFSC-58, 37 p.

Johanos TC, Kam AKH, Forsyth RG. 1987. The Hawaiian monk seal on Laysan Island: 1984. U.S. Dept. of Commerce, NOAA Technical Memorandum NOAA-TM-NMFS-SWFC-70, 38 p.

Johanos TC, Ragen TJ. 1999. The Hawaiian monk seal in the Northwestern Hawaiian Islands, 1996. U.S. Dept. of Commerce, NOAA Technical Memorandum NOAA-TM-NMFS-SWFSC-259, 134 p. Johanos TC, Ragen TJ. 1999. The Hawaiian monk seal in the Northwestern Hawaiian Islands, 1997. U.S. Dept. of Commerce, NOAA Technical Memorandum NOAA-TM-NMFS-SWFSC-262, 131 p.

Johanos TC, Ragen TJ. 1997. The Hawaiian monk seal in the Northwestern Hawaiian Islands, 1995. U.S. Dept. of Commerce, NOAA Technical Memorandum, NOAA-TM-NMFS-SWFSC-241, 121 p.

Johanos TC, Ragen TJ. 1996. The Hawaiian monk seal in the Northwestern Hawaiian Islands, 1993. U.S. Dept. of Commerce, NOAA Technical Memorandum NOAA-TM-NMFS-SWFSC-227, 141 p. Johanos TC, Ragen TJ. 1996. The Hawaiian monk seal in the Northwestern Hawaiian Islands, 1994. U.S. Dept. of Commerce, NOAA Technical Memorandum NOAA-TM-NMFS-SWFSC-229, 111 p.

Johanos TC, Withrow RP. 1988. Hawaiian monk seal and green turtle research on Lisianski Island, 1987. U.S. Dept. of Commerce, NOAA Technical Memorandum NOAA-TM-NMFS-SWFC-121, 18 p.

Angie Kaufman

Co-Investigator

Ms. Kaufman has worked first as a seasonal field biologist in 2007, and more recently as full time staff for the Hawaiian Monk Seal Research Program. She has led research field camps and has experience capturing, restraining, and tagging monk seals. Ms. Kaufman may execute all permitted activities excluding those procedures that must be performed by an attending veterinarian.

Gregg Levine, DVM

Co-Investigator

Dr. Levine is a marine mammal veterinarian contracted to the Hawaiian Monk Seal Research Program. For approximately 10 years he has sedated and health sampled monk seals both in the MHI and the NWHI and conducted surgeries. He has also conducted several necropsies on seals. Dr. Levine may execute all permitted activities including those procedures that must be performed by an attending veterinarian.

Jessica Lopez,

Co-Investigator

Ms. Lopez is a biologist with the Hawaiian Monk Seal Research Program who has worked with the program since 2003. She has led field camps in the NWHI and participated in and overseen censuses, restraint, and tagging of Hawaiian monk seals. Ms. Lopez may execute all permitted activities excluding those procedures that must be performed by an attending veterinarian.

Lizabeth Kashinsky

Co-Investigator

Ms. Kashinsky is a veterinary technician with the Health and Disease team of the Hawaiian Monk Seal Research Program. She has assisted in capture, restraint, tagging, and health sampling of Hawaiian monk seals for 10 years. She has led research field camps in the NWHI and also assisted in captive care of Hawaiian monk seals. Ms. Kashinsky may execute all permitted activities excluding those procedures that must be performed by an attending veterinarian.

Tracy Wurth

Co-Investigator

Ms Wurth is a biologist with the Hawaiian Monk Seal Research Program, having worked with the program since 2003. She presently coordinates the MHI seal sighting network. She has several years' experience leading remote NWHI field camps, and has surveyed, restrained, and tagged Hawaiian monk seals. Ms. Wurth may execute all permitted activities excluding those procedures that must be performed by an attending veterinarian.

Chad Yoshinaga

Co-Investigator

Mr. Yoshinaga has a biologist with the Hawaiian Monk Seal Research Program since 1994. He has led several field camps in the NWHI and has extensive experience capturing, handling, translocating and tagging Hawaiian monk seals. Mr. Yoshinaga may execute all permitted activities excluding those procedures that must be performed by an attending veterinarian.