

DR. MICHAEL R. HEITHAUS

Dean, College of Arts, Sciences & Education
Professor, Department of Biological Sciences
Florida International University

EDUCATION

- 2001-2002 Mote Marine Laboratory, Center for Shark Research, Sarasota, FL
Postdoctoral Scientist
- 1997-2001 Simon Fraser University, Burnaby, Canada.
PhD in Biological Sciences
- 1991-1995 Oberlin College, Oberlin, OH
BA in Biological Sciences with Highest Honors

WORK EXPERIENCE

- 2016-current Dean, College of Arts, Sciences, and Education, Florida International University,
Miami, FL
- 2015-2016 Dean, College of Arts and Sciences, Florida International University, Miami, FL
- 2014-2015 Interim Dean, College of Arts and Sciences, Florida International University,
2011-2014 Executive Director, School of Environment Arts and Society, Florida
International University, Miami, FL
- 2011-2014 Associate Dean, College of Arts and Sciences, Florida International University,
Miami, FL
- 2009-2011 Founding Director, School of Environment, Arts, and Society, Florida
International University, Miami, FL
- 2013-present Professor, Department of Biological Sciences, Florida International University,
Miami, FL
- 2008-2009 Director, Marine Sciences Program, Florida International University, Miami, FL
- 2008-2013 Associate Professor, Department of Biological Sciences, Florida International
University, Miami, FL
- 2003-2008 Assistant Professor, Department of Biological Sciences, Florida International
University, Miami, FL
- 2002-2003 Staff Scientist, Mote Marine Laboratory, Center for Shark Research, Sarasota, FL;
*On loan to National Geographic Society 2002-2003
- 1995-1996 Naturalist, Lorain County MetroParks, Lorain County, OH

ADMINISTRATIVE SERVICE AT FLORIDA INTERNATIONAL UNIVERSITY

- 2016-current Dean, College of Arts, Sciences & Education (CASE). CASE was formed in January 2016 through the merger of the College of Arts & Sciences and College of Education. I am responsible for managing and overseeing the integration of these units, which will form the largest college at FIU with an *ca.* \$142 million budget (approximately: \$73 million general, \$50 million contracts and grants, \$11 million auxiliary, \$8 million foundation). The college has almost 500 faculty and more than 17,000 undergraduate majors. In my role as Dean I serve on numerous leadership committees focused on both student success and enhancing research and economic development. I am in charge of external partnerships, fundraising, and communications as well as advancing many university-wide strategic initiatives. Since the launch of the new college, I have helped raise more than \$20 million in philanthropic donations since the formation of the new college. I drafted and implemented the first Diversity and Inclusion Plan for the College and led the college's 5-year strategic planning process.
- 2015-2016 Dean, College of Arts & Sciences. As the academic leader of the largest College at Florida International University, I was responsible for managing and overseeing an *ca.* \$145 million budget (approximately: \$85 million general, \$50 million contracts and grants, \$7 million auxiliary, \$2 million foundation) as well as more than 500 faculty and 600 graduate assistants. The college provided more than 80 degree programs across 16 departments and more than 20 interdisciplinary programs, institutes, and research centers. In my time as Dean, the College received more than \$30 million in philanthropic funding and pledges. I helped facilitate the development of major centers and institutes within the college and developed and numerous community partnerships. I participated in numerous university-wide initiatives including government relations at the local and national level. I oversaw the transition of the college to allow the School of International and Public Affairs to become a free-standing unit after a \$20 million naming gift.
- 2014-2015 Interim Dean, College of Arts & Sciences.
- 2009-2014 Founding Executive Director, School of Environment, Arts and Society (SEAS) and Associate Dean, College of Arts and Sciences (2011-2014)
I served as the academic leader of one of three schools in the College of Arts & Sciences. The School includes 3 departments and 5 centers and programs. It was responsible for more than \$20 million in research expenditures in 2013 and from 2011-2014, the school raised over \$12 million in philanthropic gifts. As the Executive Director of SEAS, I was responsible for supporting all of the College's activities on FIU's Biscayne Bay Campus.
- 2008-2009 Director, Marine Sciences Program. Oversaw considerable faculty growth and interdisciplinary expansion in the research group while overseeing research facilities in the Marine Sciences Building of FIU's Biscayne Bay Campus.

RESEARCH EXPERIENCE

My research is focused on understanding the ecological importance of large predators, especially in ocean ecosystems, and the consequences of human-induced declines in their populations. I am best-known for my work the importance of non-consumptive (“risk effects”) of predators in shaping prey behavior and ecosystem dynamics (the ecology of fear). My studies on sharks - which has included studies on their wider ecosystems (including potential prey like marine mammals and sea turtles) – has been widely cited. Much of the work in my lab is field-based and includes developing and employing new technologies to answer important questions. This includes animal-borne cameras, satellite and acoustic telemetry, and - more recently – camera-equipped unmanned aerial vehicles. The lab uses mathematical models and laboratory studies to address general questions and inform fieldwork. Our work in Shark Bay (www.sberp.org) is the most detailed study of the ecological role of sharks in the world and has been used as the underpinning for affecting positive policy changes in shark conservation initiated by several prominent NGOs. My lab is also very active in the Florida Coastal Everglades Long Term Ecological Research Project, where I have served as the lead of the Community Dynamics Working Group for two grant cycles. I am now co-lead PI on the Global FinPrint Project (www.globalfinprint.org) – an international collaboration to assess the status of reef sharks and rays worldwide and funded by Paul G Allen Philanthropy. I serve as a member of the science advisory committee for Pew Environment’s International Shark Campaign. Despite my administrative assignment, I continue to be active in research and maintain a lab that currently has ten PhD students, three postdocs, a staff scientist, and many undergraduates.

SCIENTIFIC PUBLICATIONS

PEER-REVIEWED JOURNAL ARTICLES

149. Thomson, J. A., E. R. Whitman, M. I. G. Rojas, A. Bellgrove, M. Ekins, G. C. Hays, and **M. R. Heithaus**. Individual specialization in a migratory grazer reflects long-term diet selectivity on a foraging ground: implications for isotope-based tracking. *Oecologia*
148. Guillaume, R., J. Kiszka, J. Carlos Castillo, J. Mourier, K. Boswell, and **M. R. Heithaus**. In press. Investigating fine-scale shoaling adjustments of reef sharks using unmanned aerial vehicle (UAV) surveys and image analysis. *Journal of Fish Biology*
147. Griffen, L.P., J. W. Brownscomb, A. J. Adams, R. E. Boucek, J. T. Finn, **M. R. Heithaus**, J. S. Rehage, S. J. Cooke, and A. J. Danylchuk. 2018. Keeping up with the Silver King: Using cooperative acoustic telemetry networks to quantify the movements of Atlantic tarpon (*Megalops atlanticus*) in the coastal waters of the southeastern United States. *Fisheries Research* 205: 65-76.
146. Rees, A. F., L. Avens, K. Ballorain, E. Bevan, A. C. Broderick, R. R. Carthy, M. J. A. Christianen, G. Duclos, **M. R. Heithaus**, D. W. Johnston, J. C. Manhel, F. Paladino, K. Pendolet, R. D. Reina, N. J. Robinson, R. Ryan, S. T. Sykora-Bodie, D. Tilley M. R. Varela, E. R. Whitman, P. A. Whittock, P. A. Whittock, T. Wibbels, and B. J. Godley. 2018. The potential of unmanned aerial systems for sea turtle research and conservation: a review and future directions. *Endangered Species Research* 35: 81-100.

145. Dellinger, J. A., C. R. Shores, M. Marsh, **M. R. Heithaus**, W. J. Ripple, and A. J. Wirsing. 2018. Impacts of recolonizing gray wolves on survival and mortality in two sympatric ungulates. *Canadian Journal of Zoology*: in press
144. Kilfoil, J. P., M. Bond, M. D. Campbell, J. J. Kiszka, K. R. Gastrich, **M. R. Heithaus**, Y. Zhang, and A. J. Wirsing. Baited Remote Underwater Video surveys undercount sharks at high densities: insights from full-spherical camera technologies. *Marine Ecology Progress Series* 585: 113-121.
143. Bird, C., C. Trueman, A. Verissimo, S. Magozzi, K. Abrantes, H. Al-Reasi, A. Barnett, D. Bethea, G. Biais, A. Borrell, M. Boyle, J. Brunnschweiler, P. Bustamante, A. Carlisle, D. Catarino, S. Caut, Y. Cherel, T. Chouvelon, D. Chruchill, J. Ciancio, J. Claes, A. Colaço, D. Courtney, P. Cresson, R. Daly, L. De Necker, T. Endo, I. Figueiredo, A. Frisch, J. Holst, Hansen, **M. Heithaus**, N. Hussey, J. Iitembu, F. Juanes, M. Kinney, J. Kiszka, D. Kopp, . Leaf, Y. Li, A. Lorrain, S. Lopez, D. Madigan, A. Maljkovic, L. Malpica-Cruz, P. Matich, F. Menard, M. Meekan, S. Munroe, M. Newman, Y. Papastamatiou, H. Pethybridge, J. Plumlee, C. Polo-silva, K. Quaeck, V. Raoult, J. Reum, Y. Rojas, D. Shiffman, C. Speed, M. Staudinger, A. Teffer, A. Tilley, M. Valls, J. Vaudo, T. Wai, D. Wells, A. Wyatt. 2018. A global perspective on the trophic geography of sharks. *Nature Ecology and Evolution* 2: 299-305.
142. Bond, M. E., J. Valentine-Albanese, E. A. Babcock, N. E. Hussey, **M.R. Heithaus**, and D. D. Chapman. 2018. The trophic ecology of Caribbean reef sharks (*Carcharhinus perezii*) relative to other large teleost predators on a coral atoll. *Marine Ecology Progress Series*: in press.
141. Matich, P., J. J. Kiszka, K. Gastrich, and **M. R. Heithaus**. 2017. Trophic redundancy among fishes in an East African nearshore seagrass community inferred from stable isotopes. *Journal of Fish Biology* 91: 490-509.
140. Boucek, R. E., **M. R. Heithaus**, R. Santos, P. Stevens, and J. S. Rehage. 2017. Can animal habitat use patterns influence their vulnerability to extreme climate events? An estuarine sportfish case study. *Global Change Biology* 23: 4045-4057
139. Ferreira, L. C., M. Thums, **M. R. Heithaus**, A. Barnett, K. Abrantes, B. Holmes, L. M. Zamora, A. J. Frisch, J. Pepperell, D. Burkholder, J. Vaudo, Robert Nowicki, J. Meeuwig and M. G. Meekan. 2017. The trophic role of a large marine predator, the tiger shark *Galeocerdo cuvier*. *Scientific Reports* 7, Article 7641. Doi:10.1038/s41598-017-07751-2
138. Sarabia, R. E., **M. R. Heithaus**, and J. J. Kiszka. In press. Spatial and temporal variation in abundance, group size and behavior of bottlenose dolphins in the coastal Everglades. *Journal of the Marine Biological Association, UK*.
137. Matich, P., J. J. Kiszka, S. Planes, and **M. R. Heithaus**. 2017. Species co-occurrence affects the trophic interactions of two juvenile reef shark species in tropical lagoon nurseries in Moorea (French Polynesia). *Marine Environmental Research* 127: 84-91.
136. Nowicki, R. J., J. A. Thomson, D. A. Burkholder, J. W. Fourqurean, and **M. R. Heithaus**. 2017. Predicting seagrass recovery trajectories and their implications following an extreme climate event. *Marine Ecology Progress Series* 567: 79-93.
135. Estes, J. A., **M. R. Heithaus**, D. J. McCauley, D. B. Rasher, and B. Worm. 2017. Megafaunal impacts on structure and function of ocean ecosystems. *Annual Review of Environment and Resources* 41: 83-116
134. **Heithaus, M. R.**, J. J. Kiszka, A. Cadinouche, V. Dulau-Drouot, V. Boucaud, S. Perez-Jorge, and I. Webster. 2017. Spatial variation in shark-inflicted injuries to Indo-Pacific

- bottlenose dolphins (*Tursiops aduncus*) of the southwestern Indian Ocean. *Marine Mammal Science* 33: 335-341.
133. Matich, P., J. S. Ault, R. E. Boucek, D. R. Bryan, K. R. Gastrich, C. L. Harvey, **M. R. Heithaus**, J. J. Kiszka, V. Paz, J. S. Rehage, and A. E. Rosenblatt 2017. Ecological niche partitioning within a large predator guild in a nutrient-limited estuary. *Limnology and Oceanography* 62: 934-953.
 132. Damseaux, F., J. Kiszka, **M. R. Heithaus**, G. Scholl, G. Eppe, J.P. Thomé, J. Lewis, W. Hao, M. Fontaine and K. Das. 2017. Spatial variation in the accumulation of POPs and mercury in bottlenose dolphins of the Lower Florida Keys and the coastal Everglades (South Florida). *Environmental Pollution* 220: 577-587.
 131. Kiszka, J., J. Mourier, K. Gastich, and **M. R. Heithaus**. 2016. Using micro-Unmanned Aerial Vehicles (UAVs) to investigate the effect of provisioning on shark and ray densities in a shallow coral lagoon. *Marine Ecology Progress Series* 560: 237-242.
 130. Bernard, A.M., K.A. Feldheim, **M.R. Heithaus**, S.P. Wintner, B.M. Wetherbee and M.S. Shivji. 2016. Global population genetic dynamics of a highly migratory, apex predator shark. *Molecular Ecology* 25: 5312-5329.
 129. Bessey C., **M. R. Heithaus**, J. Fourqurean, K. Gastrich and D. A. Burkholder. 2016. The importance of teleost macrograzers on seagrass composition in a subtropical ecosystem with abundant populations of megagrazers and predators. *Marine Ecology Progress Series* 553: 81-93.
 128. Manlik, O., J. A. McDonald, J. Mann, H. C. Smith, L. Bejder, M. K. Krützen, R. C. Connor, **M. R. Heithaus**, R. C. Lacy and W. B. Sherwin. In press. The relative importance of reproduction and survival for the viability of two dolphin populations: implications for the management of slow-growing vertebrate taxa. *Ecology and Evolution* 6: 3496-3512.
 127. Hays, G.C., L. C. Ferreira, A. M. M. Sequeira, M.G. Meekan, C. M. Duarte, H. Bailey, F. Bailleul, W. D. Bowen, M. J. Caley, D. P. Costa, V. M. Eguíluz, S. Fossette, A. S. Friedlaender, N. Gales, A. C. Gleiss, J. Gunn, R. Harcourt, E. L. Hazen, **M. R. Heithaus**, M. Heupel, K. Holland, M. Horning, I. Jonsen, G. T. Kooyman, C. G. Lowe, P. T. Madsen, H. Marsh, R. A. Phillips, D. Righton, Y. Ropert-Coudert, K. Sato, S. Shaffer, C. A. Simpfendorfer, D. W. Sims, G. Skomal, A. Takahashi, P. N. Trathan, M. Wikelski, J. N. Womble, and M. Thums. 2016. Key questions in marine megafauna movement ecology. *Trends in Ecology and Evolution* 31: 463-475.
 126. Loiseau, N., J. J. Kiszka, T. Bouveroux, **M. R. Heithaus**, M. Soria, and P. Chabanet. 2016. Using an unbaited stationary video system to investigate the behaviour and interactions of bull sharks (*Carcharhinus leucas*) under an aquaculture farm. *African Journal of Marine Science*: in press
 125. Catano, L. B., M. C. Rojas, R. J. Malossi, J. R. Peters, **M. R. Heithaus**, J. W. Fourqurean, and D. E. Burkepile. 2016. Reefscapes of fear: predation risk and reef heterogeneity interact to shape herbivore foraging behavior. *Journal of Animal Ecology* 85: 146-156.
 124. Madin, E., L. M. Dill, R. Warner, and **M. R. Heithaus**. 2016. Human activities change marine ecosystems by altering predation risk. *Global Change Biology* 22: 44-60.
 123. Bessey, C. and **M. R. Heithaus**. 2015. Ecological niche of an abundant teleost *Pelates octolineatus* in a subtropical seagrass ecosystem. *Marine Ecology Progress Series* 541: 195-204.
 122. Atwood, T.B., R.M. Connolly, E.G. Ritchie, C. E. Lovelock, **M. R. Heithaus**, G. C. Hays,

- J. W. Fourqurean, and P. I Macreadie. 2015. Predators help protect carbon stocks in blue carbon ecosystems. *Nature Climate Change* 5: 1038-1045
121. Vollmer, N. L., L. C. Havek, **M. R. Heithaus**, and R. C. Connor. 2015. Further evidence of a context-specific agonistic signal in bottlenose dolphins: the influence of consortships and group size on the pop vocalization. *Behaviour* 152: 1979-2000.
120. Gaiser, E. E., E. P. Anderson, E. Castaneda-Moya, L. Collado-Vides, J. W. Fourqurean, **M. R. Heithaus**, R. Jaffe, D. Lagomasino, N. J. Oehm, R. M. Price, V. H. Rivera-Monroy, R. R. Chowdhury, and T. G. Troxler. 2015 New perspectives on an iconic landscape from comparative international long-term research. *Ecosphere* 6: Article 181.
119. Thomson, J. A., A. Gulick, and **M. R. Heithaus**. 2015. Habitat-mediated interactions among green sea turtles (*Chelonia mydas*) on a foraging ground. *Marine Ecology Progress Series* 532: 243-256.
118. Kiszka, J. J., J. P. Quod, and **M. R. Heithaus**. 2015. Stingrays as possible facilitators for foraging trevallies in a nerarshore sandflat. *Marine Biodiversity* 45: 625-626.
117. Matich, P. and **M. R. Heithaus**. 2015. Ontogenetic shift and individual variability in habitat use patterns of a large estuarine predator (*Carcharhinus leucas*). *Oecologia* 178: 347-359.
116. Matich, P., J. J. Kiszka, **M. R. Heithaus**, J. Mourier, and S. Planes. 2015. Short-term shifts of stable isotope ($\delta^{13}\text{C}$, $\delta^{15}\text{N}$) values in juvenile sharks within nursery areas suggest rapid shifts in trophic interactions. *Journal of Experimental Marine Biology and Ecology* 465: 83-91.
115. Kiszka, J. J. **M. R. Heithaus**, and A. J. Wirsing. 2015. Behavioral drivers of the ecological roles and importance of marine mammals. *Marine Ecology Progress Series* 523: 267-281.
114. Churchill, D. A., **M. R. Heithaus**, and R. D. Grubbs. 2015. Effects of lipid and urea extraction on $\delta^{15}\text{N}$ values of deep-sea sharks and hagfish: can mathematical correction factors be generated? *Deep Sea Research II* 115: 103-108.
113. Rosenblatt, A. E., J. C. Nifong, **M. R. Heithaus**, F. J. Mazzotti, M. S. Cherkiss, B. M. Jeffery, R. M. Elsey, R. A. Decker, B. R. Silliman, L. J. Guillette Jr., R. H. Lowers, and J.C. Larson. 2015. Factors affecting individual foraging specialization and temporal diet stability across the range of a large “generalist” apex predator. *Oecologia* 178: 5-16.
112. Churchill, D. A., **M. R. Heithaus**, J. J. Vaudo, R. D. Grubbs, and J. I. Castro. 2015. Trophic interactions of common elasmobranchs in deep-sea communities of the Gulf of Mexico revealed through stable isotope and stomach contents analysis. *Deep Sea Research II* 115: 92-102.
111. Kiszka, J. J., A. Aubail, N. E. Hussey, **M. R. Heithaus**, F. Caurant, and P. Bustamante. 2015. Plasticity of trophic interactions among sharks from the oceanic south-western Indian Ocean revealed by stable isotope and mercury analyses. *Deep Sea Research I* 96: 49-58.
110. Kiszka, J. J., K. Charlot, N. E. Hussey, **M. R. Heithaus**, B. Simon-Bouhet, F. Humber, F. Caurant, and P. Bustamante. 2014. Trophic ecology of common elasmobranchs exploited by artisanal shark fisheries off south-western Madagascar. *Aquatic Biology* 23: 29-38.
109. **Heithaus, M. R.**, T. Alcoverro, R. Arthur, D. A. Burkholder, K. A. Coates, J. A. Christianen, N. Kelkar, W. J. Kenworthy, S. A. Manuel, A. J. Wirsing, and J. W. Fourqurean. 2014. Seagrasses in the age of sea turtle conservation and shark overfishing. *Frontiers in Marine Science* 1:28. doi: 10.3389/fmars.2014.00028
108. Thomson, J. A., D. A. Burkholder, **M. R. Heithaus**, J. W. Fourqurean, M. W. Fraser, J. Statton, and G. A. Kendrick. 2015. Extreme temperatures, foundation species, and abrupt

- ecosystem change: an example from an iconic seagrass ecosystem. *Global Change Biology* 21: 1463-1474.
107. Sergio, F., O. J. Schmitz, C. J. Krebs, R. D. Holt, **M. R. Heithaus**, A. J. Wirsing, W. J. Ripple, E. Ritchie, D. Ainley, D. Oro, Y. Jhala, F. Hiraldo, and E. Korpimäki. 2014. Towards a cohesive, holistic view of top predation: a definition, synthesis and perspective. *Oikos* 123: 1234-1243.
 106. Wirsing, A. J., **M. R. Heithaus**, and A. Frid. 2014. Cross-pollination of aquatic and terrestrial research on predator risk effects. *WIREs Water* 1: 439-448.
 105. Rosenblatt, A.E., S. Zona, M. R. Heithaus, and F. Mazzotti. 2014. Are seeds consumed by crocodilians viable? A test of the crocodilian saurochory hypothesis. *Southeastern Naturalist* 13: N26-N29.
 104. Rosenblatt, A.E., J. C. Nifong, M. R. Heithaus, M. W. Parry, and F. J. Mazzoti. 2014. New record of Everglades mink in Everglades National Park from the stomach of an American alligator. *Southeastern Naturalist* 13: N22-N25.
 103. Mukherjee, S., **M. R. Heithaus**, and J. Trexler. 2014. Perceived risk of predation affects reproductive life-history traits in *Gambusia holbrooki*, but not in *Heterandria formosa*. *PLoS One* 9(2): e88832. doi:10.1371/journal.pone.0088832
 102. Kiszka, J. J., P. Mendez-Fernandez, **M. R. Heithaus**, V. Ridoux. 2014. The foraging ecology of coastal bottlenose dolphins at an oceanic island based on stable isotope mixing models and behavioural sampling. *Marine Biology* 161: 953-961
 101. Wirsing, A. J. and **M. R. Heithaus**. 2014. Accounting for individual behavioral variation in studies of habitat selection. *Journal of Animal Ecology* 83: 319-321.
 100. Bouveroux, T., J. J. Kiszka, **M. R. Heithaus**, and S. Perzeril. 2014. Direct evidence for gray seal (*Halichoerus grypus*) predation and scavenging on harbor porpoises (*Phocoena phocoena*). *Marine Mammal Science* 30: 1542-1548.
 99. Thomson, J. A. and **M. R. Heithaus**. 2014. Animal-borne video reveals seasonal activity patterns of green sea turtles and the importance of accounting for capture stress in short-term biologging. *Journal of Experimental Marine Biology and Ecology* 450: 15-20.
 98. Matich, P. and **M. R. Heithaus**. 2014. Multi-tissue stable isotope analysis and acoustic telemetry reveal seasonal variability in the trophic interactions of juvenile bull sharks in a coastal estuary. *Journal of Animal Ecology* 83: 199-213.
 97. Rosenblatt, A. E., **M. R. Heithaus**, F. M. Mazzotti, M. Cherkiss, and B. Jeffery. 2013. Intra-population variation in activity ranges, diel patterns, movement rates, and habitat use of American alligators in a subtropical estuary. *Estuarine, Coastal and Shelf Science* 135: 182-190.
 96. Bessey, C. and **M. R. Heithaus**. 2013. Alarm call production and temporal variation in predator encounter rates for a facultative teleost grazer in a relatively pristine seagrass ecosystem. *Journal of Experimental Marine Biology and Ecology* 449: 135-141.
 95. Rosenblatt, A. E., **M. R. Heithaus**, M. E. Mather, P. Matich, J. C. Nifong, W. J. Ripple, and B. R. Siliman. 2013. Coastal top predators and long-term ecological research. *Oceanography* 26: 108-119
 94. Thomson, J. A., A. B. Cooper, D.A. Burkholder, **M. R. Heithaus**, and L. M. Dill. 2013. Correcting for heterogeneous availability bias in surveys of long-diving marine turtles. *Biological Conservation* 165: 154-161.
 93. Burkholder, D. A., **M. R. Heithaus**, J. W. Fourqurean, A. Wirsing, and L. M. Dill. 2013. Patterns of top-down control in a seagrass ecosystem: could a roving apex predator

- (*Galeocerdo cuvier*) induce a behavior-mediated trophic cascade? *Journal of Animal Ecology* 82: 1192-1202.
92. Platt, S. G., R. M. Elsey, H. Liu, T. R. Rainwater, J. C. Nifong, A. E. Rosenblatt, **M. R. Heithaus**, and F. J. Mazzotti. 2013. Frugivory and seed dispersal by crocodilians: an over-looked form of saurochory? *Journal of Zoology* 291: 87-99.
 91. Vaudo, J. J. and **M. R. Heithaus**. 2013. Microhabitat selection by marine mesoconsumers in a thermally heterogeneous habitat: behavioral thermoregulation or avoiding predation risk? *PLoS One* 8: e61907. Doi 10.1371/journal.pone.0061907
 90. **Heithaus, M. R.**, J. J. Vaudo, S. Kreicker, C. A. Layman, M. Krutzen, D. A. Burkholder, K. Gastrich, C. Bessey, R., K. Cameron, A. Wirsing, J. A. Thomson, and M. M. Dunphy-Daly. 2013. Apparent resource partitioning and trophic structure of large-bodied marine predators in a relatively pristine seagrass ecosystem. *Marine Ecology Progress Series* 481: 225-237.
 89. Worm, B., B. Davis, L. Ketterner, C. A. Ward-Paige, D. Chapman, **M. R. Heithaus**, S. T. Kessel, and S. H. Gruber. 2013. Global catches, exploitation rates, and rebuilding options for sharks. *Journal of Marine Policy* 40: 194-204.
 88. Lewis, J. S., D. Wartzok, and **M. R. Heithaus**. 2013. Individuals as information sources: Do followers benefit from leaders' knowledge? *Behaviour* 150: 635-657.
 87. Mukherjee, S. and **M. R. Heithaus**. 2013. Dangerous prey and daring predators: a review. *Biological Reviews* 88: 50-563.
 86. Lewis, J. S., D. Wartzok, **M. R. Heithaus**, and M. Krützen. 2013. Could relatedness help explain why individuals lead in bottlenose dolphin groups. *PLoS One*: 8(3): e58162. doi:10.1371/journal.pone.0058162
 85. Burkholder, D. A., J. A. Fourqurean, and **M. R. Heithaus**. 2013. Spatial pattern in seagrass stoichiometry indicates both N-limited and P-limited regions of an iconic P-limited subtropical bay. *Marine Ecology Progress Series* 472: 101-115.
 84. Rosenblatt, A. E. and M. R. Heithaus. 2013. Slow isotope turnover rates and low discrimination values in the American alligator: implications for interpretation of ectotherm stable isotope data. *Physiological and Biochemical Zoology* 86: 137-148.
 83. Bornatowski, H. **M. R. Heithaus**, C. M. P. Batista, and R. Mascarenhas. 2012. Shark scavenging and predation on sea turtles in northeastern Brazil. *Amphibia and Reptilia* 33: 495-502.
 82. Kendrick, G. A., J. W. Fourqurean, M. Fraser, **M. R. Heithaus**, G. Jackson, K. Friedman, and D. Hallac. 2012. Science behind management of Shark Bay and Florida Bay, two P-limited subtropical systems with different climatology and human pressures. *Marine and Freshwater Research* 63: 941-951.
 81. Frid, A., J. Marglive, and **M. R. Heithaus**. 2012. Interspecific variation in life history relates to antipredator decisions by marine mesopredators on temperate reefs. *PLoS One* 7(6): e40083. doi:10.1371/journal.pone.0040083
 80. Olson E. L., A. K. Salomon, A. J. Wirsing and **M. R. Heithaus**. 2012. Large-scale movement patterns of male loggerhead sea turtles (*Caretta caretta*) in Shark Bay, Australia. *Marine and Freshwater Research* 63: 1108-1116.
 79. Wirsing, A. J. and **M. R. Heithaus**. 2012. Behavioral transition probabilities in dugongs change with habitat and predator presence: implications for sirenian conservation. *Marine and Freshwater Research* 63:1069-1076.

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14. Krützen, M., L. M. Barre, L. M. Moller, **M. R. Heithaus**, C. Simms, and W. B. Sherwin. 2002. A biopsy system for small cetaceans: darting success and wound healing in *Tursiops* spp. *Marine Mammal Science* 18: 863-878.
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2. **Heithaus, M. R.** and R. H. Laushman. 1997. Genetic variation and conservation of stream fishes: influence of ecology, life history, and water quality. *Canadian Journal of Fisheries and Aquatic Sciences* 54: 1822-1836.
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CHAPTERS IN BOOKS

15. Munroe, E. M., L. Meyer, and **M. R. Heithaus**. Dietary biomarkers in shark foraging and movement ecology. 2018. Pages 1-24 in *Shark Research: Emerging technologies and applications for the field and laboratory*. Carrier, J. C., **M. R Heithaus**, and C. A. Simpfendorfer (eds). CRC Press, Boca Raton.
14. Kiszka, J. J. and **M. R. Heithaus**. 2018. Using aerial surveys to investigate the distribution, abundance, and behavior of sharks and rays. Pages 71-82 in *Shark Research: Emerging technologies and applications for the field and laboratory*. Carrier, J. C., **M. R Heithaus**, and C. A. Simpfendorfer (eds). CRC Press, Boca Raton.
13. Papastamatiou, Y. P., C. G. Myer, Y. Y. Wantanabe, and **M. R. Heithaus**. 2018. Animal-borne video cameras and their use to study shark ecology and conservation. Pages 83-91 in *Shark Research: Emerging technologies and applications for the field and laboratory*. Carrier, J. C., **M. R Heithaus**, and C. A. Simpfendorfer (eds). CRC Press, Boca Raton.
12. **Heithaus, M. R.**, L. M. Dill and J. J. Kiszka. 2018. Feeding strategies and tactics. Pages 354-363 in *Encyclopedia of Marine Mammals*. Wursig, B., J. G. M. Thewissen, and K. M. Kovacs (eds). Academic Press, San Diego, CA
11. Nowicki, R. J., J. W. Fourqurean, and **M. R. Heithaus**. 2018. The role of consumers in structuring seagrass communities: direct and indirect mechanisms. In “Seagrasses of Australia”
10. Kiszka, J. J. and **M. R. Heithaus**. 2014. The state of knowledge on sharks for conservation and management. Pages 69-88 in *Techera, E. and N. Klein (eds) Sharks: Conservation, governance, and management*. Routledge. New York.
9. **Heithaus, M. R.** 2013. Predators, prey, and ecological roles of sea turtles. Pages 249-285 in *Wyneken, J., J. K. Lohman, J. A. Musick (eds) Biology of Sea Turtles, Volume III*. CRC Press.
8. **Heithaus, M. R.** and J. J. Vaudo. 2012. Predator-prey interactions. Pages 505-546 in *Carrier, J. C., J. Musick, M. R Heithaus (eds.) The Biology of Sharks and Their Relatives, Second Edition*. CRC Pres.
7. Vaudo, J. J. and **M. R. Heithaus**. 2011. High trophic level consumers: elasmobranchs. Pages 203-225 In *Wolanski E, McLusky D (Eds), Treatise on Estuarine and Coastal Science. Volume 6: Trophic Relationships of Coastal and Estuarine Ecosystems*. Elsevier Inc.
6. Frid, A. and **M. R. Heithaus**. 2010. Conservation and Anti-Predator Behavior. Pages 366-376 In *Breed, M. D. and J. Moore (eds) Encyclopedia of Animal Behavior*. Elsevier.
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4. **Heithaus, M. R.** and L. M. Dill. 2009. Feeding Tactics and Strategies. In *Perrin, W. F., B. Wursig, and H. G. M. Thewissen (eds.) The Encyclopedia of Marine Mammals, Second Edition*. Academic Press. pp 414-423
3. **Heithaus, M. R.** 2007. Nursery areas as essential shark habitat: a theoretical perspective. In *McCandless, C. T., N. E. Kohler, H. L. Pratt Jr. (eds.) Shark Nursery Grounds of the Gulf of Mexico and the East Coast Waters of the United States*. American Fisheries Society Symposium 50: 3-13.

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1. **Heithaus, M. R.** and L. M. Dill. 2002. Feeding Tactics and Strategies. Pages 412-422 *in* Perrin, W. F., B. Würsig, and H. G. M. Thewissen (eds.). *The Encyclopedia of Marine Mammals*. Academic Press.

EDITED BOOKS

4. Carrier, J. C., **M. R Heithaus**, and C. A. Simpfendorfer (eds). 2018. *Shark Research: Emerging technologies and applications for the field and laboratory*. CRC Press, Boca Raton.
3. Carrier, J. C., J. Musick, and **M. R Heithaus** (eds). 2012. *The biology of sharks and their relatives*, Second Edition. CRC Press, Boca Raton.
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1. Carrier, J. C., J. Musick, and **M. R Heithaus** (eds). 2004. *The biology of sharks and their relatives*. CRC Press, Boca Raton.

GOVERNMENT REPORTS

1. Baird, R. W., M. B. Hansen, E. E. Ashe, **M. R. Heithaus**, and G. J. Marshall. 2003. Studies of foraging in “southern resident” killer whales during July 2002: dive depths, bursts in speed, and the use of a “Critttercam” system for examining sub-surface behavior. Report prepared under Order Number AB 133F-02-SE-1744 for the National Marine Mammal Laboratory, National Marine Fisheries Service, Seattle, WA.

BOOK REVIEWS

1. **Heithaus, M. R.** 2007. Review of Understanding sharks. *Quarterly Review of Biology* 82: 290.

NON-PEER REVIEWED PUBLICATIONS AND LETTERS

5. Fraser, M., G. Kendrick, J. Statton, J. Thomson, and M. R. Heithaus. 2014. Climate change threatens Western Australia’s iconic Shark Bay. *The Conversation*: <http://theconversation.com/climate-change-threatens-western-australias-iconic-shark-bay-32428>
4. Chapman, D. D., M. J. Frisk, D. L. Abercrombie, C. Safina, S. H. Gruber, E. A. Babcock, K. A. Feldheim, E. K. Piktich, C. Ward-Paige, B. Davis, S. Kessel, **M. Heithaus**, and B. Worm. 2013. Give shark sanctuaries a chance. *Science* 339: 757.
3. Vaudo, J. J. and **M. R. Heithaus**. 2012. Many species of sharks are found in south Florida waters. Page 362 *In*: Kruczynski, W. L. and P. J Fletcher (eds). *Tropical Connections: South Florida’s Marine Environment*. IAN Press, University of Maryland.
2. Vaudo, J. J. and **M. R. Heithaus**. 2012. Sharks are vulnerable to overfishing. Page 362 *In*: Kruczynski, W. L. and P. J Fletcher (eds). *Tropical Connections: South Florida’s Marine Environment*. IAN Press, University of Maryland.
1. Rehage, J., E. Gaiser, **M. R. Heithaus**, M. Ross, and P. Ruiz. 2010. Effects of a rare cold snap on Everglades biota: what are the long-term consequences for the ecosystem? LTER Network News Spring 2010. <http://news.lternet.edu/article314.html>.

RESEARCH FUNDING

GRANTS AS PRINCIPLE INVESTIGATOR AT FLORIDA INTERNATIONAL UNIVERSITY

- 2018-2021 IRES Track I: International research and professional development experience for students in ecology and conservation of endangered wildlife in Nosy Be, Madagascar. National Science Foundation. \$299,438
- 2017-2018 Baseline abundance of sharks in shark sanctuaries. Pew Charitable Trust. \$124,000
- 2015-2018 Global FinPrint: A global assessment of coral reef sharks and rays. Vulcan Foundation \$3,900,000 co-Lead-PI with Demian Chapman.
- 2013-2014 Shark provisioning: an assessment of individual and community level impacts around Moorea, French Polynesia (South Pacific). National Geographic Committee for Research and Exploration. \$19,500
- 2013-2015 RAPID: Ecological responses to large-scale climate disturbance: Could the interaction of overfishing and disturbance initiate phase-shifts in tropical seagrass ecosystems? National Science Foundation. \$194,639.
- 2008-2014 CAREER: Does predator intimidation influence a pristine seagrass community through multiple indirect pathways? National Science Foundation. \$725,195
- 2012-2013 Communicating research to public audiences: Predators of Shark River, National Science Foundation. \$149,988
- 2011-2012 Assessing impacts of oil exposure to deep sea ecosystems of the Gulf of Mexico using sharks and scavengers as integrative models: satellite tracking of top predators. Guy Harvey Ocean Foundation \$26,900
- 2010-2012 Assessing impacts of oil exposure to deep sea ecosystems of the Gulf of Mexico using sharks and scavengers as integrative models. Florida Institute of Oceanography. \$281,197 in research expenses with an additional \$172,800 of shiptime
- 2010-2011 Florida Scholar Boost: A professor to lead a Marine Fisheries and Ecosystems Dynamics and Policy Center. Florida Board of Governors. \$300,000
- 2009 Supplement to FCE LTER II: Coastal Oligotrophic Ecosystems Research for purchase of YSI Sondes. National Science Foundation. \$24,000
- 2008 ROA Supplement to “Behaviorally mediated species interactions in a subtropical seagrass community.” National Science Foundation, \$19,955
- 2007 Deep-sea shark communities of the Bahamas, with F Jochem coPI. Florida Institute of Oceanography. \$21,000
- 2006-2009 Behaviorally mediated species interactions in a subtropical seagrass community, with J Fourqurean coPI. National Science Foundation. \$547,746
- 2005 Deep-sea shark communities of the Gulf of Mexico, with Frank Jochem coPI. Florida Institute of Oceanography. \$12,000
- 2004-2006 Shiptime to test advanced animal-borne video telemetry devices, with JC Carrier (Albion College) and GJ Marshall (National Geographic) coPIs. NOAA Shiptime. \$55,000
- 2003-2006 Development of an advanced animal-borne video telemetry system, with JC Carrier (Albion College) and GJ Marshall (National Geographic) coPIs. SeaGrant. \$200,000

GRANTS AS CO-PRINCIPLE INVESTIGATOR AT FLORIDA INTERNATIONAL UNIVERSITY

- 2017-2020 Interactions and habitat requirements of Gulf of Mexico Bryde's Whales. with L Garrison (PI), **M. Heithaus** (coPI; PI of FIU Portion: \$350,656). Gulf of Mexico Research Institute. RESTORE. \$2,313,310.
- 2017-2018 RAPID: Hurricane Irma: How do ecosystem perturbations interact to influence long-term resilience mechanisms. with E. Gaiser (PI), **M. Heithaus** (coPI). National Science Foundation. \$175,000
- 2016-2021 FIU Advance (promoting diversity and inclusion in faculty) with K. Furton (PI), S. Rose (coPI), Y. Derisi (coPI), R. Jung (coPI), **M. Heithaus** (coPI). National Science Foundation \$3,250,000.
- 2012-2018 FCE LTER III: Coastal Oligotrophic Ecosystems Research with E. Gaiser (PI), L. Ogden (coPI), R Price (coPI), **M Heithaus (coPI)**, R Jaffe (coPI). National Science Foundation. \$5,879,998. *I am the coPI responsible for the Trophic Dynamics Group within the LTER (\$420,685).*
- 2012-2017 Collaborative Research: Does Anti-predator Behavior Modify Indirect Effects of Top Predators? National Science Foundation October 2012-September 2017. \$785,000 with A. Wirsing (PI), **M. Heithaus (coPI)**, W. Ripple (coPI). *I am the PI for the FIU portion of the project, \$35,000.*
- 2010-2011 MRI R2: Acquisition of the next generation IRMS and CRDS for the SERC Stable Isotope Laboratory with W. Anderson (PI), J Fourqurean (coPI), **M Heithaus (coPI)**, R. Jaffe (coPI). National Science Foundation, February 2010-January 2011. \$413,334
- 2006-2012 FCE LTER II: Coastal Oligotrophic Ecosystems Research with D Childers (PI), E. Gaiser (coPI), **M Heithaus (coPI)**, R Jaffe (coPI), R Price (coPI). National Science Foundation. November 2006-November 2012. \$4,920,000. *I am the coPI responsible for the Consumer Dynamics Group within the LTER. My lab directly received a total of \$398,700.*

GRANTS AND FELLOWSHIPS TO UNDERGRADUATE STUDENTS, GRADUATE STUDENTS AND POSTDOCTORAL SCIENTISTS

- 2018 PADI Foundation to C. Knauer (PhD student): \$7,800
- 2017 PADI Foundation to Elizabeth Whitman (PhD student): \$5000
- 2016 Save our Seas Foundation to Robert Nowicki (PhD student): \$5000
- 2016 Save our Seas Foundation to Camila Caceres (PhD student): \$6000
- 2016 PADI Foundation to Elizabeth Whitman (PhD student): \$6500
- 2015-2016 Total Foundation grant to J. Kiszka (postdoctoral scientist) and E. Whitman (PhD student): \$150,000
- 2015 Great Lakes National Scholarship Program to E. Whitman (PhD student): \$2500
- 2014 Great Lakes National Scholarship Program to E. Whitman (PhD student): \$2500
- 2014 Guy Harvey Foundation to D. Churchill (PhD student) \$5000
- 2014-2017 Total Foundation to J. Kiszka (postdoctoral scientist)
- 2014 PADI Foundation to C. Caceres (PhD student): \$5,000
- 2014 McNair Fellowship to V. Paz (undergraduate student)
- 2014 Save Our Seas Foundation to J. Kiszka (postdoctoral scientist): \$5,500
- 2013-2014 Florida International University Dissertation Year Fellowship to P. Matich (PhD student): \$16,000

- 2012-2013 Florida International University Dissertation Year Fellowship to A. Rosenblatt (PhD student): \$16,000
- 2013-2014 PADI Foundation to R. Nowicki (PhD Student): \$5,284
- 2012-2015 Graduate Research Fellowship to R. Nowicki (PhD student)
- 2013-2014 PADI Foundation to J. Thomson (Postdoc): \$2,900
- 2012-2013 PADI Foundation to P. Matich (PhD student): \$5,295.
- 2012-2013 ZooMiami Conservation and Research Fund to P. Matich (PhD student): \$3,000.
- 2011-2012 Christina Mendoza Research Award to P. Matich (PhD student): \$7,500.
- 2011-2012 Florida International University Dissertation Year Fellowship to D. Burkholder (PhD student)
- 2010-2011 Florida International University Dissertation Year Fellowship to J. Vaudo (PhD student)
- 2011 IUCN Crocodile Specialist Group Research Grant to A. Rosenblatt (PhD student): \$1,000.
- 2009 Florida International University Doctoral Evidence Acquisition Fellowship to D. Burkholder (PhD Student)
- 2010-2011 FIU Presidential Fellowship to R Sarabia (PhD student)
- 2009 Young Explorers Grant, National Geographic Society Committee for Research and Exploration, M. Dunphy-Daly (MS student): \$4,500
- 2008-2009 National Geographic Society Committee for Research and Exploration to A. Wirsing (Postdoctoral Scientist): \$23,000
- 2008 BBC-FIU Travel Scholarship to K Cameron (MS student): \$1,000
- 2008 BBC-FIU Travel Scholarship to A Rosenblatt (PhD student): \$1000
- 2008 FIU Marine Science Program Boat Grants to A Rosenblatt (PhD student): \$1,000
- 2006-2009 National Science Foundation, Graduate Research Fellowship to M Dunphy-Daly (MS student)
- 2007 FIU Judith Evans Parker Travel Award to M Dunphy-Daly (MS student): \$600
- 2006-2007 The ecological role of stingrays in Shark Bay, Western Australia. National Geographic Expeditions Council to J. Vaudo (PhD student): \$15,000.
- 2006-2007 PADI Foundation to D. Burkholder (PhD student): \$4,620.
- 2005 Sigma Xi, to L Posada (undergraduate honors student): \$600.
- 2005-2006 FIU Presidential Fellowship to J Vaudo (PhD student)

RESEARCH SEMINARS AND CONFERENCE TALKS

INVITED INSTITUTIONAL SEMINARS

- 2015 **Heithaus, M.R.** The role of behavior in shaping the ecological roles of large predators in coastal and estuarine ecosystems. Florida International University
- 2014 **Heithaus, M.R.** Unraveling the ecological roles of large predators in coastal and estuarine ecosystems. Broward Community College
- 2014 **Heithaus, M.R.** Unraveling the ecological roles of large predators in coastal and estuarine ecosystems. Oregon State University. Research Advances in Fisheries, Wildlife and Ecology Symposium; *Keynote address*
- 2013 **Heithaus, M.R.** Unraveling the ecological roles of large predators in coastal and estuarine ecosystems. University of La Reunion.

- 2012 **Heithaus, M.R.** Unraveling the ecological roles of large predators in coastal and estuarine ecosystems. Florida International University
- 2012 **Heithaus, M.R.** Unraveling the ecological roles of large predators in coastal and estuarine ecosystems. Duke University
- 2012 **Heithaus, M.R.** Unraveling the ecological roles of large predators in coastal and estuarine ecosystems. Keynote Address, University of Florida Marine Science Symposium
- 2011 **Heithaus, M.R.** Unraveling the ecological roles of large predators in coastal and estuarine ecosystems. University of Miami
- 2010 **Heithaus, M.R.** Unraveling the ecological role of upper trophic level predators. SERC Brownbag Seminar
- 2010 **Heithaus, M. R.** Using technology to study large marine species. Florida International University Honors College
- 2009 **Heithaus, M. R.** Beyond the body count: the ecological role of tiger sharks in a pristine ecosystem. Florida Atlantic University
- 2008 **Heithaus, M. R.** Beyond the body count: the ecological role of tiger sharks in a pristine ecosystem. Stanford University Hopkins Marine Station.
- 2008 **Heithaus, M. R.** Beyond the body count: the ecological role of tiger sharks in a pristine ecosystem. Ohio State University
- 2008 **Heithaus, M. R.** Heithaus, M. R. The ecological role of tiger sharks in a pristine seagrass ecosystem. Texas A&M University
- 2007 Heithaus, M. R. The ecological role of large sharks, Florida Atlantic University.
- 2007 **Heithaus, M. R.** Unraveling the ecological role of sharks. Sigma Xi Chapter Installation Address, Florida International University
- 2007 **Heithaus, M. R.** Non-lethal and indirect effects of tiger sharks in a pristine seagrass ecosystem. Duke University Marine Laboratory
- 2007 **Heithaus, M. R.** Non-lethal and indirect effects of tiger sharks in a pristine seagrass ecosystem. University of Miami
- 2007 **Heithaus, M. R.** Non-lethal and indirect effects of tiger sharks in a pristine seagrass ecosystem. Florida International University
- 2007 **Heithaus, M. R.** New technologies for studying the behavior of marine animals. Lubinsky Public Lecture, University of Manitoba
- 2007 **Heithaus, M. R.** Non-lethal and indirect effects of tiger sharks on a pristine seagrass community. Lubinsky Lecture, Zoology Department, University of Manitoba
- 2006 **Heithaus, M. R.** Non-lethal and indirect effects of tiger sharks on a pristine seagrass community. Dauphin Island Laboratory, Alabama
- 2006 **Heithaus, M. R.** Non-lethal and indirect effects of tiger sharks on a pristine seagrass community. Florida International University, SERC lunchtime series
- 2006 **Heithaus, M. R.** Towards a predictive framework for marine conservation. Simon Fraser University, Department of Biological Sciences.
- 2005 **Heithaus, M. R.** The role of tiger sharks in a subtropical seagrass community: is death overrated? Kenyon College, Biology Department
- 2005 **Heithaus, M. R.** Cameras on animals: new ways to study the behavior of marine animals. Florida International University, Lunchtime Faculty Seminar, UP

- 2004 **Heithaus, M. R.** Predator-prey interactions in a subtropical seagrass ecosystem: antipredator behavior of dolphins and sea turtles in response to tiger shark predation risk. NOVA Southeastern University, Marine Laboratory Seminar
- 2004 **Heithaus, M. R.** Influence of tiger sharks on habitat use and behavior of bottlenose dolphins and sea turtles in a seagrass ecosystem. University of Miami, Biology Department Seminar
- 2004 **Heithaus, M. R.** The role of tiger sharks in a subtropical seagrass community. Florida International University, Faculty Seminar Series, BBC
- 2004 **Heithaus, M. R.** Anti-predator behavior of bottlenose dolphins and sea turtles under risk of predation from tiger sharks. Duke University Marine Laboratory Seminar
- 2002 **Heithaus, M. R.** The role of tiger sharks in a seagrass ecosystem. Oberlin College, Biology Department
- 2002 **Heithaus, M. R.** Influence of tiger shark predation risk and food abundance on bottlenose dolphin habitat use. Florida International University, Department of Biological Sciences
- 2001 **Heithaus, M. R.** Colorado State University, Biology Department; Habitat use decisions by bottlenose dolphins and tiger sharks in a seagrass ecosystem. Florida Atlantic University, Biology Department Seminar
- 2001 **Heithaus, M. R.** Using behavioral ecological theory to study habitat use decisions by large marine animals. Oberlin College, Department of Biology
- 2000 **Heithaus, M. R.** Habitat use of tiger sharks and bottlenose dolphins in Shark Bay. Simon Fraser University, Les Ecologists Seminar
- 1998 **Heithaus, M. R.** Habitat use of bottlenose dolphins in Shark Bay, Western Australia. Simon Fraser University, Les Ecologists Seminar
- 1998 **Heithaus, M. R.** Taking behavioral ecological theory into the field: influences of prey availability and tiger shark predation risk on bottlenose dolphin habitat use. Kenyon College, Biology Department Seminar
- 1998 **Heithaus, M. R.** Influence of prey availability and predation risk on bottlenose dolphin habitat use. Oberlin College, Biology Department Seminar
- 1997 **Heithaus, M. R.** Bottlenose dolphin and tiger shark research in Shark Bay. University of Western Australia, Department of Anatomy and Human Biology
- 1997 **Heithaus, M. R.** The bottlenose dolphins of Shark Bay, Western Australia. Simon Fraser University, Les Ecologists Seminar
- 1995 **Heithaus, M. R.** Ecology of bottlenose dolphins: implications for conservation. Oberlin College, Montie/Block Lecture
- 1994 **Heithaus, M. R.** Feeding ecology of bottlenose dolphins: use of new techniques and implications for conservation. Oberlin College, Mellon Foundation Lecture

ORAL PRESENTATIONS SCIENTIFIC MEETING

- 2017 Dellinger, J. A.*, A. J. Wirsing, **M. R. Heithaus**, and W. J. Ripple. All bark and no bite? Impacts of recolonizing gray wolves are primarily non-consumptive in a managed landscape of western North America. Invited symposium talk for "S24: Managing novel communities and multiple threats to achieve biodiversity outcomes", 12th International Mammalogical Congress, Perth, Western Australia.

- 2016 Nowicki, R., **M. R. Heithaus**. Resistance, resilience, and the response of a teleost community to catastrophic seagrass loss. 45th Benthic Ecology Meeting, Portland, Maine. March, 2016.
- 2015 Churchill, D. A., **M. R. Heithaus**, and R. D. Grubbs. Estimating trophic position of deep-water sharks and associated species using compound-specific nitrogen isotope analysis of amino acids. American Elasmobranch Society. Reno, June, 2015.
- 2015 Nowicki, R.J. J. A. Thomson, J. W. Fourqurean, and **M. R. Heithaus**. Effects of predation risk from tiger sharks (*Galeocerdo cuvier*) on resilience of an iconic seagrass ecosystem following a widespread climate driven disturbance. American Elasmobranch Society. Reno, June, 2015.
- 2015 Kilfoil, J., J. Kiszka, A. J. Wirsing, **M. R. Heithaus**, and Y. Zhang. Unmanned aerial drone and stationary video surveys to estimate reef shark densities in shallow nursery areas. International Council for the Exploration of the Sea. Copenhagen, September, 2015.
- 2015 Damseaux, F., J. Kiszka, **M. R. Heithaus**, G. Scholl, G. Eppe, J.P. Thome, and K. Das. Spatial variation in the concentrations of mercury and persistent organic pollutants in free-ranging bottlenose dolphins (*Tursiops truncatus*) from South Florida. European Cetacean Society. March, 2015
- 2014 Kiszka, J., P. Matich, A. Rosenblatt, R. Sarabia, K. Gastrich, V. Paz, and **M. R. Heithaus**. Role of bottlenose dolphins and other top predators in linking ecosystem dynamics in the Florida Everglades. 28th Annual Conference of the European Cetacean Society, Liège, Belgium, April 2014.
- 2014 **Heithaus, M.R.** The importance of large predators in tropical and subtropical marine ecosystems. Fairchild Tropical Biology Symposium, Miami, FL. January, 2014.
- 2014 **Heithaus, M.R.** The ecological consequences of marine predator declines. Gordon Research Conference, Ventura, CA, January 2014. *Invited talk*
- 2014 Kiszka, J., P. Matich, A. Rosenblatt, R. Sarabia, K. Gastrich, V. Paz, and **M. R. Heithaus**. Role of bottlenose dolphins and other top predators in linking ecosystem dynamics in the Florida Everglades. 28th Annual Conference of the European Cetacean Society, Liège, Belgium, April 2014.
- 2013 Kiszka, J., P. Mendez-Fernandez, **M. R. Heithaus** and V. Ridoux. Assessing the feeding ecology of coastal dolphin populations: can you make it with behavioural and biopsy sampling? 27th Annual Conference of the European Cetacean Society, Setubal, Portugal, April, 2013.
- 2012 Rosenblatt, A. , **M. R. Heithaus**, F. Mazotti, and M. Cherkis. Ecological roles and individual specialization of American alligators revealed by stable isotope analysis and movement patterns. World Congress of Herpetology. Vancouver, BC, Canada, August 2012
- 2012 **Heithaus, M. R.**, C. Bessey, D. Burkholder, A. Wirsing, and J. Fourqurean. Do tiger sharks influence seagrass ecosystems through multiple indirect pathways? Annual Meeting of the American Elasmobranch Society. Vancouver, BC August 2012
- 2012 Matich, P. and **M. R. Heithaus**. Resource pulses drive seasonal variability in bull shark trophic ecology. Annual Meeting of the American Elasmobranch Society. Vancouver, BC August 2012
- 2012 Burkholder, D. A., **M. R. Heithaus**, and J. Fourqurean. Top down control in a relatively intact seagrass ecosystem. Annual Meeting of the American Elasmobranch Society. Vancouver, BC August 2012

- 2012 Wirsing, A. and **M. R. Heithaus**. Behavioral transition probabilities in dugongs change with habitat preference and predator presence. Ecological Society of America Annual Meeting. Portland, OR August 2012
- 2012 **Heithaus, M. R.**, P. Greene, A. Rosenblatt, and P. Matich. Communicating research to public audiences: Predators of Shark River. NSF Informal Science Education PIs Meeting, Washington DC, March 2012.
- 2012 Grubbs, R.D., J. Gelsleichter, **M. R. Heithaus**, K. Gastrich, C. Cotton.. Assemblages of large demersal fishes associated with Desoto Canyon and Continental Slope waters in the Eastern Gulf of Mexico with reference to the Deepwater Horizon Oil Spill. Ocean Sciences Meeting. Salt Lake City, February 2012
- 2011 Burkholder, D., **M. R. Heithaus**, J. Fourqurean, and A. Wirsing. Top-down control in a relatively pristine seagrass ecosystem. CERF 2011: 21st Biennial Conference of the Coastal and Estuarine Research Federation. Daytona Beach. November, 2011.
- 2011 **Heithaus, M.**, C. Bessey, D. Burkholder, and J. Fourqurean. Do tiger sharks influence seagrass ecosystems through multiple indirect pathways? CERF 2011: 21st Biennial Conference of the Coastal and Estuarine Research Federation. Daytona Beach. November, 2011.
- 2011 Matich, P. and **M. Heithaus**. Abiotic and biotic drivers of intraspecific variability in behavior shape the ecological roles of juvenile bull sharks. CERF 2011: 21st Biennial Conference of the Coastal and Estuarine Research Federation. Daytona Beach. November, 2011.
- 2011 Rosenblatt, A. and **M. Heithaus**. The roles of American alligators in a subtropical estuary. CERF 2011: 21st Biennial Conference of the Coastal and Estuarine Research Federation. Daytona Beach. November, 2011.
- 2011 **Heithaus, M. R.**, D. Grubbs, J. Castro, M. Shivji, and J. Gelsleichter. Assessing the impacts of oil exposure o deep sea ecosystems using sharks and scavengers as integrative models. Florida Institute of Oceanography PI Symposium, University of Central Florida, May 2011.
- 2011 Bejder, L. J. Mann, R. Connor, **M. Heithaus**, L. Rendell, H. Hunt, and H. Whitehead. The efficacy of management interventions in response to decline in relative abundance of bottlenose dolphins (*Tursiops* sp.) in Shark Bay, Western Australia. 19th Biennial Conference on the Biology of Marine Mammals. December 2011, Tampa, FL.
- 2011 Matich, P and **M. R. Heithaus**. Ontogenetic shift in the habitat use and diet of juvenile bull sharks in a coastal estuary. Annual Meeting of the American Elasmobranch Society. Minneapolis, MN July 2011
- 2011 Lewis, J., **M. R. Heithaus**, and D. Wartzok. Benefits of group leading in bottlenose dolphins. 19th Biennial Conference on the Biology of Marine Mammals. December 2011, Tampa, FL.
- 2011 Wirsing, A., **M. Heithaus**, and L. Dill. Anti-predator responses of diving dugongs depend on foraging mode. 19th Biennial Conference on the Biology of Marine Mammals. December 2011, Tampa, FL.
- 2011 Rosenblatt, A. E and **M. R. Heithaus**. Variation in movement tactics and trophic interactions among American alligators creates unexpected habitat linkages. Meeting of the Ecological Society of America, Austin, TX August 2011

- 2010 Matich, P., **M. R. Heithaus**, and C. A. Layman. Contrasting patterns of individual specialization and trophic coupling in two marine apex predators. American Elasmobranch Society Meetings. July, 2010
- 2010 Vaudo, J.J. and M.R. Heithaus. The effects of sampling unit and sample size on stable isotopic community metrics in a batoid community. . American Elasmobranch Society Meetings. July, 2010
- 2010 Bernard, A. M., K. M. Feldheim, **M. R. Heithaus**, B. Wetherbee, S Wintener, L. A. Howey, and M. S. Shivji. Population genetic structure and evolutionary history of the tiger shark (*Galeocerdo cuvier*) on a global scale. Sharks international conference. Cairns, Australia. June, 2010
- 2010 **Heithaus, M.R.** Overcoming challenges of global governance in shark conservation. Global Oceans Conference. Paris, France. May, 2010
- 2010 Ferretti, F., Worm, B., Britten, G. L., **M. R. Heithaus**, H. Loetz. The role of sharks in marine ecosystems: insights from a global overview of changes in abundance and ecosystem consequences. Sharks international conference. Cairns, Australia. June, 2010
- 2009 **Heithaus, M. R.**, P. Matich, C. Layman, B. Delius, A. J. Wirsing, and M. M. Dunphy-Daly. Trophic interactions of juvenile bull sharks in an oligotrophic estuary. American Elasmobranch Society Meetings. July, 2009
- 2009 Rosenblatt, A., **M. R. Heithaus**, and F. Mazotti. Trophospatial dynamics of alligators in an oligotrophic ecosystem. American Elasmobranch Society Meetings. July, 2009
- 2009 Burkholder, D. and **M. R. Heithaus**. Feeding ecology and habitat use of green sea turtles in a pristine seagrass ecosystem. American Elasmobranch Society Meetings. July, 2009
- 2009 Vaudo, J. and **M. R. Heithaus**. Trophic structure of an elasmobranch community in a pristine ecosystem. American Elasmobranch Society Meetings. July, 2009
- 2008 Vaudo, J. and **M. R. Heithaus**. Factors influencing habitat use of sympatric ray species in Shark Bay, Australia. American Elasmobranch Society Meetings. July, 2008
- 2008 Rosenblatt, A., **M.R. Heithaus**, and F. Mazzoti. Movements of American alligators in the Florida coastal Everglades. FCE LTER All-Scientists Meeting.
- 2007 **HEITHAUS, M. R.** Integrating animal-borne imaging into studies of a pristine seagrass ecosystem. Animal Borne Imaging Symposium, Washington DC, October 2007
- 2007 Delius, B. K. and **M. R. Heithaus**. Do bull sharks mediate upstream nutrient transport in an oligotrophic estuary? Abstracts, Meeting of the American Elasmobranch Society.
- 2006 **Heithaus, M. R.**, L. M. Dill, and A. J. Wirsing. Non-lethal and indirect effects of tiger shark predation risk on a subtropical seagrass community. 91st Meeting of the Ecological Society of America. Memphis, TN.
- 2006 Wirsing, A. J., **M. R. Heithaus**, and L. M. Dill. Dugongs prefer foraging microhabitats allowing for escape when predators are abundant. 91st Meeting of the Ecological Society of America. Memphis, TN.
- 2005 **Heithaus, M. R.** and L. M. Dill. Does tiger shark predation risk influence foraging habitat use by bottlenose dolphins at multiple spatial scales? Sixteenth Biennial Conference on the Biology of Marine Mammals. San Diego, CA.
- 2005 Bejder, L. , A. Samuels, H. Whitehead, N. Gales, J. Mann, R. Connor, M. Heithaus, J. Watson-Capps and C. Flaherty. Shift in Habitat Use by Bottlenose Dolphins (*Tursiops sp.*) Exposed to Long-term Anthropogenic Disturbance. Sixteenth Biennial Conference on the Biology of Marine Mammals. San Diego, CA.

- 2005 Mann, J., Sargeant, B.L., Watson, J. J., Connor, R.C., Heithaus, M.R. Are there benefits to tool-use in wild bottlenose dolphins? Sixteenth Biennial Conference on the Biology of Marine Mammals. San Diego, CA.
- 2005 **Heithaus, M. R.**, I. M. Hamilton, A. J. Wirsing, and L. M. Dill. Microhabitat use by tiger sharks in Shark Bay, Western Australia: predator-prey interactions at multiple spatial scales. Abstracts, Meeting of the American Elasmobranch Society. Tampa, FL.
- 2005 Sargent, B. L., J. Mann, A. J. Wirsing, and **M. R. Heithaus**. Roles of ecology and social learning in bottlenose dolphin (*Tursiops* sp.) foraging tactics. The Centre for Social Learning and Cognitive Evolution at St. Andrews International Conference on Animal Social Learning.
- 2005 Wirsing, A. J., **M. R. Heithaus**, and L. M. Dill. Predation-sensitive foraging by dugongs in a subtropical Australian embayment. Abstracts, Meeting of the Animal Behavior Society. Snowbird, UT.
- 2004 **Heithaus, M. R.** and R. E. Hueter. The biology of bull and hammerhead sharks in the lower Florida Keys. Abstracts, Meeting of the American Elasmobranch Society.
- 2003 Baird, R. W, D. J. McSweeney, **M. R. Heithaus**, and G. J. Marshall. Short-finned pilot whale diving behavior: deep feeders and day-time socialites. Abstracts, Fifteenth Biennial Meeting of the Society for Marine Mammalogy, Greensborough, NC.
- 2003 Krützen, M., J. Mann, R. Connor, M. Heithaus, L. Bejder, B. Sargeant, P. Berggren, W. Sherwin. Genetic analyses reveal contrasting modes of transmission of different foraging traditions within a single population of bottlenose dolphins (*tursiops* sp.). Abstracts, Fifteenth Biennial Meeting of the Society for Marine Mammalogy, Greensborough, NC.
- 2003 Mann, J., L. M. Barre, R. C. Connor, and **M. R. Heithaus**. Female-biased maternal investment in bottlenose dolphins. Abstracts, Fifteenth Biennial Meeting of the Society for Marine Mammalogy, Greensborough, NC.
- 2003 Sharpe, F., **M. R. Heithaus**, L. M. Dill, B. Buhleier, and G. J. Marshall. Variability in foraging tactics and estimated prey intake by socially foraging humpback whales in Chatham Strait, Alaska Abstracts, Fifteenth Biennial Meeting of the Society for Marine Mammalogy, Greensborough, NC.
- 2001 **Heithaus, M. R.** and I. M. Hamilton. Randomization techniques for studies of habitat preference. Meeting of the American Elasmobranch Society, July 6-9, Penn State University.
- 2001 Heithaus, M.R., L. M. Dill, and G. J. Marshall. The role of tiger sharks in a subtropical seagrass ecosystem. Meeting of the American Elasmobranch Society, July 6-9, Penn State University.
- 2001 Dill, L. M. and **M. R. Heithaus**. Behaviorally-mediated indirect species interactions in marine ecosystems and their importance to conservation. Marine Conservation Meetings, June 22-25. San Francisco, CA.
- 2000 **Heithaus, M. R.** and L. M. Dill. Habitat use and behavior of tiger sharks (*Galeocerdo cuvier*) in Shark Bay, Western Australia. Meeting of the American Elasmobranch Society, June 14-21. La Paz, Mexico. *Gruber award for best student presentation*
- 1999 **Heithaus, M. R.** and L. M. Dill Influence of prey availability and tiger shark predation risk on bottlenose dolphin habitat use. Abstracts, Thirteenth Biennial Meeting of the Society for Marine Mammalogy, Maui, HI

- 1998 Connor, R. C., **M. R. Heithaus**, and L. M. Barre. Variation in patterns of alliance formation among male bottlenose dolphins. Meetings of the International Society of Behavioral Ecology.
- 1995 **Heithaus, M. R.** and R. H. Laushman. Genetic variation and conservation of stream fishes: ecology, life-history, and water quality. Ninth Annual Meeting of the Society for Conservation Biology.

OUTREACH AND ENGAGEMENT

I have focused considerable effort on using the excitement of research to inspire and educate the public and K-12 students. This has included hosting a television series on the National Geographic Channel, serving as the spokesperson for National Geographic's "Everyday Explorer" Campaign, developing innovative new styles of teaching in K-12 classrooms - using a combination of videos and activities - to improve achievement while inspiring curiosity, providing professional development to teachers, writing textbooks, and creating informal science education materials for television and science museums. My students and I also give many public and school talks.

FORMAL K-12 PRODUCTS, PROGRAMS, AND ENGAGEMENT

TEXTBOOKS

2. **Heithaus, M. R.** and K. Arms. 2013. Environmental Science. Houghton Mifflin Harcourt. Orlando, FL.
1. DeSalle, R. and **M. R. Heithaus**. 2008. Biology. Holt, Reinhart, and Winston. Austin, TX.

SCIENCE PROGRAMS

3. co-author, *Earth and Space Science*, High School Program, Houghton Mifflin Harcourt (2017)
2. co-author, *Science Dimensions*, K-5 Science Program, Houghton Mifflin Harcourt (2017)
1. co-author of *Science Fusion*, K-8 Science Program, Houghton Mifflin Harcourt (2013)

LEVELED READERS (ELEMENTARY SCHOOL)

4. **Heithaus, M. R.** 2013. Rain forest adventure. Houghton Mifflin Harcourt. Orlando, FL. 16pp
3. **Heithaus, M. R.** 2013. Exploring the Galapagos Islands. Houghton Mifflin Harcourt. Orlando, FL. 16pp
2. **Heithaus, M. R.** 2013. Predators of Shark River. Houghton Mifflin Harcourt. Orlando, FL. 16pp
1. **Heithaus, M. R.** 2013. Tiger sharks in the seagrass. Houghton Mifflin Harcourt. Orlando, FL. 16pp

K-12 PROJECT-BASED VIDEO PROGRAMS:

Video-Based Projects: The concept for video-based projects was developed during NSF-funded work in Shark Bay, Australia. These supplemental class materials introduce students to an ecosystem or scientific problem and then alternate between 2-4 min video clips and written activities for the students. The projects are built so students develop their own hypotheses, see

the data collection process, test their hypotheses with data, and then use these data to make further predictions. Dr. Heithaus hosts the videos, which feature a variety of scientists conducting the research.

1. Ecology of Fear: Wolf vs Deer
 - a. Heithaus, M.R., A. J. Wirsing, A. D Craig, J. Dellinger, and P. Greene. Ecology of Fear: Wolf vs Deer: Student Workbook. 8 pp. Available at <https://mikeheithaus.com/k-12-programs/k-12-project-based-video-programs/>
 - b. Heithaus, M.R., A. J. Wirsing, A. D Craig, J. Dellinger, and P. Greene. Ecology of Fear: Wolf vs Deer: Teacher Instructions. 13 pp. Available upon request.
 - c. Heithaus, M.R. and P. Greene. Ecology of Fear: Wolf vs Deer: Project video. Available at <https://mikeheithaus.com/k-12-programs/k-12-project-based-video-programs/>
2. Exploration of a Seagrass Ecosystem
 - a. Heithaus, M.R. Exploration of a seagrass ecosystem: Student Workbook. 35pp. With lesson extension activities by P. A. Heithaus. Available at www.sberp.org
 - b. Heithaus, M.R. Exploration of a seagrass ecosystem: Teacher Instructions. Available upon request.
 - c. Heithaus, M.R. and P. Greene. Exploration of a seagrass ecosystem: Project video. Available at www.sberp.org
3. Science Fusion: Project-based videos and activities for grades 3-8 (all videos created by Heithaus, M. R, and P. Greene; Student activities and teacher instructions by M. R. Heithaus) for Houghton Mifflin Harcourt's National Elementary and Middle School Science Program.
 - a. Exploring the Galapagos Islands (Elementary)
 - b. Tent-making bats of Costa Rica (Elementary; with Dr. B. Rodriguez and PhD student A. Wendt)
 - c. Amazing alligators (Elementary; with PhD student A Rosenblatt)
 - d. Rainforest habitats (Elementary; with Dr. S. Whitfield)
 - e. Sea turtle behavior (Elementary; with MS student E. Olsen)
 - f. Animals in Motion (Middle; with MS students K. Cameron, E. Olsen)
 - g. Ecology of Shark River (Middle, with PhD student P. Matich)
 - h. Dynamic Earth (Middle)
 - i. Exploring sound (Middle; with Dr. D. McLearn)
 - j. Data from space (Middle)
 - k. Evolution in action (Middle; with Dr. B. Langrahans)
 - l. Producers of Florida Bay (Middle; with Dr. J Fouqurean and PhD student J. Campbell)
 - m. Photosynthesis (Middle; with Dr. S. Oberbauer)
 - n. Invasive species of Florida (Middle; with J. Wazilouski)
 - o. Tiger sharks and dolphins (Middle; With PhD student C. Bessey)
4. That's Amazing: Project-based videos and activities for high school biology (all videos created by Heithaus, M. R, and P. Greene; Student activities and teacher instructions by M. R. Heithaus)
 - a. Disappearing poison frogs (with Dr. S. Whitfield)
 - b. Ecological role of bats (with Dr. B. Rodriguez and PhD student A. Wendt)
 - c. Alligator diets and trophic level (with PhD student A Rosenblatt)
 - d. Photosynthesis and respiration (with Dr. S. Oberbauer)

- e. Sea turtle diving physiology and behavior (with PhD student D. Burkholder)
 - f. Neanderthal tools (with Dr. B. Hardy)
 - g. Predator-prey interactions: shark vs dolphin (with PhD student C. Bessey)
 - h. Evolutionary relationships: what is a guitarfish?
 - i. Howler monkey behavior (with Dr. D. McLearn)
 - j. Surviving a snake bite: anti-venom and immunology (with Dr. M Sasa)
 - k. Parasite control of host behavior (with Dr. A. Pinto)
 - l. Ants and antibiotics (with Dr. C. Curie)
 - m. Viral diseases of corals (with Dr. R. Vega-Thurber and Dr. D. Burkepile)
 - n. Population structure and movements of tiger sharks (with Dr. M. Shivji)
 - o. Impacts of feral cats in Australia (with the Dept. Env. Cons.)
5. STEAM Forward: Ten project-based videos and activities incorporating Science, Technology, Engineering, Arts, and Math for middle and high school (video created by P. Greene and M. R. Heithaus; Student activities and teacher instructions by M. R. Heithaus) distributed by Georgia Aquarium

Other Formal Education and Professional Development Videos:

1. Real World Math: These 90-120 second videos connect students to real-world applications of math. Created to engage and inspire students, they provide teachers with tools to help improve students' connection to the material and provide a models that help address common core standards. All videos and scripts were created by P. Greene of Symbio Studios and M. R. Heithaus. M. R. Heithaus serves as the on-camera host for all videos. A total of 135 videos cover all chapters in Mifflen Harcourt's National Go Math Program for:
 - a. Grade 6
 - b. Grade 7
 - c. Grade 8
 - d. High School Algebra 1
 - e. High School Algebra 2
2. Next Generation Science Standards (NGSS) Professional Development Videos: These 4-6 minute videos discuss key issues and concepts teachers will need to address to ensure that instruction meets NGSS standards. Produced by P. Greene of Symbio Studios, co-written and hosted by M.R. Heithaus. 13 videos.

RESEARCH EXPERIENCES FOR MIDDLE SCHOOL TEACHERS

2008-2012 Provided 1-2 week research experiences in Shark Bay, Australia for 8 middle school teachers

TEACHER PROFESSIONAL DEVELOPMENT SEMINARS AND K-12 CLASSROOM VISITS

K-12 Education Conferences

- 2018 **Heithaus, M. R.** Next-generation science learning with video-based projects. Blue Springs, MO.
- 2017 **Heithaus, M.R.** Next-generation science learning with video-based projects. Florida Association of Science Teachers, Orlando, FL
- 2017 **Heithaus, M.R.** Next-generation science learning with video-based projects. National Science Teachers Association National Meeting, Los Angeles, CA

- 2016 **Heithaus, M. R.** Engaging students and enhancing learning outcomes with project-based videos. Stuck on Science Conference (K-8 teachers). Kansas City, MO.
- 2016 **Heithaus, M. R.** Using video and field research in the classroom. Stuck on Science Conference (K-8 teachers). Kansas City, MO.
- 2016 **Heithaus, M. R.** Engaging students and enhancing learning outcomes with project-based videos. Michigan Science Teachers Association Meeting, Lansing, MI
- 2014 **Heithaus, M. R.** Inspiring math achievement. National Council of Teachers of Mathematics Annual Meeting. New Orleans, LA
- 2014 **Heithaus, M. R.** Educate, Engage, Inspire: motivating students through project-based learning. National Science Teachers Association National Meeting. Boston, MA.
- 2013 **Heithaus, M. R.** Ecology Adventures: Motivating students through project-based learning. (Talk for K-8 teachers). CAST, Houston, TX.
- 2013 **Heithaus, M. R.** Ecology Adventures: Motivating students through project-based learning. (Talk for K-8 teachers). Ft. Pierce, FL. (2 talks)
- 2013 **Heithaus, M. R.** Ecology Adventures: Motivating students through project-based learning. (Talk for K-8 teachers). National Science Teachers Association National Meeting. San Antonio, TX
- 2013 **Heithaus, M. R.** That's Amazing! Engaging students and enhancing learning outcomes with project-based videos. (Talk for high school teachers). National Science Teachers Association National Meeting. San Antonio, TX
- 2012 **Heithaus, M. R.** Ecology Adventures: Motivating students through project-based learning. (Talk for K-8 teachers). National Science Teachers Association Regional Meeting. Atlanta, GA
- 2012 **Heithaus, M. R.** That's Amazing! Engaging students and enhancing learning outcomes with project-based videos. (Talk for high school teachers). National Science Teachers Association Regional Meeting. Atlanta, GA
- 2012 **Heithaus, M. R.** Ecology Adventures: Motivating students through project-based learning. (Talk for K-8 teachers). National Science Teachers Association National Meeting. Indianapolis, IN
- 2012 **Heithaus, M. R.** That's Amazing! Engaging students and enhancing learning outcomes with project-based videos. (Talk for high school teachers). National Science Teachers Association National Meeting. Indianapolis, IN
- 2012 **Heithaus, M. R.** Adventures in science! Society of Elementary Presidential Awardees Awards Lunch, Indianapolis, IN
- 2011 **Heithaus, M. R.** Inspiring curiosity and interest in science. Lunch time talk at the Meetings of the Long Island Science Education Leadership Association. East Meadow, NY
- 2011 **Heithaus, M. R.** Science Adventures: Motivating students through project-based learning. (Talk for K-8 teachers) National Science Teachers Association Regional Meeting, New Orleans, LA.
- 2011 **Heithaus, M. R.** That's Amazing! Engaging students and enhancing learning outcomes with project-based videos. (Talk for high school teachers). National Science Teachers Association Regional Meeting, New Orleans, LA.
- 2011 **Heithaus, M. R.** Science Adventures: Motivating students through project-based learning. (Talk for K-8 teachers) National Science Teachers Association Regional Meeting, Hartford, CT.

- 2011 **Heithaus, M. R.** That's Amazing! Engaging students and enhancing learning outcomes with project-based videos. (Talk for high school teachers). National Science Teachers Association Regional Meeting, Hartford, CT.
- 2011 **Heithaus, M. R.** Science Adventures: Motivating students through project-based learning. (Talk for K-8 teachers) National Science Teachers Association Regional Meeting, Seattle, WA.
- 2011 **Heithaus, M. R.** That's Amazing! Engaging students and enhancing learning outcomes with project-based videos. (Talk for high school teachers). National Science Teachers Association Regional Meeting, Seattle, WA.
- 2011 **Heithaus, M. R.** STEM Adventures: Project-based learning in marine biology without getting wet. Wisconsin State Science Teachers Association Meeting.
- 2011 **Heithaus, M. R.** Science Fusion! Wisconsin State Science Teachers Association Meeting.
- 2010 **Heithaus, M. R.** STEM Adventures: Project-based learning in marine biology without getting wet. Michigan Science Teachers Association
- 2010 **Heithaus, M. R.** STEM Adventures: Project-based learning in marine biology without getting wet. National Science Teachers Association Regional Meeting, Philadelphia, PA
- 2010 **Heithaus, M. R.** Project-based learning: Taking adventures in marine biology into the classroom. Florida Association of Science Teachers, St. Augustine, FL
- 2010 **Heithaus, M. R.** STEM Adventures: Project-based learning in marine biology without getting wet. National Science Teachers Association Regional Meeting, Baltimore, MD
- 2010 **Heithaus, M. R.** STEM Adventures: Project-based learning in marine biology without getting wet. National Science Teachers Association Regional Meeting, Nashville, TN
- 2009 **Heithaus, M. R.** Adventures in marine biology: using basic research to aid teaching. National Science Teachers Association Regional Meeting, Ft. Lauderdale, FL
- 2009 **Heithaus, M. R.** Taking adventures in marine biology into the classroom. Miami-Dade Science Teachers Conference
- 2008 **Heithaus, M. R.** Adventures in marine biology: using basic research to aid teaching. Wisconsin Society of Science Teachers Meeting, Lake Geneva, WI
- 2008 **Heithaus, M. R.** Keynote address: Using cutting-edge research to inspire student success. Wisconsin Society of Science Teachers Meeting, Lake Geneva, WI
- 2007 **Heithaus, M. R.** Adventures in marine biology: using basic research to aid teaching. National Science Teachers Association National Meeting, Boston, MA
- 2007 **Heithaus, M. R.** Adventures in marine biology: using basic research to aid teaching. National Science Teachers Association Regional Meeting, Denver, CO
- 2007 **Heithaus, M. R.** Adventures in marine biology: using basic research to aid teaching. Michigan Science Teachers Association Meeting, Grand Rapids, MI
- 2006 **Heithaus, M. R.** Adventures in marine biology: using basic research to aid teaching. Regional Meeting of the National Science Teachers Association. Baltimore, MD.
- 2006 **Heithaus, M. R.** Adventures in marine biology: using basic research to aid teaching. National Association of Biology Teachers Meeting, Albuquerque, NM.
- 2005 **Heithaus, M. R.** Crittercam: a new tool for science and education. Time-Warner Cable National Teacher of the Year Award, Keynote Speaker. Washington, DC.
- 2004 **Heithaus, M. R.** Animal Enrichment: National Geographic Channel Day at the Bronx Zoo

Professional Development Sessions for Elementary and Middle School Teachers

- 2013 **Heithaus, M. R.** Science Adventures: Using project-based videos to inspire students . . . and improve content knowledge. Science Matters Education Conference, Kansas City, MO
- 2012 **Heithaus, M. R.** Science Adventures: Using project-based videos to inspire students . . . and improve content knowledge. Lee County Science Saturday, November 2012
- 2012 **Heithaus, M. R.** Using project-based videos in the elementary school classroom. Lee County, FL
- 2011 **Heithaus, M. R.** Using project-based videos in the elementary school classroom. Cooper City, FL
- 2011 **Heithaus, M. R.** Using project-based videos in the elementary school classroom. Peoria, IL
- 2011 **Heithaus, M. R.** Science adventures: using cutting-edge research in the classroom. Elementary Session, Long Island Science Education Leadership Association.
- 2011 **Heithaus, M. R.** Using project-based videos to excite and educate students in the elementary school classroom. Kansas City, MO
- 2011 **Heithaus, M. R.** That's Amazing! Motivating students and enhancing student outcomes using project-based videos in the high school classroom. Kansas City, MO
- 2007 **Heithaus, M. R.** Crittercam down under. National Geographic Live! Public presentation
- 2007 **Heithaus, M. R.** Exploring and protecting marine habitats. National Geographic Kids Hands-on Explorer Challenge, Sabi Sabi Reserve, South Africa
- 2004 **Heithaus, M. R.** Exploring the oceans with Crittercam. Broward Board of Education Environmental Achievement Awards
- 2003 **Heithaus, M. R.** The role of tiger sharks in a subtropical seagrass community. Albion College Public Lecture Series
- 2003 **Heithaus, M. R.** Crittercam: getting an animal's perspective. Dallas Museum of Natural History
- 2003 **Heithaus, M. R.** Crittercam: getting an animal's perspective. North Carolina Museum of Natural History
- 2002 **Heithaus, M. R.** The role of tiger sharks in a subtropical seagrass community. Monday Night at Mote Public Lecture Series

Talks for and with K-12 Students in classroom settings

- 2018 **Heithaus, M. R.** Using technology to study animals and ecosystems. 30 min talk for Grades 3-12, Ohana School, Rosemary Beach, FL.
- 2017 **Heithaus, M. R.** Sharks! 60 min talks for Grade 3-4 classrooms, Cooper City Elementary School, Cooper City, FL.
- 2016 **Heithaus, M. R.** Whales and Dolphins. 60 min talks for Grade 3 and 4 classrooms, Cooper City Elementary School, Cooper City, FL.
- 2015 **Heithaus, M. R.** Adventures as a Marine Biologist. 20 min talks for 17 K-2 classrooms, Cooper City Elementary School, Cooper City, FL.
- 2014 **Heithaus, M.R.** Using technology to study marine animals. Skype video presentation and Q&A with two 8th grade classes, Guelf, ON, Canada.
- 2014 **Heithaus, M.R.** Marine mammals and other marine top predators. Earth Echo Foundation Virtual Field Trip (attended by 160 classrooms).

- 2014 **Heithaus, M. R.** Why and when sharks matter. Curiosity Series Webinar for teachers and K-12 students. (attended by more than 200 classrooms)
- 2014 **Heithaus, M. R.** Adventures as a Marine Biologist. 30 min talks for entire K-8 school, Academy at Ocean Reef, FL.
- 2014 **Heithaus, M. R.** Adventures as a Marine Biologist. 25 min talk to all 3-5 students, Cooper City Elementary, FL.
- 2014 **Heithaus, M. R.** The Pacific Ocean. 1 hr talk with entire Fourth Grade, Cooper City Elementary, FL.
- 2014 **Heithaus, M. R.** Adventures as a Marine Biologist. 25 min talk to all K-2 students, Cooper City Elementary, FL.
- 2013 **Heithaus, M. R.** Aquarius: life underwater. Curiosity Series Webinar for teachers and K-12 students. (attended by more than 200 classrooms)
- 2013 **Heithaus, M. R.** African wildlife. 1 hr talk with entire Third Grade, Cooper City Elementary, FL.
- 2013 **Heithaus, M. R.** Sea turtles (Grade 5). Houston Independent School District
- 2013 **Heithaus, M. R.** Exploring Galapagos (Grade 3). Houston Independent School District
- 2013 **Heithaus, M. R.** Alligators! (Grade 4). Houston Independent School District
- 2013 **Heithaus, M. R.** Ocean adventures! 1 hr talk with entire Kindergarten, Cooper City Elementary, FL.
- 2013 **Heithaus, M. R.** Adventures in Marine Biology. Curiosity Series Webinar for teachers and K-12 students. (attended by more than 100 classrooms)
- 2013 **Heithaus, M. R.** 30 minute question and answer sessions with 6 K-5 classrooms from Kansas City, MO
- 2012 **Heithaus, M. R.** Adventures in Marine Biology! Norman S. Edelcup K-8, Sunny Isles, FL.
- 2012 **Heithaus, M. R.** 30 minute question and answer sessions with 23 K-5 classrooms from Kansas City, MO
- 2011 **Heithaus, M. R.** Animals in Motion. Project-based video presentation to Middle School students in Peoria, IL
- 2011 **Heithaus, M. R.** Alligators! Project-based video presentation to Elementary School students in Peoria, IL
- 2011 **Heithaus, M. R.** Exploring the Galapagos. Project-based video presentation to Elementary School students in Blue Springs, MO
- 2010 **Heithaus, M. R.** Animals in Motion. Project-based video presentation to Middle School students in Pasco Co., FL
- 2010 **Heithaus, M. R.** Alligators! Project-based video presentation to Elementary School students in Pasco Co., FL
- 2007 **Heithaus, M. R.** Dare to Explore! Dr. Bernard A. Harris Middle School, San Antonio, TX (two presentations)
- 2007 **Heithaus, M. R.** Exploring and protecting marine habitats. International Game Fishing Hall of Fame Marine Camp
- 2007 **Heithaus, M. R.** Dare to Explore! Kapolei Middle School, Oahu, HI
- 2007 **Heithaus, M. R.** Dare to Explore! Pinellas Park Boys and Girls Club, Tampa, FL
- 2007 **Heithaus, M. R.** Dare to Explore! Galloway Ridge Intermediate School, Columbus, OH (two presentations)
- 2007 **Heithaus, M. R.** Dare to Explore! Ridgeway Middle School, Memphis, Tennessee

- 2007 **Heithaus, M. R.** Dare to Explore! Ridge View Elementary School, Washington
- 2007 **Heithaus, M. R.** Dare to Explore! Northeast Middle School, Missouri
- 2006 **Heithaus, M. R.** Dare to Explore! Deep Creek Middle School, Virginia
- 2006 **Heithaus, M. R.** Using Crittercam to study marine animals. International Game Fishing Hall of Fame Marine Camp
- 2006 **Heithaus, M. R.** Exploring the oceans and some other cool places. York Chester Middle School (NC)
- 2006 **Heithaus, M. R.** Exploring the oceans and some other cool places. China Grove Middle School (NC)
- 2005 **Heithaus, M. R.** Exploring the oceans and some other cool places. La Jolla Country Day School (CA)
- 2005 **Heithaus, M. R.** Using Crittercam to study marine animals. International Game Fishing Hall of Fame Marine Camp
- 2005 **Heithaus, M. R.** Exploring the oceans and some other cool places. Frederick Douglas Academy (NY)
- 2005 **Heithaus, M. R.** Exploring the oceans and some other cool places. West Milwaukee Middle School (WI)
- 2004 **Heithaus, M. R.** Studying marine organisms. Teen Science Program, University of Miami.
- 2004 **Heithaus, M. R.** Studying marine organisms: new technologies and a look at Shark Bay, Australia. Cooper City High School (FL)
- 2003 **Heithaus, M. R.** Studying marine communities: technology, techniques, and a look at Shark Bay, Western Australia. International Game Fishing Association Hall of Fame Student Ocean Conference, Keynote Speaker. Ft. Lauderdale, FL.
- 2003 **Heithaus, M. R.** Crittercam. Degolyer Elementary School (TX)
- 2003 **Heithaus, M. R.** Crittercam. Blair Elementary School (TX)

INFORMAL SCIENCE EDUCATION AND PUBLIC ENGAGEMENT

CONGRESSIONAL TESTIMONY

1. **Heithaus, M. R.** 2015. The role of Hispanic Serving Colleges and Universities in Agricultural Research. United States House of Representatives: House Agriculture Committee Subcommittee on Biotechnology, Horticulture and Research hearing on “Research innovations from our nation’s agricultural colleges and universities.” 29 September, 2015

NATURE GUIDES

1. **Heithaus, M. R.** and D. N. Ericson. 2014. North American Sharks. Fold out nature guide. Manta Publications

VIDEO ABSTRACTS

1. **Heithaus, M. R.** 2013. Four minute video for: Matich, P. and **M. R. Heithaus.** 2013. Multi-tissue stable isotope analysis and acoustic telemetry reveal seasonal variability in the trophic

interactions of juvenile bull sharks in a coastal estuary. *Journal of Animal Ecology* 89: 199-213. <http://vimeo.com/user17036986>

2. **Heithaus, M. R.** 2013. Four minute video for: Burkholder, D. A., **M. R. Heithaus**, J. W. Fourqurean, A. Wirsing, and L. M. Dill. 2013. Patterns of top-down control in a seagrass ecosystem: could a roving apex predator (*Galeocerdo cuvier*) induce a behavior-mediated trophic cascade? *Journal of Animal Ecology* 82: 1192-1202. <http://vimeo.com/67285828>

BLOGS

1. Heithauslab.blogspot.com
2. www.hmhco.com/media-center/Blogs/2014/October/math-matters
3. <http://www.vulcan.com/editorialhomepage/homearticles/why-sharks-are-important>
4. <http://blog.discoveryeducation.com/blog/2016/06/13/students-explore-shark-bay-a-time-machine-for-biologists/>

NEWS ARTICLES AND OP EDs

1. **Heithaus, M. R.** 2016. The real threat with sharks is extinction. *Miami Herald* 28, June 2016. <http://www.miamiherald.com/opinion/op-ed/article86525302.html>
2. Fraser, M., G. Kendrick, J. Statton, J. Thomson, and **M. R. Heithaus**. 2014. Climate change threatens Western Australia's iconic Shark Bay. *The conversation*: <http://www.theconversation.com/climate-change-threatens-western-australias-iconic-shark-bay-32428>
3. **Heithaus, M. R.** 2013. Threats to sharks threaten entire ecosystems. www.insidescience.org/content/threats-sharks-threaten-entire-ecosystems/1351 (reposted on FoxNews.com: <http://www.foxnews.com/science/2013/08/06/dwindling-shark-population-worldwide-affects-ocean-ecosystem/>, *Scientific American*)

PUBLIC SERVICE ANNOUNCEMENTS (PSAs)

1. Hosted and co-produced six 30-sec "Math Matters" PSAs for CBS Saturday morning. PSAs began airing October 4th, 2014 and will run for 26 weeks.

PUBLIC DISPLAYS, WEBSITES, AND DOCUMENTARIES

1. **Predators of Shark River Kiosk @ Ft. Lauderdale Museum of Science and Discovery (2011-2012)**. The kiosk is designed to educate the public about the coastal Everglades, the importance of scientific research, and the behavior and importance of large predators in ecosystems (in this case, American alligators and bull sharks). Kiosk will also be available online in 2012 at tracking.fiu.edu). Kiosk elements include:
 - a. **Heithaus, M. R.** and P. Greene. Seven 1-2 minute video vignettes with background information and research methods and results.
 - b. **Heithaus, M. R.**, A. Fritz, A. Rosenblatt, and P. Matich. Interactive animal movement visualization tool. Six modules describe and illustrate how behaviors of predators change in response to key environmental factors. One module allows visitors to investigate all tracking data on four species.
 - c. **Heithaus, M. R.**, A. Rosenblatt, and P. Matich. Test your knowledge quiz (16 questions).

2. *Predators of Shark River* Documentary (2012). 12 min. Producer/Narrator/Character. In collaboration with Symbio Studios, we developed this documentary for use in museums and nature centers. The film will debut at the Museum of Discovery and Science in Summer 2012 and be provided to nature centers and museums throughout South Florida and around the country. It also will be uploaded to the website tracking.fiu.edu. In addition to field production and post-production I obtained full grant funding for project.
3. SBERP.ORG. 2008-current. A public website with species fact sheets, research results, photos, videos, and educational programs based on NSF-funded research in Shark Bay, Australia.
4. *Coastal Carnivores* Documentary. 2012. 26 min. Producer, on-camera scientist. In collaboration with WPBT2 Miami and Symbio Studios, we developed this documentary focused on FIU research on large predators in the coastal Everglades. It aired as part of PBS' *Changing Seas* series on June 27, 2012. In addition to field production and post-production I obtained partial grant funding for project.
5. Shot, edited, and narrated mini-documentaries for the National Geographic Channel Online.
 - 2008 South Africa
 - 2009 Galapagos Islands

DOCUMENTARY HOST/PRIMARY CHARACTER

- 2017 Host/Lead scientist, Discovery Channel's Shark Week (48-min): *Devil Sharks*
- 2017 On-Camera Scientist, National Geographic Channel Shark Fest (48 min): *Shark vs Predator*
- 2016 Primary Character, Discovery Channel's Shark Week (48-min): *Sharks vs Dolphins: Face Off*
- 2012 On-Camera Scientist, *Changing Seas: Coastal Carnivores* (24-min), WPBT-Miami
- 2004 Host, National Geographic Television Special (48-min): *Crittercam*
- 2003 Host, National Geographic Channel Television, 13-part series (24 min each): *Crittercam*
- 2000 Major Character, National Geographic Explorer, *Tiger Shark: Predator Revealed*

SELECTED OTHER MEDIA AND MINOR DOCUMENTARY APPEARANCES

- 2017 Facebook Live with Vulcan, Inc, The Verge, Seattle New Times, Discovery Channel (Shark Week "Devil Sharks"), National Geographic Channel (Shark Fest "Shark vs Predator)
- 2016 Tech Insider (2), Nuevo Herald, Live Science, Discovery Channel (Shark Week "Sharks vs Dolphins: Face Off"), seeker.com, CTV Canada, Shark Week Sharkopedia
- 2015 Washington Post, Ocean Mysteries with Jeff Corwin (ABC), Topical Currents (NPR Radio, One-hour show on STEAM education), ViewPoint (PBS2, half hour panel on higher education funding)
- 2014 British Broadcasting Company, Frost Museum of Science Gala video, Weather Channel, *Miami Herald*, CBS Local Miami, Fox Local Miami, NBC Local Miami (2)
- 2013 Telemundo51, Weather channel, Today Show, CBS This Morning
- 2010 *National Geographic Kids* Article on Sea Turtles
- 2009 Multiple radio appearances on sharks and marine ecology

- 2008 Whales Online Podcast; NGC Online video appearances
- 2007 Honolulu Morning Show (ABC TV), Dare to Explore! Talks offered as On-Demand programming in local markets, Columbus Dispatch (OH) feature article, Bay News 9 interview (Tampa, FL), CosmoGirl Magazine, NPR (Kathleen Dunn Show), CBS Radio “CBS News Weekend Roundup”, Today Show television appearance, National Geographic Online article, San Antonio Morning Show (Fox TV), ABC Radio
- 2006 Discovery Channel Online video clip for Shark Week, Key West Citizen newspaper article
- 2005 Animal Planet television documentary appearance, Miami Herald newspaper article, Fox News (National) television appearance, National Geographic Online article: Jaws at 30, Local Fox (Milwaukee) television appearance, National Geographic Online article: Bull sharks, NPR *Our Ocean World*
- 2004 NPR (National) radio interview, Philadelphia One radio interview, USA Radio interview, Air America Radio interview, H2O Radio interview, NPR (Northeast) radio interview, NPR Kathleen Dunn Show radio interview, 12 Local radio interviews across the country, Boy’s Life magazine story, Local Fox (Charlotte, NC) television appearance, Tonight Show with Jay Leno Show television appearance, Two stories on National Geographic Online
- 2003 Today Show
- 2001 Discovery Channel’s “Great White Down Under”

PUBLIC PRESENTATIONS

- 2017 **Heithaus, M. R.** Exploring Oceans. Ft. Lauderdale Boat Show.
- 2016 **Heithaus, M. R.** FIU Oceans: Sharks and the Medina Aquarius Program. LaGorce Country Club, Miami Beach, FL.
- 2016 **Heithaus, M. R.** Thirst for Deep Science. Thirst DC, Washington DC.
- 2016 **Heithaus, M. R.** T. G. Troxler. Sea level rise and south Florida. Our Fund, Ft. Lauderdale, FL.
- 2016 **Heithaus, M. R.** Aquarius Reef Base. Dadeland Rotary Club
- 2015 **Heithaus, M. R.** The Global FinPrint Project. LaGorce Country Club, Miami, FL.
- 2015 **Heithaus, M. R.** The importance of sharks in marine ecosystems. Islander Resort, Islamorada, FL.
- 2015 **Heithaus, M. R.** Panel discussion “STEM Education and the Green Collar Economy” Miami-Dade Chamber of Commerce.
- 2015 **Heithaus, M.R.,** E. Gaiser, J. Pinto, and M. Nepomechie. Sea level rise. Rise above environmental Summit, Miami Beach.
- 2015 **Heithaus, M.R.** and L. I Heithaus. Discovering sharks and marine mammals. Part of FIU SEAS Family Science night at Cooper City Elementary School, Cooper City, FL.
- 2014 **Heithaus, M.R.** Aquarius Reef Base. Coral Gables Rotary Club, FL.
- 2014 **Heithaus, M.R.** and L. I Heithaus. Discovering sharks and marine mammals. Part of FIU SEAS Family Science night at Cooper City Elementary School, Cooper City, FL.
- 2014 **Heithaus, M.R.** FIU’s Aquarius Reef Base. Biscayne Bay Yacht Club, Miami, FL
- 2014 **Heithaus, M. R.** Why and when sharks matter. Coral Reef Yacht Club. Miami, FL.
- 2014 **Heithaus, M.R.** Keynote presentation. Broward County Environmental Education Awards. Daive, FL
- 2013 **Heithaus, M. R.** Predators of Shark River. Museum of Discovery and Science, Ft. Lauderdale, FL.

- 2013 **Heithaus, M. R.** Unraveling the ecological importance of marine and estuarine predators. Dickinson State Park, FL
- 2013 **Heithaus, M. R.** Tigers in the (sea)grass. Delicate Balance of Nature Lecture Series, John Pennekamp State Park.
- 2013 **Heithaus, M. R.** Why and when sharks matter. Sea Turtle Center, La Reunion, FR
- 2013 **Heithaus, M. R.** and D. Burkepile. The importance of human exploration of the oceans and space. TEDx: FIU
- 2013 **Heithaus, M. R.** and P. Matich. Coastal Carnivores Ocean Life Lecture Series. Key Largo
- 2012 **Heithaus, M. R.** Predators of Shark River. Museum of Discovery and Science,
- 2012 **Heithaus, M.R.** Why (and when) sharks matter. Miami Science Museum Underwater Festival.
- 2012 **Heithaus, M. R.** The life and times of top predators. Ocean Life Lecture Series, Key Largo, FL.
- 2011 **Heithaus, M. R.** Predators of Shark River. Public lecture at Ft. Lauderdale Museum of Discovery and Science.
- 2011 **Heithaus, M. R.** Adventures in Marine Biology. Public lecture at Ocean Reef, FL
- 2011 **Heithaus, M. R.** Adventures in Marine Biology. Public lecture at Key Largo Rotary Club, FL
- 2011 **Heithaus, M. R.** Adventures in Marine Biology. Public lecture at Surf Club, Miami, FL
- 2011 **Heithaus, M. R.** Adventures in Marine Biology. Public lecture at Biscayne Yacht Club, Miami, FL
- 2011 **Heithaus, M. R.** Adventures in Marine Biology. Public lecture at LaGorce Country Club, Miami, FL
- 2011 **Heithaus, M. R.** A shark's eye view of Shark Bay, Australia. A talk at the Miami Museum of Science Underwater Film Festival.
- 2011 Adventures in Science! Public lecture for students, parents, and teachers in Kansas City, MO.
- 2010 **Heithaus, M. R.** Tigers in the grass. Science Café at Books n Books.

TEACHING EXPERIENCE AT FLORIDA INTERNATIONAL UNIVERSITY

COURSES

BSC6926	Topics in Biology (Graduate)
BSC6971	Master's Thesis
BSC7980	PhD Dissertation
PCB3043	Ecology
PCB3043L	Ecology Lab
BSC6913	Student Research Lab (Graduate)
OCB4303	Biology of Marine Mammals
BSC4931	Senior Seminar
BSC4914	Student Research Lab (Undergraduate)
BSC4934	Topics in Biology (Undergraduate)
BSC4915L	Honors Research Lab
BSC5935	Special Topics in Biology
PCB4995	Behavioral Ecology
PCB5993	Advanced Behavioral Ecology
OCB4993	Oceanography at Sea II
OCB5993	Advanced Oceanography at Sea II
OCB2003	Marine Biology
BSC6926	Workshop: Models in Behavioral Ecology

HIGH SCHOOL STUDENT RESEARCH PROJECTS DIRECTED

2007-2008	Michael Bush – “Effect of perceived predation risk on habitat use of red eared slider turtles” *Advanced to State Science Fair
2011-2012	Jamie Odzer – “Foraging habitats and trophic interactions of blue crabs in the coastal Everglades” *Advanced to International Science Fair

UNDERGRADUATE RESEARCH PROJECTS AT FIU*

Student	Type	Period	Project
Maria Sabando	Honors Student	2017-2018	Discrimination factors and turnover rates of compound specific stable isotopes in sharks
Michelle Quintana	Research Assistant	2014	Spatiotemporal variation in abundance of reef sharks in the tropical Pacific Ocean.
Valeria Paz	Research Student	2013-2015	Trophic interactions of bottlenose dolphins in the coastal Everglades
Rebecca Wallace	Research Assistant	2012-2013	Assisted with stable isotope and diet analysis of American alligators
Patrice Persad	Research Assistant	2012	Spatial and temporal variation in grazing rates in Shark Bay, Australia
Fernanda Valasco	Research Assistant	2010-2011	Assisted with field studies of alligator movements and ecology
Jennifer Meyer	Research Assistant	2009-2010	Assisted with field studies of bull shark foraging ecology
Cynthia Aceves	Research Assistant	2009-2010	Assisted with field studies of bull shark foraging ecology
Vivian Braun	Research Assistant	2009-2010	Assisted with field studies of alligator movements and ecology
Greg Mineau	Research Assistant	2008-2009	Assisted with field studies of alligator movements and ecology
Melissa Pimentel	Research Assistant	2007-2009	Assisted with field studies of alligator movements and ecology
Daniel Rodriguez	Research Assistant	2007-2008	Assisted with field studies of bull shark foraging ecology
Ana Morales	Research Assistant	2007-2008	Assisted with lab studies of turtle diving behavior
Nicolas Luciani	Research Assistant	2007-2008	Assisted with lab studies of turtle diving behavior
Glenn Goodwin	Research Assistant	2007-2008	Assisted with lab studies of turtle diving behavior
Angela Castillo	Research Assistant	2007	Assisted with lab studies of turtle diving behavior
Llilian Garcia	Research Assistant	2007	Assisted with lab studies of turtle diving behavior
Leon Posada	Honors Student	2004-2005	An experimental study on red-eared slider turtles diving under the risk of predation
Jennifer Arcese	Research Assistant	2004	Video analysis of turtle diving behavior
Elizabeth Bevan	Research Assistant	2005-2006	Video analysis of turtle diving behavior; field assistant in Shark Bay, Western Australia

*Includes only students who worked more than one full semester on specific projects in the lab. More than 250 students have participated in lab or field work for shorter time periods.

GRADUATE STUDENTS DIRECTED AS MAJOR PROFESSOR

Completed:

11. Robert Nowicki, “Effects of catastrophic seagrass loss on the ecological structure and resilience of a model seagrass ecosystem.” PhD – Biological Sciences, 2016
10. Diana Churchill, “Investigating trophic interactions of deep sea animals (sharks, teleosts, and scavengers) in the Gulf of Mexico using stable isotope analysis” PhD – Biological Sciences, 2015.

9. Philip Matich, "Individual specialization and foraging ecology of juvenile bull sharks in an oligotrophic estuary" PhD – Biological Sciences, 2014 (Best Dissertation, Biology Department; FIU World's Ahead Graduate)
8. Cindy Bessey, "Do tiger sharks affect the structure of seagrass ecosystems through multiple indirect pathways?" PhD – Biological Sciences, 2013
7. Adam Rosenblatt, "Movements, foraging ecology, and ecological role of an estuarine population of American alligators" PhD – Biological Sciences, 2013.
6. Robin Sarabia, "Spatial and temporal variation in densities and group sizes of common bottlenose dolphins in the Florida Coastal Everglades" MS – Biological Sciences, 2012
5. Derek Burkholder, "Do tiger sharks indirectly structure seagrass communities through risk effects on large-bodied grazers?" PhD – Biological Sciences, 2012
4. Katherine Cameron, "Regional variation in tiger shark (*Galeocerdo cuvier*) abundance and habitat use" MS – Biological Sciences, 2012
3. Jeremy Vaudo, "Habitat use and foraging ecology of a batoid community in Shark Bay, Western Australia" PhD – Biological Sciences 2011
2. Meagan Dunphy-Daly, "Temporal and spatial variation in habitat use and group size of dwarf sperm whales (*Kogia sima*) off Great Abaco, the Bahamas." MS – Biological Sciences, 2008
1. Bryan Delius, "Distribution and foraging ecology of bull sharks in an oligotrophic estuary." MS – Biological Sciences, 2007

In progress:

10. Vincent Quipquempois, PhD started 2018
9. Jessica Carde, PhD, started 2017
8. Virginia Fourqurean, PhD, started 2017
7. Courtney Knauer, PhD, started 2016
6. Valeria Paz: PhD, started 2015
5. Bradley Strickland: PhD, started 2015
4. Frances Farabaugh; PhD, started 2015
3. Elizabeth Whitman, "Ecological drivers of habitat use by a rebounding sea turtle population and top-down impacts on seagrass ecosystems," PhD – Biological Sciences (anticipated completion Summer 2018)
2. Abraham Smith, "Impacts of the Deepwater Horizon oil spill on development and performance of native organisms." PhD – Biological Sciences (anticipated completion Spring 2018)
1. Camila Caceres, "Ecological impacts of shark overfishing in tropical ecosystems." PhD – Biological Sciences (anticipated completion Spring 2019)

POSTDOCTORAL SCIENTISTS MENTORED

2017-current Dr. Matthew Shirley
2015-current Dr. Mark Bond
2012-current Dr. Jeremy Kiszka
2012-2015 Dr. Jordan Thomson (currently Postdoctoral Fellow, Deaking University)
2011 Dr. Jeremy Vaudo (currently Postdoctoral Fellow, Nova Southeastern University)
2010-2012 Dr. Laura Belika* (currently with Algenol Biofuels; *R. Jaffe primary advisor)
2010-2011 Dr. Shomen Mukherjee (currently Assistant Professor, Azim Premji University)
2005-2007 Dr. Aaron Wirsing (currently Associate Professor, University of Washington)

PROFESSIONAL, UNIVERSITY, AND PUBLIC SERVICE

SERVICE TO FLORIDA INTERNATIONAL UNIVERSITY

2018-current Co-Chair, Math Improvement Task Force
2018-current Global Council, Academic Affairs
2016-2017 Chair, Search for Dean of College of Engineering and Computing
2015-current Beyond 2020 Strategic Plan Implementation Steering Committee
2015-current Co-Chair, Strategic Growth Subcommittee, Beyond 2020 Strategic Plan Implementation Committee
2014-current Shorelight Steering Committee
2014-current Co-Chair, Academic and Quality Assurance Committee, Shorelight Partnership
2014-2016 Steering Committee, Gateway to Completion Project
2014-2016 Steering Committee, University Transformation Through Teaching (UT3)
2014-current Operations Committee
2014-current Provost's Student Success Cabinet
2014-current Vice President, FIU Research Foundation
2014-current Academic Health Center Advisory Committee
2014-2017 Chair, Batchelor Environmental Center Building Committee
2013-2014 Integrating Research Engagement Assessment and Learning (iREAL) commission – working group member
2012-2014 Reviewer, Faculty Research Support Grants
2012-2014 Campus Master Plan Focus Group
2012-2014 College of Business Sustainability taskforce
2011 Search Committee, Dean of the School of Journalism and Mass Communication
2011-2014 SEAS representative to Southeast Coastal Ocean Observing Regional Association
2011-current SECOORA Board Development Committee
2010-2011 World's Ahead Strategic Planning Committee
Chair, Environment Subcommittee
2010-2011 President Rosenberg's representative on the Mayor's Sustainability Advisory Council for Miami-Dade County (GreenPrint)
2010-2012 FIU Representative to the National Council of Environmental Deans and Directors
2010-2011 Chair, FIU Oil spill task force
2010-2011 FIU Representative to Florida Academic Oil Spill Task Force
2010-2013 Tree Campus USA (BBC) Committee
2009-2014 FIU Representative to the Florida Institute of Oceanography
2009-2010 BBC High School Relations Committee
2008-2014 BBC Leadership Committee
2008-2018 Diving Control Board

2008-2010 Board Member, Association of Marine Labs of the Caribbean
 2008-2010 Marine Biology Club co-advisor
 2007-2009 Coastal Marine Studies Committee (BBC)
 2006 Participated in FIU "World Class" Campaign
 2005 Identified and recruited keynote speaker for Honors College Program
 2004 BBC Children's Thanksgiving Experience Presentations
 2004 Identified and recruited keynote speaker for Honor's College

SERVICE TO THE COLLEGE OF ARTS AND SCIENCES

2009-2011 Leadership Council/Senior Leadership Group
 2009 School of Environment and Society (later Environment, Arts and Society) planning committee
 2008-2009 Strategic Planning Committee
 2008-2009 Council of Chairs and Directors
 2007 Organized Marine Biology presentation for BBC Open House
 2005 Dean's Advisory Board Meeting to discuss vision for Marine Sciences
 2004 Presentation to Dean's Advisory Board

SERVICE TO THE DEPARTMENT OF BIOLOGICAL SCIENCES

2008-2010 Executive Committee
 2008-2010 Undergraduate Committee
 2008-2010 Chair, Marine Biology Development Committee
 2008-2014 Faculty Mentor, Deron Burkepile
 2007-2008 Chair, Marine Biology Hiring Committee
 2007-2010 Marine Biology Budget Committee
 2007-2010 Marine Biology Boat and Vehicle Grant Committee, Chair
 2007 Helped to develop the senior assessment exam for Marine Biology majors
 2006 Created the first draft of the 2006-2007 Marine Sciences budget and led the development of the Marine Sciences Boat and Vehicle Grant Program for graduate students
 2005- 2009 Seminar and Glaser Committee
 2005- 2008 Biology Symposium Committee
 2005- 2010 Marine Biology Building Committee
 2005-2006 Marine Biology Building Furniture Committee
 2005- 2009 Honors Committee
 2004-2010 Participated in the oversight of the Marine Science Building Project, attended building meetings, move-in meetings, and helped draft equipment lists for the new building
 2004-2005 Glaser Committee
 2004-2005 Marine Biology Building Committee
 2004-2008 Member of 4 faculty search committees and search committee for the Marine Science building manager
 2004-2005 Judge, Biology Symposium
 2003-2004 Glaser Committee
 2003-2010 Advising of majors in Biology and Marine Biology at BBC

OTHER PROFESSIONAL SERVICE

12. Associate Editor, *Frontiers in Marine Science* (2014-current)
11. Panelist, NSF Informal Science Education PIs Conference (2012)
10. Guest Editor, *Ecological Applications* (1 manuscript; 2011)
9. Organized a session “Changes in top-down control and roles of large consumers” at the Coastal and Estuarine Research Federation annual meeting, CERF 2011: Societies, Estuaries and Coasts: Adapting to Change.
8. Grants Committee, American Elasmobranch Society (2007-2009)
6. Chair, Nominating Committee, American Elasmobranch Society (2006)
7. External MS review
2014 Memorial University of Newfoundland
6. External PhD reviews for
2016 Monash University, Australia
2016 University of Western Australia
2015 University of Queensland, Australia
2015 University of Pretoria, South Africa
2013 University of Toronto, Canada
2011 James Cook University, Australia
2011 University of Tasmania, Australia
2011 Charles Darwin University, Australia
2010 University of Cape Town, South Africa
2010 University of Aberdeen, UK (included external oral examination as well)
2007 University of Calcutta 2007
2007 James Cook University 2007
5. Review of files for tenure and promotion to Associate Professor
2017 University of Arizona
2016 Texas A&M University, Galveston
2014 Stony Brook University
2013 Oklahoma State University
4. Review of files for promotion to Full Professor
2011 Florida Atlantic University
2012 James Cook University
3. Abstract Reviews for the Biennial Meetings of the Society for Marine Mammalogy
2011 18 Abstracts
2009 12 Abstracts
2. Strategies of Ecology Education, Diversity and Sustainability SEEDS field ecological research mentor for Lauren K. Vicery, ESA SEEDS fellow. 2006-2007
1. SEEDS Mentor, 91st Meeting of the Ecological Society of America (ESA). Memphis, TN. August 2006

JOURNAL AND BOOK CHAPTER REVIEWS (NUMBER OF REVIEWS)

African Journal of Marine Science (1), *American Fisheries Society* (2), *American Naturalist* (4), *Animal Behaviour* (8), *Animal Biotelemetry* (1), *Aquatic Biology* (7), *Aquatic Living Resources* (1), *Aquatic Mammals* (1), *Australian Journal of Zoology* (1), *Behavioral Ecology* (9), *Behavioral Ecology and Sociobiology* (10), *Biodiversity and Conservation* (1), *Biological Conservation* (7), *Biology Letters* (1), *Bulletin of Marine Science* (3), *Cambridge University*

Press (2), *Canadian Journal of Fisheries and Aquatic Sciences* (2), *Canadian Journal of Forest Research* (1), *Caribbean Journal of Marine Science* (1), *Chelonian Conservation and Biology* (4), *Conservation Biology* (3), *Conservation Ecology* (1), *Conservation Letters* (2), *Copeia* (1), *Coral Reefs* (2), *Current Zoology* (1), *Deep Sea Research II* (1), *Diversity and Distributions* (3), *Ecological Applications* (2), *Ecological Monographs* (1), *Ecography* (1), *Ecology* (16), *Ecology and Evolution* (1), *Ecology Letters* (4), *Ecology of Freshwater Fish* (1), *Endangered Species Research* (3), *Environmental Biology of Fishes* (5), *Environmental Conservation* (2), *Fisheries Management and Ecology* (2), *Fish and Fisheries* (1), *Fisheries Research* (2), *Fishery Bulletin* (2), *Frontiers in Zoology* (1), *Functional Ecology* (2), *Global Ecology and Conservation* (1), *Global Change Biology* (2), *Hydrobiologia* (1), *ICES Journal of Marine Science* (1), *Journal of Animal Ecology* (13), *Journal of Applied Ecology* (1), *Journal of Biodiversity and Endangered Species* (1), *Journal of Ecology* (2), *Journal of Experimental Biology* (1), *Journal of Experimental Marine Biology and Ecology* (8), *Journal of Fish Biology* (7), *Journal of the Marine Biological Association, UK* (1), *Journal of Mammalogy* (1), *Journal of Zoology* (1), *Mammal Study* (1), *Marine Biology* (10), *Marine Ecology Progress Series* (37), *Marine and Freshwater Research* (11), *Marine Mammal Science* (21), *Marine Technology Society Journal* (2), *Methods in Ecology and Evolution* (1), *Neotropical Ichthyology* (1), *Northeastern Naturalist* (1), *Oecologia* (7), *Oikos* (3), *Open Ecology Journal* (1), *Open Journal of Marine Biology* (1), *Oxford University Press* (1), *Palaios* (1), *PLoS One* (13), *Polar Biology* (1), *Proceedings of the Royal Society of London B/PRSB Letters* (10), *Proceedings of the National Academy of Sciences* (5), *Reviews in Fish Biology* (1), *Scientific Reports* (3), *South African Journal of Science* (1), *Southeastern Naturalist* (1), *Taylor and Francis Press* (1), *Transactions of the American Fisheries Society* (1), *Trends in Ecology and Evolution* (2), *Wetlands* (1)

GRANT REVIEWS

Australian Marine Mammal Commission (1)
 Australian Antarctic Science Program (1)
 Department of Environment, Food, and Rural Affairs (UK) (1)
 Earthwatch Institute (1)
 Florida SeaGrant (1)
 Guggenheim Memorial Foundation (1)
 Large Pelagic Research Center Grants Program (1)
 Lizard Island Foundation (1)
 Mississippi-Alabama Sea Grant (1)
 National Academies of Sciences PEER Program, Biodiversity and Environment Panel (3)
 National Geographic Society Committee for Research and Exploration (15)
 National Science Foundation
 Animal Behavior (6)
 Bioinformatics (1)
 Division of Environmental Biology (6)
 Ocean Sciences (1)
 Biological Oceanography (13)
 Ecosystems (1)
 NSF-NOAA Cameo (1)
 Antarctic Organisms & Ecosystems (1)

Natural Environment Research Council (UK) (2)
National Research Foundation, South Africa (1)
Natural Sciences and Engineering Research Council of Canada, Discovery Grants (1)
Netherlands Organization for Scientific Research (1)
NOAA West Coast and Polar Regions Undersea Research Center (1)
NOAA Fisheries Saltonstall-Kennedy Competitive Research Program (1)
NOAA Sea Turtle Assessment Program (8)
North Pacific Research Board (3)
NOW Division for Earth and Life Sciences (Netherlands) (1)
Qatar National Research Foundation (4)
Oregon SeaGrant (1)

PUBLIC SERVICE

2016-current ZooMiami Foundation Board of Directors (Chair, Education Committee)
2013-2013 iZone Voice Committee (Broward County Board of Education) representative for Cooper City
2012-2013 Miami Science Museum “Science Star” to communicate the importance and excitement of science to the public and in Miami-Dade Schools
2011-2013 Miami Science Museum “Living Core” planning group
2011 Re:Vision Miami Participant
2011 Panelist at screening of Guy Harvey’s Shark Film, Nova Southeastern University
2011-2012 Sponsored research by High School Student (State Science Fair)
2011-current Zoo Miami Conservation Committee
2011 Search Committee, Conservation and Research Director, Zoo Miami
2010-current Florida Institute of Oceanography Ship Planning Committee
2010-current Pew Shark Science Advisory Board
2010 The Oil spill and trophic cascades in the Gulf of Mexico Workshop, Mote Marine Laboratory

PROFESSIONAL HONORS, PRIZES, FELLOWSHIPS

UNIVERSITY

2010 Top Scholars Recognition
2008 Excellence in Faculty Scholarship
2007 Faculty Award for Excellence in Research

OTHER

2008 National Science Foundation Career Award
2008 New York Book Fair, Best High School Biology Text in Class (for Desalle and Heithaus, Holt Biology 2008).
2004 American Library Association *Choice* Magazine Outstanding Academic Title for “Biology of sharks and their relatives”

AWARDS TO GRADUATE STUDENTS (NON-FELLOWSHIP/SCHOLARSHIP)

- 2014 Best Dissertation, Department of Biological Sciences and World's Ahead Graduate (FIU) to P. Matich (PhD student)
- 2012 Ecological Society of America Science and Policy Fellow Award to A. Rosenblatt (PhD student)
- 2011 Elton Prize (British Ecological Society) for best paper by a young investigator in *Journal of Animal Ecology* to P. Matich (PhD student)
- 2011 American Society of Ichthyologists and Herpetologists, best student paper in physiology to A. Rosenblatt (PhD student)