

CURRICULUM VITAE
DR. MICHAEL R. HEITHAUS
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EDUCATION

Degree	Institution	Field	Dates
PhD	Simon Fraser University	Biology	1997-2001
BA	Oberlin College	Biology	1991-1995

FULL-TIME ACADEMIC EXPERIENCE

Institution	Rank	Dates
Florida International University	Director, School Environ. Soc.	8/09-current
Florida International University	Director, Marine Sciences Program	1/08-8/09
Florida International University	Associate Professor, Biology	8/08-current
Florida International University	Assistant Professor, Biology	8/03-8/08
Mote Marine Laboratory	Staff Scientist	4/02-8/03
Mote Marine Laboratory	Postdoctoral Scientist	4/01-4/02

PUBLICATIONS

BOOKS

1. DeSalle, R. and **M. R. Heithaus**. 2008. Biology. Holt, Reinhart, and Winston. Austin, TX.
2. Carrier, J. C., J. Musick, and **M. R Heithaus** (eds). 2004. The biology of sharks and their relatives. CRC Press, Boca Raton.
3. Carrier, J. C., J. Musick, and M. R Heithaus (eds.). *in press*. Sharks and Their Relatives II: Biodiversity, adaptive physiology, and conservation. CRC Press, Boca Raton

JOURNAL PUBLICATIONS

52. Wirsing, A. J. and **M. R. Heithaus**. 2009. The measure of danger: olive-headed sea snakes (*Disteria major*) shift seagrass microhabitats to avoid predators. *Marine Ecology Progress Series* 387: 287-293.
51. **Heithaus, M. R.**, B. Delius, A. J. Wirsing, and M. M. Dunphy-Daly. 2009. Physical factors influencing the distribution of a top predator in a subtropical oligotrophic estuary. *Limnology and Oceanography* 54: 472-482.
50. **Heithaus, M. R.**, A. J. Wirsing, D. Burkholder, J. Thomson, and L. M. Dill. 2009. Towards a predictive framework for predator risk effects: the interaction of landscape features and prey escape tactics. *Journal of Animal Ecology* 78: 556-562
49. Thomson, J. A., D. Burkholder, **M. R. Heithaus**, and L. M. Dill. 2009. Validation of a rapid visual-assessment technique for categorizing the body condition of green sea turtles

- (*Chelonia mydas*) in the field. *Copeia* 2009: 251-255.
48. Mann, J. B. L. Sargeant, J. J. Watson-Capps, Q. A. Gibson, **M.R. Heithaus**, R. C. Connor, and E Patterson. 2008. Why do dolphins carry sponges? *PloS One* 3: e3868. Doi:10.1371/journal.pone.0003868
 47. **Heithaus, M. R.**, A. Frid, A. J. Wirsing, and B. Worm. 2008. Predicting ecological consequences of marine top predator declines. *Trends in Ecology and Evolution* 23: 202-210
 46. **Heithaus, M. R.**, A. J. Wirsing, J. Thompson, and D. Burkholder. 2008. A review of lethal and non-lethal effects of predators on adult marine turtles. *Journal of Experimental Marine Biology and Ecology* 356: 43-51.
 45. **Heithaus, M. R.**, A. J. Wirsing, A. Frid, and L. M. Dill. 2007. Species interactions and marine conservation: lessons from an undisturbed ecosystem. *Israel Journal of Ecology and Evolution* 53: 355-370
 44. Kerford, M., A. J. Wirsing, **M. R. Heithaus** and L. M. Dill. 2008. Danger on the rise: Habitat use by bar-bellied sea snakes in Shark Bay, Western Australia. *Marine Ecology Progress Series* 358: 289-294.
 43. Wirsing, A. J., **M. R. Heithaus**, A. Frid, and L. M. Dill. 2008. Seascapes of fear: methods for evaluating sublethal predator effects experienced and generated by marine mammals. *Marine Mammal Science* 24: 1-15
 42. Dunphy-Daly, M. M., **M. R. Heithaus**, and D. E. Claridge. 2008. Temporal variation in dwarf sperm whale (*Kogia sima*) habitat use and group size off Great Abaco Island, Bahamas. *Marine Mammal Science* 24: 171-182
 41. Wirsing, A. J., **M. R. Heithaus**, and R. Abernathy. 2008. Differences in escape abilities do not explain sex differences in predator-inflicted injury rates of loggerhead turtles. *Journal of Herpetology* 42: 411-413
 40. Marshall, G., M. Bakhtiari, M. Shepard, B. Jolliff, D. Rasch, K. Abernathy, J. Tweedy III, J. C. Carrier, and **M. R. Heithaus**. 2007. An advanced solid-state animal-borne video and environmental data-logging device ("Critttercam") for marine research. *MTS Journal* 41: 31-38.
 39. **Heithaus, M. R.**, D. Burkholder, R. E. Hueter, L. I. Heithaus, H. W. Pratt Jr, and J. C. Carrier. 2007. Spatial and temporal variation in shark communities of the lower Florida Keys and evidence for historical population declines. *Canadian Journal of Fisheries and Aquatic Sciences* 64: 1302-1313.
 38. Wirsing, A. J., **M. R. Heithaus**, and L. M. Dill. 2007. Fear factor: Do dugongs (*Dugong dugon*) trade food for safety from tiger sharks (*Galeocerdo cuvier*)? *Oecologia* 153: 1031-1040.
 37. Wirsing, A. J., **M. R. Heithaus**, and L. M. Dill. 2007. Can measures of prey availability improve our ability to predict the abundance of large marine predators? *Oecologia* 153: 563-568.
 36. **Heithaus, M. R.**, A. Fird, A. J. Wirsing, L. M. Dill, J. Fourqurean, D. Burkholder, J. Thomson, and L. Bejder. 2007. State-dependent risk-taking by green sea turtles mediates top-down effects of tiger shark intimidation in a marine ecosystem. *Journal of Animal Ecology* 76: 837-844.
 35. Wirsing, A. J., **M. R. Heithaus**, and L. M. Dill. 2007. Can you dig it? Use of excavation, a risky foraging tactic, by dugongs is sensitive to predation danger. *Animal Behavior* 74: 1085-1091

34. Wirsing, A. J., **M. R. Heithaus**, and L. M. Dill. 2007. Living on the edge: dugongs prefer foraging microhabitats that allow escape rather than avoidance of predators. *Animal Behaviour* 74: 93-101.
33. **Heithaus, M. R.**, A. J. Wirsing, and L. M. Dill. 2007. Long-term movements of tiger sharks satellite-tagged in Shark Bay, Western Australia. *Marine Biology* 151: 1455-1461.
32. Frid, A., **M. R. Heithaus**, and L. M. Dill. 2007. Dangerous dive cycles and the proverbial ostrich. *Oikos* 116: 893-902.
31. Sergeant, B. L., A. J. Wirsing, **M. R. Heithaus**, and J. Mann. 2007. Does environmental heterogeneity drive foraging variation in wild dolphins (*Tursiops* sp.)? *Behavioral Ecology and Sociobiology* 61: 679-688.
30. Bejder, L., H. Whitehead, A. Samuels, J. Mann, R. Connor, N Gales, **M. Heithaus**, J. Watson-Capps, C. Flaherty, and M. Krutzen. 2006. Detrimental effects of cumulative, long-term exposure to vessel activity on habitat use of Indo-Pacific bottlenose dolphins. *Conservation Biology* 20: 1791-1798.
29. **Heithaus, M. R.**, I. M. Hamilton, A. J. Wirsing, and L. M. Dill. 2006. Validation of a randomization procedure to assess animal habitat preferences: microhabitat use of tiger sharks in a seagrass ecosystem. *Journal of Animal Ecology* 75: 666-676.
28. **Heithaus, M. R.** and L. M. Dill. 2006. Does tiger shark predation risk influence foraging habitat use by bottlenose dolphins at multiple spatial scales? *Oikos* 114:257-264.
27. Torres, L. G., **M. R. Heithaus** and B. K. Delius. 2006. Influence of teleost abundance on the distribution and abundance of sharks in Florida Bay, USA. *Hydrobiologia* 569: 449-455.
26. Wirsing, A. J., **M. R. Heithaus**, and L. M. Dill. 2006. Tiger shark (*Galeocerdo cuvier*) abundance and growth rates in a subtropical embayment: evidence from seven years of standardized fishing effort. *Marine Biology* 4: 961-968.
25. Krützen, M, J. Mann, **M. R. Heithaus**, R. C. Connor, L. Bejder, and W. B. Sherwin. 2005. Cultural transmission of tool use in bottlenose dolphins. *Proceedings of the National Academy of Sciences* 102: 8939-8943.
24. **Heithaus, M. R.** 2005. Habitat use and group size of pied cormorants (*Phalacrocorax varius*) in a seagrass ecosystem: possible effects of food abundance and predation risk. *Marine Biology* 147: 27-35.
23. **Heithaus, M. R.**, A. Frid, A. Wirsing, L. Bejder, and L. M. Dill. 2005. The biology of green and loggerhead turtles under risk from tiger sharks at a foraging ground. *Marine Ecology Progress Series* 288: 285-294.
22. Parrish, F. A., G. J. Marshall, C. L. Littnan, **M. R. Heithaus**, S. Canja, B. Becker, R. Braun, and G. A. Antonelis. 2005. Foraging of juvenile monk seals at French Frigate Shoals, Hawaii. *Marine Mammal Science* 21: 93-107.
21. **Heithaus, M. R.** 2004. Fish communities of seagrass meadows and associated habitats in Shark Bay, Western Australia. *Bulletin of Marine Science* 75: 79-99.
20. **Heithaus, M. R.** and A. Frid. 2003. Optimal diving under the risk of predation. *Journal of Theoretical Biology* 223: 79-93.
19. Dill, L. M., **M. R. Heithaus**, and C. J. Walters. 2003. Behaviorally-mediated indirect interactions in marine communities and their conservation and implications. *Ecology* 84: 1151-1157.
18. **Heithaus, M. R.** and L. M. Dill. 2002. Food availability and tiger shark predation risk influence bottlenose dolphin habitat use. *Ecology* 83: 480-491.

17. **Heithaus, M. R.**, L. M. Dill, G. J. Marshall, and B. Buhleier. 2002. Habitat use and foraging behavior of tiger sharks (*Galeocerdo cuvier*) in a seagrass ecosystem. *Marine Biology* 140: 237-248.
16. **Heithaus, M. R.**, A. Frid, and L. M. Dill. 2002. Species and sex-class differences in shark-inflicted injury frequencies, escape ability, and habitat use of green and loggerhead turtles. *Marine Biology* 140: 229-236.
15. **Heithaus, M. R.**, J. M. McLash, A. Frid, L. M. Dill, and G. J. Marshall. 2002. Novel insights into the behavior of sea turtles from animal-borne cameras. *Journal of the Marine Biological Association UK* 82: 1049-1050.
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.
13. **Heithaus, M. R.** 2001. Habitat selection by predators and prey in communities with asymmetrical intraguild predation. *Oikos* 92: 542-554.
12. **Heithaus, M. R.** 2001. Shark attacks on bottlenose dolphins (*Tursiops aduncus*) in Shark Bay, Western Australia: attack rate, bite scar frequencies, and attack seasonality. *Marine Mammal Science* 17: 526-539.
11. **Heithaus, M. R.** 2001. The biology of tiger sharks (*Galeocerdo cuvier*) in Shark Bay, Western Australia: sex ratio, size distribution, diet, and seasonal changes in catch rates. *Environmental Biology of Fishes* 61: 25-36.
10. **Heithaus, M. R.** 2001. Predator-prey and competitive interactions between sharks (order Selachii) and dolphins (suborder Odontoceti): a review. *Journal of Zoology (London)* 253:53-68.
9. **Heithaus, M. R.**, G. J. Marshall, B. M. Buhleier, and L. M. Dill. 2001. Employing Crittercam to study habitat use and behavior of large sharks. *Marine Ecology Progress Series* 209: 307-310.
8. Hamilton, I. M. and **M. R. Heithaus**. 2001. The effect of temporal variation in predation risk on anti-predator behaviour: an empirical test with marine snails. *Proceedings of the Royal Society of London B* 268:2585-2588.
7. Connor, R. C., **M. R. Heithaus**, and L. M. Barre. 2001. Complex social structure, alliance stability, and mating access in a bottlenose dolphin ‘super-alliance.’ *Proceedings of the Royal Society of London B* 268:263-267.
6. Connor, R. C., **M. R. Heithaus**, P. Berggren, and J. L. Miksis. 2000. “Kerplunking”: surface fluke- slaps during shallow water foraging by bottlenose dolphins. *Marine Mammal Science* 16: 646-653.
5. Mann, J., R. C. Connor, L. M. Barre, and **M. R. Heithaus**. 2000. Female reproductive success in bottlenose dolphins (*Tursiops* sp.): life history, habitat, provisioning, and group-size effects. *Behavioral Ecology* 11: 210-219.
4. Connor, R. C., **M. R. Heithaus**, and L. M. Barre. 1999. Superalliance of bottlenose dolphins. *Nature* 397: 571-572.
3. **Heithaus, M. R.** and C. Gramme. 1998. Fish communities of the Vermilion River: differentiation between tributaries and the main channel. *Ohio Journal of Science* 98: 98-102. *Finalist for paper of the year, Ohio Academy of Science*

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.
1. Connor, R. C. and M. R. **Heithaus**. 1996. Great white shark approach elicits flight response in bottlenose dolphins. *Marine Mammal Science* 12: 602-606.

CHAPTERS IN BOOKS

6. Frid, A. and **M. R. Heithaus**. In press. Antipredator behavior and conservation.
5. **Heithaus, M. R.**, A. Frid, J. Vaudo, B. Worm, and A. J. Wirsing. in press. Unraveling the ecological importance of elasmobranchs. *In* Carrier, J. C., J. Musick, M. R Heithaus (eds.) *Sharks and Their Relatives II: Biodiversity, adaptive physiology, and conservation*. CRC Press pp
4. **Heithaus, M. R.** and L. M. Dill. 2009. Feeding Tactics and Strategies. *In* Perrin, W. F., B. Würsig, 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.
2. **Heithaus, M. R.** 2004. Predator-prey interactions. Pages 487-521 *In* Carrier, J. C., J. Musick, M. R Heithaus (eds.) *The Biology of Sharks and Their Relatives*. CRC Press.
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.

BOOK REVIEWS

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

FUNDED RESEARCH (Since 2003)

- Heithaus, M. R.** CAREER: Does predator intimidation influence a pristine seagrass community through multiple indirect pathways? National Science Foundation. May 2008-April 2013. \$725,195
- Heithaus, M. R.** and F. Jochem. Deep-sea shark communities of the Bahamas, with F Jochem coPI. Florida Institute of Oceanography. \$21,000
- Heithaus, M. R.** and J. Fourqurean. Behaviorally mediated species interactions in a subtropical seagrass community, with J Fourqurean coPI. National Science Foundation. January 2006-December 2008. \$547,746
- Heithaus, M. R.** and F. Jochem. Deep-sea shark communities of the Gulf of Mexico, with Frank Jochem coPI. Florida Institute of Oceanography. April 2005. \$12,000
- Heithaus, M. R.**, G. J. Marshall, and J. C. Carrier. Shiptime to test advanced animal-borne video telemetry devices. NOAA Shiptime. January 2004-June 2006. \$55,000
- Heithaus, M. R.**, G. J. Marshall, and J. C. Carrier. Development of an advanced animal-borne video telemetry system, SeaGrant. July 2003-July 2006. \$200,000
- Childers, D, E. Gaiser, R. Jaffe, R Price, and **M Heithaus**. FCE LTER II: Coastal Oligotrophic Ecosystems Research with National Science Foundation. November 2006-November 2012. \$4,920,000. (*Consumer Dynamics Group Lead with J. Trexler*)

PROFESSIONAL HONORS, PRIZES, FELLOWSHIPS

UNIVERSITY

2. Faculty Scholarship, 2008
1. Faculty Award for Excellence in Research, 2007.

OTHER

3. American Library Association *Choice* Magazine Outstanding Academic Title for “Biology of sharks and their relatives” 2004
2. Gruber Award for the best student presentation at the American Elasmobranch Society Meeting. 2000
1. NSF Graduate Research Fellowship. 1998-2001

OFFICES HELD IN PROFESSIONAL SOCIETIES

2007-2009 Grants Committee, American Elasmobranch Society
2006 Chair, Nominating Committee, American Elasmobranch Society

GRANT AND JOURNAL REVIEWS

American Fisheries Society, Animal Behaviour, Aquatic Biology, Aquatic Mammals, Australian Journal of Zoology, Behavioral Ecology, Behavioral Ecology and Sociobiology, Bulletin of Marine Science, Chelonian Conservation Biology, Cambridge University Press, Canadian Journal of Fisheries and Aquatic Sciences, Canadian Journal of Forest Research, Chelonian conservation Biology, Conservation Ecology, Ecological Applications (Subject Matter Editor), Earthwatch Institute, Ecography, Ecology, Ecology of Freshwater Fish, Endangered Species Research, Environmental Biology of Fishes, Functional Ecology, Guggenheim Memorial Foundation, Hydrobiologia, Journal of Animal Ecology, Journal of Applied Ecology, Journal of Experimental Biology, Journal of Experimental Marine Biology and Ecology, Journal of Fish Biology, Journal of Mammalogy, Journal of Zoology, Large Pelagic Research Center Grants Program, Mammal Study, Marine Biology, Marine Ecology Progress Series, Marine and Freshwater Research, Marine Mammal Science, Mississippi-Alabama Sea Grant, National Geographic Society Committee for Research and Exploration, National Science Foundation [Animal Behavior, Ocean Sciences, Biological Oceanography], Natural Environment Research Council (UK), North Pacific Research Board, Northeastern Naturalist, Oecologia, Oikos, Palaios, Proceedings of the Royal Society of London B/PRSB Letters, Proceedings of the National Academy of Sciences, South African Journal of Science, Transactions of the American Fisheries Society, Trends in Ecology and Evolution