# AARON JOHN WIRSING

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## EDUCATION

| | | |
|---|---|---|
| 2005 | Ph.D. | Biological Sciences, Simon Fraser University |
| 2001 | M.S. | Wildlife Resources, University of Idaho |
| 1996 | A.B. | Biology, Bowdoin College |

## PROFESSIONAL APPOINTMENTS

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| 2020-Present | Professor, School of Environmental and Forest Sciences (SEFS), University of Washington |
| 2022 | Visiting Professor, School of Life and Environmental Sciences, University of Sydney |
| 2016 | Visiting Professor, School of Life and Environmental Sciences, University of Sydney |
| 2014-2020 | Associate Professor, School of Environmental and Forest Sciences (SEFS), University of Washington |
| 2008-2014 | Assistant Professor, School of Environmental and Forest Sciences (SEFS), University of Washington |
| 2006-2008 | Post-doctoral Research Associate, Department of Biological Sciences, Florida International University |

## PEER-REVIEWED PUBLICATIONS

***Denotes a graduate student; †denotes an undergraduate student; ∫denotes a postdoctoral mentee**

### In Press

144. Sullender, B. K., T. R. Ganz, R. Mower, J. D. Lundquist, B. N. Kertson, T. M. Newsome, **A. J. Wirsing**, and L. R. Prugh. Apex predators exploit advantageous snow conditions across hunting modes. Journal of Animal Ecology

143. Hubl, D.*, P. Happe, B. L. Howell, R. Long, P. MacKay, and **A. J. Wirsing**. A geographically extensive camera survey demonstrates limited presence of Pacific marten on Washington's Olympic Peninsula. Northwest Science.

### Published

142. **Wirsing, A. J.** 2026. Ecology: Ecology: pumas keep roads clear of deer. Current Biology 36: R955-R957.

141. McFeely, A. K.†, C. W. Robins*, J. R. Adams, L. P. Waits, T. P. Quinn, and **A. J. Wirsing**. 2026. Sex and water depth exert population-specific effects on detection rates of brown bears along small streams during annual salmon pulses in southwestern Alaska. Canadian Journal of Zoology 104: 1-11.

140. Shively, K. A., E. M. Reese, J. I. Ransom, **A. J. Wirsing**, J. C. Lewis, T. Chestnut, D. O. Werntz, D. P. Whiteside, and Laura R. Prugh. 2026. Metabarcoding reveals striking dietary variation in a reintroduced small carnivore. Journal of Mammalogy 107: 252-263.

139. Quinn, T. P., J. H. Stern, N. Grace Henry, A. K. McFeely†, H. Ro, B. Stricker†, L. Voytas†, L. P. Waits, J. R. Adams, and **A. J. Wirsing**. 2026. Brown bear consumption of Pacific salmon varies greatly among individuals but increases with the bear's age and salmon availability. Ecology and Evolution 16: e73062.

138. Bozzi, N. B., **A. J. Wirsing**, C. W. Robins, C. J. Sowers, and T. P. Quinn. 2025. Foraging tactics and success rates of brown bears preying targeting sockeye salmon in small streams. Journal of Mammalogy 106: 819-831.

137. Cunningham, C. X., B. Windell, L. C. Satterfield, **A. J. Wirsing**, T. M. Newsome, T. R. Ganz, and L. R. Prugh. 2025. Navigating the risks and rewards of scavenging in multi-predator, human-impacted landscapes. Ecology 106: e70090.

136. Clua, E. E. G., T. Vignaud, and **A. J. Wirsing**. 2025. The Talion law 'tooth for a tooth': self-defense as a motivation for shark bites on human aggressors. Frontiers in Conservation Science 6: 1562502.

135. Ripple, W. J., R. L. Beschta, C. Wolff, L. E. Panter, and **A. J. Wirsing**. 2025. The Strength of the Yellowstone Trophic Cascade after Wolf Reintroduction. Global Ecology and Conservation 58: e04238.

134. Robins, C. W.*, B. N. Kertson, S. M. Kachel*, and **A. J. Wirsing**. 2025. Residential development reduces black bear (Ursus americanus) scavenging of cougar (*Puma concolor*) killed prey. Ecology 106: e70038.

133. **Wirsing, A. J.** 2025. Dynamic fine-tuning of anti-predator behaviour in snowshoe hares illustrates the context dependence of risk effects. Journal of Animal Ecology 94: 4-6.

132. Bassing, S. B., M. deVivo, T. R. Ganz, B. N. Kertson, L. R. Prugh, T. Roussin, L. Satterfield, R. M. Windell, A. J. Wirsing, and B. Gardner. 2024. Predator-prey interactions and landscape features influence movement behaviors in a large-mammal community. Ecology 105: e4448.

131. Ripple. W. J., D. N. Whalen, C. Wolf, Y. Cao, J. Schulte, S. Swann, S. T. Woodrich, T. Newsome, R. Cairncross, and **A. J. Wirsing**. 2024. Trophic cascades and climate change. Food Webs 41: e00362.

130. Clua, E. E. G., C. G. Meyer, C. Séguigne, and **A. J. Wirsing**. 2024. Increase of coastal shark bite frequency linked to COVID-19 lockdown reveals a territoriality-dominance behaviour toward humans. Behaviour 161: 637-660.

129. Ripple, W. J., C. Wolf, R. L. Beschta, A. D. Craig*, Z. S. Curcija, E. J. Lundgren, L. C. Satterfield, S. T. Woodrich, and **A. J. Wirsing**. 2024. A shifting ecological baseline after wolf extirpation. Bioscience 74: 430-434.

128. Dedman, S., J. H. Moxley, Y. P. Papastamatiou, M. Braccini, J. E. Caselle, D. D. Chapman, J. E. Cinner, E. M. Dillon, N. K. Dulvy, R. E. Dunn, M. Espinoza, A. R. Harborne, E. S. Harvey, M. R. Heupel, C. Huveneers, N. A. J. Graham, J. T. Ketchum, N. V. Klinard, A. A. Kock, C. G. Lowe, M. A. McNeil, E. M. P. Madin, D. J. McCauley, M. G. Meekan, A. C. Meier, C. A. Simpfendorfer, M. T. Tinker, M. Winton, **A. J. Wirsing**, M. R. Heithaus. 2024. Ecological roles and importance of sharks in the Anthropocene Ocean. Science 385: eadl2362.

127. Kilfoil, J. P.[ʃ], G. Krohn, E. E. G. Clua, S. Planes, K. R. Gastrich, M. R. Heithaus, and **A. J. Wirsing**. 2024. Divergent learning responses to a spatially consistent olfactory stimulus in two reef shark species. Marine Ecology Progress Series 738: 151-160.

126. Ganz, T. R., S. B. Bassing, M. T. DeVivo, B. Gardner, B. N. Kertson, L. C. Satterfield, L. A. Shipley, B. Y. Turnock, S. L. Walker, D. Abrahamson, **A. J. Wirsing**, and L. R. Prugh. 2024. White-tailed deer population dynamics in a multi-predator landscape shaped by humans. Ecological Applications 105: e4255.

125. Goetze, J. S., M. R. Heithaus, M. A. MacNeil, E. Harvey, C. A. Simpfendorfer, M. R. Heupel, M. Meekan, S. Wilson, M. E. Bond, C. W. Speed, L. M. Currey-Randall, R. Fisher, C. S. Sherman, J. J. Kiszka, M. J. Rees, V. Udyawer, K. I. Flowers, G. M. Clementi, J. Asher, O. Beaufort, A. T. F. Bernard, M. L. Berumen, S. Bierwagen, T. Boslogo, E. J. Brooks, J. J. Brown, D. Buddo, C. Cáceres, S. Casareto, V. Charloo, J. E. Cinner, E. E. G. Clua, J. E. M. Cochran, N. Cook, B. M. D'Alberto, M. de Graaf, M. C. Dornhege, L. Fanovich, N. F. Farabaugh, D. Fernando, C. E. L. Ferreira, C. Y. A. Fields, A. L. Flam, C. Floros, V. Fourqurean, L. G. Barcia, R. Garla, K. Gastrich, L. George, R. Graham, V. Hagan, R. S. Hardenstine, S. M. Heck, P. Heithaus, A. C. Henderson, H. Hertler, R. E. Hueter, M. Johnson, S. D. Jupiter, M. Kaimuddin, D. Kasana, M. Kelley, S. T. Kessel, B. Kiilu, F. Kyne, T. Langlois, J. Lawe, E. J. I. Lédée, S. Lindfield, J. Q. Maggs, B. M. Manjaji-Matsumoto, A. Marshall, P. Matich, E. McCombs, D. McLean, L. Meggs, S. Moore, S. Mukherji, R. Murray, S. J. Newman, O. O'Shea, K. E. Osuka, Y. P. Papastamatiou, N. Perera, B. J. Peterson, F. Pina-Amargós, A. Ponzo, A. Prasetyo, L. M. S. Quamar, J. R. Quinlan, F. A. Rolim, A. Ruiz-Abierno, H. Ruiz, M. A. Samoilys, E. Sala, W. R. Sample, M. Schärer-Umpierre, S. N. Schoen, A. M. Schlaff, A. N. H. Smith, L. Sparks, T. Stoffers, A. Tanna, R. Torres, M. J. Travers, J. Valentin-Albanese, J. D. Warren, A. M. Watts, C. K. Wen, E. R. Whitman, **A J. Wirsing**, E. Zarza-González, D. D. Chapman. 2024. Directed conservation of the world's reef sharks. Nature Ecology and Evolution 8: 1118-1128.

124. Ganz, T. R., M. T. DeVivo, **A. J. Wirsing**, S. B. Bassing, B. N. Kertson, S. L. Walker, and L. R. Prugh. 2024. Cougars, wolves, and humans drive a dynamic landscape of fear for elk. Ecology 105: e4255.

123. Newsome, T., R. Cairncross, C. X. Cunningham, E. E. Spencer, P. S. Barton, W. J. Ripple, and **A. J. Wirsing**. 2024. Scavenging with invasive species. Biological Reviews 99: 562-581.

122. Simpfendorfer, C. A., M. R. Heithaus, M. R. Heupel, M. A. MacNeil, M. Meekan, E. Harvey, C. S. Sherman, L. M. Currey-Randall, J. S. Goetze, J. J. Kiszka, M. J. Rees, C. W. Speed, V. Udyawer, M. E. Bond, K. I. Flowers, G. M. Clementi, J. Valentin-Albanese, M. S. Adam, K. Ali, J. Asher, E. Aylagas, O. Beaufort, C. Benjamin, A. T. F. Bernard, M. L. Berumen, S. Bierwagen, C. Birrell, E. Bonnema, R. M. K. Bown, E. J. Brooks, J. J. Brown, D. Buddo, P. J. Burke, C. Cáceres, M. Cambra, D. Cardeñosa, J. C. Carrier, S. Casareto, J. E. Caselle, V. Charloo, J. E. Cinner, T. Claverie, E. E. G. Clua, J. E. M. Cochran, N. Cook, J. E. Cramp, B. M. D'Alberto, M. de Graaf, M. C. Dornhege, M. Espinoza, A. Estep, L. Fanovich, N. F. Farabaugh, D. Fernando, C. E. L. Ferreira, C. Y. A. Fields, A. L. Flam, C. Floros, V. Fourqurean, L. Gajdzik, L. García Barcia, R. Garla, K. Gastrich, L. George, T. Giarrizzo, R. Graham, T. L. Guttridge, V. Hagan, R. S. Hardenstine, S. M. Heck, A. C. Henderson, P. Heithaus, H. Hertler, M. Hoyos Padilla, R. E. Hueter, R. W. Jabado, J. Joyeux, V. Jaiteh, M. Johnson, S. D. Jupiter, M. Kaimuddin, D. Kasana, M Kelley, S. T. Kessel, B. Kiilu, T. Kirata, B. Kuguru, F. Kyne, T. Langlois, F. Lara, J. Lawe, E. J. I. Lédée, S. Lindfield, A. Luna-Acosta, J. Q. Maggs, B. M. Manjaji-Matsumoto, A. Marshall, L. Martin, D. Mateos-Molina, P. Matich, E. McCombs, A. McIvor, D. McLean, L. Meggs, S. Moore, S. Mukherji, R. Murray, S. J. Newman, J. Nogués, C. Obota, D. Ochavillo, O. O'Shea, K. E. Osuka, Y. P. Papastamatiou, N. Perera, B. Peterson, C. R. Pimentel, F. Pina-Amargós, H. T. Pinheiro, A. Ponzo, A. Prasetyo, L. M. S. Quamar, J. R. Quinlan, J. Amorim Reis-Filho, H. Ruiz, A. Ruiz-Abierno, E. Sala, P. Salinas-de-León, M. A.

Samoilys, W. R. Sample, M. Schärer-Umpierre, A. M. Schlaff, K. Schmid, S. N. Schoen, N. Simpson, A. N. H. Smith, J. L. Y. Spaet, L. Sparks, T. Stoffers, A. Tanna, R. Torres, M. J. Travers, M. van Zinnicq Bergmann, L. Vigliola, J. Ward, J. D. Warren, A. M. Watts, C. K. Wen, E. R. Whitman, **A. J. Wirsing**, A. Wothke, E. Zarza-González, and D. D. Chapman. 2023. Widespread diversity deficits of coral reef sharks and rays. Science 380: 1155-1160.

121. Prugh, L. R., C. X. Cunningham, R. M. Windell, B. N. Kertson, T. R. Ganz, S. L. Walker, and **A. J. Wirsing**. 2023. Fear of large carnivores amplifies human-caused mortality for mesopredators. Science 380: 754-758.

120. Kilfoil, J. P.[ʃ], T. P. Quinn, and **A. J. Wirsing**. 2023. Human effects on brown bear diel activity may facilitate subadults foraging on Pacific salmon. Global Ecology and Conservation 42: e02407.

119. Taylor, A. C., and **A. J. Wirsing**. 2023. *Wildlife Research* turns 50. Wildlife Research 50: 1-3.

118. Kachel, S. M.*, R. Bayrakcismith, Z. Kubanychbekov, R. Kulenbekov, T. McCarthy, B. Weckworth, and **A. Wirsing**. 2023. Ungulate spatiotemporal responses to contrasting predation risk from wolves and snow leopards. Journal of Animal Ecology 92: 142-157.

117. Bassing, S. B., M. Devivo, T. Ganz, B. Kertson, L. Prugh, T. Roussin, L. Satterfield, B. Windell, **A. J. Wirsing**, and B. Gardner. 2023. Are we telling the same story? Comparing inferences made from camera trap and telemetry data for wildlife monitoring. Ecological Applications 33: e2745.

116. Ganz, T. R., M. T. DeVivo, B. N. Kertson, T. Roussin, L. Satterfield, **A. J. Wirsing**, and L. R. Prugh. 2022. Interactive effects of wildfires, season, and predator activity shape mule deer movements. Journal of Animal Ecology 91: 2273-2288.

115. Kachel, S. M.*, K. Karimov, and **A. J. Wirsing**. 2022. Predator niche overlap and partitioning and potential interactions in the mountains of Central Asia. Journal of Mammalogy 103: 1019-1029.

114. Ripple, W. J., M. K. Phillips, C. Wolf, R. L. Beschta, J. Vucetich, J. B. Kauffman, B. E. Law, **A. J. Wirsing**, J. E. Lambert, E. Leslie, C. Vynne, E. Dinerstein, R. Noss, G. Wuerthner, D. A. DellaSala, J. T. Bruskotter, M. P. Nelson, E. Crist, D. M. Ashe. 2022. Rewilding the American west. Bioscience 72: 931-935.

113. Uyeda, L. T.*, Ardiantiono, E. Iskandar, **A. J. Wirsing**, and R. C. Kyes. 2022. Snakebite Envenomation, Attitudes, and Behavior Toward Snakes in Banten, Indonesia. Animals 12: 2051.

112. Jensen, P. O., **A. J. Wirsing**, and D. H. Thornton. 2022. Using camera traps to estimate density of snowshoe hare (Lepus americanus): a keystone boreal forest herbivore. Journal of Mammalogy 103: 693-710.

111. **Wirsing, A. J.**, J. J. Kiszka, A. C. Allen, and M. R. Heithaus. 2022. Ecological roles and importance of sea cows (Order: Sirenia): a review and prospectus. Marine Ecology Progress Series 689: 191-215.

110. **Wirsing, A. J.**, A. N. Johnston, and J. J. Kiszka. 2022. Foreword to the Special Issue on 'The rapidly expanding role of drones as a tool for wildlife research'. Wildlife Research 49: i-v.

109. Quinn, T. P., **A. J. Wirsing**, and M. Proctor. 2022. Optimal barbed wire height for brown bear hair sample collection. Ursus 33: e2,1-6.

108. Dellinger, J. A.*, C. R. Shores*, A. D. Craig*, S. M. Kachel*, M. R. Heithaus, W. J. Ripple, and **A. J. Wirsing**. 2022. Predators reduce niche overlap between sympatric prey. Oikos e08628.

107. Daum, M., E. Zhang, D. He, M. Balazinska, B. Haynes, R. Krishna, A. Craig*, and **A. Wirsing**. 2022. VOCAL: Video Organization and Interactive Compositional AnaLytics. 12th Annual Conference on Innovative Data Systems Research (CIDR '22). January 10-13, 2022, Chaminade, USA.

106. Bogezi, C., L. M. van Eeden*, **A. J. Wirsing**, and J. M. Marzluff. 2021. Ranchers' perspectives on participating in non-lethal wolf-livestock conflict mitigation strategies. Frontiers in Conservation Science 2: 683732.

105. Bracis, C., and **A. J. Wirsing**. 2021. Prey foraging behavior after predator introduction Is driven by resource knowledge and exploratory tendency. Frontiers in Ecology and Evolution 9: 698370.

104. Nowicki, R., J. Thomson, J. Fourqurean, M. Heithaus, and **A. Wirsing**. 2021. Loss of predation risk from apex predators can exacerbate marine tropicalization caused by extreme climatic events. Journal of Animal Ecology 90: 2041-2052.

103. Jensen, P. O., A. J. H. Meddens, S. Fisher, **A. J. Wirsing**, D. L. Murray, and D. H. Thornton. 2021. Broaden your horizon: the use of remotely sensed data for modeling populations of forest species at landscape scales. Forest Ecology and Management 500: 119640.

102. van Eeden, L. M.*, C. Bogezi, D. Leng, J. Marzluff, **A. J. Wirsing**, and S. Rabotyagov. 2021. Public willingness to pay for gray wolf conservation that could support a rancher-led wolf-livestock coexistence program. Biological Conservation 260: 109226.

101. **Wirsing, A. J**., and T. M. Newsome. 2021. Scavenging effects of large canids. Integrative and Comparative Biology 61: 117-131.

100. Bryce, C. M., M. S. Davis, M. E. Gompper, A. Hurt, J. Koster, G. Larson, E. A. Ostrander, M. A. R. Udell, S. Urfer, **A. J. Wirsing**, and A. G. Jimenez. 2021. Biology's best friend: Bridging disciplinary gaps to advance canine science. Integrative and Comparative Biology 61: 76-92.

99. Sabal, M. C., M. S. Boyce, C. L. Charpentier, N. B. Furey, T. M. Luhring, H. W. Martin, M. C. Melnychuk, R. B. Srygley, C. M. Wagner, **A. J. Wirsing**, R. C. Ydenberg, and E. P. Palkovacs. 2021. Predation landscapes influence migratory prey ecology and evolution. Trends in Ecology and Evolution 36: 737-749.

98. Ro, H.†, J. H. Stern, **A. J. Wirsing**, and T. P. Quinn. 2021. Stable isotopes reveal variation in consumption of Pacific salmon by brown bears, despite ready access in small streams. Journal of Fish and Wildlife Management 12: 40-49.

97. van Eeden, L. M.*, S. S. Rabotyagov, M. Kather, C. Bogezi, **A. J. Wirsing**, and J. Marzluff. 2021. Political affiliation predicts public attitudes toward gray wolf (*Canis lupus*) conservation and ranching. Conservation Science and Practice 3:e387.

96. Lincoln, A. E., **A. J. Wirsing**, and T. P. Quinn. 2021. Prevalence and patterns of scavenging by brown bears (*Ursus arctos*) on salmon (*Oncorhynchus* spp.) carcasses. Canadian Journal of Zoology 99: 9-17.

95. **Wirsing, A. J**., M. R. Heithaus, J. S. Brown, B. P. Kotler, and O. J. Schmitz. 2021. The context-dependence of non-consumptive predator effects. Ecology Letters 24: 133-129.

94. Kilfoil, J. P., I. Rodriguez-Pinto, J. J. Kiszka, M. R. Heithaus, Y. Zhang, C. C. Rao, L. E. Ailloud, M. D. Campbell, and **A. J. Wirsing**. 2020. Using unmanned aerial vehicles and machine learning to improve sea cucumber density estimation in shallow habitats. ICES Journal of Marine Sciences 77: 2882-2889.

93. Lincoln, A. E., **A. J. Wirsing**, and T. P. Quinn. 2020. Long-term use of noninvasive sampling methods: does successful sampling of brown bears by hair snares and camera traps change over time? Wildlife Research 47: 499-508.

92. MacNeil, M. A., D. D. Chapman, M. Heupel, C. Simpfendorfer, M. Heithaus, M. Meekan, E. Harvey, J. Goetze, J. Kiszka, M. E. Bond, L. M. Currey-Randall, C. W. Speed, C. S. Sherman, M. J. Rees, V. Udyawer, K. I. Flowers, G. Clementi, J. Valentin-Albanese, T. Gorham, M. S. Adam, K. Ali, F. Pina-Amargós, J. A. Angulo-Valdés, J. Asher, L. G. Barcia, O. Beaufort, C. Benjamin, A. T. F. Bernard, M. L. Berumen, S. Bierwagen, E. Bonnema, R. M. K. Bown, D. Bradley, E. Brooks, J. J. Brown, D. Buddo, P. Burke, C. Cáceres, D. Cardeñosa, J. C. Carrier, J. E. Caselle, V. Charloo, T. Claverie, E. Clua, J. E. M. Cochran, N. Cook, J. Cramp, B. D'Alberto, M. de Graaf, M. Dornhege, A. Estep, L. Fanovich, N. F. Farabough, D. Fernando, A. L. Flam, C. Floros, V. Fourqurean, R. Garla, K. Gastrich, L. George, R. Graham, T. Guttridge, R. S. Hardenstine, S. Heck, A. C. Henderson, H. Hertler, R. Hueter, M. Johnson, S. Jupiter, D. Kasana, S. T. Kessel, B. Kiilu, T. Kirata, B. Kuguru, F. Kyne, T. Langlois, E. J. I. Lédée, S. Lindfield, A. Luna-Acosta, J. Maggs, B. M. Manjaji-Matsumoto, A. Marshall, P. Matich, E. McCombs, D. McLean, L. Meggs, S. Moore, S. Mukherji, R. Murray, M. Kaimuddin, S. J. Newman, J. Nogués, C. Obota, O. O'Shea, K. Osuka, Y. P. Papastamatiou, N. Perera, B. Peterson, A. Ponzo, A. Prasetyo, L. M. S. Quamar, J. Quinlan, A. Ruiz-Abierno, E. Sala, M. Samoilys, M. Schärer-Umpierre, A. Schlaff, N. Simpson, A. N. H. Smith, L. Sparks, A. Tanna, R. Torres, M. J. Travers, M. v. Z. Bergmann, L. Vigliola, J. Ward, A. M. Watts, C. Wen, E.

Whitman, **A. J. Wirsing**, A. Wothke, E. Zarza-Gonzâlez, and J. E. Cinner. 2020. Global status and conservation potential of reef sharks. Nature 583: 801-806.

91. Wold, K. †, **A. J. Wirsing**, and T. P. Quinn. 2020. Do brown bears (*Ursus arctos*) avoid barbed wires deployed to obtain hair samples? A videographic assessment. Wildlife Biology wlb.00664.

90. Lincoln, A. E., R. Hilborn, **A. J. Wirsing**, and T. P. Quinn. 2020. Managing salmon for wildlife: do fisheries limit salmon consumption by bears in small streams? Ecological Applications 30: e02061.

89. **Wirsing, A. J**., T P. Quinn, J. R. Adams, and L. P. Waits. 2020. Optimizing selection of brown bear hair for noninvasive genetic analysis. Wildlife Society Bulletin 44: 94-100.

88. Bogezi, C., L. M. van Eeden*, **A. Wirsing**, and J. Marzluff. 2019. Predator-friendly beef certification as an economic strategy to promote coexistence between ranchers and wolves. Frontiers in Ecology and Evolution 7: 476.

87. Newsome, T. M., C. Howden, and **A. J. Wirsing**. 2019. Restriction of anthropogenic foods alters a top predator's diet and intra-specific interactions. Journal of Mammalogy 100: 1522-1532.

86. Shores, C. R.*, J. A. Dellinger*, E. S. Newkirk, S. T. Kachel*, and **A. J. Wirsing**. 2019. Mesopredators change temporal activity in response to a recolonizing apex predator. Behavioral Ecology 30: 1324-1335.

85. Peelle, L. E.*, **A. J. Wirsing**, K. L. Pilgrim, and M. K. Schwartz. 2019. Identifying predators from saliva at kill sites with limited remains. Wildlife Society Bulletin 43: 546-557.

84. Nowicki, R., M. Heithaus, J. Thomson, D. Burkholder, K. Gastrich, and **A. Wirsing**. 2019. Indirect effects of an extreme climatic event and seagrass loss on abundance and habitat use of a marine megafaunal community. Ecological Monographs 89:e01365.

83. Waayers, D., T. Tucker, S. Whiting, R. Groom, M. Vanderklift, R. Pillans, J. Rossendell, K. Pendoley, X. Hoenner, M. Thums, K. Dethmers, C. J. Limpus, **A. Wirsing**, C. McMahon, A. Strydom, P. Whittock, K. Howlett, D. Oades, G. McFarlane, T. Duke, M. Guinea, A. Whiting, M. Speirs, J. King, K. Hattingh, M. Heithaus, R. Mau, and D. Holley. 2019. Satellite tracking of marine turtles in the southeastern Indian Ocean: a review of deployments spanning 1990-2016. Indian Ocean Turtle Newsletter 29: 23-37.

82. Robins, C. W.*, B. N. Kertson, J. R. Faulkner, and **A. J. Wirsing**. 2019. Effects of urbanization on cougar foraging ecology along the wildland-urban gradient of western Washington. Ecosphere 10(3) e02605.

81. Dellinger, J. A.*, C. R. Shores*, A. Craig*, M. R. Heithaus, W. J. Ripple, and **A. J. Wirsing**. 2019. Habitat use of sympatric prey suggests divergent anti-predator responses to recolonizing gray wolves. Oecologia 189: 487-500.

80. Walker, L. E., J. M. Marzluff, M. C. Metz, **A. J. Wirsing**, L. M. Moskal, and D. W. Smith. 2018. Population responses of common ravens to reintroduced gray wolves. Ecology and Evolution 8: 11158-11168.

79. **Wirsing, A. J**., T. P. Quinn, C. J. Cunningham, J. R. Adams, A. D. Craig*, and L. P. Waits. 2018. Alaskan brown bears (*Ursus arctos*) aggregate and display fidelity to foraging neighborhoods while preying on salmon in small spawning streams. Ecology and Evolution 8: 9048-9061.

78. Dellinger, J. A.*, C. R. Shores*, M. Marsh, M. R. Heithaus, W. J. Ripple, and **A. J. Wirsing**. 2018. Impacts of naturally recolonizing gray wolves on survival rates and sources of mortality in two sympatric ungulates. Canadian Journal of Zoology 96: 760-768.

77. Ripple, W. J., C. Wolf, T. M. Newsome, M. Hoffmann, **A. J. Wirsing**, and D. J. McCauley. 2018. Reply to Pincheira-Donosoet and Hodgson: both the largest and smallest vertebrates have elevated extinction risk. Proceedings of the National Academy of Sciences of the United States of America 115: E5847-E5848.

76. Thornton, D. H., **A. J. Wirsing**, C. Lopez-Gonzalez, J. R. Squires, S. Fisher, K. W. Larsen, A. Peatt, M. A. Scrafford, R. A. Moen, A. E. Scully, T. W. King, and D. L. Murray. 2018. Asymmetric cross-border protection of peripheral transboundary species. Conservation Letters 11: e12430.

75. Kilfoil, J. P., **A. J. Wirsing**, M. D. Campbell, J. J. Kiszka, K. R. Gastrich, M. R. Heithaus, Y. Zhang, and M.E. Bond. 2017. Baited Remote Underwater Video surveys undercount sharks at high densities: insights from full-spherical camera technologies. Marine Ecology Progress Series 585: 113-121.

74. Ripple, W. J., C. Wolf, T. M. Newsome, M. Hoffmann, **A. J. Wirsing**, and D. J. McCauley. 2017. Reply to Kalinkat et al.: Smallest terrestrial vertebrates are highly imperiled. Proceedings of the National Academy of Sciences of the United States of America 114: E10265.

73. Ripple, W. J., C. Wolf, T. M. Newsome, M. Hoffmann, **A. J. Wirsing**, and D. J. McCauley. 2017. Extinction risk is most acute for the world's largest and smallest vertebrates. Proceedings of the National Academy of Sciences of the United States of America 114: 10678-10683.

72. Newsome, T. C., A. C. Greenville, D. Ćirović, C. R. Dickman, C. N. Johnson, M. Krofel, M. Letnic, W. J. Ripple, E. G. Ritchie, S. Stoyanov, and **A. J. Wirsing**. 2017. Top predators constrain mesopredator distributions. Nature Communications 8: 15469 doi: 10.1038/ncomms15469

71. Doherty, T. S., C. R. Dickman, A. S. Glen, T. M. Newsome, D. G. Nimmo, E. G. Ritchie, A. T. Vanak, and **A. J. Wirsing**. 2017. The global impacts of domestic dogs on threatened vertebrates. Biological Conservation 210: 56-59.

70. Newsome, T. M., P. J. S. Fleming, C. R. Dickman, T. S. Doherty, W. J. Ripple, E. G. Ritchie, and **A. J. Wirsing**. 2017. Making a new dog? Bioscience 67: 374-381.

69. Ripple, W. J., G. Chapron, J. V. López-Bao, S. M. Durant, D. W. MacDonald, P. A. Lindsey, E. L. Bennett, R. L. Beschta, J. T. Bruskotter, A. Campos-Arceiz, R. T. Corlett, C. T. Darimont, A. J. Dickman, R. Dirzo, H. T. Dublin, J. A. Estes, K. T. Everatt, M. Galetti, V. R. Goswami, M. W. Hayward, S. Hedges, M. Hoffmann, L. T. B. Hunter, G. I. H. Kerley, M. Letnic, T. Levi, F. Maisels, J. C. Morrison, M. P. Nelson, T. H. Newsome, L. Painter, R. M. Pringle, C. J. Sandom, J. Terborgh, A. Treves, B. V. Valkenburgh, J. A. Vucetich, **A. J. Wirsing**, A. D. Wallach, C. Wolf, R. Woodroffe, H. Young, and L. Zhang. 2017. Conserving the world's megafauna and biodiversity: the fierce urgency of now. Bioscience 67: 197-200.

68. Quinn, T. P., C. J. Cunningham, and **A. J. Wirsing**. 2017. Diverse foraging opportunities drive the functional response of local and landscape-scale bear predation on Pacific salmon. Oecologia 183: 415-429.

67. Ripple, W. J., G. Chapron, J. V. López-Bao, S. M. Durant, D. W. MacDonald, P. A. Lindsey, E. L. Bennett, R. L. Beschta, J. T. Bruskotter, A. Campos-Arceiz, R. T. Corlett, C. T. Darimont, A. J. Dickman, R. Dirzo, H. T. Dublin, J. A. Estes, K. T. Everatt, M. Galetti, V. R. Goswami, M. W. Hayward, S. Hedges, M. Hoffmann, L. T. B. Hunter, G. I. H. Kerley, M. Letnic, T. Levi, F. Maisels, J. C. Morrison, M. P. Nelson, T. H. Newsome, L. Painter, R. M. Pringle, C. J. Sandom, J. Terborgh, A. Treves, B. V. Valkenburgh, J. A. Vucetich, **A. J. Wirsing**, A. D. Wallach, C. Wolf, R. Woodroffe, H. Young, and L. Zhang. 2016. Saving the world's terrestrial megafauna. Bioscience 66: 807-812.

66. Newsome, T. M.[ʃ], L. Boitani, G. Chapron, P. Ciucci, C. R. Dickman, J. A. Dellinger*, J. V. López-Bao, R. O. Peterson, C. R. Shores*, **A. J. Wirsing**, and W. J. Ripple. 2016. Food habits of the world's grey wolves. Mammal Review 46: 255-269.

65. Uyeda, L. T.*, E. Iskandar, A. Purbatrapsila, **A. J. Wirsing**, and R. C. Kyes. 2016. The role of traditional beliefs in conservation of the water monitor lizard *Varanus salvator* and reticulated python *Python reticulatus* in Banten, Indonesia. Oryx 50: 296-301.

64. Vitense, K.*, **A. J. Wirsing**, R. C. Tyson, and J. J. Anderson. 2016. Theoretical impacts of habitat loss and generalist predation on predator-prey cycles. Ecological Modeling 327: 85-94.

63. Uyeda, L. T.*, E. Iskandar, R. C. Kyes, and **A. J. Wirsing**. 2015. Encounter rates, agonistic interactions, and social hierarchy among garbage-feeding Water Monitor Lizards (*Varanus salvator bivittatus*) on Tinjil Island, Indonesia. Herpetological Conservation and Biology 10: 753-764.

62. Newsome, T. M., G. Ballard, M. S. Crowther, A. Glen, J. A. Dellinger*, P. J. S. Fleming, A. C. Greenville, C. N. Johnson, M. Letnic, D. G. Nimmo, M. P. Nelson, C. R. Shores*, W. J. Ripple, E. G. Ritchie, A. D. Wallach, **A. J. Wirsing**, and C. R. Dickman. 2015. Resolving the value of the dingo in ecological restoration: could a reintroduction experiment help? Restoration Ecology 23: 201-208.

61. 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.

60. Newsome, T. M. ʃ, J. Dellinger*, C. R. Pavey, W. J. Ripple, C. Shores*, **A. J Wirsing**, and C. R. Dickman. 2015. The ecological effects of providing resource subsidies to predators. Global Ecology and Biogeography 24: 1-11.

59. Quinn, T. P., **A. J. Wirsing**, B. Smith, C. J. Cunningham, and J. Ching. 2014. Complementary use of motion-activated cameras and unbaited wire snares for DNA sampling reveals diel and seasonal patterns of brown bears foraging on adult sockeye salmon. Canadian Journal of Zoology 92: 893-903.

58. Sergio, F., O. J. Schmitz, C. Krebs, R. Holt, M. R. Heithaus, **A. J. Wirsing**, W. Ripple, E. Ritchie, D. G. 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.

57. **Wirsing, A. J**., M. R. Heithaus, and A. Frid. 2014. Cross-fertilizing aquatic and terrestrial research to understand predator risk effects. WIREs Water 2014. doi: 10.1002/wat2.1039

56. Heithaus, M. R., T. Alcoverro, R. Arthur, D. A. Burkholder, K. A. Coates, M. J. A. Christianen, N. Kelkar, S. A. Manuel, **A. J. Wirsing**, W. J. Kenworthy, and J. W. Fourqurean. 2014. Seagrasses in the age of sea turtle conservation and shark overfishing. Frontiers in Marine Science 1. doi: 10.3389/fmars.2014.00028

55. Uyeda, L.*, E. Iskandar, A. Purbatrapsila, J. Pamungkas, **A. Wirsing**, and R. Kyes. 2014. Water monitor lizard *(Varanus salvator)* satay: a treatment for skin ailments in Muarabinuangeun and Cisiih, Indonesia. Biawak 8: 35-38.

54. **Wirsing, A. J.**, and M. R. Heithaus. 2014. Accounting for individual behavioural variation in studies of habitat selection. Journal of Animal Ecology 83: 319-321.

53. Ripple, W. J., J. A. Estes, R. L. Beschta, C. C. Wilmers, E. G. Ritchie, M. Hebblewhite, J. Berger, B. Elmhagen, M. Letnic, M. P. Nelson, O. J. Schmitz, D. W. Smith, A. D. Wallach, and **A. J. Wirsing**. 2014. Status and ecological effects of the world's largest carnivores. Science 343: 1241484(2014).

52. Burkholder, D., M. Heithaus, J. Fourqurean, **A. Wirsing,** and L. 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.

51. Ellsworth, E., **A. J. Wirsing**, L. A. Shipley, and D. L. Murray. 2013. Do measures of plant intake and digestibility from captive feeding trials align with foraging patterns of free-ranging snowshoe hares? Wildlife Research 40: 349-357.

50. Uyeda, L.*, E. Iskandar, **A. Wirsing**, and R. Kyes. 2013. Nocturnal activity of *Varanus salvator* on Tinjil Island, Indonesia. Biawak 7: 15-20.

49. Heithaus, M. R., J. J. Vaudo, S. Kreicker, C. A. Layman, M. Krutzen, D. A. Burkholder, K. Gastrich, C. Bessey, R. Sarabia, K. Cameron, **A. J. 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.

48. Thornton, D. H., **A. J. Wirsing**, J. D. Roth, and D. L. Murray. 2013. Habitat quality and population density drive occupancy dynamics of snowshoe hare in variegated landscapes. Ecography 36: 610-621.

47. Ripple, W. J., **A. J. Wirsing**, C. C. Wilmers, and M. Letnic. 2013. Widespread mesopredator effects after wolf extirpation. Biological Conservation 160: 70-79.
46. Abele, S. L., **A. J. Wirsing**, and D. L. Murray. 2013. Precommercial forest thinning alters abundance but not survival of snowshoe hares. Journal of Wildlife Management 77: 84-92.

45. Olson, E. L., A. K. Salomon, **A. J. Wirsing**, and M. R. Heithaus. 2012. Large-scale movements of male loggerhead turtles on a relatively pristine feeding ground in Shark Bay, Australia. Marine and Freshwater Research 63: 1108-1116.

44. **Wirsing, A. J.**, and M. R. Heithaus. 2012. Behavioral transition probabilities in dugongs change with habitat and shark presence: implications for sirenian conservation. Marine and Freshwater Research 63: 1069-1076.

43. Heithaus, M. R., **A. J. Wirsing**, and L. M. Dill. 2012. The ecological importance of intact top predator populations: a synthesis of fifteen years of research in a seagrass ecosystem. Marine and Freshwater Research 63: 1039-1050.

42. **Wirsing, A. J.**, S. W. Buskirk, W. J. Ripple, and R. L. Beschta. 2012. Wolves and lynx: plausible ideas make for testable hypotheses. Wildlife Society Bulletin 36: 572-577.

41. Thornton, D. H., **A. J. Wirsing**, J. D. Roth, and D. L. Murray. 2012. Complex effects of site preparation and harvest on snowshoe hare abundance across a patchy forest landscape. Forest Ecology and Management 280: 132-139.

40. Thomson, J. A., M. R. Heithaus, D. A. Burkholder, J. J. Vaudo, **A. J. Wirsing**, and L. M. Dill. 2012. Site specialists, diet generalists? Isotopic variation, site fidelity, and foraging by loggerhead turtles in Shark Bay, Western Australia. Marine Ecology Progress Series 453: 213-226.

39. **Wirsing, A. J**., J. R. Phillips, M. E. Obbard, and D. L. Murray. 2012. Incidental nest predation in freshwater turtles: inter- and intra-specific differences in vulnerability are explained by relative crypsis. Oecologia 168: 977-988.

38. Ripple, W. J., **A. J. Wirsing**, R. L. Beschta, and S. W. Buskirk. 2011. Can restoring wolves aid in lynx recovery? Wildlife Society Bulletin 35: 514-518.

37. **Wirsing, A. J.**, and W. J. Ripple. 2011. A comparison of shark and wolf research reveals similar behavioral responses by prey. Frontiers in Ecology and the Environment 9: 335-341.

36. **Wirsing, A. J.**, M. R. Heithaus, and L. M. Dill. 2011. Predator-induced modifications to diving behavior vary with foraging mode. Oikos 120: 1005-1012.

35. Dunphy-Daly, M. M., M. R. Heithaus. **A. J. Wirsing**, J. S. F. Mardon, and D. A. Burkholder. 2010. Predation risk influences the diving behavior of a marine mesopredator. The Open Ecology Journal 3: 8-15.

34. **Wirsing, A. J.**, K. E. Cameron, and M. R. Heithaus. 2010. Spatial responses to predators vary with prey escape mode. Animal Behaviour 79: 531-537.

33. **Wirsing, A. J.**, and M. R. Heithaus. 2009. Olive-headed sea snakes (*Disteria major*) shift seagrass microhabitats to avoid predators. Marine Ecology Progress Series 387: 287-293.

32. Heithaus, M. R., B. K. 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.

31. 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.

30. **Wirsing, A. J.**, R. Abernethy, and M. R. Heithaus. 2008. Speed and maneuverability of adult loggerhead sea turtles (*Caretta caretta*) under simulated predatory attack: do the sexes differ? Journal of Herpetology 42: 411-413.

29. Kerford, M. R., **A. J. Wirsing**, M. R. Heithaus, and L. M. Dill. 2008. Danger on the rise: tidal state mediates an exchange of food for safety by the bar-bellied sea snake *Hydrophis elegans*. Marine Ecology Progress Series 358: 289-294.

28. 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.

27. Heithaus, M. R., **A. J. Wirsing**, J. A. Thomson, and D. A. 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.

26. **Wirsing, A. J.**, M. R. Heithaus, A. Frid, and L. M. Dill. 2008. Seascapes of fear: evaluating sublethal predator effects experienced and generated by marine mammals. Marine Mammal Science 24: 1-15.

25. Heithaus, M. R., **A. J. Wirsing**, A. Frid, and L. M. Dill. 2007. Behavioral indicators in marine conservation: lessons from a pristine ecosystem. Israel Journal of Ecology and Evolution 53: 355-370.

24. **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 Behaviour 74: 1085-1091.

23. **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.

22. Heithaus, M. R., A. Frid, **A. J. Wirsing**, L. M. Dill, J. W. 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.

21. **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.

20. **Wirsing, A. J.**, and D. L. Murray. 2007. Food supplementation experiments revisited: verifying that supplemental food is used by its intended recipients. Canadian Journal of Zoology 85: 679-685.

19. **Wirsing, A. J.**, M. R. Heithaus, and L. M. Dill. 2007. Living on the edge: dugongs prefer to forage in microhabitats allowing for escape from rather than avoidance of predators. Animal Behaviour 74: 93-101.

18. **Wirsing, A. J.**, F. C. C. Azevedo, S. Larivière, and D. L. Murray. 2007. Patterns of gastrointestinal parasitism among five sympatric prairie carnivores: are males reservoirs? Journal of Parasitology 93: 504-510.

17. Heithaus, M. R., **A. J. Wirsing**, L. M. Dill, and L. I. Heithaus. 2007. Long-term movements of tiger sharks satellite-tagged in Shark Bay, Western Australia. Marine Biology 151: 1455-1461.

16. Ireland, D. H., **A. J. Wirsing**, and D. L. Murray. 2007. Phenotypically plastic responses of green frog embryos to conflicting predation risk. Oecologia 152: 162-168.

15. Sargeant, B. L., **A. J. Wirsing**, M. R. Heithaus, and J. Mann. 2007. Can environmental heterogeneity explain individual foraging variation in wild bottlenose dolphins (*Tursiops* sp.)? Behavioral Ecology and Sociobiology 61: 679-688.

14. Monello, R. J., J. J. Dennehy, D. L. Murray, and **A. J. Wirsing**. 2006. Growth and behavioral responses of two native frogs to an exotic competitor, *Rana catesbeiana*. Journal of Herpetology 40: 403-407.

13. 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.

12. Azevedo, F. C. C., V. Lester, W. Gorsuch, S. Larivière, **A. J. Wirsing**, and D. L. Murray. 2006. Spring dietary breadth and overlap among five sympatric prairie carnivores. Journal of Zoology 269: 127-135.

11. **Wirsing, A. J.**, M. R. Heithaus, and L. M. Dill. 2006. Tiger shark (*Galeocerdo cuvier*) abundance and growth in a subtropical embayment: evidence from seven years of standardized fishing effort. Marine Biology 149: 961-968.

10. **Wirsing, A. J.**, J. D. Roth, and D. L. Murray. 2005. Can prey use dietary cues to distinguish predators? A test involving three terrestrial amphibians. Herpetologica 61: 104-110.

9. Heithaus, M. R., A. Frid, **A. J. Wirsing**, L. Bejder, and L. M. Dill. 2005. Biology of sea turtles under risk from tiger sharks at a foraging ground. Marine Ecology Progress Series 288: 285-294.

8. Murray, D. L., J. D. Roth, and **A. J. Wirsing**. 2004. Predation risk avoidance by terrestrial amphibians: The role of prey experience and vulnerability to native and exotic predators. Ethology 110: 635-647.

7. **Wirsing, A. J.** 2003. Predation-mediated selection on prey morphology: a test using snowshoe hares. Evolutionary Ecology Research 5: 315-327.

6. **Wirsing, A. J.**, T. D. Steury, and D. L. Murray. 2002. Noninvasive estimation of body composition in small mammals: a comparison of conductive and morphometric techniques. Physiological and Biochemical Zoology 75: 489-497.

5. **Wirsing, A. J.**, and D. L. Murray. 2002. Patterns of browse consumption by snowshoe hares in the northwestern United States. Ecoscience 9: 440-449.

4. **Wirsing, A. J.**, T. D. Steury, and D. L. Murray. 2002. Relationship between body condition and vulnerability to predation in red squirrels and snowshoe hares. Journal of Mammalogy 83: 707-715.

3. Steury, T. D., **A. J. Wirsing**, and D. L. Murray. 2002. Using multiple treatment levels as a means of improving inference in wildlife research. Journal of Wildlife Management 66: 292-299.

2. Murray, D. L., J. D. Roth, E. Ellsworth, **A. J. Wirsing**, and T. D. Steury. 2002. Estimating low-density snowshoe hare populations using fecal pellet counts. Canadian Journal of Zoology 80: 771-781.

1. **Wirsing, A. J.**, T. D. Steury, and D. L. Murray. 2002. A demographic analysis of a southern snowshoe hare population in a fragmented habitat: evaluating the refugium model. Canadian Journal of Zoology 80: 169-177.

## BOOKS AND BOOK CHAPTERS

3. Hansen Wheat, C., J. Koster, and A. J. Wirsing. 2026. The behavioral ecology of canids. Pages 55-89 in Canine Science (A.G. Jiménez, S.R. Urfer, eds.), Springer, Cham.

2. Heithaus, M. R., R. E, Dunn, N. F. Farabaugh, E. Lester, E. Madin, M. G. Meekan, Y. P. Papastamatiou, G. Roff, J. J. Vaudo, and **A. J. Wirsing**. 2022. Advances in our understanding of the ecological importance of sharks and their relatives. Pages 487-522 *in* Biology of Sharks and Their Relatives: Third Edition (J. C. Carrier, C. A. Simpfendorfer, M. R. Heithaus, and K. E. Yopak, eds.), CRC Press, Boca Raton, Florida.

1. Heithaus, M. R., A. Frid, J. J. Vaudo, B. Worm, and **A. J. Wirsing**. 2010. Unraveling the ecological importance of elasmobranchs. Pages 611-637 *in* Sharks and Their Relatives II: Biodiversity, Adaptive Physiology, and Conservation (J. C. Carrier, M. R. Heithaus, and J. Musick, eds.), CRC Press, Boca Raton, Florida.

## OTHER PUBLICATIONS

Ganz, T. R., M. T. DeVivo, **A. J. Wirsing**, S. B. Bassing, B. N. Kertson, S. L. Walker, and L. R. Prugh. 2024. Elk balance threats from humans, cougars, and wolves by shifting habitat use between day and night. Bulletin of the Ecological Society of America 105(2): e02133.

Doherty, T., A. J. Wirsing, C. Dickman, D. Nimmo, E. Ritchie, and T. Newsome. 2017. The bark side: domestic dogs threaten endangered species worldwide. *The Conversation* http://theconversation.com/the-bark-side-domestic-dogs-threaten-endangered-species-worldwide-76782

Uyeda, L. T.*, E. Iskandar, R. C. Kyes, and **A. J. Wirsing**. 2012. Proposed research on home ranges and resource use of the water monitor lizard, *Varanus salvator*. Forestry Chronicle 88: 542-546.

**Wirsing, A. J**. 2005. Predation-sensitive foraging behaviour of dugongs (*Dugong dugon*). Ph.D. Dissertation, Simon Fraser University.

**Wirsing, A. J.** 2003. Tiger sharks: important players in Shark Bay's seagrass ecosystem. Monkey Mia News 8: Spring 2003.

**Wirsing, A. J.** 2001. Demographic and nutritional analyses of a southern snowshoe hare population. M.S. Thesis, University of Idaho.

## RESEARCH GRANTS AND CONTRACTS

**Total = $4,358,501**

**2026**

Indigo Partners gift (PI), as an honorarium for giving a talk on the ecological effects of wolves as part of their corporate retreat in Bigfork, MT, University of Washington (gift of **$2,500**)

Continuing Seeley Fund gift (PI) titled, "Investigating the ecology of reef sharks in Tetiaroa (Society Islands, French Polynesia)", University of Washington (gift of **$134,000**)

**2025**

Brando Hotel gift (PI) in support of ongoing reef shark research in Tetiaroa, University of Washington (gift of **$3,400**)

Continuing Seeley Fund gift (PI) titled, "Investigating the ecology of reef sharks in Tetiaroa (Society Islands, French Polynesia)", University of Washington (gift of **$155,000**)

**2024**

Continuing Seeley Fund gift (PI) titled, "Investigating the ecology of reef sharks in Tetiaroa (Society Islands, French Polynesia)", University of Washington (gift of **$130,000**)

**2023**

Olympic Park Associates grant (PI), funding for the project titled, "Assessment of Pacific marten status in Olympic National Park, are they headed to extirpation?", University of Washington (**$4,000**)

Woodland Park Zoo gift (PI) in support of project titled "Assessment of Pacific marten status in Olympic National Park, are they headed to extirpation?" **(**gift of **$15,000)**

McIntire-Stennis Cooperative Forestry Research Grant (co-PI) titled, "Linking deer behavior to forest health on Tribal lands", University of Washington (**$139,541**)

Continuing Seeley Fund gift (PI) titled, "Investigating the ecology of reef sharks in Tetiaroa (Society Islands, French Polynesia)", University of Washington (gift of **$45,000**)

**2022**

Woodland Park Zoo gift (PI) in support of project titled "Assessment of Pacific marten status in Olympic National Park, are they headed to extirpation?" **($15,000)**

Supplement to Washington Department of Fish and Wildlife contract (PI) titled, "Black bear diet reconstruction", University of Washington (**$7,100**)

Olympic Park Associates grant (PI), funding for the project titled, "Assessment of Pacific marten status in Olympic National Park, are they headed to extirpation?", University of Washington (**$3,000**)

Washington Department of Fish and Wildlife contract supplement (PI) titled, "Black bear diet supplement", University of Washington (**$10,500**)

Continuing Seeley Fund gift (PI) titled, "Investigating the ecology of reef sharks in Tetiaroa (Society Islands, French Polynesia)", University of Washington (gift of **$92,500**)

**2021**

Washington Department of Fish and Wildlife contract (PI) titled, "Black bear diet reconstruction", University of Washington (**$17,232**)

National Park Service grant (PI) titled, "Assessment of Pacific marten status in Olympic National Park, are they headed to extirpation?", University of Washington (**$86,475**)

Conservation, Research and Education Opportunities International (CREOi) grant (PI) titled, "Assessing large carnivore dietary interactions in eastern WA", University of Washington (**$20,000**)

Continuing Seeley Fund gift (PI) titled, "Investigating the ecology of reef sharks in Tetiaroa (Society Islands, French Polynesia)", University of Washington (gift of **$47,836**)

**2020**

Continuing Seeley Fund gift (PI) titled, "Investigating the ecology of reef sharks in Tetiaroa (Society Islands, French Polynesia)", University of Washington (gift of **$25,000**)

**2019**

NASA FINESST grant (PI) titled, “Fighting fire with four hooves: effects of carnivore-herbivore interactions on fuel characteristics and fire severity”, University of Washington (**$135,000**)

Aquatic Lands Enhancement Account (ALEA) Volunteer Cooperative Program grant (co-PI) titled, “Understanding predator-prey dynamics in Washington”, Washington Department of Fish and Wildlife (**$11,600**).
Royalty Research Fund (RRF) Grant (PI) titled, “Using accelerometers to understand the hunting success of cougars in a human-dominated landscape”, University of Washington **($37,394**)

Continuing Seeley Fund gift (PI) titled, “Investigating the ecology of reef sharks in Tetiaroa (Society Islands, French Polynesia)”, University of Washington (gift of **$27,500**)

**2018**

Woodland Park Zoo gift (PI) in support of research (led by graduate student M. Havrda) on mesocarnivore space use along Washington’s wildland-urban gradient (**$4,600**)

Continuing Seeley Fund gift (PI) titled, “Investigating the ecology of reef sharks in Tetiaroa (Society Islands, French Polynesia)”, University of Washington (gift of **$15,000**)

**2017**

Panthera grant (PI) titled, “A study of snow leopard ecology in Kyrgyzstan”, University of Washington (**$79,675**)

Washington Department of Fish and Wildlife Aquatic Lands Enhancement Account (ALEA) Volunteer Cooperative Grant Program grant (PI) titled, “Assessing wolf-cougar interactions and impacts in Washington”, University of Washington (**$16,200**)

Conservation, Research and Education Opportunities International (CREOi) grant (PI) titled, “Large predator competition in an urbanizing world: Cougar and black bear interactions along the wildland-urban gradient of western Washington”, University of Washington (**$20,000**)

National Science Foundation REU supplement (PI) to DEB-1145902 titled, “REU: Does Anti-predator Behavior Modify Indirect Effects of Top Predators?”, University of Washington **($6,323**)

Continuing Seeley Fund gift (PI) titled, “Investigating the ecology of reef sharks in Tetiaroa (Society Islands, French Polynesia)”, University of Washington (gift of **$15,000**)

**2016**

Washington Department of Fish and Wildlife contract (PI) titled, “Washington Predator/Prey

Dynamics", University of Washington (**$1,075,941 with co-PIs Gardner and Prugh**)

Army Corps of Engineers grant titled, "Evaluating flora and fauna diversity in the John Day/Willow Creek Project for special status species protection" (#W912HZ-16-SOI-0018, co-PI), University of Washington (**$444,918**)

Continuing Seeley Fund gift (PI) titled, "Investigating the ecology of reef sharks in Tetiaroa (Society Islands, French Polynesia)", University of Washington (gift of **$18,475**)

National Institute of Food and Agriculture (NIFA) grant (PI) titled, "Modeling the effects of forest management on snowshoe hare population dynamics in Washington at the landscape scale", University of Washington (**$10,972**)

Woodland Park Zoo gift (PI) in support of research (led by graduate student M. Havrda) on mesocarnivore space use along Washington's wildland-urban gradient (**$8,431**)

**2015**

Safari Conservation International Foundation (SCIF) grant (PI) titled, "Effects of North American wolf recolonization on deer fawn survival", University of Washington (**$35,000**)

Washington Department of Fish and Wildlife Aquatic Lands Enhancement Account (ALEA) Volunteer Cooperative Grant Program grant (PI) titled, "Investigating how landscape characteristics shape cougar foraging ecology along the urban-to-wildland gradient of western Washington", University of Washington (**$9,302**)

Student technology Fee grant (PI) titled, "Wildlife ecology education and research using trail cameras", University of Washington (**$24,692**)

Seattle City Light grant (PI) titled, "Interactions between wolves and cougars in NE Washington", University of Washington (**$46,173**)

Continuing Seeley Fund gift (PI) titled, "Investigating the ecology of reef sharks in Tetiaroa (Society Islands, French Polynesia)", University of Washington (gift of **$15,000**)

Mule Deer Foundation grant (PI) titled, "Do wolves indirectly affect mule deer fawn survival", University of Washington (**$2,100**)

**2014**

National Science Foundation grant (co-PI, CNIC-1427542, Catalyzing New International Collaborations) titled, "US-Canada planning visit: building a transboundary research program to understand the influence of climate change on southern range limits", University of Washington (**$47,255** over 1 year; UW share = **$8,498**)

Safari Conservation International Foundation (SCIF) grant (PI) titled, “Impact of wolves on deer in Washington: seasonality and fawn survival”, University of Washington (**$49,500**)

Seattle City Light grant (PI) titled, “Do wolves indirectly affect mule deer fawn survival by modifying coyote predation?”, University of Washington (**$51,684**)

Seeley Fund gift (PI) titled, “Investigating the ecology of reef sharks in Tetiaroa (Society Islands, French Polynesia)”, University of Washington (gift of **$13,000**)

**2013**

Safari Conservation International Foundation (SCIF) grant (PI) titled, “Impact of re-colonizing gray wolves on mule and white-tailed deer in Washington state, USA”, University of Washington (**$45,000**)

Washington Department of Fish and Wildlife Aquatic Lands Enhancement Account (ALEA) Volunteer Cooperative Grant Program grant (PI) titled, “Impact of wolves on mule and white-tailed deer”, University of Washington (**$11,105**)

Institute of Forest Resources grant (co-PI) titled, “Feasibility of a wolf economy for Washington”, University of Washington **($175,000**)

Seattle City Light grant (PI) titled, “Will a warming climate affect mesocarnivore interactions in Washington’s southern boreal forests?”, University of Washington (**$24,052**)

Royalty Research Fund (RRF) Grant (co-PI) titled, “Predation by brown bears on Pacific salmon”, University of Washington **($28,986**)

**2012**

Seattle City Light grant (co-PI) titled, “Wolverine distribution and ecology in the North Cascades Ecosystem – Argos satellite telemetry”, University of Washington (**$22,146**; UW share = **$20,168**)

National Science Foundation grant (PI, DEB-1145902, Division of Environmental Biology) titled, “Collaborative Research: Does Anti-predator Behavior Modify Indirect Effects of Top Predators?”, University of Washington (**$789,977**)

**2011**

United States Forest Service Cost Reimbursable Agreement (PI; non-competitive grant) titled, "Patterns of predation on snowshoe hares in north-central Washington", University of Washington (**$10,000**)

McIntire-Stennis Equipment Grant (PI) titled, "Does anti-predator behavior modify indirect effects of top predators?", University of Washington (**$10,468**)

**2010**

McIntire-Stennis Cooperative Forestry Research Grant (PI) titled, "Fine-scale resource use by snowshoe hares in the boreal forests of north-central Washington", University of Washington (**$13,000**)

McIntire-Stennis Cooperative Forestry Research Grant (co-PI) titled, "Assessing the role of harvest intensity in improving forest health and providing biodiversity as an ecosystem service: A comparison of western and eastern Cascade forests", University of Washington (**$10,110**)

**2009**

Royalty Research Fund (RRF) Grant (PI) titled, "Using snowshoe hare responses to forest stand structure and fragmentation to guide lynx recovery in Washington", University of Washington **($39,073**)

**2007**

National Geographic Society Committee for Research and Exploration (CRE) Grant (PI) titled, "Does habitat structure affect depth preferences and indirect effects of tiger sharks in a seagrass community?", Florida International University **($24,000**)

**2003**

National Geographic Society Expeditions Council Grant (PI) titled, "Foraging ecology of dugongs in a pristine seagrass ecosystem", Simon Fraser University (**$22,500**)

## CONFERENCE PRESENTATIONS

***Denotes a graduate student; †denotes an undergraduate student**

**2026**

Hubl, D.*, P. Happe, B. L. Howell, R. A. Long, P. MacKay[1], and **A. J. Wirsing**. Extensive occupancy study reveals limited Pacific marten population on Washington State's Olympic Peninsula. 9th Martes Working Group Symposium, Whitehorse, Yukon, Canada.
[1]Presenter

**2025**

McFeely, A. K.[†], C. W. Robins, J. R. Adams, L. P. Waits, T. P. Quinn, and **A. J. Wirsing**. Sex and water depth exert population-specific effects on detection rates of brown bears on small streams during annual salmon pulses in southwestern Alaska. Alaska Salmon Program Science Symposium, University of Washington, Seattle, WA, USA.

Quinn, T., K. West[†], and **A. J. Wirsing**. CSI Hansen Creek: Invisible bears kill salmon. Alaska Salmon Program Science Symposium, University of Washington, Seattle, WA, USA.

**2024**
Quinn, T., J. Stern, G. Henry, L. Voytas[†], H. Ro[†], A. McFeely[†], and **A. J. Wirsing**. Bear consumption of salmon increases with salmon availability and the bear's age. Alaska Salmon Program Science Symposium, University of Washington, Seattle, WA, USA.

**Wirsing, A. J.**, Shannon Kachel*, and T. P. Quinn. Do bears remember a good summer of salmon fishing? Alaska Salmon Program Science Symposium, University of Washington, Seattle, WA, USA.

Kilfoil, J., G. Krohn, E. Clua, S. Planes, K. Gastrich, M. Heithaus, and **A. Wirsing**. Using BRUVS to gain insights into shark foraging behavior outside laboratory settings. 154th Annual Meeting of the American Fisheries Society, Honolulu, Hawai'i, USA.

**2023**

**Wirsing, A. J.**, N. B. Bozzi[†], C. W. Robins*, C. Sowers[†], and T. P. Quinn. Causes and consequences of variation in Alaskan brown bear foraging tactics. 13th International Mammalogical Congress, Anchorage, AK, USA.

**2022**

**Wirsing, A. J.**, C. R. Shores*, J. A. Dellinger*, S. C. White, E. S. Newkirk, and L. Satterfield. Cougars (*Puma concolor*) prioritize temporal avoidance of wolves (*Canis lupus*) over humans. 2022 Australasian Wildlife Management Society (AWMS) Conference, Napier, New Zealand.

Cunningham, C. X., R. M. Windell, L. Satterfield, **A. J. Wirsing**, and L. R. Prugh. Wolf recovery alters scavenging dynamics…*or does it?* The Wildlife Society's 29th Annual

Conference, Spokane, WA, USA.

Dreher, K., L. Prugh, J. Ransom, **A. Wirsing**, and S. Volker. Fishers in the food web: The diet habits of reintroduced fishers and subsequent risks of rodenticide exposure. The Wildlife Society's 29th Annual Conference, Spokane, WA, USA.

Prugh, L., C. Cunningham, R. Windell, L. Satterfield, T. Ganz, S. Bassing, B. Kertson, **A. Wirsing**, B. Gardner, S. Walker, and D. Abrahamson. When human shields are lethal: apex-mesocarnivore dynamics outside of protected areas. The Wildlife Society's 29th Annual Conference, Spokane, WA, USA.

Satterfield, L., T. Newsome, B. Kertson, B. Abrahms, J. Allen, B. Gardner, T. Levi, A. Nisi, E. Reese, A. White, and **A. Wirsing**. Prey diversity and season mediate trophic overlap between cougars and wolves in anthropogenic landscapes. The Wildlife Society's 29th Annual Conference, Spokane, WA, USA.

Yan, A.*, J. P. Kilfoil, **A. J. Wirsing**, and T. P. Quinn. How do Alaska brown bears distribute themselves relative salmon availability in small stream networks? The Wildlife Society's 29th Annual Conference, Spokane, WA, USA.

**2019**

Quinn, T., K. Wold†, and **A. J. Wirsing**. How often do bears avoid barbed wire hair snares? Alaska Salmon Program Science Symposium, University of Washington, Seattle, WA, USA.

Satterfield, L., B. McClintock, B. Kertson, T. Newsome, and **A. Wirsing**. Identification of cougar feeding sites from GPS data using hidden Markov models. 2019 American Fisheries Society & The Wildlife Society Joint Annual Conference, Reno, NV, USA

Bassing, S., T. Ganz, L. Prugh, L. Satterfield, **A. Wirsing**, and B. Gardner. Potential biases in camera trap data when monitoring multiple species. 2019 American Fisheries Society & The Wildlife Society Joint Annual Conference, Reno, NV, USA

Gardner, B., S. Bassing, T. Ganz, L. Prugh, T. Roussin, O. Sanderfoot, L. Satterfield, and **A. Wirsing.** Smoke on the water, fire in the sky: quantifying the effects of smoke pollution on large mammal movement and detections. 2019 American Fisheries Society & The Wildlife Society Joint Annual Conference, Reno, NV, USA

**2018**

Lincoln, A., T. P. Quinn, and **A. J. Wirsing**. Are bears becoming wire shy? Alaska Salmon Program Science Symposium, University of Washington, Seattle, WA, USA.

Satterfield, L., T. Newsome, B. Kertson, and **A. Wirsing**. Competition on two legs and four: impacts of wolf-cougar co-occurrence on resource selection and survival across an anthropogenic gradient. 2018 International Wolf Symposium, Minneapolis, MN, USA.

Robins, C.*, B. Kertson, J. Faulkner*, and **A. Wirsing**. Investigating the effects of urbanization on cougar foraging ecology along the wildland-urban gradient of western Washington. The Wildlife Society 25th Annual Conference, Cleveland, OH, USA.

**Wirsing, A. J.,** T. P. Quinn, J. Adams, and L. Waits. Rating the bear hair that we snare: should we care? Alaska Salmon Program Science Symposium, University of Washington, Seattle, WA, USA.

**2017**

Kilfoil, J. P., M. Campbell, M. Heithaus, K. Gastrich, J. Kiszka, **A. Wirsing**, M. Bond, and Y. Zhang. Are limited fields-of-view limiting elasmobranch conservation efforts? Implications for baited remote underwater video surveys (BRUVs). American Fisheries Society 2017 Annual Meeting, Tampa, FL, USA.

Peelle, L.* and **A. J. Wirsing**. Predator species identification from saliva at kill sites with limited remains. Joint Meeting of the Washington Chapter of The Wildlife Society and the Washington State Society of American Foresters, Yakima, WA, USA.

**2016**

**Wirsing, A. J.,** T. Quinn, C. Cunningham, J. Adams, A. Craig*, and L. Waits. There probably is a bear around that next bend: non-invasive genetic CMR population estimates reveal an abundance of bears at Aleknagik's salmon spawning streams. Alaska Salmon Program Science Symposium, University of Washington, Seattle, WA, USA.

Thornton, D.H., **A. J. Wirsing**, and D.L. Murray. Peripheral transboundary species: conflicting cross-border management may threaten a large number of peripheral species. North American Congress for Conservation Biology. Madison, WI, USA.

**2015**

**Wirsing, A. J.,** T. Quinn, C. Cunningham, J. Adams, and L. Waits. A tale of two neighborhoods: brown bears show fidelity to distinct salmon spawning stream networks. Alaska Salmon Program Science Symposium, University of Washington, Seattle, WA, USA.

Kilfoil, J. P., J. J. Kiszka, J. Mourier, **A. J. Wirsing**, M. R. Heithaus, and Y. Zhang. Unmanned aerial drone and stationary video surveys to estimate reef shark densities in shallow nursery habitats. International Council for the Exploration of the Sea (ICES) Annual Science Conference, Copenhagen, Denmark.

**2013**

**Wirsing, A. J.,** T. Quinn, C. Cunningham, and L. Waits. Noninvasive exploration of brown Bear behavior along salmon spawning streams in the Wood River Lakes System, AK: an Update. Alaska Salmon Program Science Symposium, University of Washington, Seattle, WA, USA.

Smith, B., T. Quinn, and **A. Wirsing**. Comparative effectiveness of non-invasive observation techniques for brown bears (*Ursus arctos*). Alaska Salmon Program Science Symposium, University of Washington, Seattle, WA, USA.

Bolis, J.*, K. Aubry, C. Raley, and **A. Wirsing**. Effects of variable physiography and animal behavior on Argos location error and acquisition. The Wildlife Society 20th Annual Conference, Milwaukee, WI, USA.

Richardson, K. A.*, W. Gaines, **A. Wirsing**, and R. Long. Patterns of black bear abundance in the North Cascades Ecosystem: Implications for the role of wilderness in large carnivore conservation. 22nd International Conference on Bear Research and Management, Provo, UT, USA.

**2012**

Quinn, T., and **A. J. Wirsing**. Who are those guys? Snare the hair to ID the bear. Alaska Salmon Program Science Symposium, University of Washington, Seattle, WA, USA.
Heithaus, M. R., C. Bessey, **A. J. Wirsing**, D. Burkholder, and J. Forqurean. Do tiger sharks influence seagrass ecosystems through multiple indirect pathways? 7th World Congress of Herpetology, University of British Columbia, Vancouver, BC, Canada.

Burkholder, D., M. R. Heithaus, J. Fourqurean, and **A. J. Wirsing**. Top-down control in a relatively intact seagrass ecosystem. 7th World Congress of Herpetology, University of British Columbia, Vancouver, BC, Canada.

**Wirsing, A. J.**, and M. R. Heithaus. Behavioral transition probabilities in dugongs change with habitat and shark presence. 97th Annual Meeting of the Ecological Society of America, Portland, OR, USA.

Ettl, G. J., S. Tóth, N. Konnyu, J. Comnick, K. Ceder, S. Rabotyagov, **A. J. Wirsing**, and L. Rogers. ECOSEL, an online market-based tool for monetizing ecosystem services: Pack Forest, a case study. 97th Annual Meeting of the Ecological Society of America, Portland, OR, USA.

Uyeda, L. T.*, E. Iskandar, R. C. Kyes, and **A. J. Wirsing**. Combining sociological and ecological research approaches to investigate the role of the water monitor lizard (*Varanus salvator*) in Indonesia. Future Forestry Leaders Graduate Student Research Symposium,

Vancouver, BC, Canada.

**2011**

**Wirsing, A. J.**, M. R. Heithaus, and L. M. Dill. Anti-predator responses of diving dugongs depend on foraging mode. 19th Biennial Conference on the Biology of Marine Mammals, Tampa, FL, USA.

Santos, L. O., A. N. Zerbini, J. L. Laake, K. J. Raedeke, and **A. J. Wirsing**. Estimating abundance of harbor porpoises in Puget Sound, WA: A correction for observer bias. 19th Biennial Conference on the Biology of Marine Mammals, Tampa, FL, USA.

**Wirsing, A. J.**, W. J. Ripple, R. L. Beschta, and S. W. Buskirk. Can restoring wolves help lynx recovery? Special Session titled, "Predator interactions on both sides of the Pacific", 91st Annual Meeting of the American Society of Mammalogists, Portland, OR, USA.

**2009**

**Wirsing, A. J.**, and W. J. Ripple. The scope of fear: large predators trigger similar indirect risk effects in marine and terrestrial systems. Special Session titled, "Surf and Turf: Establishing New Paradigms by Integrating Theory and Forging Partnerships Between Marine and Terrestrial Ecology", 94th Annual Meeting of the Ecological Society of America, Albuquerque, NM, USA.

Heithaus, M., C. Layman, P. Matich, B. Delius, **A. Wirsing**, and M. Dunphy-Daly. Stable isotopic analysis reveals individual variation in feeding behavior of juvenile bull sharks. 25th Annual Meeting of the American Elasmobranch Society, Portland, OR, USA.

Burkholder, D., M. Heithaus, J. Thomson, and **A. Wirsing**. Does tiger shark (*Galeocerdo cuvier*) predation risk influence habitat use of green sea turtles (*Chelonia mydas*) at multiple spatial scales? 25th Annual Meeting of the American Elasmobranch Society, Portland, OR, USA.

**Wirsing, A. J.**, M. R. Heithaus, C. A. Layman, B. K. Delius, and M. M. Dunphy-Daly. No bull: juvenile bull sharks may play diverse functional roles in coastal food webs. 19th Annual Review of Research, The Water Center, University of Washington, Seattle, WA, USA.

**2006**

**Wirsing, A. J.**, M. R. Heithaus, and L. M. Dill. Living on the edge: dugongs prefer foraging microhabitats allowing for escape when predators are abundant. 91st Annual Meeting of the Ecological Society of America, Memphis, TN, USA.

**Wirsing, A. J.**, M. R. Heithaus, and L. M. Dill. "Living on the edge: dugongs prefer foraging microhabitats allowing for escape when predators are abundant". 8th Annual Biology Research Symposium, Florida International University, North Miami, FL, USA.

**2005**

**Wirsing, A. J.**, M. R. Heithaus, and L. M. Dill. Predation-sensitive foraging by dugongs in a subtropical Australian embayment. 42nd annual Animal Behavior Society Conference, Snowbird, UT, USA.

Heithaus, M. R., **A. J. Wirsing**, L. M. Dill, and I. M. Hamilton. Microhabitat use of tiger sharks in Shark Bay, Western Australia: predator-prey interactions at multiple spatial scales. 21st Annual Meeting of the American Elasmobranch Society, Tampa, FL, USA.

**Wirsing, A. J.**, M. R. Heithaus, and L. M. Dill. Predation-sensitive foraging by dugongs in a subtropical Australian embayment. 26th annual Pacific Ecology and Evolution Conference, Ellensburg, WA, USA.

**2004**

Murray, D. L., E. Ellsworth, S. Field, S. Johnson, T. Steury, and **A. J. Wirsing**. Do southern snowshoe hare populations cycle, or simply fluctuate irregularly? 2nd International Lagomorph Conference.

**2003**

**Wirsing, A. J.**, M. R. Heithaus, and L. M. Dill. Habitat use and foraging decisions of dugongs in response to varying tiger shark predation risk. 11th Annual BC Marine Mammal Symposium, Vancouver, BC, Canada.

**2001**

**Wirsing, A. J**., and D. L. Murray. Do food quantity and quality influence the dynamics of southern snowshoe hare populations? 81st Annual Meeting of the American Society of Mammalogists, Missoula, MT, USA.

**2000**

**Wirsing, A. J.**, T. D. Steury, and D. L. Murray. Population dynamics of snowshoe hares and lynx conservation in Idaho. 14th Annual Meeting of the Society for Conservation Biology, Missoula, MT, USA.

**Wirsing, A. J.**, T. D. Steury, and D. L. Murray. Population dynamics of snowshoe hares in Idaho. Annual meeting of the Idaho Chapter of the Wildlife Society, Post Falls, ID, USA.

**1999**

Steury, T. D., and **A. J. Wirsing**. Population Regulation Theory: Emancipation from the Quest for Density Dependence. 84th Annual Meeting of the Ecological Society of America, Spokane, WA, USA.

Murray, D. L., T. D. Steury, and **A. J. Wirsing**. Snowshoe Hare and Red Squirrel Ecology in the Bitterroot Mountains of Idaho. Western Forest Carnivore Meeting, Post Falls, ID, USA.

## INVITED TALKS

**2026**

**Wirsing, A. J.** Ecological impacts of wolves in anthropogenic landscapes of Washington. Indigo Partners Retreat. Big Fork, MT, USA.

**2025**

McInturff, A., and **Wirsing, A. J.*** Novel directions in human-predator interactions: power, culture, and carnivores. Pathways 2025 Conference: Human Dimensions of Wildlife. Estes Park, CO, USA.
*Presenter

**2023**

**Wirsing, A. J.**, L. Satterfield, C. X. Cunningham, B. N. Kertson, T. Roussin, T. M. Newsome, S. L. Walker, and B. Gardner. Cougar dietary overlap with and spatial responses to recolonizing wolves in Washington. Wolf Advisory Group (WAG) meeting, Seattle, WA.

**2022**

**Wirsing, A. J.** Predicting contingency in non-consumptive predator-prey interactions. Gordon Research Conference on Predator-Prey Interactions. Lucca, Italy

**2021**

**Wirsing, A. J**., and T. M. Newsome. Scavenging effects of large canids. Society for Integrative and Comparative Biology (SICB) annual meeting. Symposium titled, "S11: Biology's Best Friend: Bridging Disciplinary Gaps to Advance Canine Science IV". Washington DC, USA.

**2020**

**Wirsing, A. J.**., and M. R. Heithaus. The enduring and outsized value of longitudinal field research. School of Environmental and Forest Sciences (SEFS) Autumn Seminar Series, University of Washington, Seattle, WA, USA.

**2019**

Bassing, S., T. Ganz, L. Prugh, L. Satterfield, **A. Wirsing**, and B. Gardner. Potential biases in camera trap data when monitoring multiple species. Autumn 2019 Fish and Wildlife Ecology Seminar Series, University of Washington, Seattle, WA, USA.

**Wirsing, A**., T. Quinn, C. Cunningham, J. Adams, A. Craig*, and L. Waits. Local and landscape drivers of brown bear aggregation to and predation in salmon spawning streams in southwestern Alaska. Symposium titled, "The interface of predation and migration in aquatic and terrestrial ecosystems", 2019 American Fisheries Society & The Wildlife Society Joint Annual Conference, Reno, NV, USA.

**Wirsing, A.,** C. Shores*, J. Dellinger*, E. Newkirk, and S. White. Timescapes of fear: ungulates change spatiotemporal activity in response to contrasting risk from humans and predators. Symposium titled, "The community ecology of large carnivores in the mountain west", 2019 American Fisheries Society & The Wildlife Society Joint Annual Conference, Reno, NV, USA.

Quinn, T., and **Wirsing, A. J.** Bears and salmon: The Yin and Yang of predator-prey interactions. Winter 2019 Fish and Wildlife Ecology Seminar Series, University of Washington, Seattle, WA, USA.*

*Speaking split evenly between the two co-presenters.

**Wirsing, A. J.**, and L. Prugh. The Washington Predator-Prey Project: an update. Senate Agriculture, Water, Natural Resources & Parks Committee Meeting, 1/22/2019. Olympia, WA, USA.

**2018**

**Wirsing A. J.**, J. A. Dellinger*, M. R. Heithaus, and W. J. Ripple. Escape behavior predicts divergent prey responses to predators in both marine and terrestrial ecosystems. Marine Sciences Seminar (Graduate Student Invited Speaker), Florida International University, North Miami, FL, USA.

**Wirsing, A. J.,** T. Quinn, C. Cunningham, A. Craig*, J. Adams, and L. Waits. Alaskan brown

bears display fidelity to foraging neighborhoods while preying on Pacific salmon in small streams. Office of Animal Welfare All Staff Meeting, University of Washington, Seattle, WA, USA.

**Wirsing, A. J.,** T. Quinn, C. Cunningham, A. Craig*, J. Adams, and L. Waits. Alaskan brown bears display fidelity to foraging neighborhoods while preying on Pacific salmon in small streams. Understanding change across high latitudes – Arctic science at the University of Washington (ESRM 429), University of Washington, Seattle, WA, USA.

**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.

**Wirsing, A. J**., J. A. Dellinger*, and A. Craig*. Impacts of recolonizing gray wolves on sympatric mule and white-tailed deer in a managed landscape of eastern WA. Biology, Ecology, and Evolution Research (BEER) Group Invited Seminar, California State University, Northridge, USA.

**2016**

**Wirsing, A. J.** and T. D. Newsome. A cross continent comparison of two top predators. Youth at the Zoo (YATZ) Seminar, Taronga Zoo, Sydney, Australia.

**Wirsing, A. J.** Ecological impacts of gray wolf recolonization in managed landscapes of the western USA. Centre for Integrative Ecology 2016 Seminar, Deakin University, Melbourne, Australia.

**Wirsing, A. J.**, T. P. Quinn, C. Cunningham, J. Adams, and L. P. Waits. Patterns of brown bear foraging in salmon spawning stream neighborhoods. Department of Biological Sciences Seminar, Boise State University, Boise, ID, USA.

**2015**

**Wirsing, A. J.**, T. P. Quinn, C. Cunningham, and L. P. Waits. Patterns of brown bear foraging in salmon spawning stream neighborhoods. University of Idaho Fish and Wildlife Sciences Seminar, Graduate student invited speaker, Moscow, ID, USA.

**Wirsing, A. J.** Exploring the ecological consequences of wolf recolonization in Washington. Washington Department of Fish and Wildlife Game and Diversity Winter Workshop. Wenatchee Convention Center, Wenatchee, WA, USA.

**2014**

**Wirsing, A. J.** Snowshoe hare interactions with predators and population dynamics in north-central Washington. Canada Lynx Transboundary Research Workshop. Manning Park Resort, British Columbia, Canada.

**Wirsing, A. J.** Using a multidisciplinary approach to explore the consequences of wolf recolonization in Washington. Vashon Allied Arts Science Lecture Series, Vashon Island, WA, USA.

**Wirsing, A. J.** The rise of animal-borne video systems as tools for wildlife research. Plenary session titled, "The Rise of Technology in Wildlife Science: Transforming Wildlife Conservation in the 21st Century". Annual Meeting of the Northwest Section of the Wildlife Society, Boise, ID, USA.

**2013**

**Wirsing, A. J.** Exploring the ecological and economic consequences of wolf recovery in WA. Wolf Advisory Group Meeting, October 2013, Ellensburg, WA, USA.

**Wirsing, A. J**. Using a multidisciplinary approach to explore the consequences of wolf recolonization in Washington. Osher Lifelong Learning Institute Lunch and Learn Seminar Series, University of Washington, Seattle, WA, USA.
**Wirsing, A. J.**, T. P. Quinn, C. J. Cunningham, and L. P. Waits. Noninvasive exploration of brown bear behavior along salmon spawning streams in the Wood River Lakes System, AK. Alaska Salmon Program Spring Meetings, University of Washington, Seattle, WA, USA.

**2012**

**Wirsing, A. J.** The importance of breadth in ecology: using a multidisciplinary approach to explore the consequences of wolf recolonization in Washington. Program on the Environment Capstone Symposium, Seattle, WA, USA.

**Wirsing, A. J.,** S. L. Abele, and D. L. Murray. How do snowshoe hares respond to precommercial forest thinning? Autumn Wildlife Science Seminar Series, School of Environmental and Forest Sciences, University of Washington, Seattle, WA, USA.

**Wirsing, A. J.** Surviving in shark-infested waters: for green sea turtles, it's all about gaining weight. Nerd Nite Lecture Series, Seattle, WA, USA.

**Wirsing, A. J.** Ecology and habitat use of deer mice, pocket gophers, snowshoe hares, and western red-backed voles. Northern Spotted Owl Prey Ecology: What's for Dinner? Forest Service/Bureau. Forest Service/Bureau of Land Management Workshop, Eugene, OR, USA.

**Wirsing, A. J.** Using prey escape behavior to predict indirect effects of predators. Departmental Seminar, Department of Fisheries and Wildlife, Oregon State University, Corvallis, OR, USA.

**Wirsing, A. J.** Off the menu: how prey animals avoid becoming a predator's lunch. 2012 College of the Environment Lunch and Learn in the Desert, Rancho Mirage, CA, USA.

**2009**

**Wirsing, A. J.**, and W. J. Ripple. The scope of fear: large predators trigger similar indirect risk effects in marine and terrestrial systems. Department of Biology Autumn Seminar Series, University of Washington, Seattle, WA, USA.

**Wirsing, A. J.**, and W. J. Ripple. The scope of fear: large predators trigger similar indirect risk effects in marine and terrestrial systems. Brown Bag Seminar Series, Washington Department of Fish and Wildlife, Olympia, WA, USA.

**Wirsing, A. J.** Using tiger sharks to protect and restore seagrass meadows. Aquatic and Fishery Sciences Spring Departmental Seminar Series, University of Washington, Seattle, WA, USA.

**Wirsing, A. J.** Carnivore conservation in the Pacific Northwest. "Sustaining Our Northwest World" Winter Lecture Series, College of Forest Resources, University of Washington, Seattle, WA, USA.

Heithaus, M. R., C. A. Layman, B. K. Delius, **A. J. Wirsing**, and M. M. Dunphy-Daly. Among-individual niche variation of a marine top predator species, the bull shark (*Carcharhinus leucas*), suggests diverse functional roles within coastal food webs. Winter Water Center Seminars, University of Washington, Seattle, WA, USA.

Heithaus, M. R., C. A. Layman, B. K. Delius, **A. J. Wirsing**, and M. M. Dunphy-Daly. Among-individual diet variation of a marine top predator, the bull shark. Winter Wildlife Science Seminar Series, College of Forest Resources, University of Washington, Seattle, WA, USA.

**2008**

**Wirsing, A. J.** Using behavior to predict the consequences of large predator loss. Autumn Wildlife Science Seminar Series, College of Forest Resources, University of Washington, Seattle, WA, USA.

**Wirsing, A. J.** Predicting predation risk effects in communities. Public seminar, College of Forest Resources, University of Washington, Seattle, WA, USA.

**2007**

**Wirsing, A. J.** Towards a predictive framework for sublethal top predator effects in marine communities. Public seminar, University of Sydney, Sydney, New South Wales, Australia.

**Wirsing, A. J.** Danger on the rise: does tidal state mediate an exchange of food for safety by the sea snake *Hydrophis elegans*? Marine Biology Seminar Series, Florida International University North Miami, FL, USA..

**2006**

**Wirsing, A. J.** Living in shark infested waters: predation-sensitive foraging by dugongs in a subtropical Australian embayment. Public seminar, Murdoch University Centre for Fish and Fisheries Research, Perth, Western Australia.

**2004**

**Wirsing, A. J.**, M. R. Heithaus, and L. M. Dill. Do large, marine herbivores trade-off between food and safety? A case study using the dugong. Marine Science and Engineering Seminar Series, University of Western Australia, Crawley, Australia.

**2002**

**Wirsing, A. J.** So why don't southern snowshoe hare populations cycle? *Les Ecologistes* Seminar Series, Simon Fraser University, Burnaby, BC, Canada.

## CONFERENCE POSTERS

***Denotes graduate student**

**2025**

Hubl, D.*, P. Happi, B. Howell, R. Long. P. McKay, and **A. J. Wirsing**. Pacific marten occupancy study on the Olympic Peninsula 2022-2023. Joint Annual Meeting of the Washington Chapter of The Wildlife Society, The Society for Northwestern Vertebrate Biology, and Northwest Partners in Amphibian and Reptile Conservation. Tulalip, WA, USA.

**2023**

Bassing, S. B., L. Satterfield, T. R. Ganz, M. DeVivo, B. N. Kertson, L. R. Prugh, T. Roussin, **A. J. Wirsing**, and B. Gardner. Predator-prey space use and landscape features influence animal movement in a large-mammal community. Gordon Research Conference on Movement Ecology of Animals. Lucca, Italy.

**2022**

Ganz, T. R., M. T. DeVivo, B. N. Kertson, T. Roussin, L. Satterfield, **A. J. Wirsing**, L. R. Prugh. Predation risk and season shape how mule deer navigate fire-affected landscapes in northern Washington, USA. Gordon Research Conference on Predator-Prey Interactions. Lucca, Italy

**2018**

Booth, H. †, A. Craig*, and **A. J. Wirsing**. The relationship between wildfire and cascading impacts of predators and plants. Joint meeting of the Oregon Chapter of the Wildlife Society, Washington Chapter of the Wildlife Society, Society for Northwestern Vertebrate Biology, and Northwest Partners in Amphibian and Reptile Conservation, Portland, OR, USA.

**2017**

Craig, A.*, S. Szablewski, and **A. J. Wirsing**. Do recolonizing wolves impact deer hunter success? Joint Meeting of the Washington Chapter of The Wildlife Society and the Washington State Society of American Foresters, Yakima, WA, USA.

**2015**

Dellinger, J. A.*, C. Shores*, A. Craig*, and **A. J. Wirsing**. Impact of re-colonizing wolves on mule and white-tailed deer in Washington, USA. 11th Biennial Western States and Provinces Deer and Elk Workshop, Canmore, Alberta, Canada.

**2014**

Kachel, S. M.*, T. M. McCarthy, and **A. J. Wirsing**. Snow Leopards, Wolves, and the Ecology of Fear in Central Asia. The Wildlife Society Annual Conference, Pittsburgh, PA, USA.

**2013**

Dellinger, J. A.*, W. Myers, E. Krausz, M. Marsh, B. Kertson, and **A. J. Wirsing**. Impact of recolonizing wolves on mule and white-tailed deer in Washington. International Wolf Symposium 2013, Duluth, MN, USA.

Dellinger, J.*, **A. Wirsing**, E. Krausz, M. Marsh, W. Myers, and B. Kertson. Impact of recolonizing gray wolves on mule and white-tailed deer in Washington. 10th Biennial Western

States and Provinces Deer and Elk Workshop, Missoula, MT, USA.

**2001**

**Wirsing, A. J.**, T. D. Steury, and D. L. Murray. The relationship between body condition and vulnerability to predation in two small mammals. Annual SFU/UBC/UVIC graduate student retreat, Squamish, BC, Canada.

## TEACHING EXPERIENCE

### Courses

**2026**

"FISH 491: Aquatic Ecological Research in Alaska", Summer Quarter (taught the bear-salmon module with Professor Tom Quinn, 1 week), University of Washington

"ESRM 459: Wildlife Conservation in Northwest Ecosystems", Spring Quarter, University of Washington

"ESRM 150: Wildlife in the Modern World", Spring Quarter, University of Washington

"ESRM 450: Wildlife Ecology and Conservation", Winter Quarter, University of Washington

**2025**

"ESRM 304: Environmental and Resource Assessment" (wildlife module), Spring Quarter, University of Washington

"ESRM 459: Wildlife Conservation in Northwest Ecosystems", Spring Quarter, University of Washington

"ESRM 150: Wildlife in the Modern World", Spring Quarter, University of Washington

"ESRM 450: Wildlife Ecology and Conservation", Winter Quarter, University of Washington

**2024**

"ESRM 350: Wildlife Biology and Conservation", Autumn Quarter, University of Washington

"ESRM 304: Environmental and Resource Assessment" (wildlife module), Spring Quarter, University of Washington

“ESRM 459: Wildlife Conservation in Northwest Ecosystems”, Spring Quarter, University of Washington

“ESRM 150: Wildlife in the Modern World”, Spring Quarter, University of Washington

“ESRM 450: Wildlife Ecology and Conservation”, Winter Quarter, University of Washington

**2023**

“ESRM 350: Wildlife Biology and Conservation”, Autumn Quarter, University of Washington

**2022**

“ESRM 304: Environmental and Resource Assessment” (wildlife module), Spring Quarter, University of Washington

“ESRM 459: Wildlife Conservation in Northwest Ecosystems”, Spring Quarter, University of Washington

“ESRM 150: Wildlife in the Modern World”, Spring Quarter, University of Washington

“ESRM 450: Wildlife Ecology and Conservation”, Winter Quarter, University of Washington

**2021**

“ESRM 304: Environmental and Resource Assessment” (wildlife module), Autumn Quarter, University of Washington

“ESRM 350: Wildlife Biology and Conservation”, Autumn Quarter, University of Washington

“ESRM 304: Environmental and Resource Assessment” (wildlife module), Spring Quarter, University of Washington

“ESRM 150: Wildlife in the Modern World”, Spring Quarter, University of Washington

“ESRM 450: Wildlife Ecology and Conservation”, Winter Quarter, University of Washington

**2020**

“ESRM 304: Environmental and Resource Assessment” (wildlife module), Autumn Quarter, University of Washington

“ESRM 350: Wildlife Biology and Conservation”, Autumn Quarter, University of Washington

“ESRM 304: Environmental and Resource Assessment” (wildlife module), Spring Quarter, University of Washington

“SEFS 590: Predator-Prey Interactions (graduate seminar)”, Spring Quarter, University of Washington

“ESRM 459: Wildlife Conservation in Northwest Ecosystems”, Spring Quarter, University of Washington

“ESRM 450: Wildlife Ecology and Conservation”, Winter Quarter, University of Washington

**2019**

“ESRM 350: Wildlife Biology and Conservation”, Autumn Quarter, University of Washington

“ESRM 304: Environmental and Resource Assessment” (wildlife module), Spring Quarter, University of Washington

“SEFS 590: Predator-Prey Interactions (graduate seminar)”, Spring Quarter, University of Washington

“ESRM 459: Wildlife Conservation in Northwest Ecosystems”, Spring Quarter, University of Washington

“ESRM 450: Wildlife Ecology and Conservation”, Winter Quarter, University of Washington

**2018**

“ESRM 350: Wildlife Biology and Conservation”, Autumn Quarter, University of Washington

“ESRM 304: Environmental and Resource Assessment” (wildlife module), Spring Quarter, University of Washington

“SEFS 590: Predator-Prey Interactions (graduate seminar)”, Spring Quarter, University of Washington

“ESRM 459: Wildlife Conservation in Northwest Ecosystems”, Spring Quarter, University of Washington

“ESRM 450: Wildlife Ecology and Conservation”, Winter Quarter, University of Washington

**2017**

"ESRM 304: Environmental and Resource Assessment" (wildlife module), Autumn Quarter, University of Washington

"ESRM 350: Wildlife Biology and Conservation", Autumn Quarter, University of Washington

"ESRM 304: Environmental and Resource Assessment" (wildlife module), Summer Quarter, University of Washington

"ESRM 304: Environmental and Resource Assessment" (wildlife module), Spring Quarter, University of Washington

"SEFS 590: Predator-Prey Interactions (graduate seminar)", Spring Quarter, University of Washington

"ESRM 459: Wildlife Conservation in Northwest Ecosystems", Spring Quarter, University of Washington

"ESRM 450: Wildlife Ecology and Conservation", Winter Quarter, University of Washington

**2016**

"ESRM 304: Environmental and Resource Assessment" (wildlife module), Summer Quarter, University of Washington

"ESRM 350: Wildlife Biology and Conservation", Autumn Quarter, University of Washington

**2015**

"ESRM 304: Environmental and Resource Assessment" (wildlife module), Summer Quarter, University of Washington

"ESRM 459: Wildlife Conservation in Northwest Ecosystems", Spring Quarter, University of Washington

"ESRM 455: Wildlife Seminar", Winter Quarter, University of Washington

"ESRM 450: Wildlife Ecology and Conservation", Winter Quarter, University of Washington

**2014**

“ESRM 350: Wildlife Biology and Conservation”, Autumn Quarter, University of Washington

“ESRM 304: Environmental and Resource Assessment” (wildlife module), Summer Quarter, University of Washington

“SEFS 590 B: Behavioral Ecology”, Spring Quarter, University of Washington

“ESRM 459: Wildlife Conservation in Northwest Ecosystems”, Spring Quarter, University of Washington

“ESRM 455: Wildlife Seminar”, Winter Quarter, University of Washington

“ESRM 450: Wildlife Ecology and Conservation”, Winter Quarter, University of Washington

**2013**

“ESRM 350: Wildlife Biology and Conservation”, Autumn Quarter, University of Washington

“SEFS 590 D: Uses of Animal Behavior in Conservation”, Spring Quarter, University of Washington

“ESRM 459: Wildlife Conservation in Northwest Ecosystems”, Spring Quarter, University of Washington

“ESRM 450: Wildlife Ecology and Conservation”, Winter Quarter, University of Washington

**2012**

“ESRM 150: Wildlife in the Modern World”, Autumn Quarter, University of Washington

“CFR 590 D: Uses of Animal Behavior in Conservation”, Spring Quarter, University of Washington

“ESRM 459: Wildlife Conservation in Northwest Ecosystems”, Spring Quarter, University of Washington

“ESRM 450: Wildlife Ecology and Conservation”, Winter Quarter, University of Washington

**2011**

“CFR 590 B: Current Topics in Behavioral Ecology”, Autumn Quarter, University of Washington

“CFR 590 D: Uses of Animal Behavior in Conservation”, Spring Quarter, University of Washington

“ESRM 459: Wildlife Conservation in Northwest Ecosystems”, Spring Quarter, University of Washington

“ESRM 450: Wildlife Ecology and Conservation”, Winter Quarter, University of Washington

**2010**

“CFR 590 B: Current Topics in Behavioral Ecology”, Autumn Quarter, University of Washington

“CFR 590 D: Uses of Animal Behavior in Conservation”, Spring Quarter, University of Washington

“ESRM 459: Wildlife Conservation in Northwest Ecosystems”, Spring Quarter, University of Washington

“ESRM 450: Wildlife Ecology and Conservation”, Winter Quarter, University of Washington

**2009**

“CFR 590 B: Current Topics in Behavioral Ecology”, Autumn Quarter, University of Washington

“CFR 590 D: Uses of Animal Behavior in Conservation”, Spring Quarter, University of Washington

“ESRM 450: Wildlife Ecology and Conservation”, Winter Quarter, University of Washington

**2007**

“PCB 3043: Ecology”, Florida International University

**2000**

“WILDLIFE 314: Wildlife Ecology I”, University of Idaho

“WILDLIFE 315: Wildlife Ecology I Lab”, University of Idaho

**Guest Lectures**

**2026**

"FISH 497 – Aquatic Ecological Research in Alaska (AERA)", lecture titled, "Brown bear behavior along small, salmon spawning streams in Alaska: 14 years of insights", Alaska Salmon Program, University of Washington*

*Also co-taught the 6-day section on salmon biology and interactions with bears as part of this summer class with Professor Tom Quinn of SAFS (July 20-27)

"ESRM 150 – Wildlife in the Modern World", lecture titled, "Using tiger sharks to restore seagrass meadows", University of Washington

**2025**

"ESRM 323 – Practical Silviculture", lecture titled, "Silviculture for wildlife habitat", University of Washington

"ESRM 150 – Wildlife in the Modern World", lecture titled, "Using tiger sharks to restore seagrass meadows", University of Washington

"Forest Ecosystems and Society (FES) 499/599 –Ecology of Apex Predators", lecture titled, "Status and top-down ecological effects of sharks", Oregon State University

**2024**

"ESRM 323 – Practical Silviculture", lecture titled, "Silviculture for wildlife habitat", University of Washington

"ESRM 150 – Wildlife in the Modern World", lecture titled, "Using tiger sharks to restore seagrass meadows", University of Washington

"Forest Ecosystems and Society (FES) 499 – Large Carnivores in Ecology", lecture titled, "Status and top-down ecological effects of sharks", Oregon State University

"ESRM 201 – Sustaining Pacific Northwest Ecosystems", lecture titled, "Wildlife in the urban-wildland gradient", University of Washington

**2023**

"ESRM 323 – Practical Silviculture", lecture titled, "Silviculture for wildlife habitat", University of Washington

"ESRM 150 – Wildlife in the Modern World", lecture titled, "Using tiger sharks to restore seagrass meadows", University of Washington

"FES/FW 550 – Trophic Cascades", lecture titled, "Status and top-down ecological effects of sharks", Oregon State University

**2022**

"FISH 497 – Aquatic Ecological Research in Alaska", lecture titled, "Brown bear foraging along small, salmon-spawning streams in Alaska: abundance, site fidelity, predation rates, diel activity, and responses to humans", Alaska Salmon Program, University of Washington (2 lectures and two field trips)

"ESRM 351 – Wildlife Research Techniques", lecture titled, "Sampling Large Carnivores", University of Washington

"Forest Ecosystems and Society (FES) 499 – Large Carnivores in Ecology", lecture titled, "Status and top-down ecological effects of sharks", Oregon State University

"ESRM 201 – Sustaining Pacific Northwest Ecosystems", lecture titled, "Wildlife conservation in the Anthropocene: the case of wolves in Washington", University of Washington

"ESRM 300 – Principles of Sustainability", lecture titled, "Sustaining top predator populations", University of Washington

**2021**

"GENERAL STUDIES 297 – Exploring Majors", lecture titled, "Escape behavior predicts divergent deer responses to recolonizing wolves", University of Washington

"ESRM 323 – Practical Silviculture", lecture titled, "Silviculture for wildlife habitat", University of Washington

"ESRM 351 – Wildlife Research Techniques", lecture titled, "Sampling Large Carnivores", University of Washington

"ESRM 201 – Sustaining Pacific Northwest Ecosystems", lecture titled, "Wildlife in the urban-wildland gradient", University of Washington

"ESRM 300 – Principles of Sustainability", lecture titled, "Sustaining top predator populations", University of Washington

**2020**

“ESRM 323 – Practical Silviculture”, lecture titled, “Silviculture for wildlife habitat”, University of Washington

“ESRM 150 – Wildlife in the Modern World”, lecture titled, “Using tiger sharks to restore seagrass meadows”, University of Washington (twice)

**2019**

“ESRM 150 – Wildlife in the Modern World”, lecture titled, “Using tiger sharks to restore seagrass meadows”, University of Washington

“ESRM 323 – Practical Silviculture”, lecture titled, “Silviculture for wildlife habitat”, University of Washington

“FISH 511 – Current Topics in Evolution, Ecology, and Behavior”, lecture titled, “Foraging and Risk Aversion”, University of Washington

**2018**

“ESRM 201 – Sustaining Pacific Northwest Ecosystems”, lecture titled, “Wildlife conservation in the Anthropocene: the case of wolves in Washington”, University of Washington

“ESRM 150 – Wildlife in the Modern World”, lecture titled, “Using tiger sharks to restore seagrass meadows”, University of Washington

“FISH 497 – Aquatic Ecological Research in Alaska”, lecture titled, “Alaskan brown bears display fidelity to foraging neighborhoods while preying on Pacific salmon along small streams”, Alaska Salmon Program, University of Washington

“ESRM 323 – Practical Silviculture”, lecture titled, “Silviculture for wildlife habitat”, University of Washington

**2017**

“ESRM 150 – Wildlife in the Modern World”, lecture titled, “Using tiger sharks to restore seagrass meadows”, University of Washington

“General Studies 391 – Undergraduate Research Program (URP)”, lecture titled, “All bark and no bite? Impacts of recolonizing gray wolves on prey are primarily fear-based in a managed landscape of Washington state”, University of Washington

"ESRM 323 – Practical Silviculture", lecture titled, "Silviculture for wildlife habitat", University of Washington

"BIOL/SEFS/FISH 567 – Topics in Advance Ecology", two-part lecture/discussion titled, "Rebound without recovery: the conundrum of recovering depleted species in a world without large predators", University of Washington

**2016**

"ESRM 150 – Wildlife in the Modern World", lecture titled, "Using tiger sharks to restore seagrass meadows", University of Washington

"ESRM 323 – Practical Silviculture", lecture titled, "Silviculture for wildlife habitat", University of Washington

"BIOL 597/497 – Science and Society", lecture titled, "Responses to predators depend on prey escape behavior: implications for trophic cascades", Boise State University

**2015**

"ESRM 304 – Environmental and Resource Assessment (Spring)", lecture titled, "Censusing wildlife populations", University of Washington

"ESRM 304 – Environmental and Resource Assessment (Spring)", lecture titled, "The nature of wildlife populations", University of Washington

"ESRM 201 – Sustaining Pacific Northwest Ecosystems" (just the two 3-hour labs), University of Washington

"ESRM 351 – Wildlife Research Techniques", lecture titled, "Sampling large carnivores", University of Washington

"ESRM 323 – Practical Silviculture", lecture titled, "Silviculture for wildlife habitat", University of Washington

"ESRM 201 – Sustaining Pacific Northwest Ecosystems", lecture titled, "Wildlife in the urban-wildland gradient", University of Washington (included two 3-hour labs)

**2014**

"ESRM 304 – Environmental and Resource Assessment (Autumn)", lecture titled, "Censusing wildlife populations", University of Washington

“ESRM 304 – Environmental and Resource Assessment (Autumn)”, lecture titled, “The nature of wildlife populations”, University of Washington

“ESRM 150 – Wildlife in the Modern World”, lecture titled, “Using tiger sharks to restore seagrass meadows”, University of Washington

“GENERAL STUDIES 197G – Freshmen Seminar: Exploring Environmental Majors at the UW”, lecture titled, “The ecology of reef sharks in French Polynesia”, University of Washington

“ESRM 304 – Environmental and Resource Assessment (Spring)”, lecture titled, “Censusing wildlife populations”, University of Washington

“ESRM 304 – Environmental and Resource Assessment (Spring)”, lecture titled, “The nature of wildlife populations”, University of Washington

“ESRM 351 – Wildlife Research Techniques”, lecture titled, “Sampling Large Carnivores”, University of Washington

“ESRM 323 – Practical Silviculture”, lecture titled, “Silviculture for wildlife habitat”, University of Washington

“ESRM 201 – Sustaining Pacific Northwest Ecosystems”, lecture titled, “Wildlife in the urban-wildland gradient”, University of Washington (included two 3-hour labs)

“BIOL/SEFS/FISH 567 – Topics in Advance Ecology”, two-part lecture titled, “Responses to predators depend on prey escape behavior: implications for trophic cascades”, University of Washington

**2013**

“ESRM 304 – Environmental and Resource Assessment (Autumn)”, lecture titled, “Censusing wildlife populations”, University of Washington

“ESRM 304 – Environmental and Resource Assessment (Autumn)”, lecture titled, “The nature of wildlife populations”, University of Washington

“GENERAL STUDIES 197G – Freshmen Seminar: Exploring Environmental Majors at the UW”, lecture titled, “How do snowshoe hares respond to precommercial forest thinning?”, University of Washington

“ESRM 304 – Environmental and Resource Assessment (Spring)”, lecture titled, “Censusing wildlife populations”, University of Washington

“ESRM 304 – Environmental and Resource Assessment (Spring)”, lecture titled, “The nature of wildlife populations”, University of Washington

"BIOL/SEFS/FISH 567 – Topics in Advance Ecology", two-part lecture titled, "Responses to predators depend on prey escape behavior: implications for trophic cascades", University of Washington

**2012**

"ESRM 350 – Wildlife Biology and Conservation", lecture titled, "Biology and conservation of marine mammals, with special reference to the Pacific Northwest", University of Washington

"ESRM 350 – Wildlife Biology and Conservation", lecture titled, "The nutria (*Myocastor coypus*), with notes on some close cousins", University of Washington

"GENERAL STUDIES 197G – Freshmen Seminar: Exploring Environmental Majors at the UW", lecture titled, "How do snowshoe hares respond to precommercial forest thinning?", University of Washington

"ESRM 150 – Wildlife in the Modern World", lecture titled, "Climate change and biotic interactions: will warming temperatures affect predation on snowshoe hares?", University of Washington

"ENVIR 100 – Environmental Studies: Interdisciplinary Foundations", lecture titled, "Using tiger sharks to restore seagrass meadows", University of Washington

**2011**

"GENERAL STUDIES 197G – Freshmen Seminar: Exploring Environmental Majors at the UW", lecture titled, "The scope of fear: large predators trigger similar indirect risk effects in marine and terrestrial systems", University of Washington

"GENERAL STUDIES 197K – Wolves: Natural History, Behavior, and Society", lecture titled, "The wolf-elk relationship: elk anti-predator behavior and its ecosystem consequences", University of Washington

"ESRM 150 – Wildlife in the Modern World", lecture titled, "Prey responses to predators depend on escape behavior: a cross-ecosystem comparison", University of Washington

"FOR/FW 547 – Trophic Cascades", lecture titled, "Responses to predators depend on prey escape behavior: implications for trophic cascades", Oregon State University

"BIOL/CFR/FISH 567 – Topics in Advance Ecology", two-part lecture titled, "Contingency in risk effects of predators", University of Washington

"ENVIR 100 – Environmental Studies: Interdisciplinary Foundations", lecture titled, "Using tiger sharks to restore seagrass meadows", University of Washington

“FISH 497 – Conservation of Sharks: History and Future”, lecture titled, “The behavior and ecological effects of tiger sharks”, University of Washington

**2010**

“ESRM 150 – Wildlife in the Modern World”, lecture titled, “Prey responses to predators depend on escape behavior: a cross-ecosystem comparison”, University of Washington

“GENERAL STUDIES 197G – Freshmen Seminar: Exploring Environmental Majors at the UW”, lecture titled, “The scope of fear: large predators trigger similar indirect risk effects in marine and terrestrial systems”, University of Washington

“ENVIR 100 – Environmental Studies: Interdisciplinary Foundations”, lecture titled, “Using tiger sharks to restore seagrass meadows”, University of Washington

**2009**

“FISH 522 – Hot Topics in Fisheries Science and Aquaculture”, lecture titled, “The multiple roles of top of the food chain predators in aquatic ecosystems”, University of Washington

“ENVIR 100 – Environmental Studies: Interdisciplinary Foundations”, lecture titled, “Using tiger sharks to restore seagrass meadows”, University of Washington

“HONORS 100B: Knowledge Across the Disciplines”, lecture titled, “The scope of fear: large predators trigger similar indirect risk effects in marine and terrestrial systems”, University of Washington

“GENERAL STUDIES 197G – Freshmen Seminar: Exploring Environmental Majors at the UW”, lecture titled, “The scope of fear: large predators trigger similar indirect risk effects in marine and terrestrial systems”, University of Washington

“ESRM 150 – Wildlife in the Modern World”, lecture titled, “Beyond mortality: predator risk effects in different ecosystems”, University of Washington

“FISH 475 – Marine Mammalogy”, lecture titled, “Do marine mammals fear their predators? Evidence and community consequences”, University of Washington

“FISH/ENVIR 439 – Attaining a Sustainable Society”, lecture titled, “Attitudes toward sharks and the sustainability of the world’s fisheries”, University of Washington

“LANDSCAPE ARCHITECTURE 363 – Ecological Design and Planning”, lecture titled, “Landscape geometry and the outcome of predator-prey interactions”, University of Washington

"FOR/FW 547 – Trophic Cascades", lecture titled, "The scope of fear: predators trigger similar indirect risk effects in marine and terrestrial systems", Oregon State University

"ENVIR 100 – Environmental Studies: Interdisciplinary Foundations", lecture titled, "Using tiger sharks to restore seagrass meadows", University of Washington

"BIOL/CFR/FISH 567 – Topics in Advance Ecology", two-part lecture titled, "Contingency in predator risk effects", University of Washington

**2008**

"GENERAL STUDIES 197 – Freshmen Seminar", lecture titled, "Using behavior to predict the consequences of large predator loss", University of Washington

"OCB 3043: Marine Biology and Oceanography", lecture titled, "Marine Mammal Ecology", Florida International University

**2007**

"BSC 4934: Coastal Marine Conservation", lecture titled, "Towards a predictive framework for marine conservation", Florida International University

**2002**

"BISC 304: Animal Ecology", lecture titled, "Predators and prey: games, higher-order interactions, and lessons from a place called Shark Bay", Simon Fraser University

**2001**

"BISC 304: Animal Ecology", lecture titled, "So why don't southern snowshoe hare populations cycle?", Simon Fraser University

**2000**

"WILDLIFE 448: Multi-species Interactions", lecture titled, "Costs and benefits of alarm response behavior", University of Idaho

"WILDLIFE 448: Multi-species interactions", lecture titled "Functional, numerical, and total responses", University of Idaho

"WILDLIFE 316: Wildlife Ecology II", lecture titled, "Population ecology of snowshoe hares", University of Idaho

## MENTORING EXPERIENCE

### Post-doctoral supervision

2024-Present Dr. N. Frances Farabaugh

2020-2022 Dr. James Kilfoil

2013-2014 Dr. Thomas Newsome

### Graduate Students (active)

2025-Present MSc Committee Chair, Sarah Colosimo, SEFS, University of Washington

2014-Present PhD Committee Chair, Apryle Craig, SEFS, University of Washington

### Graduate students (completed)

2022-2025 Dylan Hubl, MS, SEFS, University of Washington

2016-2024 Laurel Peelle, PhD, SEFS, University of Washington

2017-2023 Clint Robins, PhD, SEFS, University of Washington

2015-2022 Michael Havrda, MS, SEFS, University of Washington

2014-2021 Shannon Kachel, PhD, SEFS, University of Washington

2013-2020 Carolyn Shores, PhD, SEFS, University of Washington

2012-2018 Justin Dellinger, PhD, SEFS, University of Washington

2013-2017 Clint Robins, MS, SEFS, University of Washington

2011-2016 Jeff Harris, MS, SEFS, University of Washington

2009-2016 Laurel Peelle, MS, SEFS, University of Washington

2010-2015 Linda Uyeda, PhD, SEFS, University of Washington

2013-2014 Kelsey Vitense, MS, Quantitative Ecology and Resource Management (QERM), University of Washington

2011-2013 Kristen Richardson, MS, SEFS, University of Washington

2010-2013 Jessica Bolis, MS, SEFS, University of Washington

**Graduate Committees (active)**

2026-Present MFR Committee Member, Lauren Boydstun, School of Environmental and Forest Sciences, University of Washington

2025-Present PhD Committee Member, Kori Burkhardt, École pratique des hautes études (Paris, France)

2024-Present PhD Committee Member, Laura Quinche, Department of Biology, University of Washington

2024-Present PhD Committee Member, Kristina Randrup, School of Aquatic and Fishery Sciences, University of Washington

2024-Present PhD Committee Member, Vivian Hawkinson, School of Environmental and Forest Sciences, University of Washington

2023-Present PhD Committee Member, Tessa Code, School of Aquatic and Fishery Sciences, University of Washington

2023-Present MSc Committee Member, Molly Rambeau, School of Environmental and Forest Sciences, University of Washington

2023-Present PhD Committee Member, Arial Brewer, School of Aquatic and Fishery Sciences, University of Washington

2023-Present PhD Committee Member, Lara Volski, School of Environmental and Forest Sciences, University of Washington

2021-Present PhD Committee Member, Zoe Rand, Quantitative Ecology and Resource Management (QERM), University of Washington

**Graduate Committees (completed)**

2024-2025 MFR Committee Member, Matt Cocchi, School of Environmental and Forest Sciences, University of Washington

2020-2024 PhD Committee Member, Marta Gomez-Buckley, School of Aquatic and Fishery Sciences, University of Washington

2022-2023 MSc Committee Member, Rochelle Johnson, School of Aquatic and Fishery Sciences, University of Washington

2017-2023 PhD Committee Member, Samantha Zwicker, School of Environmental and Forest Sciences, University of Washington

2021-2023 MSc Committee Member, Kayla Dreher, School of Environmental and Forest Sciences, University of Washington

2018-2022 PhD Committee Member, Taylor Ganz, School of Environmental and Forest Sciences, University of Washington

2018-2022 PhD Committee Member, Sarah Bassing, School of Environmental and Forest Sciences, University of Washington

2017-2022 MSc Committee Member, Jessica Hale, School of Aquatic and Fishery Sciences, University of Washington

2017-2021 PhD Committee Member, Robbie Emmet, Quantitative Ecology and Resource Management (QERM), University of Washington

2016-2020 PhD Committee Member, Saethra Fritscher, Department of Psychology, University of Washington

2017-2019 MSc Committee Member, Hannah Sipe, Quantitative Ecology and Resource Management (QERM), University of Washington

2014-2019 PhD Committee Member, Carly Loyer, Department of Psychology, University of Washington

2014-2019 PhD Committee Member, Rochelle Kelly, Department of Biology, University of Washington

2016-2019 MSc Committee Member, Alex Lincoln, School of Aquatic and Fishery Sciences, University of Washington

2014-2019 PhD Committee Member, Benjamin Dittbrenner, School of Environmental and Forest Sciences, University of Washington

2012-2019 PhD Committee Member, Carol Bogezi, School of Environmental and Forest Sciences, University of Washington

2013-2018 PhD Committee Member, Lindsey Nietmann, Department of Psychology, University of Washington

2012-2018 PhD Committee Member, Kaeli Swift, School of Environmental and Forest Sciences, University of Washington

2015-2017 Peace Corps International Masters (PCMI) Committee Member, Zak Williams, School of Environmental and Forest Sciences, University of Washington

2015-2017 Peace Corps International Masters (PCMI) Committee Member, Jordan Bunch, School of Environmental and Forest Sciences, University of Washington

2014-2017 PhD Committee Member, Sarah Faegre, Department of Psychology, University of Washington

2015-2017 MSc Committee Member, Tessia Robbins, School of Environmental and Forest Sciences, University of Washington

2015-2017 MSc Committee Member, Leif Hansen, School of Environmental and Forest Sciences, University of Washington

2017 PhD Committee Member, Alicia Kinney-Clawson, College of Education, University of Washington (*Late replacement as GSR)

2013-2016 Peace Corps International Masters (PCMI) Committee Member, Alia Kroos, School of Environmental and Forest Sciences, University of Washington

2015-2016 MSc Committee Member, Amber Mount, School of Environmental and Forest Sciences, University of Washington

2012-2015 PhD Committee Member, Lauren Walker, School of Environmental and Forest Sciences, University of Washington

2012-2015 PhD Committee Member, Michael Clawson, School of Environmental and Forest Sciences, University of Washington

2012-2015 PhD Committee Member, Curry Cunningham, School of Aquatic and Fishery Sciences, University of Washington

2012-2014 PhD Committee Member, Chloe Bracis, Quantitative Ecology and Resource Management (QERM), University of Washington

2012-2014 PhD Committee Member, Amy Yahnke, School of Aquatic and Fishery Sciences, University of Washington

2012-2013 PhD Committee Member, Adam Hansen, School of Aquatic and Fishery

2010-2013 PhD Committee Member, Morgan Bond, School of Aquatic and Fishery Sciences, University of Washington

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| 2012 | PhD Committee Member, Jennifer Griffiths, School of Aquatic and Fishery Sciences, University of Washington (*Late replacement as GSR) |
| 2010-2012 | MSc Committee Member, Christie Galitski, School of Environmental and Forest Sciences, University of Washington |
| 2011-2012 | Master of Science in Biology Teaching (MBST) Program Committee Member, Emily Owens, University of Washington |
| 2010-2012 | PhD Committee Member, Chris Gast, Quantitative Ecology and Resource Management (QERM), University of Washington |
| 2008-2011 | MSc Committee Member, Erica Olson, School of Resource and Environmental Management, Simon Fraser University |
| 2009-2011 | MSc Committee Member, Luciana Santos, School of Forest Resources, University of Washington |
| 2009-2011 | PhD Committee Member, Neala Kendall, School of Aquatic and Fishery Sciences, University of Washington |
| 2011 | PhD Committee Member, Jonathan Reum, School of Aquatic and Fishery Sciences, University of Washington (*Late replacement as GSR) |
| 2010-2011 | MSc Committee Member, Kristine Mazur, School of Forest Resources, University of Washington |
| 2009-2011 | MSc Committee Member, Carrie Schloss, School of Forest Resources, University of Washington |
| 2009-2011 | MSc Committee Member, Laura Farwell, School of Forest Resources, University of Washington |
| 2009-2011 | MSc Committee Member, Lauren Seckel, School of Forest Resources, University of Washington |
| 2009-2011 | MSc Committee Member, John Burk, School of Forest Resources, University of Washington |
| 2009-2011 | PhD Committee Member, Amanda Bradford, School of Aquatic and Fishery Sciences, University of Washington |
| 2008 | Master of Science in Biology Teaching (MBST) Program Committee Member, Linda Uyeda, University of Washington |

**Undergraduate Mentoring**

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|---|---|
| 2025 | Thesis (Capstone) advisor, Carol Wang |
| 2025 | Thesis (Capstone) advisor, Grace Parker |
| 2025 | Thesis (Capstone) advisor, Caitlin Erhard |
| 2024 | Thesis (Capstone) advisor, Alyssa Yamaguchi-Monastiero |
| 2024 | Thesis (Capstone) advisor, Eric Kaganyuk |
| 2024 | Thesis (Capstone) advisor, Bella Kent |
| 2023 | Thesis (Capstone) advisor, Annika McFeely |
| 2023 | Thesis (Capstone) advisor, Natalee Bozzi |
| 2022 | Thesis (Capstone) Advisor, Casey Sowers |
| 2022 | Thesis (Capstone) Advisor, Gidget Bo |
| 2021 | Thesis (Capstone) Advisor, Gabby Krohn |
| 2021 | Thesis (Capstone) Advisor, Isabelle Hoecherl |
| 2020 | Thesis (Capstone) Advisor, Sierra Herzberger |
| 2020 | Thesis (Capstone) Faculty Advisor, Program on the Environment, Kera Zegar |
| 2020 | Thesis (Capstone) Advisor, Alle Johnson |
| 2020 | Thesis (Capstone) Advisor, Julia Harry |
| 2019 | Thesis (Capstone) Advisor, Katherine Wold |
| 2019 | Thesis (Capstone) Advisor, Hyejoo Ro |
| 2019 | Thesis (Capstone) Advisor, Xin Deng |
| 2019 | Thesis (Capstone) Advisor, Thadeus Sternberg |
| 2019 | Thesis (Capstone) Advisor, Xin Deng |
| 2019 | Thesis (Capstone) Advisor, Alexis Krapas |

2019 Thesis (Capstone) Advisor, Sophie Feathers

2019 Thesis (Capstone) Advisor, Lexi Wachtell

2019 Thesis (Capstone) Faculty Advisor, Program on the Environment, Alec Egurrola

2018 Thesis (Capstone) Advisor, Tiffany Lloyd

2018 Thesis (Capstone) Advisor, Ryan Caffey

2018 Thesis (Capstone) Advisor, Liz Allyn (SAFS)

2018 Thesis (Capstone) Advisor, Caroline Sullivan

2018 Thesis (Capstone) Advisor, Nina Mowat

2018 Thesis (Capstone) Advisor, Nicholas Ulacia

2017 Thesis (Capstone) Advisor, Tali Hamilton

2017 Thesis (Capstone) Advisor, Nathan Redon

2017 Thesis (Capstone) Advisor, Megan Schenk

2017 Thesis (Capstone) Advisor, Alison Wang

2017 Thesis (Capstone) Advisor, John Soren Reyes

2017 Thesis (Capstone) Advisor, Kathryn Jesser

2017 Thesis (Capstone) Advisor, Erin Strand

2016 Thesis (Capstone) Advisor, Paris Werner

2016 Thesis (Capstone) Advisor, Connor Meyer

2015 Thesis (Capstone) Advisor, Lyndsey Smith

2015 Thesis (Capstone) Advisor, Christina Mebust-Boscolo

2015 Thesis (Capstone) Advisor, Katie Fergot

2015 Thesis (Capstone) Advisor, Aurielle Pfeifer

2015 Thesis (Capstone) Advisor, Ghee-hee Yang

2015 Thesis (Capstone) Advisor, Sarah Schooler

2015 Thesis (Capstone) Advisor, Emily Chan

2015 Thesis (Capstone) Faculty Advisor, Program on the Environment, Simon Nhan

2014 Thesis (Capstone) Advisor, Travis Fuller

2014 Thesis (Capstone) Advisor, Maria Gamman

2014 Thesis (Capstone) Advisor, Jordan Aragon

2014 Thesis (Capstone) Advisor, Brenna Dart

2014 Thesis (Capstone) Advisor, Ashley Sacco

2014 Thesis (Capstone) Advisor, Tara Wilson

2014 Thesis (Capstone) Advisor, Justin Johnson

2014 Thesis (Capstone) Advisor, Ashley Imhof

2014 Thesis (Capstone) Advisor, Julie Hower

2014 Thesis (Capstone) Advisor, Michael Havrda

2014 Thesis (Capstone) Advisor, Rebbekah Curtin

2014 Thesis (Capstone) Advisor, Emily Chudek

2013 Thesis (Capstone) Faculty Advisor, Program on the Environment, Marika Wegerbuaer

2013 Thesis (Capstone) Faculty Advisor, Program on the Environment, Connie Combs

2013 Thesis (Capstone) Advisor, Ian Riley

2013 Thesis (Capstone) Advisor, Graeme Riggins

2013 Thesis (Capstone) Advisor, Amanda Rasmussen

2013 Thesis (Capstone) Advisor, Grace Teller

2013 Thesis (Capstone) Advisor, Kyla Caddey

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| 2013 | Thesis (Capstone) Advisor, Octavia Graham |
| 2012 | Thesis (Capstone) Advisor, Tiffany Chan |
| 2012 | Thesis (Capstone) Advisor, Terence Thomas |
| 2012 | Thesis (Capstone) Advisor, Jazmine Kim |
| 2012 | Thesis (Capstone) Faculty Advisor, Program on the Environment, Samantha Zwicker |
| 2012 | Thesis (Capstone) Advisor, Monica White |
| 2012 | Thesis (Capstone) Advisor, Andrea Nichols |
| 2012 | Thesis (Capstone) Faculty Advisor, Program on the Environment, Tory Johnson |
| 2012 | Thesis (Capstone) Advisor, Jessica Gray |
| 2012 | Thesis (Capstone) Advisor, Russell Pharr |
| 2011 | Thesis (Capstone) Advisor, Sara Meicho |
| 2011 | Thesis (Capstone) Advisor, Marlena Staton |
| 2011 | Thesis (Capstone) Advisor, Ashley Kees |
| 2011 | Thesis (Capstone) Advisor, Randy Bacon |
| 2010-2011 | Thesis (Capstone) Faculty Advisor, Program on the Environment, Cara Appel |
| 2010 | Thesis (Capstone) Faculty Advisor, Program on the Environment, Tyson Wine |
| 2009-2010 | Thesis (Capstone) Advisor, Lindsey Kirschman |
| 2009-2010 | Thesis (Capstone) Advisor, J. Kimiko LaHaela |
| 2009 | Thesis (Capstone) Advisor, Mathew E. Weintraub |
| 2006 | Student Mentor, Strategies for Ecology Education, Development, and Sustainability (SEEDS), 91st Annual Meeting of the Ecological Society of America |

## ACADEMIC DISTINCTIONS AND AWARDS

**2025**

Faculty Member of the Year award, School of Environmental and Forest Sciences, University of Washington

**2020**

College of the Environment Outstanding Teaching Faculty Award, University of Washington

**2017**

Runner-up, Faculty Member of the Year award, School of Environmental and Forest Sciences, University of Washington

Finalist, Distinguished Teaching Award competition, University of Washington

**2016**

Finalist, Distinguished Teaching Award competition, University of Washington

**2013**

Exemplary Teaching Award, Annual Recognition Event, School of Environmental and Forest Sciences, University of Washington

**2011**

Winter Quarter Faculty Teaching Award, School of Forest Resources, University of Washington

**2010**

Winter Quarter Faculty Teaching Award, School of Forest Resources, University of Washington

**2001**

Outstanding Instructor Award, nominated by a student with a disability, University of Idaho

Outstanding Graduate Student Award, Department of Fish and Wildlife Resources, University of Idaho

**2000**

Ted Trueblood Communications Award, Best graduate student presentation, Annual meeting of the Idaho Chapter of the Wildlife Society

## ACADEMIC SERVICE

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| 2023-Present | Elected Faculty Advisory Council (EFAC), School of Environmental and Forest Sciences, University of Washington |
| 2020-Present | Editor-in-Chief, *Wildlife Research* |
| 2013-Present | Associate Editor, *Oecologia* |
| 2002-Present | Peer reviewer for **97** journals (**353** total reviews): *Acta Theriologica*, *American Midland Naturalist*, *Animal Behaviour*, *Animal Conservation*, *Annales Zoologici Fennici*, *Arthropod-Plant Interactions*, *Australian Journal of Zoology*, *Behavioral Ecology*, *Behavioral Ecology and Sociobiology*, *Basic and Applied Ecology*, *Biocontrol Science and Technology*, *Biodiversity and Conservation*, *Biological Conservation*, *Biological Invasions*, *Biological Journal of the Linnean Society*, *Biological Reviews*, *Biotropica*, *BMC Biology*, *BMC Ecology*, *Canadian Journal of Fisheries and Aquatic Sciences*, *Canadian Journal of Forest Research*, *Canadian Journal of Zoology*, *Chelonian Conservation Biology*, *Conservation Biology*, *Conservation Letters*, *Current Biology*, *Ecography*, *Ecological Informatics*, *Ecological Modeling*, *Ecological Monographs*, *Ecological Research, Ecology*, *Ecology and Evolution*, *Ecology Letters*, *Ecoscience*, *Ecosphere*, *Endangered Species Research*, *Environmental Science and Policy*, *Ethology*, *Forensic Sciences Research*, *Forest Ecology and Management*, *Frontiers in Ecology and Evolution*, *Frontiers in Ecology and the Environment*, *Frontiers in Marine Science*, *Frontiers in Zoology*, *Functional Ecology*, *Global Ecology and Conservation*, *Herpetological Conservation and Biology*, *IBIS*, *Integrative and Comparative Biology*, *Integrative Zoology*, *iScience*, *Journal for Nature Conservation*, *Journal of Animal Ecology*, *Journal of Ecology*, *Journal of Environmental Management*, *Journal of Experimental Marine Biology and Ecology*, *Journal of Mammalogy*, *Journal of Wildlife Management*, *Knowledge and Management of Aquatic Ecosystems*, *Latin American Journal of Aquatic Mammals*, *Mammal Study*, *Mammalian Biology*, *Marine Biology*, *Marine Ecology Progress Series*, *Marine and Freshwater Research*, *Marine Mammal Science*, *Marine Policy*, *Natural Resource Modeling*, *Nature Ecology and Evolution*, *Naturwissenschaften*, *Northwestern Naturalist*, *Oceans*, *Oecologia*, *Oikos*, *PeerJ*, *Pest* |

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| | *Management Science*, *Physiological and Biochemical Zoology*, *PLoS Biology*, *PLoS ONE*, *Polar Biology*, *Proceedings of the National Academy of Sciences of the United States of America*, *Proceedings of the Royal Society B*, *Royal Society Open Science*, *Scientific Reports*, *Southeastern Naturalist*, *Trends in Ecology and Evolution*, *Urban Ecosystems*, *Western Wildlife*, *Wildlife Biology*, *Wildlife Research*, *Wildlife Society Bulletin*, *WIREs Water* |
| 2002-Present | Grant reviewer for Dutch Research Council, Israel Science Foundation (ISF), National Geographic Society Committee for Research and Exploration (CRE), CRE Young Explorers program, National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA) FY18 Saltonstall Kennedy Competition, National Science Foundation (NSF) (Biological Oceanography, Division of Environmental Biology [Long-Term Research in Environmental Biology, LTREB; Opportunities for Promoting Understanding Through Synthesis, OPUS; Population and Community Ecology Cluster), Oregon Sea Grant, University of Washington Royalty Research Fund (RRF), US-Israel Binational Science Foundation |
| 2026 | Perr evaluation of teaching, course titled, "Social-Ecological Systems: Theories, Methods, and Applications (SEFS 572)", Assistant Professor Alex McInturff, School of Environmental and Forest Sciences, University of Washington |
| 2024-2025 | Chair, Search Committee, Terrestrial Avian Ecologist faculty position, School of Environmental and Forest Sciences, University of Washington |
| 2024-2025 | Chair, Elected Faculty Advisory Council (EFAC), School of Environmental and Forest Sciences, University of Washington |
| 2024 | End-of-Year Awards Committee, School of Environmental and Forest Sciences, University of Washington |
| 2023-2024 | Scholarship Committee, School of Environmental and Forest Sciences, University of Washington |
| 2023 | Panelist, PhD Defense for Clémentine Séguigne, PSL Université Paris: EPHE-UPVD-CNRS, USR 3278 CRIOBE BP 1013, Papetoai, French Polynesia |
| 2008-2023 | Student Chapter Advisor, The Wildlife Society, University of Washington |

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| 2022 | Member, Search Committee for a without-tenure (WOT) professor in the area of marine top predators, School of Aquatic and Fishery Sciences (SAFS), University of Washington |
| 2022 | Dissertation reviewer, University of Melbourne, Australia |
| 2021-2022 | Graduate Program Coordinator (GPC), School of Environmental and Forest Sciences, University of Washington |
| 2019-2022 | Member, University of Washington Program on the Environment (PoE) Faculty Council |
| 2021 | Member, SEFS Students and Academic Services (SAS) Manager search committee, University of Washington |
| 2021 | Chair, search committee for the Program on the Environment (POE), Assistant Teaching Professor position with an emphasis on food systems, College of the Environment, University of Washington |
| 2021 | Chair, search committee for the Center for Quantitative Science (CQS) Director, College of the Environment, University of Washington |
| 2021 | Moderator, *Pathways to a Postdoc* (panel discussion), College of the Environment, University of Washington |
| 2021 | College of the Environment Awards Selection Committee, University of Washington |
| 2020 | Expert commentator, *Scientific American* story about an *Animal Behaviour* paper titled, "Effect of early exposure to predation on risk perception and survival of fish exposed to a non-native predator" (article published May 19) |
| 2017-2021 | SEFS Research Committee |
| 2019-2021 | Member, UW Royalty Research Fund (RRF) subcommittee for the Basic Biological and Biomedical Sciences |
| 2018-2019 | Associate Editor, *Wildlife Research* |
| 2017-2020 | Quantitative Ecology and Resource Management (QERM) Application Review Committee, University of Washington |
| 2016-2021 | SEFS Promotion, Merit, and Tenure (PMT) Committee |
| 2016-2020 | Associate Editor, *Ecological Applications* |

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| 2014-2018 | Steering Committee, Doris Duke Conservation Scholars Program (DDCSP) |
| 2016-2017 | Faculty mentor, Doris Duke Conservation Scholars Program (DDCSP), 'Wolf recovery in the Pacific Northwest' conservation practice team project, University of Washington |
| 2015-2017 | Faculty mentor, Doris Duke Conservation Scholars Program (DDCSP), 'Wildlife on the Coastal Margins' conservation practice team project, University of Washington |
| 2016 | Faculty Panel Member, International Forestry Students' Association (IFSA) panel comparing forestry and wildlife management practices in Austria and Washington |
| 2016 | Panel Member, Ungulate Research Scientist search, Washington Department of Fish and Wildlife |
| 2016 | External peer reviewer, Wildlife Program 2015-17 Program Plan Initiative Charter 6 [a document assessing vulnerability of ungulate populations in WA to predation], Washington Department of Fish and Wildlife |
| 2014 | Peer teaching evaluator for Professor Sharon Doty, ESRM 325 / SEFS 523 "Environmental Applications of Plants: Bioremediation and Bioenergy", University of Washington |
| 2014 | Expert commentator, *Oregon State University News and Research Communications* news release titled, "Aspen recovering as wildlife populations shift in Yellowstone national Park" (article published September 30) |
| 2013-2015 | Elected Faculty Advisory Council (EFAC) |
| 2012 | Representative for the School of Environmental and Forest Sciences, College of the Environment "Meet a Scientist" Breakout Session, SACNAS National Meeting, University of Washington |
| 2012 | Dissertation reviewer, Ben-Gurion University of the Negev, Israel |
| 2012 | Faculty Coordinator, Qualifying Exam for Tait Bowers, Center for International Trade in Forest Products (CINTRAFOR), School of Environmental and Forest Sciences, University of Washington |
| 2012 | Host for Nicholas Dulvy, guest speaker, Bevan Series on Sustainable Fisheries, School of Aquatic and Fishery Sciences, University of Washington |

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| 2012 | Expert commentator, *Associated Press* article titled, "Study: Yellowstone wolves helping park trees rebound" (article published January 2) |
| 2012 | Expert commentator, *Jackson Hole Daily* article titled, "Wolves helping aspens" (article published January 2) |
| 2011 | Faculty Portfolio Committee, tasked with identifying future needs in teaching, research, and outreach, SEFS |
| 2011 | Faculty panel member, Graduate student orientation, School of Forest Resources |
| 2011 | Expert commentator, *USA Today* article titled, "Loss of predators in the food chain can alter the ecosystem" (article published on July 15) |
| 2011 | Expert commentator, *ScienceNOW* article titled, "Why penguins are afraid of the dark" (article published on-line in June) |
| 2011 | Advisor, Dead Elk Society, spring and autumn quarters |
| 2011 | Faculty Advisor, ESRM 490 H ("Indirect linkages in Ecology"), spring quarter |
| 2011 | Peer reviewer, book titled, "Behavioural Responses to a changing world: Mechanisms and Consequences" |
| 2010-2013 | Member, Lynx Research Science Advisory Committee, Convened to evaluate ongoing lynx research effort headed by the Washington Department of Fish and Wildlife |
| 2010 | Peer reviewer, manuscript titled, "Cougar prey use in a wildland-urban environment in western Washington" to be submitted to the *Journal of Mammalogy*, Washington Cooperative Fish and Wildlife Research Unit, University of Washington |
| 2010 | Peer reviewer, report titled, "Climate change and wildlife habitat management at Olympic National Forest and Olympic National Park", prepared by participants of the Wildlife Adaptation Workshop representing Olympic National Park, Olympic National Forest, United States Geological Survey, Forest Service, and University of Washington |
| 2010 | Faculty panel member, Graduate student orientation, School of Forest Resources |

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| 2009-2013 | Member, Washington State Lynx Working Group, Partnership involving the Bureau of Land Management, Conservation Northwest, United States Department of Agriculture Forest Service, United States Fish and Wildlife Service, University of Washington, Washington Department of Fish and Wildlife, and Washington Department of Natural Resources that meets biennially with the goal of facilitating lynx research and recovery in the Pacific Northwest. |
| 2009 | Participant, CFR Centennial Grove maintenance, Union Bay Natural Area, University of Washington Botanic Gardens, April 4 (9am – 12pm) |
| 2004 | Coordinator, joint venture involving researchers from Simon Fraser University, the Western Australian Department of Conservation and Land Management (CALM), and the Yadgalah Aboriginal Corporation to fit loggerhead turtles with satellite tags (5 deployments) |
| 2003 | Coordinator, joint venture involving researchers from Simon Fraser University, the Western Australian Department of Conservation and Land Management (CALM), and the Yadgalah Aboriginal Corporation to fit dugongs with underwater video and data recording systems (Crittercam; 3 deployments) |
| 2001 | Participant, Burnaby Mountain Biodiversity Challenge, Simon Fraser University |
| 2000 | Graduate student representative, 5th Year Review Committee for Dr. Kerry Reese, University of Idaho |

## PUBLIC EDUCATION AND OUTREACH

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| 2026 | Featured expert opinion ("L'avis d'expert") contributor to French language book by Éric Clua and Thomas Vignaud titled *Le Requin Singulier*. |
| 2026 | Featured expert, article about sirenians titled, "Extremely relaxed creatures", "Natur" [German magazine] |
| 2025 | Expert commentator, article titled, "Why Do Sharks Go Into Feeding Frenzies? A Case Study of a Recent, Unusual Attack on a Human Looks for Answers", Smithsonian magazine |
| 2025 | Invited interview, article titled, "Inside UW's Yellowstone field course", *The Daily* (student newspaper), University of Washington, Seattle, WA |

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| 2025 | Expert contributor to *The Spokesman-Review* article titled, "Cool critters: Here comes Washington's cottontails, hopping down the bunny trail", Spokane, WA |
| 2024 | Invited advancement talk titled, "The Tetiaroa reef shark project", College of the Environment, University of Washington |
| 2024 | Invited interview, podcast titled, "Wolves have made a comeback, but will stay endangered in WA", *Seattle Now*, KUOW Radio, Seattle, WA |
| 2024 | Featured faculty member, Daily newspaper article titled, "A Salmon Tale: the importance of salmon across cultures, professions, and species", University of Washington |
| 2023 | Invited speaker, talk titled "The Tetiaroa shark research program: an overview of past, present, and future", Brando Hotel, Tetiaroa, French Polynesia |
| 2021 | Invited speaker, talk titled, "Ecological effects of wolf recolonization in Washington", December Meeting for the Flathead Audubon Society, Kalispell, MT |
| 2021 | Invited presenter, talk titled, "Deer are also afraid of the 'Big Bad Wolf", Puesta del Sol PTA – MEET THE SCIENTIST!, Bellevue, WA (remote) |
| 2020 | Featured Faculty for the College of the Environment's *Labs Unlocked* event; exhibit titled, "Unlocking the secrets of reef shark nurseries", University of Washington |
| 2019 | Invited interview, story titled, "Bunny boom: Garden expert Ciscoe's secret recipe repels pesky rabbits", KIRO Radio, Seattle, WA |
| 2019 | Invited interview, story titled, "Seattle rabbits seem to be breeding like, well, rabbits", KUOW Public Radio, Seattle, WA |
| 2018 | Invited presenter, talk titled, "Effects of gray wolf recolonization on ungulates and mesopredators: an update", Confederated Tribes of the Colville Reservation Natural Resources Committee Meeting, Nespelem, WA |
| 2018 | Invited speaker for "Port Ludlow's Dine and Discover", a monthly seminar series for the Port Ludlow, WA community; talk titled, "Using a multidisciplinary approach to explore the consequences of wolf recolonization in Washington" |

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| 2017 | Featured speaker for "Science and a Movie presents *Jaws*", a collaboration between the Pacific Science Center and Central Cinema that allows moviegoers to learn how science relates to classic cinema; talk titled, "Tiger sharks keep seagrass ecosystems healthy by scaring sea turtles" |
| 2017 | Featured co-author for a Spokane Public Radio broadcast titled, "Study: to mitigate problem predators, give wolves more space, tolerance", based on paper published in *Nature Communications* |
| 2017 | Panelist for the College of the Environment's Center for Creative Conservation event titled, "Earthgames on Tap", University of Washington |
| 2017 | Panelist for the College of the Environment's *Amplify* event titled, "Communicating science in a world with differing values", University of Washington |
| 2017 | Featured Faculty for the College of the Environment's *Labs Unlocked* event; exhibit titled, "Top dog: how the reemergence of gray wolves in Washington shapes our diverse landscapes", University of Washington |
| 2017 | Expert contributor to BBC *CrowdScience* broadcast titled, "Why are cats loners?" (http://www.bbc.co.uk/programmes/p04skkwl) |
| 2016 | Panelist for forum on wolf conservation titled, "Crying wolf in Washington State: Unraveling out complicated relationship with wolves", hosted by the Woodland Park Zoo |
| 2016 | Featured biologist for educational video titled, "Ecology of Fear: Wolf v Deer", produced in collaboration with Symbio Studies for use at multiple grade levels as part of the Houghton Mifflin ScienceFusion Program |
| 2014 | Research featured in a PBS Quest documentary titled, "Wolves and the Ecology of Fear", which was awarded a 2014 American Association for the Advancement of Science (AAAS) Kavli Science Journalism Award in the 'Spot News/Feature Reporting' category |
| 2014 | Wolf research profiled in article titled, "Predator feared but essential", *Mercer Island Reporter* |
| 2014 | Wolf research profiled in article titled, "Washington wolves: after 80 year absence, the pack is back", *The Daily* (of the University of Washington) |
| 2014 | Wolf research project featured in a blog titled, "Exclusive: collar camera records deer predation by cougar", *American Hunter* magazine |

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| 2014 | Host and moderator for a panel on gray wolf research and management in the Pacific Northwest co-sponsored by the Pacific Wolf Coalition, University of Washington, Seattle, WA |
| 2014 | Guest Speaker, Educational talk titled, "Lynx, snowshoe hares, and the future of Washington's boreal forests", Streamkeeper Academy, Adopt A Stream Foundation (AASF), Everett, WA |
| 2012 | Guest Speaker, Educational talk titled, "Lynx, snowshoe hares, and the future of Washington's boreal forests", Streamkeeper Academy, Adopt A Stream Foundation (AASF), Everett, WA |
| 2011 | Featured author, "Beyond the Frontier", monthly podcast produced by the Ecological Society of America in which authors whose articles will appear in the upcoming issue of *Frontiers in Ecology and the Environment* are interviewed (podcast aired in August) |
| 2011 | Guest Speaker, Educational talk titled, "Lynx, snowshoe hares, and the future of Washington's boreal forests", Streamkeeper Academy, Adopt A Stream Foundation (AASF), Everett, WA |
| 2010 | Guest Speaker, Educational talk titled, "Lynx, snowshoe hares, and the future of Washington's boreal forests", Streamkeeper Academy, Adopt A Stream Foundation (AASF), Everett, WA |
| 2009 | Featured speaker, University of Washington Television program titled, "Carnivore Conservation in the Pacific Northwest" |
| 2007 | Featured biologist, on-line *Discovery News* article titled, "Tiger Sharks Keep Seagrass Tidy" |
| 2007 | Featured biologist, Network Ten Australia wildlife documentary titled, "Dugongs in Shark Bay" (part of the *Totally Wild* series) |
| 2006 | Featured biologist, book titled *Gone to Shark Bay*, University of Western Australia Press |
| 2006 | Guest biologist, Network Ten Australia wildlife documentary titled, "Mysteries of Shark Bay" (part of the *Totally Wild* series) |
| 2004 | Guest biologist, Australian Broadcasting Channel (ABC) wildlife documentary titled, "Shark Bay" |
| 2004 | Featured biologist, National Geographic Television wildlife documentary titled, "Dugongs", episode 11 of the *Crittercam* series |

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| 2004 | Guest biologist, National Geographic Television wildlife documentary titled, “Turtles”, episode 13 of the *Crittercam* series |
| 2002-2007 | Weekly research seminar speaker, talk titled, “Shark Bay: realm of the tiger shark”, given to visitors to the Monkey Mia Dolphin Resort, Western Australia (total of roughly 96 talks) |