

DR. CAMERON H. AINSWORTH

CURRICULUM VITAE

(To Jan 2018)

General

Position Associate Professor, Fisheries Oceanography
(Received tenure June 9, 2017)
College of Marine Science, University of South Florida
140 7th Avenue South, St. Petersburg, FL 33701
Email: ainsworth@usf.edu
Office: (727) 553-3373 Cell: (727) 710-2915
Lab URL: <http://www.marine.usf.edu/ainsworthecology/>

Education

- *Ph.D.* 2006. University of British Columbia. Fisheries Centre. Department of Resource Management and Environmental Studies.
Title of dissertation: Strategic Marine Ecosystem Restoration in Northern British Columbia (Advisor: Professor Tony J. Pitcher)
- *B.S.* 1997. University of British Columbia. Department of Zoology.
Major: Marine Biology

Appointments

- April 2011-present. Assistant Professor, College of Marine Science. University of South Florida.
- Alfred P. Sloan Research Fellow 2013-2014.
- September 2011 – present. Adjunct Faculty, Rosenstiel School of Marine and Atmospheric Science. University of Miami.
- June 2011-2013. Associate Faculty, Fisheries Centre. University of British Columbia.
- November 2007-June 2011. Adjunct Professor, Fisheries Centre. University of British Columbia.
- November 2007-March 2011. Post-doctoral Fellow. Northwest Fisheries Science Center (NOAA). Seattle, WA. Supervisor: Dr. Phil Levin
- April 2006 – October 2007. Post-doctoral Fellow. University of British Columbia Fisheries Centre. Vancouver, BC. Supervisor: Dr. Tony Pitcher
- December 2005-April 2006. Graduate Student Researcher. University of British Columbia Fisheries Centre. Vancouver, BC. Supervisor: Dr. Tony Pitcher
- August 2000 - May 2001. Research Assistant. Sea Around Us Project. University of British Columbia Fisheries Centre. Vancouver, BC. Supervisor: Dr. Daniel Pauly

Recognition

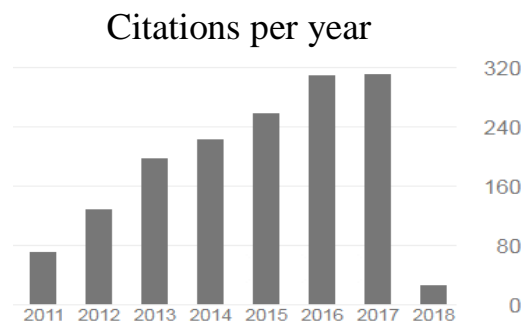
- (Nominated) University of Miami Rosenstiel Award (2016)
- Alfred P. Sloan Fellowship (2013-2014) for early-career scientists.
- Outstanding Faculty Award (2014), University of South Florida

Professional associations

- American Association for the Advancement of Science, Member
- American Fisheries Society, Member

Publications

Citation indices	All	Since 2013
Citations	2055	1326
h-index	24	18
i10-index	47	30
Total peer reviewed	50	29
Citations per paper	24.9	



Peer-reviewed articles (*student or staff)

1. **Ainsworth, C.H.**, Paris, C., Perlin, N., Dornberger, L.N., Patterson, W., Chancellor, E., Murawski, S., Hollander, D., Daly, K., Romero, I., Coleman, F., Perryman, H. (in press). Ecosystem Impacts of the Deepwater Horizon oil spill. *PLoS One*.
2. Olsen, E., Kaplan, I.C., **Ainsworth, C.**, Fay, G., Gaichas, S., Gamble, R., Girardin, R., Hansen, C., Ihde, T.F., Morzaria-Luna, H., Johnson, K.F., Savina-Rolland, M., Townsend, H., Weijerman, M., Fulton, E., and Link, J.S. (in press). Ocean futures as explored using a worldwide suite of ecosystem models. *Frontiers in Marine Science*.
3. Gruss, A., Drexler, M.D., **Ainsworth, C.H.**, Babcock, E.A., Tarnecki, J.H. and Love, M.S. (in press) Producing Distribution Maps for a Spatially-Explicit Ecosystem Model Using Large Monitoring and Environmental Databases and a Combination of Interpolation and Extrapolation. *Frontiers in Marine Science*. DOI: <https://doi.org/10.3389/fmars.2018.00016>
4. *Morzaria-Luna, H., **Ainsworth, C.H.**, Tarnecki, J., and Grüss, A., (in press). Diet composition uncertainty determines impacts on fisheries following an oil spill. *Ecosystem Services*
5. *Masi, M., **Ainsworth, C.H.**, Kaplan, I.K., Schirripa, M.J. (in press). Inter-specific interactions may influence reef fish management strategies in the Gulf of Mexico. *Marine and Coastal Fisheries*.

6. *Bumbeer, J., da Rocha R.M., Bornatowski, H., de Castro Robert, M., **Ainsworth, C.** 2017. Predicting impacts of lionfish (*Pterois volitans*) invasion in a coastal ecosystem of southern Brazil. *Biological Invasions*. <https://doi.org/10.1007/s10530-017-1625-8>
7. *Suprenand, P., and **Ainsworth, C.H.** 2017. Trophodynamic effects of climate change-induced alterations to primary production along the Western Antarctic Peninsula. *Marine Ecology Progress Series*, 569: 37-54.
8. Grüss, A., Rose, K.A., Simons, J., Ainsworth, C.H., Babcock, E.A., Chagaris, D.D., de Mutsert, K., Froeschke, J., Himchak, P., Kaplan, I.C., O'Farrell, H. and Zetina Rejon, M.J. 2017. Recommendations on the use of ecosystem modeling for informing ecosystem-based fisheries management and restoration outcomes in the Gulf of Mexico. *Marine and Coastal Fisheries*, 9: 291-295.
9. Eddy TD, Lotze HK, Fulton EA, Coll M, **Ainsworth C.H.**, Araújo JN, Bulman C, Bundy A, Christensen V, Field J, Gribble N, Hasan M, Mackinson S, Townsend H. 2017. Ecosystem effects of invertebrate fisheries. *Fish and Fisheries*. 18: 40-53.
10. *Masi, M.D., **Ainsworth, C.H.**, Jones, D.L. 2017. Using a Gulf of Mexico Atlantis model to evaluate ecological indicators for sensitivity to fishing mortality and robustness to observation error. *Ecological Indicators*, 74: 516-525.
11. Chacin, D.H., Switzer, T.S., **Ainsworth, C.H.**, Stallings, C.S. 2016. Long-term analysis of spatio-temporal patterns in population dynamics and demography of juvenile Pinfish (*Lagodon rhomboides*). *Estuarine Coast and Shelf Science*, 183(2016): 52-61.
12. Grüss, A., Sagarese, S.R., Drexler, M., Babcock, E., Chagaris, D., **Ainsworth, C.H.**, Penta, B., deRada, S. 2016. Improving the spatial allocation of functional group biomasses in spatially-explicit ecosystem models: insights from the Gulf of Mexico. *Bulletin of Marine Science*, 4: 473-496.
13. *Dornberger, L., **Ainsworth, C.**, Gosnell, S. and Coleman, F. 2016. Developing a polycyclic aromatic hydrocarbon exposure dose-response model for fish health and growth. *Marine Pollution Bulletin*, 109(1): 259-266.
14. Wijerman, M., Link, J.S., Fulton, E.A., Olsen, E., Townsend, H., Gaichas, S., Hansen, C., Skern-Mauritzen, M., Kaplan, I.C., Gamble, R., Fay, G., Savina, M., **Ainsworth, C.H.**, Van Putten, I., Gorton, R., Brainard, R.E., and Hutton, T. 2016. Atlantis ecosystem model summit: report from a workshop. *Ecological Modelling*, 335: 35-38.
15. *Tarnecki, J., Wallace, A., Simons, J.D. and **Ainsworth, C.H.** (2016). Progression of a Gulf of Mexico Food Web Supporting Atlantis Ecosystem Model Development. *Fisheries Research*, 179: 237-250.
16. Grüss, A., Schirripa, M.J., Chagaris, D., Velez, L., Shin, Y-J., Verley, P., Oliveros-Ramos, R. and **Ainsworth, C.**, (2016). Estimating natural mortality rates and simulating fishing scenarios for Gulf of Mexico red grouper (*Epinephelus morio*) using the ecosystem model OSMOSE-WFS. *Journal of Marine Systems*, 154(B): 264-279.
17. **Ainsworth, C.H.** (2016). British Columbia Marine Fisheries Catch Reconstruction: 1873 to 2011. *BC Studies*, 188: 81-90.

18. **Ainsworth, C.H.**, and Walters, C.J. (2015). Ten common mistakes made in Ecopath with Ecosim modelling. *Ecological Modelling*, 308: 14-17.
19. *Suprenand, P., **Ainsworth, C.H.** and Jones, D. (2015). Strategic assessment of fisheries independent monitoring programs in the Gulf of Mexico. *PLoS One*. DOI: 10.1371/journal.pone.0120929.
20. Grüss, A. Schirripa, M.J., Chagaris, D., Drexler, M., Simons, J., Verley, P., Shin, Y-J., Karnauskas, M., Oliveros-Ramos, R., **Ainsworth, C.H.** (2015). Evaluation of the trophic structure of the West Florida Shelf in the 2000s using the ecosystem model OSMOSE. *Journal of Marine Systems*, 144: 30-47.
21. **Ainsworth, C.H.** and Mumby, P. (2014). Coral-algal phase shifts alter fish communities and reduce fisheries production. *Global Change Biology*, 21(1): 165-172.
22. Sale, P.F., Agardy, T., **Ainsworth, C.H.**, Feist, B.E., Bell, J.D., Christie, P., Hoegh-Guldberg, O., Mumby, P.J., Feary, D.A., Saunders, M.I., Daw, T.M., Foale, S.J., Levin, P.S., Lindeman, K.C., Lorenzen, K., Pomeroy, R.S., Allison, E.H., Bradbury, R.H., Corrin, J., Edwards, A.J., Obura, D.O., Sadovy de Micheson, Y.J., Samoilys, M.A. and Sheppard, C.R.C. (2014). Transforming Management of Tropical Coastal Seas to Cope with Challenges of the 21st Century. *Marine Pollution Bulletin*, 85(1): 8-23.
23. Grüss A, Drexler M., **Ainsworth, C.H.**, (2014). Using delta generalized additive models to produce distribution maps for spatially explicit ecosystem models. *Fisheries Research*, 159: 11–24
24. *Masi, M., **Ainsworth, C.H.** and Chagaris, D. (2014). A probabilistic representation of fish diet compositions from multiple data sources: a Gulf of Mexico case study. *Ecological Modelling*, 284(2014): 60–74.
25. Levin, P.S., Kelble, C.R., Shuford, R.L., **Ainsworth, C.H.**, deReynier, Y., Dunsmore, R., Fogarty, M.J., Holsman, K., Howell, E.A., Monaco, M.E., Oakes, S.A. and Werner, F. (2013). Guidance for implementation of integrated ecosystem assessments: a US perspective. *ICES Journal of Marine Science*, doi:10.1093/icesjms/fst112.
26. Morzaria-Luna H.N., **Ainsworth C.H.**, Kaplan I.C., Levin P.S., Fulton E.A. (2013). Indirect Effects of Conservation Policies on the Coupled Human-Natural Ecosystem of the Upper Gulf of California. *PLoS ONE* 8(5): e64085. doi:10.1371/journal.pone.0064085
27. *Drexler M, **Ainsworth C.H.** (2013) Generalized Additive Models Used to Predict Species Abundance in the Gulf of Mexico: An Ecosystem Modeling Tool. *PLoS ONE* 8(5): e64458. doi:10.1371/journal.pone.0064458.
28. Pitcher, T.J., Lam, M., **Ainsworth, C.H.**, Martindale, A., Nakamura, K., Perry, I., Ward, T., (2013). Improvements to Rapfish: a rapid evaluation technique for fisheries integrating ecological and human dimensions. *Journal of Fish Biology*, 83(4): 865-889.
29. Morzaria-Luna, H., **Ainsworth, C.H.**, Kaplan, I.C., Levin, P., Fulton, E., (2012). Exploring trade-offs between fisheries and conservation of the vaquita porpoise (*Phocoena sinus*) using an Atlantis ecosystem model. *PLoS ONE* 7(8): e42917. doi:10.1371/journal.pone.0042917

30. **Ainsworth, C.H.**, Morzaria-Luna, H., Kaplan, I.C., Levin, P., Fulton, E.A., Cudney-Bueno, R., Turk-Boyer, P., Torre, J., Danneman, G., Pfister, T., (2012). Effective ecosystem-based management must encourage regulatory compliance: A Gulf of California case study. *Marine Policy*, 36: 1275-1283.
31. Varkey, D., **Ainsworth, C.H.**, and Pitcher, T.J., (2012). Modelling reef fish population responses to fisheries restrictions in Marine Protected Areas in the Coral Triangle. *Journal of Marine Biology*, 2012. DOI: 10.1155/2012/721483.
32. **Ainsworth, C.H.**, Morzaria-Luna, H., Kaplan, I.C., Levin, P.S. and Fulton, E.A., (2012). Full compliance with harvest regulations yields ecological benefits: Northern Gulf of California case study. *Journal of Applied Ecology*, 49: 63-72.
33. **Ainsworth, C.H.**, Samhouri, J., Busch, D.S., Cheung, W., Dunne, J., and Okey, T. (2011) Potential impacts of climate change on Northeast Pacific marine foodwebs and fisheries. *ICES Journal of Marine Science*, 68(6): 1217-1229. [ranked 448 of 23335 articles on Web of Science]
34. **Ainsworth, C.H.** (2011) Quantifying Species Abundance Trends in the Northern Gulf of California Using Local Ecological Knowledge. *Marine and Coastal Fisheries*, 3(1): 190-218.
35. Fulton, E.A., Link, J.S., Kaplan, I., Savina-Rolland, M., Johnson, P., **Ainsworth, C.H.**, Horne, P., Gorton, R., Gamble, R.J., Smith, A.D.M. and Smith, D.C. (2011). Lessons in Modelling and Management of Marine Ecosystems: The Atlantis Experience. *Fish and Fisheries*, 12(2): 171-188.
36. Li, L., **Ainsworth, C.H.** and Pitcher, T.J. (2010). Presence of harbor seals (*Phoca vitulina*) may increase exploitable fish biomass in the Strait of Georgia. *Progress in Oceanography*, 87(1-4): 235-241.
37. **Ainsworth, C.H.**, Kaplan, I.C., Levin, P.S. and Mangel, M. (2010) A statistical approach for estimating fish diet compositions from multiple data sources: Gulf of California case study. *Ecological Applications*, 20(8): 2188-2202.
38. **Ainsworth, C.H.**, and Pitcher, T.J. (2010). A bioeconomic optimization approach to marine ecosystem restoration: British Columbia case study. *Environmental Conservation*, 36(4): 301-311.
39. Samhouri, J., Levin, P.S. and **Ainsworth, C.H.** (2010). Identifying thresholds for ecosystem-based management. *PLoS One* 5(1): e8907. DOI: 10.1371/journal.pone.008907
40. Pitcher, T.J. and **Ainsworth, C.H.** (2010). Resilience to Change in Two Coastal Communities: Using the Maximum Dexterity Fleet. *Marine Policy*, 34: 810-814.
41. Varkey, D. **Ainsworth, C.H.**, Pitcher, T.J., Goram, Y. and Sumaila, R., (2010). Illegal, Unreported and Unregulated Fisheries Catch in Raja Ampat Regency, Eastern Indonesia. *Marine Policy*, 34(2): 228-236.
42. **Ainsworth, C.H.**, Pitcher, T.J., Heymans, J.J., Vasconcellos, M. (2008). Reconstructing historical marine ecosystems using food web models: Northern British Columbia from Pre-European Contact to Present. *Ecological Modelling*, 216: 354-368.
43. **Ainsworth, C.H.**, Varkey, D.A. and Pitcher, T.J. (2008) Ecosystem simulations supporting Ecosystem Based Fisheries Management in the Coral Triangle, Indonesia. *Ecological Modelling*, 214: 361-374.

44. **Ainsworth, C.H.**, Pitcher, T.J. and Rotinsulu, C. (2008) Evidence of fishery depletions and shifting cognitive baselines in Eastern Indonesia. *Biological Conservation*, 141(3): 848-859. (*Featured article in Current Conservation*)
45. Grober-Dunsmore, R., Wooninck, L., Field, J., **Ainsworth, C.H.**, Beets, J.P., Berkeley, S., Bohnsack, J.A., Boulon, R., Brodeur, R. D., Brodziak, J., Crowder, L. Gleason, D. F., Hixon, M. A., Kaufman, L., Lindberg, B.L., Miller, M. L., Morgan, L and Wahle, C. (2007). Vertical Zoning in Marine Protected Areas: Ecological Considerations for Balancing Pelagic Fishing with Conservation of Benthic Communities. *Fisheries*, 33(12): 598-610.
46. **Ainsworth, C.H.** and Pitcher, T.J. (2006) Modifying Kempton's Species Diversity Index for use with Ecosystem Simulation Models. *Ecological Indicators*, 6(3):623-630.
47. **Ainsworth, C.H.** and Pitcher, T.J. (2005) Estimating Illegal, Unreported and Unregulated catch in British Columbia's Marine Fisheries. *Fisheries Research*, 75: 40-55.
48. **Ainsworth, C.H.** and Sumaila, U.R. (2005) Intergenerational valuation of fisheries resources can justify long-term conservation: a case study in Atlantic cod (*Gadus morhua*). *Canadian J. of Fisheries and Aquatic Sciences*, 62: 1104-1110.
49. Sayer, M.D.J., Magill, S.H., Pitcher, T.J., Morissette, L. and **Ainsworth, C.H.** (2005) Simulation-Based Investigations of Fishery Changes as Influenced by the Scale and Design of Artificial Habitats. *Journal of Fish Biology*, 67(B): 218-243.

Book chapters

50. Lorenzen, K., **Ainsworth, C.**, Baker, S., Barbieri, L., Camp, E., Dotson, J., Lester, S. (2017). Climate change impacts on Florida's fisheries and aquaculture sectors and options for adaptation. Chapter 14 in *Florida's Climate: Changes, Variations & Impacts*. Florida Climate Institute.
51. **Ainsworth, C.H.** (2016). British Columbia Marine Fisheries Catch Reconstruction 1873-2011. In Pauly, D. and Zeller, D. (eds.). *Global Atlas of Marine Fisheries*. Island Press. 550 pp.
52. **Ainsworth, C.H.** and Pitcher, T.J. (2008) Back-to-the-Future in Northern British Columbia: Evaluating Historic Marine Ecosystems and Optimal Restorable Biomass as Restoration Goals for the Future. Pages 587-599 in Nielson J. (ed.) *Reconciling Fisheries with Conservation: Proceedings of the Fourth World Fisheries Congress*. American Fisheries Society, Bethesda, USA. [*document no. WFC-0100R*].
53. Pitcher, T.J. and **Ainsworth, C.H.** (2008) Back-to-the-Future: a candidate ecosystem-based solution to the fisheries problem. In Nielson J. (ed.) *Reconciling Fisheries with Conservation: Proceedings of the Fourth World Fisheries Congress*. American Fisheries Society, Bethesda, USA.
54. Haggan, N., **Ainsworth, C.H.**, Pitcher, T.J., Sumaila, U.R. and Heymans, J. 2008. Où Sont les Poissons d'Antan? Restoring Past Ecosystems: Policy Trade-offs for Resilience and Food Security for Coastal Communities. Pages 51-74 in: C. Parrish, N. Turner and S. Solberg (Eds.) *Resetting the Kitchen Table: Food Security, Culture, Health and Resilience in Coastal Communities*. Nova Science Publishing. Hauppauge, NY: Nova Science Publishing.

55. **Ainsworth, C.H.** and Pitcher, T.J. (2005) Using Local Ecological Knowledge in Ecosystem Models. Pages 289-304 in: G.H. Kruse, V.F. Gallucci, D.E. Hay, R.I. Perry, R.M. Peterman, T.C. Shirley, P.D. Spencer, B. Wilson, and D. Woodby (Eds.) Fisheries assessment and management in data-limited situations. Alaska Sea Grant College Program, University of Alaska Fairbanks. 948 pp.
56. **Ainsworth, C.H.** and Pitcher, T.J. (2005) Evaluating Marine Ecosystem Restoration Goals for Northern British Columbia. Pages 419-438 in: G.H. Kruse, V.F. Gallucci, D.E. Hay, R.I. Perry, R.M. Peterman, T.C. Shirley, P.D. Spencer, B. Wilson, and D. Woodby (Eds.) Fisheries assessment and management in data-limited situations. Alaska Sea Grant College Program, University of Alaska Fairbanks. 948 pp.
57. Pitcher, T.J., **Ainsworth, C.H.**, Buchary, E., Cheung, W., Forrest, R., Haggan, N., Lozano, H., Morato, T. and Morrissette, L. (2005) Strategic Management of Marine Ecosystems using Whole-Ecosystem simulation Modelling: The 'Back to the Future' Policy Approach. In: E. Levner, I. Linkov, J. Proth (Eds.) Strategic Management of Marine Ecosystems. Springer, NATO Science Series: IV: Earth and Environmental Sciences 50: 199-258.
58. Pitcher, T.J., Heymans, J.J., **Ainsworth, C.H.**, Buchary, E.A., Sumaila, U.R. and Christensen, V. (2004) Opening the Lost Valley: Implementing a 'Back to the Future' Restoration Policy for Marine Ecosystems and their Fisheries. In: Knudsen, E.E., MacDonald, D.D. and Muirhead, J.K. (Eds.) Sustainable Management of North American Fisheries. American Fisheries Society Symposium 43: 165-193.

Top 5 cited papers	Citations
Fulton, E.A., Link, J.S., Kaplan, I., Savina-Rolland, M., Johnson, P., Ainsworth, C.H., Horne, P., Gorton, R., Gamble, R.J., Smith, A.D.M. and Smith, D.C. (2011). Lessons in Modelling and Management of Marine Ecosystems: The Atlantis Experience. <i>Fish and Fisheries</i> , 12(2): 171-188.	297
Ainsworth, C.H., Samhuri, J., Busch, D.S., Cheung, W., Dunne, J., and Okey, T. (2011) Potential impacts of climate change on Northeast Pacific marine foodwebs and fisheries. <i>ICES Journal of Marine Science</i> , 68(6): 1217-1229.	112
Samhuri, J., Levin, P.S. and Ainsworth, C.H. (2010). Identifying thresholds for ecosystem-based management. <i>PLoS One</i> 5(1): e8907. DOI: 10.1371/journal.pone.008907	106
Ainsworth, C.H., Pitcher, T.J. and Rotinsulu, C. (2008) Evidence of fishery depletions and shifting cognitive baselines in Eastern Indonesia. <i>Biological Conservation</i> , 141(3): 848-859. (Featured article in Current Conservation)	98
Ainsworth, C.H. and Pitcher, T.J. (2005) Estimating Illegal, Unreported and Unregulated catch in British Columbia's Marine Fisheries. <i>Fisheries Research</i> , 75: 40-55.	76

In review

1. Gruss, A., Perryman, H.A., Sagarese, S.R., Thorson, J.T., **Ainsworth, C.H.**, Anderson, E.J., Brennan, K., Campbell, M.D., Christman, M.C., Cross, S.,

- Drexler, M.D., Drymon, J.M., Gardner, C.L., Hanisko, D.S., Hendon, J., Koenig, C.C., Love, M.S., Martinez-Andrade, F., Morris, J., Noble, B.T., Nuttall, M.A., Osborne, J., Pattengill-Semmens, C., Pollack, A.G., Sutton, T.T., Switzer, T.S. (in review). Monitoring programs of the US Gulf of Mexico: inventory, development of a large monitoring database, and use of the large monitoring database to map the spatial distributions of fish and invertebrates of the US Gulf of Mexico. *Reviews in Fish Biology and Fisheries*.
2. A. Grüss, M.D. Drexler, C.H. Ainsworth, c, JJ. Roberts, R.H. Carmichael, N.F. Putman, P.M. Richards, E. Chancellor, E.A. Babcock, i, M.S. Love. Improving the spatial allocation of marine mammal and sea turtle biomasses in spatially-explicit ecosystem models. *Marine Ecology Progress Series*.
 3. Rohal, M., **Ainsworth, C.H.**, Lupher, B., Montagna, P.A., Paris-Limouzy, C., Perlin, N., Suprenand, P.M., Yoskowitz, D. (in review). The Effect of the Deepwater Horizon Oil Spill on Ecosystem Services in the Northern Gulf of Mexico. *Ecosystem Services*
 4. Suprenand, P.M., Hoover, C., **Ainsworth, C.**, Dornberger, L. (in review). Preparing for the inevitable: ecological and indigenous community impacts of oil spill-related mortality in the United States Arctic marine ecosystem. *Marine Ecology Progress Series*.

In preparation

1. *Gray, A.M. and **Ainsworth, C.H.** Effects of *Karenia brevis* harmful algal blooms on fish community structure on the West Florida Shelf. *Harmful Algae*.
2. *Tarnecki, J.H., Suprenand, P., Wallace, A., Reinhard, J.F., Lipton, J., Hollweg, T.A. and **Ainsworth, C.** Characterization of predator-prey relationships in the Northern Gulf of Mexico relevant to Deepwater Horizon oil spill restoration.
3. *Drexler, M. and **Ainsworth, C.H.** Larval source-sink dynamics can inform spatial management: a Gulf of Mexico case study.
4. *Dornberger, L., and **Ainsworth, C.H.** [DWH oil spill effects on invertebrate populations]

Funding

- **ACTIVE:** Gulf of Mexico Research Initiative. Center for Integrated Modeling and Analysis of the Gulf Ecosystem III (C-IMAGE III) (\$200,000) (Jan. 2018 – Dec. 2019) (Co-Principle Investigator).
- **COMPLETED:** Gulf of Mexico Research Initiative. Center for Integrated Modeling and Analysis of the Gulf Ecosystem II (C-IMAGE II) (\$450,000) (Jan. 2015 – Dec. 2017) (Co-Principle Investigator).
- **COMPLETED:** Improving the use of products derived from monitoring data in ecosystem models of the Gulf of Mexico. Florida RESTORE Act Centers of Excellence Program (FLRACEP) (\$31,898) (Jan. 2016 – Dec. 2017) (Co-Principle Investigator)
- **COMPLETED:** Alfred P. Sloan Research Fellowship (\$50,000) (Sept. 2013-Sept. 2017) (Principle Investigator)

- **COMPLETED:** Ecosystem Modeling Efforts in the Gulf of Mexico: Current Status and Future Needs to Address Management and Restoration Activities. NOS/NOAA Regional Coastal Resilience Grants Program (\$47,786) (Sept. 2015 to Aug. 2017) (Co-Principle Investigator)
- **COMPLETED:** Characterization of predator-prey relationships relevant to Deepwater Horizon oil spill impacts. Stratus Consulting (\$46803) (March 2014 to Sept. 2016) (Principle Investigator)
- **COMPLETED:** Response of the Coastal Gulf of Alaska Ecosystem to Environmental Change: Analysis of Past Dynamics to Improve Prediction of Future Response to Natural and Anthropogenic Change. National Center for Ecological Analysis and Synthesis UCSB (Oct. 2014 – Oct. 2016) (Co-Principle Investigator).
- **COMPLETED:** Center for Integrated Modeling and Analysis of the Gulf Ecosystem II (C-IMAGE I). Gulf of Mexico Research Initiative (\$150,000) (Jan. 2012 – Dec. 2014) (Co-Principle Investigator).
- **COMPLETED:** Marine Fisheries Initiative (MARFIN). “Fisheries Diet Data Compilation and Research: Toward an Integrated Ecosystem Assessment in the Gulf of Mexico” (\$71,253) (Sept. 2013-Aug. 2015) (Co-Investigator)
- **COMPLETED:** Deep Sea to Coast Connectivity in the Eastern Gulf of Mexico (DEEP-C) Gulf of Mexico Research Initiative (\$48,193) (Aug. 2013-Dec. 2015) (Co-Investigator)
- **COMPLETED:** Strategic assessment of fisheries independent monitoring programs in the Gulf of Mexico. Ocean Conservancy (\$61,423) (July 2013 - June 2014) (Principle Investigator)
- **COMPLETED:** Center for Integrated Modeling and Analysis of the Gulf Ecosystem (C-IMAGE). Gulf of Mexico Research Initiative (\$150,000) (Dec. 2011 – Nov. 2014) (Co-Investigator).
- **COMPLETED:** Spatial ecological modeling of the Gulf of Mexico supporting an Integrated Ecosystem Assessment. Florida Sea Grant (\$124,864) (Sept. 2012-Aug. 2015) (Principle Investigator)
- **COMPLETED:** California Current Model Exploratory Work. Department of Fisheries and Oceans. Government of Canada (\$16,000 CAD) (June 2009 – Aug. 2009) (Co-Investigator)
- **COMPLETED:** Evaluating the Human Dimensions of Fisheries. Martha Piper Research Fund. University of British Columbia (\$25,000 CAD) (Co-Investigator)
- **COMPLETED:** University Graduate Fellowship, Sept. 2004-April 2006. University of British Columbia. (\$32,000 CAD)
- **COMPLETED:** The Darkside of Marine Fisheries: Quantifying Illegal, Unreported and Unregulated (IUU) Catch in British Columbia. Ministry of Water, Land and Air Protection, Government of Canada (\$3,000 CAD) (Feb. 2004 – Mar. 2004). (Co-Investigator)
- **COMPLETED:** WWF State of Species Database V 1.01. The Nature Audit. World Wildlife Fund Canada (\$1,750 CAD) (Feb. 2003) (Awardee)
- **COMPLETED:** Spatial Investigations for the Gwaii Hanaas National Marine Conservation Area. World Wildlife Fund Canada (\$5,000 CAD) (Jan. 2003) (Co-investigator)

- **COMPLETED:** Provincial Scholarship, Sept 1992. (\$2,000 CAD)
- **COMPLETED:** Passport to Education, Sept 1992. (\$800 CAD)

Student accolades and awards

- Best Student Presentation GOMRI 2015 (\$500) L. Dornberger
- Garrels Memorial Fellowship in Marine Science (\$15000) L. Dornberger
- Mote Marine Laboratory Fellowship (\$144000) P. Suprenand
- Fulbright Scholar (\$32000) P. Suprenand
- Watkins Award (\$10000) L. Dornberger
- Bill Young Fellowship (\$10000) M. Masi
- Fish Florida Scholarship (\$1500) M. Masi
- Presidential Doctoral Fellowship (\$125000) K. Vasbinder
- Carl Riggs Fellowship (\$10000) M. Masi
- Jack and Katharine Ann Lake Fellowship (\$13000) L. Dornberger
- Gulf Oceanographic Charitable Trust (relinquished) (\$12000) M. Drexler
- Marine Resource Assessment Fellowship (\$40,000) E. Simpson
- Wells Fargo Fellowship (\$10000) L. Dornberger
- Sanibel Captiva/Bridell Memorial Fellowship (\$10000) A. Gray
- Aylesworth Scholarship (\$12000) M. Masi
- USF Student Travel grant (\$1500) M. Drexler
- USF Student Government Conference grant (\$600) M. Drexler
- Florida AFS student travel grant (\$135) M. Drexler
- Fish Florida Scholarship (\$2500) A.Gray
- Southern Kingfish Association Fellowship (\$10000) A.Gray
- Von Rosenstiel Fellowship (\$12000) A.Gray
- Fish Florida Scholarship (A. Gray) (\$2500) A. Gray
- Marine Resource Assessment Fellowship (\$33000) M. Drexler

Teaching experience

Postdoctoral & Research Associate Supervision

- Paul Suprenand (July 2013 to April 2014). Topic: Analysis of Northern Gulf of Mexico food web; analysis of fisheries independent monitoring program efficiency.
- Joel Ortega-Ortiz (Post-doc: Feb 2015-July 2015. Research Associate: July 2015-present). Topic: Biogeochemical modeling of IXTOC oil spill.
- Joe Tarnecki (Research Assistant: Sept 2014 – April 2016. Topic: Statistical analysis of fish diet compositions)

Graduate Student Supervision

- *Major academic advisor:* Michael Drexler (PhD, 2011-present). Topic: Long-term impacts from the Deepwater Horizon oil spill in the Gulf of Mexico examined using the Atlantis ecosystem model.
- *Major academic advisor:* Alisha Gray (M.Sc, 2011-2014). Topic: The influence of fisheries on red tide frequency and severity on the West Florida Shelf examined using Ecosim with Ecosim. (Graduated)

- *Major academic advisor:* Michelle Masi (PhD, 2012-2017). Topic: Integrated Ecosystem Assessment (IEA) for the Gulf of Mexico using the Atlantis ecosystem model. (Graduated)
- *Major academic advisor:* Lindsey Dornberger (PhD, 2012-present). Topic: Long-term impacts of the Deepwater Horizon oil spill in the Northeastern Gulf of Mexico examined using the Atlantis ecosystem model.
- *Major academic advisor:* Elizabeth Simpson (PhD, 2014-present). Topic: Succession dynamics on natural and artificial reefs.
- *Major academic advisor.* Brittany Combs (MS, 2013-2015). Topic: Manatee collision risk.
- *Major academic advisor:* Kelly Vasbinder (PhD, 2015-present). Topic. Management Strategy Evaluation in the Gulf of Mexico.
- *Academic committee member:*
 - **Current:** L. Dornberger (PhD, USF), M. Drexler (PhD, USF), K. Vasbinder (PhD, USF), E. Simpson (PhD, USF), H. Perryman (PhD, UM), M. Nutall, (PhD, UM), L. McEachron (PhD, UF), Matthew Brik (PhD, USF)
 - **Former:** P. Suprenand (PhD, USF), J. Fenton (MS, USF), B. Combs (MS,USF). D. Chacin (MS,USF), D. Varkey (PhD,UBC), L. Li (PhD,UBC), C. Crowley (PhD, USF) , E. Herdter (PhD, USF), M. Masi (PhD, USF).
- *Research project supervisor:* Janaina Bumbeer (MS, Federal University of Paraná, Brazil). Stacy Bohovsky (MA, USF School of Global Sustainability, 2012); Michael Estebahn (BE, USF Civil and Environmental Engineering, 2012)

Courses taught

- *Lecturer*, Fall (2012, 2014, 2016). Population dynamics and fisheries. OCE6934.641F. University of South Florida (3 credits).
- *Lecturer*, Fall (2013, 2015, 2017). Marine ecosystem modeling. OCE6934.641F. University of South Florida (3 credits).
- *Lecturer*, Fall (2017) Management Strategy Evaluation short course. ICES 2017 Annual Science Meeting.
- *Lecturer*, Spring (2016) R Code. OCE 6934.640S17. University of South Florida (1 credit)
- *Lecturer*, Fall (2011). Fisheries ecology reading course. OCE6934.640F11. University of South Florida. (1 credit)
- *Guest Lecturer*, Fall (2011, 2012, 2013, 2014, 2015). . Fish Biology. OCB 6050.607. University of South Florida. Instructor: Ernst Peebles.
- *Guest Lecturer*, Fall (2015) Marine Resource Remote Sensing. OCE6934.636. University of South Florida. Instructor: Chuanmin Hu
- *Guest Lecturer*, Fall (2011, 2012) Introduction to Oceanography. OCE2001.608. University of South Florida. Instructor: Kent Fanning
- *Lecturer*, June 2010. Atlantis training course (4 days) NOAA-SEFSC. Galveston, TX
- *Lecturer*, Nov 2009. Atlantis training course (4 days) CICESE. Ensenada, Mexico
- *Lecturer*, Sept 2009. Atlantis training course (3 days) NOAA-NWFSC. Seattle, WA

- *Guest Lecturer*, May 2008. Ecosystem modelling approaches and applications. BIOL 325. Western Washington University. Instructor: Peter Kiffney.
- *Guest Lecturer*, Oct. 2007. Restoration ecology: Department of Earth and Ocean Sciences. EOSC 478. University of British Columbia. Instructor: Evgeny Pakhomov
- *Guest Lecturer*, Nov. 2006. FISH 501. Bioeconomic restoration modelling. Department of Resource Management and Environmental Studies. University of British Columbia. Instructor: Villy Christensen
- *Lecturer*, Nov 2005. Ecopath with Ecosim training course (5 days). University of British Columbia Fisheries Centre. Vancouver, Canada.
- *Lecturer*, Sept 2005. Ecopath with Ecosim training course (4 days). Scottish Association for Marine Science. Oban, Scotland, UK.

Post-doctoral studies

- Post-Doctoral Researcher, Nov 2007 – March 2011. Atlantis Ecosystem Modelling. Northwest Fisheries Science Centre. National Oceanic and Atmospheric Administration (NOAA). Seattle, WA. PI: Dr. Phillip Levin. (Project value: \$401,549 USD)
- Post-Doctoral Researcher, Dec 2005 - Oct 2007. Birds Head Seascape Ecosystem Based Management Project in Papua, Indonesia. David and Lucile Packard Foundation. UBC Fisheries Centre. Vancouver, B.C. PI: Dr. Tony J. Pitcher. (Project value: \$140,000 CAD)

Continuing education

- Portland, OR. 2015. Introduction to Bayesian Inference Using Gibbs Sampling (BUGS) for Fish Biologists (I and II) AFS 2015 (Dr. Dan Rawding).
- St. Petersburg, FL. Aug. 2015. Presentation Boot Camp. USF College of Marine Science.
- St. Petersburg, FL. Nov. 2015. Stock Synthesis 3. FWRI (Dr. Rick Methot).
- Vancouver, BC. April 2013. Ecopath Programming Course. UBC (Dr. Villy Christensen)
- Seattle, WA. July 2010. Error Estimation in Trophic Modelling. Alaska Fisheries Science Center (NOAA) (Dr. Kerim Aydin)
- Seattle, WA. Nov. 2008. Data Analysis using Regression and Multilevel / Hierarchical models. Northwest Fisheries Science Center (NOAA) (Dr. Eli Holmes)
- February 2008. Biogeochemical modelling tools. DFO Pacific Biological Station, Nanaimo, Canada
- Vancouver, BC. Dec. 2007. Bayesian Decision Analysis. University of British Columbia. (Dr. Murdoch McAlister)
- Annapolis, MD. Aug. 2006. Ecopath with Ecosim VB .net programming course. Chesapeake Research Consortium. (Dr. Villy Christensen)
- Vancouver, BC. Dec. 2002. Programming in Visual Basic with special reference to Fisheries Science. University of British Columbia Fisheries Centre. (Dr. Steve Martell)
- Vancouver, BC. Feb. 2001. Scientific Writing Course. University of British Columbia Fisheries Centre.

Paid consultancies

- Editor, March 2016. Delta Management Fish and Shellfish Ecosystem Model. Prepared for the Coastal Protection and Restoration Authority of the State of Louisiana.
- Editor, March 2016. Development of the CASM for Evaluation of Fish Community Impacts for the Mississippi River Delta Management Study. Prepared for the Coastal Protection and Restoration Authority of the State of Louisiana.
- Consultant, Nov 2005. Benthic-Pelagic Linkages in MPA Design: A workshop to explore the application of science to vertical zoning approaches. National Oceanic and Atmospheric Administration. Monterey, CA. Nov 15-16, 2005.
- Consultant, May 2005. Guidelines for Assessment of Small-Scale/Data-Deficient Fisheries Case Study Workshop. Marine Stewardship Council. Rosenstiel School of Marine Science, University of Miami. May 2-5, 2005.
- Consultant, Mar 2005. Assessing Socio-Economic Impacts of SARA listings using Dynamic Stock Assessment Models. Department of Fisheries and Oceans. Vancouver, BC. Canada. March 22-23, 2005.
- Consultant, Jan 2004. North Coast Marine Workshop. Golder Associates. Burnaby, Canada.

Research interests

Along with my students and staff, I use a range of statistical and numerical models to investigate ecological and fisheries management-related research questions. My recent work has focused on the Gulf of Mexico. Between 2011 and 2016, I developed biogeochemical Atlantis models of the Gulf of Mexico and Campeche Bay. I am using them in a comparative study of the 2010 Deepwater Horizon oil spill and the 1979 IXTOC oil spill. Other applications of Atlantis include management strategy evaluation (conducted in collaboration with NOAA's Integrated Ecosystem Assessment program) and marine protected area design. In the latter case, I developed and coupled to Atlantis an individual based model for passive particle tracking to help explore larval connectivity patterns. This methodology has since been revised to include a generalized additive model for describing larval movement based on environmental predictors. Beginning in 2011, I wrote a series of papers on the Gulf of Mexico food web: these describe the latest and best estimates of trophic connectance available for this region, a meta-analysis of published diet data sets, and evaluation of the trophic structure as it relates to oil sensitivity. Management-focused efforts evaluated sampling efficiency in fisheries independent monitoring programs, and estimated harmful algal bloom mortality on reef fish. Other published contributions since 2011 include papers on climate change in coral reefs, climate change in global coastal systems, and a modelling best-practices paper on the Ecopath with Ecosim suite of modeling tools. One other ongoing project is comparing succession dynamics on natural and artificial reefs using a Markov state transition model.

In a previous position as a Post-doctoral Fellow at the Northwest Fisheries Science Center (NOAA) in Seattle I was responsible for modelling and field studies in the Gulf of

California (Mexico). I designed and directed trawl surveys, community interviews, fish gut content analysis, and biometric studies. These formed the basis of an Atlantis ecosystem model of the Gulf of California. Applications of the model include analysis of gear regulations and recovery planning for the endangered vaquita, a cetacean. In my previous Post-doctoral position at the University of British Columbia Fisheries Centre I coordinated field work in Papua, Indonesia, developed spatial ecosystem models, and developed EcoLocator, novel software for spatial analysis of coral reef communities.

My PhD thesis used Ecopath with Ecosim ecosystem modelling to design and test optimal restoration strategies for northern British Columbia.

Service

Panels and committees

- (2016) NOAA Sea Grant Population and Ecosystem Dynamics Fellowship review panel.
- (2015-2017) NCEAS Working Group (Exxon Valdez impacts, Gulf of Alaska)
- (2015) GFMC Fishery Ecosystem Plan Technical Working Group.
- (2015) COCA FY14 Climate impacts on fish proposal review panel, NOAA. Silver Springs, MD.
- (2014-2015) Vice-Chair, Gulf of Mexico Fishery Management Council's Ecosystem Science and Statistical Committee
- (2012-2014) Gulf of Mexico Fishery Management Council's Ecosystem Science and Statistical Committee
- (2013) SEDAR 33 (Southeast Data Assessment and Review) ecosystem working group for the gag grouper stock assessment.

University committees

- (2017-present) CMS Ethics Committee
- (2017-present) CMS Faculty Evaluation Committee
- (2016-present) USF Council on Technology for Instruction and Research
- (2015-present) CMS Curriculum Committee.
- (2011-present) CMS Marine Resource Assessment Program Committee
- (2011-present) CMS Faculty Search Committees (various)
- (2011-present) CMS Information Technology Committee
- (2011-2014) CMS Seminar Committee.
- (2012) CMS Undergraduate Education Committee
- (2013) CMS (Chair), MRA Certificate Program Committee

Other

- (2015, 2017) Session Organizer, GOMRI Symposium
- (2014) Subject editor, Ecological Applications
- (2012-Present) Ecopath with Ecosim Research Consortium member.
- (2006-2007) Founding member, Pacific Marine Analysis and Research Association (PacMARA).
- (2006) AquaLink Graduate Student Association.
- (1993-1994) President, Vancouver School of Theology Residents Association

- (1992-1993) Vice President, Vancouver School of Theology Residents Association
- (1992) Deckhand, Commercial salmon gillnetter British Columbia.

Article and proposal reviews since 2006 (# of articles)

Ecological Modelling (12)	Estuarine, Coastal and Shelf Science (1)
Ecology and Society (1)	Fisheries Research (4)
Marine Ecology Progress Series (18)	Hawaii Sea Grant (1)
Fish and Fisheries (15)	Hydrobiologia (1)
CAMEO (NOAA/NSF) (4)	Marine Environmental Research (1)
ICES Journal of Marine Science (5)	N. American Journal of Fisheries Management (1)
American Fisheries Society Books (1).	New Zealand J. Mar. and Freshwater Research (1)
Aquatic Living Resources (1)	Progress in Oceanography (1)
Biological Conservation (2)	R Journal (1)
Bulletin of Marine Science (2)	Ecosystems (1)
Conservation Biology (2)	Ecological Applications (3) (subject editor) (1)
CT NY Sea Grant (1)	PhD Theses examiner: Internal (1); External (2)
Florida Sea Grant (2)	National Science Foundation (3)
Global Change Biology (2)	Washington Sea Grant (1)
Gulf of Mexico Science (1)	National Geographic Society (1)
Coastal Management Journal (1)	Elsevier Books (1)
Fisheries Management and Ecology (1)	NOAA Internal Reviews (5)
PLoS Computational Biology (1)	PLoS One (1)
Env. Science and Tech. (1)	Journal of Coastal Research (1)
NMFS Tech. Memo. (1)	NOAA MARFIN (1)
Reviews in Fish Biology and Fisheries (1)	NOAA Saltonstall-Kennedy (1)
Frontiers in Marine Science (1)	NPRB (2)

Technical skills

R, Visual Basic & VBA / Excel, C++, Atlantis, EwE, ArcGIS, Matlab, GitHUB, SVN, Linux

Presentations (selected)

- **Tampa, FL.** March 2017. Deepwater Horizon oil spill impacts American Fisheries Society (Oral presentation)
- **New Orleans, LA.** Jan 2017. GOMRI Symposium Session Keynote. (Oral presentation).
- **Coral Springs, FL.** April 2016. Ecosystem recovery following the DWH oil spill evaluated using an end-to-end model. National Conference on Ecosystem Restoration (Oral presentation).
- **Tampa, FL.** Jan 2016. Evaluation of DWHOS ecosystem impacts using an Atlantis biogeochemical model. In 2016 GOMRI Science Conference (Poster presentation).
- **Gainesville, FL.** Sept 2015. Development of an Atlantis Model for Integrated Ecosystem Assessment. Coastal Science Symposium (Oral presentation).

- **Portland, OR.** Aug 2015. Development of an Atlantis model for studying Deepwater Horizon Impacts. American Fisheries Society (Oral presentation).
- **Houston, TX.** Feb 2015. Development of an Atlantis ecosystem model to study ecosystem impacts of DWHOS. GOMRI Science Conference (Oral presentation).
- **Houston, TX.** Feb 2015. Ecosystem modeling: an approach to estimate effects of PAHs on fishes. GOMRI Science Conference (Oral presentation) (Presenter: L. Dornberger)
- **Barcelona, Spain.** Gulf of Mexico Species Interactions (GOMEXSI): integrated ecosystem trophic data for ecopath models and ecosystem based fisheries management. 30 year Anniversary Ecopath with Ecosim Symposium (Poster presentation) (Presenter: J. Simons)
- **St. Petersburg, FL.** May 2014. NOAA Quest webinar (online) (Oral presentation).
- **Honolulu, HI.** February 2014. Ecosystem modelling in the Gulf of Mexico supporting an integrated ecosystem assessment. Ocean Science Meeting (Oral presentation)
- **Honolulu, HI.** February 2014. Implementation of new spatial forcing functions in the Atlantis modeling framework to accurately represent oil spill impacts in the Gulf of Mexico. Ocean Science Meeting (Poster presentation) (Presenter: L. Dornberger)
- **Mobile, AL.** January 2014. Development of an Atlantis ecosystem model to study food web impacts of DWHOS. Gulf of Mexico Oil Spill and Ecosystem Science Conference. (Oral presentation)
- **Mobile, AL.** January 2014. Implementation of new spatial forming functions in the Atlantis modeling framework to accurately represent oil spill impacts in the GoM. Gulf of Mexico Oil Spill & Ecosystem Science Conference. (Poster presentation) (Presenter: L. Dornberger).
- **Mobile, AL.** January 2014. Modeling population connectivity, larval drift, and cumulative contaminate exposure mortality in the GoM. Gulf of Mexico Oil Spill & Ecosystem Science Conference. (Poster presentation) (Presenter: M. Drexler)
- **La Coruna, Spain.** September 2014. The use of zero inflated generalized additive models to predict aggregate functional group distributions for the Gulf of Mexico. ICES Annual Science Conference (Oral presentation) (Presenter: M. Drexler)
- **Merida, Mexico.** December 2013. Diet study to support Integrated Ecosystem Assessment. Fisheries Diet Data Compilation and Research: Toward an Integrated Ecosystem Assessment in the Gulf of Mexico (CINVESTAV).
- **NPR interview.** October, 2013. Program “Living On Earth with Steve Curwood”. National radio environmental news and information program. Re: oil spill research.
- **New Orleans, LA.** Feb 2013. Development of an Atlantis ecosystem model to study food web impacts of DWHOS. GOMRI Conference. (Oral presentation).
- **Queen Charlotte City, BC.** November 2012. Northern BC models. Parks Canada. Invited. (Oral presentation).
- **Monterey, CA.** May 2012. Restoring the Gulf of California. Hopkins Marine Station. Stanford University. Invited speaker.
- **Gainesville, FL.** Sept 2012. Ecosystem Modelling in the Gulf of Mexico. University of Florida. Invited. (Oral presentation).
- **Miami, FL.** Sept. 2011. In a perfect world: imagining full compliance with fisheries regulations in the Sea of Cortez. RSMAS University of Miami. Invited. (Oral presentation).
- **Monterey, CA.** August 2011. Role of ecosystem modelling in NOAA’s Integrated Ecosystem Analysis. Southwest Fisheries Science Centre, Pacific Grove. Invited. (Oral presentation).

- **Daytona Beach, FL.** 2011. Development of an Atlantis Ecosystem-Based Model for the Louisiana-Texas Continental Shelf. Coastal and Estuarine Research Federation Daytona International Conference (Poster presentation) (Presenter: A. Adamack)
- **Sendai, Japan.** December 2010. Tools for modelling marine food webs and fisheries. Tohoku University. Invited. (Oral presentation).
- **St. Andrews, New Brunswick.** Sept 2009. Trophodynamic ecosystem modeling: test bed for ecosystem-based fisheries management approaches. St. Andrews Biological Station. Invited. (Oral presentation).
- **Vancouver, BC.** May 2009. Oceans Past II. History of Marine Animal populations. Census of Marine Life (Session chair) (Oral presentation).
- **Sarasota, FL.** November 2008. Spatial Ecosystem Modelling of the Upper Gulf of California. Mote International Symposium. (Poster presentation).
- **Guaymas, Mexico.** March 2008. Atlantis Ecosystem Modelling of the Gulf of California. CIBNOR. Invited. (Oral presentation).
- **Santa Cruz, CA.** Oct. 2006. Ecosystem-Based Management in the Marine Environment: Case Studies and Moving Forward. Santa Cruz, CA. TNC and the David and Lucille Packard Foundation. (Oral presentation).
- **Kolberg, Denmark.** Oct. 2005. Ecosystem Restoration in Northern British Columbia. Oceans Past: History of Marine Animal Populations. Census of Marine Life. (Oral presentation).
- **Barcelona, Spain.** Sept. 2005. Constructing Ecosystem Models of the Past. History of Marine Animal Populations. Census of Marine Life. (Oral presentation)
- **Aberdeen, UK.** Sept. 2005. A Whole Ecosystem Approach to Marine Restoration: Optimal Strategies for Northern British Columbia. ICES Annual Science Conference. (Oral presentation).
- **Vancouver, Canada.** May 2005 Economic Evaluation of Marine Ecosystem Restoration in Northern British Columbia. NAAFE Forum: Fisheries Benefits to All Generations: The Role of Economics. North American Association of Fisheries Economists. (Oral presentation).
- **Barcelona, Spain.** September 2004 Constructing Ecosystem Models of the Past: Structure and Data Sources. International Conference. Oral presentation. Historical Mapping of Animal Populations (HMAP) Mediterranean Workshop. (Oral presentation).
- **Anchorage, AK.** Oct. 2003. Evaluating Marine Ecosystem Restoration Goals for Northern British Columbia. Fisheries Assessment and Management in Data-Limited Situations. Alaska Sea Grant College Program. (Oral presentation).
- **Nice, France.** Oct. 2003. Developing Restoration Strategies and Responsible Harvest Plans for the Marine Ecosystem of Northern British Columbia. Strategic Management of Marine Ecosystems workshop. NATO. Invited. (Oral presentation).
- **Rome, Italy.** Oct. 2003. Evaluating Ecosystem Restoration Goals for BC. Food and Agricultural Organization. Invited. (Oral presentation).
- **Quebec City, QB.** Aug. 2003. Back to the Future in Newfoundland. American Fisheries Society Annual Symposium. (Oral presentation).
- **Victoria, Canada.** May 2003 Evaluating Whole Ecosystem Restoration Goals for Northern BC. 5th Annual International Conference: Science and Management of Marine Protected Areas (SAMPAA) (Oral presentation).

- **Queen Charlotte City, Canada.** May 2003 Evaluating Ecosystem Restoration Strategies in Northern BC. Towards a Network of Marine Protected Areas for BC's North Coast. World Wildlife Fund. (Oral presentation).
- **Vancouver, Canada.** May 2003. Developing Restoration Strategies for the Marine Ecosystem of Northern British Columbia. BC Studies Conference. (Oral presentation).
- **La Paz, Mexico.** Nov. 2002. Using Local Environmental Knowledge to Improve Ecosystem models of Northern BC. CICIMAR. Invited. (Oral presentation).
- **St. Johns, NFLD.** Sept. 2002. Opening the Lost Valley: Evaluating Options for Restoration. Coasts Under Stress. (Poster presentation).
- **Vancouver, Canada.** Feb 2002. Ecosystem Simulation Models of Northern BC. Institutional Conference. Back to the Future: Methods and Results Symposium. (Oral presentation).

Technical publications

1. Meselhe, E., Costanza, K., **Ainsworth, C.H.**, Chagaris, D., Addis, D., Simpson, E., Rodrigue, M., Jung, H. and Smits, J. 2017. Models performance assessment metrics for the LCA Mississippi River hydrodynamic and delta management study. Report for the Coastal Protection and Restoration Authority. The Water Institute of the Gulf. Available: emeselhe@thewaterinstitute.org
2. **Ainsworth, C.H.**, 2016. Peer review of EwE and CASM Mississippi River Delta Management Studies: Editors Report. Prepared for the Water Institute of the Gulf under project CPRA-2016-TO39-DR. University of South Florida. St. Petersburg, FL. 61 pp
3. Kumar, R., Surma, S., Pitcher, T.J., Varkey, D., Lam, M., **Ainsworth, C.H.** and Pakhomov, E. 2016. An ecosystem model of the ocean around Haida Gwaii, northern British Columbia: Ecopath, Ecosim and Ecospace. Institute for the Oceans and Fisheries, University of British Columbia, Canada. Fisheries Centre Research Reports.
4. **Ainsworth, C.H.** 2015. British Columbia Marine Fisheries Catch Reconstruction: 1873-2010. Fisheries Centre Working Paper Series. Working Paper #2015-62. 9 pp.
5. **Ainsworth, C.H.**, Schirripa, M.J. and Morzaria-Luna, H. (eds.), 2015. An Atlantis ecosystem model for the Gulf of Mexico supporting Integrated Ecosystem Assessment. US Dept. Comm. NOAA Technical Memorandum NMFS-SEFSC-676. 149 pp.
6. **Ainsworth, C.H.** 2015. Canada (Pacific), In: D. Pauly and D. Zeller (eds.) Atlas of Fisheries Impacts on the World's Marine Ecosystems, 1950-2010. Island Press, Washington, D.C.
7. **Ainsworth, C.H.**, Chagaris, D., Addis, D. and Simpson, E. 2014. Model performance evaluation for EwE, Trosim and CASM. Interim report prepared for the Water Institute. University of South Florida, St. Petersburg, FL. 32 pp. Available: ainsworth@usf.edu.
8. Simons, J., Poelen, J.H., Yuan, M., Vega-Cendejas, M.E., Carollo, C., Reed, D. and **Ainsworth, C.H.** 2014. Gulf of Mexico species interactions (GoMexSI):

- Integrated ecosystem trophic data for Ecopath models and ecosystem based fisheries management. Fisheries Centre Research Reports, 22(3): 172-174.
9. Suprenand, P.M., Drexler, M., Jones, D.L., **Ainsworth, C.H.** 2014. Strategic assessment of fisheries independent monitoring programs in the Gulf of Mexico. Report to the Ocean Conservancy. Marine Science Faculty Publications. Paper 218. Available: http://scholarcommons.usf.edu/msc_facpub/218/
 10. Sagarese, S.R., Gray, A.M., **Ainsworth, C.H.**, Chagaris, D.D., Mahmoudi, B., 2014. Red tide mortality on red grouper (*Epinephelus morio*) between 1980 and 2009 on the West Florida Shelf. SEDAR 42 Working Paper. SEDAR, North Charleston, SC. 11 pp.
 11. Grüss, A., Schirripa, M.J., Chagaris, D., Verley, P., Shin, Y.-J. , Velez, L., **Ainsworth, C. H.**, Sagarese, S. R., and Karnauskas, M. 2014. Evaluation of the natural mortality rates of red grouper (*Epinephelus morio*) in the West Florida Shelf ecosystem using the individual-based, multi-species model OSMOSE-WFS. SEDAR 42 Working Paper. SEDAR, North Charleston, SC. 70 pp.
 12. Gray, A., **Ainsworth, C.**, Chagaris, D. and Mahmoudi, B., 2013. Red tide mortality on gag grouper 1980-2009. Working paper. SEDAR 33. SEDAR, North Charleston, SC. 44 pp
 13. Grüss, A., M.J. Shirripa, D. Chagaris, M.D. Drexler, J. Simons, P. Verley, Y.-J. Shin, R. Oliveros-Ramos, M. Karnauskas, and **C.H. Ainsworth**. 2013. Natural mortality rates and diet patterns of gag grouper (*Mycteroperca microlepis*) in the West Florida Shelf ecosystem in the 2000s: Insights from the individual-based, multi-species model OSMOSE-WFS. SEDAR33-AW22. SEDAR, North Charleston, SC. 44 pp
 14. Levin, P., **Ainsworth, C.H.**, deReynier, Y., Dunsmore, R., Fogarty, M., Holsman, K., Howell, E., Kelble, C., Monaco, M., Oakes, S., Shuford, R. and Werner, C. 2012. Integrated Ecosystem Assessment: Guidance for Implementation. Internal NMFS Report. 31pp.
 15. Kaplan, I.C., Horne, P.J., Levin, P.S., **Ainsworth, C.H.**, Samhour, J.F., Busch, S., Cheung, W., Dunne, J., Okey, T., Merrick, B., Fulton, E.A., 2011. The evaluation of management strategies. NOAA Technical Memorandum. NMFS-NWFSC, 109: 141-218.
 16. **Ainsworth, C.H.**, Kaplan, I.C., Levin, P.S., Cudney-Bueno, R., Fulton, E.A., Mangel, M., Turk-Boyer, P., Torre, J., Pares-Sierra, A. and Morzaria-Luna, H. 2011. Atlantis model development for the Northern Gulf of California. U.S. Dept. Commer., NOAA Tech. Memo. NMFS-NWFSC-110, 293p. Available: http://www.nwfsc.noaa.gov/assets/25/7784_08012011_125850_AtlantisModelTM110WebFinal.pdf
 17. **Ainsworth, C.H.**, Kaplan, I.C., Levin, P.S. and Mangel, M. 2009. Diet compositions of fish species in the Northern Gulf of California. Integrative Marine Ecology. In Morzaria-Luna, H (ed.) Publication for the PANGAS project. Available: ainsworth@usf.edu.

18. **Ainsworth, C.H.**, Varkey, D., and Pitcher, T.J., 2008. Ecosystem Simulation Models of Raja Ampat, Indonesia, in Support of Ecosystem-Based Fisheries Management. Pages 3-124 in: Bailey, M. and Pitcher, T.J. (Eds.) Ecological and Economic Analyses of Marine Ecosystems in the Bird's Head Seascape, Papua, Indonesia: II. Fisheries Centre Research Reports 16(1): 186 pp.
19. **Ainsworth, C.H.**, 2008. EcoLocator User's Guide. Pages 179-186 in: Bailey, M. and Pitcher, T.J. (Eds.) Ecological and Economic Analyses of Marine Ecosystems in the Bird's Head Seascape, Papua, Indonesia: II. Fisheries Centre Research Reports 16(1): 186 pp
20. Varkey, D., Pitcher, T.J. and **Ainsworth, C.H.**, 2008. Ecosystem Based Management: the Influence of a Project in Raja Ampat, Papua Indonesia. Pages 171-177 in: Bailey, M. and Pitcher, T.J. (Eds.) Ecological and Economic Analyses of Marine Ecosystems in the Bird's Head Seascape, Papua, Indonesia: II. Fisheries Centre Research Reports 16(1): 186 pp
21. **Ainsworth, C.H.** and Varkey, D., 2008. Collaborative EBM Project in Indonesia Bears Fruit. Fishbytes 13(6): 1-2.
22. **Ainsworth, C.H.**, Varkey, D. and Pitcher, T.J. 2007. Ecosystem simulation models of Raja Ampat, Indonesia in Support of Ecosystem Based Fisheries Management. Final technical report for the Birds Head Seascape Ecosystem Based Management Project. University of British Columbia Fisheries Centre. December 2007, 111 pp. Available: ainsworth@usf.edu.
23. **Ainsworth, C.H.**, Varkey, D. and Pitcher, T.J. 2007. Ecosystem simulation models for the Bird's Head Seascape, Papua, fitted to data. Pages 6-172 in: Pitcher, T.J., Ainsworth C.H. and Bailey, M. (Eds.) Ecological and Economic Analyses of Marine Ecosystems in the Birds Head Seascape, Papua, Indonesia. Fisheries Centre Research Reports 15(5): 182 pp.
24. Alcock, E., Harris, D., Ings, D., Kennedy, J., Mackie, Q., Murray, G., Neis, B., Pitcher, T.J., Haggan, N., **Ainsworth, C.H.**, Sumaila, R., Rogers, K., Ryan, D., Vodden, K. and Whelan, J. 2007 A Social-Ecological History of Canada's Fisheries. Chapter 2 in: Ommer, R. (Ed.) with the Coasts Under Stress Team, Coasts Under Stress. Restructuring and the Social-Ecological Health. McGill-Queens University Press. Montreal.
25. Baker, K., Davis, R., Haedrich, D., Hamilton, L., Pitcher, T.J., Heymans, S., Sumaila, R., **Ainsworth, C.H.**, Vodden, K. and Wroblewski, J. 2007. New Options for Governance I: Marine and Coastal Waters. Chapter 14 in: Ommer, R. (Ed.) with the Coasts Under Stress Team, Coasts Under Stress. Restructuring and the Social-Ecological Health. McGill-Queens University Press. Montreal.
26. **Ainsworth, C.H.** and Pitcher, T.J. 2005. A Whole Ecosystem Approach to Marine Restoration: Optimal Strategies for Northern British Columbia. ICES CM 2005/BB:03.
27. Pitcher, T.J, **Ainsworth, C.H.**, Lozano, H., Cheung, W.L. and Skaret, G. 2005. Evaluating the Role of Climate, Fisheries and Parameter Uncertainty using Ecosystem-Based Viability Analysis. ICES CM 2005/M:24, 1-6.

28. **Ainsworth, C.H.** and Pitcher, T.J. 2005. Dynamic Simulations with Ecosim. In: Haggan, N. and Pitcher, T. (Eds.). *Ecosystem Simulation Models of Scotland's West Coast and Sea Lochs*. Fisheries Centre Research Reports 13(4): 42-46.
29. Chuenpagdee, R., Bundy, A., **Ainsworth, C.H.**, Buchary, E.A., Cheung, W.L., Dingerson, L., Ferris, B., Freire, K.M, Giannico, G., Holt, C., Labert, D., Liguori, L., Liu, Y., Nandakumar, D., Poon, A., Salas, S., Salomon, A., Simms, J., Turnipseed, M. and Ware, C. 2005. Reconciling Fisheries with Conservation: Overview of Papers Presented at the Fourth World Fisheries Congress. In: Chuenpagdee, R. and Bundy, A. (Eds.) *Innovation and Outlook in Fisheries: an Assessment of the Research Presented at the Fourth World Fisheries Congress*. Fisheries Centre Research Reports 13(2): 7-17.
30. Cheung, W.L., **Ainsworth, C.H.**, Simms, J. and Buchary, E.A. 2005. Tools to Reconcile Fisheries with Conservation. In: Chuenpagdee, R. and Bundy, A. (Eds.) *Innovation and Outlook in Fisheries: an Assessment of the Research Presented at the Fourth World Fisheries Congress*. Fisheries Centre Research Reports 13(2): 49-55.
31. **Ainsworth, C.H.** and Dingerson, L. 2005. Results from the Panel Discussion: Priority Areas for Research Identified at the Fourth World Fisheries Congress. In: Chuenpagdee, R. and Bundy, A. (Eds.) *Innovation and Outlook in Fisheries: an Assessment of the Research Presented at the Fourth World Fisheries Congress*. Fisheries Centre Research Reports 13(2):67-70.
32. **Ainsworth, C.H.** and Pitcher, T.J. 2004. The Dark Side of BC Marine Fisheries: Estimating Illegal, Unreported and Unregulated Catch. State of Environment Reporting. Internal Report. Ministry of Water, Land and Air Protection. 44 pp.
33. **Ainsworth, C.H.** 2004. Spatial Investigations for the Gwaii Haanas National Marine Conservation Area. Internal Report. World Wildlife Fund Canada. 29 pp.
34. **Ainsworth, C.H.** 2004. Estimating the Effects of Prey-predator Vulnerability Settings on Ecosim's Dynamic Function. In: T. Pitcher (Ed.) *Back to the Future: Advances in Methodology for Modelling and Evaluating Past Ecosystems as Future Policy Goals*. Fisheries Centre Research Reports 12(1): 45-47.
35. **Ainsworth, C.H.**, Heymans, S. and Pitcher, T.J. 2004. Policy Search Methods for Back to the Future. In: T. Pitcher (Ed.) *Back to the Future: Advances in Methodology for Modelling and Evaluating Past Ecosystems as Future Policy Goals*. Fisheries Centre Research Reports 12(1): 48-63.
36. **Ainsworth, C.H.** and Pitcher, T.J. 2004. Modifying Kempton's Species Diversity Index for Use with Dynamic Ecosystem Simulation Models. In: T. Pitcher (Ed.) *Back to the Future: Advances in Methodology for Modelling and Evaluating Past Ecosystems as Future Policy Goals*. Fisheries Centre Research Reports 12(1): 91-93.
37. **Ainsworth, C.H.** and Sumaila, U.R. 2004. Economic Valuation Techniques for Back to the Future Optimal Policy Searches. In: T. Pitcher (Ed.) *Back to the Future: Advances in Methodology for Modelling and Evaluating Past Ecosystems as Future Policy Goals*. Fisheries Centre Research Reports 12(1): 104-107.

38. **Ainsworth, C.H.** and Sumaila, U.R. 2004. An Employment Diversity Index used to Evaluate Ecosystem Restoration Strategies. In: T. Pitcher (Ed.) *Back to the Future: Advances in Methodology for Modelling and Evaluating Past Ecosystems as Future Policy Goals*. Fisheries Centre Research Reports 12(1): 108.
39. **Ainsworth, C.H.** 2004. How we carried out the Back to the Future community interviews. In: T. Pitcher (Ed.) *Back to the Future: Advances in Methodology for Modelling and Evaluating Past Ecosystems as Future Policy Goals*. Fisheries Centre Research Reports 12(1): 117-125.
40. **Ainsworth, C.H.**, 2003. AFS 2003 meeting in Quebec City. *Fishbytes* 9(4).
41. **Ainsworth, C.H.** and Lozano, H., 2003. Back to the Future in the Sea of Cortez. *Fishbytes* 9(1).
42. **Ainsworth, C.H.** and Sumaila, U.R. 2003. Intergenerational discounting and the conservation of fisheries resources: a case study in Canadian Atlantic cod. In: Sumaila, U.R. (Ed.) *Three Essays on the Economics of Fishing*. Fisheries Centre Research Reports 11(3): 26-33.
43. **Ainsworth, C.H.**, Buchary, E. and Heymans, S. 2002. Report on Discussions: Group 5 (Models). In: T. Pitcher, M. Power and L. Wood (Eds.) *Restoring the Past to Salvage the Future: Report on a Community Participation Workshop in Prince Rupert, BC*. Fisheries Centre Research Reports 10(7): 17-19.
44. **Ainsworth, C.H.** 2002. Simulations Requested by Group 1. In: T. Pitcher, M. Power and L. Wood (Eds.) *Restoring the Past to Salvage the Future: Report on a Community Participation Workshop in Prince Rupert, BC*. Fisheries Centre Research Reports 10(7): 20-21.
45. **Ainsworth, C.H.** 2002. What the interviews have shown. In: T. Pitcher, M. Power and L. Wood (Eds.) *Restoring the Past to Salvage the Future: Report on a Community Participation Workshop in Prince Rupert, BC*. Fisheries Centre Research Reports 10(7): 35-36.
46. **Ainsworth, C.H.** 2002. Can we split the Ecosim fisheries by license type? In: T. Pitcher, M. Power and L. Wood (Eds.) *Restoring the Past to Salvage the Future: Report on a Community Participation Workshop in Prince Rupert, BC*. Fisheries Centre Research Reports 10(7): 36-37.
47. **Ainsworth, C.H.** 2002. Rapporteur's Report on Plenary Discussions. In: T. Pitcher, M. Power and L. Wood (Eds.) *Restoring the Past to Salvage the Future: Report on a Community Participation Workshop in Prince Rupert, BC*. Fisheries Centre Research Reports 10(7): 41-42.
48. Buchary, E., Heymans, S. and **Ainsworth, C.H.** 2002. Final Discussion on the Models of Northern BC. In: T. Pitcher, M. Power and L. Wood (Eds.) *Restoring the Past to Salvage the Future: Report on a Community Participation Workshop in Prince Rupert, BC*. Fisheries Centre Research Reports 10(7): 47-48.
49. **Ainsworth, C.H.**, Heymans, S., Pitcher, T.J. and Vasconcellos, M. (Eds.) 2002. *Ecosystem Models of Northern British Columbia for the Time Periods 2000, 1950, 1900 and 1750*. Fisheries Centre Research Reports 10(4): 41 pp.
50. **Ainsworth, C.H.** 2001. Electronic Database of British Columbia Fisheries Catches. *Fishbytes* 7(4).

51. **Ainsworth, C.H.** 2001. How Does Your Information Compare with Scientific Estimates? Institutional Conference. Poster presentation. Community Input Workshop. Back to the Future: policy consultation and simulations. Prince Rupert, BC, Canada. Coasts Under Stress MCRI. December 2001.
52. **Ainsworth, C.H.**, Ferriss, B., Leblond, E. and Guenette, S. 2001. The Bay of Biscay, France: 1998 and 1970 Models. In: S. Guenette, V. Christensen and D. Pauly (Eds.) Fisheries Impacts on North Atlantic Ecosystems: Models and Analyses. Fisheries Centre Research Reports 9(4): 271-313.