# DR. CAMERON H. AINSWORTH

# **Curriculum Vitae**

## General

Associate Professor, Fisheries Oceanography 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: <u>http://www.marine.usf.edu/ainsworthecology/</u> Google Scholar: <u>https10</u>

## Education

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

## Work history

- June 2017-Present. Associate Professor, College of Marine Science. University of South Florida
- April 2011-June 2017. Assistant Professor, College of MarineJ. Pitcher
  - December 2005-April 2006. Graduate Student Researcher. University of British Columbia Fisheries Centre. Vancouver, BC. Supervisor: Dr. Tony J. Pitcher
  - August 2000 May 2001. Research Assistant. Sea Around Us Project. University of British Columbia Fisheries Centre. Vancouver, BC. Supervisor: Dr. Daniel Pauly

## Other appointments

- June 2018-present. Council Member. Ecosystem Science and Statistical Committee of the Gulf of Mexico Fisheries Management Council.
- May 2018-Present. Member. United Nations Pool of Experts. Division for Ocean Affairs and the Law of the Sea. Secretariat for the Regular Process for Global Reporting and

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

#### 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

# **Publications**

Citations per year – Google Scholar

	All	Since 2015
Citations	3457	1973
h-index	30	24
i10-index	68	45
Total peer reviewed	75	42
Papers per year	5.0	8.0

#### Peer-reviewed articles

\*Student or staff as lead author

- 1. Lewis, K.A., Rose, K.A., De Mutsert, K., Sable, S., Ainsworth, C., Brady, D., Townsend, H., in review. Using multiple ecological models to inform environmental decision making. Frontiers in Marine Science
- Rohal, M., Ainsworth, C.H., Lupher, B., Montagna, P.A., Paris-Limouzy, C., Suprenand, P.M., Yoskowitz, D., Perlin, N.2020. The Effect of the Deepwater Horizon Oil Spill on Ecosystem Services in the Northern Gulf of Mexico. Environmental Modelling and Software. (in press)
- 3. Natugonza, V., **Ainsworth, C.H.**, Sturludóttir, E., Musinguzi, L., Ogutu-Ohwayo, R., Tomasson, T., Nyamweya, C., Stefansson, G., 2020. Simulating trade-offs between

- 15. \*Morzaria-Luna, H., **Ainsworth, C.H**., Tarnecki, J., and Grüss, A., 2018. Diet composition uncertainty determines impacts on fisheries following an oil spill. Ecosystem Services, 33: 187-198.
- 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. 2018. Impacts of the Deepwater Horizon oil spill evaluated using an end-to-end ecosystem model. PLoS One. 2018 Jan 25;13(1):e0190840. doi: 10.1371/journal.pone.0190840.
- 17. Olsen, E., Kaplan, I.C., Ainsworth, C.H., 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. 2018. Ocean futures as explored using a worldwide suite of ecosystem models. Front. Mar. Sci., 01 March 2018 | https://doi.org/10.3389/fmars.2018.00064.
- Gruss, A., Drexler, M.D., Ainsworth, C.H., Babcock, E.A., Tarnecki, J.H. and Love, M.S. 2018 Producing Distribution Maps for a Spatially-Explicit Ecosystem Model Using Large Monitoring and Environmental Databases and a Combination of Interpolation and Extrapolation. Front. Mar. Sci., 31 January 2018. https://doi.org/10.3389/fmars.2018.00016
- 19. \*Masi, M., Ainsworth, C.H., Kaplan, I.K., Schirripa, M.J. 2018. Inter-specific interactions may influence reef fish management strategies in the Gulf of Mexico. Marine and Coastal Fisheries, 10(1): 24-39. DOI: 10.1002/mcf2.10001

20.

- 27. \*Dornberger, L., **Ainsworth, C.H.**, 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.
- 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.
- 29. \*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.
- 30. Grüss, A., Schirripa, M.J., Chagaris, D., Velez, L., Shin, Y-J., Verley, P., Oliveros-Ramos, R. and Ainsworth, C.H., (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.
- Ainsworth, C.H. (2016). British Columbia Marine Fisheries Catch Reconstruction: 1873 to 2011. BC Studies, 188: 81-90.
- 32. Ainsworth, C.H., and Walters, C.J. (2015). Ten common mistakes made in Ecopath with Ecosim modelling. Ecological Modelling, 308: 14-17.
- 33. \*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.
- 34. 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.
- 35. 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.
- 36. 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.
- 37. 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
- \*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.
- 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.
- 40. 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

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# **Teaching statement**

## **Teaching goals**

- 1. Encourage critical thinking by introducing students to the epistemological elements that differentiate science from other disciplines: falsifiability, the value of converging evidence, the tentative nature of hypotheses and the durability of well-supported theory.
- 2. Promote students' long-term professional growth by helping them to develop professional networks
- 3. Provide students with a robust technical education in quantitative marine science.
- 4. Support continuing education for professional stock assessment scientists

# **Courses taught**

Instructor of record

- Fall (2012, 2014, 2016, 2018). Population dynamics and fisheries. OCE6934.641. University of South Florida (3 credits).
- Fall (2013, 2015, 2017, 2019). Marine ecosystem modeling. OCE6934.641. University of South Florida (3 credits).
- Fall (2019) Applied Methods in Fisheries Science. University of South Florida (1 credit)
- Fall (2017) Management Strategy Evaluation short course. ICES 2017 Annual Science Meeting.
- Spring (2016) R Code. OCE 6934.640. University of South Florida (1 credit).
- Fall (2011). Fisheries ecology reading course. OCE6934.640. University of South Florida. (1cr)
- Fall (2011, 2012, 2013, 2014, 2015). Fish Biology. OCB 6050.607. University of South Florida. Instructor: Ernst Peebles.
- June 2010. Atlantis training course (4 days) NOAA-SEFSC. Galveston, TX
- Dec 2019. Ecopath with Ecosim Intro (3 days) Ecopath35. USF CMS St. Petersburg, FL.
- Nov 2009. Atlantis training course (4 days) CICESE. Ensenada, Mexico
- Sept 2009. Atlantis training course (3 days) NOAA-NWFSC. Seattle, WA
- 2005 Scottish Association for Marine Science. Oban, Scotland

#### Guest Lecturer

- Fall (2015; 2019) Marine Resource Remote Sensing. OCE6934.636. University of South Florida. Instructor: Chuanmin Hu.
- Fall (2016) OCE 6934 Applied Phytoplankton Ecology. Instructor: Kendra Daly
- Fall (2011, 2012) Introduction to Oceanography. OCE2001.608. University of South Florida. Instructor: Kent Fanning
- Fall (2013; 2018) OCE6934.628 Dynamics of Marine Ecosystems. Instructor: Mark Luther & Kendra Daly.
- Spring (2012) OCE 6934.640 Fish Biology. Instructor: Chris Stallings.
- Fall (2011-2019) Biological Oceanography OCB6050.615. Instructor: Ernst Peebles.

• Spring

## Service

Panels and committees

- (2020) NOAA Ocean Acidification Program review panel
- (2018-Present) Gulf of Mexico Fishery Management Council Ecosystem Science and Statistical Committee
- (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

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- 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 addive 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 an1obeNP an1obeNP an1obeNP an1obeNP an1o67 (t)-1.7 (i)-1.7 (i)-1.7

• Santa Cruz, CA. Oct. 2006. Ecosystem-

- 15. 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 microlep)sin 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
- 16. 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

36. 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): 45-47Ainsworth, C.H. ,rr (Ed.

- 48. 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.
- 49. 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.
- 50. 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.
- 51. 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.
- 52. Ainsworth, C.H. 2001. Electronic Database of British Columbia Fisheries Catches. Fishbytes 7(4).
- 53. 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.
- 54. 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.

#### References

Dr. R. Ian Perry Senior Research Scientist, Department of Fisheries and Oceans Canada Pacific Biological Station 3190 Hammond Bay Rd, Nanaimo, BC V9T 6N7, Canada Telephone: 250-756-7137 Email: <u>ian.perry@dfo-mpo.gc.ca</u>

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