Edward V. Camp

Assistant Professor | University of Florida | School of Forest Resources and Conservation | Program of Fisheries and Aquatic Sciences |7922 NW 71st ST | Gainesville, FL. USA 32653 | edvcamp@ufl.edu +1 (401) 862-7702.

Education

- 2014 Ph.D. (Fisheries and Aquatic Sciences) University of Florida (Gainesville, FL) Integrated assessment of the stock enhancement of recreational fisheries.
- 2010 M.Sc. (Fisheries and Aquatic Sciences) University of Florida (Gainesville, FL) Relationships between small bodied fishes and macroinvertebrates and aquatic vegetation: Implications of habitat change.
- 2005 B.A. (Environmental Studies) Gordon College (Wenham, MA).

Professional Experience

- 2017-Present Assistant Professor of Fisheries and Aquaculture Governance, School of Forest Resources and Conservation, University of Florida, Gainesville FL.
- 2014-2017 Post-doctoral Research Associate, University of Florida, Gainesville FL. Quantitative evaluations of spatially explicit of fisheries management and restoration actions.
- 2011-2014 Ph.D. Student, University of Florida, Gainesville FL. Quantitative, integrated assessment of the stock enhancement of recreational fisheries.
- 2010-2011 Fisheries Biologist, Adirondack Fisheries Research Program, Cornell University, Ithaca NY. Quantitative and field research of Adirondack brook trout populations and fisheries
- 2010-2010 Fisheries Research Assistant, University of Florida, Gainesville FL. Synthesis and preparation of information for modeling marine ecosystems.
- 2008-2010 M.Sc. Student, University of Florida, Gainesville FL.

Assessments of effects of habitat change on small fish and macroinvertebrates in coastal rivers.

- 2007-2008 Fisheries Technician, University of Florida, Gainesville FL.
- Field and lab research on fish-habitat relationships in Florida rivers
- 2006-2007 Fisheries Technician, Cornell University, Old Forge NY.
- Research of Adirondack fish populations subject to habitat change and invasive species.
- 2005-2006 Fisheries Technician, Colorado Division of Wildlife, Montrose CO.
- Field and lab research on native trout response to whirling disease.
- 2005-2005 Fisheries Technician, Trout Unlimited, Logan UT Field research on fluvial life history strategies of Bonneville cutthroat trout.

Teaching Experience

- 2016 Guest Lecturer, Quantitative Wildlife Ecology (4 credits) University of Florida. WIS 4601
- 2016 Guest Lecturer, Fisheries Management (4 credits) University of Florida. FAS 6355
- 2015 Co-Instructor and Lecturer, Fisheries Management (4 credits) University of Florida. FAS 6355
- 2014 Co-instructor and Lecturer, Fish Population Dynamics (4 credits) University of Florida. FAS 6337
- 2014 Teaching Assistant Advanced Quantitative Fisheries Assessment (4 credits) University of Florida. FAS 6932
- 2011 Teaching Assistant and Lecturer, Fisheries Management (4 credits) University of Florida. FAS 6355
- 2011 Guest Lecturer, Fish Ecology and Management (4 credits) Cornell University. NTRES 3310

Publications In Review **Camp E.V.**, R.N.M. Ahrens, C.A.C. Crandall & K. Lorenzen. *In Review*. Angler travel distances: implications for recreational fisheries governance and regional economic activity. *Marine Policy*.

Peer-Reviewed Publications (14, 9 first author)

- Lynch A.J., S.J. Cooke, T.D. Beard, Jr., Y.C. Kao, K. Lorenzen, A.M. Song, M.S. Allen, Z. Basher, D.B. Bunnell, E.V. Camp, I.G. Cowx, J.A. Freedman, V.M. Nguyen, J.K. Nohner, M.W. Rogers, Z.A. Siders, W.W. Taylor, S. Youn. *In Press*. Grand challenges in the management and conservation of North American inland fish and fisheries. *Fisheries*. 42(2): 115-124.
- Garlock, T.M., **E.V. Camp &** K. Lorenzen. 2016. Using fisheries modeling to assess candidate species for marine fisheries enhancement in Florida. *Fisheries Research*. http://dx.doi.org/10.1016/j.fishres.2016.08.024
- Ward H.G.M., M.S. Allen, E.V. Camp, N. Cole, L.M. Hunt, B. Matthias, J.R. Post, K. Wilson & R. Arlinghaus. 2016. Understanding and managing social-ecological feedbacks in spatially-structured recreational fisheries: the overlooked behavioral dimension. *Fisheries* 41: 524-535.
- Camp, E.V., S. Larkin, K. Lorenzen & R.N.M. Ahrens. 2016. Socioeconomic and conservation tradeoffs in the stock enhancement of recreational fisheries. *Fisheries Research* 186: 446-459. http://dx.doi.org/10.1016/j.fishres.2016.05.031
- Camp E.V., R.N.M. Ahrens, M.S. Allen & K. Lorenzen. 2016. Assessing angler effort and fish abundance couplings in multi-species fisheries. *Fisheries Management and Ecology*.
- Camp E.V., B. van Poorten & C.J. Walters. 2015. Evaluating short openings as a management tool to maximize catch-related utility in catch-and-release fisheries. North American Journal of Fisheries Management. 35: 1106-1120.
- Pine W.E., C.J. Walters, E.V. Camp, R. Bouchillon, R.N.M. Ahrens, L. Sturmer & M. Berrigan. 2015. The curious case of eastern oyster *Crassostrea virginica* stock status in Apalachicola Bay, Florida. *Ecology and Society* 20: 46. http://dx.doi.org/10.5751/ES-07827-200346
- Camp E.V., W.E. Pine, K. Havens, A. Kane, C.J. Walters, T. Irani, A. Lindsey & J. Morris. 2015. Collapse of a historic oyster fishery: Diagnosing causes and identifying paths towards increased resilience. *Ecology and Society* 20: 45. http://dx.doi.org/10.5751/ES-07821-200345
- **Camp E.V.**, K. Lorenzen, R.N.M. Ahrens & M.S. Allen. 2014. Stock enhancement to address multiple recreational fisheries objectives: an integrated model applied to red drum *Sciaenops ocellatus* in Florida. *Journal of Fish Biology*, 85: 1868-1889.
- Camp E.V., C.L. Staudhammer, W.E. Pine III, J.C. Tetzlaff & T.K. Frazer. 2014. Replacement of rooted macrophytes by filamentous macroalgae: effects on small fish and macroinvertebrates: Implications of habitat change. *Hydrobiologia* 722: 159-170
- Camp E.V., K. Lorenzen, R.N.M. Ahrens, L. Barbieri and K.M. Leber. 2013. Potentials and Limitations of Stock Enhancement in Marine Recreational Fisheries Systems: An Integrative Review of Florida's Red Drum Enhancement. *Reviews in Fisheries Science* 21: 380-402.
- Lauretta M.V., **E.V. Camp**, W.E. Pine III & T.K. Frazer. 2013. Catchability model selection for estimating the composition of fishes and invertebrates within dynamic aquatic ecosystems. *Canadian Journal of Fisheries and Aquatic Sciences* 70: 381-392
- **Camp E.V.**, D. Gwinn, W. Pine & T. Frazer. 2012. Changes in submersed aquatic vegetation affect predation risks of common prey fish *Lucania parva* (Cyprinodontiformes: Fundulidae) in a spring-fed coastal river. *Journal of Fisheries Management and Ecology* 19:245-251.
- **Camp E.V.**, D.E. Gwinn, M.V. Lauretta, W.E. Pine III & T.K. Frazer. 2011. Use of recovery probabilities can improve sampling efficiency for throw traps in vegetated habitats. *Transactions of American Fisheries Society* 140: 164-169.

In Preparation (Completed drafts only) (2)

Garlock, T.M., E.V. Camp & K. Lorenzen. *In Prep.* Largemouth bass *Micropterus floridanus* stock enhancement in Florida.

Cole N., E.V. Camp, R.N.M. Ahrens & M.S. Allen. *In Prep*. Assessing angler effort and fish abundance couplings in multi-species fisheries.

Technical Reports (2)

- Havens K., M. Allen, E. Camp, T. Irani, A. Lindsey, J.G. Morris, A. Kane, D. Kimbro, S. Ottwell, B. Pine, C. Walters. 2013. Apalachicola Bay Oyster Situation Report Florida Sea Grant TP 200.
- Camp E.V., W.E. Pine III, C.L. Staudhammer, T.K. Frazer. 2009. Annual Report. Project title: Fish habitat relationships in Florida springs: Do submerged plants and filamentous algae influence the population structure and production of small bodied fishes? Florida Wildlife Conservation Agreement number 08008.

Presentations

Invited talks (3)

- Camp E.V. 2016. Management implications of oyster populations ecology. University of Florida Fisheries and Aquatic Sciences Seminar Invited Speaker. January 15, 2016. Gainesville, Florida, USA.
- Camp E.V. 2014. An Integrated evaluation of stock enhancement of recreational fisheries, applied to red drum in Florida. University of British Columbia Seminar Invited Speaker. October 10, 2015. Vancouver, British Columbia, CA.
- Camp E.V. 2013. Evaluating stock enhancement: Management strategies for addressing conflicting objectives in fisheries. University of Florida Fisheries and Aquatic Sciences Seminar Invited Speaker. January 26, 2013. Gainesville, Florida, USA.

Extension and Outreach talks (2)

- Camp E.V. and T. Garlock. 2015. Modeling likely outcomes of snook stocking in Sarasota Bay. Stakeholder workshop: Can stocking help improve the redfish fishery? May 14, 2015, Sarasota, Florida, USA.
- Camp E.V. 2015. Modeling likely outcomes of snook stocking in Sarasota Bay. Stakeholder workshop: Can stocking help improve the redfish fishery? May 7, 2015, Charlotte Harbor, Florida, USA.

International and National talks (10)

- Camp E.V., R. Ahrens & K. Lorenzen. 2016. Spatial dynamics of recreational fish and fisheries to inform restoration strategies. Challenges of Natural Resource Economics and Policy. March 20-22, 2016.
- Camp E.V., R. Ahrens, S. Larkin & K. Lorenzen. 2015. Evaluating spatially explicit strategies for addressing short-term socioeconomic and conservation trade-offs in recreational fisheries. American Fisheries Society 144th Annual Meeting. August 16-21, 2015. Portland, Oregon, USA.
- Camp E.V., R.N.M. Ahrens, S. Larkin & K. Lorenzen. 2014. The efficacy of stock enhancement for alleviating inherent short-term socioeconomic and conservation trade-offs in recreational fisheries. American Fisheries Society 144th Annual Meeting. August 17-21, 2014, Quebec City, Quebec, CA.
- Camp E.V., K. Lorenzen, R. Ahrens & M. Allen. 2014. Evaluation of potential stock enhancement of Florida's red drum recreational fishery: an integrated approach. 14th Annual Symposium of the Fisheries Society of the British Isles, July 7-11, 2014. University of Hull, U.K.
- Camp E.V., W.E. Pine, R.N.M. Ahrens & C.J. Walters. 2014. Deciphering oyster population dynamics. Benthic Ecology Annual Meeting, March 19-22, 2014. Jacksonville, Florida, USA.

- Camp E.V. & K. Lorenzen. 2013. Socioeconomic Dynamics and System-Level Evaluation of Enhancement Outcomes. American Fisheries Society 143rd Annual Meeting. September 8-12 2013, Little Rock, Arkansas, USA. *Awarded Best Student Paper, socioeconomic section*
- Camp E.V., R.N.M. Ahrens & K. Lorenzen. 2013. The nature of inherent socioeconomic and conservation trade-offs in recreational fisheries: Implications for management strategies and understanding stakeholders. Biennial forum of North American Association of Fisheries Economists. May 21-24, 2013. St. Petersburg, Florida, USA. *Second runner-up for Best Student Paper*
- Camp E.V., D.C. Gwinn & K. Lorenzen. 2011. The effect of attracted fishing effort and stocking strategy on wild fish: a simulation approach. Annual meeting of the American Fisheries Society, September 4-8th 2011. Seattle, Washington, USA.
- Camp E.V., W.E. Pine III, C.L. Staudhammer & T.K. Frazer. 2009. Relationships between aquatic habitats and small fish and macroinvertebrates: consequences of habitat shifts. Annual meeting of the American Fisheries Society. August 30-September 3, 2009, Nashville, Tennessee.
- Camp E.V., W.E. Pine III, C.L. Staudhammer & T.K. Frazer. 2009. Macrophyte declines in Florida's spring-fed rivers: Implications for faunal organisms. Annual meeting of the Ecological Society of America. August 1-7, 2009, Albuquerque, New Mexico.

Regional and State talks (10)

- Camp E.V., R. Ahrens, M. Allen & K. Lorenzen. 2015. Assessing angler effort and fish abundance couplings. Mid-year meeting of the American Fisheries Society Southern Division. January 28-February 1, 2015. Savannah, Georgia, USA.
- Camp E.V., K. Lorenzen, R. Ahrens & M. Allen. 2014. Evaluation of potential stock enhancement of Florida's red drum recreational fishery: an integrated modeling approach. Annual meeting of the Florida Chapter of the American Fisheries Society, February 11-13, 2014. Ocala, Florida, USA. *Awarded Best Student paper*
- Camp E.V., K Lorenzen & T. Gainer. 2014. Recreational stock enhancement and the resiliency of socioecological systems. North Florida Marine Science Symposium, January 16-17, 2014. Marineland, Florida, USA.
- Camp E.V., K. Lorenzen, R. Ahrens & M. Allen. 2013. Empirical assessment of angler effort dynamics in marine recreational fisheries. Mid-year meeting of the American Fisheries Society Southern Division. February 8-10, 2013. Nashville, Tennessee, USA.
- Camp E.V., K. Lorenzen & R. Ahrens. 2013. Effects of enhanced marine recreational fisheries on natural resource objectives. University of Florida Marine Biology Symposium. January 17-18, 2013. Marineland, Florida, USA.
- Camp E.V., & K. Lorenzen. 2012. An integrated assessment of potential implications of red drum stock enhancement in Florida. Mid-year meeting of the American Fisheries Society Southern Division. January 26-29, 2012. Biloxi, Mississippi, USA.
- Camp E.V., D.C. Gwinn, W.E. Pine & T.K. Frazer. 2011. Changes in submersed aquatic vegetation affect predation risks of common prey fish Lucania parva (Cyprinodontiformes: Fundulidae) in a spring-fed coastal river. Mid-year meeting of the American Fisheries Society Southern Division. January 13-16, 2011, Tampa, Florida, USA.
- Camp E.V., W.E. Pine III, C.L. Staudhammer & T.K. Frazer. 2010. Consequences of aquatic habitat shifts on specific size classes and taxa of a small fish and macroinvertebrate community Midyear meeting of the American Fisheries Society Florida Chapter. February 16-18, 2010. Ocala, Florida.
- Camp E.V., W.E. Pine III, C.L. Staudhammer & T.K. Frazer. 2009. Assessing relationships between aquatic habitats and small fish and macroinvertebrates: does plant type matter? Mid-year meeting of the American Fisheries Society Florida Chapter. February 17-19, 2009, Ocala, Florida.

Camp E.V., W.E. Pine III & T.K. Frazer. 2009. Assessing relationships between aquatic habitats and small fish and macroinvertebrates: does plant type matter? Mid-year meeting of the American Fisheries Society Southern Division. January 15-18, 2009. New Orleans, Louisiana.

Abstracts (6)

- van Poorten, B & E.V. Camp. 2016. A diversified management approach to address heterogeneous anglers in recreational fisheries. American Fisheries Society 145th Annual Meeting. August 21-25, 2016. Kansas City, Missouri, USA.
- Garlock, T., Camp, E.V., and K. Lorenzen. 2014. Largemouth bass stock enhancement in Florida. 14th Annual Symposium of the Fisheries Society of the British Isles, July 7-11, 2014. University of Hull, U.K.
- Garlock T., K. Lorenzen, K. Leber & E.V. Camp. 2013. Prioritizing species and stocks for marine fisheries enhancement in Florida: a science-based and stakeholder-participatory process. American Fisheries Society 143rd Annual Meeting, September 8-12, 2013. Little Rock, Arkansas, USA.
- Fetzer W.W., E.V. Camp, J.R. Jackson & L.G. Rudstam. 2011. 100 years of nearshore fish community change in Oneida Lake, New York. Annual meeting of the American Fisheries Society New York Chapter. February 2-4, 2011. Canandaigua, New York, USA.
- Dutterer A.C., W.E. Pine III, E.V. Camp & M.V. Lauretta. 2008. Using capture probability to assess riverine fish sampling. Mid-year meeting of the American Fisheries Society Florida Chapter. February 17-19, 2008. Ocala, Florida.
- Boorse D., E. Camp, W. Daya, L. Hamel, C. Mathison, T. Russell. 2005. Wood frog (Rana sylvatica) and spotted salamander (Ambystoma maculatum) egg mass abundances in relation to landscape, basin and micro-site characteristics. Annual meeting of the Ecological Society of America. August 2005. Montreal, Canada.

Awards

Grants/Fellowships awarded

- 2016 Pew Charitable Trust (Co-PI). Management strategy evaluation for the recreational fishing sector in the Gulf of Mexico reef fish fishery. **(\$87,870)**. I clarified project context and provide technical assistance.
- 2015 The Conservation Fund (Co-PI). Integrative assessment of spotted seatrout management to provide economic growth in the Big Bend. **(\$19,912)**. I clarified project objectives and helped write proposal.
- 2015 National Academy of Sciences Gulf Research Program (Co-PI). Synthesizing spatial dynamics of recreational fish and fisheries to inform restoration strategies: red drum in the Gulf of Mexico **(\$480,248)**. I conceived project concept, led writing the proposal and have led analyses and coordination responsibilities.
- 2015 Gulf of Mexico Management Council (Co-PI). Use of barotrauma mitigation measures in the Gulf of Mexico grouper fisheries (\$75,000). I contributed review and technical assistance.
- 2014 NSF IGERT QSE3 Collaborative Research and Education Grant (\$3,000). I wrote and received independently.
- 2014 Guy Harvey Fellowship (\$5,000). I wrote and received independently.
- 2011-2014 NSF IGERT Fellowship/University of Florida Alumni Fellowship (**\$88,000**). I wrote and received independently.

Professional awards

2015 High Impact Publication award, IFAS, University of Florida

2014 Outstanding Dissertation, Fisheries and Aquatic Sciences, University of Florida

- 2014 Outstanding Graduate Student of the Year (PhD), Fisheries and Aquatic Sciences, University of Florida
- 2014 Best Student paper, Annual meeting of the Florida Chapter of the American Fisheries Society
- 2013 Best Student paper, Socioeconomic section, Annual meeting of the American Fisheries Society
- 2013 Best Student Presentation Runner-up, North American Association of Fisheries Economists Biennial meeting.

Outreach and Service

- 2014 President, Fisheries and Aquatic Sciences student organization (SURF), University of Florida Led SURF student organization at University of Florida, developing innovative and cooperation learning experiences, including "R-Fridays", a student led initiative to share knowledge and experience of a primary computer programming tool, program R.
- 2014 Volunteer teacher, Fish and Food Chains Lesson, Talbot Elementary, Gainesville FL Interactive teaching of fourth grade classes about freshwater fish anatomy, physiology and morphology.
- 2014 Volunteer judge, Florida Chapter of the American Fisheries Society, Ocala, FL

Served as a judge for best paper presented via poster for the 2014 Florida Chapter of the American Fisheries Society Meeting.

2011-2014 Travel Grant Committee member, SURF, University of Florida Reviewed SURF travel grant applications to select recipients

2010-Present Manuscript reviewer

Provided anonymous peer review for *Fisheries Research*, *Reviews in Fisheries Science*, *North American Journal of Fisheries Management*, *Transaction of the American Fisheries Society*, and *African Journal of Aquatic Science*.

Professional skills

Population dynamic modeling, stock assessment modeling, management strategy evaluation, structured decision making, bioeconomic modeling, mixed effects models, generalized linear models, occupancy estimation, mark-recapture estimation, time series analyses, nonparametric analyses. Skilled in using multiple platforms for data and analyses, including R, ADMB, winBUGS, JAGS, SAS, Microsoft Excel programming, Microsoft Access database management, SQL executed through various database platforms.