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Education

Ph.D.	Florida International University Biology	8/2012 to 12/2019 Awarded: December 2019
M.S.	Florida International University Biology	8/2012 to 12/2017 Awarded: December 2017
B.S.	University of South Carolina Marine Science Emphasis: Biological Oceanography	8/2008 to 12/2011 Awarded: December 2011

Appointments and Research Positions

1/2020-present, Postdoctoral Researcher, University of Illinois at Urbana-Champaign, Illinois Natural History Survey (Adviser: Dr. John Chick)

8/2019-12/2019, Postdoctoral Researcher, Florida International University, Department of Biological Science (Adviser: Dr. Joel Trexler)

8/2012-8/2019, Graduate Research Assistant, Florida International University, Department of Biological Science (Adviser: Dr. Joel Trexler)

3/2012-4/2012, Research Intern, Oceans Research, Mossel Bay, Western Cape, South Africa

8/2010-8/2012, Undergraduate Research Assistant, University of South Carolina, Department of Biological Sciences (Adviser: Dr. Blaine Griffen)

5/2010-8/2010, Research Intern, Environmental Laboratory, Albemarle Corporation (now SI Group), Orangeburg, SC (Supervisor: Slade Shealy)

8/2009-5/2010, Undergraduate Research Assistant, University of South Carolina, Department of Marine Science (Adviser: Dr. Joseph Quattro)

Publications and Technical Reports

11. **Gatto, J.V.**, B. S. Ickes, and J.H. Chick. Evidence of alternative trophic pathways for fish consumers in a large river system in the face of invasion. *River Research and Applications*. *In press*.

10. **Gatto, J. V.**, J. L. Kline, W. F. Loftus, and J. C. Trexler. 2021. Linking demographic transitions to population dynamics in a fluctuating environment. *Canadian Journal of Fisheries and Aquatic Sciences*. 78(7): 797-808.
9. **Gatto, J. V.** and J. C Trexler. 2020. Correction to: Speed and directedness predict colonization sequence post-disturbance. *Oecologia*. 193(3): 729-730.
8. **Gatto, J. V.** and J. C Trexler. 2020. Speed and Directedness Predict Colonization Sequence Post-Disturbance. *Oecologia*. 193(3): 713-727.
7. **Gatto, J.V.** and J. C Trexler. 2020. Investigating Phosphorus as a Spatial Marker Using Otolith Microchemistry as Part of the DECOMP Physical Model. Agreement # 4600004007 / PO 9500008051. South Florida Water Management District
6. **Gatto, J. V.** Incorporating Early Life History and Recruitment in Analysis of Population Dynamics of Wetland Fishes. 2019. FIU Electronic Theses and Dissertations. 4353. <https://digitalcommons.fiu.edu/etd/4353>
5. Tennenbaum, Stephen, **J. Gatto**, and J. Trexler. 2019. "Thinking Inside the Box: An Advection-Diffusion Model of Animal Movement in an Enclosed Region." arXiv preprint arXiv:1909.07625.
4. **Gatto, J. V.** and J. C Trexler. 2019. Seasonality of Fish Recruitment in a Pulsed Wetland Ecosystem: Estimation and Hydrological Effects. *Environmental Biology of Fishes*. 102 (4): 595-613.
3. **Gatto, J.V.** and J. C Trexler. 2019. Investigating Phosphorus as a Spatial Marker Using Otolith Microchemistry in Everglades Fish Final Report. PO # 4500102397. South Florida Water Management District
2. Toscano, B. J., **J. Gatto**, and B. D. Griffen. 2013. Effect of predation threat on repeatability of individual crab behavior revealed by mark-recapture. *Behavioral Ecology and Sociobiology*: 68(3): 519-527.
1. Griffen, B. D., B. J. Toscano, and **J. Gatto**. 2012. The role of intraspecific trait variation in mediating indirect interactions. *Ecology* 93(8): 1935-1943.

Manuscripts in Prep

1. **Gatto, J. V.** and J. H Chick. Environmentally Driven Shifts in Fish Community Structure Along a Large Regulated River. Manuscript complete. Target Journal: *River Research and Applications*
2. **Gatto, J. V.** and J. H Chick. Spatial Variation in Fish Community Structure and Environmental Variables in a Large River: Implications for Management. Manuscript complete. Target Journal: *Journal of Aquatic Sciences*
3. **Gatto, J. V.** and J. C Trexler. Detecting Density-Dependent Recruitment in Pulsed Ecosystems. Manuscript complete. Target Journal: *Canadian Journal of Fisheries and Aquatic Sciences*

Aquatic Sciences

4. Hine, E. C., **J.V Gatto**, and J. H. Chick. Effects of Habitat Connectivity on Diversity and Abundance of Fishes in the Main Channel of the Mississippi and Illinois Rivers. Data set complete, manuscript in prep. Target Journal: *River Research and Applications*
5. **Gatto, J. V.**, J. L. Kline, and J. C Trexler. Intra- and Interspecific Patterns of Colonization in a Hydrologically Pulsed Ecosystem. Data set complete, manuscript in prep. Target Journal: *Hydrobiologia*.

Awards, Grants, and Recognitions

2020	US Army Corps of Engineers/US Geological Survey (\$93,422) <i>Functional UMRS fish community responses and their environmental associations in the face of a changing river: hydrologic variability, biological invasions, and habitat rehabilitation.</i>
2019	Southeastern Research Center (SERC) Graduate Student of the Year (\$500) -matched by Institute of Water and Environment (\$500)
2018	Florida International University Dissertation Year Fellowship (\$16,600)
2018	SEEC Best Oral Presentation – Honorable Mention <i>Using agent based modeling to predict recolonization patterns following disturbances</i>
2017	South Florida Water Management District (\$9984.75) <i>Investigating Phosphorus as a Spatial Marker Using Otolith Microchemistry in Everglades Fish</i>
2016	American Killifish Association, George Maier Fund Grant (\$3,315) <i>Incorporating Early Life History and Recruitment in Analysis of Population Dynamics of Wetland Fishes.</i>
2015-2019	FIU BBC-SGA Travel Grant (\$300/year)
2012	Florida International University Graduate Teaching Assistant (\$24,000/year)
2012	1 st Place Poster, University of South Carolina Discovery Day (\$250) <i>The role of individual behavior type in mediating indirect interactions</i>
2010	Magellan Scholar for Undergraduate Research (\$2,500) <i>Predation Risk on Individual Personality and TMII Variation</i>
2008-2011	David Odom Memorial Undergraduate Scholarship (In-state tuition and \$250/semester)

Seminars, Presented Papers, and Invited Talks

Gatto, J.V., B. S. Ickes, and J.H. Chick. Evidence of alternative trophic pathways for fish consumers in a large river system in the face of invasion. Mississippi River Research Consortium, La Crosse, WI. April 2022 (Oral Presentation).

Gatto, J.V., B. S. Ickes, and J.H. Chick. Functional UMRS fish community responses and their environmental associations in the face of a changing river: hydrologic variability, biological invasions, and habitat rehabilitation. Upper Mississippi River Research Webinar, La Crosse, WI. December 2021 (Virtual Oral Presentation).

Hine, E. C., **Gatto, J. V.**, and Chick, J. H. Effects of Habitat Connectivity on Diversity and Abundance of Fishes in the Main Channel of the Mississippi and Illinois Rivers. American Fisheries Society Annual Meeting, Baltimore, MD. November 2021 (Oral Presentation).

Gatto, J.V., B. S. Ickes, and J.H. Chick. Evidence of alternative trophic pathways for fish consumers in a large river system in the face of invasion. American Fisheries Society Annual Meeting, Baltimore, MD. November 2021 (Oral Presentation).

Gatto, J. V. and Chick, J. H. Environmentally driven shifts in fish community structure along a large regulated river. Mississippi River Research Consortium, La Crosse, WI. April 2021 (Oral Presentation).

Hine, E. C., **Gatto, J. V.**, and Chick, J. H. Effects of Habitat Connectivity on Diversity and Abundance of Fishes in the Main Channel of the Mississippi and Illinois Rivers. Mississippi River Research Consortium, La Crosse, WI. April 2021 (Oral Presentation).

Gatto, J. V. Incorporating Early Life History and Recruitment in the Analysis of Population Dynamics of Wetland Fishes. Illinois Natural History Survey Seminar Series, University of Illinois at Urbana-Champaign. October 2020. (Invited Seminar).

Gatto, J. V. Long-term Monitoring Reveals Controls of Fish Population Dynamics and Recruitment. South Florida Natural Resource Center Science Series, Homestead, FL. October 2020. (Invited Seminar).

Gatto, J. V. and Chick, J. H. Environmentally driven shifts in fish community structure along a large regulated river. Ecological Society of America Annual Meeting, Salt Lake City, UT. August 2020. (Late Breaking Poster in *Communities*).

Gatto, J. V. and Chick, J. H. Environmentally driven shifts in fish community structure along a large regulated river. Mississippi River Research Consortium, La Crosse, WI. April 2020. *Cancelled due to COVID-19*

Tennenbaum, S., **Gatto, J. V.**, and Trexler, J. C. Thinking Inside the Box: An Advection-Diffusion Model of Animal Movement in an Enclosed Region. American Mathematical Society Southeastern Section Meeting, Gainesville, FL. November 2019 (Oral Presentation in organized session *Mathematical Biology*).

Gatto, J. V. and Trexler, J. C. Predicting Sustainable Population Growth by Linking Age-Specific Mortality and Growth Rate (M'/G') to Biomass in a Fluctuating Environment. American Fisheries Society & The Wildlife Society 2019 Joint Annual Conference, Reno, NV. October 2019 (Oral Presentation in organized session *Freshwater Fisheries Management II*).

Gatto, J. V. and Trexler, J. C. Predicting Sustainable Population Growth by Linking Age-Specific Mortality and Growth Rate (M/G') to Biomass in a Fluctuating Environment. Ecological Society of America Annual Meeting, Louisville, KY. August 2019. (Oral Presentation in organized session *Population Dynamics And Regulation*).

Gatto, J.V., Trexler, J. C., Newman, S., Saunders, C., & Cook, M. Evaluating Otolith Microchemistry for Tracking Phosphorus Experienced by Everglades Fish. Greater Everglades Ecosystem Restoration Conference (GEER). Coral Springs, FL. April 2019. (Poster Presentation)

Gatto, J.V. and Trexler, J.C. Using Agent Based Modeling to Predict Recolonization Patterns Following Disturbance. Southeastern Ecology and Evolution Conference (SEEC). University of Miami, Coral Gables, FL. October 2018. (Oral Presentation)

Gatto, J.V. and Trexler, J.C. Do Changes in Hydrology Influence the Strength of Density-Dependent Recruitment in Pulsed Ecosystems? American Fisheries Society Annual Meeting, Atlantic City, NJ. August 2018. (Oral Presentation in organized Symposium *Advancing Environmental Flows: Novel Findings, Challenges to Conventional Thinking, and Embracing Uncertainty*)

Gatto, J.V. and Trexler, J.C. Using Agent Based Modeling to Predict Recolonization Patterns Following Disturbance. Ecological Society of America Annual Meeting, New Orleans, LA. August 2018. (Oral Presentation in organized session *Behavior: Migration And Movement II*)

Gatto, J.V. and Trexler, J.C. Detecting Density-Dependent Recruitment in Pulsed Ecosystems. Florida International University Biology Symposium, Miami, FL. February 2018. (Lightning Talk)

Gatto, J.V. and Trexler, J.C. Using Agent Based Modeling to Predict Fish Movement Patterns in the Florida Everglades. American Fisheries Society Annual Meeting, Tampa, FL. August 2017. (Oral Presentation in organized session *Fish Movement and Biotelemetry*)

Gatto, J.V. and Trexler, J.C. Using Agent Based Modeling to Predict Fish Movement Patterns in the Florida Everglades. Joint Meeting of Herpetologists and Ichthyologists, Austin, TX. July 2017. (Oral Presentation)

Bush, M. R., **Gatto, J.**, Ontkos, A. & Trexler, J. C. Effects of Hydroscape Modification on Everglades Aquatic Consumers: Evaluating Two Hypotheses. Greater Everglades Ecosystem Restoration Conference, Coral Springs, FL. April 2017. (Oral Presentation in organized session *The DPM High-Flow Experiments: Direct Observations to Serve Adaptive Management*)

Gatto, J.V. and Trexler, J.C. Using Agent Based Modeling to Predict Fish Movement Patterns in the Florida Everglades. Florida International University Biology Symposium, Miami, FL. February 2017. (Oral Presentation)

Gatto, J.V. and Trexler, J.C. Using Virtual Population Analysis (VPA) to estimate under-sampled recruits to improve population dynamics models. Ecological Society of America Annual Meeting, Ft. Lauderdale, FL. August 2016. (Oral Presentation in organized session *Population Dynamics: Modeling*).

Gatto, J.V. and Trexler, J.C. Endurance Tests Explain Recolonization Patterns Following Hydrological Disturbance. Joint Meeting of Herpetologists and Ichthyologists, New Orleans, LA. July 2016. (Oral Presentation in organized session *Ichthyology*).

Gatto, J.V. and Trexler, J.C. Endurance Tests Explain Recolonization Patterns Following Hydrological Disturbance. Florida International University Biology Symposium, Miami, FL. February 2016. (Oral Presentation)

Gatto, J.V. and Trexler, J.C. Endurance tests explain recolonization patterns following hydrological disturbance. Ecological Society of America Annual Meeting, Baltimore, MD. August 2015. (Oral Presentation in organized session *Behaviour: Migration and Movement*)

Bush, M.R., Bornhoeft, S., **Gatto, J.**, & Trexler, J.C. Effects of Flow and Connectivity on Everglades Aquatic Consumers: Evaluating Three Hypotheses. Greater Everglades Ecosystem Restoration Conference, Coral Springs, FL. April 2015. (Oral Presentation in organized session *Flow-Pulse Drivers of Aquatic Ecosystem Restoration-Findings from the DECOMP Physical Model*)

Gatto, J.V. and Trexler, J.C. The Effect of Hydroperiod on Recruitment Variability of Small-Bodied (<8cm) Everglades Fish. Florida International University Biology Symposium, Miami, FL. January 2015. (Poster Presentation)

Gatto, J.V. and Griffen, B.D. The role of intraspecific trait variation in mediating indirect interactions. University of South Carolina Discovery Day, Columbia, SC. April 2012. (Poster Presentation)

Teaching and Mentoring

2022-present	Mentored Large River Ecologist David Weyers
2021	Advanced Fisheries Ecology, University of Illinois Urbana-Champaign
2021	Mentored Julia Hampton
2020-present	Mentored Large River Ecologist Eric Hine
2019	Taught workshop on Agent Based Models in Netlogo
2019	Taught workshop on otolith microchemistry (LA-ICP-MS)
2019	Taught workshop on otolith preparation techniques
2016-2019	Mentored 2 laboratory technicians
2015-2017	Mentored 2 undergraduate researchers
2012-2013	General Biology II, Florida International University

Outreach and Service

Gatto, J.V. Using Agent Based Modeling to Predict Fish Movement Patterns in the Florida Everglades. Meet the Scientist: FIU Comes to Key Largo School, Key Largo, FL. December 2017.

Gatto, J.V. Using Agent Based Modeling to Predict Fish Movement Patterns in the Florida Everglades. Meet the Scientist: FIU Comes to Treasure Village Montessori, Key Largo, FL. October 2017.

Gatto, J.V. and Trexler, J.C. Endurance Tests Explain Recolonization Patterns Following Hydrological Disturbance. Everglades National Park Symposium, Homestead, FL. August 2016.

Gatto, J.V. Race to the Finish: Critical Swimming Speed and Recolonization of Newly Inundated Habitats. Meet the Scientist: FIU Comes to Treasure Village Montessori, Key Largo, FL. October 2015.

Gatto, J.V. You're gonna need a bigger boat. Meet the Scientist: FIU Comes to Coral Springs High School, Key Largo, FL. October 2014.

Professional Societies

2017-present	American Fisheries Society (AFS)
2012-present	Ecological Society of America (ESA)

Software Proficiencies

- Primer-e (multivariate community analyses)
- Netlogo
- SAS Institute (SAS 9.4, SAS 9.3)
- R (basic graphing and modeling techniques)
- Adobe Creative Cloud (Illustrator)
- Microsoft Office

Other Qualifications

2021-present	Reviewer for <i>Florida Scientist</i>
2018-present	Reviewer for <i>Environmental Biology of Fishes</i>
2012-present	Reviewer for <i>Oecologia</i>
2008-present	PADI Open Water Diver

References

Dr. Joel C. Trexler (PhD Adviser)
Director, Coastal and Marine Laboratory
Professor, Biological Sciences
Florida State University

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Dr. John H. Chick (Postdoctoral Adviser)
Principal Research Scientist/Field Station Director
Illinois Natural History Survey (UIUC)
Great Rivers Field Station
918 Union Street
Alton, Illinois 62002
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chick@illinois.edu

Brian Ickes (Professional Reference)
Principal Investigator UMRR LTRM Fish component
U.S. Geological Survey
Upper Midwest Environmental Sciences Center
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