



PAVEL V. DIMENS

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<https://pdimens.github.io>

POPULATION AND EVOLUTIONARY GENOMICS

LANGUAGES

Spoken & Written

 English ●●●●●

 Russian ●●●●●

Programming

 BASH ●●●●●

 Python ●●●●●

 R ●●●●●

 Julia ●●●●●



github.com/pdimens

Repositories

[BioJulia/PopGen.jl](#)

[PopGenSims.jl](#)

[Harpy](#)

[LepWrap](#)

[gust](#)

Contributions

[dDocent](#)

[DBG2OLC](#)

[adegenet](#)

[EcoJulia.github.io](#)

Communities

[BioJulia](#)

[EcoJulia](#)

EDUCATION



Ph.D. Coastal Sciences

2017-2022

University of Southern Mississippi

Advisor: Eric Saillant



M.S. Fisheries and Mariculture

2014-2016

Texas A&M University - Corpus Christi

Advisor: David Portnoy



B.S. Aquatic and Fisheries Science

2007-2010

SUNY College of Environmental Sciences and Forestry

RECENT EXPERIENCE

Postdoctoral Fellow

2023-Present

Cornell University - Dept. of Natural Resources

- Climate-change driven gene flow of shad
- Develop haplotagging analysis pipeline
- Proposal writing
- Research collaboration and coordination

Bioinformatics Technician

2022-2023

Cornell University - Dept. of Natural Resources

- Develop haplotagging analysis pipeline
- Population genetics of haplotag data
- SV analysis of haplotag data

STEM Technical Course Developer

2021-2023

Cornell University - eCornell

- Py/R/Julia/MySQL STEM course development
- Course quality assessment

Graduate Student / Research Assistant

2017-2022

University of Southern Mississippi

- genome assembly
- linkage map construction
- ddRAD library preparation
- genomic data processing and analysis



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OLDER EXPERIENCE

Graduate Student / Research Assistant

2014-2016

Texas A&M University - Corpus Christi

- DNA isolation and ddRAD library preparation
- genomic data processing and analysis
- inshore long line project and field manager
- Uca sp. collection field manager
- DNA isolation methods on otolith surfaces
- teaching assistant (Bio II, A&P II)

Intern

2014

Dauphin Island Sea Lab

- sediment contaminant study project leader
- purchases and requisitions, logistics, data entry
- organizing with collaborators from Grand Bay NERR
- sediment core acquisition and sectioning
- porewater, grain size, and stable isotope analyses

Fellow

2014

Eurasia Foundation Social Expertise Exchange

- touring U.S. and Russian Republic national parks
- exchange best practices between both systems
- synthesize document spotlighting both park systems
- collaboration with World Wildlife Fund Russia
- attend international working group conferences

Intern

2012-2013

Dauphin Island Sea Lab

- oyster settlement, growth index, and stable isotope analyses
- fish stomach content analyses
- bottom, vertical long line, gillnet, seine, and hook and line
- tagging, measuring, dissection, and otolith removal of fish
- data entry, equipment design, and maintenance
- public outreach

OTHER TECHNICAL PROFICIENCIES

- Programming languages: R, BASH, Python, Julia
- Reproducible and open data practices (git, Jupyter, etc.)
- Frequentist and some Bayesian statistics (FST, AMOVA, PCA, DAPC, permutations, sliding window, STRUCTURE, IBD, etc.), comparative genomics, pairwise distances
- vertical and bottom longline, trawling, trolling, seine netting, plankton net
- Graphic design, QGIS
- Various bioinformatics tools (htslib, aligners, variant callers, sequence trimming, etc.)



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PUBLICATIONS

Dimens PV, Jones KL, Margulies D, Scholey V, Cusatti S, ... Saillant EA (2024). Genomic resources for the Yellowfin tuna *Thunnus albacares*. *Molecular Biology Reports*. doi: 10.1007/s11033-023-09117-6

Dimens PV, Reynal L, Pau C, Arocha F, Hazin F, Roque P, Cummings NJ, ...Saillant EA (2023) Weak range-wide population structure in the blackfin tuna (*Thunnus atlanticus*) revealed by analysis of genome-wide SNPs. *ICES Journal of Marine Science*. <https://doi.org/10.1093/icesjms/fsad012>

Dimens PV (2022). "A Genomic Investigation of Divergence Between Tuna Species". *Dissertations*. 2013. <https://aquila.usm.edu/dissertations/2013>

Dimens PV, Willis S, Dean Grubbs R, Portnoy DS (2019) A genomic assessment of movement and gene flow around the South Florida vicariance zone in the migratory coastal blacknose shark, *Carcharhinus acronotus*. *Marine biology*. doi: 10.1007/s00227-019-3533-1

Dimens PV (2016). Population structure of a migratory small coastal shark, the blacknose shark *Carcharhinus acronotus*, across cryptic barriers to gene flow (Master's thesis, Texas A&M University-Corpus Christi).

AWARDS & HONORS

NSF Ocean Sciences Postdoctoral Research Fellowship	2023
	\$167,800
Mcllwain Endowment	2021
University of Southern Mississippi	\$1207
Manuel Caboz Scholarship	2019
71st Tuna Conference	\$2500
Student Travel Award	2017
American Elasmobranch Society	\$500
Parents Council Student Travel Award	2016
Texas A&M University - Corpus Christi	\$500
Sea Grant-In-Aid Graduate Research Program award	2015
NOAA Sea Grant	\$2000
Fisheries and Mariculture Student Research Award	2014-2015
Texas A&M University - Corpus Christi	\$1500
College of Science and Technology Graduate Scholarship	2014-2015
Texas A&M University - Corpus Christi	\$500
C.J. Davidson Graduate Scholarship Endowment	2014-2015
Texas A&M University - Corpus Christi	\$500



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AWARDS & HONORS continued

Robin Hood Oak Award	2010
SUNY College of Environmental Sciences and Forestry	
Undergraduate Mentoring in Environmental Biology fellowship	2009-2010
National Science Foundation	

SERVICE & TEACHING

Invited Lectures/Workshops

Introduction to Computational Genomics - University of Notre Dame	2020
Introduction to Snakemake - University of California at Irvine	2020
Julia for Big Data - Texas A&M College Station	2019

Hosted Workshops

Introduction to Snakemake - Cornell University	2022
Microsoft PowerPoint - University of Southern Mississippi	2019
Graphic Design - University of Southern Mississippi	2019
Basic Design Theory - University of Southern Mississippi	2018
Computer language fundamentals - University of Southern Mississippi	2018
Introductory Python - University of Southern Mississippi	2018
Introductory Bash - University of Southern Mississippi	2018
Introductory Julia - University of Southern Mississippi	

Organizational Roles

Secretary - USM American Fisheries Society Student Subunit	2019
Vice President - USM Marine and Estuarine Graduate Student Association	2018-2019
Founder/President - SUNY ESF Student Heart Walk Team	2010
Founder/President - SUNY ESF Music Society	2009-2010

Teaching Assistant

Biology II - Texas A&M University - Corpus Christi	2015
Anatomy & Physiology II - Texas A&M University - Corpus Christi	2015

Volunteering

Alabama Deep Sea Fishing Rodeo (outreach)	2013-2014
Docent - New York Aquarium	2006-2007



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PRESENTATIONS

Haplotagging and its analysis

- Evolution Conference 2023
- GLAMM at Cornell University 2023

Whole-genome derived phylogeny of genus *Thunnus*

- Evolution Conference 2022

Yellowfin Tuna Genome Assembly and Linkage Map

- 71st Tuna Conference 2021

Blackfin Tuna Population Structure

- USM Graduate Student Research Symposium 2021

Molecular Ecology of Marine Fishes

- Gulf Coast Research Laboratory Science Café 2020
- Corpus Christi Veterans Memorial High School 2015

Blacknose Shark Population Structure

- Joint Meeting of Ichthyologists and Herpetologists 2017
- Joint Meeting of Ichthyologists and Herpetologists 2016
- Texas A&M - Corpus Christi MSGSO Research Forum 2015
- Joint Meeting of Ichthyologists and Herpetologists 2015
- Dauphin Island Sea Lab Graduate Student Symposium 2015
- Texas A&M - Corpus Christi MSGSO Research Forum 2014

Developing A Landing Cradle for Landing Large Fishes

- Gulf and Caribbean Fisheries Institute 2014

Adirondack Pristine Lake Trophic Ecology

- SUNY ESF Symposium 2010

MEMBERSHIPS & CERTIFICATES

Evolution Society of America	2021-present
American Fisheries Society	2016-present
American Elasmobranch Society	2014-2017
PADI Open Water Diver	43 logged dives
NRA/DEC Firearm Safety Course	2011
NRA Shotgun Safety Course	2011
National Scholars Honor Society	2007