

Pablo J. Delclos, PhD

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Education, Research, and Training

2021-Present	Assistant Professor , Dept. of Natural Sciences, University of Houston-Downtown, Houston, TX
2019-2021	Postdoctoral Fellow , Dept. of Biology & Biochemistry, University of Houston, Houston, TX PI: Richard Meisel
2017-2019	Postdoctoral Research Associate , Dept. of Entomology, Texas A&M University, College Station, TX PI: Jeff Tomberlin
2011-2017	Ph.D. , Biology, Texas A&M University, College Station, TX Advisor: Gil Rosenthal Dissertation Title: Environmental and neurogenetic framework of mate-choice relevant behaviors in <i>Xiphophorus</i> fishes
2007-2010	B.S. , Ecology & Evolutionary Biology, Rice University, Houston, TX Thesis: The interaction of stage structure and habitat complexity on predator-prey interactions

Reviewed Publications

 *Mentored Student, [!]Undergraduate Author, [†]Co-first author

11. [†]**Delclos PJ**, [†]Adhikari K, [!]Hassan O, [!]Cambric JE, ^{*}[!]Matuk AG, ^{*}[!]Presley RI, ^{*}[!]Tran J, [!]Sriskantharajah V, Meisel RP. *Evolution Letters*. doi: 10.1002/evl3.248
10. ^{*}Kotze Z, **Delclos PJ**, Knap AH, Wade TL, Tomberlin JK. (2021). Volatile organic compounds in variably aged carrion impacted by the presence of the primary colonizer, *Cochliomyia macellaria* (Diptera: Calliphoridae). *International Journal of Legal Medicine*. doi: 10.1007/s00414-020-02478-8.
9. **Delclos PJ**, ^{*}[!]Bouldin TL, Tomberlin JK. (2021). Olfactory choice for decomposition stage in the vurying beetle *Nicrophorus vespilloides*: preference or aversion? *Insects* 12(1): 11. doi: 10.3390/insects12010011.
8. ^{*}Sharma A, Tomberlin JK, **Delclos PJ**, Bala M. (2020). Volatile compounds reveal age: a study of volatile organic compounds released by *Chrysomya rufifacies* immatures. *International Journal of Legal Medicine* 1-11. doi: 10.1007/s00414-020-02471-1.
7. Malawey AS, ^{*}Zhang H, McGuane AS, Walsh EM, Rusch TW, Hjelman CE, **Delclos PJ**, Rangel J, Zheng L, Cai M, Yu Z, Tarone AM, Zhang J, Tomberlin JK. (2020). Interaction of age and temperature on heat shock protein expression, sperm count, and sperm viability

of the adult black soldier fly (Diptera: Stratiomyidae). *Journal of Insects as Food and Feed* 1: 13. doi: 10.3920/JIFF2020.0017.

6. **Delclos PJ**, *¹Forero S, Rosenthal GG. (2020). Divergent neurogenomic responses shape social learning of both personality and mate preference. *Journal of Experimental Biology* 223(6). doi: 10.1242/jeb.220707.
5. Meisel RP, **Delclos PJ**, Wexler JR. (2019). The X chromosome of the German cockroach, *Blattella germanica*, is homologous to a fly X chromosome despite 400 million years divergence. *BMC Biology* 17(1): 1-14. doi: 10.1186/s12915-019-0721-x.
4. Schumer M, Powell DL, **Delclos PJ**, Squire MK, Cui R, Andolfatto P, Rosenthal GG. (2017). Assortative mating and persistent reproductive isolation in hybrids. *PNAS* 114(41): 10936-10941. doi: 10.1073/pnas.1711238114.
3. †Cui R, †**Delclos PJ**, Schumer M, Rosenthal GG. (2017). Early social learning triggers neurogenomic expression changes in a swordtail fish. *Proceedings of the Royal Society B: Biological Sciences* 284(1854): 20170701. doi: 10.1098/rspb.2017.0701.
2. Paczolt KA, Passow CN, **Delclos PJ**, Kindsvater HK, Jones AG, Rosenthal GG. (2015). Multiple mating and reproductive skew in parental and introgressed females of the live-bearing fish *Xiphophorus birchmanni*. *Journal of Heredity* 106(1): 57-66. doi: 10.1093/jhered/esu066.
1. **Delclos PJ**, Rudolf VHW. 2011. Effects of size structure and habitat complexity on predator-prey interactions. *Ecological Entomology* 36(6): 744-750. doi: 10.1111/j.1365-2311.2011.01324.x

In Review and Prep *Mentored Student, ¹Undergraduate Author

- **Delclos PJ**, Adhikari K, ¹Hassan O, ¹Oderhowho AA, ¹Sriskanharajah V, ¹Trinh T, Meisel RP. A conserved *trans* regulatory loop involving an odorant-binding protein controls male mating behavior in flies.
- **Delclos PJ**, *¹Forero S, Rosenthal GG. Cultural transmission of male personality-related traits in the swordtail fish *Xiphophorus birchmanni*.

Seminars and Conference Talks *Presenting Author, ¹Undergraduate Author

2021

- A conserved *trans* regulatory loop involving an odorant-binding protein controls male mating behavior in flies. ***Delclos PJ**.
- University of Wisconsin – Madison JF Crow Institute for the Study of Evolution Seminar Series (Early Career Scientist Seminars Award Lecture)
- Un bucle *trans*regulador y conservado entre especies de mosca involucra una proteína olfativa y controla el comportamiento de apareamiento masculino. ***Delclos PJ**, Adhikari K, ¹Hassan O, ¹Oderhowho AA, ¹Sriskanharajah V, ¹Trinh T, Meisel RP.
- Evolution Conference (virtual)

- A conserved *trans* regulatory loop involving an odorant-binding protein controls male mating behavior in flies. ***Delclos PJ**, Adhikari K, ¹Hassan O, ¹Oderhowho AA, ¹Sriskanharajah V, ¹Trinh T, Meisel RP.
- *The Allied Genetics Conference 2021* (virtual)
- Applied potential for an odorant-binding protein that controls male mating behavior in flies. ***Delclos PJ**, Meisel RP.
- *NIMSS S1076 Annual Meeting: Fly Management in Animal Agricultural Systems and Impacts on Animal Health and Food Safety*. Raleigh, NC (virtual attendance).

2020

- A conserved *trans*-regulatory loop involving an odorant-binding protein controls male mating behavior in flies. ***Delclos PJ**, Meisel RP.
- *University of Houston Networks Seminar, Department of Mathematics*, Invited Speaker.
- Genotype-by-temperature effects on thermal preference in the house fly *Musca domestica*. ***Delclos PJ**, Meisel RP.
- *Society for Integrative & Comparative Biology Annual Meeting*. Austin, TX.

2018

- Olfactory choice for carrion age in the female burying beetle *Nicrophorus vespilloides*: preference or aversion? ***Delclos PJ**, ¹Bouldin TL, Tomberlin JK.
- *2018 Entomological Society of America*. Vancouver, Canada.

2017

- Neurogenetic framework of learned female mating preferences in the swordtail fish *Xiphophorus birchmanni*. ***Delclos PJ**, ¹Forero S, Rosenthal GG.
- *University of Houston Regional Ecology & Evolution Symposium*. Houston, TX.

2016

- Neurogenetic framework of learned female mating preferences in the swordtail fish *Xiphophorus birchmanni*. ***Delclos PJ**, ¹Forero S, Rosenthal GG.
- *University of Texas Austin Brain, Behavior & Evolution Seminar*, Invited Speaker.
- Context-dependent female mate choice: “Neighborhood” effects on preference. ***Delclos PJ**, Schumer M, Rosenthal GG.
- *Evolution Conference*. Austin, TX.

2015

- Evaluación rápida del ecosistema acuático. ***Delclos PJ**.
- *CICHAZ Jornada de las Ciencias*. Calnali, Mexico.
- Efectos sociales y nutritivos sobre la elección de pareja en *Xiphophorus*. ***Delclos PJ**.
- *CICHAZ Jornada de las Ciencias*. Calnali, Mexico
- Context-dependent female mate choice: Social and nutritional effects. ***Delclos PJ**, Rosenthal GG.
- *Texas A&M University Biology Department Seminar*, Invited Speaker.

- Conditional diet effects on sexual communication in hybridizing swordtails. ***Delclos PJ**, Rosenthal GG.
- *Ecological Integration Symposium*. College Station, TX.

2014

- Spatial, temporal, and diet effects on sexual communication in hybridizing swordtails (Teleostei: Poeciliidae). ***Delclos PJ**, Rosenthal GG.
- *Animal Behavior Society Conference*. Princeton, NJ.

2013

- Nutritional effects on female mate choice in hybrid populations of northern swordtails. ***Delclos PJ**, Rosenthal GG.
- *Texas A&M University Evolution Symposium*. College Station, TX.

2012

- Environmental effects on male traits in hybrid populations of northern swordtails. ***Delclos PJ**, Rosenthal GG.
- *Texas A&M Applied Biodiversity Sciences Cross-Pollination Seminar*, Invited Speaker.
- Métodos baratos y efectivos de medir la calidad del agua. Rosenthal GG, Culumber ZW, Hernández-Bautista CE, ***Delclos PJ**.
- *CECyTEH Calnali*. Calnali, Mexico.

Poster Presentations *Presenting Author, ¹Undergraduate Author

2020

- A conserved *trans*-regulatory loop involving an odorant-binding protein controls male mating behavior in flies. ***Delclos PJ**, Adhikari K, ¹Hassan O, ¹Oderhowho AA, ¹Srikantharajah V, ¹Trinh T, Meisel RP.
- *EMBO/EMBL Symposium: The Molecular Basis & Evolution of Sexual Dimorphism* (virtual).
- Polymorphic house fly male-determining proto-Y chromosomes affect male behaviors in ways that are consistent with their distributions in natural populations. ***Delclos PJ**, Adhikari K, ¹Matuk AG, ¹Presley RI, ¹Oderhowho A, ¹Hassan T, ¹Tran J, Meisel RP.
- *The Allied Genetics Conference 2020* (virtual).

2018

- Aflatoxin suppression in stored corn by managing maize weevils and introducing an exogenous molecule. ***Hobby S**, **Delclos PJ**, Tomberlin JK, Toews M.
- *2018 Entomological Society of America Meeting*. Vancouver, Canada.

2017

- Neurogenetic framework of learned female mate preference in swordtail fish. ***Forero S**, **Delclos PJ**, Rosenthal GG.
- *Undergraduate Research Scholars Symposium*, Texas A&M University.

2016

- Context-dependent female mate choice: Neurogenetic framework of learned preference.
***Delclos PJ**, [†]Forero S, Rosenthal GG.
- *Evolution Conference*. Austin, TX.

2014

- Effects of diet on female preference in the swordtail fish *Xiphophorus malinche*. *[†]Stanley ME, **Delclos PJ**, Rosenthal GG.
- *Ecological Integration Symposium*. College Station, TX.
- Nutritional effects on male traits and female mate choice in hybrid populations of northern swordtails *Xiphophorus malinche* x *X. birchmanni*. ***Delclos PJ**, Rosenthal GG.
- *The Society for Integrative & Comparative Biology Conference*. Austin, TX.

2013

- Nutritional effects on male traits and female mate choice in hybrid swordtail populations.
***Delclos PJ**, Rosenthal GG.
- *Student/Postdoc Research Conference*, Texas A&M University
- *Ecological Integration Symposium*, Texas A&M University

2012

- Effects of algal abundance on male display trait expression. ***Delclos PJ**, Rosenthal GG.
- *Student/Postdoc Research Conference*, Texas A&M University
- Nutrient and predator effects on sexual selection in *Xiphophorus birchmanni*. ***Delclos PJ**, Rosenthal GG.
- *American Livebearer Association Conference*. Ft. Lauderdale, FL

Guest Lectures And Workshops

2021

Weighted gene co-expression network analysis for Spring 2021 BIOL 3301 (Genetics), University of Houston

2020

Introduction to R for Spring 2020 BIOL 3301 (Genetics), University of Houston

2018

Weighted gene co-expression analysis: WGCNA R package tutorial for Open Source for Open Science Workshop, Texas A&M University

2016

Gene-by-environmental effects on sexual selection for Fall 2016 BIOL 467 (Integrative Animal Behavior), Texas A&M University

Female mate choice and premating sexual selection for Fall 2016 BIOL 467 (Integrative Animal Behavior), Texas A&M University

Teaching Experience

- **Animal Behavior** (BIOL 4340), 2021 - Present
- **Senior Seminar: Mate Choice and its Consequences** (BIOL 4311), 2022 - Present
- **General Biology II Lecture** (BIOL 1302), 2021 - Present
- **General Biology II Lab** (BIOL 1102), 2021 - Present
- **Ecology Laboratory** (BIOL 358) – Laboratory TA, 2013
- **Genes, Ecology, and Evolution** (BIOL 214) – Lecture TA, 2012

University & Professional Experience

- 2022 UH-D Assistant Professor Faculty Search Committee
- 2021 Student Publications Advisory Committee, Chair
- 2021 Judge for Houston Regional Ecology & Evolution Symposium
- 2018 Open Source Open Science Workshop 2018- instructor (292 students)
- 2014 Organizing committee member for 15th annual Texas A&M Ecological Integration Symposium
- 2013-2014 Organizer of Ecology & Evolutionary Biology Independent Student Organization weekly journal clubs and “shop talk” events
- 2013-2017 Rosenthal Lab website developer
- 2012-2016 Organizing committee member for “Jornada Científica del CICHAZ” community outreach event

Students Mentored (Affiliation and Years Mentored)

Undergraduate Mentees

- Kathy Nguyen (University of Houston-Downtown, 2022)
- Saima Akhtar (University of Houston-Downtown, 2022)
- Hafsa Khalil (University of Houston-Downtown/Scholars Academy, 2022)
- Nidda Mian (University of Houston-Downtown, 2022)
- Xavier Mitchell (University of Houston-Downtown, 2022)
- Gisselle Marquez (University of Houston-Downtown, 2021)
- Anna Matuk (University of Houston, 2019-2020)
- Rebecca Presley (University of Houston, 2019-2020)
- Jessica Tran (University of Houston, 2019-Present)
- Tammy Bouldin (Texas A&M University, 2018-2019)

- Kelsey Mattingley (Texas A&M University, 2018-2019)
- Ellie Chapkin (non-student worker, Texas A&M University, 2018-2019)
- Santiago Forero (Undergraduate Research Scholars Program, Texas A&M University 2015-2017)
- Abby Glueck (Texas A&M University, 2015-2016)
- Geneva Kernaghan (Texas A&M University, 2015-2016)
- Michael Stanley (Texas A&M University, 2013-2014)

Visiting PhD Student Mentees

- Hongyuan Zhang (Huazhong Agricultural University, 2018)
- Anika Sharma (Punjabi University, 2017-2018)

Peer Review (Number of Reviews)

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|---|-------------------------|
| • Behavioral Ecology & Sociobiology (2) | • Molecular Ecology (2) |
| • Current Biology (1) | • PloS One (1) |
| • Ethology (1) | • Animal Behaviour (1) |
| • Evolution (1) | |
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Community Outreach

- 2016 Texas A&M University Darwin Day live demonstrations of behavior experiments
 - 2012-2016 CICHAZ Summer Mentorship Program for Calnali high school students
 - 2016 Community-wide “Día de las Ciencias” event
 - 2015 Community-wide “Jornada Científica del CICHAZ” event
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Current Society Memberships

- Society of Integrative and Comparative Biology
 - Society for Molecular Biology and Evolution
 - Genetics Society of America
 - Society for the Study of Evolution
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Awards

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| • 2021 | Jim F. Crow Institute for the Study of Evolution (UW-Madison) Early Career Scientist Seminars Award |
| • 2017 | University of Houston Regional Ecology & Evolution Symposium: Best Presentation |
| • 2015-2017 | National Science Foundation Doctoral Dissertation Improvement Grant |
| • 2014 | Texas A&M University, Department of Biology Lawrence S. Dillon Distinguished Graduate Student Award |
| • 2013 | American Society of Ichthyologists and Herpetologists Raney Fund Award |

- 2013-2017 National Science Foundation Graduate Research Fellowship Program Award
- 2012 National Science Foundation Graduate Research Fellowship Program Award (Honorable Mention)
- 2011-2014 Texas A&M University Diversity Fellowship
- 2007-2010 Rice University Trustee Scholarship
- 2007-2009 Rice University Century Scholars Program Fellowship

Skills

- RNA-Seq
- R for statistics and data visualization
 - General and mixed-effect modeling
 - Multivariate statistics
- Genomic analyses using local and HPC resources
 - Sequence alignments
 - Molecular evolution/phylogenetics
 - Gene network analysis
 - Transcriptomic analysis
- Metagenomic analysis of microbial communities
- DNA and RNA extraction
 - Non-model insect husbandry
 - Fish husbandry
 - Development and validation of behavioral assay equipment
 - Development of nearly isogenic house fly strains
 - Gas chromatography/mass spectrometry analyses
 - Volatile organic compound profiling
 - Cuticular hydrocarbon profiling

References

- **Richard Meisel**
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- **Jeff Tomberlin**
Professor, Dept. of Entomology, Texas A&M University
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- **Gil Rosenthal**
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