Noland H. Martin, Ph.D.
Texas State University - San Marcos
601 University Drive
San Marcos, TX 78666

I. Academic/Professional Background

A. Name: NOLAND H. MARTIN, Ph.D. **Title:** Associate Professor

B. Educational Background

Degree	Year	University	Major
Ph.D.	2004	Duke University	Biology
Dissertation title: *Evolution, Genetics, and Maintenance of Reproductive Isolation in* Mimulus guttatus *and* Mimulus nasutus.			
M.S.	2000	University of Oregon	Biology
B.S.	1996	University of Texas, Austin	Biology

C. University Experience

Associate Professor	Texas State University	2013 - present
Assistant Professor,	Texas State University	2006-2013
Postdoctoral Researcher,	University of Georgia	2004-2006
Teaching Assistant,	Duke University	2000-2004
Teaching Assistant,	University of Oregon	1997-2000

D. Relevant Professional Experience

Analytical Consultant	Milwaukee Public Museum	2003-2004

II. TEACHING

A. Courses Taught

BIO 2410, Introduction to General Botany, Spring 2007, 2008, Fall 2011
BIO 2450, Genetics, Fall 2007, 2008, 2010, Spring 2009 - present
BIO 4301, Evolution, Spring 2009, Summer 2010, Fall 2012 - present
BIO 7120, Population Biology Seminar: Natural Hybridization, Spring 2007
BIO 7120, Population Biology Seminar: Ecological Speciation, Spring 2017
BIO 7427, Population Biology (Quantitative Genetics Module), Fall 2007 - 2014
BIO 4299, Undergraduate Research, Spring, Fall 2007-present
BIO 4350O, Tropical Ecology and Conservation – Summer 2016-present
BIO 4319, Biological Resources – Conservation and Planning Summer 2016-present
BIO 5X99A, Thesis 2006 – present
BIO 5X99B, Thesis 2006 – present
BIO 5X14, Research Experience, 2013 – present
BIO 7303 Research Summer 2017
BIO 7314, Research Experience, 2012 – present
BIO 7X99A, Dissertation
BIO 7X99B, Dissertation

B. Undergraduate Researchers Mentored

• Bobby J. Cast - (Strandtmann Field Biology Award), Spring 2007
• Benjamin D. Rickman , Spring 2007

• Scott R. Sandilos, Spring 2007
• Katherine Cummings, Summer 2007
• James May, Fall 2007
• Heath Goins, Fall 2007 – Fall 2008
• Mary Dobson (Francis Rose Undergraduate Grant Recipient), Fall 2007 – Fall 2008
• Rees Willard, Fall 2008 - 2010
• Charlene Farias, Fall 2009 – Spring 2010
• Mark Foster, Fall 2009 – Spring 2010
• Loren Kempf, Fall 2009 – Spring 2010
• Mark Ramirez, Summer 2009 – Fall 2009
• Shelter Anyama, Summer 2009 – Fall 2009
• Courtney Carr, Summer 2009 – Fall 2009
• Josh Matlock, Summer 2009 – Fall 2009
• Luis Rojas, Fall 2009 – 2010
• Sulap Khatwada, Summer 2011 - 2012
• Kendall AuBuchon, 2010 – 2013
• Alex Carr, 2012
• Alexander Zalmat 2013 - 2015
• Marie McCarthy 2013 – 2014
• Emily Spence, 2015 – present
• Abdo Zeinoun 2015 – 2016
• Travis Eaton 2015 – 2016
• James Akers 2016
• Aiko Amano 2016 - 2018
• Dustin Burns 2016 - 2018
• Armando Becker 2016 - 2018
• Austin Heitmann 2016 – 2018
• Peyton Randolph 2018 – 2020
• Melissa Wolter 2020
• Emily Bellew 2020
• Hannah Wright 2020 - present

C. Courses Prepared

BIO 2410, Introduction to General Botany, Spring 2007, 2008, Fall 2011
BIO 2450, Genetics, Fall 2007, 2008, 2010, Spring 2009 - present
BIO 4301, Evolution, Spring 2009, Summer 2010, Fall 2012 - present
BIO 7120, Population Biology Seminar: Natural Hybridization, Spring 2007
BIO 7120, Population Biology Seminar: Ecological Speciation, Spring 2017
BIO 7427, Population Biology (Quantitative Genetics Module), Fall 2007 - 2014
BIO 4299, Undergraduate Research, Spring, Fall 2007 – present
BIO 4350O, Tropical Ecology and Conservation – Summer 2016, 2017, 2018, 2019
BIO 4319, Biological Resources – Conservation and Planning Summer 2016 – present.
BIO 4338, Tropical Ecology and Conservation – 2020+ (prepared course for adoption)

D. Graduate / Postdoctoral Theses/Dissertations or Exit Committees

Graduate Student Advisor:

1. Alexander Zalmat (2021 – Present) – PhD.
2. Avery Mottet (2019 – *Present*) – M.S.

3. Matthew Harrison (2019 – *Present*) – M.S.
4. Chloe Reeves (2018 – 2021)
    - Thesis Title: *Natural Hybridization and Introgression between Berberis trifoliolata and Berberis swaseyi in the Edwards Plateau*
5. V. Alex Sotola (2016 - 2020) – PhD
    - Dissertation Title: *Influences of Historical and Contemporary Environmental Conditions on Threatened and Endemic Aquatic Organisms*
6. Taylor McCrary (2018-2019)
    - Masters Project Title: *Preventing the Loss of Animal Biodiversity Through Captive Breeding and Reintroduction Programs*
7. Alexander Zalmat (2015 – 2019) – M.S.
    - Thesis title: *Population structure and gene flow in the Louisiana Iris species complex*
8. Joy Sung (2013– 2017) M.S.
    - Thesis title: *The genomic architecture of reproductive isolation in a Louisiana Iris hybrid zone*
9. Shengwei Ho (2010 – 2013) – M.S.
    - Thesis title: *An interspecific linkage map of Iris fulva and Iris nelsonii.*
10. Sunni Taylor (2008 – 2012) – Ph.D.
    - Dissertation Title: *Homoploid hybrid speciation in Louisiana Iris.*
11. Josh Shaw (2008 – 2010) – M.S.
12. Mary Dobson (2008 – 2010) – M.S.
    - Thesis Title: *Hybrids and Herbivory: Genetic Patterns of Tolerance in Hybrids.*
13. Sunni Taylor (2006 – 2008) – M.S.
    - Thesis Title: *Genetic Architecture of Hybrid Fitness in the Louisiana Iris Species Complex.*

<u>Graduate Student Committee Member (Texas State University – San Marcos)</u>:

1. Carli Martinez (MS 2021 – present – Dr. Veech)
2. Cody Craig (PhD 2017 – 2020 – Dr. Bonner)
    - *Classification, and Explanations of Processes and Patterns Structuring and Maintaining Inland Fish Communities*
3. Amanda Driscoe (MS 2015 – 2018 – Dr. Ott)
    - *Host plant affiliation and spatial autocorrelation as drivers of genetic differentiation among populations of a regionally host-specific insect herbivore*
4. Kate Bell (Ph.D. 2012-2018 – Dr. Nice)
    - *The Genomics of Speciation*
5. Lauren Lucas (Ph.D. – 2012 – Present – Dr. Nice)
6. David Ruppel (PhD 2016 – 2019 – Dr. Bonner)
    - *Factors Influencing Community Structure of Riverine Organisms: Implications for Imperiled Species Management*
7. Richard Nuckels (Ph.D. – 2011 – 2018 – Dr. Garcia)
    - *Differential selection pressure among duplicated genes in teleosts*
8. Kate Bell (2010 – 2012 – Dr. Nice)
    - *Sympatric, allochronic populations of the Pine White butterfly* Neophasia menapia *are morphologically and genetically differentiated.*
9. Nihar Adhikary (2009 – 2011 – Dr. McLean)
    - Thesis title: *Long Term Competition in* Escherichia coli *and* Pseudomonas aeruginosa *Co-Culture.*
10. Michael Vandewege (2009 – 2011 – Dr. Forstner)

- Thesis title: *Using Pedigree Reconstruction to Test Head-Starting Efficiency for Endangered Amphibians: Field Tested in the Houston Toad* (Bufo houstonensis).

11. Jacqueline Ma (2009 – 2011 – Dr. Gabor)
    - Thesis title: *Proximate and Ultimate Perspectives on Sperm Production and Mating Behavior in a Bisexual-Unisexual Mating System Between Sailfin* (Poecilia latipinna) *and Atlantic* (P. mexicana) *Mollies with Clonal Amazon Mollies* (P. formosa).
12. Michelle Downey (2008 – 2010 – Dr. Nice)
    - Thesis title: *Experimental and Population Genetic Evidence of Host Race Formation in a Specialized* Lycaenid *Butterfly.*
13. Cristina Campbell (2008 – 2010 – Dr. Ott)
    - Thesis title: *Hypersensitive Response in Live Oak: Characterization and Efficacy Against a Host Specific Gall-Forming Wasp.*
14. Celeste Espinedo (2006 – 2008 – Dr. Gabor)
    - Thesis title: *The Degree of Reproductive Isolation in* Gambusia affinis *and* Gambusia geiseri.
15. Joe Angermeier (2007 – 2009 – Dr. Lemke)

Outside Ph.D. Committee Member:

1. Elizabeth Milano (2010 – 2015)- University of Texas, Austin (Dr. Juenger) Dissertation title: *Population Structure and Genetic Analysis of the* Ipomopsis aggregata *ssp.* candida *and ssp.* collina *Hybrid Zone.*

Postdoctoral Advisor

1. Dr. Amanda Brothers, Indiana University (2010 – 2012)
2. Dr. Evangeline Ballerini, Harvard University (2010 – 2012)
3. Dr. Sunni Taylor (2012 – 2015)

E. Teaching Awards

- Favorite Professor. Texas State University. Alpha Chi National Honor Society (2014, 2015, 2018, 2019)

III. SCHOLARLY/CREATIVE

A. Works In Print - This font color represents "layperson" publications – not peer reviewed. (Works "in prep," "in progress," and etc. are not listed.)

‡Martin Graduate student author, *****Martin Undergraduate student author, ¥Martin postdoctoral author

1. ‡Zalmat, A.S., ‡V.A. Sotola, C.C. Nice, and **N.H. Martin**. 2021. Genomic population structure in the Louisiana Iris complex reveals patterns of current and historical introgression. *Accepted minor revisions (resubmitted)* **American Journal of Botany**.
2. ‡Sotola, V.A., K. Sullivan, B. Littrell, **N.H. Martin**, D.S. Stich, and T.H. Bonner. 2021. Short-term responses of freshwater mussels to floods in a southwestern U.S.A. river estimated using mark–recapture sampling. **Freshwater Biology 66:** 349-361. DOI: 10.1111/fwb.13642
3. Ruppel, D.S. ‡V.A. Sotola, C.A. Craig, **N.H. Martin**, and T.H. Bonner. 2020. Assessing functions of movement in a Great Plains endemic fish. **Environmental Biology of Fishes 103:** 795-814. https://doi.org/10.1007/s10641-020-00983-8
4. ‡Sotola, V.A., D.L. Ruppel, T.H. Bonner, C.C. Nice, and **N.H. Martin.** 2019. Asymmetric introgression between fishes in the Red River basin of Texas is associated with variation in water quality. **Ecology and Evolution. 9:** 2083-2095. DOI: 10.1002/ece3.4901.
5. ‡Sotola, V.A., C.A. Craig, P.J. Pfaff, **N.H. Martin**, and T.H. Bonner. 2019. Effect of preservation on fish morphology over time: implications for morphological studies. **PLOS ONE 14(3):** e0213915.

6. ‡Sung, Cheng-Jung, K.L. Bell, C.C. Nice, and **N.H. Martin.** 2018. Integrating Bayesian genomic cline analyses and association mapping of morphological and ecological traits to dissect reproductive isolation and introgression in a Louisiana Iris hybrid zone. **Molecular Ecology** 27(4) 959-978. DOI:10.1111/mec.14479
7. ‡Shaw, J.P., ‡S.J. Taylor, ‡M.C. Dobson, and **N.H. Martin**. 2017. Pollinator isolation in Louisiana iris: legitimacy and pollen transfer. **Evolutionary Ecology Research** 18: 429-441.
8. Arnold, M.L., ¥A.N. Brothers, J.A.P. Hamlin, ‡S.J. Taylor, and N.H. Martin. 2015. Divergence With Gene Flow: What Humans and Other Animals Got Up To in Reticulate Evolution: Symbiosis, Lateral Gene Transfer, Hybridization, and Infectious Heredity, **Interdisciplinary Evolution Research** 3: 255-296. DOI 10.1007/978-3-319-16345-1
9. **Martin, N.H**. and ‡S.J. Taylor. 2013. Floral preference, flower constancy, and pollen transfer efficiency of the ruby-throated hummingbird (*Archilochus colubris*) in mixed arrays of *Iris nelsonii* and *Iris fulva*. **Evolutionary Ecology Research 15:** 783-792. (Featured on cover).
10. ‡Taylor, S.J., *L.D. Rojas, ‡S.W. Ho, **N.H. Martin**, 2013. Genomic collinearity and the genetic architecture of floral differences between the homoploid hybrid species *Iris nelsonii* and one of its progenitors, *Iris hexagona*. **Heredity 110 (1):** 63-70.
11. Benedict, B.G. Modliszewski, J.L., A.L. Sweigart, **N.H. Martin**, and J.H. Willis. 2012. *Mimulus sookensis* (Phrymaceae), a new allotetraploid species derived from *Mimulus guttatus* and *Mimulus nasutus*. **Madroño 59:** 29-43.
12. ¥Ballerini, E.A., ¥A.N. Brothers, S. Tang, S.J. Knapp, A. Bouck, ‡S.J. Taylor, M.L. Arnold and **N.H. Martin**. 2012. QTL mapping reveals the genetic architecture of loci affecting pre- and post-zygotic isolating barriers in Louisiana Iris. **BMC Plant Biology 12:** 91.
13. ‡Taylor, S.J., K.J. *AuBuchon, and **N.H. Martin**. 2012. Identification of floral visitors of *Iris nelsonii*. **Southeastern Naturalist: 11:** 141-144.
14. ‡Dobson, M.C., ‡S.J. Taylor, M.L. Arnold and **N.H. Martin**. 2011. Patterns of herbivory and fungal infection in experimental Louisiana Iris hybrids. **Evolutionary Ecology Research 13:** 543-552. (Featured on cover).
15. ‡Taylor, S.J., *R.W. Willard, ‡J.P. Shaw, ‡M.C. Dobson, and **N.H. Martin**. 2011. Differential response of the homoploid hybrid species *Iris nelsonii* (Iridaceae) and its progenitors to abiotic habitat conditions. **American Journal of Botany 98:** 1309-1316.
16. **Martin N.H.** 2011. A scientist's perspective on national funding for science. **Irises: The Bulletin of the American Iris Society** 92: 17-23.
17. **Martin, N.H.** and J.H. Willis. 2010. Geographic variation in postzygotic isolation and its genetic basis within and between two *Mimulus* species. ***Philosophical Transactions of the Royal Society B: Biological Sciences* 365:** 2469-2478.
18. Tang, S., R.A. Okashah, S.J. Knapp, M.L. Arnold, and **N.H. Martin.** 2010. Reproductive isolation in Louisiana Irises: transmission ratio distortion. ***BMC Plant Biology* 10:** 48.
19. **Martin, N.H.** 2010. A scientist reports again. ***Irises: The Bulletin of the American Iris Society* 91:** 17-18.
20. Arnold, M.L. and **N.H. Martin**. 2010. Hybrid fitness across time and habitats. **Trends in Ecology and Evolution 25:** 530-536. **(Invited Review -** Featured on cover).
21. Arnold, M.L., S. Tang, S.J. Knapp and **N.H. Martin.** 2010. Asymmetric introgressive hybridization among Louisiana Iris species. **Genes 1:** 9-22.
22. Arnold, M.L. and **N.H. Martin**. 2009. Adaptation by introgression. ***Journal of Biology* 8:** 82.
23. **Martin, N.H.** 2009. A scientist reports again: SLI support enables field work. ***Fleur de Lis* 217:** 5-7.
24. ‡Taylor, S.J., M.L. Arnold, and **N.H. Martin**. 2009. Genetic architecture of reproductive isolation in Louisiana Irises: hybrid fitness in nature. ***Evolution* 63:** 2581-2594. (Featured on cover).
25. DeVries, P. J., G.T. Austin, and **N.H. Martin.** 2009. Estimating species diversity in a guild of Neotropical skippers (Lepidoptera: Hesperiidae) with artificial lures is a sampling problem. ***Insect Conservation and Diversity* 2:** 1-10.
26. **Martin, N.H.** 2008. Scientist meets Louisiana Irises... love grows after rough introduction. ***Fleur de***

Lis **211:** 9-11.

27. Arnold, M.L., S. Cornman, and **N.H. Martin**. 2008. Genetic exchange and the origin of adaptations – Prokaryotes to primates. ***Philosophical Transactions of the Royal Society B: Biological Sciences* 363**: 2813-2820.
28. **Martin, N.H.,** Y. Sapir, and M.L. Arnold. 2008. The genetic architecture of reproductive isolation in Louisiana Irises: pollination syndromes and pollinator preferences. ***Evolution* 62:** 740-752. (Featured on cover).
29. A.L. Sweigart, **N.H. Martin,** and J.H. Willis, 2008. Hybrid origin of a new *Mimulus* species. ***Molecular Ecology* 17:** 2089-2100. ("Perspective" written about this work in same journal – "Co-first author").
30. P.J. DeVries, G.T. Austin, and **N.H. Martin**. 2008. Patterns of diversity and temporal activity in a mega-diverse community of rainforest skipper butterflies. ***Biological Journal of the Linnean Society* 94:** 723-736.
31. Arnold M.L., R.S. Cornman and **N.H. Martin** 2008. Hybridization, hybrid fitness and the evolution of adaptations. ***Plant Biosystems* 142:** 166-171.
32. **Martin, N.H.**, A.C. Bouck, and M.L. Arnold. 2007. The genetic architecture of reproductive isolation in Louisiana Irises: Flowering Phenology. ***Genetics* 175:** 1803-1812.
33. **Martin, N.H.** and J.H. Willis. 2007. Ecological divergence associated with mating system causes nearly complete reproductive isolation between sympatric *Mimulus* species. ***Evolution* 61:** 68-82.
34. **Martin, N.H.**, A.C. Bouck, and M.L. Arnold. 2006. Detecting adaptive trait introgression between *Iris fulva* and *Iris brevicaulis* in highly-selective field conditions. ***Genetics* 172:** 2481-2489.
35. **Martin, N.H.**, A.C. Bouck, and M.L. Arnold. 2005. Loci affecting long-term hybrid survivability in Louisiana Irises: implications for reproductive isolation and introgression. ***Evolution* 59:** 2116-2124.
36. **Martin, N.H.** 2004. Flower size preferences of the honeybee (*Apis mellifera*) foraging on *Mimulus guttatus* (Scrophulariaceae). ***Evolutionary Ecology Research* 6:** 777-782.

B. Reports: non-peer-reviewed r*eports to granting agencies are not listed. All grants were appropriately reported to granting agencies.*

Ellerbe Creek Watershed Plan, 2003 - www.ellerbecreek.org/watershed-plan-intro.htm

C. SCIENTIFIC PRESENTATIONS AT INTERNATIONAL MEETINGS:

* *GRADUATE / UNDERGRADUATE IN MARTIN LAB*

Intermediate traits of hybridized Prairie Chub Macrhybopsis australis and Shoal Chub M. hyostoma within the Red RiverBasin. Banks, W.A., J.E. Pav, N.H. Martin, *V.A. Sotola, and T.H. Bonner. Texas Chapter American Fisheries Society, Waco, Texas. (Poster) 2020

Genomic and morphological divergence within the Texas Shiner Notropis amabilis group throughout Central Texas drainages. Edwards, C.R., S. Thiels, C.A. Craig, N.H. Martin, *V.A. Sotola, and T.H. Bonner Texas Chapter American Fisheries Society Edwards., Waco, Texas. (Poster) 2020

Effect of Discharge on Mussel Population Dynamics through Mark-Recapture Sampling. Sotola, V.A., K. Sullivan, B. Littrell, N.H. Martin, D.S. Stich, and T.H. Bonner. National American Fisheries Society and The Wildlife Society, Reno, Nevada. (Oral Presentation) 2019

Identification of Historical Dispersal Patterns of Fishes into and within Gulf Slope Drainages. Sotola, V.A., C.A. Craig, T.H. Bonner, and N.H. Martin. National American Fisheries Society and The Wildlife Society, Reno, Nevada. (Poster) 2019

Asymmetric introgression between fishes in the Red River basin of Texas is associated with variation in

water quality. Sotola, V.A., D.S. Ruppel, C.C. Nice, T.H. Bonner, and N.H. Martin. Southern Division and Texas Chapter of the American Fisheries Society, Galveston, Texas. (Oral Presentation) 2019

Effect of preservation on fish morphology over time: implications for morphological studies. Pfaff, P.J., V.A. Sotola, C.A. Craig, J.D. Maikoetter, N.H. Martin, and T.H. Bonner. Southern Division and Texas Chapter American Fisheries Society, Galveston, Texas. (Poster) 2019

Factors influencing migrations of a prairie stream fish: a case study using Macrhybopsis australis. Ruppel, D.S., V.A. Sotola, C.A. Craig, and T.H. Bonner. Southern Division and Texas Chapter American Fisheries Society, Galveston, Texas. (Oral Presentation) 2019

Genetic analysis reveals complex genetic structuring and historical biogeographical patterns in the Macrhybopsis species complex. Sotola, V.A., T.H. Bonner, and N.H. Martin. Southern Division Meeting of the American Fisheries Society. 2019

Genetic analysis of the Macrhybopsis species complex: a perpective of their historical biogeography within Texas. Sotola, V.A., T.H. Bonner, and N.H. Martin. Southwestern Association of Naturalists. 2018

Assessment of genetic structuring, morphological variation, and hybridization between the Prairie Chub and Shoal Chub. Sotola, V.A., D. Ruppel, T.H. Bonner, and N. Martin. 2017. American Fisheries Society. 2017

*Morphometrics as a descriptor of potential hybridization between prairie chub (*Macrhybopsis australis*) and shoal chub (*M. hyostoma*)* (Oral Presentation) Sotola, V.A., D.S. Ruppel, T.H. Bonner, and N.H. Martin. 2017.

The genomic architecture of reproductive isolation in a Louisiana Iris hybrid zone. J. Sung and N.H. Martin. Ecological Genetics Symposium. Kansas State University. Manhattan, KS. December 2014.

Hybrid speciation in Louisiana Iris. (poster) N.H. Martin and S.J. Taylor. Evolution conference. Logan, Utah 21-25 June 2013.

Mechanical pollinator isolation in Louisiana Iris: legitimacy and pollen transfer. (poster) *Ho, S., N.H. Martin. Ecological Society of America conference. Austin, TX. August 2011.

Homoploid hybrid speciation in Louisiana Iris. (poster) *Taylor, S.J. and N.H. Martin. Ecological Society of America conference. Austin, TX. August 2011.

Homoploid hybrid speciation in Louisiana Iris (poster) *Taylor, S.J., and N.H. Martin. International Botanical Congress, Melbourne, Victoria. July 2011.

Homoploid hybrid speciation in Louisiana Iris. *Taylor, S.J., and N.H. Martin. Botany 2011, St. Louis, MO. July 2011.

Homoploid hybrid speciation in Louisiana Iris. (poster) *Taylor, S.J., and N.H. Martin. Evolution conference, Norman, OK. June 2011.

Genetic architecture of reproductive isolation in Louisiana Iris.(oral) *Taylor, S.J., *L.D. Rojas, and N.H. Martin. Botanical Society of America conference, Providence, RI. July 2010.

Genetic architecture of reproductive isolation in Louisiana Iris. (oral) *Taylor, S.J., * L.D. Rojas, and N.H. Martin. Evolution conference, Portland, OR. June 2010.

Genetic architecture of floral morphology in Louisiana Iris. (poster) *Taylor, S.J., *L.D. Rojas, and N.H. Martin. Women in Science and Engineering conference, San Marcos, TX. May 2010.

Genetic architecture of pollination syndromes in Louisiana Iris. (oral) *Taylor, S.J., *L.D. Rojas, and N.H. Martin. Southwestern Association of Naturalists conference. Junction, TX. April 2010.

Genetic architecture of postzygotic isolation in Louisiana Iris: hybrid fitness in nature. (oral) *Taylor, S.J., M.L. Arnold, and N.H. Martin. Talk. Texas Academy of Science conference, Stephenville, TX. March 2010.

Part of the story: Postzygotic isolation of a hybrid species (poster) *S.J. Taylor and N.H. Martin. Sigma Xi Annual Meeting and Student Research Conference, Houston, TX November 2009.

The genetic architecture of reproductive isolation in Louisiana Irises: hybrid fitness in nature. (oral)

*S.J. Taylor and N.H. Martin. Texas State University International Research Conference for Graduate Students. November 2009.

The genetic architecture of reproductive isolation in Louisiana Irises: hybrid fitness in nature. (oral) *S.J. Taylor, M.L. Arnold, and N.H. Martin. Botany and Mycology Conference, Snowbird, UT, July 2009.

Patterns of fungal infection and herbivore attack in Louisiana Iris. (poster) *M.C. Dobson, and N.H. Martin, Botany and Mycology Conference, Snowbird, UT, 25-29 July 2009.

Mechanical pollinator isolation in Louisiana Iris: legitimacy and pollen transfer (poster) *J.P. Shaw and N.H. Martin Botany and Mycology Conference, Snowbird, UT, 25-29 July 2009.

Habitat Isolation in Louisiana Iris (oral) N.H. Martin, *S.J. Taylor, *R.Willard, *J.P. Shaw, *M.C. Dobson, and M.L. Arnold. Evolution Conference, Moscow ID, 15 June 2009.

The genetic architecture of reproductive isolation in Louisiana Iris: Iris nelsonii x I. hexagona (poster) *S.J. Taylor and N.H. Martin, Evolution Conference, Moscow ID, June 2009.

Differential herbivory and fungal infections on parental and hybrid classes of Louisiana Irises (oral) *M.C. Dobson and N.H. Martin. Southwestern Association of Naturalists Meeting, Monterrey, Mexico 2009.

QTL analysis of floral traits affecting introgression and reproductive isolation in Iris hybrids (poster) S. Tang, R.A. Okashah, N.H. Martin, Y. Sapir, S.J. Knapp, and M.L. Arnold. Plant and Animal Genome Conference, San Diego, CA. January 2009.

The genetic architecture of reproductive isolation in Louisiana Irises: pollination syndromes and pollinator preferences. (oral) N.H. Martin and M.L. Arnold, Botanical Society of America, Victoria, BC, Canada. July 2008.

The genetic architecture of hybrid fitness in the Louisiana Iris species complex. (poster) *S.J. Taylor, N.H. Martin and M.L. Arnold, Botanical Society of America, Victoria, BC, Canada. July 2008.

Components of reproductive isolation between sympatric Mimulus guttatus and Mimulus nasutus (poster) N.H. Martin and J.H. Willis, Plant Speciation meetings 2003 (Plant Canada)

Hybrid lethality in sympatric Mimulus: the importance of Dobzhansky-Muller and nuclear-cytoplasmic interactions (oral) N.H. Martin and J.H. Willis, Evolution meetings 2002.

Reproductive isolation in Mimulus: the importance of Dobzhansky-Muller and nuclear-cytoplasmic interactions (oral) N.H. Martin and J.H. Willis, Botany meetings 2002.

D. INVITED TALKS

Reproductive Isolation and natural hybridization in Louisiana Iris. N.H. Martin Univ. New Orleans
Invited Talk. 2017

Population Genetics of Louisiana Iris June 2015
Society for Louisiana Iris

Conservation Biology of Iris nelsonii.
Louisiana Dept. of Wildlife and Fisheries June 2012

Conservation Biology of Iris nelsonii.
Society for Louisiana Iris March 2012

Quantifying diversity, quantification of reproductive isolation, and quantitative genetics of speciation
Texas State University March 2009

Genetic architecture of speciation and reproductive isolation in Mimulus.
University of Houston November 2007

Speciation in Mimulus *and* Iris.
(Class Lecture: Frances Rose) October 2006

How I Became a Scientist.
Texas State University November 2006

Natural history of speciation and introgressive hybridization: case studies in Mimulus *and* Iris.
Texas State University, April 2006

The identification and quantification of prezygotic and postzygotic isolation.
Department of Genetics, University of Georgia November 2005.
Evolution and maintenance of reproductive isolation: a genetic, ecological, and genomic approach to studying speciation.
University of New Orleans April 2005
The biology of speciation.
Mesa State College May 2005
- *Speciation in* Mimulus.
Duke University - Population Biology Group 2001-2004

E. Grants and Contracts (Funded and Pending External Grants) – Student grants not listed

- Texas Ecolab: *Do ecological variables associated with Agarita (Mahonia trifoliolata and Mahonia swaseyi) predict population structure?* (2021) $10,000
- Texas Ecolab: *Reproductive Ecology of Berberis species on the Edwards Plateau* (2020-2021) $14,000
- Texas Comptroller: *Mark and recapture freshwater mussel assessment* (2020-2023) $200,000
- Sabine River Authority: *Sabine River Mussel Project* (2020-2021) $150,000
- Texas Comptroller: *Range-wide survey for Louisiana Pigtoe (Pleurobema riddellii) and Texas Heelsplitter (Potamilus amphichaenus)* (2020-2023) $500,000
- Texas Ecolab: *Natural Hybridization in Central Texas* Berberis (2017-2019) $14,000
- RFP No. 212f for Endangered Species Research Projects for the Prairie Chub Texas Comptroller (2015-2018) $120,000
- Society for Louisiana Irises: *Transmission ratio distortion of Iris nelsonii and Iris fulva* (2012 – 2016) $7,726
- Louisiana Dept. of Wildlife and Fisheries: *Examining species diversity and relative abundance of a butterfly community visiting* Iris nelsonii*, the only plant endemic to the state of Louisiana.* (2011 - 2015) $61,538
- National Science Foundation: *Collaborative Proposal: Genetic architecture of reproductive isolation and introgression in experimental and natural hybrid zones in Louisiana Irises* (Mar 2010-2015) $537,632
- National Science Foundation: *Ecology, evolution, and genetic architecture of reproductive isolation in* Iris nelsonii*: a homoploid hybrid.* (2008-2011) $135,000
- Society for Louisiana Irises (2 awards) (2007, 2008) $2000
- American Iris Society Foundation (4 awards) (2007-2009, 2010) > $15,000
- Duke University Keever Fund Research Award 2002 (2002) $1000
- Duke University Conference Travel Award (2002) $500
- National Science Foundation, Dissertation Improvement Grant (2000) $5331
- National Institute of Health, Genetics Research Fellow (1999-2000) stipend
- Sigma Xi, Grant-in-Aid-of-Research (1999) $700

F. Submitted but not funded (major) grants and contracts

- Research Enhancement Program – Texas State University (not funded) (2018)
- Preliminary Proposal: *Genomics of reproductive isolation, adaptive introgression, and homoploid hybrid speciation in Louisiana Iris* - National Science Foundation (not funded) (Aug. 2015)
- *A genomic approach to identifying loci responsible for ecological speciation in the homoploid hybrid*

species Iris nelsonii
National Science Foundation (not funded) (Aug. 2013)

- Preliminary Proposal: *A genomic approach to identifying speciation loci in the homoploid hybrid species Iris nelsonii*

National Science Foundation (invited) (Jan. 2013) $591,827

- Preliminary Proposal: *Collaborative Proposal: Genetic Architecture of Reproductive Isolation and Introgression in Experimental and Natural Hybrid Zones in Louisiana Irises*

National Science Foundation *(not funded)* (Jan. 2013)

- Preliminary Proposal: *Genomic Composition of the Homoploid Hybrid Species Iris nelsonii: Testing for Ecological Divergence*

National Science Foundation *(not funded)* (Jan. 2012)

- *Population structure of the rare endemic Iris nelsonii.*

National Fish and Wildlife Foundation (NPCI) *(not funded)* (June 2011) $178,070

- *Homoploid hybrid speciation in Louisiana Iris*

Advanced Research Program (state of Texas) *(not funded)* (October 2009) $200,000

- *Ecology, Evolution, and Genetic Architecture of Reproductive Isolation in Louisiana Iris,*

National Science Foundation *(not funded)* (July 2007) $569,350

- *Genetic Architecture of Speciation / Reproductive Isolation in Louisiana Iris*

Advanced Research Program (state of Texas) *(not funded)* (October 2007) $125,000

G. Funded Internal Grants and Contracts

- Research Enhancement Program – Texas State University (2007) $7966
- Research Enhancement Program – Texas State University (2006) $7993
- Startup Funds from Texas State University (2006) $175,000

H. Funded Graduate-Student Grants

- *Sunni-Taylor:* Sigma Xi, Grant-in-Aid-of-Research (2007) $400
- Botanical Society of America Research Award (2007) $500
- American Iris Society Foundation (2007) $2550
- American Iris Society Foundation (2011) $2719

I. Scholarly/Creative Awards

- College of Science Runner Up: Presidential Award for Excellence in Scholarly/Creative Activities 2009
- College of Science Runner Up: Presidential Award for Excellence in Scholarly/Creative Activities 2011
- Alpha Chi

IV. SERVICE

A. Departmental Committees

- Departmental Planning Committee (2013-present)
- Seminar Committee (2006-2012)
- Undergraduate Committee (2006-present)
- Target of Opportunity Committee (2006-present)
- Vehicle Use Committee (2006-2016)
- Greenhouse Committee (Current Co-Chair) (2006-present)
- Tenure and Promotion Committee (2008-present)
- Graduate Committee (2016-present)

B. Departmental Activities

- Chair of Population and Conservation Biology Masters Program (2016-present)
- Chair - Francis Rose Undergraduate Award for Excellence in Biological Research (2016-present)

- Coordinate departmental graduate student luncheons with speakers (2006-2012)
- Invited and hosted University of Chicago speaker Jerry Coyne (March 2010)
- Invited and hosted University of New Orleans speaker Philip J. DeVries (12 Feb 2007)
- Invited and hosted University of New Orleans speaker Carla Penz (26 Mar 2007)
- Invited and hosted University of Georgia speaker Mike Arnold (15 Oct 2007)
- Served as grant panel judge for Francis Rose Undergrad. Res. Award (2007-present)
- Served as judge for student Colloquium (2008)

C. University Service

- Invited and hosted University of Chicago speaker Jerry Coyne for a public "Why Evolution is True" talk. (March 2010)

D. Training

- "National Science Foundaton Regional Grants Conference"
  – National Science Foundation organizers (October 2008)
- "Introduction to QTL Mapping" Module – Summer Institute in Statistical Genetics
  - R. Doerge, Z.B. Zeng instructors (June 2005)
- "Advanced QTL Mapping" – Summer Institute in Statistical Genetics
  - K. Broman, B. Yandell, Z.B. Zeng instructors (June 2005)

E. Organizational Memberships

- Member: Society for Louisiana Irises (2007-present)
- Member: American Iris Society (2007-present)
- Member: Society for the Study of Evolutionary Biology (2006-present)
- Member: Botanical Society of America (2007-present)
- Member Sigma Xi Scientific Research Society (2007-present)

F. Professional Service

- Editorial Board: **Genes 2021 – present.**
- Associate Editor: **American Journal of Botany** 2012 - 2016
- Grant Panelist for National Science Foundation: Population and Evolutionary Processes (2009, 2012, 2014)
- Grant Reviewer for National Science Foundation: Population and Evolutionary Processes
- Faculty Member of EDEN – Evo-Devo-Eco Network (NSF – Funded opportunity to allow undergraduate students to study with non-model-system organisms 2011 - 2017).
- Planting Science High School Mentor (2009 - 2011)
- Reviewer for **Evolutionary Ecology** (2011)
- Reviewer for **BMC Evolutionary Biology** (2011)
- Reviewer for **Journal of Animal Ecology** (2010)
- Reviewer for **Journal of Ecology** (2010)
- Reviewer for **ABC Botanica** (2009)
- Reviewer for **Annals of Botany** (2009, 2012, 2013)
- Reviewer for **Behavioral Ecology and Sociobiology** (2009)
- Reviewer for **Sexual Plant Reproduction** (2009)
- Reviewer for **Molecular Ecology** (2009, 2010, 2011, 2013, 2014, 2019, 2020)
- Reviewer for **Acta Botanica Cracoviensia** (2009)
- Reviewer for **Diversity and Distributions** (2008)
- Reviwer for **Botanical Journal of the Linnean Society** (2008)
- Reviewer for **New Phytologist** (2008, 2009, 2012, 2015, 2019, 2019)
- Reviewer for **Evolution** (2007, 2008, 2009, 2011, 2012, 2013, 2016, 2018, 2019)
- Reviewer for **Journal of Heredity** (2007, 2012)

- Reviewer for **Plant Systematics and Evolution** (2007)
- Reviewer for **Philosophical Transactions of the Royal Society** (2007, 2008)
- Reviewer for **Lundellia** (2007)
- Reviewer for **Genetics** (2006-2007, 2014)
- Reviewer for **American Journal of Botany** (2006-2007, 2009-2010, 2013-2016)
- Reviewer for **Planta** (2006)
- Reviewer for **Journal of the Lepidopterists' Society** (2001, 2002)
- Reviewer for **Biotropica** (2001, 2002)
- Reviewer for **Evolutionary Ecology Research** (2015)
- Board Member for Ellerbe Creek Watershed Association (Land Trust) (2002, 2003)