

# **PHILIP LAVRETSKY**

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## **EXPERIENCE**

- **Associate Professor, Biological Sciences Department at the University of at Texas El Paso, TX** Aug. 2022 – Present
- **Birds Curator, University of Texas at El Paso Biodiversity Collections** Aug. 2016 – Present
- **Assistant Professor, Biological Sciences Department at the University of at Texas El Paso, TX** Aug. 2016 – Aug. 2022
- **Biological Science Technician with U. S. Geological Survey** May 2016 – Aug. 2016
- **Postdoctoral Researcher at the University of Miami, FL** Jan. 2015 – Aug. 2016  
(PI: Dr. Kevin McCracken)
- **Visiting Assistant Professor at the Miami University, OH with Project Dragonfly** Aug. 2015 – May 2016
- **Smithsonian Visiting Researcher, Washington, D.C.** June – Dec. 2014  
(PIs: Dr. Helen James and Dr. Robert Fleischer)

## **EDUCATION**

- **Wright State University, Dayton, Ohio**
  - Postdoctoral Research Associate June – December 2014
  - Ph.D. Environmental Sciences May 2014  
(PI: Dr. Jeffrey L. Peters)
- **University of California, Davis, California**
  - B.S. Genetics, Minor in Wildlife, Fish and Conservation Biology June 2008

## **PROFESSIONAL EXPERIENCE**

### **(A) Research**

#### **U. S. Geological Survey**

- Collecting genomic ddRAD-seq data to understand population structure and hybridization in 15 species of sea ducks

#### **University of Miami, Miami, FL**

- Collecting genomic data to understand population structure and hybridization in two scaup species
- Collecting genomic data to reconstruct phylogenetic relationships within the heron clade
- Understanding gene flow and selection in the adaption of high altitude species

### **Miami University, Oxford, OH**

- Teaching online Master's level courses in Issues in Evolution, Biology in the Age of Technology, Issues in Biodiversity, and a Master's Capstone offered within the NSF funded Project *Dragonfly* Global Field Program and Advanced Inquiry Program

### **Smithsonian, Washington, D.C.**

- Ancient DNA sequencing of various extant and extinct Hawaiian waterbirds

### **Wright State University, Dayton, OH**

- *Thesis Title*: Phylogenetic, Population Genetics and Evolution of the Mallard Complex
- Attaining Next-Generation restriction site associated markers (ddRADseq) for a variety of Anatids
- Developing molecular methods for the conservation of the Laysan duck and Hawaiian duck
- Coordinating scientific collection trips in North America, Mexico, South Africa, and Namibia with > 100 voucher specimens in American Museum of Natural History, Smithsonian, and UC-Davis Museum of Wildlife Fish Biology
- Developing GIS based distributional methods to understand migratory patterns of waterfowl species using band-recovery data
- Genetic testing of African bird's for avian malaria
- Developing molecular techniques to identify marine leeches from sea turtles in the Atlantic and Pacific Ocean basins
- Developing molecular techniques for the conservation of the endangered northeastern bulrush
- *NSF Graduate Research Assistant*. DNA sequencing of Australian and African waterfowl

### **University of California-Davis, Davis, CA**

- Undergraduate Honors Thesis Research project with Dr. Bernie May (2007-08): *Genetic Variation at the Major Histocompatibility Complex Beta II Locus in Sacramento Perch*
- SNP genotyping redband trout and rainbow trout individuals using real time PCR to understand genetic structure and hybridization
- SNP analysis in Argentinian redband trout and comparison with Californian redband trout

## **(B) Teaching**

### **Teaching at University of Texas at El Paso (Developed Courses are underlined)**

- Waterfowl Ecology and Management (*ONLINE only*: Combing certificate-only options for professionals and for-credit via COS at UG, MS, & PhD levels)
- Evolution
- Waterfowl Ecology and Evolution
- Organismal Biology
- Birds and Mammals
- Population Genetics

\*Invited guest lecturer with Texas Parks and Wildlife, Texas Master naturalist Course – Mammals Section (2017-2018)

## Teaching at Wright State University

- Organisms and Ecosystems Lab Spring 2014
- Co-Teacher for a Biology Honors Student Recitation Winter 2013
- Biology of Food Lab Summer 2013
- Cells and Genes Lab Fall 2012-Spring 2013-Winter 2013
- Mentored twelve undergraduate and four graduate students in the Peters Lab throughout my PhD

## (C) Direct Mentorship

- Post-Doctoral Fellows ( $N = 3$ )
  - Dr. Joshua I. Brown (Fall 2021 – Summer 2023)
  - Dr. Paige Byerly (Summer 2021 – May 2022)
  - Dr. Caitlin Wells (May – August 2018)
- Doctoral ( $N = 4$ ; Graduated = 1)
  - Lauren McFarland (Fall 2021 – Present): *Genomic and morphological consequences of landscape-level hybridization between wild and domesticated congeners.*
  - Sarah Gonzalez (Fall 2019 – Present): *Computer vision identification and genotype-phenotype analyses among taxa of a recent avian radiation.*
  - Flor Hernández (Spring 2018 – Summer 2024). *Signatures of selection, gene flow, and genetic drift on the genomes of a recent avian radiation.*
  - Joshua I. Brown (Fall 2016 – Summer 2021). *Landscape population genomics and the effects of selection and gene flow in several closely related species of ducks.*
- Masters ( $N = 4$ ; Graduated = 1)
  - Vergie M. Musni (Fall 2023 – Present): *TBD.*
  - Nicholas Enriquez (Fall 2022 – Present): *TBD.*
  - Kristi Fukunaga (Fall 2022 – Spring 2024). *Towards the conservation of mainland Hawaii's last endemic duck: Establishing sex-ratios and habitat associations of koloa, feral mallard, and hybrid clutches on the main Hawaiian Islands*
  - Marissa H. Kaminski (Fall 2019 – Summer 2021). *Pacific black duck ecology and habitat assessment in Aunu'u, American Samoa, and their relationship to other mallard-like ducks of Oceania, greater Indonesia, and the Philippines.*
- Mentored ~30 undergraduates
- Outside committee member for 5 MS and 5 PhD students.

## (D) Field and Museum Experiences

- Develop Museum Exhibit “A Waddle Through Time” for the UTEP Centennial Museum running January – July, 2024 focused on worldwide waterfowl conservation:  
<https://www.utep.edu/centennial-museum/museum/current%20exhibits/ducks.html#:~:text=A%20Waddle%20Through%20Time&text=Highlighting%20the%20work%20of%20Dr,a%20world%20we%20all%20s> here.
- Birds Curator of UTEP's Biodiversity Collections (2016 – Present)
- Coordinating local and international scientific collection trips
  - Museum skin preparation of various avian species

- Places: USA (including Hawaii), Canada, Mexico, New Zealand, Namibia, South Africa, American Samoa, Australia
- Coordinating banding operations (**Master Bander ID 24073**) in USA (Texas, New Mexico, Arizona) and American Samoa
- Waterfowl banding intern with California Waterfowl Association (Jan.-March 2009)
  - Rocket netting and banding in California's Central Valley and in the Klamath Refuge
- Waterfowl banding intern with Minnesota Department of Natural resources (July-Aug. 2008)
  - Working with state officials and landowners to live trap (diurnal drive-trapping, nocturnal night-lighting from boats and spotlights), identify, and band adult and young waterfowl; Avian Influenza sampling in waterfowl
- Professional Guide for Safari Nordik in Quebec, Canada. (August-September 2007)
- Volunteer with International Student Volunteers (ISV) Inc., New Zealand.
  - Working with local Māori to build trails and fences, replant native flora, reduce invasive numbers (e.g., small mammal trapping), and enhance riverbanks

**(E) National Outreach Effort**

- duckDNA is a partnership between Lavretsky's Lab and Ducks Unlimited, Inc. is the largest citizen science project in waterfowl genetics and conservation: [www.duckDNA.com](http://www.duckDNA.com)

**WORKSHOPS and SYMPOSIUM**

- **Lavretsky P.** 2024. North American Mallard Symposium at *the North American Duck Symposium 9*. Portland, OR, USA.
- **Lavretsky P.** 2022. Hawaiian Duck Workshop v2 for USFWS Partners. Honolulu, HI, USA.
- **Lavretsky P.** 2021. Hawaiian Duck Workshop for USFWS Partners. Virtual.
- **Lavretsky P.** 2019. Birds Session at *the Chihuahuan Desert Conference*. El Paso, TX, USA.
- **Lavretsky P.** 2019. Eastern Mallard and Brown Duck Symposium at *the North American Duck Symposium 8*. Winnipeg, Manitoba, Canada.
- **Lavretsky P.** 2019. Oxford Nanopore MinION Genome Sequencing Workshop. University of Texas at El Paso. El Paso, Texas.
- McCracken KG, **Lavretsky P.**, and Peters JL. 2018. Population Genetics and ddRAD Sequencing Workshop. Universidad Científica del Perú, Iquitos, Peru.
- McCracken KG and **Lavretsky P.** 2017. Population Genetics and ddRAD Sequencing Workshop. Universidad Nacional Toribio Rodríguez de Mendoza de Amazonas, Triunfo, Chachapoyas, Peru.

**GRANTS/FELLOWSHIPS** (Total Secured = **\$5,976,730**)

(A) Grant Funding = **\$5,752,145** (PI on 26 of 29 Grants)

- Lavretsky, Philip (PI)**. “Reversing Anthropogenic Hybridization in Endangered Koloa Maoli (Hawaiian duck, *Anas wyvilliana*)”; Sponsored by U.S. Fish and Wildlife Services (DOFWA-HI), Federal. \$482,770. (September 2023 – August 2026).
- Walsh, Elizabeth A (PI), Lougheed, Vanessa L (co-PI), Moody, Michael L (co-PI), McLaren, Jennie R (co-PI), La Rue Elizabeth A (co-PI), and **Lavretsky, Philip (co-PI)**. "RaMP: Research opportunities and access for diverse scientists (ROADs) in extreme dryland environments ": Sponsored by NSF (DBI), Federal. \$2,998,993. (September 2023 - August 2027).
- Lavretsky, Philip (PI)** and McFarland, Lauren (co-PI). Graduate Fellowship in Waterfowl Conservation: Sponsored by Ducks Unlimited, NPO. \$17,900. (September 2022 – December 2024).
- Lavretsky, Philip (PI)** and Collins, Dan (co-PI). " Population structure, movement ecology, habitat needs, and basic life-history matrices of Mexican Ducks (*Anas diazi*) in Southwestern United States”; Sponsored by U.S. Fish and Wildlife Services, Federal. \$42,000. (September 2022 – August 2024).
- Lavretsky, Philip (PI)**. "SUPPLEMENTAL FUNDING: Research Experience for Undergraduates (REU) in the Biological Sciences": Sponsored by NSF (DEB 2010704), Federal. \$9,000. (May - August 2023).
- Lavretsky, Philip (PI)**. "SUPPLEMENTAL FUNDING: Research Experience for Post-Baccalaureate Students (REPS) in the Biological Sciences": Sponsored by NSF (DEB 2010704), Federal. \$65,546. (September 2022 - August 2023).
- Lavretsky, Philip (PI)**. "SUPPLEMENTAL FUNDING: Post-doctoral Fellowship ": Sponsored by NSF (DEB 2010704), Federal. \$104,782. (September 2022 - August 2023).
- Lavretsky, Philip (PI)**. "SUPPLEMENTAL FUNDING: Research Experience for Post-Baccalaureate Students (REPS) in the Biological Sciences": Sponsored by NSF (DEB 2010704), Federal. \$47,022. (September 2021 - August 2022).
- Lavretsky, Philip (PI)** and Schummer, Michael (Co-PI). "COLLABORATIVE RESEARCH: Landscape Consequences of Hybridization between Wild and Domesticated Forms: Investigating the influence of domestic mallard genetics and morphology on North American wild mallard populations": Sponsored by NSF (DEB 2010704), Federal. \$704,315 (of \$918,311). (September 1, 2020- August 31, 2024).
- Lavretsky, Philip (PI)**. "Active management strategies to meet koloa recovery goals: developing molecular-based simulations to inform augmentation and removal practices”; Sponsored by U.S. Fish and Wildlife Services, Federal. \$86,027. (October 2020 – September 2022).
- Lavretsky, Philip (PI)**. "Using genetics to identify geographical overlap and frequency of hybridization between west gulf coast plain mottled ducks and Mexican ducks in the south Texas brush country”; Sponsored by Texas Parks and Wildlife Department, State. \$256,795. (September 2019 – August 2024).
- Lavretsky, Philip (PI)**. "Population Ecology, Population Genetics, and Conservation of the Pacific Black Duck (*Anas Supercilliosa*) in American Samoa”; Sponsored by U.S. Fish and Wildlife Services, Federal. \$392,151. (October 2019 – September 2024).
- Lavretsky, Philip (PI)**. "Genomics of a recent radiation," Sponsored by UTEP-URI, \$5,000. (September 2020 - August 2021).
- Lavretsky, Philip (PI)** and Brown, Joshua (co-PI). "Eastern mallard genetics”: Sponsored by Ducks Unlimited, NPO. \$12,920. (June 2019 - February 2021).

- Lavretsky, Philip (PI).** “Long-term genetic effects of game-farm mallard releases on wild mallards in North America ”: Sponsored by Ducks Unlimited, NPO. \$15,050. (April 2019 - March 2021).
- Lavretsky, Philip (PI).** "Genetic structure of South Carolina mottled ducks and rate of hybridization with released mallards": Sponsored by South Carolina Department of Natural Resources, State. \$6,946. (June 2019 - July 2020).
- Lavretsky, Philip (PI)** and Brown, Joshua (coPI). "Long-Term Genetic Effects of Game-Farm Mallard Releases on Wild Mallards in the Atlantic Flyway": Sponsored by Ducks Unlimited, NPO. \$7,676. (April 2018 - March 2019).
- Greenbaum, Eli (PI), Mayfield, Teresa (co-PI), Lavretsky, Philip (co-PI). "Digitization PEN: Incorporation of a Massive New World Invertebrate Collection at the University of Texas at El Paso.," Sponsored by NSF, Federal. \$166,288. (2017 - 2018).
- Lavretsky, Philip (PI).** "Population Genetics and Ecology Of Mexican Ducks And Mallards"; Sponsored by Safari Club Intl - El Paso Chapter, NPO. \$10,000. (July 2017 – June 2018).
- Lavretsky, Philip (PI).** "Population Genetics of Arizona's Springsnail stage 2"; Sponsored by Arizona Game and Fish Department, STO. \$6,640. (May 2018 – August 2018).
- Lavretsky, Philip (PI).** "Population Genetics of Arizona's Springsnail"; Sponsored by Arizona Game and Fish Department, STO. \$6,610. (March 2018 – May 2018).
- Lavretsky, Philip (PI).** "Screening Candidate Genes for Sexually Monochromatic Plumage in Anas Ducks," Sponsored by UTEP-URI, \$5,000. (September 2016 - August 2017).
- Lavretsky, Philip (PI)** and Peters, Jeffrey L (co-PI). " Distribution modeling and genetic structuring of North America’s American Black Duck (*Anas rubripes*) and Mallard (*Anas platyrhynchos*) populations”; U.S. Fish and Wildlife Services (Black Duck Joint Venture), Federal. \$58,534. (October 2014 – September 2015).
- Peters, Jeffrey L (PI) and **Lavretsky, Philip (co-PI).** " A Genomic Appraisal of the Taxonomic Distinctiveness of Florida and West Gulf Coast Mottled Ducks (*Anas fulvigula*)”; Sponsored by Arizona Game and Fish Department, STO. \$10,000. (September 2012 – August 2013).
- Lavretsky, Philip (PI).** "Travel Award: Scientific Collection of Mexican Ducks”; Sponsored by American Museum of Natural History, NPO. \$2,900. (February 2012).
- Lavretsky, Philip (PI).** “Ducks Unlimited Richard H. G. Bonnycastle Graduate Fellowship in Wetland and Waterfowl Biology”: Sponsored by Ducks Unlimited, NPO. \$10,274. (September 2011 – August 2012).
- Lavretsky, Philip (PI).** "Travel Award”; Sponsored by The American Ornithologist’s Union, NPO. \$260. (August 2011).
- Lavretsky, Philip (PI).** "Graduate Fellowship”; Sponsored by Yellow Springs Instruments, Inc., NPO. \$6000. (September 2009 – August 2011).
- Lavretsky, Philip (PI).** "Graduate Fellowship in Waterfowl Conservation”; Sponsored by Ohio Waterfowl Association, NPO. \$750. (September 2009 – August 2010).
- (B) Philanthropic Donations (Since 2022) = \$224,585**

## **HONORS/AWARDS**

- 2023 The Wildlife Society-Southeastern Section Outstanding Publication in Wildlife Biology/Management award for Davis et al. 2022. *Ornithology*. 139:p.ukac034.
- 2022 Elective Member of the American Ornithological Society

- 2016 Ducks Unlimited Canada's Institute for Wetland and Waterfowl Student Awardee (\$500 award for Lavretsky et al. 2015. *Molecular Ecology*. 24:5364-5378.)
- 2016 Smithsonian Fellow Awardee
- 2012 Wright State ES PhD Graduate Excellence Award

### **PEER-REVIEWED PUBLICATIONS** (Students are Underlined)

- (53) **Lavretsky P**, Kraai K, Butler D, Morel J, Marty J, Musni VM, and Collins D. accepted. Human-induced range expansions have resulted in a recent hybrid zone between sister species of ducks. *GENES* (special issue *Genomics of Evolution and Adaptation in Animals*).
- (52) Kaminski M, Brown JI, Seibert SR, Hernandez CF, Duya MV, Fontanilla IKC, Roshier D, Miles A, Joseph L, Peters JL, and **Lavretsky P**. (accepted). Island biogeography of mallard-like ducks of Oceania, Indonesia, and the Philippines. *Molecular Phylogenetics and Evolution*.
- (51) Vera AJ, Soliz AG, Khatchikian CE, Mora-Covarrubias ADL, Watts DM, and **Lavretsky P**. (accepted). Genomic Analysis of *Aedes aegypti* in the Northern Chihuahuan Desert of Texas and Mexico. *J. of Vector-Borne and Zoonotic Diseases*.
- (50) McCracken KG, Graham AM, **Lavretsky P**, and Wilson RE. (2024). High-altitude adaptation is accompanied by strong signatures of purifying selection in the mitochondrial genomes of three Andean waterfowl. *PLOS ONE*. 19:e0294842.
- (49) Champagnon J, Elmberg J, Guillemain M, **Lavretsky P**, Clark RG, and Söderquist P. (2023). Silent domestication of wildlife in the Anthropocene: The mallard as a case study. *Biological Conservation*. 288:110354
- (48) Hernandez CF, Janzen T, and **Lavretsky P**. (2023). simRestore: A decision-making tool for adaptive management of the native genetic status of wild populations. *Molecular Ecology Resources*. 24:e13892.
- (47) Samake J, **Lavretsky P**, Gunarathna I, Follis M, Brown JI, Ali S, Yared S, and Carter T. (2023). Genome-wide analyses reveal mechanisms of invasive *Anopheles stephensii* dispersal in the Horn of Africa. *Molecular Ecology*. 00:1–14.
- (46) Schell E, McCracken KG, Graham S, White J, **Lavretsky P**, and Dawson N. (2023). Consistent changes in muscle metabolism underlie dive performance across multiple lineages of diving ducks. *Proceedings of the Royal Society B: Biological Sciences*. 290:20231466.
- (45) **Lavretsky P**, Camacho-Hernández FB, Swale T, and Mohl JE. (2023). Chromosomal-level reference genome of a wild North American mallard. *G3: Genes, Genomes, Genetics*. jkad171.
- (44) **Lavretsky P**, Mohl JE, Söderquist P, Kraus RHS, Schummer ML, and Brown JI, (2023). The meaning of wild: Genetic and adaptive consequences from large-scale releases of domestic mallards. *Communications Biology*. 6:819.
- (43) **Lavretsky P** and Sedinger B. (2023). Migratory Patterns of Eastern North American Mallards as Revealed from a half-century of Band-Recovery Data. *Journal of Wildlife Management*. e22421.

- (42) Schummer M, Simpson J, Shirkey B, Kucia S, **Lavretsky P**, and Tozer D. (2023). Population Genetics and Geographic Origins of Mallards Harvested in Northwestern Ohio. *PLOS ONE*. 18:e0282874.
- (41) Hruska J, Holmes J, Oliveros C, Shakya S, **Lavretsky P**, McCracken KG, Sheldon F, Moyle R. (2023). Ultraconserved elements resolve the phylogeny and corroborate patterns of molecular rate variation in herons (Aves: Ardeidae). *Ornithology*. ukad005.
- (40) **Lavretsky P**, Hoyt A, Musni VM, Howell D, and Williams CK. (2023). Frequency and types of alternative breeding strategies employed by nesting American black ducks in North Carolina. *PLOS ONE*. 18:e0278905.
- (39) Seibert S, Joseph L, Bowers J, **Lavretsky P**, Drew A, Mason I, Roshier D, and Peters JL. (2023). Population genomics and phylogeography of four Australasian waterfowl. *Emu-Austral Ornithology*. 123:105-117.
- (38) **Lavretsky P**, Camacho-Hernández FB, and Davis JB. (2022). Ovarian degeneration resulting in the phenotypic masculinisation of a wild female Mallard (*Anas platyrhynchos*). *Wildfowl*. 72:174–181.
- (37) Davis JB, Outlaw DC, Kaminski RM, Ringelman KM, & **Lavretsky P**. (2022). Low Levels of Hybridization between Domestic and Wild Mallards Wintering in the Lower Mississippi flyway. *Ornithology*. 139:p.ukac034.
- (36) Brown JI, Camacho-Hernández FB, Engilis AE Jr., Hernández-Baños B, Collins D, and **Lavretsky P**. (2022). Genomic and morphological data shed light on the complexities of shared ancestry between closely related duck species. *Scientific Reports*. 12:1-14.
- (35) Kulikova IV, Shedko SV, Zhuravlev YN, **Lavretsky P**, and Peters JL (2022) Z-chromosome outliers as diagnostic markers to discriminate Mallard and Chinese Spot-billed Duck (Anatidae). *Zoologica Scripta*. 51:401-414.
- (34) Brown JI, Harrigan R, and **Lavretsky P**. (2022). Evolutionary and Ecological Drivers of Local Adaptation and Speciation in a North American Avian Species Complex. *Molecular Ecology*. 31:2578-2593.
- (33) Stunz E, Fetcher N, **Lavretsky P**, Mohl J, Tang J, and Moody ML. (2022). Landscape genomics provides evidence of ecotypic adaptation and a barrier to gene flow at treeline for the arctic foundation species *Eriophorum vaginatum*. *Frontiers in Plant Science*. 13:860439-860439.
- (32) Wilson R, Sonsthagen S, **Lavretsky P**, Majewski A, Arnason E, Halldórsdóttir K, Einarsson AW, Wedemeyer K, Talbot S. (2022). Low levels of hybridization between sympatric cold-water adapted Arctic cod and Polar cod in Beaufort Sea confirms genetic distinctiveness. *Arctic Science*. 8:1082-1093
- (31) Hernández F, Brown JI, Kaminski MH, Harvey MG, and **Lavretsky P**. (2021). Species genomics reveals low levels of gene flow, robust species trees, and large demographic changes in the evolutionary histories of four dove species. In Special Issue Domestic and Wild Species Interaction: from Genotype to Phenotype. *Animals*. 11:2677.
- (30) Kayla H, **Lavretsky P**, Foth J, Williams CK. (2021). Nest parasitism, promiscuity, and relatedness among wood ducks. *Plos One*. 16:e0257105.



- (29) **Lavretsky P**, **Duenez E**, Kneece M, and Kaminski RM. (2021). Comparative genetics of mottled ducks introduced to South Carolina and other mallard-like ducks in North America. *Journal of Wildlife Management*. 85:1616-1627.
- (28) Lawson D, Williams CK, **Lavretsky P**, Howell D, and Fuller J. (2021). Mallard–black duck hybridization and population structure in North Carolina. *Journal of Wildlife Management*. 85:1243–1255.
- (27) **Lavretsky P**, **Duenez E**, and Sorensen J. (2021). Phylogeography and conservation of recently discovered springsnails in Arizona. *Journal of Molluscan Studies*.87:eyab020
- (26) **Lavretsky P**, Wilson RE, Talbot SL, and Sonsthagen SA. (2021). Phylogenomics reveals ancient and contemporary gene flow contributing to the evolutionary history of sea ducks (Tribe Mergini). *Journal of Molecular Phylogenetics and Evolution*.161:107164
- (25) **Brown JI**, **Lavretsky P**, Joseph L, Roshier D, and Peters JL. (2021). A multi-locus approach to discern conservation units and adaptive potential of Pacific black ducks across Australia and surrounding islands. *Emu*. 161:107164
- (24) **Brown JI**, **Lavretsky P**, Wilson RE, Haughey C, Boyd SW, Esler D, Talbot S, and Sonsthagen SA. (2020). High site fidelity does not equate to population genetic structure for common goldeneye and Barrow’s goldeneye in North America. *Journal of Avian Biology*. 51:e02600.
- (23) **Lavretsky P**, McInerney N, **Mohl JE**, **Brown JI**, James HF, McCracken KG, and Fleischer RC. (2020). Assessing Changes in Genomic Divergence Following a Century of Human Mediated Secondary Contact among Wild and Captive-bred Ducks. *Molecular Ecology*. 29:578–595.
- (22) Wells CP, **Lavretsky P**, Peters JL, DaCosta J, Sorenson MD, Turnbull S, Uyehara K, Malachowski C, Dugger B, Eadie JM, and Engilis A Jr. (2019). Persistence of an endangered native duck, feral mallards, and multiple hybrid swarms across the main Hawaiian Islands. *Molecular Ecology*. 28:5203-5216. [Co-First author; **Cover Image**]
- (21) **Brown JI**, **Lavretsky P**, Cumming GC, and Peters JL. (2019). Strong population structure and limited gene flow between Yellow-billed Ducks and Mallards. *The Condor*. 121:1-10.
- (20) Alza L, **Lavretsky P**, Peters JL, Cerón G, Smith M, Kopuchian C, Astie A, and McCracken KG. (2019). Old Divergence and Restricted Gene Flow between Torrent Duck (*Merganetta armata*) Subspecies in the Central and Southern Andes. *Ecology and Evolution*. 00:1–16.
- (19) Sonsthagen SA, Wilson RE, **Lavretsky P**, and Talbot S. (2019). Coast to Coast:High Genomic Connectivity in North American Scoters. *Ecology and Evolution*. 9:7246-7261.
- (18) **Lavretsky P**, DaCosta JM, Sorenson MD, McCracken K G, and Peters JL. (2019). ddRAD-seq data reveal significant genome-wide population structure and divergent genomic regions that distinguish the mallard and close relatives in North America. *Molecular Ecology*. 00:1–16.
- (17) **Lavretsky P**, Janzen, T., and McCracken K G. (2019). Genomics of hybridization and the maintenance of divergent regions: mallards and American black ducks of eastern North America. *Ecology and Evolution*. 9:3470–3490.

- (16) Graham A, **Lavretsky P**, Muñoz-Fuentes V, Green A, Wilson RE, McCracken KG. (2017). Migration-selection balance drives genetic differentiation in genes associated with high-altitude function in the speckled teal (*Anas flavirostris*) in the Andes." *Genome Biology and Evolution* 10:3544-3562.
- (15) Cipollini K., **Lavretsky P**, Cipollini D, and Peters JL. (2017). Population genetic structure and conservation units across the range of endangered northeastern bulrush, *Scirpus ancistrochaetus*. *International Journal of Plant Sciences*. 178:000-000.
- (14) Peters JL, **Lavretsky P**, DaCosta JM, Bielefeld RR, Feddersen JC, and Sorenson MD. (2016). Population genomic data delineate conservation units in mottled ducks (*Anas fulvigula*). *Biological Conservation*. 203:272-281.
- (13) **Lavretsky P**, Peters JL, Winker K., Volker B., Kulikova I, Zhuravlev YN, Wilson RE, Barger C, Gurney K., and McCracken KG. (2016). Becoming pure: identifying generational classes of admixed individuals within lesser and greater scaup populations. *Molecular Ecology*. 25:661–674.
- (12) **Lavretsky P**, DaCosta JM, Hernández-Baños BE, Engilis A Jr., Sorenson MD, and Peters JL. (2015). Speciation genomics and a role for the sex chromosome in the early stages of divergence. *Molecular Ecology*. 24:5364-5378. [**\*\*IWWR Award Winner**]
- (11) Michelle RH, John PM, **Lavretsky P**, Pedro SP, and Karen CN, (2015). Microsatellite variation and rare alleles in a bottlenecked Hawaiian Islands endemic: implications for reintroductions. *Endangered Species Research*. 28:117-122.
- (10) **Lavretsky P**, Engilis A Jr., Eadie JM, and Peters JL. (2015). Genetic admixture supports an ancient hybrid origin of the endangered Hawaiian duck. *Journal of Evolutionary Biology*. 28:1005–1015.
- (9) **Lavretsky P**, Schwartz RS, Baerwald M, and May BP. (2014). Developing major histocompatibility markers in a species of concern: the Sacramento perch *Archoplites interruptus*. *Journal of Fish Biology*. 85:1766-1776.
- (8) **Lavretsky P**, Blanca HE, and Peters JL. (2014). Rapid radiation and hybridization contribute to weak differentiation and hinder phylogenetic inferences in the New World Mallard complex (*Anas* spp.). *The Auk*. 131:524-538. [**\*\*Editors Pick for Press Release**]
- (7) **Lavretsky P**, Miller JM., Peters JL, and Volker B. (2014). Exploring Fall Migratory Patterns of American Black Ducks Using Eight Decades of Band-Recovery Data. *Journal of Wildlife Management*. 78:997-1004.
- (6) **Lavretsky P**, Peters JL, and Engilis A Jr. (2014). Major histocompatibility I gene diversity in the critically endangered Laysan duck (*Anas laysanensis*). *Journal of Pacific Conservation Biology*. 20:86–93.
- (5) Peters JL, Winker K., Millam K., **Lavretsky P**, Kulikova I, Wilson RE, Zhuravlev Y, and McCracken KG. (2014). Mito-nuclear discord in six congeneric lineages of Holarctic ducks (genus *Anas*). *Molecular Ecology*. 23:2961–2974.
- (4) Peters JL, Sonsthagen SA, **Lavretsky P**, Rezsutek M, Johnson WP, and McCracken KG. (2014). Interspecific hybridization contributes to high genetic diversity and apparent effective population size in an endemic population of mottled ducks (*Anas fulvigula maculosa*). *Conservation Genetics*. 15:509-520.

- (3) **Lavretsky P**, McCracken KG, and Peters JL. (2014). Phylogenetics of a recent radiation in the mallards and allies (*Anas Anas*): Inferences from a genomic transect and the multispecies coalescent. *Journal of Molecular Phylogenetics and Evolution*.70:402–411.
- (2) **Lavretsky P**, Truong T, McGowin A., Balazs G, and Peters JL. 2012. New primers reveal the presence of a duplicate histone H3 in the marine turtle leech *Ozobranchus branchiatus*. *Conservation Genetics Resources*, 4:487-490.
- (1) Simmons RE, **Lavretsky P**, and May BP. 2010. Introgressive Hybridization of Redband Trout in the Upper McCloud River Watershed. *Transactions of the American Fisheries Society*. 139:201-213.

### **IN-REVIEW/REVISION PUBLICATIONS** (Students are Underlined)

- Diaz A, Hernandez CF, Mohl JE, **Lavretsky P**, and McCracken KG. (in review). Phylogenomics, introgression, and demographic history of extant flamingos (Aves: Phoenicopteridae). *Molecular, Phylogenetics, and Evolution*.
- Diaz A, Hernandez CF, **Lavretsky P**, and McCracken KG. (in review). Population genomics of the slate-colored coot (*Fulica ardesiaca*) in Peru reveals isolation and genetic differentiation of low- and high-altitude populations with a high-altitude origin. *PLOS ONE*.
- Brown JI, Sheppard JL, Mohl JE, and **Lavretsky P**. (in review). Anthropogenically-induced adaptive introgression promotes the re-wilding of introduced domestic and demise of wild endemic bird populations in New Zealand. *Molecular Ecology*.
- Schummer M, Halligan S, Fournier AMV, **Lavretsky P**, Davis JB, Downs CJ, and Musni VM. (in review). Morphological differences between wild and game-farm Mallards in North America. *Ibis*.

### **BOOK CHAPTERS**

- Lavretsky P**. (2020). Population Genomics Provides Key Insights into Admixture, Speciation, and Evolution of Closely Related Ducks of the Mallard Complex in Population Genomics: Wildlife.
- Ottenburghs J, **Lavretsky P**, Peters JL, Kawakami T, and Kraus RHS. (2019). Population Genomics and Phylogeography in Avian Genomics in Ecology and Evolution. Pg. 237-265.

### **OTHER PUBLICATION**

- Lavretsky P**. (2020). Genetically modified mallards: Game-farm genetics fill the Atlantic Flyway. Is that California’s future? California Waterfowl Association Summer issue.
- Lavretsky P**. (2020). The Surprising Genetics of American Black Ducks and Mallards. Ducks Unlimited May/June 2020 issue. <https://www.ducks.org/duckdna>.
- Ducks Unlimited Canada IWWR. (2016). The mallard take-over: Could the prevalence of mallard-like traits in today’s waterfowl go back thousands of years?. <http://www.ducks.ca/stories/iwwr/the-mallard-take-over/>
- Lavretsky P**. (2015). The Evolution of Mallards and Mexican Ducks Explained by the Z-Sex Chromosome. iScience Sharing Knowledge Blog. <http://www.ibase24.com/#!/The->

Evolution-of-Mallards-and-Mexican-Ducks-Explained-by-the-ZSex-Chromosome/c1tye/565daee60cf2099ad66eab8b.

Reynolds MH, Pearce JM, **Lavretsky P**, Peters JL, Courtot KN, and Seixas PP. (2015). Evidence of low genetic variation and rare alleles in a bottlenecked endangered island endemic, the Laysan Teal (*Anas laysanensis*). HCSU Technical Reports. HCSU-063.

**Lavretsky P**. (2014). Phylogenetics, population genetics, and evolution of the mallard complex. Dissertation. Wright State University.

## **OTHER MEDIA**

- 3/27/2024 Southeast Whitetail Podcast - <https://podcasts.apple.com/us/podcast/ep-54-negative-impacts-from-game-farm-mallards-w-dr/id1607379410?i=1000650622833>
- 2/19/2024 The FowlWeather Podcast - <https://podcasts.apple.com/us/podcast/ep-28-kitchen-conversations-talking-mallard-migration/id1708505832?i=1000645792160>
- 2/17/2024 - GETDUCKS Podcast: <https://podcasts.apple.com/us/podcast/ep-446-is-the-mallard-migration-shifting-or-is/id1503110007?i=1000645021461>
- 02/05/2024 - Texas Standard (NPR) - <https://www.texasstandard.org/stories/waddle-through-time-ducks-exhibit-centennial-museum-chihuahuan-desert-gardens-university-texas-el-paso-utep/>
- 01/23/2023: GetDucks: <https://www.youtube.com/watch?v=R5gVx28lPzM>
- 12/19/2023: DU NATION TV: <https://www.youtube.com/watch?v=IZpY9m5i-WM>
- 12/13/2023: DU NATION TV: <https://www.youtube.com/watch?v=nKHNnXVowYk>
- 11/23/2023: DU NATION TV: <https://www.youtube.com/watch?v=C7MHWhkPI4&t=170s>
- 12/07/2023 - GETDUCKS Podcast: <https://podcasts.apple.com/us/podcast/ep-429-chasing-living-breathing-waterfowl-fossils/id1503110007?i=1000637791599>
- 11/06/2023 - The Southern Roost Podcast: <https://podcasts.apple.com/us/podcast/dr-phil-lavretsky-utep-mottled-duck-genetics/id1697724429?i=1000633828632>
- 10/30/2023 – MeatEater Podcast: <https://podcasts.apple.com/us/podcast/the-meateater-podcast/id960902903?i=1000633064285>
- 10/27/2023 - The Southern Roost Podcast: <https://podcasts.apple.com/us/podcast/duck-dna-dr-phil-lavretsky-really-a-hybrid/id1697724429?i=1000632809138>
- 10/02/2023 - The Big Honker Podcast: <https://podcasts.apple.com/nz/podcast/episode-776-phillip-lavretsky-mike-brasher/id1369618540?i=1000629921580>
- 09/29/2023 - GETDUCKS Podcast: <https://podcasts.apple.com/us/podcast/special-participate-in-the-new-duckdna-program/id1503110007?i=1000629627777>
- 09/28/2023 - Ducks Unlimited Podcast: <https://podcasts.apple.com/us/podcast/ep-512-duckdna-where-hunters-become-the-scientists/id1483983112?i=1000629501071>
- 08/03/2023 - The Big Honker Podcast: <https://podcasts.apple.com/us/podcast/episode-750-dr-philip-lavretsky/id1369618540?i=1000623295039>

- 6/13/2023 - Ducks Unlimited Podcast: <https://podcasts.apple.com/us/podcast/ep-477-discoveries-from-duck-dna-causing-scientists/id1483983112?i=1000616764532>
- 5/10/2023 - The HuntScience Podcast: <https://podcasts.apple.com/us/podcast/the-huntscience-podcast-episode-25-dr-phillip/id1646115040?i=1000612421453>
- 04/25/2023 - The Big Honker Podcast: <https://podcasts.apple.com/us/podcast/episode-708-dr-philip-lavretsky/id1369618540?i=1000610533682>
- 03/27/2023 - GETDUCKS Podcast: <https://podcasts.apple.com/us/podcast/mallard-rockstars/id1503110007?i=1000606073506>
- 2/2/2023 - Ducks Unlimited Podcast: <https://podcasts.apple.com/us/podcast/ep-465-are-hybrid-waterfowl-sterile/id1483983112?i=1000596718535>
- 07/01/2022 – The Fowl Talk Podcast: <https://podcasts.apple.com/us/podcast/mexican-ducks-mottled-ducks-and-mallards/id1622263885?i=1000568434359>
- 10/28/2021 - GETDUCKS Podcast: <https://podcasts.apple.com/us/podcast/help-wanted-solving-texas-dusky-duck-dilemma/id1503110007?i=1000539987823>
- 02/23/2021 – 2 Part Public Pursuit Waterfowl Podcast:  
 (Part 1) <https://podcasts.apple.com/us/podcast/ugly-truth-mallard-release-program-dr-phil-lavretsky/id1532282745?i=1000510422633>  
 (Part 2) <https://podcasts.apple.com/us/podcast/ugly-truth-mallard-release-program-part-2-dr-phil-lavretsky/id1532282745?i=1000510422634>
- 10/01/2020 - Cast and Blast Florida Podcast: <http://castandblastfl.com/2020/10/01/conversations-2-24-dr-phil-lavretsky/>
- 9/16-18/2020 - 3 Part Ducks Unlimited Podcast:  
 (Part 1) <https://podcasts.apple.com/us/podcast/the-origin-of-greenheads-in-north-america/id1483983112?i=1000491434802>  
 (Part 2) <https://podcasts.apple.com/us/podcast/black-duck-mallard-or-hybrid-its-more-complex-than/id1483983112>  
 (Part 3) <https://podcasts.apple.com/us/podcast/game-farm-mallards-in-the-eastern-us/id1483983112?i=1000491671482>
- 06/21/2020 - GETDUCKS Podcast: <https://podcasts.apple.com/us/podcast/duck-season-somewhere/id1503110007?i=1000478002466>

## **PRESENTATIONS** (\*Invited Speaker [26], Students are Underlined)

\***Lavretsky P.** 2024. 2023-24 Harvest: Genetics of South Carolina’s Mallards & Mallard-Like Ducks. Belle W. Baruch Institute of Coastal Ecology and Forest Science Seminar. Georgetown, SC.

\***Lavretsky P.** 2024. Wildfowl genomics in the 21st century. QuantaBio Seminar Series. ONLINE.

**Gonzalez S** and **Lavretsky P.** 2024. AI-Assisted Conservation: Developing Tools to Standardize In-The-Field Means to Distinguish Duck Species and Hybrids. North American Ducks Symposium 9. Feb 5 – 9, 2024. Portland, OR.

- Hernández F, Janzen T, and **Lavretsky P**. 2024. simRestore: A Decision-Making Tool for Adaptive Management of the Native Genetic Status of Wild Populations. North American Ducks Symposium 9. Feb 5 – 9, 2024. Portland, OR.
- Luukkonen BZ, Winterstein SR, Hayes DB, Fowler DN, **Lavretsky P**, Avers BV, Coluccy JM, O'Neal BJ, Shipley AA, Winiarski JM, Simpson JW. 2024. Great Lakes Mallard Movements and Population Dynamics. North American Ducks Symposium 9. Feb 5 – 9, 2024. Portland, OR.
- VonBank JA, Morel J, Collins DP, Ballard BM, **Lavretsky P**, and Kraai KJ. 2024. Movement Ecology of Mottled Ducks in a Novel Environment: The South Texas Brush Country. North American Ducks Symposium 9. Feb 5 – 9, 2024. Portland, OR.
- Brown JI and **Lavretsky P**. 2024. Landscape Genetics Reveals Environmental Drivers of Historical Reproductive Barriers Between Mexican Ducks and Mallards. North American Ducks Symposium 9. Feb 5 – 9, 2024. Portland, OR.
- Lavretsky P** and Schummer ML. 2024. The Meaning of Wild: Genetic and Adaptive Consequences from Large-Scale Releases of Domestic Mallards. North American Ducks Symposium 9. Feb 5 – 9, 2024. Portland, OR.
- McFarland L, Brown JI, Byerly P, Musni VM, James H, Fleischer R, Schummer ML, and **Lavretsky P**. 2024. Reconstructing the Genomic and Morphological History of Wild Mallards Resulting from Game-Farm Mallard Releases. North American Ducks Symposium 9. Feb 5 – 9, 2024. Portland, OR.
- Brown JI, Schummer ML, and **Lavretsky P**. 2024. Game-Farm Mallard Releases Lead to Hybridization and Pose a Threat to the Genetic Health and Future Adaptive Potential of Wild Populations Across North America. North American Ducks Symposium 9. Feb 5 – 9, 2024. Portland, OR.
- Halligan S, Schummer ML, **Lavretsky P**, Fournier A, Davis JB, and Downs C. 2024. Morphology and Food Intake Rate of Wild and Game-Farm Mallards. North American Ducks Symposium 9. Feb 5 – 9, 2024. Portland, OR.
- Collins H, Schummer ML, **Lavretsky P**, and Simpson J. 2024. Comparisons of Morphology and Feather Patterns Among Genotypes of North American Mallards. North American Ducks Symposium 9. Feb 5 – 9, 2024. Portland, OR.
- Tunstall AK, Brasher MG, Victor KH, and **Lavretsky P**. 2024. duckDNA: Engaging Hunters in the Study of Waterfowl Genetics. North American Ducks Symposium 9. Feb 5 – 9, 2024. Portland, OR.
- Schummer ML and **Lavretsky P**. 2024. Minding Our Mallards? Who's Looking After the Mallards for the Next Generation(s). North American Ducks Symposium 9. Feb 5 – 9, 2024. Portland, OR.
- Söderquist P, Champagnon J, Elmberg J, Guillemain M, **Lavretsky P**, and Clark R. 2024. The Mallard in the Anthropocene. North American Ducks Symposium 9. Feb 5 – 9, 2024. Portland, OR.
- Clements S, Davis JB, Bauer B, Hagy H, **Lavretsky P**, Morin D, and Wang G. 2024. Evaluating the Diets of Ducks Using South Atlantic Coastal Wetlands. North American Ducks Symposium 9. Feb 5 – 9, 2024. Portland, OR.

- Schell ER, Scott GR, Dawson NJ, **Lavretsky P**, White J, and McCracken KG. 2024. Physiological Correlates of Dive Time in 16 Species of North American Diving Ducks. North American Ducks Symposium 9. Feb 5 – 9, 2024. Portland, OR.
- Cohen BS, Masto NM, Highway CJ, Link PT, Torrance K, Hurt CR, **Lavretsky P**, Feddersen JC, Osborne DC, and Hagy HM. 2024. Hunting as a Selective Force on Migration Phenology and a Mechanism for 'Stale' Ducks. North American Ducks Symposium 9. Feb 5 – 9, 2024. Portland, OR.
- Lavretsky P**, Kraai K, Butler D, Morel J, Marty J, Musni VM, and Collins D. 2024. Human-Induced Range Expansions Result in a Hybrid Zone Between Mottled and Mexican Ducks in South Texas Brush Country. North American Ducks Symposium 9. Feb 5 – 9, 2024. Portland, OR.
- Fowler DN, Masto NM, Stemaly SC, Keever AC, Schummer ML, **Lavretsky P**, Blake-Bradshaw AG, Highway CJ, Feddersen JC, Hagy HM, and Cohen BS. 2024. Integrating GPS Telemetry and Delta 2H Isoscapes to Identify Breeding Ground Fidelity and Dispersal by Mallards. North American Ducks Symposium 9. Feb 5 – 9, 2024. Portland, OR.
- Harvey K, Schummer ML, **Lavretsky P**, Cohen J, Nicolai C, Kusack JW, Hobson KA, and Tozer DC. 2024. Geographic Origins and Genetics of Banded Mallards in the Northern Atlantic and Mississippi Flyways. North American Ducks Symposium 9. Feb 5 – 9, 2024. Portland, OR.
- Camacho-Hernández FB, Mohl JE, Engilis AE Jr., and **Lavretsky P**. 2023. Whole genome sequence analysis supports the genomic mosaicism of the endangered Hawaiian duck. Evolution. Albuquerque, NM, USA.
- \***Lavretsky P**. 2023. A Mallard Story: The conservation paradox of feral populations and the meaning of wild. Mississippi State University Conservation Seminar Series. Starksville, Mississippi.
- \***Lavretsky P**, Mohl JE, Söderquist P, Kraus RHS, Schummer ML, and Brown JI. 2023. Manhandling mallards: The conservation paradox of feral populations and the meaning of wild. Plant and Animal Genomics Conference XXX. San Diego, California.
- Brown JI & **Lavretsky P**. 2023. Landscape genomics uncovers the adaptive consequences of introgression from domestic conspecifics. Plant and Animal Genomics Conference XXX. San Diego, California.
- Davis JB, Outlaw DC, Ringelman KM, Kaminski RM, and **Lavretsky**. 2022. Low Levels of Hybridization between Domestic and Wild Mallards Wintering in the Lower Mississippi Flyway. The Wildlife Society. Spokane, Washington.
- \***Lavretsky P**. 2022. Understanding Game-farm and Wild Mallard Hybridization Across the Mississippi Flyway. Mississippi Flyway Tech Committee. Online.
- \***Lavretsky P**. 2022. The Power of RADS & Population Genetics of Wild Populations. Novogenetics LTD. Online.
- Davis JB, Outlaw DC, Ringelman KM, Kaminski RM, and **Lavretsky**. 2022. Low Levels of Hybridization between Domestic and Wild Mallards Wintering in the Lower Mississippi Flyway. Lower Mississippi Valley Joint Venture. Memphis, Tennessee.

- Brown JI and **Lavretsky P.** 2022. Landscape genomics reveals environmental drivers of local adaptation and speciation in desert adapted Mexican ducks. *Evolution*. Cleveland, OH.
- Vega J, Segura A, Gonzalez S, Contreras J, Ceberio M, and **Lavretsky P.** 2022. Standardizing the Process of Waterfowl Species Identification using Neural Networks. UTEP COURI Symposium. University of Texas at El Paso, El Paso, Texas, USA.
- Gonzalez S, Contreras J, Vega J, Segura A, Ceberio M, and **Lavretsky P.** 2022. Standardizing the Process of Waterfowl Species Identification. The 27th Joint NMSU/UTEP Workshop on Mathematics, Computer Science, and Computational Sciences. New Mexico State University, Las Cruces, New Mexico, USA.
- \***Lavretsky P.** 2022. Manhandling Mallards: Population genomics reveals a history of Anthropogenic gene flow among world-wide mallard populations. Wright State University Environmental Science Seminar. Dayton, OH.
- \***Lavretsky P.** 2022. Mallard Begets Mallard: Population Genomics helps shed light into the outcomes of secondary contact and its consequences for conservation of several duck species. Hampton Roads Bird Club Seminar Series. Hampton, VA. (*ONLINE*).
- Lavretsky P.** and Brown, J. 2022. Domestic Mallard Introductions Result in Feral x Wild Hybrid Swarms and Conservation Concern on Multiple Islands and Continents: Domestic Mallards Gone-Wild! Plant and Animal Genomics Conference XXIX. San Diego, California. (*ONLINE*).
- \***Lavretsky P.** 2021. Application of Dove-tail Genomes in Evolutionary & Conservation Genomics Studies. Dove-tail Genomics, LLC, Santa Cruz, CA. (*ONLINE*).
- Brown JI, Schummer M, and **Lavretsky P.** 2021. Mallard hybridization with feral conspecifics results in adaptive differences in eastern North America. 76th Annual Northeast Fish and Wildlife Conference. (*ONLINE*).
- Harvey KM, **Lavretsky P**, Foth J, and Williams CK. (2021, April 15-18). A Case Study: Wood Duck Nest Competition and Clutch Genetic Composition. Northeast Natural History Conference. (*ONLINE*).
- Brown JI, Schummer M, and **Lavretsky P.** 2021. Mallard hybridization with feral conspecifics results in adaptive differences in eastern North America. Northeast Natural History Conference. (*ONLINE*).
- \***Lavretsky P.** 2021. Mallard Begets Mallard: Dove-tail Genomics helps shed light into the outcomes of secondary contact and its consequences for conservation of several duck species. Dove-tail Genomics, LLC, Santa Cruz, CA. (*ONLINE*).
- \***Lavretsky P** and Schummer, M. 2020. Genetics of North American Mallards. Mini-Mallard Symposium. Patuxent, MD. (*ONLINE*).
- Wells CP and **Lavretsky P.** 2020. Conservation paleogenomics: using 3D morphometrics and ancient DNA to determine the former ranges of endemic, endangered ducks in Hawai'i. North American Congress for Conservation Biology. Denver, CO, USA (*ONLINE*).
- \***Lavretsky P.** 2020. Landscape Level Genetic Consequences of Game-Farm Mallard Releases in North America: Domestic Mallards Gone-Wild! Plant and Animal Genomics Conference XXVIII. San Diego, California.



**Lavretsky P.** 2020. Population Genetics and Hybridization of Mallards and Mallard-Like Ducks in North America. Plant and Animal Genomics Conference XXVIII. San Diego, California.

Camacho-Hernández FB, Engilis AE Jr., Brown JI, and **Lavretsky P.** 2019. Standardizing hybrid identification: Developing a genetically-vetted field key to distinguish between Mexican ducks, mallards, and their hybrids. The Chihuahuan Desert Conference. El Paso, TX, USA.

Brown JI and **Lavretsky P.** 2019. Population Genomics Reveals Low levels of Hybridization between Mallards and Mexican Ducks. The Chihuahuan Desert Conference. El Paso, TX, USA.

\***Lavretsky P**, Kaminski R, Duenez E, and Kneece M. 2019. Population Genetics and Hybridization Between Mottled Ducks and Mallards In South Carolina. Southeastern Association of Fish and Wildlife Agencies. Hilton Head, South Carolina.

Lawson D, Williams CK, Fuller J, Howell D, and **Lavretsky P.** 2019. Population Genetics and Hybridization Between Mottled Ducks and Mallards In South Carolina. Southeastern Association of Fish and Wildlife Agencies. Hilton Head, South Carolina.

Camacho-Hernández FB, Engilis AE Jr., Brown JI, and **Lavretsky P.** 2019. Standardizing hybrid identification: Developing a genetically-vetted field key to distinguish between Mexican ducks, mallards, and their hybrids. North American Duck Symposium. Winnipeg, Manitoba, Canada.

Brown JI and **Lavretsky P.** 2019. Population Genomics Reveals Low levels of Hybridization between Mallards and Mexican Ducks. North American Duck Symposium. Winnipeg, Manitoba, Canada.

Lawson D, Williams CK, Fuller J, Howell D, and **Lavretsky P.** 2019. Population Genetics of American Black Ducks in Coastal North Carolina. North American Duck Symposium. Winnipeg, Manitoba, Canada.

**Lavretsky P.** 2019. Population Genetics and Hybridization of Mallards and Mallard-Like Ducks in North America. North American Duck Symposium. Winnipeg, Manitoba, Canada.

\***Lavretsky P.** 2019. Genomics and Wildlife Conservation: Genomics of North American Mallard-Like Ducks. New Mexico State University Biology Seminar. Las Cruces, New Mexico.

\***Lavretsky P.** 2018. Genomics of Hybridization: Lessons learned from the Mallard Complex. Audobon Society. El Paso, Texas.

\***Lavretsky P.** 2018. What is a Koloa maoli? Brief Evolutionary History. Koloa Recovery Implementation Group Meeting. Honolulu, Oahu.

Wells CP and **Lavretsky P.** 2018. Dual roles of hybridization in the evolution and conservation of the koloa maoli (Hawaiian duck, *Anas wyvilliana*). Department of Fish, Wildlife, and Conservation Biology, Colorado State University

Wells CP, **Lavretsky P**, Sorenson M, Peters JL, DaCosta J, Turnbull S, Uyehara K, Malachowski C, Dugger B, Eadie JM, and Engilis AE Jr. 2018. Genetic diversity and population structure in the endangered Koloa maoli. Koloa Recovery Implementation Group Meeting. Honolulu, Oahu.

- Brown JI and Lavretsky P** 2018. Conservation Implications from Genome Wide Sampling Which Suggests that Ancestral Variation and not Hybridization Explains Phenotypic Similarities Between Two Closely Related Duck Taxa. Symposium on the Evolutionary Genomics of Adaptation. Polson, MT.
- Wells CP, **Lavretsky P**, Spitzer M, Dattoria M, and James H. 2018. Subfossil evidence for a recent hybrid origin of the endangered, endemic Hawaiian duck (koloa maoli, *Anas wyvilliana*). American Ornithological Society Annual Meeting. Tucson, AZ.
- \***Lavretsky P**. 2018. Genomics of Hybridization: Lessons learned from the Mallard Complex. UTEP Bioinformatics Colloquium. El Paso, TX.
- \***Lavretsky P**. 2018. Genomics of Hybridization: Lessons learned from the Mallard Complex. Belle W. Baruch Institute of Coastal Ecology and Forest Science Seminar. Georgetown, SC.
- \***Lavretsky P**. 2018. Genomics of Hybridization: Lessons learned from the Mallard Complex. Clemson Wildlife and Fisheries Biology Seminar. Clemson, SC.
- \***Lavretsky P**. 2018. Genomics of American Black Ducks and Mallards in North America. Atlantic Flyway Migratory Bird Technical Sections. Cape May, NJ.
- \***Lavretsky P**. 2018. Genomics of Hybridization and the Maintenance of Islands of Divergence: Mallards and American Black Ducks of Eastern North America *in* Avian Genomics – Going Wild! Workshop. Plant and Animal Genomics Conference, San Diego, CA
- Brown JI and Lavretsky P**. 2017. Hybridization and Population Structure of the Chihuahuan Desert Endemic Mexican Duck (*Anas platyrhynchos diazi*). The Wildlife Society. Albuquerque, NM.
- Lavretsky P**. 2017. Population Genomics and Hybridization between Lesser and Greater Scaup. The Wildlife Society. Albuquerque, NM.
- \***Lavretsky P**. 2017. Importance of Genomics and Hybrid Phenotypes in the Mallard Complex: Establishing a Working Field Key Requires Vetting Phenotypic Characters with Genomic Techniques. Molecular Ecology Working Group Workshop. The Wildlife Society. Albuquerque, NM.
- \***Lavretsky P**. 2016. Population and Historical Genetics of the American Black Duck and Mallard. Annual Black Duck Joint Venture Meeting. Toronto, Ontario, Canada.
- Peters, JL, Hawkins K, Nelson JT, and **Lavretsky P**. 2016. Speciation with gene flow in *Anas* ducks. North American Ornithological Conference, Washington, D.C.
- Hawkins K, **Lavretsky P**, and Peters JL. 2016. Selection drives fast Z divergence in a pair of monochromatic/dichromatic Australian Teals. Midwest Ecology and Evolution Conference. Oxford. OH.
- Bowers J, Peters JL, Seibert S, **Lavretsky P**, Joseph L, and Roshier D. 2016. Pacific Black Duck: Understanding population structure through genetics and geography. Midwest Ecology and Evolution Conference. Oxford. OH.
- \***Lavretsky P**, Peters JL, and McCracken KG. 2016. Genomics of New World Mallard-Like Ducks. 7<sup>th</sup> North American Duck Symposium, Annapolis, MD.
- Lavretsky P**, Peters JL, and McCracken KG. 2016. Population Genomics and Hybridization between Lesser and Greater Scaup. 7<sup>th</sup> North American Duck Symposium, Annapolis, MD.

- Caitlin CP, **Lavretsky P**, Peters JL, Dugger B, Malachowski C, Eadie JM, and Engilis AE Jr.. 2016. Geographic Variation in Hybridization between Mallards and Hawaii's Koloa Maoli. 7<sup>th</sup> North American Duck Symposium, Annapolis, MD.
- \***Lavretsky P**. 2016. Genomics and Speciation: The New World Mallard Complex *in* Avian Genomics – Going Wild! Workshop. 2016. Plant and Animal Genomics Conference, San Diego, CA.
- Graham AM, **Lavretsky P**, and McCracken KG. 2016. High-altitude adaptation and genetic divergence in Speckled Teal populations (*Anas flavirostris*). Society for Integrative and Comparative Biology. Portland, OR.
- Hawkins K, **Lavretsky P**, Nelson J, and Peters JL. 2015. Parallel molecular evolution on the Z-chromosome in species of ducks with parallel transitions in sexual dichromatism/monochromatism. 2015. American Ornithologist Union/Cooper Ornithological Society Conference, Norman, OK.
- Peters JL and **Lavretsky P**. 2015. Speciation genomics in mallards and American black ducks. 2015 American Ornithologist Union/Cooper Ornithological Society Conference, Norman, OK.
- \***Lavretsky P**. 2015. Speciation Genomics of a Recent Radiation: The Mallard Complex. *Invited Speaker at University of Miami - The Rosenstiel School of Marine and Atmospheric Science.*
- Lavretsky P**, DaCosta J, Hernández-Baños B, Engilis AE Jr., Sorenson MD, and Peters JL. 2014. Speciation genomics and a role for the sex chromosome in the mallard and Mexican duck. Evolution Conference, Raleigh, NC.
- Lavretsky P**, Engilis AE Jr., Eadie JM, and Peters JL. 2014. Islands as venues for homoploid hybrid speciation: a case for the endangered Hawaiian duck. Evolution Conference, Raleigh, NC.
- Lavretsky P**, Hernández-Baños B, and Peters JL. 2014. Rapid radiation and hybridization contribute to weak differentiation and hinder phylogenetic inferences in the new world mallard complex (*Anas* spp.). Midwest Ecology and Evolution Conference, Dayton, OH.
- Wells CP, Engilis AE Jr., Eadie JM, Dugger B, Malachowski C, **Lavretsky P**, and Peters JL. 2013. Kaneohe, HI. Hybridization and conservation genetics of the Hawaiian duck, *koloa maoli*. Hawaiian Wetlands and Waterbird Workshop.
- Truong TM, **Lavretsky P**, Peters JL, and McGowin AE. 2013. Genetic identification of *Ozobranchus* spp. from Atlantic and Pacific Ocean sea turtles for host parasite studies. American Chemical Society, Indianapolis, IN.
- Cipollini K., **Lavretsky P**, Cipollini D, and Peters JL. 2013. Using SNPs to examine population structure and identify units for conservation of endangered northeastern bulrush, *Scirpus ancistrochaetus*, across its range. Ecological Society of America, Minneapolis, MN.
- Lavretsky P**, Miller J, Bahn V, and Peters JL. 2013. Using banding data to reconstruct migrational tendencies and emigrational rates of Mississippi and Atlantic flyway mallards and American black ducks. Great Lakes Partners Forum, Port Clinton, OH.
- Lavretsky P** and Peters JL. 2013. A multi-locus evaluation of the New World Mallard clade. North American Duck Symposium, Memphis, TN.

- Lavretsky P**, Miller J, Bahn V, and Peters JL. 2013. Using banding data to reconstruct migrational tendencies and emigrational rates of Mississippi and Atlantic flyway mallards and American black ducks. North American Duck Symposium, Memphis, TN.
- Peters, JL, **Lavretsky P**, Millam K, Winker K, and McCracken KG. 2012. Population structure and gene flow in Holarctic ducks: Evidence from a genomic transect. North American Ornithological Conference, Vancouver, BC, Canada.
- Lavretsky P** and Peters JL. 2011. Phylogenetics of the mallard complex comparing mitochondrial and nuclear trees. 129<sup>th</sup> Stated Meeting of the American Ornithologists' Union, Jacksonville, FL.
- Lavretsky P** and Peters JL. 2011. Phylogenetics of the mallard complex. 2<sup>nd</sup> Annual UT GSA Midwest Graduate Research Symposium, Toledo University, Toledo, OH.
- Lavretsky P** and Peters JL. 2010. Waterfowl of the Hawaiian archipelago: A genetic evaluation of Laysan teal, Hawaiian ducks, and mallards. Ecological Society of America, Pittsburgh, PA.
- Lavretsky P**, Schwartz RS, Baerwald MR, and May BP. 2008. MHC Polymorphism in Sacramento Perch. Bay Area Conservation Biology Symposium, University of California Davis, Davis, CA.
- Lavretsky P**, Schwartz RS, Baerwald MR, and May BP. 2008. MHC Polymorphism in Sacramento Perch. Undergraduate Research, Scholarship and Creative Activities Conference, University of California-Davis, Davis, CA.

### **POSTERS** (Students are underlined)

- Musni VM, Kraai K, Butler D, Morel Collins D, and **Lavretsky P**. 2024. Assessing Morphology Among Mexican Ducks, Mottled Ducks, Mallards, and Their Hybrids in a Recent Contact Zone in South Texas Brush Country. North American Ducks Symposium 9. Feb 5 – 9, 2024. Portland, OR.
- Hernández F, Mohl J, and **Lavretsky P**. 2024. Signals of Both Purifying and Directional Selection Across the Speciation Continuum in the Mallard Complex. North American Ducks Symposium 9. Feb 5 – 9, 2024. Portland, OR.
- Enriquez N, Khan A, Balivada S, and **Lavretsky P**. 2024. Domestication Results in Physiologically Different Birds: Quantifying Muscle Fiber-Types of Wild, Game-Farm, and Hybrid Mallards. North American Ducks Symposium 9. Feb 5 – 9, 2024. Portland, OR.
- Collins H, LaFever A, **Lavretsky P**, and Schummer ML. 2024. Distribution of Game-Farm Mallard Release Programs Throughout the United States. North American Ducks Symposium 9. Feb 5 – 9, 2024. Portland, OR.
- Palanivel K, Malachowski CP, Dugger BD, Uyehara K, Engilis A, Eadie JM, **Lavretsky P**, Turnbull S, and Wells CP. 2024. Social Associations of the Endangered Koloa Maoli and the Role of Plumage and Genetic Relatedness. North American Ducks Symposium 9. Feb 5 – 9, 2024. Portland, OR.
- Camacho-Hernández FB, Mohl JE, and **Lavretsky P**. 2023. Signals of both purifying and directional selection across the speciation continuum in the Mallard complex. Evolution. Albuquerque, NM, USA.

- Lavretsky P, Hernández F, Swale T, & Mohl JE.** 2023. Chromosomal-level reference genome of a wild North American mallard (*Anas platyrhynchos*). Plant and Animal Genomics Conference XXX. San Diego, California.
- Mohl JE, Chaib E, Wallace R, Hochberg R, **Lavretsky P**, Walsh EJ. 2023. Exploring the size and complexity of monogonont rotifer genomes. Plant and Animal Genomics Conference XXX. San Diego, California.
- Brown CC**, Octavio ML, Chessa JF, and **Lavretsky P**.2022. The aerodynamics of wild and domesticated mallards. UTEP Undergraduate COURI Symposium. El Paso, TX.
- Brown JI**, Mohl J, Sheppard JL, and **Lavretsky P**. 2022. Mallard Introductions to New Zealand Result in Extensive Hybridization with Endemic Grey Ducks. Evolution. Cleveland, OH.
- Mohl J, Brown PD, Robbins A, **Lavretsky P**, and Walsh EJ. 2021. Sequencing and Annotation of Monogonont Rotifer Genomes. Plant and Animal Genomics Conference XXIX. San Diego, California. (Online).
- Brown JI**, Mohl J. Sheppard JL, and **Lavretsky P**. 2020. Mallard Introductions to New Zealand Result in Extensive Hybridization with Endemic Grey Ducks. Plant and Animal Genomics Conference XXVIII. San Diego, California.
- Brown JI**, Mohl J. Sheppard JL, and **Lavretsky P**. 2019. Mallard Introductions to New Zealand Result in Extensive Hybridization with Endemic Grey Ducks. North American Duck Symposium. Winnipeg, Manitoba, Canada.
- Lavretsky P**, Sonsthagen SA, Wilson RE, and Talbot SL, 2019. Phylogenomics and Evolution of Sea Ducks (Tribe Mergini). North American Duck Symposium. Winnipeg, Manitoba, Canada.
- Wells CP, **Lavretsky P**, Fleischer R, Spitzer M, Dattoria M, McIrney N, Rossi V, and James H. 2019 (August). Conservation Paleoecology: using subfossil 3D morphometrics and ancient DNA to determine the former ranges of endemic, endangered ducks in Hawaii. North American Duck Symposium. Winnipeg, Manitoba, Canada.
- Stunz E**, Mohl J, **Lavretsky P**, Fetcher N, Tang J, Moody ML.2019 (June). Molecular ecology of the arctic tussock cottongrass (*Eriophorum vaginatum*) in the context of local adaptation and climate change. Evolution Society of America, Providence, Rhode Island.
- Wells CP, **Lavretsky P**, Fleischer R, Spitzer M, Dattoria M, McIrney N, Rossi V, and James H. 2019 (August). Conservation Paleoecology: using subfossil 3D morphometrics and ancient DNA to determine the former ranges of endemic, endangered ducks in Hawaii. Ecological Society of America in Louisville, KY.
- Verissimo AF, Calderon O, Blakely B, Rodriguez F, **Lavretsky P**, Maldonado R, Romero A, and Khatchikian CE. 2018 (August). Demographic inferences using population genetics: *Triatoma rubida*, vector of chagas disease along the west Texas-Mexico border. Ecological Society of America Annual Meeting. New Orleans, LA.
- Ryan L**, **Brown JI**, and **Lavretsky P**. 2018 (August). Mexican and Mallard Ducks: Understanding population structure, demographic histories, and hybridization. UTEP Undergraduate COURI Symposium. El Paso, TX.
- Covarrubias P**, **Duenez E**, **Brown JI**, **Hernández, F**, and **Lavretsky P**. 2018 (August). Mitochondrial ancestry of the New Zealand grey duck (*Anas superciliosa superciliosa*). UTEP Undergraduate COURI Symposium. El Paso, TX.

- Chavez A and **Lavretsky P**. 2018 (April). Duck behavior at Keystone Heritage Park. UTEP Undergraduate COURI Symposium. El Paso, TX.
- Chavez A, Flores L, and **Lavretsky P**. 2018 (April). Assessing the abundance of duck species at Keystone Heritage Park. UTEP Undergraduate COURI Symposium. El Paso, TX.
- Salyer M, Brown JI, and **Lavretsky P**. 2017 (October). Food Availability and Waterfowl Behavior in Chihuahuan Desert Wetlands. 2017 SACNAS Conference. Salt Lake City, UT.
- Duenez E and **Lavretsky P**. 2017 (October). Mexican Duck (*Anas platyrhynchos diazi*) Nest Surveys. 2017 SACNAS Conference. Salt Lake City, UT.
- Salyer M, Brown JI, and **Lavretsky P**. 2017 (September). Food Availability and Waterfowl Behavior in Chihuahuan Desert Wetlands. UT System LSAMP Conference. El Paso, TX.
- Duenez E and **Lavretsky P**. 2017 (August). Mexican Duck (*Anas platyrhynchos diazi*) Nest Surveys. UTEP Undergraduate COURI Symposium. El Paso, TX.
- Salyer M, Brown JI, and **Lavretsky P**. 2017 (August). Food Availability and Waterfowl Behavior in Chihuahuan Desert Wetlands. UTEP Undergraduate COURI Symposium. El Paso, TX.
- Salyer M, Brown JI, and **Lavretsky P**. 2017 (August). Food Availability and Waterfowl Behavior in Chihuahuan Desert Wetlands. UTEP BRIDGES and STEMGROW Symposium. El Paso, TX.
- Brown, J., Sonsthagen SA, Wilson RE, and **Lavretsky P**. 2017 (June). Coast to coast: assessing migratory connectivity of North American scoters. Evolution, Portland,OR.
- Sonsthagen SA, Wilson RE, and **Lavretsky P**. Pearce JM. 2017 (February). Intra- and inter-specific population dynamics of the common goldeneye and barrow's goldeneye. 6th International Sea Duck Conference, San Francisco, CA.
- Brown, JI, Sonsthagen SA, Wilson RE, and **Lavretsky P**. 2017 (February). Coast to coast: assessing migratory connectivity of North American scoters. 6th International Sea Duck Conference, San Francisco, CA.
- Lavretsky P**. 2016 (February). Exploring Fall Migration Patterns of Northern Pintail Using Band-Recovery Data. 7<sup>th</sup> North American Duck Symposium, Annapolis, MD.
- del Mar Flores Hernandez A, Peters JL, Nelson J, Hawkins KK, and **Lavretsky P**. 2015 (August). Speciation genomics of wigeons. STREAMS Poster Symposium, Wright Sate Univesity, Dayton OH.
- Tison KD, **Lavretsky P**, and Peters JL. 2015 (August). Examining genome differentiation of Old and New World *Anas platyrhynchos*. STREAMS Poster Symposium, Wright Sate Univesity, Dayton OH.
- Thompson J, Lopez E, Cumming GS, **Lavretsky P**, and Peters JL. 2013 (July). Prevalence of malaria in red-billed teal:the influence of DNA concentration on detection rates. STREAMS Poster Symposium, Wright State University, Dayton, OH.
- Lopez E, Thompson J, **Lavretsky P**, and Peters JL. 2013 (July). ddRAD-seq on red-billed teal. STREAMS Poster Symposium, Wright State University, Dayton, OH.

Truong TM, **Lavretsky P**, Peters JL, and McGowin AE. 2013 (September). Genetic identification of *Ozobranchus* spp. from Atlantic and Pacific Ocean sea turtles for host parasite studies. American Chemical Society, Indianapolis, IN.

**Lavretsky P**, J. Miller, V. Bahn, and Peters JL. 2012 (October). Using banding data to elucidate migratory tendencies of Mississippi and Atlantic Flyway mallards and American black ducks. The Wildlife Society. Portland, OR.

Truong, T., **Lavretsky P**, Peters JL, and A.E. McGowin. 2012 (April). Identifying new haplotypes and potential cryptic species for marine leeches (*Ozobranchus* spp.) from Hawaiian and Florida sea turtles based on molecular DNA. Celebration of Research, Scholarship and Creative Activities, Wright State University, Dayton, OH.

Truong, T.M., A.E. McGowin, **Lavretsky P**, and Peters JL. 2012 (August). Establishing a global DNA barcode and molecular phylogeny for identifying marine leeches (*Ozobranchus* spp.) from sea turtles in the Atlantic and Pacific Ocean basins. American Chemical Society National Meeting and Exposition. Philadelphia, PA.

Cipollini, K.A., D.J. Burks, D. Cipollini, **Lavretsky P**, K. Millam, and Peters JL. 2011 (August). Comparison of genetic population structure of endangered *Scirpus ancistrochaetus* using two methods. Ecological Society of America, Austin, TX.

## **OTHER COMMITTEES**

**2024-Present** University of Texas at El Paso Micro Credential Pathways Governance Committee

**2023-Present** University of Texas Space Committee

**2019-2021** Natural Resources Conservation and Research Field of Study Advisory Committee for Texas Board of Higher Education

## **REVIEWER**

The Auk, Condor, Molecular Ecology, European Journal of Wildlife Research, BMC Evolutionary Biology, Molecular Phylogenetics and Evolution, Current Zoology, GigaScience, Ostrich, Journal of Evolutionary Applications, Scientific Reports, Animal Genetics, BMC Genomics, Evolution, PLoS One, Communications Biology, Ornithology, Royal Society Open Science, Evolutionary Applications, Conservation Genetics, Southeastern Naturalist, G3: Genes Genomes Genetics

## **PATENTS**

- Deboning knife – United States Patent 8382562