

Dr. David S. Portnoy

Texas A&M University-Corpus Christi
Science & Engineering, Life Sciences

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Education

PhD, Virginia Institute of Marine Science, The College of William and Mary, 2008.

BS, The College of William and Mary, 1998.

Professional Employment

Assistant Professor, Texas A&M University - Corpus Christi. (August 2013 - Present).

Postdoctoral Research Associate/Research Associate and Visiting Lecturer, Texas A&M University. (August 2008 - August 2013).

Professional Memberships

American Elasmobranch Society
American Fisheries Society

TEACHING

Teaching Experience

BIMS 2200, PROFESSIONAL SKILLS
BIOL 2200, PROFESSIONAL SKILLS
BIOL 2416, GENETICS
BIOL 4396, DIS: Single Sperm, cell isolation from frozen fish testes
BIOL 4432, ICHTHYOLOGY
BIOL 4590, Special Topics: Ecology and Evolution of Fishes
BIOL 5392, THESIS PROPOSAL
BIOL 5590, Special Topics: Ecology and Evolution of Fishes
FAMA 5102, GRADUATE DEFENSE SEMINAR
FAMA 5392, THESIS PROPOSAL
FAMA 5393, THESIS RESEARCH
FAMA 5394, THESIS SUBMISSION
FAMA 5590, SPECIAL TOPICS: Marine Genetics
FAMA 5940, PROJECT RESEARCH
MARB 5596, DIS: Molecular Laboratory Techniques
MARB 6392, DISSERTATION PROPOSAL
MARB 6590, SPECIAL TOPICS: Ecology and Evolution of Fishes Lab
MARB 6596, DIRECTED INDEPENDENT STUDY
MARB 6940, DISSERTATION PROJECT RESEARCH

Non-Credit Instruction

Marine Ecology. (October 2014).
Mariculture. (October 2014).

SCHOLARLY AND CREATIVE ACTIVITIES

Publications

Refereed

Journal Articles

Purtiz, J. B., Gold, J. R., Portnoy, D. S. (2016). Fine-scale partitioning of genomic variation among recruits in an exploited fishery: causes and consequences. *Nature: Scientific Reports*.

Portnoy, D. S., Hollenbeck, C. M., Bethea, D. M., Frazier, B. S., Gelsleichter, J., Gold, J. (2016). Population structure, gene flow, and historical demography of a small coastal shark (*Carcharhinus isodon*) in U.S. waters of the western Atlantic Ocean. *ICES Journal of Marine Science*.

Hollenbeck, C. M., Portnoy, D. S., Gold, J. (2016). A method for detecting recent changes in contemporary effective population size from linkage disequilibrium at linked and unlinked loci. *Heredity*, 117, 207-216.

Selwyn, J. D., Hogan, J. D., Downey-Wall, A. M., Gurski, L. M., Portnoy, D. S., Heath, D. D. (2016). Kin-aggregations explain chaotic genetic patchiness, a commonly observed genetic pattern, in a marine fish. *Plos-One*, 11, e0153381.

Hollenbeck, C. M., Portnoy, D. S., Salliant, E., Gold, J. (2015). Population structure of red snapper (*Lutjanus campechanus*) in U.S. waters of the western Atlantic Ocean and the northeastern Gulf of Mexico. *Fisheries Research*, 172, 17-25.

Portnoy, D. S., Puritz, J. B., Hollenbeck, C. M., Jim, G., Demian, C., Gold, J. (2015). Selection and sex-biased gene flow: philopatric sorting of adaptive alleles in a coastal shark. *Molecular Ecology*, 24, 5877-5885.

Giresi, M. M., Grubbs, R. D., Portnoy, D. S., Driggers III, W. B., Jones, L., Gold, J. (2015). Identification and distribution of morphologically conserved smoothhound sharks (Genus *Mustelus*) in the northern Gulf of Mexico. *Transactions of the American Fisheries Society*, 144, 1301-1310.

Hollenbeck, C. N., Portnoy, D. S., Gold, J. (2015). A genetic linkage map of red drum (*Sciaenops ocellatus*) and comparison of chromosomal synteny with four other fish species. *Aquaculture*, 435, 265-274.

Portnoy, D. S., Hollenbeck, C. N., Belcher, C. N., Driggers III, W. B., Frazier, B. S., Gelsleichter, J., Grubbs, R. D., Gold, J. (2014). Post-glacial genetic demography and contemporary population structure of the blacknose shark, *Carcharhinus acronotus*, in the western North Atlantic. *Molecular Ecology*, 23, 5480-5495.

Portnoy, D. S., Hollenbeck, C. M., Vidal, R. Rorigo, Gold, J. (2014). A comparison of neutral and immune genetic variation in Atlantic salmon, *Salmo salar* L, exposed to the ISA virus in Chilean aquaculture facilities. *PLoS ONE*, 9(6).
www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0099358

Portnoy, D. S., Hollenbeck, C. M., Johnston, S., Casman, H., Gold, J. (2014). Parthenogenesis in a reef whitetip shark, *Triaenodon obesus*, involves a reduction in ploidy. *Journal of Fish Biology*, 85(2), 502-508.
onlinelibrary.wiley.com/doi/10.1111/jfb.12415/abstract

Non-Refereed

Journal Articles

Portnoy, D. S., Hollenbeck, C. M., Johnston, S., Casman, H., Gold, J. (2014). Parthenogenesis in a reef whitetip shark, *Triacodon obesus*, involves a reduction in ploidy. *Journal of Fish Biology*, 85(2), 502-508.
onlinelibrary.wiley.com/doi/10.1111/jfb.12415/abstract

Portnoy, D. S., Gold, J. (2013). Finding geographic population structure in marine fish species with high gene flow. *Proceedings of the Gulf and Caribbean Fisheries Institute*.

Anderson, J. J., Portnoy, D. S., Hafner, J. C., Light, J. E. (2013). Populations at risk: conservation genetics of kangaroo mice (*Microdipodops*) of the Great Basin Desert. *Ecology and Evolution*.

Portnoy, D. S., Hollenbeck, C. M., Renshaw, M. A., Cummings, N. J., Gold, J. (2013). Does mating behaviour affect connectivity in marine fishes? Comparative population genetics of two protogynous groupers (Family Serranidae). *Molecular Ecology*.

Presentations

Dahl, K. A. (Author & Presenter), Patterson III, W. F. (Author), Robertson, A. (Author), Ortmann, A. C. (Author), Portnoy, D. S. (Author), Hogan, J. D. (Author), "DNA barcoding and microsatellite genotyping reveal cannibalism among invasive lionfish in the northern Gulf of Mexico.," Gulf Estuarine Research Society, Pensacola, FL. (November 2016).

Cooper, P. (Author & Presenter), Portnoy, D. S. (Author), Powers, S. P. (Author), "Examining population structure and disruptive selection in morphologically divergent groups of sheepshead, *Archosargus probatocephalus*: a genomic approach.," Joint Meeting of Ichthyologists and Herpetologists, New Orleans, LA. (July 2016).

O'Leary, S. J. (Author & Presenter), Gold, J. (Author), Portnoy, D. S. (Author), "Genomics as a tool for restoration enhancement of southern flounder.," Joint Meeting of Ichthyologists and Herpetologists, New Orleans, LA. (July 2016).

Swift, D. G., Portnoy, D. S., "High-throughput sequencing for genetic monitoring and stock structure assessment of blacktip sharks (*Carcharhinus limbatus*).," Joint Meeting of Ichthyologists and Herpetologists, New Orleans, LA. (July 2016).

Barker, A. M. (Author & Presenter), Frazier, B. S. (Author), Adams, D. H. (Author), Gelsleichter, J. (Author), Portnoy, D. S., "Identification and Relative Abundance of Cryptic Hammerhead Sharks.," Joint Meeting of Ichthyologists and Herpetologists, New Orleans, LA. (July 2016).

Elizabeth, H. P. (Author & Presenter), Willis, S. C. (Author), Conway, K. W. (Author), Portnoy, D. S. (Author), "Inferring the phylogenetic relationships within two genera of fishes: insights into the biogeography of the northern Gulf of Mexico.," Joint Meeting of Ichthyologists and Herpetologists, New Orleans, LA. (July 2016).

Willis, S. C. (Author & Presenter), Hollenbeck, C. M. (Author), Puritz, J. B. (Author), Portnoy, D. S. (Author), Gold, J. (Author), "Low genomic divergence among king mackerel (*Scomberomorus cavalla*) in northern temperate waters of the western Atlantic Ocean revealed by ddRAD sequencing.," Joint Meeting of Ichthyologists and Herpetologists, New Orleans, LA. (July 2016).

Hollenbeck, C. M. (Author), Portnoy, D. S. (Author & Presenter), (Author), "Population genomics of red drum, *Sciaenops ocellatus*," Joint Meeting of Ichthyologists and Herpetologists, New Orleans, LA. (July 2016).

Dimens, P. V. (Author & Presenter), Portnoy, D. S. (Author), "Population structure of a small coastal shark, the blacknose shark *Carcharhinus acronotus*, to cryptic barriers to gene flow," Joint Meeting of Ichthyologists and Herpetologists, New Orleans, LA. (July 2016).

O'Leary, S. J. (Author & Presenter), Gold, J. R. (Author), Portnoy, D. S. (Author), "Potential genetic impacts of the Deepwater Horizon oil spill on a demersal, sedentary deepwater-burrowing species," Gulf of Mexico Oil Spill & Ecosystem Science Conference, Tampa Bay, FL. (February 2016).

Portnoy, D. S., Patterson III, W. F., "Session 015: Ecological impacts of the Deepwater Horizon oil spill impacts across multiple scales.," Gulf of Mexico Oil Spill & Ecosystem Science Conference, Tampa Bay, FL. (February 2016).

Puritz, J. B. (Author & Presenter), Portnoy, D. S., Gold, J., "Testing the genomic impact of the DWH Oil Spill on red snapper," Gulf of Mexico Oil Spill & Ecosystem Science Conference, Tampa Bay, FL. (February 2016).

Christopher, H. M. (Author & Presenter), O'Leary, S. J. (Author), Portnoy, D. S., Gold, J., "Development of genomic resources for commercial and restoration aquaculture of red drum and southern flounder," World Aquaculture Society, Las Vegas, Nevada. (February 2016).

Barker, A. M. (Author & Presenter), Portnoy, D. S. (Author), Gold, J. (Author), "Identification, stock assessment and habitat usage of cryptic hammerhead sharks.," Joint Meeting of Ichthyologists and Herpetologists, Reno, NV. (July 2015).

Stuart, W. C. (Author & Presenter), Christopher, H. M. (Author), Jonathan, P. B. (Author), Portnoy, D. S., Gold, J., "Identifying recruitment patterns among silk snapper (*Lutjanus vivanus*) off the west coast of Puerto Rico: challenges and solutions with using ddRAD-bases single nucleotide polymorphisms," Joint Meeting of Ichthyologists and Herpetologists, Reno, NV. (July 2015).

Selwyn, J. (Author & Presenter), Portnoy, D. S. (Author), Heath, D. (Author), Hogan, J. D. (Chair), "Kin aggregations explain a commonly observed genetic pattern in a marine fish species," Joint Meeting of Ichthyologists and Herpetologists, ASIH, Reno, Nevada. (July 2015).

Selwyn, J. D. (Author & Presenter), Portnoy, D. S. (Author), Heath, D. D. (Author), Hogan, J. D. (Author), "Kin aggregations explain a commonly observed genetic pattern in a marine fish species.," Joint Meeting of Ichthyologists and Herpetologists, Reno, NV. (July 2015).

Dimens, P. v. (Author & Presenter), Gold, J. (Author), Portnoy, D. S. (Author), "Structural ambiguity: Population demography of the blacknose shark in the Florida Keys.," Joint Meeting of Ichthyologists and Herpetologists, Reno, NV. (July 2015).

Portnoy, D. S. (Author & Presenter), Jonathan, P. B. (Author), Christopher, H. M. (Author), Gold, J., "Adaptive genetic variation and male-mediated gene flow in the bonnethead shark," Joint Meeting of Ichthyologists and Herpetologists, Reno, NV. (June 2015).

Portnoy, D. S., Gold, J., "Oil spills, adaptation and gene flow; genomic insights for fisheries management in impacted systems," Gulf of Mexico Oil Spill and Ecosystem Science Conference, Houston, Texas. (February 2015).

Hollenbeck, C. N. (Author & Presenter), Puritz, J. B. (Author), Portnoy, D. S. (Author), Gold, J. (Author), "Genomic patterns of linkage disequilibrium in red drum," Plant and Animal Genome Conference XXIII, San Diego. (January 2015).

Giresi, M. M. (Author & Presenter), Portnoy, D. S. (Author), Grubbs, D. R. (Author), Driggers III, W. B. (Author), Skomal, G. B. (Author), McCandless, C. (Author), Frazier, B. (Author), Renshaw, M. A. (Author), Gold, J. R. (Author), "Genetic population structure of the dusky smoothhound shark, *Mustelus canis*, in U.S. Waters.," Joint Meeting of Ichthyologists and Herpetologists, Chattanooga, TN. (August 2014).

Portnoy, D. S. (Author & Presenter), Hollenbeck, C. M. (Author), Gold, J. R. (Author), "Historical genetic demography and stock structure of the blacknose shark," Joint Meeting of Ichthyologists and Herpetologists, Chattanooga, TN. (August 2014).

Willis, S. (Author & Presenter), Cummings, N. (Author), Portnoy, D. S. (Author), Gold, J. R. (Author), "Sources, sinks, SNPs, and snappers: population structure of deepwater snappers in protected and non-protected areas of Puerto Rico.," Evolution, Raleigh, NC. (June 2014).

Puritz, J. B., Portnoy, D. S., Gold, J., "Mind the gap: the effects of INDELs and over-splitting on population genetic inference from RAD sequencing," Evolution, Austin, TX. (June 2013).

Contracts, Grants and Sponsored Research

Contract

Portnoy, David S, "Genotyping of hatchery broodfish," Sponsored by Texas Parks and Wildlife, State, \$9,950.00. (September 2016 - August 2017).

Portnoy, David S (Principal), Gold, John, "Population Structure, Connectivity, and Genetic Demographics of Southern Flounder (*Paralichthys lethostigma*) in Texas Bays and Estuaries," Sponsored by Texas Parks and Wildlife, State, \$63,113.00. (September 1, 2015 - August 31, 2017).

Portnoy, David S (Principal), Gold, John (Co-Principal), "A Genetic Map of Southern Flounder (*Paralichthys lethostigma*)," Sponsored by Texas Parks and Wildlife, State, \$47,580.00. (September 2014 - August 2017).

Portnoy, David S (Principal), Conway, Kevin (Co-Principal), Gold, John (Co-Principal), "On the brink yet under the radar: rapid conservation genetic assessment of the highly imperiled Rio Grande shiner (*Notropis jemezianus*) and development of management tools.," Sponsored by Texas Parks and Wildlife, State, \$32,692.00. (September 2014 - March 2016).

Grant

Hogan, James D (Co-Principal), Portnoy, David S (Principal), Hernandez, Frank J (Co-Principal), "Local adaptation as a filter on recruitment and connectivity in red drum across a regional genetic and environmental discontinuity," Sponsored by NOAA-SK, Federal, \$295,000.00. (September 1, 2017 - Present).

Portnoy, David S (Principal), Gold, John (Co-Principal), "Gulf of Mexico Research Institute. C-IMAGE-II, Genomics Component," \$305,595.00. (January 2015 - December 2018).

Portnoy, David S (Co-Principal), Grubbs, R D (Co-Principal), Gelsleichter, Jim (Co-Principal), Frazier, Bryan (Co-Principal), "Post-release survivorship and life history traits of scalloped and

great hammerhead sharks from U.S. Atlantic waters," Sponsored by Cooperative Research Program, NOAA/NMFS, Federal, \$32,928.00. (September 2016 - August 2018).

Portnoy, David S (Co-Principal), Frazier, Bryan (Co-Principal), "Stock structure and life history of the bonnethead, *Sphyrna tiburo*, in U.S. waters," Sponsored by Saltonstall-Kennedy Grant Program, NOAA/NMFS, Federal, \$145,074.00. (September 2016 - August 2018).

Portnoy, David S (Co-Principal), Stunz, Gregory (Co-Principal), McKinney, Larry (Principal), "Restoring and enhancing structurally complex nursery habitat to enhance reef fish populations," Sponsored by Texas Governor's Office, State, \$23,098.00. (March 2016 - August 2018).

Portnoy, David S (Principal), "Identification and delineation of critical shark nursery habitat surrounding Corpus Christi Bay," Sponsored by Texas Parks and Wildlife, State, \$75,486.00. (February 2015 - February 2018).

Portnoy, David S (Principal), Frazier, Bryan (Co-Principal), Gold, John (Co-Principal), "Relative abundance and trophic ecology of two sympatrically distributed Sphyrnids, the scalloped hammerhead (*Sphyrna lewini*) and the recently discovered Carolina hammerhead (*Sphyrna gilberti*) within known nurseries off the East coast of the United States," Sponsored by Competitive State Wildlife Grant, U.S. Fish and Wildlife, Federal, \$150,251.00. (December 2014 - August 2017).

Portnoy, David S (Principal), Gold, John R (Co-Principal), "Genetic monitoring and stock structure of two large coastal sharks, using high throughput next-generation sequ," Sponsored by National Marine Fisheries Service, Federal, \$157,709.00. (September 1, 2014 - August 31, 2017).

Portnoy, David S (Principal), Gold, John, Puritz, Jonathan B (Co-Principal), "Impacts of sewage effluent on genomic diversity and connectivity of marine intertidal communities," Sponsored by Texas Research and Development Fund, Texas A&M University-Corpus Christi, \$20,000.00. (2015 - 2016).

SERVICE

Department

Committee Member, FAMA Awards Committee. (2016 - Present).

Committee Member, MARB IDP Curriculum Committee. (2016 - Present).

Committee Member, Faculty Search Committee, Professor in Marine Fisheries with an emphasis on early life history. (November 2014 - Present).

Committee Member, Faculty Search Committee, Assistant Professor in Marine Fisheries Science. (September 2013 - February 2014).

College

Committee Member, Awards and Scholarships. (March 2015 - Present).

University

Committee Member, University Scholarship Committee. (September 2015 - Present).

Professional

Reviewer, Journal Article, *Molecular Ecology*. (March 2016).

Reviewer, Journal Article, *Journal of Fish Biology*. (February 2016).

Reviewer, Journal Article, Journal of Fish Biology. (January 2016).
Reviewer, Journal Article, Molecular Ecology. (December 2015).
Attendee, Meeting, Gulf of Mexico Sea Turtle Workshop. (2015).
Reviewer, Journal Article, Molecular Ecology. (September 2015).
Reviewer, Journal Article, Biology Letters. (July 2015).
Reviewer, Journal Article, Molecular Ecology. (June 2015).
Reviewer, Journal Article, Nature: Scientific Reports. (April 2015).
Reviewer, Journal Article, Nature: Scientific Reports. (February 2015).
Reviewer, Journal Article, Journal of Fish Biology. (January 2015).
Reviewer, Journal Article, Molecular Ecology. (November 2014).
Reviewer, Journal Article, Journal of Fish Biology. (November 2014).
Reviewer, Journal Article, Journal of Fish Biology. (November 2014).
Reviewer, Journal Article, Heredity. (October 2014).
Reviewer, Journal Article, Conservation Genetics. (July 2014).
Reviewer, Journal Article, Molecular Ecology. (May 2014).
Reviewer, Journal Article, Journal of the Marine Biological Association of the United Kingdom. (May 2014).
Reviewer, Journal Article, Heredity. (April 2014).
Reviewer, Journal Article, PLOS ONE. (November 2013).
Reviewer, Journal Article, Environmental Biology of Fishes. (November 2013).
Reviewer, Journal Article, Aquatic Biology. (October 2013).
Reviewer, Journal Article, Molecular Ecology. (October 2013).
Reviewer, Journal Article, Journal of Fish Biology. (September 2013).

Public

Guest Speaker, St James Episcopal School. (May 2014 - Present).
Coach, OSO Pony Baseball. (March 2015 - May 2015).
Youth Soccer Coach, YMCA of the Coastal Bend. (September 2013 - October 2013).