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# Dr. Christopher Hollenbeck

## Education

- 2013–2016 **Ph.D. Genetics**, Texas A&M University, College Station, TX, USA.  
2006–2009 **B.S. Biology**, Texas A&M University, College Station, TX, USA.

## Professional Experience

- 2020–present **Assistant Professor**, Texas A&M University - Corpus Christi / Texas A&M Agrilife Research, Corpus Christi, TX, USA.  
2018–2019 **Chief Technology Officer**, Xelect, Ltd., St Andrews, UK.  
2016–2018 **Research Fellow**, University of St Andrews, St Andrews, UK.  
2014–2016 **Research Associate**, Harte Research Institute, Corpus Christi, TX, USA.  
2012–2014 **Research Associate**, Texas A&M University, College Station, TX, USA.  
2008–2012 **Research Assistant**, Texas A&M University, College Station, TX, USA.

## Publications

Amanda M. Barker, Bryan S. Frazier, James Gelsleichter, R. Dean Grubbs, Christopher M. Hollenbeck, and David S. Portnoy. High Rates of Genetic Polyandry in the Blacknose Shark, *Carcharhinus acronotus*. *Copeia*, 107(3):502–508, September 2019.

Christopher M. Hollenbeck, David S. Portnoy, and John R. Gold. Evolution of population structure in an estuarine-dependent marine fish. *Ecology and Evolution*, 9(6):3141–3152, 2019.

Luke E. Holman, Christopher M. Hollenbeck, Thomas J. Ashton, and Ian A. Johnston. Demonstration of the Use of Environmental DNA for the Non-Invasive Genotyping of a Bivalve Mollusk, the European Flat Oyster (*Ostrea edulis*). *Frontiers in Genetics*, 10, 2019.

Christopher M. Hollenbeck and Ian A. Johnston. Genomic tools and selective breeding in molluscs. *Frontiers in Genetics*, 9, 2018.

Shannon J. O’Leary, Christopher M. Hollenbeck, Robert R. Vega, John R. Gold, and David S. Portnoy. Genetic mapping and comparative genomics to inform restoration enhancement and culture of southern flounder, *Paralichthys lethostigma*. *BMC Genomics*, 19(1):1–11, 2018.

Shannon J O’Leary, Jonathan B Puritz, Stuart C Willis, Christopher M Hollenbeck, and David S Portnoy. These aren’t the loci your’e looking for: Principles of effective SNP filtering for molecular ecologists. *Molecular Ecology*, 27(16):3193–3206, 2018.

Andrew N. Black, Heidi A. Sears, Christopher M. Hollenbeck, and Paul B. Samollow. Rapid genetic and morphologic divergence between captive and wild populations of the endangered Leon Springs pupfish, *Cyprinodon bovinus*. *Molecular Ecology*, 26(8):2237–2256, 2017.

Christopher M. Hollenbeck, David S. Portnoy, Dana Wetzel, Tracy A. Sherwood, Paul B. Samollow, and John R. Gold. Linkage mapping and comparative genomics of red drum (*Sciaenops ocellatus*) using next-generation sequencing. *G3*, 7(3):843–850, 2017.

Stuart C. Willis, Christopher M. Hollenbeck, Jonathan B. Puritz, John R. Gold, and David S. Portnoy. Haplotyping RAD loci: An efficient method to filter paralogs and account for physical linkage. *Molecular Ecology Resources*, (doi:10.1111/1755-0998.12647), 2017.

Christopher M. Hollenbeck, David S. Portnoy, and John R. Gold. A method for detecting recent changes in contemporary effective population size from linkage disequilibrium at linked and unlinked loci. *Heredity*, 117(4):207–216, 2016.

David S. Portnoy, Christopher M. Hollenbeck, D M Bethea, B S Frazier, J Gelsichter, and John R. Gold. 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*, 73(9):2322–2332, 2016.

Christopher M. Hollenbeck, David S. Portnoy, and John R. Gold. A genetic linkage map of red drum (*Sciaenops ocellatus*) and comparison of chromosomal synteny with four other fish species. *Aquaculture*, 435:265–274, January 2015.

John R. Gold, Stuart C. Willis, Mark A. Renshaw, A Buentello, Jon B. Puritz, Christopher M. Hollenbeck, and G Voelker. Phylogenetic relationships of tropical eastern Pacific snappers (Lutjanidae) inferred from mitochondrial DNA sequences. *Systematics and Biodiversity*, 2000(September):1–12, 2015.

Christopher M. Hollenbeck, David S. Portnoy, Eric Saillant, and John R. Gold. 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, 2015.

David S. Portnoy, Jon B. Puritz, Christopher M. Hollenbeck, J Gelsichter, D Chapman, and John R. Gold. Selection and sex-biased dispersal in a coastal shark: The influence of philopatry on adaptive variation. *Molecular ecology*, 24(23):5877–5885, 2015.

David S. Portnoy, Christopher M. Hollenbeck, C N Belcher, W B Driggers III, B S Frazier, J Gelsichter, R D Grubbs, and John R. Gold. Contemporary population structure and post-glacial genetic demography in a migratory marine species, the blacknose shark, *Carcharhinus acronotus*. *Molecular ecology*, 23(22):5480–5495, 2014.

David S. Portnoy, Christopher M. Hollenbeck, J S Johnston, H M Casman, and John R. Gold. Parthenogenesis in a whitetip reef shark *Triaenodon obesus* involves a reduction in ploidy. *Journal of Fish Biology*, 85(2):502–508, 2014.

David S. Portnoy, Christopher M. Hollenbeck, R R Vidal, and John R. Gold. A comparison of neutral and immune genetic variation in Atlantic salmon, *Salmo salar* L. in Chilean aquaculture facilities. *PLoS ONE*, 9(6), 2014.

Jon B. Puritz, Christopher M. Hollenbeck, and John R. Gold. dDocent: A RADseq, variant-calling pipeline designed for population genomics of non-model organisms. *PeerJ*, 2(1):e431, 2014.

David S. Portnoy, Christopher M. Hollenbeck, Mark A. Renshaw, N J Cummings, and John R. Gold. Does mating behaviour affect connectivity in marine fishes? Comparative population genetics of two protogynous groupers (Family Serranidae). *Molecular Ecology*, 22(2):301–313, 2013.

Christopher M. Hollenbeck, David S. Portnoy, and John R. Gold. Use of Comparative Genomics to Develop EST-SSRs for Red Drum (*Sciaenops ocellatus*). *Marine Biotechnology*, 14(6):672–680, December 2012.

Mark A. Renshaw, Christopher M. Hollenbeck, and John R. Gold. Isolation of microsatellite markers from red drum, *Sciaenops ocellatus*, and characterization in red drum and spotted seatrout, *Cynoscion nebulosus*. *Molecular Ecology Resources*, 12(3):570–572, 2012.

David S. Portnoy, Christopher M. Hollenbeck, Mark A. Renshaw, and John R. Gold. Microsatellite panels for gene localization in red drum, *Sciaenops ocellatus*. *Aquaculture*, 319(3-4):505–508, October 2011.

David S. Portnoy, Mark A. Renshaw, Christopher M. Hollenbeck, and John R. Gold. A genetic linkage map of red drum, *Sciaenops ocellatus*. *Animal Genetics*, 41(6):630–641, 2010.

## Presentations and Conference Abstracts

Christopher Hollenbeck. Genetic data analysis - a data science approach. In *Bioinformatics in Aquaculture Short Course*, Stirling, UK, August 2019.

M. K. Gundappa, A.C. Bertolotti, R. M. Layer, M. D. Gallagher, C. M. Hollenbeck, T. Nome, D. Robledo, S. Sandve, R. D. Houston, S. A. M. Martin, S. Lien, I. A. Johnston, and D. J. Macqueen. The structural variation landscape in Atlantic salmon and its potential contribution to disease resistance. In *Aquaculture Europe*, Berlin, 2019.

Christopher M. Hollenbeck. Genomic Resources for Aquaculture Species. In *Genomics in Aquaculture Workshop UK/MX*, Merida, Mexico, 2017.

Stuart C. Willis, Christopher M. Hollenbeck, Jon B. Puritz, John R. Gold, and David S. Portnoy. Dispersal is limited by distance and depth in young-of-the year, deep-water snappers (Lutjanidae) in the U.S. Caribbean as revealed by ddRAD population genomics. In *Joint Meeting of Ichthyologists and Herpetologists*, Austin, TX, 2017.

Christopher M. Hollenbeck, Shannon J. O'Leary, David S. Portnoy, and John R. Gold. Development of genomic resources for commercial and restoration aquaculture of red drum and southern flounder. In *World Aquaculture Society Meeting*, Las Vegas, NV, 2016.

Christopher M. Hollenbeck, David S. Portnoy, and John R. Gold. Population genomics of red drum (*Sciaenops ocellatus*). In *Joint Meeting of Ichthyologists and Herpetologists*, New Orleans, LA, 2016.

Shannon J. O'Leary, Christopher M. Hollenbeck, John R. Gold, and David S. Portnoy. Genomics as a tool for restoration enhancement southern flounder. In *Joint Meeting of Ichthyologists and Herpetologists*, New Orleans, LA, 2016.

Christopher M. Hollenbeck, Jon B. Puritz, David S. Portnoy, and John R. Gold. Genomic patterns of linkage disequilibrium in red drum (Poster). In *Plant and Animal Genome Conference XXIII*, San Diego, CA, 2015.

David S. Portnoy, Jon B. Puritz, Christopher M. Hollenbeck, and John R. Gold. Adaptive genetic variation and male-mediated gene-flow in the bonnethead. In *Joint Meeting of Ichthyologists and Herpetologists*, Reno, NV, 2015.

Jon B. Puritz, Christopher M. Hollenbeck, and John R. Gold. Fishing for selection, but only catching bias: examining library effects in double-digest RAD data in a non-model marine species. (Poster). In *Plant and Animal Genome Conference XXIII*, San Diego, CA, 2015.

Stuart C. Willis, Christopher M. Hollenbeck, Jon B. Puritz, David S. Portnoy, and John R. Gold. Identifying recruitment patterns among silk snapper (*Lutjanus vivanus*) off the west coast of Puerto Rico: challenges and solutions with using ddRADseq-based single nucleotide polymorphisms. In *Joint Meeting of Ichthyologists and Herpetologists*, Reno, NV, 2015.

David S. Portnoy, Christopher M. Hollenbeck, and John R. Gold. Historical genetic demography and stock structure of the blacknose shark. In *Joint Meeting of Ichthyologists and Herpetologists*, Chattanooga, TN, 2014.

Christopher M. Hollenbeck, David S. Portnoy, and John R. Gold. Genomic tools for inferring population processes: linkage mapping in red drum. In *American Fisheries Society Meeting*, Little Rock, AR, 2013.

Jon B. Puritz, Christopher M. Hollenbeck, and John R. Gold. Genomic studies of red snapper (*Lutjanus campechanus*) in US waters of the Gulf of Mexico and Atlantic Ocean. In *American Fisheries Society Meeting*, Little Rock, AR, 2013.

Jon B. Puritz, Christopher M. Hollenbeck, T J Krabbenhoft, J D Hogan, David S. Portnoy, C E Bird, and John R. Gold. Genomic tools for assessment of natural and artificial reefs and formation of a joint HRI and TAMU-CC marine genomics core facility. In *Gulf Coast Fisheries Institute*, Corpus Christi, TX, 2013.

Christopher M. Hollenbeck. Development of gene-based microsatellites for linkage mapping and comparative genomics in red drum. In *Seminar Series, Department of Wildlife and Fisheries Sciences*, College Station, TX, 2012.

Christopher M. Hollenbeck, David S. Portnoy, and John R. Gold. Design of expressed-sequence tag-linked microsatellites for non-model aquacultured species. In *Plant and Animal Genome XX Conference*, San Diego, CA, 2012.

David S. Portnoy, Christopher M. Hollenbeck, and John R. Gold. Linkage mapping in the red drum, *Sciaenops ocellatus*. In *Texas Bays and Estuaries Meeting*, Port Aransas, TX, 2011.

## Professional Activities

- 2014-present **Peer review of academic articles**, *Animal Genetics*, *G3: Genes | Genomes | Genetics*, *Journal of Animal Breeding and Genetics*, *Journal of Experimental Marine Biology and Ecology*, *Journal of Fish Biology*, *Molecular Ecology Resources*, *Scientific Reports*.
- 2018 **NOAA Saltonstall-Kennedy Grant Program**, *Reviewer*.
- 2015-2016 **Harte Research Institute Staff Innovations Grant Committee**, *Member*.
- 2014-2016 **Harte Research Institute Staff Research Group**, *Member*.
- 2015 **Harte Research Institute Science Review Committee**, *Graduate Student Representative*.