**W3004 2018 Annual Report**

**Publications – Journal Articles**

Alvarez, S., S.L. Larkin, and A. Ropicki. 2017. “Optimizing Provision of Ecosystem Services Using Modern Portfolio Theory.” *Ecosystem Services* 27: 25-37.

Ganesh, K., C.R. Engle, T.R. Hanson, C.S. Tucker, T.W. Brown, L.B. Bott, L.A. Roy, C.E. Boyd, M.S. Recsetar, J. Park, E.L. Torrans. 2018. “Economics of alternative catfish production technologies.” *Journal of the World Aquaculture Society*. doi: 10.1111/jwas.2555 .

McCrummen, S.T., Y. Wang, T.R. Hanson, L. Bott, S. Liu. 2018. “Culture environment and the odorous volatile compounds present in pond-raised channel catfish (*Ictalurus punctatus*).” *Aquaculture International* 26 (2): 685-694. DOI 10.1007/s10499-018-0247-1.

Nguyen, L., R. Kubitza, S.M.R. Salem, T.R. Hanson, D.A. Davis. 2018. “Comparison of organic and inorganic microminerals in all plant diets for Nile tilapia Oreochromis niloticus. *Aquaculture*. 498 (2019): 297-304. https://doi.org/10.1016/j.aquaculture.2018.08.034

Novriadi, R., M. Rhodes, M. Powell, T. Hanson, D.A. Davis. 2017. Effects of soybean meal replacement with fermented soybean meal on growth, serum biochemistry and morphological condition of liver and distal intestine of Florida pompano *Trachinotus carolinus*. *Aquaculture Nutrition*. p. 1–10.https://doi.org/10.1111/anu.12645.

Novriadi, R., E. Spangler, M. Rhodes, T. Hanson and D.A. Allen. 2017. Effects of various levels of squid hydrolysate and squid meal supplementation with enzyme-treated soy on growth performance, body composition, serum biochemistry and histology of Florida pompano Trachinotus carolinus. Aquaculture 481 (2017): 85-93.

Quagrainie, K.K. 2017. Consumer Willingness to Pay for a Saline Fish Species Grown in the US Midwest: The Case of Striped Bass, Morone saxatilis. *Journal of the World Aquaculture* *Society*. DOI: 10.1111/jwas.12464.

Quagrainie, K.K., R.M.V. Flores, Hye-Ji Kim, and V. McClain. 2018. Economic Analysis of Aquaponics and Hydroponics Production in the U.S. Midwest. *Journal of Applied Aquaculture* 30(1): 1-14.

Roheim, C.A., S.R. Bush, F. Asche, J.N. Sanchirico, and H. Uchida. Forthcoming. “Evolution and Future of the Sustainable Seafood Market.” *Nature Sustainability*.

Ropicki, A., D. Willard, and S. Larkin. 2018. “Proposed policy changes to the Gulf of Mexico Red Snapper IFQ Program: Evaluating Differential Impacts by Participant Type.” *Ocean and Coastal Management* 152: 48-56.

Ullman, C., M. Rhodes, T. Hanson, D. Cline, D.A. Davis. 2018. “Effects of Four Different Feeding Techniques on the Pond Culture of Pacific White Shrimp, *Litopenaeus vannamei*.” *Journal of the World Aquaculture Society*. doi: 10.1111/jwas.12531 .

**Publications – Abstracts**

Dunham, R.A., R. Odin, K. Gosh, M. Bangs, N. Backenstose, C. Chen, T. Hanson, J. Terhune, N. Chatakondi, Z. Taylor. 2018. “Genetic Effects and Combining Ability for Oversized and Undersized Channel Catfish *Ictalurus punctatus* Female X Blue Catfish *I. furcatus* Male Hybrid Catfish.” Abstract printed in the Book of Abstracts of Aquaculture America 2018, February 19-22, Las Vegas, NV, Feb 19-22, p. 536.

Fantini, L.E., T.X. Martins, T. Hanson, R.A.C. Corrêa Filho, J.A. Povh. 2018. “Comparison of Cachara Pseudoplatystoma reticulatum and Hybrid P. reticulatum × P. corruscans Growth Curves.” Abstract printed in the Book of Abstracts of Aquaculture America 2018, February 19-22, Las Vegas, NV, Feb 19-22, p. 144.

Fantini, L.E., J. Chappell, R.A.C. Corrêa Filho, J.A. Povh, T. Hanson, F. Kubitza. 2018. “Channel Catfish *Ictalurus punctatus* Production in Floating Raceways.” Abstract printed in the Book of Abstracts of Aquaculture America 2018, February 19-22, Las Vegas, NV, Feb 19-22, p. 143.

Gosh, K., T. R. Hanson, R.A. Dunham, N. Chatakondi, D. Drescher, D. Robinson, W. Bugg, C. Jeffers, J. A. Chappell, F. Kubitza and G. Kumar. 2018. “Economic Impact of Channel-Blue Hybrid Catfish Growth Variability on Production.” Abstract printed in the Book of Abstracts of Aquaculture America 2018, February 19-22, Las Vegas, NV, Feb 19-22, p. 179.

Gosh, K., R.A. Dunham, T.R. Hanson, N. Chatakondi, D. Drescher, D. Robinson, W. Bugg, N. Backenstose, C. Jeffers, J. A. Chappell, F. Kubitza, C.Y. Chen. 2018. “Analyzing the Effect of Production Variables on the Growth Variability of Channel-Blue Hybrid Catfish.” Abstract printed in the Book of Abstracts of Aquaculture America 2018, February 19-22, Las Vegas, NV, Feb 19-22, p. 178.

James, J., T.R. Hanson, J.S. Terhune, J.A. Chappell, C.R. Arias, B.H. Beck, B.R. LaFrentz, E. Peatman, P. Merrill, E. Arana, K. Veverica, W. Hemstreet, S. Dahl, L.A. Roy. 2018. “Evaluation of a Trivalent Vaccine for Aeromonas hydrophila, Flavobacterium columnare, and Edwardsiella ictaluri Using In-Pond Raceway Systems in West Alabama.” Abstract printed in the Book of Abstracts of Aquaculture America 2018, February 19-22, Las Vegas, NV, Feb 19-22, p. 228.

Larkin, S and T Yandle. 2018. Consumer preferences for lionfish meat in U.S. Virgin Islands. International Institute of Fisheries and Trade Biennial Conference, Seattle, WA, July 2018.

Larkin, S and A Ropicki. 2018. Evaluating the impact of individual fishing quota management on vessel technical efficiency in the Gulf of Mexico grouper-tilefish commercial fishery. International Institute of Fisheries and Trade Biennial Conference, Seattle, WA, July 2018.

Mount, A.S. and V.B.S... Chan. Miata57 is a potent antifouling deterrent to marine larval invertebrate biofouling. Macro and Integrative Biology session, The 19th International Congress on Marine Corrosion and Fouling (ICMCF), Melbourne, Florida, Jun 24-29, 2018. Presented by Chan.

Mount, A.S. Miata57 is a potent antifouling deterrent to marine larval invertebrate biofouling.Clemson University Research Symposium. Clemson, South Carolina, May 9, 2018

Mount, A.S. Oyster as a model of biomineralization – the Cellular Perspective. Baruch Estate Workshop, Bellfield Plantation, Georgetown, SC. February 9, 2018

Posadas, Benedict C., and Mark Peterman. 2018. Measuring the Economic Impacts of Aquatic Animal Diseases: The Case of Catfish farming. Abstract for Aquaculture 2018, Las Vegas, Nevada. February 19-22, 2018.

Roheim, C.A., S.R. Bush, F. Asche, J.N. Sanchirico, and H. Uchida. A New Theory of Change for the Sustainable Seafood Movement. North American Association of Fisheries Economists Forum, La Paz, Mexico, March 2017.

Smith, M.R., D. Wells, T. Hanson, J. Chappell, D. Blersch. 2018. “Water and Nutrient Management and Savings in Closed-Loop Aquaponic Tilapia-Vegetable Production.” Abstract printed in the Book of Abstracts of Aquaculture America 2018, February 19-22, Las Vegas, NV, Feb 19-22, p. 451.

Uchida, H. 2018. Fishery co-management and spatial coordination: Fishery self-governance alleviates crowding inefficiency. International Institute of Fisheries and Trade Biennial Conference, Seattle, WA, July 2018.

Uchida, H. 2018. FPIs and fishery co-management: Drilling down on collective fishery management. International Institute of Fisheries and Trade Biennial Conference, Seattle, WA, July 2018.

Weir, M. and H. Uchida. 2017. Explaining Consumer Heterogeneity in Responses to Seafood Information Campaigns. North American Association of Fisheries Economists Forum, La Paz, Mexico, March 2017.

Zou C and H Uchida. 2018. A study of Chinese consumers’ preference for sustainably farmed seafood using experimental auctions. International Institute of Fisheries and Trade Biennial Conference, Seattle, WA, July 2018.

**Publications –Presentations**

Cai, W., E. Willmon, F.B. Valverde, C. L. Ray, T. Hanson, C. Arias. 2018. “Understanding Aeromonas spp. Dynamics in Catfish Ponds: Where Do They Hide?” Presented at the 43rd Eastern Fish Health Workshop, Chattanooga, TN, April.

Dahl, S., J. P. James, L.A. Roy, T. Hanson, J. Chappell, B.H. Beck, B. LaFrentz, B. Hemstreet, J. Terhune, C. Arias. 2018. “Evaluation of an alternative carp meal based feed for the Alabama catfish industry.” Poster presented at the Alabama Farm and Land Expo, 2018, Montgomery, AL, August 4.

Gosh, K., R.A. Dunham, T.R. Hanson, N. Chatakondi, D. Drescher, D. Robinson, W. Bugg, N. Backenstose, C. Jeffers, J. A. Chappell, F. Kubitza, C.Y. Chen. 2018. “Analyzing the Effect of Production Variables on the Growth Variability of Channel-Blue Hybrid Catfish.” Presented at This Is Research Student Symposium 2018, Auburn University, Auburn, AL, March 26.

Gosh, K., T. R. Hanson, R.A. Dunham, N. Chatakondi, D. Drescher, D. Robinson, W. Bugg, C. Jeffers, J. A. Chappell, F. Kubitza and G. Kumar. 2018. “Economic Impact of Channel-Blue Hybrid Catfish Growth Variability on Production.” Presented at the This Is Research Student Symposium 2018, Auburn University, Auburn AL, March 26.

Hanson, T., D. Blersch, J. Chappell, D. Wells, T. Huang and M. Smith. 2018. “Improving Aquaculture’s Value through Enhanced Nutrient Management.” Poster presented at the Aquaculture America 2018 conference, Las Vegas, NV, Feb 19-22.

Hanson, T., D. Blersch, J. Chappell, D. Wells, T. Huang and M. Smith. 2017. “Improving Aquaculture’s Value through Enhanced Nutrient Management.” Poster presented at Auburn University’s ‘This Is Research – Research Expo 2017.” September 22, Auburn University, Auburn, AL.

Hanson, T., D. Blersch, J. Chappell, D. Wells, T. Huang and M. Smith. 2017. “Improving Aquaculture’s Value through Enhanced Nutrient Management.” Poster presented at Alabama Farmers Federation ALFA 45th Annual Commodity Producers Conference and Expo, August 5, Birmingham, AL.

James, J., T.R. Hanson, J.S. Terhune, J.A. Chappell, C.R. Arias, B.H. Beck, B.R. LaFrentz, E. Peatman, P. Merrill, E. Arana, K. Veverica, W. Hemstreet, S. Dahl, L.A. Roy. 2018. “Evaluation of a Trivalent Vaccine for *Aeromonas hydrophila, Flavobacterium columnare*, and *Edwardsiella ictaluri* Using In-Pond Raceway Systems in West Alabama.” Presented at the Aquaculture America 2018 conference, Las Vegas, NV, Feb 19-22.

James, J., T.R. Hanson, J.S. Terhune, J.A. Chappell, M.R. Liles, C. Thurlow, C.R. Arias, B.H. Beck, B.R. LaFrentz, E. Peatman, P. Merrill, L.B. Bott, E. Arana, W. Hemstreet, S. Dahl, L.A. Roy. 2018. “Commercial Research Demonstration Trials (2015-2017) Using In-Pond Raceway Systems to Investigate Fish Diseases on catfish Farms in West Alabama. Poster presented at the Aquaculture America 2018 conference, Las Vegas, NV, Feb 19-22.

James, J., T.R. Hanson, J.S. Terhune, J.A. Chappell, M.R. Liles, C. Thurlow, C.R. Arias, B.H. Beck, B.R. LaFrentz, E. Peatman, D. Sun, P. Merrill, L.B. Bott, E. Arana, K. Veverica, W. Hemstreet, S. Dahl, L.A. Roy. 2017. “Commercial research demonstration trials (2015-2017)​ using in-pond raceway systems to investigate fish diseases on catfish farms in west Alabama.” Poster presented at Alabama Farmers Federation ALFA 45th Annual Commodity Producers Conference and Expo, August 5, Birmingham, AL.

James, J., T. Hanson, J. Terhune, J. Chappell, C. Arias, B. Beck, P. Merrill, B. Hemstreet, S. Dahl, L. Roy. “Evaluation of a Trivalent Vaccine for Aeromonas hydrophila, Flavobacterium columnare and Edwardsiella ictaluri Using In-pond Raceway Systems in West Alabama.” Poster presented at the Alabama Farm and Land Expo, 2018, Montgomery, AL, August 4.

Kubitza, F., J.A. Chappell, T.R. Hanson, E. Arana. 2017. “The Promise of In-Pond Raceway Systems, part 1.” https://www.aquaculturealliance.org/advocate/promise-pond-raceway-systems-part-1/ March 19.

Kubitza, F., J.A. Chappell, T.R. Hanson, E. Arana. 2017. “The Promise of In-Pond Raceway Systems, part 2.” https://www.aquaculturealliance.org/advocate/promise-pond-raceway-systems-part-2/ March 24.

Posadas, Benedict C. (Author & Presenter), Sparks, Eric L. (Author), CREC Producer Advisory Council Annual Meeting, "Research and Extension in Seafood and Aquaculture," Mississippi State University, Coastal Research and Extension Center, Ellisville, Mississippi. (February 28, 2018).

Posadas, Benedict C. (Author & Presenter), Peterman, Mark Alan (Author), Aquaculture America 2018, "Measuring the Economic Impacts of Aquatic Animal Diseases: The Case of Catfish Farming," World Aquaculture Society, Las Vegas, Nevada. (February 2018).

**Output – Patent Application**

United States Patent. Mount and Chan, 2018. Conotoxin peptides for use in biofouling deterrence, US Patent WO2016191200 A1. <http://www.google.com/patents/WO2016191200A1>