

## THOMAS K. FRAZER

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College of Marine Science  
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### Professional Preparation

Humboldt State University	Marine Fisheries (cum laude)	BS, 1986
University of Florida	Fisheries and Aquatic Sciences	MS, 1990
UC Santa Barbara	Biological Sciences	PhD, 1995

### Appointments

2020-present Dean, College of Marine Science, University of South Florida  
2019-present Chief Science Officer, State of Florida, Department of Environmental Protection  
2012-2019 Director, School of Natural Resources and Environment, University of Florida  
2015-2016 Acting Director, University of Florida Water Institute  
2008-2012 Associate Director, School of Forest Resources and Conservation, University of Florida  
2008-2012 Program Leader, Fisheries and Aquatic Sciences Program, University of Florida  
2008 Associate Chair, Department of Fisheries and Aquatic Sciences, University of Florida  
2010-present Professor, School of Forest Resources and Conservation, University of Florida  
2007-2009 Research Foundation Professor, University of Florida  
2004-2009 Associate Professor, Department of Fisheries and Aquatic Sciences, University of Florida  
1998-2004 Assistant Professor, Department of Fisheries and Aquatic Sciences, University of Florida  
1996-1998 Research Assistant Professor, Department of Fisheries and Aquatic Sciences, University of Florida

- 1990-1995 Graduate Research/Teaching Assistant, Department of Biological Sciences,  
University of California at Santa Barbara
- 1988-1990 Biological Scientist II, Department of Fisheries and Aquatic Sciences,  
University of Florida
- 1987-1988 Biological Scientist, Department of Fisheries and Aquatic Sciences,  
University of Florida
- 1986 Fisheries Biologist, U.S. Fish and Wildlife Service, Arcata, California

## **Administration and Leadership Experience**

### ***University of South Florida***

2020 – Present: Dean, College of Marine Science

Administrative Scope – The Dean serves as the chief academic officer and administrator for the College of Marine Science and is responsible for all areas of strategic planning and academic operations for the College. This includes, but is not limited to, management of faculty and staff; development of academic programs; delivery of student services; oversight of facilities; development of research; fiscal and budgetary management; and external relations, including fundraising.

### ***State of Florida, Department of Environmental Protection***

2019 – Present: Chief Science Officer

Administrative Scope – The Chief Science Officer (CSO) coordinates and prioritizes the scientific data, research and analyses needs of the state to ensure alignment with current and emerging environmental concerns. The CSO identifies and sets priorities for key research initiatives and oversees also the allocation of funding for all related research projects. The CSO serves as the state liaison to the broader scientific community while simultaneously cultivating and maintaining relationships with internal and external environmental stakeholder groups. The CSO is responsible for defining and growing areas of strategic focus and where appropriate identifying and engaging external resources to aid in such efforts. The CSO presents finding and develops recommendations for senior leadership in support of policy decisions and related management actions.

*University of Florida*

2012 – 2020: Director of the School of Natural Resources and Environment

Administrative Scope – The Director provides leadership and administrative oversight of all aspects of the SNRE’s academic programs. The School’s degrees access more than 300 affiliate faculty and courses delivered across 13 different UF colleges and college level units. The Director plans, implements and administers innovative, interdisciplinary degree programs and serves as Graduate and Undergraduate Coordinator for the Interdisciplinary Ecology and Environmental Science degree programs, respectively. The Director has fiscal oversight of the School and is responsible for planning and managing the academic programs budget. The Director also is responsible for attracting extramural support for the SNRE’s academic programs and private donations in support of the broader suite of activities carried out within the School.

2015 – 2016: Acting Director of the UF Water Institute

Administrative Scope – The Director leads and guides the establishment of interdisciplinary research, education and outreach programs conducted under the auspices of the University of Florida Water Institute. The Director is expected also to identify and foster externally funded research programs and strategic opportunities for UF to deliver valued outcomes to stakeholders confronting water-related issues. Within UF, the Director works with faculty, department chairs, directors of on-campus and off-campus research and education centers, and county extension directors to focus, coordinate, and integrate the water-related programs in existing disciplinary departments, centers, and interdisciplinary programs.

2008 – 2012: Associate Director of the School of Forest Resources and Conservation and  
Leader of the Fisheries and Aquatic Sciences Program

Administrative Scope - Provide school-wide leadership in Research, Teaching and Extension and with the SFRC Director manage a facility that houses over 250 faculty, staff and graduate students. The Associate Director reports directly to the Director of the SFRC and assists with fiscal, administrative and personnel matters.

2008: Associate Chair, Department of Fisheries and Aquatic Sciences

Administrative Scope – Provide leadership in Research, Teaching and Extension and with the FAS Chair manage an academic unit that comprises 15 tenure track/tenured faculty, 10 resident scientists, and ~ 25 graduate students. The Associate Chair assists with all fiscal, administrative and personnel matters.

## Research Narrative

The overarching goals of my individual and collaborative research efforts are to develop and transfer into management a mechanistic understanding of the effects of anthropogenic activities on the ecology of both freshwater and marine ecosystems. My research is, by nature, interdisciplinary, involves collaborators from disparate disciplines and is carried out across broad space and time scales to effectively address contemporary and emerging environmental issues.

## Publications

### *Refereed Publications*

#### 2020

- Andradi-Brown, D.A., A.T. Banaszak, T.K. Frazer, H. Gilchrist, A.R. Harborne, C.E. Head, H.J. Koldewey, E. Levy, K. Richards, R. Short1, M. Sweet, K. Teleki, C.R. Voolstra, B. Wilson, E. Wood, R.T. Yarlett, D.J. Curnick. 2020. Editorial: Coral Reefs in the Anthropocene – reflecting on 20 years of Reef Conservation UK. *Frontiers in Marine Science*. 7:364 [doi: 10.3389/fmars.2020.00364]
- Guan, J., C.A. Jacoby, T.K. Frazer. 2020. Light attenuation by periphyton on *Vallisneria americana*. *Ecological Indicators*. 116:106498 [https://doi.org/10.1016/j.ecolind.2020.106498]
- Guan, J., C.A. Jacoby, T.K. Frazer. 2020. *In-situ* assessment of the effects of periphyton on the growth of *Vallisneria americana*. *Ecological Indicators* [In press]
- Miller, N., P. Maneval, T.K. Frazer and J.L. Meyer. 2020. Spatial distribution of microbial communities among colonies and genotypes in nursery-reared *Acropora cervicornis*. *PeerJ* [In press]
- Newkirk, C.R., T.K. Frazer, M.Q. Martindale and C.E. Schnitzler. 2020. Adaptation to bleaching: are thermotolerant Symbiodiniaceae strains more successful than other strains under elevated temperatures in a model symbiotic cnidarian? *Frontiers in Microbiology*. 11:822. [https://doi: 10.3389/fmicb.2020.00822]

## 2019

- Brown, A.L., T.K. Frazer, G. Li, J.R. Hilsenroth, J.S. Shima and C.W. Osenberg. 2019. Hidden predators on coral reefs: muricid consumption of vermetids. *Marine Ecology Progress Series*. 615:121–131 [<https://doi.org/10.3354/meps12920>]
- Hyman, A.C., T.K. Frazer, C.A. Jacoby, J. Frost and M. Kowalewski. 2019. Long-term persistence of structured habitats: Seagrass meadows as enduring hotspots of elevated biodiversity and faunal stability. *Proceedings of the Royal Society B - Biological Sciences*. 286:20191861 [<https://doi.org/10.1098/rspb.2019.1861>]
- Lauretta, M.V., W.E. Pine, C.W. Walters and T.K. Frazer. 2019. Plant mediated community structure within spring-fed, coastal rivers. *PLoS ONE*. 14(12): e0219236 [<https://doi.org/10.1371/journal.pone.0219236>]
- Littles, C.J., R.K. Bonde, S. Butler, C.A. Jacoby, S.K. Notestein, J.P. Reid, D.H. Sloan and T.K. Frazer. 2019. Coastal habitat change and marine megafauna behavior: Florida manatees encountering reduced food provisions in a prominent winter refuge. *Endangered Species Research*. 38:29-43 [<https://doi.org/10.3354/esr00933>]
- Reaver, N.G.F., D.A. Kaplan, R.A. Mattson, E. Carter, P. Sucusy and T.K. Frazer. 2019. Hydrodynamic controls on primary producer communities in spring-fed rivers. *Geophysical Research Letters*. 46(9): 4715-4725 [<https://doi.org/10.1029/2019GL082571>]

## 2018

- Adler, J., S.C. Barry, J. Johnston, C.A. Jacoby and T.K. Frazer. 2018. Aggregation of turtles in a Florida spring yields insights into dietary preferences and grazing rates. *Freshwater Science*. 37(2):397-403 [<https://doi.org/10.1080/00036846.2018.1458196>]
- Alvarez-Aleman, A., J.A. Austin, C.A. Jacoby and T.K. Frazer. 2018. Cuban connection: regional role for Florida's manatees. *Frontiers in Marine Science*. 5:294 [<https://doi.org/10.3389/fmars.2018.00294>]
- Alvarez-Aleman, A., E. García, Y. Forneiro Martin-Viana, Z. Hernandez Gonzalez, R. Escalona Domenech, A. Hurtado, J. Powell, C.A. Jacoby and T.K. Frazer. 2017. Status and conservation of manatees in Cuba. *Bulletin of Marine Science*. 94(2):313-327 [<https://doi.org/10.5343/bms.2016.1132>]

Barry, S.C., T.S. Bianchi, M.R. Shields, J.A. Hutchings, C.A. Jacoby and T.K. Frazer. 2018. Characterizing blue carbon stocks in seagrass meadows subjected to different long-term phosphorus supplies: a lignin biomarker approach. *Limnology and Oceanography*. 63(6): 2630-2646 [<https://doi.org/10.1002/lno.10965>]

Barry, S.C., C.A. Jacoby and T.K. Frazer. 2018. Resilience to shading influenced by differential allocation of biomass in *Thalassia testudinum*. *Limnology and Oceanography*. 63(4):1817-1831. [<https://doi.org/10.1002/lno.10810>]

Hilsenroth, J.R., S. Larkin and T.K. Frazer. 2018. The price of pretty: characteristics of black Tahitian pearls and their implicit values. *Applied Economics*. 50(2):4582-4591. [<https://doi.org/10.1080/00036846.2018.1458196>]

Mintzer, V.J., K. Diniz and T.K. Frazer. 2018. The use of aquatic mammals for bait in global fisheries. *Frontiers in Marine Science*. 5:191 [<https://doi.org/10.3389/fmars.2018.00191>]

Newkirk, C.R., T.K. Frazer and M.Q. Martindale. 2018. Uptake and proliferation of *Symbiodinium* in polyps of the upside-down jellyfish, *Cassiopea xamachana*. *Journal of Experimental Marine Biology and Ecology*. 508:44-51 [<https://doi.org/10.1016/j.jembe.2018.08.010>]

## 2017

Barry, S.C., C.A. Jacoby and T.K. Frazer. 2017. Environmental influences on growth and morphology of *Thalassia testudinum*. *Marine Ecology Progress Series*. 570:57-70 [<https://doi.org/10.3354/meps12112>]

Hotaling-Hagan, A., R. Swett, L. Rex Ellis and T.K. Frazer. 2017. A spatial model to improve site selection for seagrass restoration in shallow boating environments. *Journal of Environmental Management* 186:42-54 [doi: 10.1016/j.jenvman.2016.10.005]

## 2016

Brown, A.L., T.K. Frazer, J.S. Shima and C.W. Osenberg. 2016. Mass mortality of the vermetid gastropod *Ceraesignum maximum*. *Coral Reefs* 35: 1027–1032 [doi: 10.1007/s00338-016-1438-8]

Nifong, J.C., T.K. Frazer and C. Mojica. 2016. *Alligator mississippiensis* (American alligator). DIET. Herpetological Review 47(1):130-131.

Mintzer, V.J., K. Lorenzen, T.K. Frazer, V.M.F. da Silva and A.R. Martin. 2016. Seasonal movements of river dolphins (*Inia geoffrensis*) in a protected Amazonian floodplain. Marine Mammal Science. 32(2):664-681. [doi: 10.1111/mms.12298]

Littles, C.J., S.S. Pilyugin and T.K. Frazer. 2016. A combined inverse method and multivariate approach for exploring population trends of Florida Manatees. Marine Mammal Science 32(1):122-140. [doi: 10.1111/mms.12247]

## 2015

Gardner, P.G., T.K. Frazer, C.A. Jacoby and R.P.E. Yanong. 2015. Reproductive biology of invasive lionfish (*Pterois* spp.). Frontiers in Marine Science 2:7. [doi:10.3389/fmars.2015.00007]

Mintzer, V.J., M. Schmink, K. Lorenzen, T.K. Frazer, A.R. Martin and V.M.F. da Silva. 2015. Attitudes and behaviors toward Amazon River dolphins (*Inia geoffrensis*) in a sustainable use protected area. Biodiversity and Conservation 24:247-269.

## 2014

Edwards, M.A., T.K. Frazer and C.A. Jacoby. 2014. Age and growth of invasive lionfish (*Pterois* spp.) in the Caribbean, with implications for management. Bulletin of Marine Science 90(4):953-966.

Liebowitz, D.M., M.J. Cohen, J.B. Heffernan, L.V. Korhnak and T.K. Frazer. 2014. Environmentally mediated consumer control of algal proliferation in Florida springs. Freshwater Biology. 59(10):2009-2023.

Brown, A.L., J. Zill, T.K. Frazer and C.W. Osenberg. 2014. Death and life: Muricid snails consume the vermetid gastropod, *Dendropoma maximum*, and use empty shells for reproduction. Coral Reefs 33(2):437.

Choice, Z.D., T.K. Frazer and C.A. Jacoby. 2014. Light requirements of seagrasses determined from historical records of light attenuation along the Gulf coast of peninsular Florida. Marine Pollution Bulletin 84:91-102.

Diller, J.L., T.K. Frazer and C.A. Jacoby. 2014. Coping with the lionfish invasion: evidence that naïve, native predators can learn to help. *Journal of Experimental Marine Biology and Ecology* 455:45-49.

Huge, D.H., P.J. Schofield, C.A. Jacoby and T.K. Frazer. 2014. Total mercury concentrations in lionfish (*Pterois volitans/miles*) from the Florida Keys National Marine Sanctuary, USA. *Marine Pollution Bulletin* 78:51-55.

Camp, E.V., C.L. Staudhammer, W.E. Pine III, J.C. Tetzlaff and T.K. Frazer. 2014. Replacement of rooted macrophytes by filamentous macroalgae: effects on small fishes and macroinvertebrates. *Hydrobiologia* 722:159-170.

## 2013

Manfrino, C., C.A. Jacoby, E. Camp and T.K. Frazer. 2013. A positive trajectory for corals at Little Cayman Island. *PLoS ONE* 8(10):e75432.\*

Barry, S.C., T.K. Frazer and C.A. Jacoby. 2013. Production and carbonate dynamics of *Halimeda incrassata* (Ellis) Lamouroux altered by *Thalassia testudinum* Banks and Soland ex Konig. *Journal of Experimental Marine Biology and Ecology* 444:73-80.

Schofield, O., M. Moline, B. Cahill, T. Frazer, A. Kahl, M. Oliver, J. Reinfelder, S. Glenn and R. Chant. 2013. Phytoplankton productivity in a turbid buoyant coastal plume. *Continental Shelf Research* 63:S138-S148.

Lauretta, M.V., E.V. Camp, W.E. Pine and T.K. Frazer. 2013. Catchability model selection for estimating the composition of fishes and invertebrates within dynamic aquatic ecosystems. *Canadian Journal of Fisheries and Aquatic Sciences* 70:381-392.

Mintzer, V.J., A.R. Martin, V. M.F. da Silva, A.B. Barbour, K. Lorenzen and T.K. Frazer. 2013. Effect of illegal harvest on apparent survival of Amazon River dolphins (*Inia geoffrensis*). *Biological Conservation* 158:280-286.

## 2012

Frazer, T.K., C.A. Jacoby, M.A. Edwards, S.C. Barry and C.M. Manfrino. 2012. Coping with lionfish: can targeted removals yield beneficial effects? *Reviews in Fisheries Science* 20:185-191.

Frost, J., C.A. Jacoby, T.K. Frazer and A. Zimmerman. 2012. Bacterial decomposition of *Chrysaora quinquecirrha* (Desor 1848) supplies carbon, nitrogen and phosphorous. *Hydrobiologia* 690:247-256.

Camp, E.V., D.C. Gwinn, W.E. Pine and T.K. Frazer. 2012. Changes in submersed aquatic vegetation affect predation risks of common prey fish *Lucania parva* (Cyprinodontiformes: Fundulidae) in a spring-fed coastal river. *Fisheries Management and Ecology*. 19:245-251.

Van Holt, T., C.A. Moreno, M.W. Binford, K.M. Portier, S. Muslow and T.K. Frazer. 2012. Influence of landscape change on a nearshore fisheries in southern Chile. *Global Change Biology* 18(7):2147-2160.

## 2011

Barbour, A.B., M.S. Allen, T.K. Frazer and K.D. Sherman. 2011. Evaluating the potential efficacy of invasive lionfish (*Pterois volitans*) removals. *PLoS ONE* 6(5):e19666 [doi: 10.1371/journal.pone.0019666]

Camp, E.V., D.C. Gwinn, M.V. Laretta, W.E. Pine and T.K. Frazer. 2011. Use of recovery probabilities can improve sampling efficiency for throw traps in vegetated habitats. *Transactions of the American Fisheries Society* 140:164-169.

Lazar, K.L., T.K. Frazer, C.A. Jacoby and C.M. St. Mary. 2011. Reproductive strategy of *Siderastrea radians* (Pallas 1766) in the St. Martins Keys, Florida. *Bulletin of Marine Science* 87:91-111.

## 2010

Duarte, C.M., R. Martinez, Y.T. Prairie, T.K. Frazer, M.V. Hoyer, S.K. Notestein and D.E. Canfield. 2010. Rapid accretion of dissolved organic carbon in the springs of Florida: the most organic-poor natural waters. *Biogeosciences* 7:4051-4057.

Wright, D.D., T.K. Frazer and J.R. Reinfelder. 2010. The influence of river plume dynamics on trace metal accumulation in calanoid copepods. *Limnology and Oceanography* 55(6):2487-2502.

Heffernan, J.B., M.J. Cohen, T.K. Frazer, R.G. Thomas, T.J. Rayfield, J. Gulley, J.B. Martin, J.J. Delfino and W.D. Graham. 2010. Nitrogen dynamics in a spring-fed Florida river. *Limnology and Oceanography*. 55(1):249-263.

Heffernan, J.B., D.M. Liebowitz, T.K. Frazer, J.M. Evans and M.J. Cohen. 2010. Algal blooms and the nitrogen-enrichment hypothesis in Florida springs: evidence, alternatives, and adaptive management. *Ecological Applications* 20(3):816-829.

## 2009

Tetzlaff, J.C., W.E. Pine III and T.K. Frazer. 2009. Comparison of bioenergetics parameters from two spring-fed riverine largemouth bass populations. *The Open Fish Science Journal* 2:1-14 [ISSN: 1874-401X/09]

Ortega-Retuerta, E., T.K. Frazer, C.M. Duarte, S. Ruiz, A. Tovar-Sanchez, J.M. Arrieta and I. Reche. 2009. Biogeneration of chromophoric dissolved organic matter by bacteria and krill in the Southern Ocean. *Limnology and Oceanography* 54(6):1941-1950.

Tomasko, D.A., E. Hyfield-Keenan, L. De Brabandere, J.P. Montoya and T.K. Frazer. 2009. Assessment of water quality responses to sediment removal in Lake Hancock. *Florida Scientist* 72(4):346-366.

Jacoby, C.A. and T.K. Frazer. 2009. Eutrophication: time to adjust expectations. *Science* 324:723–724.

Grober-Dunsmore, R., V. Bonito and T.K. Frazer. 2009. 1,000 feet above a coral reef: a seascape approach to designing marine protected areas. *Park Science* 26:22-26.

De Brabandere, L., M. J. Catalano, T.K. Frazer and M.S. Allen. 2009. Stable isotope evidence of ontogenetic changes in the diet of gizzard shad (*Dorosoma cepedianum*) with implications for biomanipulation of a shallow eutrophic lake. *Journal of Fish Biology* 74:105–119.

## 2008

Moline, M.A., T.K. Frazer, R. Chant, S. Glenn, C.A. Jacoby, J.R. Reinfelder, J. Yost, M. Zhou and O.M.E. Schofield. 2008. Biological responses in a dynamic, buoyant river plume. *Oceanography* 21:70–89.

Frazer, T.K. and C.A. Jacoby. 2008. Estimating rates of microzooplankton grazing. *Oceanography* 21:79.

Chant, R.J., J. Wilkin, W. Zhang, B.J. Choi, E. Hunter, R. Castelao, S. Glenn, J. Jurisa, O. Schofield, R. Houghton, J. Kohut, T.K. Frazer and M.A. Moline. 2008. Dispersal of the Hudson River plume on the New York Bight: synthesis of observational and numerical studies during LaTTE. *Oceanography* 21:148–161.

Moline, M.A., N.J. Karnovsky, Z. Brown, G.J. Divoky, T.K. Frazer, C.A. Jacoby, J.J. Torres and W.R. Fraser. 2008. High latitude changes in ice dynamics and their impact on polar marine ecosystems. *Annals of the New York Academy of Sciences* 1134:267–319. [Book Series: Year in Ecology and Conservation Biology]

Grober-Dunsmore, R., T.K. Frazer, J.P. Beets, W.J. Lindberg, P. Zwick and N. Funicelli. 2008. Influence of landscape structure on reef fish assemblages. *Landscape Ecology* 23:37–53.

## 2007

Greenawalt-Boswell, J.M., T.K. Frazer, C.A. Jacoby and W.S. Arnold. 2007. Estimates of mortality and exploitation rates for the recreational bay scallop fishery off the Gulf coast of Florida, USA. *North American Journal of Fisheries Management* 27:1230–1242.

De Brabandere, L., T.K. Frazer and J.P. Montoya. 2007. Stable nitrogen isotope ratios of macrophytes and associated periphyton in two subtropical, spring-fed streams. *Freshwater Biology* 52:1564–1574.

Hauxwell, J., T.K. Frazer and C.W. Osenberg. 2007. An annual cycle of biomass and productivity of *Vallisneria americana* in a subtropical spring-fed estuary. *Aquatic Botany* 87:61–68.

Grober-Dunsmore, R., V. Bonito and T. K. Frazer. 2007. Discerning sexual recruits is beneficial, but not critical for assessing recovery of *Acropora palmata* populations. *Marine Ecology Progress Series* 335:233–236.

Grober-Dunsmore, R., T.K. Frazer, W.J. Lindberg and J.P. Beets. 2007. Reef fish and habitat relationships in a Caribbean seascape: the importance of reef context. *Coral Reefs* 26:201–216.

## 2006

- Calleja, M.L., C. Barrón, J.A. Hale, T.K. Frazer and C.M. Duarte. 2006. Light regulation of benthic sulfate reduction rates mediated by seagrass (*Thalassia testudinum*) metabolism. *Estuaries and Coasts* 29:1255–1264.
- Frazer, T.K., S.K. Notestein, C.A. Jacoby, C.J. Littles, S.R. Keller and R.A. Swett. 2006. Effects of storm-induced salinity changes on submersed aquatic vegetation in Kings Bay, Florida. *Estuaries and Coasts* 29:943–953.
- Agustí, S., E. Alou, M.V. Hoyer, T.K. Frazer and D.E. Canfield. 2006. Cell death in lake phytoplankton communities. *Freshwater Biology* 51:1496–1506.
- Grober-Dunsmore, R., V. Bonito and T. K. Frazer. 2006. Potential inhibitors to the recovery of *Acropora palmata* populations in St. John, US Virgin Islands. *Marine Ecology Progress Series* 321:123–132.
- Hoyer, M.V., S.K. Notestein, T.K. Frazer and D.E. Canfield. 2006. Bird density and species richness on five Florida coastal rivers, with comparisons to Florida freshwater lakes. *Hydrobiologia* 567:5–18.
- Lindberg, W.J., T.K. Frazer, K.P. Portier, F. Vose, J. Loftin, D. Murie, D.M. Mason, B. Nagy and M.K. Hart. 2006. Density-dependent habitat selection and performance by a large mobile reef fish. *Ecological Applications* 16:731–746.
- Lindberg, W.J., T.K. Frazer, K.P. Portier, F. Vose, J. Loftin, D. Murie, D.M. Mason, B. Nagy and M.K. Hart. 2006. Appendix A: procedures for using the fitted linear model to predict mean gag abundances. *Ecological Archives* A016-029-A1. [<http://www.esapubs.org/archive/app1/A016/029/appendix-A.htm>]

## 2004

- Moline, M.A., H. Claustre, T.K. Frazer, J. Grzyski, O. Schofield and M. Vernet. 2004. Alteration of the food web along the Antarctic Peninsula in response to a regional warming trend. *Global Change Biology* 10:1–8.
- Hoyer, M.V., T.K. Frazer, S.K. Notestein and D.E. Canfield. 2004. Vegetative characteristics of three low-lying Florida coastal rivers in relation to flow, light, salinity and nutrients. *Hydrobiologia* 528:31–43.

- Hauxwell, J., T.K. Frazer and C.W. Osenberg. 2004. Grazing by manatees excludes both new and established wild celery transplants: implications for restoration in Kings Bay, Florida, USA. *Journal of Aquatic Plant Management* 42:49–53.
- Greenawalt, J.M., T.K. Frazer, S.R. Keller and C.A. Jacoby. 2004. Abundance and sizes of bay scallops in heterogeneous habitats along the Gulf coast of Florida. *Gulf of Mexico Science* 2004:74–84.
- Hauxwell, J.A., C.W. Osenberg and T.K. Frazer. 2004. Conflicting management goals: manatees and invasive competitors inhibit restoration of a native macrophyte. *Ecological Applications* 14:571–586.
- Hale, J.A., T.K. Frazer, D.A. Tomasko and M.O. Hall. 2004. Changes in the distribution of seagrass species along Florida's central Gulf coast – Iverson and Bittaker revisited. *Estuaries* 27:36–43.

## **2003**

- Quetin, L.B., R.M. Ross, T.K. Frazer, M.O. Amsler, C. Wyatt-Evens and S.A. Oakes. 2003. Growth of larval krill, *Euphausia superba*, in fall and winter west of the Antarctic Peninsula. *Marine Biology* 143:833–843.
- Schofield, O., P.W. Bissett, T.K. Frazer, D. Iglesias-Rodriguez, M.A. Moline and S. Glenn. 2003. Development of regional coastal ocean observatories and the potential benefits to marine sanctuaries. *Marine Technology Society Journal* 37:54–67.
- Notestein, S.K., T.K. Frazer, M.V. Hoyer and D.E. Canfield, Jr. 2003. Nutrient limitation of periphyton in a spring-fed stream coastal stream in Florida, USA. *Journal of Aquatic Plant Management* 41:57–60.
- Glancy, T.P., T.K. Frazer, C.E. Cichra and W.J. Lindberg. 2003. Comparative patterns of occupancy by decapod crustaceans in seagrass, oyster, and marsh edge habitats in a northeast Gulf of Mexico estuary. *Estuaries* 26:1291–1301.

## 2002

Frazer, T.K., L.B. Quetin and R.M. Ross. 2002. Energetic demands of larval krill, *Euphausia superba*, in winter. *Journal of Experimental Marine Biology and Ecology* 277:157–171.

Frazer, T.K., L.B. Quetin and R.M. Ross. 2002. Abundance, sizes and developmental stages of larval krill, *Euphausia superba*, in ice covered seas west of the Antarctic Peninsula. *Journal of Plankton Research* 24:1067–1077.

Hoyer, M.V., T.K. Frazer, S.K. Notestein and D.E. Canfield, Jr. 2002. Nutrient, chlorophyll and water clarity relationships in Florida's nearshore coastal waters with comparisons to freshwater lakes. *Canadian Journal of Fisheries and Aquatic Sciences* 59:1024–1031.

## 2000 and earlier

Gu, B., D.M. Schell, T. Frazer, M. Hoyer and F.A. Chapman. 2001. Stable carbon isotope evidence for reduced feeding/forced fasting of Gulf of Mexico sturgeon during their prolonged river residence period. *Estuarine Coastal and Shelf Science* 53:275–280.

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### ***Peer-reviewed Extension Publications, EDIS***

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Obreza, T., M. Clark, B. Boman, T. Borisova, M. Cohen, M. Dukes, T. Frazer, E. Hanlon, K. Havens, C. Martinez, K. Migliaccio, S. Shukla and A. Wright. 2010. A guide to EPA's proposed numeric nutrient water quality criteria for Florida. <http://edis.ifas.ufl.edu/ss528>

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### **Contracts and Grants Awarded**

Ecological and Economic Impacts of Land-Use and Climate Change on Coastal Food Webs and Fisheries. 2020-2023, \$888,487, The National Academies of Science, Engineering and Medicine: Gulf Research Program, M. Allen, D. Kaplan, W. Graham, D. Chagaris, T. Frazer, B. Scheffers, C. Court, K. Grogan, b. Xiang, R. Telg and A. Lindsey

RCN: Integrating and Translating Conservation Paleobiology. 2019 – 2024, \$492,099, National Science Foundation, M. Kowaleski [T. Frazer role – Senior personnel and collaborator]

Independent Scientific Review to Inform Development of the new Lake Okeechobee Regulation Schedule. 2019, \$306,303, South Florida Water Management District, W. Graham, K. Havens, T. Frazer, M. Brenner and J. Obeysekera. [Adopted an *ex-officio* role post-award due to change in professional position]

A Seawater System for Enhancing the Nature Coast Biological Station's Research and Education Programs. 2018 – 2019, \$238,987, National Science Foundation, M.S. Allen, T.K. Frazer, C. Angelini, C. Martin and L.K. Reynolds.

Historical Ecology of Seagrass Meadows: Assessing Multi-Centennial Dynamics of Threatened Biodiversity Hotspots. 2016, \$127,300, UF/IFAS Seed Fund, T.K. Frazer and M. Kowalewski.

SJRWMD-UF Springs Protection Initiative – *Collaborative Research Initiative on Sustainability and Protection of Springs (CRISPS)*. 2014 – 2017, \$3,000,000, St. Johns River Water Management District - this effort involves multiple UF investigators and multiple projects; T. Frazer is the lead investigator for the biology group.

Technical Review of Options to Move Water from Lake Okeechobee to the Everglades. 2014, \$250,000, Florida Senate, W. Graham, K. Havens, T. Frazer, R. Reddy, M. DeAngelo and P. Frederick.

Peer review: proposed minimum flows and levels for lower Santa Fe and Ichetucknee rivers. 2013, \$45,000, Suwannee River Water Management District, W.D. Graham, M. Clark, M.J. Cohen, T.K. Frazer and J.B. Martin.

Marine and Coastal Sciences – Assistant Research Scientist Position. 2012 – 2016, \$250,000, Florida Aquarium, T.K. Frazer.

Marine and Coastal Sciences – Assistant Research Scientist Position. 2012 – 2016, \$125,000, Florida Fish and Wildlife Conservation Commission, T.K. Frazer.

Spatial patterns of coral-vermetid interactions: short-term effects and long-term consequences. September 2011 – August 2016, \$800,000, National Science Foundation, C.W. Osenberg and T.K. Frazer.

Interactions between algal mats and sediment biogeochemistry. January 2012 – April 2015, \$350,000, Southwest Florida Water Management District, T.K. Frazer and C.A. Jacoby.

Management and restoration of Kings Bay: control of undesirable submersed aquatic vegetation by macroinvertebrate grazers. January 2012 – June 2015, \$369,375, Southwest Florida Water Management District, T.K. Frazer and C.A. Jacoby.

Management and restoration of Kings Bay: assessing temporal changes in submersed aquatic vegetation. January 2012 – April 2014, \$179,480, Southwest Florida Water Management District, T.K. Frazer and C.A. Jacoby.

Project COAST. January 2012 – September 2015, \$300,000, Southwest Florida Water Management District, T.K. Frazer and C.A. Jacoby.

Defending reefs from invasive lionfish. October 2011-September 2012, \$20,000, Disney Worldwide Conservation Fund, T.K. Frazer and C.A. Jacoby.

A pre-spill assessment of seagrasses along Florida's Gulf coast, July 2010 – December 2010, \$9,997, Florida Sea Grant, T.K. Frazer and C.A. Jacoby.

Project COAST - Pasco County. June 2010 – July 2013, \$262,350, Southwest Florida Water Management District, T.K. Frazer and C.A. Jacoby.

Assessment of Florida's marine and freshwater hatchery programs. January 2010 – December 2014, \$827,500, Florida Fish and Wildlife Conservation Commission, T.K. Frazer and K. Lorenzen.

Coastal water quality assessment. January 2010 – August 2013, \$262,350, Southwest Florida Water Management District, T.K. Frazer and C.A. Jacoby.

Linking seagrass performance measures to water quality. January 2010 – December 2012, \$150,000, Florida Fish and Wildlife Conservation Commission, T.K. Frazer and C.A. Jacoby.

Quantifying pathways of nitrate removal in spring-fed rivers. January 2010 – December 2012, \$298,375, Southwest Florida Water Management District, T.K. Frazer, M.J. Cohen and C.A. Jacoby.

Compilation and synthesis of existing data in support of the determination of minimum flows for Crystal River. January 2010 – December 2010, \$63,200, Southwest Florida Water Management District, T.K. Frazer.

Nearshore ecology of Grand Canyon fish. April 2009 – December 2012, \$1,199,876, US Geological Survey, W.E. Pine, T.K. Frazer, M.S. Allen, K.E. Limburg and J. Korman

Fish-habitat relationships in Florida springs: do submersed plants and algae influence the population structure and production of small-bodied fishes? July 2008 – June 2011, \$134,073, Florida Fish and Wildlife Conservation Commission, W.E. Pine, T.K. Frazer and C.L. Staudhammer.

Determining coral reef impacts associated with boat anchoring and user activity in Broward and Palm Beach Counties. July 2008 – June 2011, \$105,623, Florida Fish and Wildlife Conservation Commission, D.C. Behringer, T.K. Frazer, R.A. Swett, R.L. Watkins, and M.J. Butler.

Nutrient loading of spring-fed coastal rivers: effects on habitat and faunal communities. July 2007 – June 2011, \$262,907, Florida Fish and Wildlife Conservation Commission, T.K. Frazer, M.V. Lauretta, W.E. Pine, G. L. Warren and E.J. Nagid.

Determining coral reef impacts associated with boat anchoring and user activity in Miami-Dade County. July 2008 – June 2010, \$81,275, Mote State Reef Plate Grant Program, D.C. Behringer, T.K. Frazer, R.A. Swett, M.J. Butler and R.L. Watkins.

Determining coral reef impacts associated with boat anchoring and user activity in Miami-Dade County. July 2008 – June 2010, \$92,000, Florida Department of Environmental Protection/ National Oceanographic and Atmospheric Administration; Florida Coral Reef Initiative, D.C. Behringer and T.K. Frazer.

Summary and synthesis of the available literature on the effects of nutrients on spring associated organisms and systems. January 2007 – June 2008, \$210,000, Florida Department of Environmental Protection, M. Brown, K. Reiss, M. Cohen, R. Reddy, P. Inglet, K. Inglet, T. Frazer, C. Jacoby, E. Philips and R. Knight.

Eutrophication issues in Florida. October 2007 – September 2008, \$17,008, Renewable Resources Extension Act, C.A. Jacoby and T.K. Frazer.

Project COAST. January 2006 – December 2008, \$523,000, Southwest Florida Water Management District, T.K. Frazer.

Kings Bay Vegetation Evaluation (phase 3). January 2006 – December 2007, \$92,000, Southwest Florida Water Management District, T.K. Frazer.

Kings Bay Vegetation Evaluation (phase 2). January 2005 – December 2006, \$50,000, Southwest Florida Water Management District, T.K. Frazer.

Habitat Selection and the Performance of Gag Grouper Across a Range of Hard Bottom Habitat in the Northeastern Gulf of Mexico. February 2004 – January 2007, \$175,059, MARFIN, W.J. Lindberg, D.M. Mason, D.J. Murie, T.K. Frazer and K.M. Portier.

Effects of large-scale harvesting on gizzard shad population dynamics and nutrient cycling in Florida lakes. 2004–2007. \$413,796, Florida Fish and Wildlife Conservation Commission, M.S. Allen and T.K. Frazer.

Kings Bay Vegetation Evaluation. January 2004 – December 2005, \$50,000, Southwest Florida Water Management District, T.K. Frazer.

Collaborative Research: Lagrangian studies of the transport, transformation and biological impact of nutrients and contaminant metals in a buoyant plume. July 2003 – June 2009, \$391,377, National Science Foundation, T.K. Frazer.

Project COAST. January 2003- December 2005, \$465,000, Southwest Florida Water Management District, T.K. Frazer.

Complex Pelagic Interactions in the Southern Ocean: Deciphering the Antarctic Paradox. July 2003 – September 2004, \$27,086, National Science Foundation, T.K. Frazer.

Coastal springs estuary assessment. January 2001- December 2002, \$60,000, Southwest Florida Water Management District, T.K. Frazer.

Coastal Eutrophication and the Productivity of Clams and Oysters. October 2000 – October 2004, \$450,000, USDA, E.J. Philips, T.K. Frazer, D.J. Murie and S.M. Baker.

Water Quality Assessment - Project COAST Extension. 2000-2003, \$160,000, Southwest Florida Water Management District, T.K. Frazer.

Factors influencing the dynamics of *Vallisneria americana* and their effects on the restoration of Kings Bay and other spring-fed systems. 2000-2002, \$162,000, Southwest Florida Water Management District, T.K. Frazer and C. Osenberg.

Coastal Springs Nitrate Assessment - Nutrient Assimilation Capacity of Five Gulf Coast Rivers (Project Extension). September 2000 – May 2001, \$60,000, Southwest Florida Water Management District, T.K. Frazer and D.E. Canfield.

Florida LAKEWATCH/Project COAST. July 2000-June 2001, \$400,000, State of Florida Legislative Appropriation, T.K. Frazer and D.E. Canfield.

Nutrient Limiting Status of Five Gulf Coast Estuaries. 2000-2001, \$90,000, Southwest Florida Water Management District, T.K. Frazer.

Coastal Springs/Kings Bay/Crystal River Water Quality, Vegetation, Sediment and Tidal Fluctuation Investigation. January 1999 – December 2001, \$280,000, Southwest Florida Water Management District, T.K. Frazer, D.E. Canfield, R. Bachmann and M.V. Hoyer.

Ecological Factors Limiting Density and regulating Growth and Condition for Gag Grouper: A Definitive Test for the Role of Shelter. October 1998 - September 2001, \$183,748, MARFIN, W.J. Lindberg, T.K. Frazer and K.M. Portier.

Nutrient Assimilation Capacity of Five Gulf Coast Rivers. February 1998 – June 2000, \$274,724, Southwest Florida Water Management District, T.K. Frazer and D.E. Canfield.

Regional Patterns of Habitat Use by Juvenile Blue Crabs: Assessing the Role of Alternative Habitat Types in Florida and North Carolina. January 1998 - December 1999, \$103,010, Florida Sea Grant, T.K. Frazer, M.H. Posey, T. Alphin and S.B. Blitch.

Regional Patterns of Habitat Use by Juvenile Blue Crabs: Assessing the Role of Alternative Habitat Types in Florida and North Carolina. January 1998 - December 1999, \$60,600 plus GSA, North Carolina Sea Grant, M.H. Posey, T.K. Frazer and T. Alphin.

Water Quality Assessment - Project COAST. 1997-98, \$40,000, Suwannee River Water Management District and Southwest Florida Water Management District, T.K. Frazer, D.E. Canfield and W.J. Lindberg.

## **Teaching**

Undergraduate, graduate, and post-doctoral training are critical to my professional goals. I have served on more than 140 Ph.D. and M.S. committees, involved numerous undergraduates in my research programs, and sponsored 2 international PhD-level students and 7 post-doctoral scholars.

## **Service**

I regularly review manuscripts for a broad suite of scientific journals and frequently serve as a panelist to review research proposals submitted to state and federal agencies. Other recent and/or current service-related activities are as follows:

### ***University of Florida – recent***

- Member, UF Graduate Council (2015-2018)

- Member, UF Diving Control Board (2014 – 2020)
- Member, UF International Outreach Advisory Council (2014 – 2020)
- Member, UF Tropical Conservation and Development Program, Steering Committee (2017 – 2019)
- Chair, UF Environmental Science General Education Committee (2014 – 2016)
- Past-Chair and member, Faculty Advisory Committee, UF Water Institute (2007-17)
- Faculty Advisory Committee, UF Climate Institute (2013 – 2020)
- Chair, UF Climate Science Faculty Committee (2014 – 2020)
- Past-Chair, University of Florida Oil Spill Task Force (2010 – 2011)
- Search and Screen Committee, Chair – Soil and Water Sciences Department (2018)
- Search and Screen Committee, Director - Whitney Marine Laboratory
- Melnick Fund Advisory Board
- QSE3 IGERT Advisory Council
- Member, UF Hydrologic Sciences Academic Cluster
- Search and Screen Committee, Dean – UF College of Veterinary Medicine
- Founding Member – UF Marine Sciences Committee
- Chair, SNRE Coordinating Committee (2012 – 2013)
- Center for the Environment Working Group (2012 – 2103)
- Chair, Search and Screen Committee, Assistant Research Scientist in Marine Conservation, School of Forest Resources and Conservation
- Curriculum Committee, College of Agriculture and Life Sciences (2012 – 2019)
- Search and Screen Committee, Assistant Professor in Coastal Biogeochemistry - Soil and Water Science Department
- Search and Screen Committee, Assistant Professor in Restoration Aquaculture – School of Forest Resources and Conservation
- Search and Screen Committee, Estuarine Ecologist – UF/IFAS Nature Coast Biological Station
- Graduate Curriculum Committee, School of Forest Resources and Conservation
- Proposal Review Panel, UF Office of Research

***External Activities - current\* and recent***

- Member, Community Advisory Board, Apalachicola Bay System Initiative (2019 – present) \*
- Member and current Chair, Gulf of Mexico Fishery Management Council (2016-present) \*
- Member, Atlantic Highly Migratory Species Advisory Panel, NOAA Fisheries (2018 – present) \*

- Member, Marine Resources Education Program (MREP) Aquaculture Steering Committee \*
- Member, Board on Oceans, Atmosphere and Climate, APLU (2017 – present) \*
- Specialty Chief Editor, *Frontiers in Marine Science*, Coral Reef Research (2015-2020)
- Member, Florida Climate-Smart Agriculture and Forestry Work Group (2019 – present) \*
- External Reviewer, Great Barrier Reef Marine Park Authority
- Delegate, Organization for Tropical Studies
- Oil Spill Research Strategy Review Panel, US EPA
- Indian River Lagoon Observatory Science and Technology Advisory Committee (IRLO-STAC)
- LOICZ working group on Global Environmental Change in the Coastal Zone
- Technical Advisory Committee on Marine Numeric Nutrient Criteria, Florida Department of Environmental Protection
- Executive Committee, National Association of University Fish and Wildlife Programs
- Peer-review panel for Dissolved Oxygen Criteria, Florida Department of Environmental Protection
- Advisory Council, Office of Water Policy and Ecosystem Restoration, Florida Department of Environmental Protection
- Science Advisory Board, Central Caribbean Marine Institute
- External Review Team, University of Idaho
- External Review Team, California Polytechnic University
- Oil Spill Academic Task Force, Florida State University System
- Kings Bay Working Group, Southwest Florida Water Management District
- Florida Aquaculture Interagency Coordinating Council, Florida Department of Agriculture and Community Services
- External examiner, Imperial University, United Kingdom
- External examiner, Murdoch University, Australia

### ***Other Professional Affiliations***

- Current Member, American Association for the Advancement of Science
- Current Member, International Society for Reef Studies