Todd R. Clardy, Ph.D.

Collections Manager and CT Scanner Technical Lead
Department of Ichthyology
Natural History Museum of Los Angeles County
213-763-3374 | tclardy@nhm.org or clardytodd@gmail.com | 900 Exposition Boulevard, Los Angeles, CA 90007

Employment History

Job Title: Collections Manager and CT Scanner Technical Lead
Organization: Department of Ichthyology, Natural History Museum of Los Angeles County
Address: 900 Exposition Blvd, Los Angeles, CA 90007
Duration of Employment: 02/2020-present
Supervisor: Dr. William B. Ludt (213-763-3210)

Job Duties and Accomplishments:

- Responsible for the care and maintenance of 3 million preserved fishes in the NHMLA Ichthyology Collection. Material includes wet-preserved, dry skeletal, cleared and stained, histology slides, and larval material, as well as otolith and fish tissue collections
- Accession, identify, preserve, and catalog specimens collected from the field. Organize and lead field trips to collect new material. Ensure that all work and specimens are covered by appropriate permits
- Manage loans and facilitate data requests and museum visits from researchers
- Manage the collections database in EMu
- Digitize specimens of extant vertebrates for the museum with our Bruker Skyscan 1273 micro-ct scanner. Departments under my purview include Ichthyology, Herpetology, Mammalogy, and Ornithology. Upload data to MorphoSource. Train users in other departments in scanner use.
- Oversee student workers and volunteers working in the collections, identifying collections management tasks and organizing help to achieve these tasks
- Lead collections tours to school groups, researchers, and guests. Participate in outreach activities through the museum and in the community
- Work with the museum Exhibitions Team to develop public exhibits that create memorable experiences for guests while maintaining proper care and conservation of collections specimens. A major highlight includes an exhibit on a Pacific Footballfish that washed ashore at Crystal Cove State Park and received significant media attention
- Represent the museum in the media as an ichthyology expert as needed (highlights include interviews with The New Yorker, Atlas Obscura, and Spectrum News)
- Serve on graduate student committees
- Serve on museum-wide committees
- Guest lecture at community colleges and universities

Job Title: Lecturer
Organization: Friday Harbor Labs, University of Washington
Address: 620 University Road
Duration of Employment: 08/2019-12/2019
Supervisor: Dr. Adam Summers (310-864-1491)
Job Duties and Accomplishments:

- Designed and taught a course titled "Research in Marine Biology", FHL 470.
- Helped students develop original research at Friday Harbor Labs, focusing on hypothesis testing, study design, data acquisition and analysis, and presenting research findings
- Organized the FHL seminar series for the Autumn semester, inviting guest presenters and arranging their visits

Job Title: Research Scientist III, Assistant Professor
Organization: Center for Environment and Water, King Fahd University of Petroleum and Minerals
Address: Dhahran, Saudi Arabia 31261
Duration of Employment: 06/2015-08/2019
Supervisor: Dr. Mohammad Ali Qurban
Job Duties and Accomplishments:

- Lead of the Zooplankton Ecology Lab in the Center for Environment and Water, Marine Studies Section (MSS)
- Managed a team of scientists studying zooplankton ecology of the Arabian Gulf and Red Sea. Coordinated and collaborated with the Phytoplankton Ecology, Fisheries Science, and Marine Megafauna Labs
- Designed a field survey investigating spatial and seasonal zooplankton abundance and distribution in all Saudi Arabian waters of the Arabian Gulf. Led teams in the field and lab to collect and process biological and environmental data
- Served as the lead larval fish taxonomist for all plankton samples collected by the MSS in the Arabian Gulf and Red Sea
- Analyzed large data sets of biological and environmental data
- Prepared presentations, reports, and publications based on the results of our surveys

Job Title: Graduate Research Assistant
Organization: Virginia Institute of Marine Science
Address: PO Box 1346, 1370 Greate Road, Gloucester Point, VA 23062
Duration of Employment: 08/2008-08/2014
Supervisor: Dr. Eric J. Hilton (804-684-7178)
Dissertation Title: Phylogenetic systematics of the prickleback family Stichaeidae (Cottiformes: Zoarcoidei) using morphological data
Job Duties and Accomplishments:

- Investigated the evolutionary relationships of the teleost family Stichaeidae using morphological data
- Managed a project investigating the ingress of larval fishes into the York River, VA. This included scheduling field days based on tides, coordinating a field team, collecting samples, sorting and identifying samples in the lab, and maintaining a project database

- Held a teaching fellowship for one year at Booker T. Washington Middle school, a magnet school for marine science. Developed and taught marine science lesson plans for the seventh grade Life Sciences course on a weekly basis
- Supervised undergraduate students in the lab
- Assisted in field surveys throughout the region, including the Roanoke Roundup, a long term sampling effort in the mountain streams of western Virginia, and Dragon run, a local creek filled with gar and *Amia*

Job Title: Staff Biologist
Organization: Barry A. Vittor and Associates, Inc.
Address: 8060 Cottage Hill Road
Duration of Employment: 01/2005-06/2008
Supervisor: Barry A. Vittor (251-633-6100)
Job Duties and Accomplishments:

- Lead larval fish taxonomist responsible for identifying larval and juvenile fishes from the northern Gulf of Mexico, primarily in fulfillment of a fishery monitoring plan for a liquid natural gas facility operating in the northern Gulf
- Managed the plankton lab, coordinating the processing of 80-120 samples collected per month
- Developed impact assessment models for key fish and invertebrate taxa to estimate the effect of the liquid natural gas facility on Gulf fisheries
- Prepared quarterly and annual reports
- Assisted in field collections for the plankton survey and other monitoring programs

Job Title: Graduate Research Assistant
Organization: Dauphin Island Sea Lab, University of South Alabama
Address: 101 Bienville Blvd, Dauphin Island, AL 36528
Duration of Employment: 08/2002-09/2006
Supervisor: Dr. William Patterson III
Thesis Title: Stock discrimination between eastern Gulf of Mexico and Atlantic king mackerel, *Scomberomorus cavalla*, using otolith shape analysis
Job Duties and Accomplishments:

- Collected otoliths and sex and length data from king mackerel from fishing ports along the Gulf and Atlantic coasts, including Dauphin Island, AL, Panama City, FL, Stock Island, FL, Jacksonville, FL, both during summer when migratory units are separate and in winter when they mix
- Analyzed the shape of otoliths using a combination of morphometric parameters, including Fourier analysis
- Developed shape-specific natural tags for individual king mackerel units and then estimated their relative contributions to the winter mixed fishery
- Wrote reports and publications that were incorporated into the SEDAR 16 and 38 Stock Assessment Reports for king mackerel

Job Title: Research Assistant
Organization: National Marine Fisheries Service, Southeast Fisheries Science Center/University of South Alabama
Address: 3500 Delwood Beach Rd, Panama City, FL 32408
Duration of Employment: 06/2002-08/2002
Supervisor: Dr. Douglas DeVries
Job Duties and Accomplishments:

- Collected otoliths and data on sex, weight, and length for fishes, primarily king mackerel but some reef fishes as well, from the Panama City, FL, Jacksonville, FL, and Dauphin Island, AL regions in support of the SEFSC fishery landings data collections
- Assisted with sectioning and ageing king mackerel otoliths

Education

2008-2014, **Ph.D., Fisheries Science**, Virginia Institute of Marine Science, College of William & Mary, 3.54 GPA
Ph.D. Dissertation: Phylogenetic systematics of the prickleback family Stichaeidae (Cottiformes: Zoarcoidei) using morphological data
Major Advisor: Dr. Eric J. Hilton
Dissertation Committee: Drs. Wolgang Vogelbein, Tracey Sutton, Bruce B. Collette
2002-2006, **M.S., Marine Sciences**, University of South Alabama, 3.85 GPA
M.S. thesis: Stock discrimination between eastern Gulf of Mexico and Atlantic king mackerel, *Scomberomorus cavalla*, using otolith shape analysis
Major Advisor: Dr. William F. Patterson III
Thesis Committee: Drs. Douglas DeVries, Sean Powers, Jack O'Brien
2000-2002, **B.S., Marine Biology**, Troy State University, 3.56 GPA
1998-2000, University of South Alabama

Publications

T. R. Clardy, M. Al-Nuwariah, P. B. Das, B. K. Thomas, M. J. Heinle, T. I. Hikmawan, P. Prihartato, K. A. Abdulqader, M. A. Qurban, *In Review*, Optimal temperature preference for *Belzebub hanseni* (Crustacea: Decapoda: Luciferidae) in the Western Arabian Gulf during summer, Journal of the Marine Biological Association of the United Kingdom

T. R. Clardy, J. Gopalan, L. Rabaoui, *In Review*, Morphology of photophores in juvenile *Vinciguerria mabahiss* Jonhson and Feltes 1984 (Stomiiformes: Phosichthyidae), Ichthyological Research

M. J. Heinle, A. V. Flandez, **T. R. Clardy**, H. Balkhi, M. A. Qurban, *In Review*, Contributions of nano- and picophytoplankton to the phytoplankton biomass in Saudi Arabian waters of the Arabian Gulf, Marine and Freshwater Research

B. K. Thomas, K. P. Manikandan, M. A. Qurban, **T. R. Clardy**, A. Sundaramanickam, *In Review*, Advancing zooplankton species identification and phylogenetic analysis in the Saudi Arabian Gulf through DNA barcoding and molecular evaluation, Egyptian Journal of Aquatic Research

T. R. Clardy, 2024, Fractal morphology of mechanosensory lateral-line canals in Stichaeidae,

Zoomorphology https://doi.org/10.1007/s00435-024-00674-3

D. C. Blackburn, D. M. Boyer, J. A. Gray, J. Winchester, J. M. Bates, S. L. Baumgart, E. Braker, D. Coldren, K. W. Conway, A. D. Rabosky, N. de la Sancha, C. B. Dillman, J. L. Dunnum, C. M. Early, B. W. Frable, M. W. Gage, J. Hanken, J. A. Maisano, B. D. Marks, K. P. Maslenikov, J. E. McCormack, R. S. Nagesan, G. G. Pandelis, H. L. Prestridge, D. L. Rabosky, Z. S. Randall, M. B. Robbins, L. A. Sheinberg, C. L. Spencer, A. P. Summers, L. Tepanila, C. W. Thompson, L. Tornabene, G. J. Watkins-Colwell, L. J. Weton, **the oVert Project Team***, E. L. Stanly, 2024, Increasing the impact of vertebrate scientific collections through 3D imaging: The openVertebrate (oVert) Thematic Collections Network, BioScience https://doi.org/10.1093/biosci/biae027

B. K. Thomas, K. Manikandan, M. A. Qurban, **T. R. Clardy**, A. Sundaramanickam, A. B. Khalil, J. Gopalan, 2023, Metabarcoding of zooplankton species of the Saudi Arabian Gulf: A study employing mock communities and two gene markers, Egyptian Journal of Aquatic Research https://doi.org/10.1016/j.ejar.2023.03.003

B. K. Thomas, K. Manikandan, M. A. Qurban, **T. R. Clardy**, A. Sundaramanickam, E. Suarez-Morales, 2022, First record of *Caromiobenella helgolandica* (Claus 1863) from Saudi waters of the Arabian Gulf, Check List 18:575-581 https://doi.org/10.15560/18.3.575

W. B. Ludt, **T. R. Clardy**, 2022, First detection of biofluorescence in a deep-sea anglerfish, Journal of Fish Biology 100:843-846 https://doi.org/10.1111/jfb.14988

M. J. Heinle, R. M. Kolchar, A. V. Flandez, **T. R. Clardy**, B. K. Thomas, T. I. Hikmawan, P. Prihartato, K. A. Abdulqader, M. A. Qurban, 2021, Spatial and temporal variability in the phytoplankton community of the Western Arabian Gulf and its regulation by physicochemical factors and zooplankton, Regional Studies in Marine Science https://www.sciencedirect.com/science/article/pii/S2352485521003741

L. Rabaoui, L. Yacoubi, D. Sanna, M. Casu, F. Scarpa, Y.-J. Lin, K.-N. Shen, **T. R. Clardy**, M. Arculeo, M. A. Qurban, 2019, DNA barcoding of marine fishes from Saudi Arabian waters of the Gulf, Journal of Fish Biology 95:1286-1297 https://doi.org/10.1111/jfb.14130

T. R. Clardy, M. J. Heinle, Y.-J. Lin, 2019, Chapter 3.12, The Pelagic Environment of the Arabian Gulf. In: K. A. Abdulqader, R. Loughland, M. A. Qurban, eds., Ecosystems and Biodiversity of the Arabian Gulf: 50 Years of Scientific Research, pp. 309-323. Saudi Aramco and King Fahd University of Petroleum and Minerals https://www.researchgate.net/publication/334544536_The_Pelagic_Environment_of_the_Arabian_Gulf

M. A. Qurban, M. Wafar, M. J. Heinle, K. Manikandan, **T. R. Clardy**, K. A. Abdulqader, 2019, Chapter 4.1, Plankton. In: K. A. Abdulqader, R. Loughland, M. A. Qurban, eds., Ecosystems and Biodiversity of the Arabian Gulf: 50 Years of Scientific Research, pp. 309-323. Saudi Aramco and King Fahd University of Petroleum and Minerals https://www.researchgate.net/publication/334544465_Plankton

T. R. Clardy, E. J. Hilton, 2016, Osteology of the prickleback genus Xiphister (Cottiformes: Zoarcoidei: Stichaeidae), Acta Zoologica 97: 211-231 http://dx.doi.org/10.1111/azo.12118

T. R. Clardy, E. J. Hilton, W. F. Vogelbein, 2015, Morphology and ontogeny of multiple lateral-line canals in the prickleback genus Xiphister (Cottiformes: Zoarcoidei: Stichaeidae), Journal of Morphology 276:1218-1229 http://onlinelibrary.wiley.com/doi/10.1002/jmor.20413/

F. Ribeiro, E. Hale, **T. R. Clardy**, A. L. Deary, E. J. Hilton, T. Targett, J. E. Olney, 2015, Composition

and temporal patterns of larval fish ingress is Chesapeake and Delaware Bays, Marine Ecology Progress Series, 527:167-180 https://www.int-res.com/abstracts/meps/v527/p167-180/

J. S. Lefcheck, A. Buchheister, K. M. Laumann, M. Stratton, K. Sobocinski, S. Chak, **T. R. Clardy**, P. L. Reynolds, J. E. Duffy, R. J. Latour, 2014, Dimensions of biodiversity in Chesapeake Bay demersal fishes: Patterns and drivers through space and time, Ecosphere http://dx.doi.org/10.1890/ES13-00284.1

T. R. Clardy, 2012, Aquatic and terrestrial locomotion of the Rock Prickleback, *Xiphister mucosus* (Cottiformes: Zoarcoidei: Stichaeidae), Northwestern Naturalist 93:203-210 https://doi.org/10.1898/11-19.1

T. R. Clardy, W. F. Patterson III, D. A. DeVries, 2008, Spatial and temporal variability in the relative contributions of King Mackerel (Scomberomorus cavalla) stocks to winter mixed fisheries off South Florida, Fishery Bulletin 106:152-160 https://spo.nmfs.noaa.gov/sites/default/files/pdf-content/2008/1062/clardy.pdf

* T. R. Clardy is part of the oVert Project Team

Management Products

W. F. Patterson III, R. L. Shipp, **T. R. Clardy**, Z. Chen, 2004, Discrimination among U.S. South Atlantic and Gulf of Mexico king mackerel stocks with otolith shape analysis and otolith microchemistry, Marfin Final Report for SEDAR 16.

Invited Presentations

T. R. Clardy, 2023, “Larval Fishes are the Coolest Fishes” Cal Poly Pomona, Pomona, CA, October 27

T. R. Clardy, 2021, “Natural History Museums and How to Make them Work for You” Chapman University, March 17[virtual]

T. R. Clardy, 2020, “Natural History Museums and How to Make them Work for You” Friday Harbor Labs, University of Washington, October 21 [virtual]

T. R. Clardy, 2020, “Larval Fishes are the Coolest Fishes” University of Oklahoma, Ichthyology Seminar, November 10 [virtual]

T. R. Clardy, 2011, “What’s lurking in the deep?” Virginia Institute of Marine Science, Discovery Lab Seminar Series, March 22

T. R. Clardy, 2010, “Babies in the Bay” Virginia Institute of Marine Science, Discovery Lab Seminar Series, April 20

Contributed Presentations

T. R. Clardy, M. Wilson, T. Porri, W. B. Ludt, 2024, “CryptoVert: Digitizing cryptobenthic fishes in support of oVert” Joint Meeting of Ichthyologists and Herpetologists, Pittsburg, PA July 10-14*

T. R. Clardy, C. Weisbart, T. Colias, W. B. Ludt, 2023, “Discovery from the deep: Designing an

exhibit for a Pacific Footballfish (*Himantolophus sagamius*)" Society for the Preservation of Natural History Collections, San Francisco, CA, May 28-June 2

O. Hawkins, D. Kennedy, M. L. Vandenburg, R. C. Hoover, C. H. Crawford, **T. R. Clardy**, E. A. Kane, C. M. Donatelli, 2023, "To eel or not to eel: Functional diversity of control surfaces in elongate fishes" Society for Integrative and Comparative Biology, Austin, TX, January 3-7

T. R. Clardy, A. L. Deary, 2021, "Ontogeny of the feeding apparatus of the White Croaker, *Genyonemus lineatus* (Sciaenidae)" 44th Annual Larval Fish Conference. June 25 [virtual]

T. R. Clardy, A. L. Deary, 2021, "Ontogeny of the feeding apparatus of the White Croaker, *Genyonemus lineatus* (Sciaenidae)" Society for Integrative and Comparative Biology, January 3-February 28 [virtual]

T. R. Clardy, V. G. Jinoy, 2019, "Photophore morphology in *Vinciguerria mabahiss* Johnson and Feltes1984 (Stomiiformes: Phosichthyidae)" 31st Charles Henry Gilbert Ichthyological Society Meeting, Pack Forest, WA, September 20-22

H. H. Hsu, **T. R. Clardy**, P. Panickan, Z. M. Nazeer, M. A. Qurban, 2019, "Preliminary study of whale shark occurrences and association with zooplankton biomass in Saudi Arabian waters of the Arabian Gulf." 5th International Whale Shark Conference, Exmouth, Australia, May 28-31

M. J. Heinle, A. V. Flandez, **T. R. Clardy**, P. K. Prihartato, T. I. Hikmawan, K. A. Abdulkader, M. A. Qurban, 2019, "The role of nano- and picophytoplankton in coastal phytoplankton communities of the Arabian Gulf." ASLO 2019 Aquatic Sciences Meeting, San Juan, Puerto Rico, February 23-March 2

T. R. Clardy, M. J. Heinle, M. Al-Nuwairah, B. K. Thomas, T. I. Hikmawan, P. K. Prihartato, K. A. Abdulkader, M. A. Qurban, 2019, "Spatial diversity and distribution of zooplankton in the Western Arabian Gulf." ASLO 2019 Aquatic Sciences Meeting, San Juan, Puerto Rico, February 23-March 2

M. Al-Nuwairah, B. K. Thomas, **T. R. Clardy**, M. J. Heinle, T. I. Hikmawan, P. K. Prihartato, K. A. Abdulkader, M. A. Qurban, 2019, "Spatial diversity and distribution of zooplankton in Saudi Arabian waters of the Western Arabian Gulf." PetroEnvironment 2019. Al-Khobar, Saudi Arabia. February 19-21*

T. R. Clardy, M. J. Heinle, B. K. Thomas, M. Al-Nuwairah, P. B. Das, T. I. Hikmawan, P. K. Prihartato, K. A. Abdulkader, M. A. Qurban, 2019, "Response of zooplankton to a phytoplankton bloom off Al-Khobar, Saudi Arabia." PetroEnvironment 2019, Al-Khobar, Saudi Arabia, February 19-21*

T. R. Clardy, M. J. Heinle, B. K. Thomas, M. Al-Nuwairah, P. B. Das, T. I. Hikmawan, P. K. Prihartato, K. A. Abdulkader, M. A. Qurban, 2019, "Response of zooplankton to a diatom bloom in coastal waters of the Western Arabian Gulf." Society for Integrative and Comparative Biology, Tampa, FL, January 3-8*

T. R. Clardy, V. G. Jinoy, 2018, "Morphology of photophores in juvenile *Vinciguerria mabahiss* Johnson and Feltes 1984 (Stomiiformes: Phosichthyidae)." Society for Integrative and Comparative Biology. San Francisco, CA, January 4-8*

T. R. Clardy, M. Al-Nuwairah, K. P. Manikandan, 2016 "Composition and distribution of zooplankton in Saudi Arabian waters of the Red Sea." International Conference on the Environment of the Red Sea, Thuwal, Saudi Arabia, November 14-16

T. R. Clardy, R. H. Maneja, M. J. Heinle, M. Al-Nuwairah, J. Dagoy, M. A. Qurban, 2016, "Ichthyoplankton surveys in Saudi Arabian waters of the Arabian Gulf." 40th Annual Larval Fish Conference, Solomons, MD, June 19-23*

F. Ribeiro, E. Hale, E. J. Hilton, **T. R. Clardy**, A. L. Deary, T. E. Targett, J. E. Olney, 2015,

"Composition and temporal patterns of larval fish communities in Chesapeake and Delaware Bays." European Congress of Ichthyology, Porto, Portugal, September 7-11

T. R. Clardy, 2014, "Complexity of the mechanosensory systems of Stichaeidae (Cottiformes: Zoarcoidei)." Southeast Regional Meeting of the Society for Integrative and Comparative Biology, Chapel Hill, NC, October 25

T. R. Clardy and E. J. Hilton, 2014, "Systematics of the prickleback family Stichaeidae (Cottiformes: Zoarcoidei) using morphological data." Joint Meeting of Ichthyologists and Herpetologists, Chattanooga, TN, July 30

T. R. Clardy, E. J. Hilton, and Wolfgang K. Vogelbein, 2014, "Morphology of multiple lateral lines in the Rock Prickleback, *Xiphister mucosus*." Society for Integrative and Comparative Biology, Austin, TX, January 3-7

T. R. Clardy, E. J. Hilton, and Wolfgang K. Vogelbein, 2013, "Morphology of multiple lateral lines in the Rock Prickleback, *Xiphister mucosus*." Joint Meeting of Ichthyologists and Herpetologists. Albuquerque, NM, July 12

T. R. Clardy and E. J. Hilton, 2013, "Systematic relationships of the prickleback family Stichaeidae (Cottiformes: Zoarcoidei) using morphological data." Joint Meeting of Ichthyologists and Herpetologists, Albuquerque, NM, July 12*

T. R. Clardy and E. J. Hilton, 2012, "A preliminary look at the systematic relationships of the prickleback family Stichaeidae (Cottiformes: Zoarcoidei) based on morphological data." Joint Meeting of Ichthyologists and Herpetologists, Vancouver, BC, August 10

J. Lefcheck, A. Buchheister, K. M. Laumann, S. Chak, P. L. Reynolds, K. Soboconski, M. Stratton, **T. R. Clardy** and J. E. Duffy, 2012, "Components of biodiversity in a Chesapeake Bay groundfish assemblage: a high-resolution analysis of patterns and drivers." Ecological Society of America, 97th Annual Meeting. Portland, OR. August 9

T. R. Clardy, 2012, "Using fractals to describe morphology and ontogeny of lateral line canals of *Xiphister* (Cottiformes: Zoarcoidei: Stichaeidae) with comparisons to other stichaeids." Society for Integrative and Comparative Biology. Charleston, SC, January 6

T. R. Clardy and E. J. Hilton, 2012, "Osteology of the prickleback genus *Xiphister* (Cottiformes: Zoarcoidei: Stichaeidae) with comparisons to other stichaeids." 13th Annual Sigma Xi Tidewater Student Research Poster Session. Newport News, VA, November 18*

T. R. Clardy, 2011, "Using fractals to describe morphology and ontogeny of the trunk lateral line canals of the prickleback genus *Xiphister* (Cottiformes: Zoarcoidei: Stichaeidae) with comparisons to other stichaeids." Joint Meeting of Ichthyologists and Herpetologists, Minneapolis, MN, July 10

F. Ribeiro, **T. R. Clardy**, A. Deary, E. J. Hilton and J. E. Olney, 2011, "Fish larvae in the York River: the ongoing saga of the Ingress Project." York River Research Symposium, Gloucester Point, VA, April 20

F. Ribeiro, E. Hale, **T. R. Clardy**, A. Deary, E. J. Hilton, T. E. Targett and J. E. Olney, 2011, "The ongoing saga of larval fishes in the Chesapeake and Delaware Bays." 25th Annual Meeting of the American Fisheries Society's Tidewater Chapter, Gloucester Point, VA, March 11

T. R. Clardy, 2011, "An analysis of aquatic and terrestrial locomotion in the rock prickleback, *Xiphister mucosus* (Cottiformes: Zoarcoidei: Stichaeidae)." 25th Annual Meeting of the American Fisheries Society's Tidewater Chapter, Gloucester Point, VA, March 11

T. R. Clardy, 2011, "Terrestrial and aquatic locomotion of the rock prickleback, *Xiphister mucosus* (Cottiformes: Zoarcoidei: Stichaeidae)." American Society of Limnology and Oceanography Aquatic Sciences Meeting, San Juan, Puerto Rico, February 13

T. R. Clardy and E. J. Hilton, 2010, "Osteology of the prickleback genus *Xiphister* (Cottiformes:

Zoarcoidei: Stichaeidae) with comparisons to other stichaeids." Joint Meeting of Ichthyologists and Herpetologists, Providence, RI, July 7-12*

F. Ribeiro, E. Hale, **T. R. Clardy**, A. Deary, E. J. Hilton, T. E. Targett and J. E. Olney, 2010, "Patterns of early stage fish ingress into Chesapeake and Delaware Bays." Joint Meeting of Ichthyologists and Herpetologists. Providence, RI, July 7-12

T. R. Clardy and E. J. Hilton, 2009, "Morphology and ontogeny of trunk lateral line canals of the rock prickleback, *Xiphister mucosus* (Perciformes: Zoarcoidei: Stichaeidae), with preliminary comparisons to other stichaeids." Joint Meeting of Ichthyologists and Herpetologists. Portland, OR. July 23-26*

J. Cebrian, K. Pickard and **T. R. Clardy**, 2008, "The effects of short-term shading and sediment nutrient enrichment on shoalgrass (*Halodule wrightii*) growth dynamics." Eighth International Seagrass Biology Workshop. Vancouver, BC, August 31-September 6

J. D. Lee, C. Newton, **T. R. Clardy**, and B. Vittor, 2006, "Fishery Impact Monitoring of Open-Rack Vaporization LNG Facilities." Spring meeting of the Southern Division of the American Fisheries Society. San Antonio, TX. February*

T. R. Clardy, W.F. Patterson III, and C. Palmer, 2004, "Stock discrimination between eastern Gulf of Mexico and Atlantic king mackerel using otolith shape analysis." Third International Symposium on Fish Otolith Research and Application. Townsville, Queensland, Australia, July 11-16*

T. R. Clardy, W.F. Patterson III, and C. Palmer, 2004, "Stock discrimination between Atlantic and Gulf of Mexico king mackerel, Scomberomorus cavalla, with otolith shape analysis." 21st Annual Alabama Fisheries Association Meeting. Gulf Shores, AL, February

T. R. Clardy, W.F. Patterson III, and C. Palmer, 2003, "Stock discrimination of eastern Gulf of Mexico and southeast Atlantic king mackerel *Scomberomorus cavalla* using otolith shape analysis." University of South Alabama Research Symposium. University of South Alabama, Mobile, AL, April*

T. R. Clardy and J. Cebrian, 2002, "The effects of short-term sediment fertilization and water column shading on the growth and density of *Halodule wrightii*." Association of Southeastern Biologists. Appalachian State University, Boone, NC, April

T. R. Clardy and A. Diamond, 2001, "Preliminary investigations of the floral visitors of *Dalea pinnata* in southern Alabama." Alabama Academy of Science. Auburn University, Auburn, AL, March

T. R. Clardy and J. Cebrian, 2001, "The effects of short-term sediment fertilization and water column shading on the growth and density of *Halodule wrightii*." Graduate Student Symposium. Dauphin Island Sea Lab, Dauphin Island, AL, February 16-17

* denotes poster presentation

Graduate Student Committee Member

2022-present, Daniel Ramirez, Cal Poly Pomona

Mentorship

2015-2019, Mentor for students in the undergraduate research program with the Marine Studies Section, Center for Environment and Water, King Fadh University of Petroleum and Minerals

2015, Mentor to Phil Sweetser, College of William & Mary

2004, Mentor to Danielle Ploetz, Dauphin Island Sea Lab NSF REU participant
2003, Mentor to Juliana Oostyen, Dauphin Island Sea Lab NSF REU participant

Grants and Fellowships

2014, Undergraduate Minor in Marine Science Teaching Assistantship, College of William & Mary, tuition and stipend
2013, Marine Science Teaching Fellows Program, College of William & Mary, tuition and stipend
2012, NSF GK-12 PERFECT Fellowship, Virginia Institute of Marine Science, tuition and stipend
2012, Addison E. Verrill Visiting Graduate Student Award, Darling Marine Center, $2300
2012, Graduate Student Association Supplies Mini-Grant, Virginia Institute of Marine Science, $500
2010, Lerner-Gray Grants for Marine Research, American Museum of Natural History, $1500
2009, Graduate Student Association Supplies Mini-Grant, Virginia Institute of Marine Science, $491
2009, Graduate Student Association Student Research Grant, Virginia Institute of Marine Science, $500

Research Cruise Experience

2020, R/V *Yellowfin*, Southeastern Pacific (Coastal Southern California), coastal groundfish survey
2018, Arabian Gulf, Summer Zooplankton Survey
2018, Arabian Gulf, Spring Whale Shark Monitoring Survey
2018, Arabian Gulf, Winter Zooplankton Survey
2017, Arabian Gulf, Summer Zooplankton Survey
2017, Arabian Gulf, Winter Zooplankton Survey
2010, R/V *Bay Eagle*, Chesapeake Bay, Volunteer for Bay Flounder tagging program
2009, R/V *Bay Eagle*, Chesapeake Bay, VIMS ChesMMAP Survey
2006, Northern Gulf of Mexico, multi-day environmental monitoring cruises for Barry A. Vittor and Associates, Inc.
2002-2004, Northern Gulf of Mexico, Volunteer for the University of South Alabama, Artificial Reef Fish Tagging Program

In total, I have logged around 150 days at sea conducting research on large vessels (30+ feet), plus around 100 additional days at sea on small vessels (under 30 feet).

Affiliations with Professional Societies

Early Life History Section, American Fisheries Society
American Fisheries Society
Society for Integrative and Comparative Biology
Association for the Sciences of Ichthyology and Herpetology
Society for the Preservation of Natural History Collections
Gilbert Ichthyological Society
Association for the Sciences of Limnology and Oceanography
Southern California Academy of Sciences

Subject Area Editor

ZooKeys (marine fishes)

Reviewer For

California SeaGrant
Acta Zoologica
Cahiers de Biologie Marine
Copeia
Journal of Fish Biology
Journal of Morphology
Journal of the Marine Biological Association of the United Kingdom
Marine Biology Research
Zoology
Zootaxa

Additional Professional Skills

Computer Skills

- EMu
- R and R-Studio
- 3D Slicer
- ImageJ
- Adobe Photoshop and Illustrator
- Mesquite
- TNT
- Microsoft Office Suite

Professional Skills

- NAUI Open Water Scuba Diver Certification
- Otolith extraction, sectioning, and ageing for larval, juvenile, and adult fishes
- Clearing and staining techniques and dry skeleton preparation techniques
- Use of Bruker Skyscan 1273 micro-ct scanner and associated Bruker software
- Familiar with adult fish sampling techniques, including electroshocking, seining, hook and line, Otter trawls, cast netting, and gillnetting
- Familiar with larval fish sampling techniques, including bongo nets, manta nets, MOCHNESS, and light traps
- Familiar with the operation of various environmental sensing and monitoring equipment`
- Larval identification skills for fishes of the East and West Coasts of the US, Northern Gulf of Mexico, Arabian Gulf, Red Sea

- Adult fish identification skills for freshwater fishes of the Southeastern and western US and marine fishes of the East and West Coasts of the US, Northern Gulf of Mexico, Arabian Gulf, and Red Sea