

Heather L. Judkins
Department of Biological Sciences
College of Arts and Sciences
University of South Florida St. Petersburg
140 7th Ave South, St. Petersburg, FL 33701
(813) 340-0055c
Judkins@mail.usf.edu

Professional Preparation

University of South Florida	Biological Oceanography	Ph.D., 2009
Nova Southeastern University	Secondary Science Education	M.S., 1997
University of Rhode Island	Marine Affairs	B.S., 1993

Appointments

2019- Associate Professor, Biological Sciences, University of South Florida St. Petersburg, FL.
2013- 2019 Assistant Professor, Biological Sciences, University of South Florida St. Petersburg, FL.
2009- Teacher Programs Coordinator, The Florida Aquarium, Tampa, FL
2011-2013 Visiting Assistant Professor, Biological Sciences, University of South Florida St. Petersburg
1997-2010 Adjunct Instructor, Biological Sciences, St. Petersburg College, Clearwater, FL
1994-2011 Marine Science Instructor, Biology Department, Seminole High School, Pinellas County, FL

Grant Awards

USFSP Internal Grant, 2018 **\$9900.00**
Awarded to explore the cryptic cephalopod species of the Gulf of Mexico through molecular Genetic markers.

Gulf of Mexico Research Initiative Award- DEEPEND Consortium; 2018 **\$1M**
Co-PI on DEEPEND consortium which received a 1 year extension for additional cruise and analysis. Responsible for all mollusk related projects (n=7). ~30K to USFSP.

NOAA Ocean Exploration Grant Award; 2018-2019 **\$565,000**
CO-PI on deep-sea exploration project in the Gulf of Mexico. Examining cephalopod biology, diversity, and bioluminescence properties at 2000m deep in the Sigsbee escarpment. Majority of funding is for shiptime. Responsible for 17K at USFSP for invertebrate and cephalopod related projects.

USFSP Internal Grant, 2016 **\$9900.00**
Awarded to explore the genetic variation among 3 different cephalopod species in the Gulf of Mexico and over Bear Seamount in the northern Atlantic Ocean.

Gulf of Mexico Research Initiative Award- DEEPEND Consortium (GoMRI); 2015-2017 **\$8.53 M**
Co-principal investigator of a 3-year study through the Deep-Pelagic Nekton Dynamics of the Gulf of Mexico (DEEPEND) consortium. The goal is to evaluate the extant recovery and potential future recovery of deep-pelagic communities after the DWHOS both short and long term scales through sampling and analysis. Responsible for \$430K at USFSP for cephalopod related projects.

USFSP Internal Grant; 2013 **\$7950.00**
Awarded to purchase materials, equipment, and resources for undergraduate biology research projects.

Research Experience

DEEPEND Consortium- Deep Pelagic Nekton Dynamics of the Gulf of Mexico Program; 2015-present
Co-Principal investigator responsible for: cephalopod abundance, distribution, and biodiversity; genetic, species, and population genetics for the group; examining samples for trophic level dynamics as well as potential contaminants to the deep sea cephalopods. Also responsible for pelagic mollusk projects.

National Resource Damage Assessment (NOAA/NRDA) Offshore Sampling and Analysis Program; 2011-2016

ONSAP program team member examining cephalopods from 7 cruises that were conducted in 2011.
Identification and verification of cephalopods in the northern Gulf of Mexico.
Documenting and analyzing all aspects of cephalopod ecology, vertical migration, new species records.

Chief Scientist; 2012- present

Plan and coordinate 1-day research cruises aboard the R/V Weatherbird for various marine-related courses.
Planned and coordinated a 3-day, scientific research cruise for 8 marine biology students in the eastern Gulf of Mexico. Conducted a baseline biodiversity survey of the region and collected samples for current and future research projects (2013).

Research Cruise Scientist

All cruises involved 15-26 days at sea, conducted offshore scientific projects including oceanographic monitoring, multiple net deployments/retrievals, Humboldt squid capture and analyses, cephalopod identification and documentation, invertebrate collection, plankton trawls, mid-water and benthic trawling, tissue sampling, and marine mammal biopsy tissue collection.

- NOAA Ocean Exploration Cruise- Gulf of Mexico, June, 2019.
- DEEPEND cruises; Gulf of Mexico; Aug. 2015, Aug. 2016, July 2018.
- Bear Seamount Biodiversity Cruise; North Atlantic Ocean, 2014. NOAA Northeast Science Fisheries Center, Woods Hole, Ma.
- National Resource Damage Assessment Cruise- ONSAP Program; 2011, Virginia Institute of Marine Science, Gloucester Point, Va.
- Sperm Whale Acoustics and Prey Survey (SWAPS cruise); 2010, Southeast Fisheries Science Center, Miami, Fl.
- Oregon, California, and Washington Line Transect and Ecosystem Cetacean Survey; (ORCAWALE) 2008; Southwest Fisheries Science Center, La Jolla, Ca
- Stenella Abundance Research Line Transect and Ecosystem Survey (STAR-LITE Cruise); 2007 Southwest Fisheries Science Center, La Jolla, Ca

Publications

Judkins, H., A. Lindgren, R. Villeneuve, K. Clark, M. Vecchione. Accepted. 2019. New Bathyteuthid species in the northern Gulf of Mexico; *Bulletin of Marine Science*.

R. Rosa, V. Pissarra, F. Borges, J. Xavier, I. Gleadall, A. Golikov, G. Bello, L. Martins, F. Lishchenko, Á. Roura, **H. Judkins**, C. Ibanez, U. Piatkowski, M. Vecchione, R. Villanueva. 2019. Global patterns of species richness in coastal cephalopods; *Front. Mar. Sci.*, 02 August 2019; <https://doi.org/10.3389/fmars.2019.00469>.

A. Golikov, F. Ceia, R.M. Sabirov, J. Ablett, I. Gleadall, G. Gudmundsson, H. Hoving, **H. Judkins**, J. Pálsson, A.L. Reid, R. Rosas-Luis, E.K. Shea, R. Schwarz, J. Xavier. In Review. The deep-water Vampire Squid occupy a similar trophic level throughout its global range; *Nature Communications*.

Timm, L & **H. Judkins**, H. Bracken-Grissom, A. Sosnowski, M. Breitbart, M. Vecchione. In review 2019. Population connectivity of three deep-sea cephalopod species between the Gulf of Mexico and northwestern Atlantic Ocean; *Deep Sea Research I*.

Staudinger, M., V. Dimkovikj, C.A.M. France, E. Jorgensen, **H. Judkins**, A. Lindgren, E.K. Shea, M. Vecchione. In review; 2019. Trophic ecology of the deep-sea cephalopod assemblage near Bear Seamount in the Northwest Atlantic Ocean. *Marine Ecology Progress Series*.

Meath, B., E. Peebles, B. Seibel, **H. Judkins**. 2019. Stable Isotopes in the Eye Lenses of *Doryteuthis plei* (Blainville 1823): Exploring Natal Origins and Migratory Patterns in the Eastern Gulf of Mexico; *Continental Shelf Research*. 174:76-84; DOI: <https://doi.org/10.1016/j.csr.2018.12.013>

Sutton, T, T. Frank, **H. Judkins**, I. Romero. 2018. As Gulf oil extraction goes deeper, who is at risk? Community structure, distribution, and connectivity of the deep-pelagic fauna. *Scenarios and Responses to Deep-Oil Spills- Fighting the Next War. Vol. 2*. Springer Science.

Allcock, L., **H. Judkins**, Y. Sakuri. 2017. Editorial: Recent advances in cephalopod science. CIAC 2015 special issue. 2565-2567. <http://dx.doi.org/10.1080/00222933.2017.1389385>

Shea, E., **H. Judkins**, M.D. Staudinger, V. Hartigan, A. Lindgren, M. Vecchione. 2017. Cephalopod biodiversity in the vicinity of Bear Seamount, western North Atlantic. *Marine Biodiversity*; 47: 699. <https://doi.org/10.1007/s12526-017-0633-3>

Judkins H., M. Vecchione, A. Cook, T. Sutton. 2016. Diversity of midwater cephalopods in the northern Gulf of Mexico: comparison of two collecting methods. *Marine Biodiversity*. DOI 10.1007/s12526-016-0597-8

Judkins, H., K. Rosario, M. Vecchione. 2016. Morphological and molecular evidence of *Heteroteuthis dagamensis* in the Gulf of Mexico. *Bulletin of Marine Science*. DOI: <http://dx.doi.org/10.5343/bms.2015.1061>

Roper, C.F.E., **H. Judkins**, N. Voss, E. Shea, E. Dawes, D. Ingraio, P. Rothman, I. Roper. 2015. A compilation of recent records of the giant squid, *Architeuthis dux* (Steenstrup, 1857) (Cephalopoda) from the Western North Atlantic Ocean, Newfoundland to the Gulf of Mexico. *American Malacological Bulletin*, 33(1)1-11.

Hoving, HJ, J. Perez, K. Bolstad, H. Braid, A. Evans, D. Fuchs, **H. Judkins**, J. Kelly, J. Marian, R. Nakajima, U. Piatkowski, A. Reid, M. Vecchione, J. Xavier. 2014. The Study of Deep-Sea Cephalopods; E. Vidal editor; *Advances in Marine Biology*, v.67; 235-259.

Judkins, H., S. Arbuckle, M. Vecchione, L. Garrison, A. Martinez. 2013. Cephalopods in the potential prey field of Sperm Whales (*Physeter macrocephalus*) in the northern Gulf of Mexico. *Journal of Natural History*, DOI: 10.1080/00222933.2013.802045

Judkins, H and M. Vecchione. 2013. *Doryteuthis plei* (Blainville, 1823), the slender inshore squid. *Advances in Squid Biology, Ecology and Fisheries, Part I: Myopsid squid*. Ed. Rui Rosa, Graham Pierce, Ron O'Dor; pp. 241-256.

Judkins, H., M. Vecchione, J. Torres, C.F.E. Roper. 2010. Cephalopod species richness in the wider Caribbean region. *ICES Journal of Marine Science*, 67: 1392-1400.

Judkins, H. M. Vecchione, & C.F.E. Roper. 2009. Cephalopods (Mollusca: Cephalopoda) of the Gulf of Mexico. *Gulf of Mexico Origin, Waters, and Biota Biodiversity, Volume 1* (Darryl Felder, David A. Camp, editors) Texas A&M University Press, College Station, Texas, Ch. 34, pp. 701-710.

Judkins, Heather. 2009. Cephalopods of the Broad Caribbean: distribution, abundance and ecological importance; dissertation; University of South Florida; 156 p.

Judkins, H. Debra Ingraio, C.F.E. Roper. August 2009. First records of *Asperoteuthis acanthoderma* (Lu, 1977) CEPHALOPODA: OEGOPSIDAE: CHIROTEUTHIDAE), from the North Atlantic Ocean, Straits of Florida. *Proceedings of the Biological Society of Washington*; 122(2):162-170.

Publications in Preparation

R. Milligan, A. Cook, T. Frank, D. Nichols, N. Pruzinsky, M. Novotny, M. Johnston, J. Moore, K. M Boswell, I Romero, C. Hu, D. English, **H. Judkins**, R. D. Wells, T. Richards, G. Lawson, D. Fenolio, M. Vecchione. In prep. On the importance of baselines in deep ocean stewardship: a cautionary tale from the Gulf of Mexico and beyond.

Judkins, H., M. Vecchione. In prep. Vertical distribution patterns of cephalopods of the northern Gulf of Mexico. *Frontiers in Marine Science*.

Judkins, H., T. Richards, M. Vecchione. In prep. Are Vampire squid associated with the oxygen minimum zone of the northern Gulf of Mexico? *Bulletin of Marine Science*.

Research Presentations

2019: - Diel vertical migration facilitates connectivity between mesopelagic prey and epipelagic predatory fishes. Murawski, S., T. Sutton, E. Pulster, E. Hughes, J. Morris, K. Boswell, M. Schwaab, I. Romero, **H. Judkins**. Oral presentation. Gulf of Mexico Oil Spill and Ecosystem Science Conference Feb. 2019.

- 2018:** - DEEPEND: What have we learned since 2011 about cephalopods in the northern Gulf of Mexico?; **H. Judkins**, M. Vecchione, A. Sosnowski, I. Romero, T. Richards, L. Timm, A. Cook, T. Sutton. Oral Presentation. Gulf of Mexico Oil Spill and Ecosystem Science Conference, Feb. 2018.
- DEEPEND: Species abundance, spatial and vertical distributions of Heteropods (Pterotracheoidea) in the northern Gulf of Mexico. K. Clark*, B. Seibel, M. Vecchione, **H. Judkins**; oral presentation. Gulf of Mexico Oil spill and Ecosystem Science conference; Feb. 2018.
- 2017:** - DEEPEND: Preliminary Results of Cephalopod Vertical Migration Patterns in the Northern Gulf of Mexico; **H. Judkins**, M. Vecchione, A. Cook, T. Sutton. Poster Gulf of Mexico Oil Spill and Ecosystem Science conference. Feb. 2017.
- DEEPEND: Preliminary Results of Cephalopod Vertical Migration Patterns in the Northern Gulf of Mexico; **H. Judkins**, M. Vecchione, A. Cook, T. Sutton. Oral presentation. Aquatic Sciences and Limnology conference. Feb.-Mar. 2017
- DEEPEND: New Bathyteuthid species in the northern Gulf of Mexico. **H. Judkins**, A. Lindgren, K. Clark, M. Vecchione; Oral presentation. American Malacological Society Conference, July, 2017.
- 2016:** -Vertical Distribution Patterns of the Cephalopod Fauna of the Gulf of Mexico; **H. Judkins**, A. Cook, T. Sutton, M. Vecchione. 2016 Gulf of Mexico Oil Spill and Ecosystem Science Conference. Poster.
- The Dynamics of Vertical Movement in the Oceanic Gulf of Mexico after the Deepwater Horizon: Active Linkage of Large Vertebrates and Deep Pelagic Realm. T. Sutton*, A. Cook, T. Frank, K. Boswell, M. Vecchione, **H. Judkins**, I. Romero. 2016 Gulf of Mexico Oil Spill and Ecosystem Science Conference. Poster.
- The Dynamics of Vertical Movement in the Oceanic Gulf of Mexico after the Deepwater Horizon: Active Linkage of Large Vertebrates and Deep Pelagic Realm. T. Sutton*, A. Cook, T. Frank, K. Boswell, M. Vecchione, **H. Judkins**, I. Romero. 2016 Ocean Sciences Meeting. Poster.
- 2015:** -What have we learned about the cephalopod fauna of the Gulf of Mexico? Initial results of the NOAA/NRDA Offshore nekton sampling and analysis program; oral presentation. **H. Judkins**, K. Rosario, M. Vecchione. Cephalopod International Advisory Council Symposium. Hakodate, Japan; Nov. 2015.
- Cephalopod biodiversity in the vicinity of Bear Seamount, western North Atlantic. Poster. Elizabeth Shea, **Heather Judkins**, Michelle D. Staudinger, Valerie Hartigan, Annie Lindgren, and Michael Vecchione. Cephalopod International Advisory Council Symposium; Hakodate, Japan, Nov. 2015.
- Understanding deep-pelagic ecosystem variability in an age of increasing deep-ocean commercial activity: A Gulf of Mexico case study and new research initiative (DEEPEND); oral presentation; Tracey T. Sutton*, Kevin Boswell, Heather Bracken-Grissom, April Cook, Sergio deRada^c, David English, Ron Eytan, Danté Fenolio, Tamara Frank, Chuanmin Hu, Matthew Johnston, **Heather Judkins**, Chad Lembke, Jose V. Lopez, Jon A. Moore, Martha Nizinski, Brad Penta, Isabel C. Romero, Jay R. Rooker, Mahmood Shivji, Michael Vecchione, R. J. David Wells, Marsh Youngbluth; Joint Meetings of Ichthyologists and Herpetologists; Nevada, 2015.
- DEEPEND: Deep-Pelagic Nekton Dynamics of the Gulf of Mexico; poster. Tracey T. Sutton, April Cook*, Kevin Boswell, Heather Bracken-Grissom, Sergio deRada, David English, Ron Eytan, Danté Fenolio, Tamara Frank, Chuanmin Hu, Matthew Johnston, **Heather Judkins**, Chad Lembke, Jose V. Lopez, Jon A. Moore, Martha Nizinski, Brad Penta, Isabel C. Romero, Jay R. Rooker Mahmood Shivji, Michael Vecchione, R. J. David Wells, Marsh Youngbluth; Joint Meetings of Ichthyologists and Herpetologists; Nevada, 2015.

Related Presentations

- 2018:** - What does Heather do with her days? The life of a deep sea researcher; invited guest speaker, St. Petersburg Rotary Club; Jan. 2018
- 2017:** - Cephalopods of the northern Gulf of Mexico; H. Judkins. Invited speaker. Eckerd College. Nov. 2017
- Cephalopods of the northern Gulf of Mexico; H Judkins. Invited speaker. Westminster Palms Community Sept. 2017
- 2016:** -DEEPEND Consortium: What we do in the deep? Invited speaker; USFSP, April 7, 2016
- DEEPEND: Gulf of Mexico Exploration. Oral pres. Nova Southeastern University, Feb. 2016
- 2015:** -What does Dr. Judkins do with her time? invited speaker; Biology Seminar Series, USF-Tampa; Mar. 12, 2015
- 2014:** -What Does Dr. Judkins do with her time? invited speaker; Think Tank, Florida Aquarium. Nov. 30, 2014
- Oceans of Chemistry teacher workshop experience; Oral pres. Florida Marine Science Educators Association

Conference, Panama City, FL April, 2014.

- 2013:** -Cephalopods: Current Research; invited speaker; Tide Talks series, The Florida Aquarium; aired on the Tampa Bay Arts and Education Channel; Feb 20, 2013 and March, 2013
-Fascinating Cephalopods; invited speaker; Clearwater Marine Aquarium, Making Waves; Sept. 2013.
-Marine Science Topics - Smithsonian Journeys guest speaker, Celebrity Cruise Lines, 2009-2012.

Awards

- Florida Marine Science Educators Association Educator of the Year; 2012.
- National Board Certified Teacher; Secondary Science- Biology; 2003-2013.
- NSF Graduate STEM Teaching Fellowship; University of South Florida; 2003-2005
Year 1: \$30,000.00; Year 2: \$30,000.00

Leadership Experience

- DEEPEND Consortium Outreach/Education team leader for the 4-year program.
- Florida Institute of Oceanography USFSP representative, Education and Bylaws committees
- Event Organizer for 2018 International Cephalopod Advisory Council Symposium- USFSP
- Adviser to undergraduate biology student capstone research projects; 35 to date; includes Honors theses.
- Chief Scientist onboard USF research vessels for undergraduate field research experiences; 2012- present
- Successfully led two study- abroad biology summer experiences
2012- Biogeography of the Panama Gap: 6 week undergraduate course with 3 weeks in the rainforest and volcanic ecosystems of Costa Rica and the marine ecosystem in Panama; 12 students.
2014- Field Studies in Biology: 4 week undergraduate course with 2 weeks in the rainforest and marine ecosystems of Puerto Rico; 12 students.
- Regional coordinator for the NOSB Spoonbill Bowl; 2004-2009.

Professional Service

University committees:

- USFSP Florida Institute of Oceanography representative (2012-present)
- USFSP Research Advisory Group (2017-present)
- Department of Biological Sciences Secretary (2012- present)
- Advisor for the USFSP Marine Adventures Club (2012- present)
- College of Arts and Sciences Dean search committee (2017)
- USF System STEM Collaborative Committee (2015-2017)
- USF System Research Advisory Committee (2015-2017)
- USFSP Strategic Planning Committee (2013-2014)
- Department of Biological Sciences Annual Review committee member (2012-2017)
- Department of Biological Sciences Search committee member (2013, 2015, 2016)
- USF College of Marine Science 50th Anniversary Committee (2016)

Research related:

- Cephalopod Advisory Council President (2018-2021)
- Cephalopod Advisory Council Member (2015- 2018)
- Co-administrator of social media web page for Cephalopod International Advisory Council(CIAC)
- Guest editor of the Caribbean Naturalist Journal
- Guest editor for the Journal of Natural History (2016-2017-special cephalopod section)
- Reviewer for NOAA B-Wet Educator grant awards
- Manuscript Reviewer for:
 - Marine Biodiversity
 - Marine Ecology Progress Series
 - European Journal of Taxonomy

Graduate Student Adviser

Marine Science MS: K. Clark. 2019. Species abundance, spatial and vertical distributions of large heteropods (Pterotracheidae and Carinariidae) in the northern Gulf of Mexico

Marine Science MS: B. Meath. 2017. Stable Isotopes in the Eye Lenses of *Doryteuthis plei*: Exploring Natal Origins and Migratory Patterns in the Eastern Gulf of Mexico

Marine Science MS: A. Sosnowski. 2017. Genetic Identification and Population Characteristics of Deep-sea Cephalopod Species in the Gulf of Mexico and Northwestern Atlantic Ocean
Conservation Biology MS in progress: A. Hetzler, K. Lowry, T. Nicholson
Marine Science MS in progress: S. Shedler

Graduate Committee Member

Marine Science PhD: M. Birk. 2018. Ecophysiology of Oxygen Supply in Cephalopods; College of Marine Science, University of South Florida, St. Petersburg, FL.

Special Training

- advanced SCUBA certification, nitrox certification
- CPR and First Aid certification
- HAZMAT certification
- ESOL (English for speakers of other languages) certification

Synergistic Activities

- Cephalopod International Advisory Council (CIAC)
- Deep Sea Biology Society
- American Association for the Advancement of Science (AAAS)
- American Malacological Society (AMS)
- Florida Marine Science Educators Association (FMSEA)
- National Marine Educators Association (NMEA)