

CURRICULUM VITA

12/2019

NOE C. BARRERA, M.S.

Research Specialist

CONTACT INFORMATION

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EDUCATION

Post Baccalaureate Professional Certification; Management Information Systems (MIS).
Texas A&M University-Corpus Christi, Corpus Christi, TX, 2003.

M.S. Marine Biology. Texas A&M University-Corpus Christi, Corpus Christi, TX, 2001.

B.S. Marine Emphasis/Chemistry Minor. Corpus Christi State University, Corpus Christi,
TX, 1991.

PROFESSIONAL EXPERIENCE

2014 to Present. Research Specialist for Dr. Paul Montagna, Endowed Chair of
Ecosystems & Modeling, Harte Research Institute for Gulf of Mexico Studies (HRI),
Texas A&M University-Corpus Christi, identifying mollusks from benthic samples for a
variety of projects.

2012-2014. 1. Research Specialist for Dr. Paul Montagna, Endowed Chair of Ecosystems
& Modeling, Harte Research Institute for Gulf of Mexico Studies (HRI), Texas A&M
University-Corpus Christi, identifying mollusks from benthic samples for a variety of
projects.

2. Curator of Invertebrates for Dr. J.W. Tunnell Jr., Associate Director, and Endowed
Chair of Biodiversity and Conservation Science, HRI. Responsible for gathering and
preparing a variety of invertebrates for distribution to three major museums: Texas
Cooperative Wildlife Collection @ Texas A&M University, College Station, TX,
Houston Museum of Natural Science, Houston, TX and Universidad Nacional Autonoma
de Mexico, Mexico City, Mexico.

2003-2009. Research Specialist, Harte Research Institute. Contracted to co-author a
manuscript on the mollusks of Texas, and other delegated responsibilities. Texas A&M
University-Corpus Christi, Corpus Christi, TX.

PUBLICATIONS

Melissa Rohal; **Noe Barrera**; Elva Escobar-Briones; Gregg Brooks; David Hollander; Rebekka Larson; Paul A Montagna; Marissa Pryor; Isabel Romero; Patrick Schwing. 2020. How Quickly Will the Deep-Sea Ecosystem Recover from the 2010 Deepwater Horizon Oil Spill? Lessons Learned from the 1979 Ixtoc-1 Oil Well Blowout. *Ecological Indicators*. Pp. 1-41.

Melissa Rohal, **Noe Barrera**, Justine S. Van Eenennaam, Edwin M. Foekema, Paul A. Montagna, Albertinka J. Murk, Marissa Pryor, Isabel C. Romero. 2020. The effects of experimental oil-contaminated marine snow on meiofauna in a microcosm. *Marine Pollution Bulletin* vol. 150 January 2020 110656.

Ortigosa, D., N. Yolimar Suarez-Mozo, **N. C. Barrera**, and N. Simoes. 2018. First survey of Interstitial molluscs from Cayo Nuevo, Campeche Bank, Gulf of Mexico. *Zookeys*. 18 pp.

Tunnell, J. W., Jr., **N. C. Barrera**, and F. Moretzsohn. 2014. *Texas Seashells: A Field Guide*. Texas A&M Press, College Station, Texas. 278 pp.

Tunnell, J. W., Jr., J. Andrews, **N. C. Barrera**, and F. Moretzsohn. 2010. *Encyclopedia of Texas Seashells: Identification, Ecology, Distribution & History*. Texas A&M Press, College Station, Texas. 512 pp.

Moretzsohn, F., J. W. Tunnell, Jr., W. G. Lyons, E. Baqueiro Cárdenas, **N.C. Barrera**, J. Espinosa, E. F. García, J. Ortea, and M. Regueiro. 2009. *Mollusca: Introduction*, Pp. 559–564 in Felder, D. L., and Camp, D. K. (eds.), *Gulf of Mexico—Origins, Waters, and Biota. Biodiversity*. Texas A&M Press, College Station, Texas.

Tunnell, J. W., Jr., **N. C. Barrera**, C., Beaver, C. R., Davidson, J., Gourley, J. E., Moretzsohn, F., Nañez-James, S., Pearce, J. J., and M. E. Vega. 2007. Checklist of the biota associated with Southern Gulf of Mexico coral reefs and coral reef islands. Available at <http://www.gulfbase.org/checklist/>

Moretzsohn, F. and **N. C. Barrera**. 2006. Occurrence of the Asian Clam, *Corbicula fluminea*, in the Jim Naismith Reservoir, Ingleside, Texas, April 2006. Report to the San Patricio Municipal Water Treatment Plant, San Patricio, Texas. 19 pp.

Barrera, N. C. 2001. *Micromolluscan Assemblages on the Flower Garden Banks, Northwestern Gulf of Mexico*. M.S. Thesis, Dept. of Physical and Life Sci., Texas A&M University-Corpus Christi, Corpus Christi, TX 90 pp.

Hicks, D. W., **N. C. Barrera**, and J. W. Tunnell, Jr. 2001. Ecological distribution of shallow-water mollusks of Alacrán reef, Campeche Bank, Yucatan, Mexico. *Texas Conchologist* 38: 7-30.

Tunnell, J.W. Jr. and **N. C. Barrera**. 2001. Micromolluscan faunal survey of the east and west Flower Garden Banks. *In*: Dokken, Q. R., I. R. MacDonald, J. W. Tunnell, Jr., T. Wade, C. R. Beaver, S. A. Childs, K. Withers, and T. W. Bates. 2001. *Long-term Monitoring of the East and West Flower Garden Banks, 1998-1999*. OCS Study MMS 2001-101. U.S. Dept. of the Interior, Minerals Management Service, Gulf of Mexico OCS Region, New Orleans, Louisiana. 120 pp.

Barrera, N. C. and J. W. Tunnell, Jr. 1999. Micromolluscan faunal survey. *In*: Dokken, Q. R., I. R. McDonald, J. W. Tunnell, Jr., C. R. Beaver, G. S. Boland, and D. K. Hagman. 1999. *Long-term monitoring at the East and West Flower Garden Banks, 1996-1997*. OCS Study MMS 99-0005. Minerals Management Service. New Orleans, LA. 101 pp.

GRAPHIC DESIGN

Tunnell, J. W., Jr., J. Andrews, **N. C. Barrera**, and F. Moretzsohn. 2010. *Encyclopedia of Texas Seashells: Identification, Ecology, Distribution & History*. Texas A&M Press, College Station, Texas. 512 pp.

Tunnell, J. W., Jr. 2009. Center for Coastal Studies: The First 25 Years. 1984-2009. Center for Coastal Studies, College of Science and Technology, Texas A&M University-Corpus Christi. Corpus Christi, Texas. 172 pp.

POSTERS

Texas Seashells, a New Illustrated Guide. *Bays and Estuaries Meeting*, University of Texas Marine Science Institute, Port Aransas, TX, April, 2005.

Texas Seashells, a New Illustrated Guide. *71st annual meeting of the American Malacological Society (AMS), and the 38th annual meeting of the Western Society of Malacologists (WSM)*, Pacific Grove, CA, June, 2005.

COMPUTER-BASED SKILLS

Microsoft Office for the Professional.

Adobe Computer Suite, with extensive experience in *InDesign* and *Photoshop*.

Graphic Design and Photography: Digital: macro with emphasis in microphotography.

SPECIAL SKILLS

SCUBA Certifications: PADI: Scientific Diving Program @ CCS/TAMU-CC: NOAA-equivalent to working diver certification. CPR training and First Aid.

FIELD EXPERIENCE

OCEANIC

July-Aug 20015

Aboard Justo-Sierra R/V from Tuxpan/Mexico. Collect multi-corer samples to obtain meiofauna and macro-fauna for a field study of the southern Gulf of Mexico along the same track of the IXTOC oil catastrophe of 1979. To see what types of damage if any, still linger after all this time (35 yrs), and to try and predict what will occur to the oil of the Deep Water Horizon mishap of 2010.

June-July 2014

Aboard the R/V Irish from Houma/Louisiana. Collect multi-corer samples to obtain macro-fauna, for a field study of the area surrounding the Deep-Water Horizon catastrophe in the Gulf of Mexico.

November-December 1994

Last leg of water sampling project, known as the LATEX (Louisiana-Texas) Cruise, aboard the TAMU College Station RV GYRE. POSITION: BIOTECH. Collect and preserve microzooplankton for Dr. Ed Buskey (PI; UTMSI-Port Aransas, TX), and assist wherever possible.

September, 1994

By-catch Reduction Device Study (BRDS) in Gulf of Mexico, aboard the NOAA RV Oregon II, stationed at Pascagoula, MISS. POSITION: BIOTECH; assist with SCUBA maintenance, identification of by-catch and shrimp species, and assist with maintenance of collection gear.

May, 1994

Predator-Prey food habits survey, aboard the NOAA RV Delaware II, stationed at Woods Hole MA.; study site: Georges Bank, Northeast Atlantic. POSITION: BIOTECH; assist with identification of ichthyofauna, identification (of some stomach material) and preservation of stomach contents using cryogenic procedures for DNA analysis.

April, 1994

Small pelagic ichthyofaunal survey, using regular trawling procedures as the control and hydroacoustic sonar as the test equipment; chlorophyll extraction from surface water; DNA patterning between offshore *Turciops truncatus* and nearshore *T. truncatus*, using the standard crossbow technique for collection of samples: study site; continental shelf off the west coast of Florida, eastern Gulf of Mexico, aboard the RV Chapman, stationed at Pascagoula, MISS. POSITION: BIOTECH; Identification of ichthyofauna; assist with dolphin watch; assist with preserving dolphin samples; and extraction and preservation of chlorophyll from water samples.

August 1993

Atlantic Deep-Sea Scallop (*Placopectin magellanica*) survey and whale watch; aboard the Albatross IV, Woods Hole, MA. On Georges Bank, northeast Atlantic. POSITION: BIOTECH; assist with measuring and counting scallops; assist with whale watch.

CORAL REEF SYSTEMS

September, 2001

Flower Gardens Banks monitoring cruise, aboard the MV Fling, off Texas coast, Gulf of Mexico. Sponsor, Center for Coastal Studies (CCS) Scientific Diving Program @ TAMU-CC. POSITION: BIOTECH; collect and preserve micromollusk samples; assist where needed.

September, 2000

Flower Gardens Banks monitoring cruise, aboard the MV Fling, off Texas coast, Gulf of Mexico. Sponsor, CCS Scientific Diving Program @ TAMU-CC. POSITION: BIOTECH; collect and preserve micromollusk samples; assist where needed.

September, 1998

Flower Gardens Banks monitoring cruise, aboard the MV Fling, off Texas coast, Gulf of Mexico. Sponsor, CCS Scientific Diving Program @ TAMU-CC. POSITION: BIOTECH; collect and preserve micromollusk samples; assist with coring of coral heads; assist where needed.

September, 1997

Flower Gardens Banks monitoring cruise, aboard the MV Fling, off Texas coast, Gulf of Mexico. Sponsor, CCS Scientific Diving Program @ TAMU-CC. POSITION: BIOTECH; collect and preserve micromollusk samples; assist where needed.

June, 1997

Alacran Reef, Yucatan, Mexico biofauna study. Location: Isla Perez, Alacran Reef. Sponsored by CCS @ TAMU-CC, NASA, and Centro de Investigaciones Avancadas, (CINVESTAV) de Mexico. Transportation from Yucatan Peninsula to Alacran Reef provided by Mexican Navy. POSITION: Biologist; assist with biofauna study (collection and identification of plant and animal species). Collect and preserve micromollusk samples.

October, 1996

Flower Gardens Banks monitoring cruise; aboard MV Spree, off the Texas coast, Gulf of Mexico. Sponsored by CCS Scientific Diving Program @ TAMU-CC. POSITION: BIOTECH; collect and preserve micromollusk samples; assist where needed.

June, 1996

Flower Garden Banks monitoring cruise, aboard MV Spree, off the Texas Coast, Gulf of Mexico. Sponsored by NOAA. POSITION: BIOTECH; collect and preserve micromollusk samples, assist where needed.

June, 1993

Study the ecology of the Veracruz/Anton Lizardo Reef complex. Coral Reef Ecology Class, TAMU-CC. Professor: John W. Tunnell Jr. Ph.D. @ TAMU-CC. GRADUATE PROJECT: Polynuclear Aromatic Hydrocarbon (PAH) analysis of the sediments of Isla de Media, Enmedio Reef, Veracruz, Mexico, and assist in a photographic transect project of the midreef depth zone.

June, 1991

Coral Reef Ecology of the Veracruz/ Anton Lizardo Reef complex. Coral Reef Ecology Class, TAMU-CC. Professor: Dr. J.W. Tunnell Jr. Ph.D. @ TAMU-CC. UNDERGRADUATE PROJECT: assist graduates with study, and learn the biota of the coral reef system.

MOLLUSCAN RESEARCH

January 2018. Help identify micromollusks from Cayo Nuevo, Campeche Bank, Mexico. From the BioDiversidad Marina de Yucatán (BDMY) workshop.

Fall, 2002

Assist with the Graduate “Biology of the Mollusca” class, by preparing, assisting, and grading students on micromollusks.

October, 1997

Molluscan faunal research from Tuxpan, Veracruz, Mexico south to Catemaco, Veracruz, Mexico. Biology of the Mollusca class @ TAMU-CC. Professor: J.W. Tunnell Jr. Ph.D. POSITION: Graduate Assistant; Interpret when needed, (Spanish/English); assist in collecting molluscan specimens; and update *Perna perna* migration along the Mexico, Gulf of Mexico coastline.

October, 1993

Collection and identification of Molluscan fauna from Tuxpan, Veracruz, Mexico south to Catemaco, Veracruz, Mexico. Biology of the Mollusca class @ TAMU-CC. Professor: J.W. Tunnell Jr. Ph.D. Graduate research project: Quantitative analysis of the southern migration of *Perna perna* on the Gulf of Mexico coast.

ESTUARINE SYSTEMS

January 2018

Collect benthic core samples for the Benthic Invertebrate Taxonomy, Metagenomics, and Bioinformatics (BITMaB-2) workshop. Samples were collected from Laguna Madre, Corpus Christi Bay and Redfish Bay, in order for the BITMAB group to collect macrofauna and prepare them for DNA extraction.

October 2015

Collect raw data, using YSI and coring devices, from the San Antonio and Lavaca bay systems.

October, 1995

Ichthyofaunal survey on McFaddin and Texas Point National Wildlife Refuge (NWR); Sponsored by Fisheries Resource Office/ Fish and Wildlife Service (FRO/FWS) @ TAMU-CC. POSITION: BIOTECH; assist with capture and identification of fish.

September, and August, 1995

Ichthyofaunal survey, Brazoria, NWR. Sponsored by FRO/FWS @ TAMU-CC. POSITION: BIOTECH; assist with capture and identification of fish.

December, 1994

Ichthyofaunal monitoring survey on Brazoria, NWR. Sponsored by FRO/FWS @ TAMU-CC. POSITION: BIOTECH; assist with capture and identification of fish.

October, 1994

Ichthyofaunal survey, McFaddin and Texas Point, NWR. Sponsored by FRO/FWS @ TAMU-CC. POSITION: BIOTECH; assist with capture and identification of fish.

RIVERINE SYSTEMS

September, and August, 1995

Ichthyofaunal survey on the Rio Grande River, at accessible locations between Brownsville and Anzalduas Dam. Sponsored by Fisheries Resource Office (FRO)/Fisheries Wildlife Services (FWS) @ TAMU-CC. POSITION: BIOTECH; assist with capture and identification of fish.

April, 1995

Ichthyofaunal survey on the Alabama-Coushatta Indian Reservation and Trinity River. Sponsored by FRO/FWS @ TAMU-CC. POSITION: BIOTECH; assist with capture and identification of fish.

January, 1995

Ichthyofaunal survey on Attwater Prairie Chicken, NWR. Sponsored by FRO/FWS @ TAMU-CC. POSITION: BIOTECH; assist with capture and identification of fish.

December, 1994

Ichthyofaunal survey on the Rio Grande River, from Retamal Dam to approximately 30 miles upstream of Anzalduas Dam. Sponsored by FRO/FWS @ TAMU-CC. POSITION: BIOTECH; assist with locating sites, suitable for launching small boats.

REFERENCES

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Endowed Chair Ecosystems and Modeling
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