

# Aline Trejo

Texas A&M University – Corpus Christi  
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## Education

- Present      **Texas A&M University – Corpus Christi**  
MS, Fisheries and Mariculture, Marine Genomics Lab  
— Advisor: Dr. David S. Portnoy  
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- 2009-2012    **Texas A&M University – Corpus Christi**  
BS in Biology with a concentration in Marine Biology

## Research Experience

- 2016      **Marine Genomics Laboratory, Texas A&M University - Corpus Christi**  
**Identification and delineation of critical shark nursery habitat surrounding Corpus Christi Bay**  
Aided in the summer sampling efforts to target a variety of juvenile shark species throughout the Corpus Christi bay and Laguna Madre using longlining fishing techniques.
- 2014-2016    **HoBi Marine Molecular Ecology Laboratory, Texas A&M University-Corpus Christi**  
**Determine if juvenile Lionfish recruit to mangrove nursery habitats using Otolith isotope microchemistry**  
Individually developed protocol to cross section, mount, and polish juvenile *P. volitans* otoliths collected in the Mesoamerican Barrier Reef for isotope separation using laser ablation.  
**Lionfish effects on the genetic diversity of bicolor damsel fish**  
Spearheaded the optimization of polymerase chain reaction protocols for fluorescently labeled microsatellite markers to molecularly analyze the effects of invasive *P. volitans* on the genetic diversity of *Stegastes partitus* collected in the Mesoamerican Barrier Reef.  
**Bar-coding gut contents of lionfish collected at the Flower Garden Banks NMS**  
Identify unknown species found in the gut contents of *P. volitans*, collected in the Flower Garden Banks Nation Marine Sanctuary, using the mitochondrial cytochrome COI gene, or “barcode” gene, through polymerase chain reaction DNA amplification.
- 2015      **Michael Gonzales Memorial Internship at the San Antonio River Authority**  
Aiding in watershed management, biological sampling, community recreational management and outreach. All sampling efforts and data management was conducted per Texas Commission of Environmental Quality standards and protocols.
- 2015      **30<sup>th</sup> Annual Oso Bay Diurnal -Texas A&M University Corpus Christi**

### **Annual health assessment of the Oso Bay in Corpus Christi, Texas**

Implemented a variety of field sampling methods to collect field data every four hours for 24 hours. Data collected included: water quality, macro and micro fauna species surveys for benthic, deep, and swallow environments.

2014

### **Coastal Conservation and Restoration Ecology Lab, Texas A&M University–Corpus Christi**

#### **Using stable isotopes to determine food web dynamics of estuarine associated fauna**

Assisted with stable isotope spectroscopy preparation. Duties included weighing using an analytical microgram scale and encapsulating dried tissue samples.

#### **Increasing temperature and salinity effects on ontogenic development of Southern Flounder**

Assisted with collecting, quantifying flounder eggs exposed to various gradients of salinity and temperature. As well as screening flounder eggs for proper yolk formation under a microscope.

### **Workshops**

Aug 2014

#### **Green Immunology REU workshop – Texas A&M University**

Guided through sequential techniques of mutant genes isolation and TALEN gene engineering in *Arabidopsis*. Inoculating isolated Luciferase tagged genes using bacteria in order to determine gene regulation at the molecular level. Ultimately apply novel understandings of gene regulation to develop more resistant crops such as cotton.

### **Teaching Experience**

Fall 2017      Genetics, BIOL 2416

Spring 2018    Ecology and Evolution of Fishes, BIOL 4590

### **Laboratory and Field Skills**

**Lab**      DNA extraction and isolation, PCR, otolith dissection, otolith cross section mounting, encapsulating dried tissue for isotope microchemistry.

**Field**    Sampling techniques including longline, seine, electroshocking, benthic troll, plankton tow, and traps, *in situ* fish identification and preservation, water quality testing using YSI and Hach benchtop spectrometer.

### **Professional Affiliations**

Texas Chapter of the American Fisheries Society

