

Althea Marks

Graduate Student

Department of Biological Science
California State University Fullerton
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Education

California State University Fullerton / M.S. Marine Ecology

2016 - EXPECTED 2019, ADVISOR: DR. DANIELLE ZACHERL

University of New Hampshire / B.S. Environmental Science

2007 - 2011, ADVISOR: DR. WILLIAM H. MCDOWELL

Experience

Olympia Oyster Restoration Network / Database Analyst

SEPTEMBER 2018 - PRESENT, ELKHORN SLOUGH, CALIFORNIA

DIRECTORS: DR. KERSTIN WASSON & DR. APRIL RIDLON

ELKHORN SLOUGH NATIONAL ESTUARINE RESEARCH RESERVE

Designed and built online survey to compile, archive, and analyze data and information about 30 Olympia oyster restoration projects from British Columbia, Canada to Baja California, Mexico. Responsible for assisting scientists and restoration practitioners with online survey, and will assist with database analysis.

California Sea Grant / Student Trainee

JANUARY 2018 - JANUARY 2019, FULLERTON, CALIFORNIA

DIRECTOR: DR. DANIELLE ZACHERL

Quantifying the filtration services of constructed Olympia oyster habitat in Newport Bay and San Francisco Bays. Collaborating with oyster aquaculture (Morro Bay Oyster Company and Port of San Diego Blue Economy Incubator) to determine the filtration services provided by oyster aquaculture.

California State University Fullerton / Research Assistant

AUGUST 2016 - JUNE 2018, FULLERTON, CALIFORNIA

DIRECTOR: DR. DANIELLE ZACHERL

SAN DIEGO NATIVE RESTORATION PROJECT

Monitor native and non-native oyster settlement year-round and growth and survival during summer and winter seasons. Survey native and non-native oyster densities at multiple sites.

Dauphin Island Sea Laboratory / Research Technician

AUGUST 2014 - FEBRUARY 2015, DAUPHIN ISLAND, ALABAMA

DIRECTOR: DR. SEAN POWERS

NATURAL RESOURCE DAMAGE ASSESSMENT

Processed oyster reef quadrats, settlement plates, and gonad samples. Data contributed to assessing the Deepwater Horizon oil spill's impact on C.

virginica populations throughout the Gulf of Mexico. Mapped artificial and natural reef structures on a 10-day offshore acoustic bathymetric cruise for fishery independent surveys. Assisted with offshore vertical long lines to assess Red Snapper populations in reef habitat. Process fish for otolith and gonad samples.

New Hampshire Sea Grant/ Research Assistant

JANUARY 2011 - MAY 2011, DURHAM, NEW HAMPSHIRE

DIRECTOR: KAREN ALEXANDER, M.S.

GULF OF MAINE COD PROJECT

Examined historical relationships among forage fish and predator species in the Gulf of Maine. Compiled dataset with catch on specific fishing grounds of various species along with gear type and effort information using data from 1928 to 1960.

NH Water Quality Analysis Laboratory / Laboratory Assistant

2008 - 2011, DURHAM, NEW HAMPSHIRE

DIRECTOR: DR. WILLIAM H. MCDOWELL

LAMPREY RIVER HYDROLOGIC OBSERVATORY

Collected and processed weekly samples from established field sites in the seacoast region to examine hydrology and biogeochemistry of a suburban basin and its inputs to downstream estuarine.

Nanjing Forestry University / Student Researcher

JUNE 2010 - AUGUST 2010, NANJING, CHINA

SUPERVISORS: DR. WILLIAM H. MCDOWELL & DR. HONGHUA RUAN

INTERNATIONAL RESEARCH OPPORTUNITIES PROGRAM

Traveled independently to Nanjing as a guest researcher to collect soil and water samples in the Wuyi Mountains with the assistance host lab group. Processed samples to examine the relationships between soil C:N and stream DOC, stream nitrate, and elevation in the Wuyi Mountains and compare to North American watersheds.

EcoQuest / Study Abroad & Undergraduate Thesis

JANUARY 2010 - JUNE 2010, WHAKATIWAI, NEW ZEALAND

Studied Restoration Ecology & Ecosystem Management, Biogeography, and Environmental Policy, Planning & Sustainability. Undergraduate thesis: The Effects of Pest Management of Coleoptera and Orthoptera Communities, Mangatautari Ecological Island and Mt. Pirongia Forest Park, New Zealand.

Paul Smith's College/ Watershed Steward

MAY 2009 - AUGUST 2009, ADIRONDACKS MOUNTAINS, NEW YORK

Engaged and educated regional boat launch users on aquatic invasive species (AIS). Topics included recreational and ecological problems associated with AIS, how to identify AIS, and steps to prevent AIS spread while boating.

Awards

Coppel Graduate Science Award (CSUF) / \$3,000

MARCH 2019

National Shellfisheries Association Student Travel Grant / \$1,450
JANUARY 2019

Giles T. Brown Graduate Student Travel Grant / \$1,000
MARCH 2018 & 2019

CSUF Biology Department Research Grant / \$270
SPRING 2018 & 2019

Biology Graduate Student Club Travel Grant / \$360
MARCH 2018

California Sea Grant Traineeship / \$10,000
JANUARY 2018, PI: DR. DANIELLE ZACHERL

In Situ Filtration Services of Constructed Olympia Oyster (*Ostrea lurida*)
Habitat And California Aquaculture Operations

Associated Students Inc. CSUF Research Grant / \$1,300
FEBRUARY 2018

National Geographic Society Early Career Grant / \$4,995
JUNE 2017

In Situ Filtration Rates of Olympus Oyster (*Ostrea lurida*) Habitat and Pacific
Oyster (*Crassostrea gigas*) Aquaculture

International Research Opportunities Program / \$6,450
NOVEMBER 2009

Relationships between soil C:N and stream DOC, stream nitrate, and
elevation in the Wuyi Mountains, Fujian and Jiangxi Provinces, China

Dean's Scholarship University of New Hampshire / \$24,000
2007 - 2011

Presentations

World Aquaculture Society & National Shellfish Association
MARCH 2019, NEW ORLEANS, LOUISIANA

"In Situ Filtration Services of Constructed Olympia Oyster (*Ostrea lurida*)
Habitat And California Aquaculture Operations"

Restore America's Estuaries
DECEMBER 2018, LONG BEACH, CALIFORNIA

"In Situ Filtration Services of Constructed Olympia Oyster (*Ostrea lurida*)
Habitat And California Aquaculture Operations"

National Shellfish Association Annual Meeting
MARCH 2018, SEATTLE, WASHINGTON

"In Situ Filtration Services of Constructed Olympia Oyster (*Ostrea lurida*)
Habitat And California Aquaculture Operations"

CSUF Biology 500 A/B Poster Session

DECEMBER 2016, FULLERTON, CALIFORNIA

“In Situ Filtration Rates of Restored Oyster Reefs in California”

International Research Opportunities Program Symposium

SEPTEMBER 2010, DURHAM, NEW HAMPSHIRE

“Relationships between soil C:N and stream DOC, stream nitrate, and elevation in the Wuyi Mountains, Fujian and Jiangxi Provinces, China”

EcoQuest Semester Symposium

MAY 2010, WHAKATIWAI, NEW ZEALAND

“The Effects of Pest Management of Coleoptera and Orthoptera Communities, Mangatautari Ecological Island and Mt. Pirongia Forest Park, New Zealand”

Service Activities

Orange County Coast Keeper/ Volunteer Scientist

AUGUST 2016 - PRESENT, NEWPORT BEACH, CALIFORNIA

Construct and monitor Olympia oyster shell bed and eelgrass habitats for Newport Bay Living Shoreline Project.

Western Society of Naturalists Annual Meeting / Student Volunteer

NOVEMBER 2017, PASADENA, CALIFORNIA

Assisted coordinators with registration table and presentation setup.

The Natural Capital Project / Volunteer

OCTOBER 2015- MARCH 2016, SEATTLE, WASHINGTON

Compiled scientific and government literature to inform the consequence of human activities on natural habitats in habitat risk assessment analyses for current and future scenarios in New England and the Bahamas.

Alabama Coastal Foundation Cleanup / Volunteer

SEPTEMBER 2014, DAUPHIN ISLAND, ALABAMA

UC Davis Tahoe Environmental Research Center / Volunteer

FEBRUARY 2014, INCLINE VILLAGE, NEVADA

Assisted elementary students present their science projects to other students through hands on displays at the Children’s Expo Day.

The League to Save Lake Tahoe/ Volunteer

SEPTEMBER 2013, MEYERS, CALIFORNIA

Collected and installed willow cuttings for stream bank stabilization.

Academic Courses

- Environmental Statistics
- Ecology of Biological Invasions
- Evolutionary Pathways in Nature
- Geographic Information System: Principles and Applied

- Environmental History of North Atlantic Fisheries
- Marine Ecology
- Community Ecology
- Fate and Transport in Environmental Systems
- Watershed Water Quality & Management

Skills

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- YSI 6-series water quality sonde operation & maintenance
 - Qualtrics - Research Core Survey
 - R
 - GIS
 - Excel
 - Work, research, and living on boats
 - 82' outrigger trawler (10 days liveaboard research)
 - 65' fishing boat (multiple day trips research)
 - 21' skiff (multiple days trips restoration)
 - 27' sailboat (5 day liveaboard)
 - Oregon Boaters Safety Course Certification
 - SDI Open Water SCUBA Certification
 - Manual transmission operation
 - Wilderness Experience and Sensibility:
 - o Long Distance Backpacking (800 miles Pacific Crest Trail)
 - o Mountaineering (submitted 3x 14,000+' glaciated volcanoes)
 - o Backcountry Alpine Touring Skiing
 - o Rock Climbing (setting anchors, basic lead sport climbing)
 - o Avalanche Institute for Avalanche Research and Education (AIARE) Level 1 Certification

Professional Affiliations

Western Society of Naturalists
National Shellfish Association