

# MARINE AFFAIRS & BIOLOGY



Within the many facets of marine science, there is often overlap of job functions. However, many marine scientists find advantages in becoming more specialized in one of the major subfields (e.g., marine geology, marine chemistry). As an undergraduate, seek laboratory experiences such as research projects, volunteering with professors, summer jobs, or internships. Learn laboratory procedures and become familiar with instrumentation. Participate in summer research programs.

Submit research to local poster competitions or research symposia. A bachelor's degree will qualify one for work as a laboratory assistant, lab coordinator, technician, technologist, or research assistant in education, industry, government, museums, parks, and hatcheries.

Combine an undergraduate degree with a degree in journalism, law, business, education, computer science, or other discipline to expand career opportunities. Become familiar with the specific entrance exam for graduate or professional schools in your area of interest.

In the United States, doctoral students typically receive partial or full tuition waivers and annual salaries to attend graduate school because there is a strong need for teaching assistants in introductory science courses such as General Chemistry. There is also excellent federal and industrial monetary support available for research. Secure strong relationships and personal recommendations from professors and/or employers. Recommendation letters are needs for graduate and professional schools. Learn to work independently and as part of a team. Develop exceptional computer skills, learn how to make professional figures (graphs, tables), and use statistical software.

Excellent verbal and written communication skills are essential. The ability to market your skills and write proposals is critical to maintain steady work. Grants may be necessary to start and continue projects. Join professional, environmental, and community organizations, and read related journals to stay abreast of current issues in the field and to develop contacts. Learn federal, state, and local government job application process. The federal government is the largest employer of scientists. Develop physical stamina to work and conduct field research, often in remote areas under various conditions.

## AREAS OF OPPORTUNITY

- Ecology and evolution
- Conservation
- Consulting
- Environmental protection/Regulation
- Environmental remediation/Compliance
- Fisheries management
- Marine biotechnology
- Molecular biology
- Marine policy/Law
- Mariculture/Aquaculture
- Hatchery operations management
- Aquarium operations management

Fish and Wildlife Service  
 National Oceanic and Atmospheric Administration  
 US Geological Survey  
 Park Service  
 Forest Service  
 Bureau of Land Management  
 Natural Resources Conservation Service  
 Environmental Protection Agency  
 Department of Justice  
 Army Corps of Engineers  
 Centers for Disease Control and Prevention  
 National Institutes of Health  
 National Science Foundation  
 Wildlife refuges, wildlife sanctuaries, and aquatic preserves  
 National and international environmental and conservation organizations  
 Zoos, aquariums, museums, and other collections of animals  
 Universities and colleges  
 Non-governmental organizations, (e.g., Ocean Conservation, Nature Conservancy)  
 Biotechnology firms and industry

## COMMON EMPLOYERS



## PROFESSIONAL ORGANIZATIONS



- [American Association of Petroleum Geologists](#)
- [American Chemical Society](#)
- [American Fisheries Society](#)
- [American Geophysical Union](#)
- [American Geosciences Institute](#)
- [Association for the Sciences of Limnology and Oceanography](#)
- [Association for Women Geoscientists](#)
- [Association of Environmental and Engineering Geologists](#)
- [Coastal and Estuarine Research Federation](#)
- [Ecological Society of America](#)
- [Geological Society of America](#)
- [National Academies](#)
- [National Association of Environmental Professionals](#)
- [National Association of Science Writers](#)
- [National Council for Science and the Environment](#)
- [Sigma Xi, The Scientific Research Society](#)
- [Society for Marine Mammalogy](#)
- [Society for Technical Communication](#)
- [Society of Exploration Geophysicists](#)



## STRATEGIES ON ENTERING THE FIELD

- Seek internships, summer jobs, or volunteer positions to gain experience. Some professionals in the field will begin their careers in temporary jobs.
- Develop physical stamina, outdoor skills, and comfort in being in water and working on a boat.
- Learn to set up, operate, maintain laboratory instruments and equipment, and monitor experiments.
- Develop public speaking skills through coursework or experience. Practice good communication and problem solving skills.
- Exercise close attention to detail.
- Seek experience with data management, analysis, and statistical tools used in research.
- For law enforcement jobs, be prepared to complete additional officer training and to go through a background check as part of the hiring process.
- Attain experience with boat safety, laboratory and chemical safety, and first aid training. OSHA HAZWOPER training may be required for some positions.
- Attain certification in SCUBA.
- Become familiar with government job application procedures and use your college career center for assistance.
- Be prepared to relocate to areas with abundant natural resources. Seek knowledge of technology used in natural resource management including software, geographical information systems, and global positioning systems.
- Seek leadership roles in student organizations.
- Maintain an excellent GPA, particularly in the sciences, and build relationships with faculty. Strong recommendations from professors are needed for graduate and professional schools.
- Marine Biology can serve as a pre-vet bachelor's degree. Research veterinary programs, take prerequisite courses to meet veterinary school requirements, and prepare for the application process.
- Join professional associations and environmental groups as way to learn about the field and network.