

Larval Fish Biology Research Technician

Research Technician Position in the Department of Biology at East Carolina University

Position description and key responsibilities: The Asch Fisheries Oceanography Lab at East Carolina University (located in Greenville, NC; http://www.ecu.edu/cs-cas/biology/Rebecca_Asch.cfm) is seeking to hire a research technician for a full-time, temporary position. Our lab is partnering with the Beaufort, North Carolina branch of the National Oceanic and Atmospheric Administration (NOAA) to expand the Beaufort Inlet Ichthyoplankton Sampling Program (BIISP). BIISP has been collecting weekly ichthyoplankton samples at Beaufort Inlet during fall through spring months since the year 1987, making it the longest continuously operating ichthyoplankton time series on the east coast of the U.S. The goal of this program is to measure estuarine ingress of larval fish species that spawn offshore but utilize estuarine habitats during the fish's juvenile life history stage. This time series has the potential to provide valuable information on how local fish communities are responding to climate variability and climate change. The Asch Fisheries Oceanography lab is investigating this question by examining variations in the seasonal timing of larval fish ingress and changes in species composition as a function of a number of climatic and ecological variables. We are expanding upon the BIISP time series by lengthening the duration of the sampling season so that it is year round, collecting weekly mesozooplankton samples, and conducting YSI profiles of temperature, salinity, dissolved oxygen, pH, and fluorescence.

We seek a technician to assist our lab with this work. The technician's primary responsibility will focus on analyzing the mesozooplankton samples using a ZooScan system (<http://www.hydroptic.com/zooscan.html>). A ZooScan consists of a flatbed scanner that is used to electronically scan size-fractionated zooplankton samples. Machine learning software is then used to semi-automatically identify species in the samples. The technician will be in charge of traveling to Beaufort once a week to collect samples, scanning the samples in the lab, running the machine learning algorithm, and verifying taxonomic classification accuracy. During summer months (May-September), the technician will also lead collection of larval fish samples and will train a team of undergraduate research assistants in the procedure for sorting these samples and identifying larvae. Since larval fishes are capable of avoiding capture by plankton nets during the day, all sampling will be conducted at night and will be timed to coincide with tidal fluctuations and the schedule of NOAA collaborators.

Lastly, it is expected that this technician will take on some duties associated with lab management including training students in lab protocols, helping to order lab supplies, assuring compliance with lab safety regulations, and maintaining the lab in clean and functioning order. The successful technician will be encouraged to take on additional roles associated with statistical analysis of data, preparation of manuscripts for publication, and the presentation of results at scientific conferences.

This will initially be a one-year position, with the potential for renewal contingent upon available funding and satisfactory performance.

Minimum qualifications:

B.S. degree in marine science, biology, ecology, oceanography, natural resource management, or similar fields. Must have taken at least introductory coursework in marine ecology.

Some experience working in an ecology lab and using a dissecting microscope.

Ability to drive state owned vehicles, conduct ecological fieldwork in wet and occasionally uncomfortable conditions at night-time, and carry field equipment weighing up to ~30 lbs.

Independent self-starter who is excited to learn new skills and has the ability to problem shoot technical challenges.

Preferred qualifications:

Masters of science degree in marine science, biology, ecology, oceanography, natural resource management, or similar fields.

1-2 years of experience at the post-baccalaureate level working in a lab focused on conducting marine ecological research.

Previous experience operating a ZooScan and collecting and processing ichthyoplankton and zooplankton samples in marine and estuarine environments. Experience with identification of ichthyoplankton and zooplankton species, especially those found in the Southeast U.S.

Experience analyzing data and writing computer programs with MATLAB or R. Experience with multivariate ecological statistics.

Written and published scientific manuscripts and presented scientific results at conferences.

Salary: While this is an hourly position, we anticipate that the salary for this hire will be approximated \$31,200 per year.

Application instructions: Applications for this position are to be completed online, with full instructions available at the following URL: <https://ecu.peopleadmin.com/postings/25818>. Please contact Rebecca Asch (aschr16@ecu.edu) regarding any questions that you may have about this posting. There is an initial February 14, 2019 deadline for applications, but we anticipate that this position will remain open until filled.

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