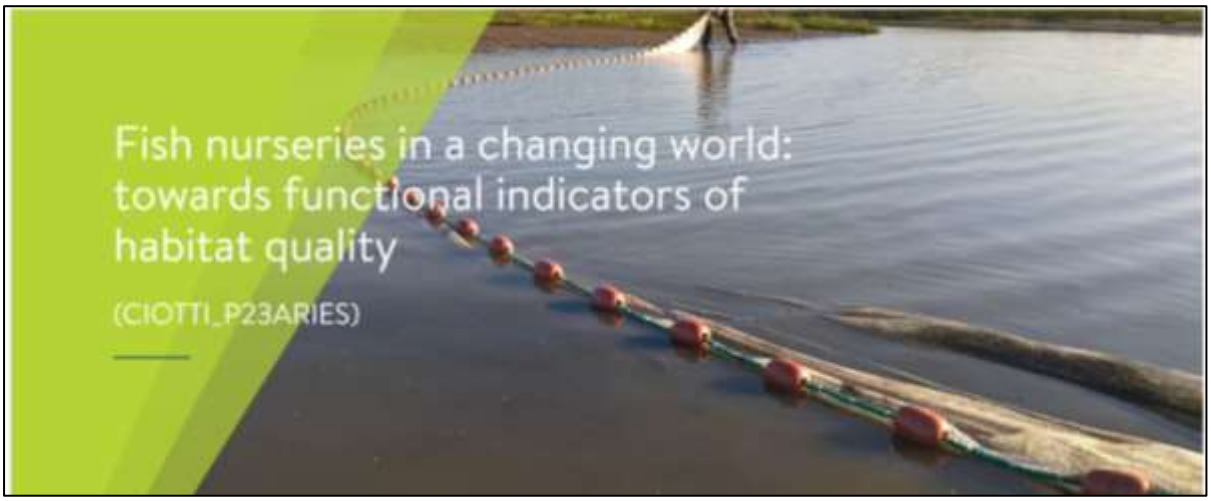
21st December 2022

Devon and Severn IFCA News

PhD Opportunity: Fish Nurseries in a Changing World

D&S IFCA is advertising a PhD opportunity with the Universities of Plymouth and Essex, and Ocean Ecology, competitively funded by the ARIES DTP



D&S IFCA is advertising a PhD opportunity that has been shortlisted for funding by the ARIES NERC DTP and will start on 1st October 2023. The closing date for applications is 23:59 on 11th January 2023. This studentship will be co-supervised by the University of Plymouth, University of Essex and D&S IFCA, with Ocean Ecology as a CASE partner.

Project background

The identification and conservation of “Essential Fish Habitat” is emerging as a research, management, and policy priority. Protecting habitats required for every life-stage is necessary to create sustainable fisheries and conserve threatened species, but knowledge of fish habitat needs is very limited, particularly for juveniles. Juveniles are often critically dependent on shallow, inshore areas which are heavily impacted by human activities. Little is known about these young stages because they are rarely targeted by commercial fisheries or fisheries-independent surveys.

Currently, juvenile habitat quality is typically assessed simply on the basis of the abundance of fish they contain. Functional indicators such as fish growth, survival and movement into the adult population are often overlooked but are essential to quantifying the importance of different areas as fish nurseries.

Methodology

This PhD project involves 1) laboratory experiments to develop novel molecular and geochemical indices of feeding, growth and movement in free-ranging juvenile fish; and 2) extensive field work in the Severn Estuary to apply these tools in a real-life setting and identify key habitat needs of a commercially valuable species, the common sole *Solea solea.*

Training

The student will be trained in a range of skills, building on core expertise of the supervisors in molecular growth indices, DNA metabarcoding for diet characterisation, and biogeochemical tracers for trophic and connectivity reconstruction: key techniques relevant not just for fisheries, but broadly across environmental research disciplines. The consultancy 'Ocean Ecology' (CASE partner) and the D&S IFCA (collaborative partner) offer a unique platform for sampling challenging estuarine environments and experience in applying innovative research to support marine policy and management decisions.

The PhD is therefore an unrivalled opportunity to develop and apply expertise in a suite of valuable research tools to support effective fisheries and ecosystem management.

Applications

For more information, including on how to apply, please visit https://www.aries-dtp.ac.uk/studentships/ciotti23/ or contact the lead supervisor Dr Ben Ciotti at benjamin.ciotti@plymouth.ac.uk