

Environmental DNA Applications for Fisheries Conservation and Management

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Accurate information on species presence and distribution is essential for effective fisheries conservation and management. However, obtaining this information with traditional sampling methods can be difficult when animals occur in low densities such as at the leading edge of an invasion, after an eradication effort, and when monitoring species that are in decline.

Environmental DNA (eDNA) based sampling methods are proven to be more sensitive, accurate, and efficient than traditional sampling methods. As a result, this tool provides a solution to obtaining occupancy information where traditional sampling methods fail. This presentation will use case studies to demonstrate effective applications of eDNA in fisheries conservation and management, including the successful use of this tool for tracking reintroductions of native fish, evaluating eradication efforts, and identifying distributions of species in decline. This presentation will conclude with a summary of strengths and limitations of eDNA based methods to help managers identify the most effective applications of this tool.