

Stream Fish Conservation in Extreme Habitats

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Abstract:

Humans depend on freshwater for persistence, but our growing demand on water resources has made conservation of freshwater biota challenging on a global scale. The highest rates of imperilment occur among aquatic species (fish, mussels, crayfish, etc.) and contemporary conservation efforts need to expand into human-altered landscapes in addition to “pristine” lands. Conservation of stream fish in “extreme habitats” is becoming a common challenge whether they are defined by extreme climate events (drought or flood), small or isolated habitats with no gene flow, or the presence of non-native species that create novel biological interactions. Still, scientific understanding of the behavior of animals and ecosystems in extreme habitats is limited and can hamper effective management of aquatic ecosystems. The goal of this project is to initiate potentially long-term projects locally and internationally to address habitat degradation, invasive species, and climate change in stream fish conservation.