Ecosystem Services Provided by Stream Fishes

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Stream fish provide important services to people, including recreation and food, regulation of ecosystem processes, and aesthetic benefits. If the services provided by fish in different streams can be measured, then they can be valued and considered in restoration decisions. We developed predictive habitat models for stream fish species that are indicators for different services in the Albemarle-Pamlico basin. These hierarchical models use environmental predictors from the NHD Plus dataset and account for natural differences in ecoregion and river drainage. We found that different services have distinct responses to stressors, and not all species are important service providers. The services approach to aquatic ecosystems may not protect all stream fish species, and thus should be carefully assessed for use in restoration.