Taxonomy and genetics

Conservation management of an endangered endemic freshwater fish, *Sandelia bainsii*

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Named after its province of origin in South Africa, the Eastern Cape Rocky (*Sandelia bainsii*) is an endangered freshwater apex predator. The introduction of invasive species such as bass and trout (*Micropterus* spp., *Salmo trutta* and *Oncorhynchus mykiss*) to river systems and dams for recreational and personal use has led to increased competition and predation. In addition, the construction of the Kat River Dam and the presence of many smaller weirs has caused large scale habitat fragmentation across the species' distribution. These factors are expected to have an adverse effect on gene flow between remnant populations that will affect the long-term evolutionary potential or persistence of the species. A mitogenomic study identified three allopatrically distributed lineages across the Eastern Cape Province, however further research into the genetic structure and diversity of the species is critically needed to inform targeted conservation management of vulnerable populations. Presented here is the first assessment of the species using novel microsatellite markers to identify current patterns of genetic diversity. Furthermore, we used Approximate Bayesian Computation (ABC) methods to determine historical demographic changes and infer the resilience or resistance of the species to future genetic pressures.