Feeding ecology of lenok, Baikal grayling and Hovsgol grayling from the Eg-Uur Watershed, Mongolia

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Abstract:

The Eg-Uur Watershed of Northern Mongolia is home to several unique salmonid species which are believed to be declining due to the rapid industrial development currently taking place in Asia. Until recently, there has been an absence of scientific literature describing the diets of lenok (*Brachymystax lenok*), Baikal grayling (*Thymallus baicalensis*) and Hovsgol grayling (*Thymallus nigrescens*), three of the most prevalent salmonids in the watershed. We used a combination of stomach contents and stable isotopes to examine the diets and degree of dietary niche overlap of lenok, Baikal grayling and Hovsgol grayling in lake and stream habitats of the Eg-Uur Watershed. Lenok and grayling exhibited vertical partitioning of prey resources despite differences in prey availability between lake and stream habitats. Benthic prey were consistently more abundant in the diets of lenok, while grayling were more reliant upon prey suspended in the water column or near the water’s surface. Within stream habitats, prey availability was positively related to diet overlap, suggesting that competition is responsible for the resource partitioning we observed. Additionally, our analysis revealed evidence of trophic polymorphism in Hovsgol grayling. The results from this study provide a baseline description of prey utilization and partitioning between lenok and grayling (*Thymallus spp.*) which may be used to guide management and future research of these declining species.