

SPATIOTEMPORAL VARIATION OF FISH ASSEMBLAGES IN MONTANA PRAIRIE STREAMS

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Information on the spatiotemporal variation of fish assemblages in Montana prairie streams is needed to better understand the ecosystem and to enable managers to design more efficient sampling regimes. To assess spatial variation in fish assemblages, we sampled fishes from five streams at nine or ten (dependent on access and permission) longitudinal sites per stream arrayed from the confluence to the headwaters during June and July 2005. To assess temporal variation, a downstream, middle, and headwater site was sampled on each of the five streams in June, July, August, and October 2005, and February and April 2006. Species richness generally decreased from downstream to upstream sites, whether assessing all species or only large river guild species. Increases in species richness at downstream sites may be associated with high flow events. Future evaluations will focus on the spatiotemporal variation of species composition and its relationship to longitudinal position, season, watershed size, and habitat variables.