

ASSESSMENT OF *TUBIFEX TUBIFEX* HABITAT AND *MYXOBOLUS CEREBRALIS* DISTRIBUTION IN PELICAN CREEK, YELLOWSTONE NATIONAL PARK

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The introduced parasite that causes whirling disease (WD) in salmonids, *Myxobolus cerebralis*, poses a significant threat to the Yellowstone cutthroat trout (YCT) population of Yellowstone Lake. Although, numbers of YCT have declined significantly in Pelican Creek, a large spawning tributary to Yellowstone Lake, similar declines have not been observed in other nearby spawning tributaries. Infection risk in Pelican Creek was quantified using infection prevalence in the alternate host, *Tubifex tubifex* (Oligochaeta: Tubificidae) and compared with infection prevalence and severity in sentinel fish. The development of tubificid habitat assessment and detection tools based on variation among tubificids and habitat in the Pelican Valley are in progress. Uniform (100%) infection prevalence and high infection severity in sentinel fish suggested that WD risk was high among sites in the Pelican Creek watershed. In contrast, patchy patterns of infection in tubificids suggested that *M. cerebralis* does not have uniform distribution throughout the watershed. Thus, the highly variable patterns of tubificid and infected tubificid abundance relative to habitat type warrants further investigation. Knowledge of the distribution of *M. cerebralis* is important for understanding the factors affecting WD risk and YCT population declines, and to facilitate YCT conservation efforts within Yellowstone National Park.