

As one of nature's best hitchhikers, the New Zealand mud snail (NZMS) (*Potamopyrgus antipodarum*) has infiltrated rivers, lakes, and watersheds across the Pacific Northwest since 2002, catching rides on recreational gear and fishing boats. Since its eruption in 1980, Mount St. Helens has been a delicate, recovering environment, making it vulnerable to invasive species. After the NZMS's appearance in rainbow trout (*Oncorhynchus mykiss*) gut contents in Spirit Lake in 2015, the ecological effects of NZMS on the lake and its tributaries were studied by mapping the spatial extent and relative abundance of NZMS and native snails in lake sediment, on aquatic plants, and within fish digestive tracts. Preliminary findings show that NZMS are found at their highest densities along the shallow southern shorelines of Leech Cove and Duck Bay within Spirit Lake. NZMS abundance in rainbow trout guts is consistent with macrophyte sampling data – indicating that the snails are a main food source for rainbow trout where NZMS abundance is high. No evidence of interspecies competition between NZMS and the native snails was observed – where NZMS were at their highest densities, native *G. deflectus* snail counts were comparable, occupying the same aquatic macrophytes as habitat. While NZMS have yet to colonize downstream of Spirit Lake, the recently proposed US Forest Service in-water maintenance staging area may act as a vector. The long-term effects of NZMS on Spirit Lake ecology remains unknown, but actions for limiting the spread of this species must be fully considered during future lake management decisions.