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Dietary Assessment of Yellowstone Cutthroat Trout in Yellowstone Lake, Yellowstone National Park

The Yellowstone cutthroat trout (YCT, *Oncorhynchus clarkii bouvieri*) population in Yellowstone Lake is the largest inland cutthroat trout population in the world. An intensive monitoring program has been in place for the YCT population since the middle of the 20th century; however, diet data have been assessed only sporadically through time. Our objective was to assess YCT diet throughout the ice-free season to determine the relative importance of prey items. Fish were captured by gill nets and trap nets during the 2011 season. Diets were sampled in three seasons: pre-stratified (before 1 August), stratified (1 August – 20 September), and post-stratified (after 20 September). Stomach contents were assessed by frequency of occurrence and mean proportion by weight (MPW) for each taxonomic group. Ontogenetic shifts in diet occur for many fish species; therefore, diet was also assessed by 100-mm length groups. Preliminary results indicated amphipods are the most important prey item in both the pre-stratified and stratified seasons for all ontogenetic length groups. Amphipods composed 0.76 and 0.80 MPW for pre-stratification and stratified seasons, respectively. Chironomids were important in the pre-stratified season (0.15 MPW) and were less important during the stratified season (0.04 MPW). Conversely, *Daphnia spp.* composed a larger proportion of the diet in the stratified season (0.08 MPW) than in the pre-stratified season (< 0.001 MPW). These data will allow for diet comparisons to previous years and contribute to an ongoing study evaluating diet overlap between Yellowstone cutthroat trout and introduced lake trout.