




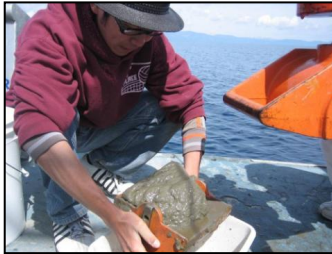








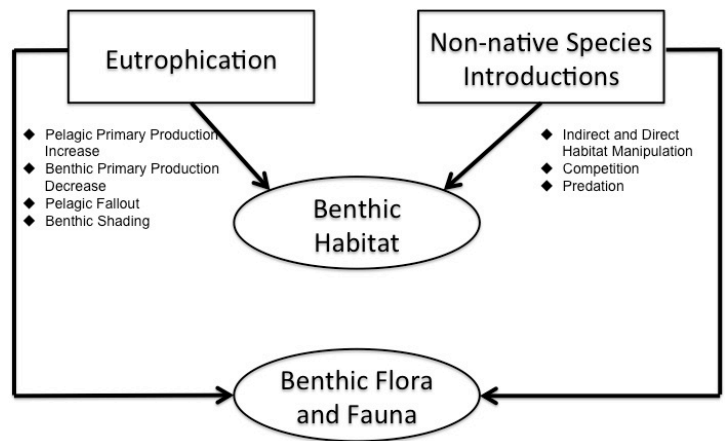
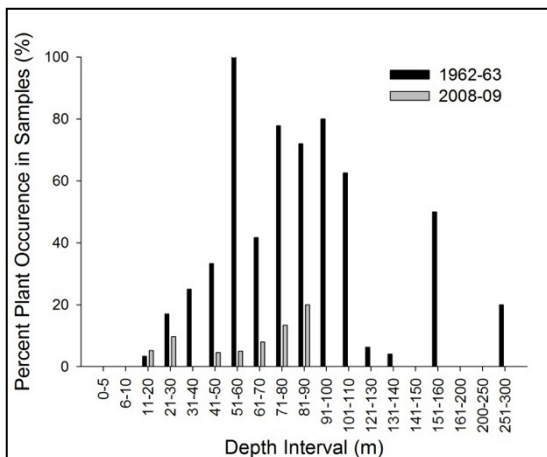
Four decades of change: dramatic loss of zoobenthos in an oligotrophic lake exhibiting gradual eutrophication

Major declines in the density of benthic invertebrates and the detection of aquatic plants were found between surveys conducted in the 1960s and late 2000s.

	Benthic Invertebrate	Preferred Habitat	Percent Change Since 1960s	
	Blind Amphipod*	Silt, Plants	-99.9%	
	Tahoe Deepwater Stonefly*	Plants	-94%	
	Tahoe Flatworm*	Plants	-99.9%	
	Tahoe Seed Shrimp*	Plants	-83%	
	Segmented Worms*	Near Plants	-57%	
	Non-biting Midges	Sand, Gravel	-34%	
	Water Mites	Plants	-80%	
	Pea Clams	Plants	+230%	
	Snails	Plants	-55%	

*Indicates endemic (only found in Tahoe) benthic invertebrates

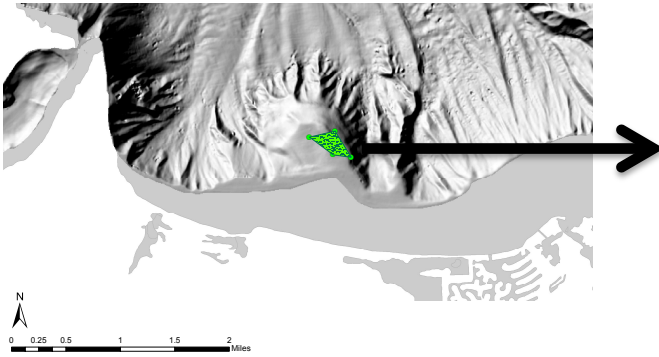
The decline in native and/ or endemic plants and invertebrates is thought to be related to the decrease in clarity in the lake and increase in numbers of non-native species (e.g. crayfish) which migrate along the bottom for feeding.



Understanding more about deepwater sensitive species in Lake Tahoe

Two hotspot areas of endemism have been identified in the southern part of Lake Tahoe: Camp Richardson (35 m depth) and the South Shore Mound (50 m depth). The Camp Richardson hotspot area contains a large area (~1/3 sq. mi.) of native skunkweed (*Chara* spp.), which is important habitat for endemic benthic invertebrates.

Current Diver-Delineated Extent of Camp Richardson Chara Beds



Linking light and invasive species to the decline of native species in the lake.

Our preliminary research suggests that light levels are insufficient for skunkweed growth at depths greater than 60 meters, linking the loss of clarity to plant habitat. In addition, nonnative crayfish readily consume native moss and skunkweed.

Cutting edge research suggests unique characteristics of Tahoe's endemic stonefly.

The Tahoe deepwater stonefly (*Capnia lacustra*) shows life-history characteristics that differ greatly from other stonefly populations around the world. First, it exhibits two staggered generations per year (reproduction occurs in May and November). Second, it gives live birth to young, an extremely unique phenomenon in stoneflies.

