

Susquehanna River and West Branch Susquehanna River

2014 Young-Of-Year Black Bass Survey

Young-of-year (YOY) or recently spawned and hatched black bass (*Micropterus* species) are surveyed annually by Division of Fisheries Management staff at major rivers statewide as an index of reproductive success. Since 2005, this index has also been used to determine incidence and prevalence of disease affecting YOY Smallmouth Bass *Micropterus dolomieu* in the Susquehanna River system as well as for detection in areas where this condition has not been noted historically.

Division of Fisheries Management staff from Areas 3, 4, 6, and 7 surveyed YOY black bass (primarily Smallmouth Bass) in the West Branch Susquehanna River, upper Susquehanna (North Branch), lower Susquehanna, and middle Susquehanna River, respectively. Surveys were conducted using backpack electrofishing gear and targeted near-shore, gravel and cobble habitats favored by YOY Smallmouth Bass that, for the most part, have been historically annually sampled.



Division of Fisheries Management staff conducting a YOY black bass survey

Sampling results exhibited variation by river and reach during 2014. The high stream flows in late-June and early-July negatively affected YOY Smallmouth Bass densities, which is common among riverine Smallmouth Bass populations. Sampling on the West Branch Susquehanna River, upper Susquehanna River (North Branch) and middle Susquehanna River yielded catch rates below long-term medians (Figures 1-3, respectively). Contrarily, the lower Susquehanna River catch rate was above the historic median (Figure 4).

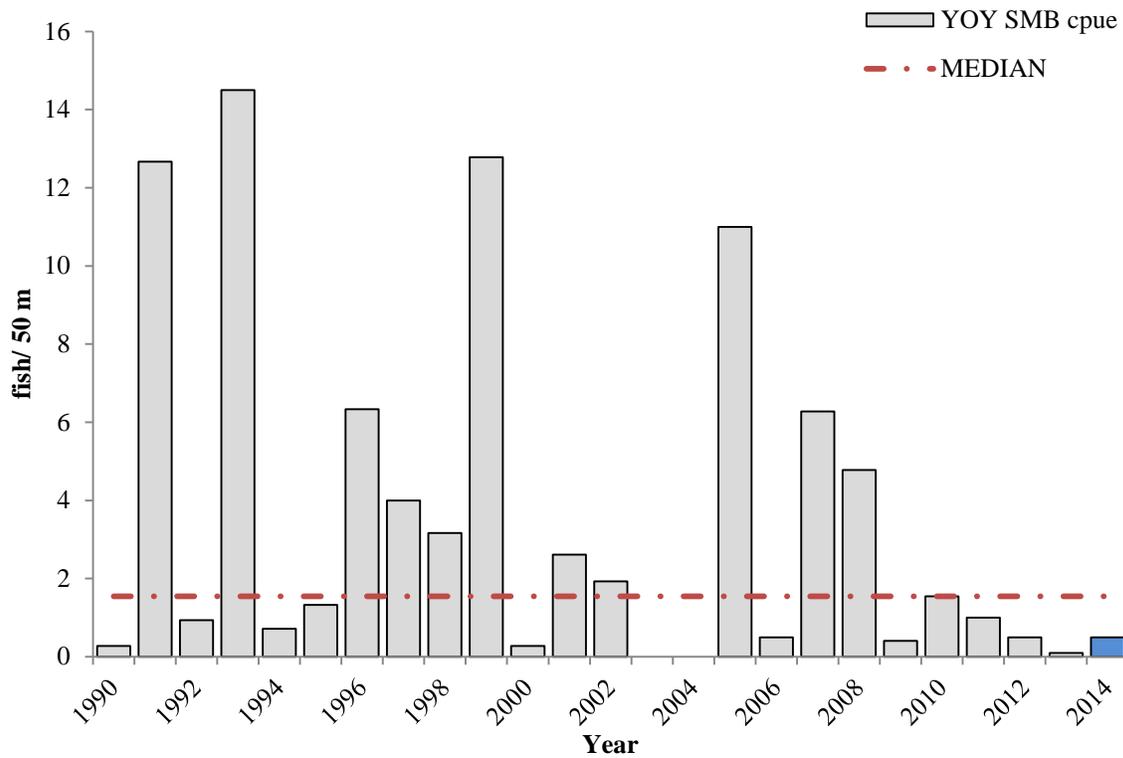


Figure 1: Catch rate of young-of-year Smallmouth Bass at the West Branch Susquehanna River.

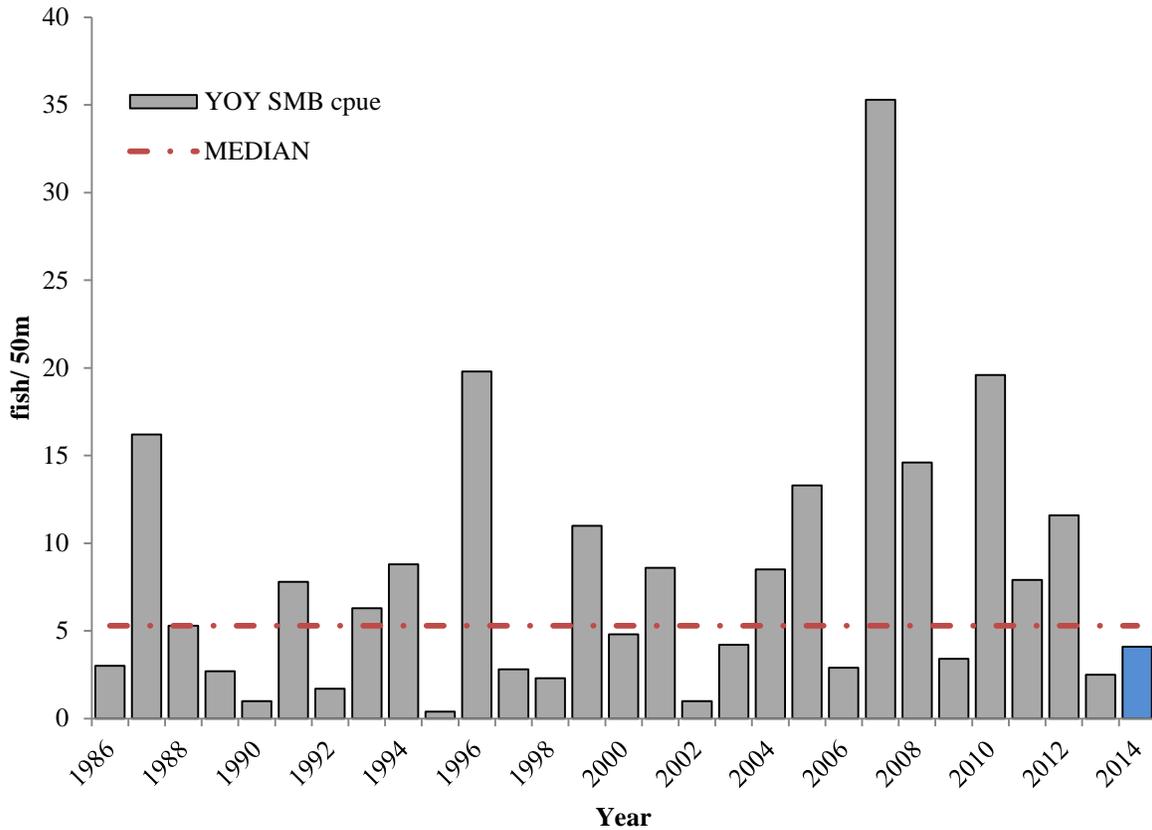


Figure 2: Catch rate of young-of-year Smallmouth Bass at the upper Susquehanna River (North Branch). Blank values indicate years when surveys were not conducted not zero values. Note difference in scale among graphics.

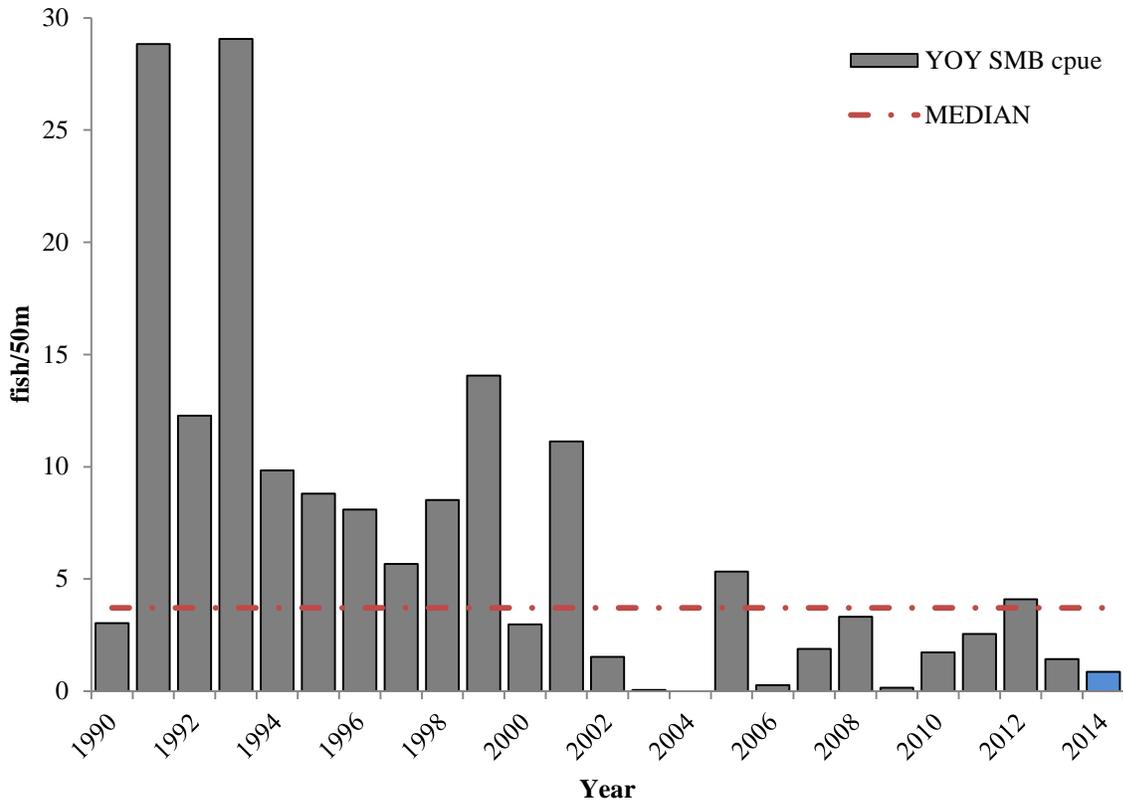


Figure 3: Catch rate of young-of-year Smallmouth Bass at the middle Susquehanna River (Sunbury to York Haven Dam). Blank values indicate years when surveys were not conducted not zero values. Note differences in scale among graphics.

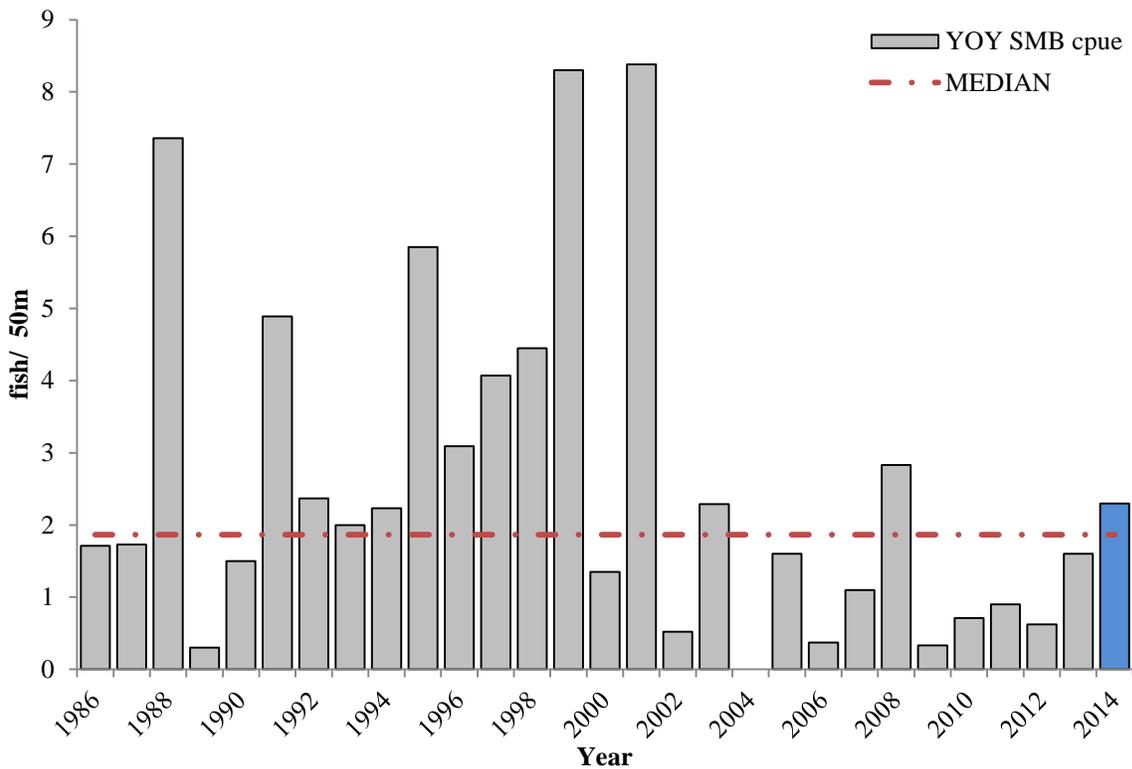


Figure 4: Catch rate of young-of-year Smallmouth Bass at the lower Susquehanna River (York Haven Dam to Holtwood Dam). Blank values indicate years when surveys were not conducted not zero values. Note differences in scale among graphics.

Prevalence of disease among YOY Smallmouth Bass sampled in 2014 was highest in the middle Susquehanna River (Figure 5). At the time of the initial surveys, there was no reported incidence of disease at the West Branch Susquehanna River. Follow-up surveys documented disease at two locations at the West Branch Susquehanna River; however, prevalence was not quantified.

Future boat electrofishing surveys targeting adult Smallmouth Bass will provide further insight into the survival and contribution level of the 2014 year class to the catchable bass population in the West Branch Susquehanna River and various reaches of the main-stem Susquehanna River.

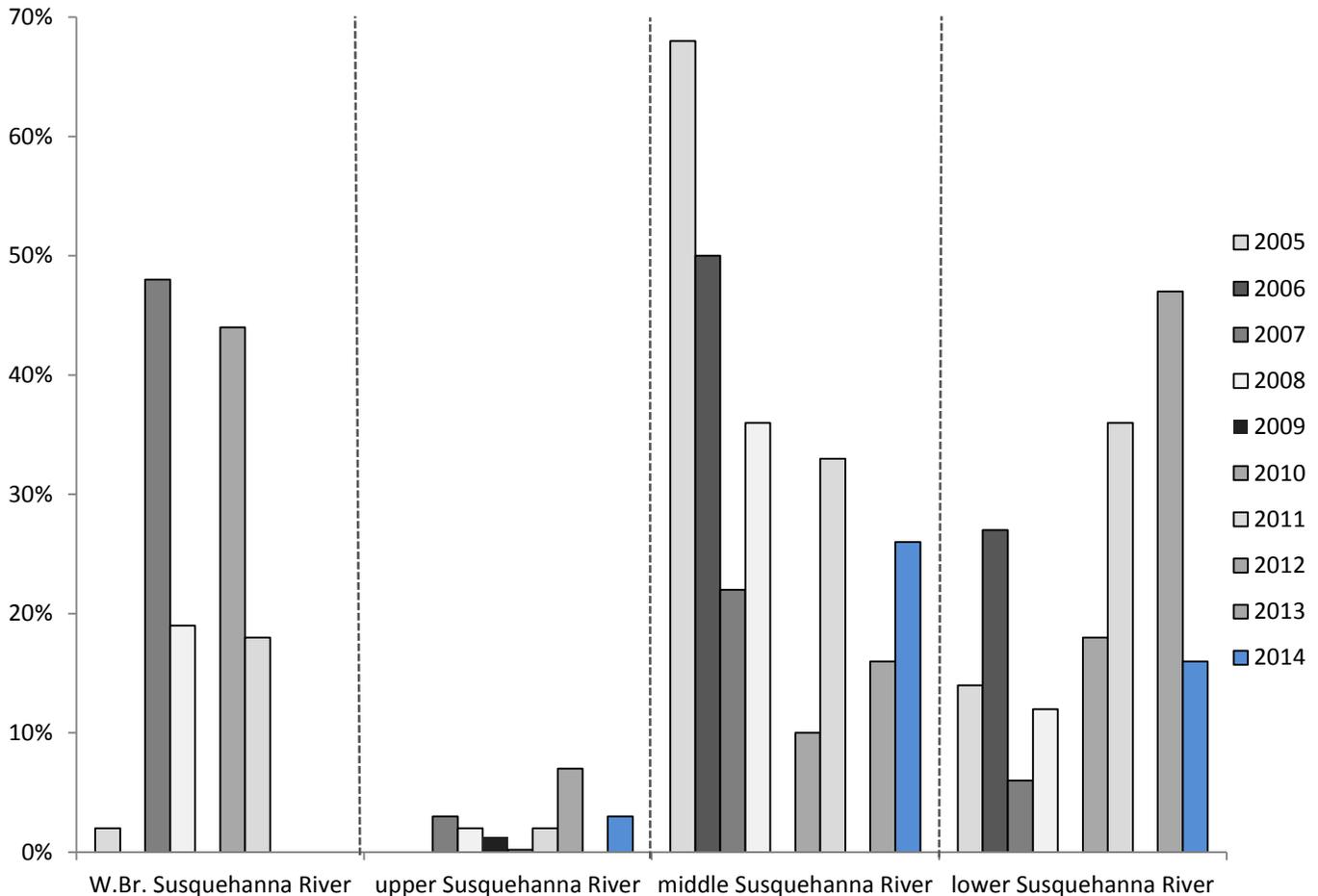


Figure 5: Prevalence of disease among YOY Smallmouth Bass captured since discovery in 2005. Results depict disease prevalence from collections on the West Branch Susquehanna River and various reaches of the Susquehanna River. Due to small sample sizes during some years, prevalence values reported are considered site-specific and cannot be extrapolated to be representative the entire population.