

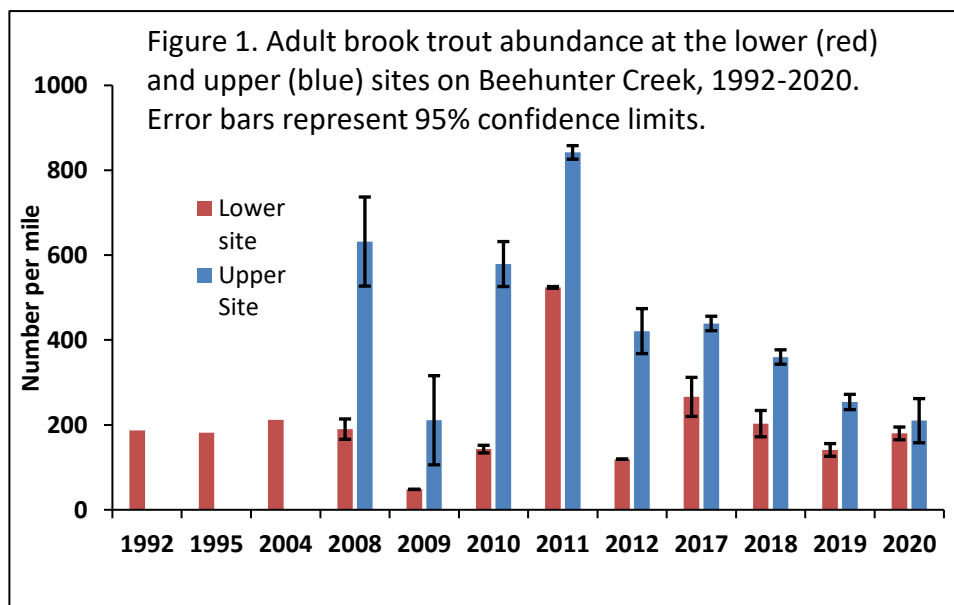
Beehunter Creek Trout Population Estimate

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Beehunter Creek, a tributary of Red House Lake in Allegany State Park, provides a fishery for wild brook trout. This is a small, infertile stream, averaging 15 feet in width, containing large-boulder adult trout habitat typical of Allegany State Park streams. As part of region-wide trout population monitoring, two sites were sampled by electrofishing in mid-June 2020. Both sites had been sampled yearly from 2008 to 2012 and from 2017 to 2019. Additionally, the lower site was also sampled in 1992, 1995 and 2004. In 2008-2020, trout population abundance was estimated from two electrofishing passes while earlier surveys utilized single-pass methodology.

In 2020 at our lower site (675 feet long), we captured 23 adult (yearling and older) brook trout along with 14 young-of-year (YOY). This resulted in an adult brook trout population estimate of 180 fish/mile (± 15). At our upper site (600 feet long), we captured 23 adult brook trout and three YOY, resulting in an adult brook trout population estimate of 210 fish/mile (± 52). Adult brook trout captured ranged from 4.0 to 8.9 inches long.

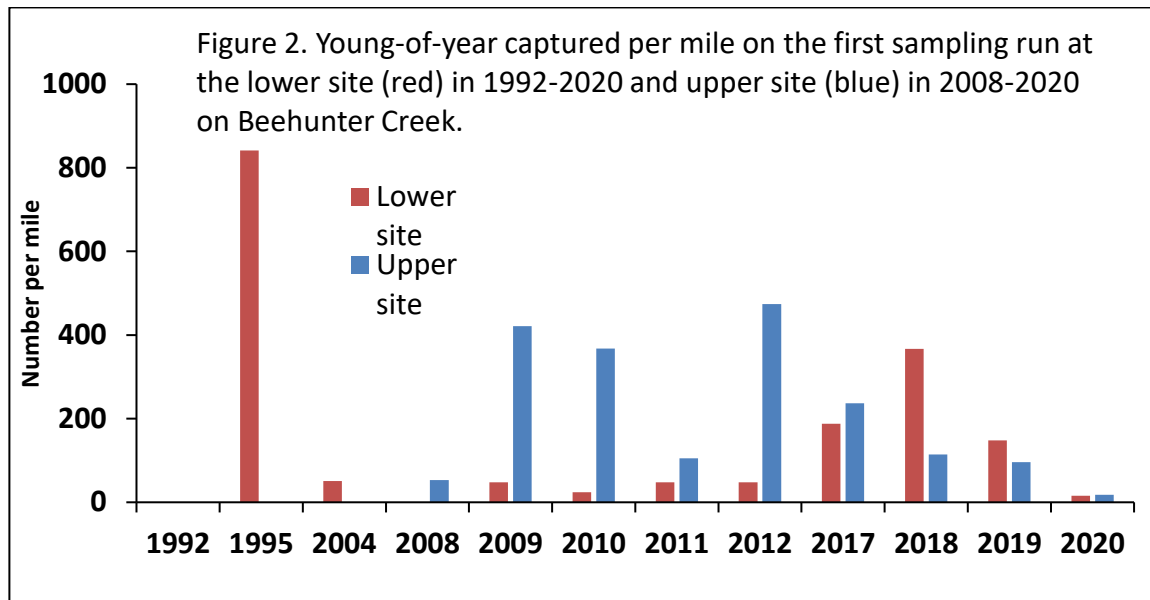


Adult wild brook trout populations typically show substantial year to year variation caused by the influence of winter and spring flooding on the success of previous year's reproduction (Dauwalter et al. 2009, Warren et al. 2009, Grossman et al. 2012). For adult wild brook trout neither sampling site showed any long-term trends through all sampling years, however both sites showed decreasing trends from 2017 to 2020 (Figure

1). Reproduction of brook trout (number of YOY/mile captured on the first shocking run) at both sites in 2020 was among the lowest we have measured (Figure 2). This may have been due to the very cool conditions in April and May this year, that appears to have resulted in YOY being much smaller than average for mid-June and thus more difficult to capture. Visual observations on the stream later in the summer by the author indicated YOY were relatively numerous in our sampling sites. Based on this year's sampling, Beehunter Creek should continue to provide good fishing for anglers wishing to pursue wild brook trout in a scenic, forested setting. Brook trout from this naturally infertile stream seldom exceed eight inches and these fish may take at least 3-4 years to reach this size. This combined with naturally low overall adult population abundance



means anglers are encouraged to limit their harvest of brook trout to provide sustained quality fishing in future years. No changes to management or regulations are expected for Beehunter Creek based on the 2020 state-wide Inland Trout Stream Management Plan.



Literature Cited

Dauwalter, D.C., F.J. Rahel and K.G. Gerow. 2009. Temporal variation in trout populations: Implications for monitoring and trend detection. *Transactions of the American Fisheries Society*, 138:38-51.

Grossman, G.D., A. Nuhfer, T. Zorn, G. Sundin and G. Alexander. 2012. Population regulation of brook trout in Hunt Creek, Michigan: a 50-year study. *Freshwater Biology*, 57:1434-1448.

Warren, D.R., A.G. Ernst, B.P. Baldigo. 2009. Influence of spring floods on year class strength of fall and spring spawning salmonids in Catskill Mountain streams. *Transactions of the American Fisheries Society* 138: 200-210.