Otsego Lake fry sampling, 2013

Holly A. Waterfield, CLM and Matthew F. Albright, CLM

INTRODUCTION

Walleye stocking began in 2000 to re-establish a population of the popular game-fish, which would take advantage of the abundant forage provided by alewife (Cornwell 2005). Alewife are known to prey heavily on walleye fry; given the low abundance of alewife in recent years (Waterfield and Cornwell 2014), it is plausible that natural recruitment of walleye is occurring in Otsego Lake. Walleye spawning has been thoroughly documented (i.e., Foster et al. 2011), though no work has been done to document their recruitment. The intent of this survey was to qualitatively assess the success of walleye spawning in the streams tributary to Otsego Lake. The presence of fry would indicate successful spawning by adult walleye, hatching of eggs, and migration of fry into open waters.

METHODS

On 28 and 29 May, thirteen five-minute tows were performed following guidance from T. Brooking (Pers. Comm.) for a total tow time of about 40 minutes; approximate locations are illustrated in Figure 1. A 1-meter diameter net with 1mm mesh and an attached sample cup was used to collect qualitative samples for fry presence. Tow depth was approximated, ranging from roughly 1 meter below the surface to a depth of 4 meters. No estimates of volume sampled were generated, though distance and tow track were recorded via GPS. Aqueous samples were processed within 24 hours; rose bengal was used to aid in the separation of fry from zooplankton. Zooplankton were discarded, fry were preserved with 70% ethanol and sent to T. Brooking at Cornell Biological Field Station for identification.

RESULTS & DISCUSSION

Samples were dominated by zooplankton, primarily Daphnia spp., though fish fry were collected from many tows. In total, 40 fry were collected (total tow time about 40 minutes), ranging from 6 to 10mm in length. Anecdotally, the greatest abundance of fry occurred in tows with lower zooplankton abundance. Fry were not positively identified to species level, though they were decidedly not walleye fry (Brooking, pers. comm.). NYS DEC staff have suggested that effort should be focused on further investigation of potential walleye recruitment in Otsego Lake; 2014 surveys should include use of a miller sampler for fry sampling.
Figure 1. May 2013 tows to assess presence or absence of walleye fry in Otsego Lake, NY.

REFERENCES

Brooking, T.E., Personal Communication. Cornell Biological Field Station at Shackelton Point, NY. Cornell University.

