

Bug Lake Round Whitefish Stocking Evaluation (Survey #517918)

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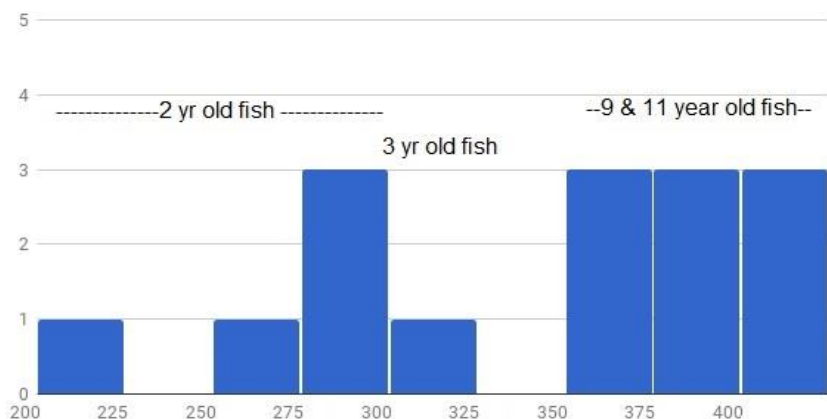
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Bug Lake is an 88.5-acre pond and has a maximum depth of 75 ft. It is in the Black River watershed in Hamilton County and can be accessed on a hiking trail one mile from the Eighth Lake Campground, and canoes are often carried-in. Bug Lake is one of 19 ponds in the Adirondack region that were chosen by the DEC for stocking of the state endangered round whitefish (*Prosopium cylindraceum*) based on its status as a historic water and current acceptable pH (Steinhart 2007). Round whitefish were endemic to this pond until the pond became compromised by invasive species and was then treated with rotenone in 1957 to remove all fish. Following reclamation, Bug Pond was stocked with cold water sportfish, including sockeye salmon (*Oncorhynchus nerka*), lake trout (*Salvelinus namaycush*), and brook trout (*Salvelinus fontinalis*). Fathead minnow (*Pimephales promelas*) were documented in lake trout stomachs in a 2011 survey, and there are anecdotal reports of rainbow smelt (*Osmerus mordax*), golden shiners (*Notemigonus crysoleucas*) and northern redbelly dace (*Chrosomus eos*) having been present at the time of a 1995 survey. Rainbow smelt are considered competitors of round whitefish, and golden shiners are competitors of brook trout.

A 2005 survey of Bug Lake with 18 gill net sets detected no round whitefish, but lake trout, brook trout and sockeye salmon were collected. Subsequently, DEC stocked Bug Lake with 1,700 and 1,200 young of year round whitefish in 2006 and 2008, respectively. Additional gill net surveys that confirmed survival of the two stockings were conducted in 2011 and 2013, but no unstocked year classes were detected at that time.

In August 2017, a single overnight gill netting effort was undertaken to sample for round whitefish survival and recruitment. Fifteen round whitefish were caught, of which six were wild recruits, between 8.0 and 12.0 inches (202 and 303 mm) total length. The remaining nine were stocked 9- or 11-year old fish between 14.2 and 16.3 inches (360 and 413 mm) total length. Otoliths were collected from seven representative fish and used to assign age-length categories for all fish captured. Length-at-age data indicates favorably fast growth. In addition to the round whitefish, nine brook trout 8.0 to 17.8 inches (204 to 452 mm) and nine lake trout 21.1 to 26.0 inches (535 to 660 mm) were caught. A large school (200+) of fathead minnows, including several

Figure 1. Number of Round Whitefish in size groups, as total length (mm), and estimated ages caught in Bug Lake, 2017.



apparently leucistic or albino individuals, was additionally observed near the shoreline of the lake, confirming the previous observation from 2011. No rainbow smelt, golden shiners, or sockeye salmon were captured in the current survey. However, a large sockeye salmon was reported by an angler earlier in the summer and the last one to be stocked was 2001, indicating natural reproduction is likely occurring.

Figure 2. The smallest Round Whitefish (202 mm) caught in Bug Lake, a wild 2-year old recruit.



Although this lake was only stocked with round whitefish on two occasions, this species appears to be thriving here. The presence of two- and three-year old round whitefish documents that natural reproduction has been achieved. The Round Whitefish Recovery Plan contained within the Steinhart (2007) report has a goal of 10 naturally reproducing round whitefish populations in New York Waters. The documentation of reproduction in Bug Lake brings the current total number of self-sustaining populations to nine. Continuing management actions should include posting signs for anglers about this special species to heighten awareness (protected from harvest) and possibly reduce chances for bait bucket releases of more invasive species.

Literature Cited

Steinhart, G.B., M. Mineau and C.E. Kraft. 2007. Status and recovery of Round Whitefish (*Prosopium cylindraceum*) in New York USA. Final report to State Wildlife Grant T-3-1, NYSDEC, Bureau of Wildlife, Albany, NY. 59 pp.