Eastern Georgian Bay Stewardship Council

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Go Home Bay
Walleye Re-introduction Project

Eastern Georgian Bay Stewardship Council

July 27, 2010

Walleye summer fingerlings planted in Go Home Bay, July 2010

Introduction

In 2007, the Eastern Georgian Bay Stewardship Council (EGBSC) formulated a Spawning Habitat Rehabilitation Program (McIntyre, 2008). Since 2007, the Council has focused on walleye rehabilitation efforts in south-eastern Georgian Bay in an area stretching from the Moon River in the north to Severn Sound in the south.

One of the sites identified for walleye rehabilitation was Go Home Bay, including the portion of Georgian Bay known as the Go Home River. The Go Home Bay Chutes at the eastern extremity of Go Home Bay has been identified as a former walleye spawning site. However, spawning assessment work conducted in 2009 indicated no walleye spawning activity was occurring at the site (McIntyre, 2009a).

As part of a walleye re-introduction project, in the fall of 2009 extensive enhancement of the Go Home Chutes walleye spawning bed was conducted (McIntyre, 2009b). It is intended that walleye fingerling plantings will be made at Go Home Bay for a period of two to three years for the purpose of 'seeding' the Go Home Bay Chutes spawning site and creating a self-sustaining walleye population in the area. This report documents the initial efforts of the stocking portion of the re-introduction program.

Methods

Walleye eggs were collected in the spring of 2010 from the Port Severn walleye stock. The egg collection was conducted by members of the EGBSC in conjunction with an index-spawners survey under the auspices of the MNR's Upper Great Lakes Management Unit (MNR). Gravid walleye caught in trap-nets used for the MNR survey were transferred to an adjacent boat manned by EGBSC members and spawned on site.

The EGBSC contracted Cedar Brook Farms hatchery (near Victoria Harbour) to incubate and culture the eggs to the summer fingerling stage. At this stage, walleye fingerlings were transported by vehicle to King Bay of Eastern Georgian Bay, and then by boat to various stocking locations in Go Home Bay.

Results

Approximately 100,000 eggs were collected from the Port Severn walleye population.

Hatching success was around 50% with 50,000 emergent fry planted into the ponds at Cedar Brook Farms. Of these, 17,700 summer fingerlings were harvested for re-introductory plantings into Go Home Bay.

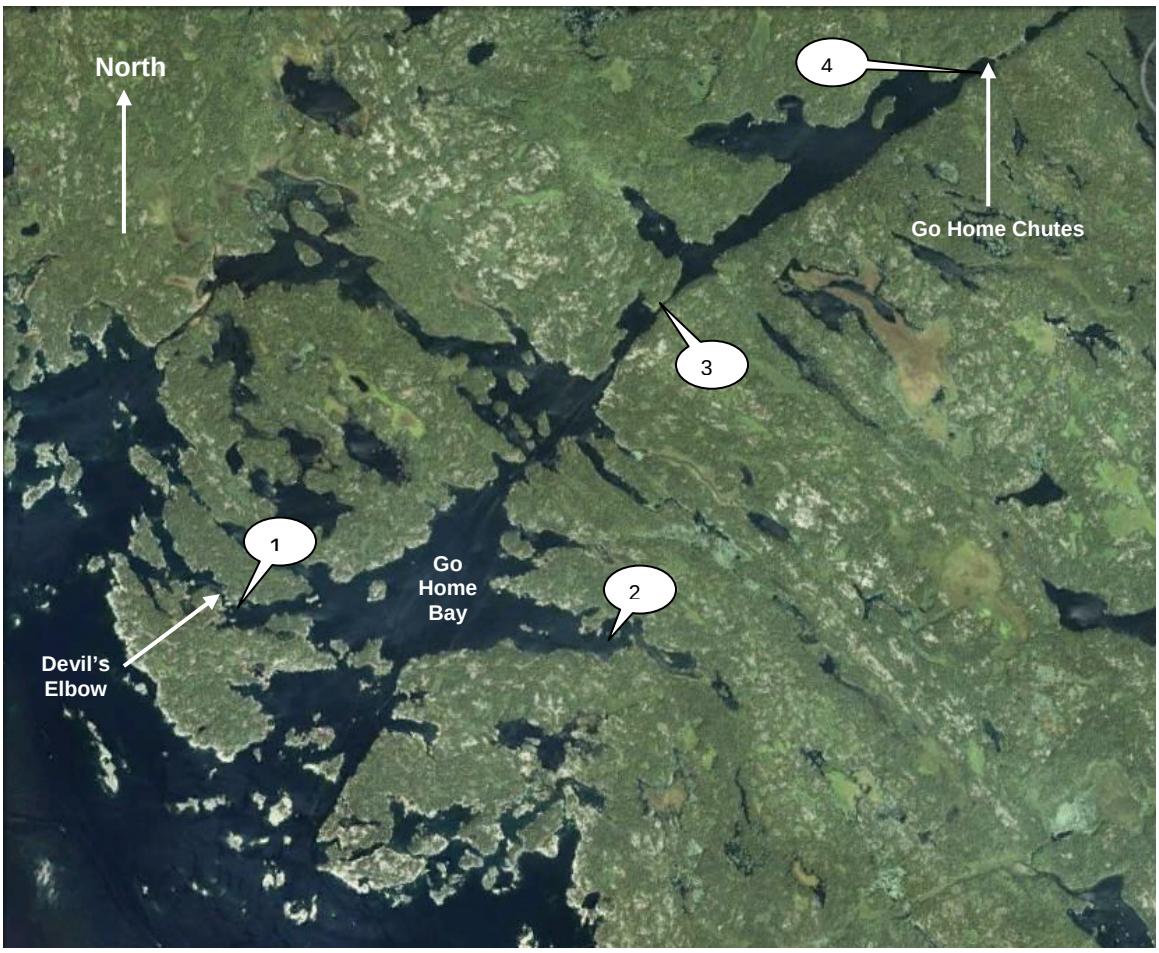
Two plantings of summer fingerlings were made: 6,700 on July 14; and 11,000 on July 19. Average size on July 14 was 0.90 grams, and on July 19 – 1.05 grams. (The photo of walleye fingerlings shown on the cover was taken July 19.)

Walleye stocking location and number stocked was as follows:

1. Eastern inlet to Devil's Elbow – approximately 4,000
2. Eastern arm of Go Home Bay – approximately 2,000
3. Narrows in the Go Home River – approximately 4,000
4. Go Home Chutes – approximately 7,700

Total planting number: 17,700
(see Figure 1).

Figure 1. Walleye fingerling stocking locations in Go Home Bay, 2010. (Numbers refer to stocking location as indicated above.)



Discussion

There continues to be considerable discussion in fish management circles around the optimal stage and location to stock walleye.

In consultation with Venard Robitaille, manager of the Cedar Brook Farms hatchery, we opted to stock at the summer fingerling stage as we were fearful that extending beyond this stage was likely to result in cannibalism in the culture ponds and a significant reduction of stocking number. We did observe half a dozen or so large cannibals (4 – 5") in amongst fingerlings that were otherwise consistently 2" in length. Stocking at this stage also has the advantage of allowing walleye to convert to a pisciverous (fish) diet that results in a highly accelerated growth rate. This growth is critical in assisting walleye through their first winter of life which can be is a stage of high mortality.

Sites 1 and 3 were selected for stocking as they are locations where considerable current exist. Past experience indicate young-of-the-year walleye prefer locations where current is present.

Site 2 was an area of extensive submergent vegetation. Such sites offer a high degree of cover for fingerling walleye, although they also tend to harbour a higher density of predatory fish.

Most fingerlings were stocked in the vicinity of Go Home Bay Chutes. Because it is intended stocked fish will return to the Chutes to spawn in the future, stocking nearby will help to imprint walleye to the site. Furthermore, suitable nursery habitat is located immediately downstream of the chutes in the form of macrophyte beds (aquatic vegetation) and current is also present.

It is intended that similar re-introductory plantings in the Go Home Bay will continue in 2011.

Acknowledgements

We express immense gratitude to Venard Robitaille of Cedar Brook Farms hatchery for the excellent number of walleye produced this year. Venard was instrumental in the egg collection and all facets of culturing walleye until their release. Thank you Venard for a job well done!

Thanks also to Terry Crawford for assisting in the egg collection and his sage advice throughout the culture period.

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Literature Cited

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