Results of a Summer Profundal Index Netting (SPIN) Survey Conducted on Otter Lake in 2013

File Report

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Bracebridge, Ontario

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Otter Lake is a medium-sized (510 ha) lake located in Foley Township. It has a relatively high maximum depth (Z_{max}= 45 m) but only moderate mean depth (Z_{mean} = 11 m) due to the complex shape of the lake basin. It is an oligotrophic lake with high water clarity and low nutrient levels (Secchi depth = 5.9 m, TP = 5.8 ug/l, MOE 2011) (Figure 1).

The fish community of the lake is fairly diverse; the dominant sport fish species being smallmouth bass, northern pike and lake trout. Black crappie were introduced recently (1999). Cisco, rainbow smelt (introduced), yellow perch, white sucker, rock bass and pumpkinseed also occur.

Otter Lake is currently designated for management for a naturally reproducing lake trout population. Regular supplemental stocking occurred from the 1950's to 1998 but was discontinued to eliminate potential impacts of stocking on the native population. The open season for lake trout is restricted to the third Saturday in May to September 30 and no lake trout may be retained between 40 and 55 cm in length in order to protect the population from over-exploitation.

Several assessments of the lake trout population have been completed. The most recent lake-wide population index was done in 1999 (McIntyre 1999). The Spring Littoral Index Netting (SLIN, Hicks 1999) survey caught 10 lake trout of which 9 were of hatchery origin. The catch indicated a low population abundance, particularly of native fish. Earlier assessments in 1976, 1977 and 1990 caught small proportions of, or no, natural fish as well (Deary Environmental Consultants 1990, Thurston 1976 and 1977). More recently, observations of spawning activity were done in 2002 and 2005 following a spawning shoal enhancement project in 2001 (McIntyre 2002, 2005). Three unclipped lake trout were observed in 2005.

Despite the poor representation of native fish in catches, the lake appears to provide habitat that is capable of supporting a self-sustaining population. The mean concentration of oxygen in the hypolimnion, a measure of the amount and quality of habitat, particularly for juvenile lake trout, has been measured several times. The average measurement in late summer has been 7.1 ppm; a moderately high level. However, the proportion of the lake that provides that deep water juvenile habitat is relatively small, which limits the potential size (and lake-wide density) of the population. The complex bathymetry, with numerous basins, islands and bays is probably also a limiting factor as the habitat for lake trout is fragmented, but is favourable to other competitors, such as northern pike and smallmouth bass. The high water clarity is also favourable to lake trout.

A Summer Profundal Index Netting (SPIN) survey was conducted in 2013 to obtain information on the current status of the lake trout population.

Methods

The SPIN protocol was followed (Sandstrom and Lester 2007). Gear consisted of gangs of eight panels of clear mono-filament gill net; each panel was 1.8 m high and 8.0 m long. Panel mesh sizes were 2.25 2.50 2.75 3.00 3.50 4.00 4.50 and 5.0 inch stretch measure, randomly arranged. Net sets consisted of single-gang straps. Nets were allocated to different depth strata (6-10 m, 10-20 m, 20-30 m, 30-40 m and >40 m), with the number of sets approximately proportional to the area in each stratum. Nets were set for two-hour periods.

Captured fish had standard biological attributes measured.

A temperature and dissolved oxygen profile was collected to determine the depth of the thermocline at the time of netting and bathymetric data was collected.

Tissue samples were collected from lake trout that did not survive the netting process and submitted to the MOE for analysis of contaminants, primarily mercury. Results will appear on the MOE Guide to Eating Ontario Sportfish.

Lake trout density and abundance estimates were generated using the SPIN Support Spreadsheet (ver. 9.07). Raw catch data were corrected for net selectivity, and weighted by stratum areas to produce a whole-lake catch-per-unit-effort (CUE). The CUE was converted to number and biomass estimates using calibration formulas developed for this netting protocol.

Project data is stored in FISHNET3 as PSD_IA13_OTTER.

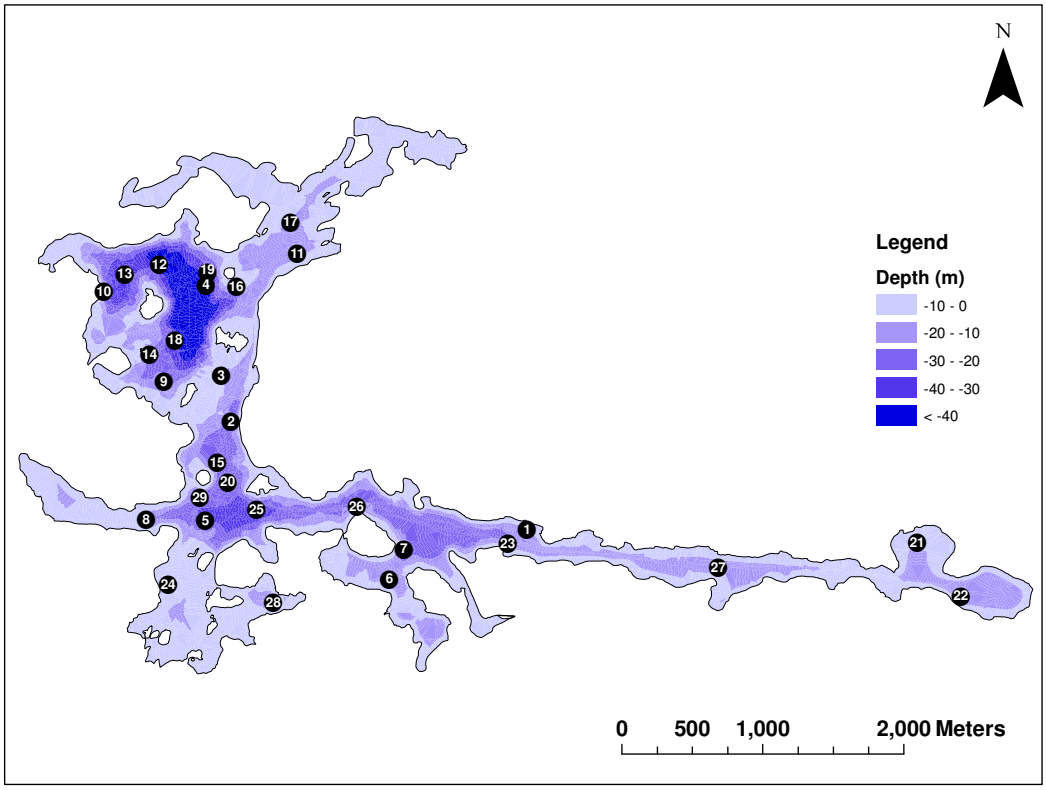


Figure 1 Map of Otter Lake showing bathymetry and net set locations, 2013.

Results

Netting occurred on July 17, 18 and 22, 2013. At the time of netting the thermocline was well defined and occurred from approximately 6 to 10 m deep (Table 1). The dissolved oxygen level was above the threshold for optimal use by lake trout (6 ppm) to at least 28 m deep (the deepest point at which a measurement was recorded), and probably to the bottom of the lake.

A total of 29 net sets were completed over three days of netting (Table 2, Figure 1); three sets were in the 3-10 m stratum, twelve in 10-20 m, eight in 20-30 m, three in 30-40 m and three in greater than 40 m. One net set was tampered with (Set 26) and did not fish effectively.

A total of nine lake trout, five cisco, two white sucker and seven smallmouth bass were caught (Table 3). No lake trout were caught in the sets in the thermocline (3-10 m stratum); four were caught in the twelve 10-20 m sets, four in the eight 20-30 m sets; one in the 30-40 m set and none in the three 40-50 m sets. The bass and suckers were caught primarily in the shallowest sets, where the nets approached or crossed the interface between the epilimnion and thermocline. Their catches are considered incidental and do not reflect their abundance in the lake.

Four of the lake trout had fin clips, indicating they were of hatchery origin (Table 4). All were large individuals, ranging from 657 to 745 mm total length. One had an adipose fin clip and was determined to be 16 years old. Three had a left pelvic clip and were 20 years old. These ages and clips correspond to the last two stocking events in 1994 and 1998.

Table 1 Temperature and dissolved oxygen profile, Otter Lake, July 17, 2013.

Depth (m)	Temp. (C)	D.O. (ppm)
0.5	27.5	8.1
1	27.4	8.1
2	26.9	8.4
3	25.8	8.6
4	24.4	9.1
5	21.1	10.2
6	16.6	10.5
7	13.3	9.9
8	11.1	9.7
9	9.9	9.7
10	8.8	9.7
12	8.1	9.7
14	7.4	9.6
16	6.8	9.5
18	6.3	9.3
20	6.0	9.3
22	5.8	9.3
24	5.6	9.1
26	5.4	8.6
28	5.3	7.8

Table 2 Net set details, Otter Lake, 2013.

Effort	Easting	Northing	Set Date	Set Time	Lift Time	Stratum	Depth Start	Depth Mid	Depth End	Effort Status
1	582924	5013276	17/07/2013	09:40	11:45	10	10	16	18	1
2	580824	5014042	17/07/2013	10:20	12:20	20	21	22	19	1
3	580753	5014368	17/07/2013	10:40	12:40	3	7	9	10	1
4	580646	5015008	17/07/2013	11:00	13:00	40	40	43	44	1
5	580644	5013340	17/07/2013	11:20	13:20	20	20	28	30	1
6	581949	5012922	17/07/2013	11:40	13:40	10	14	14	14	1
7	582050	5013136	17/07/2013	12:00	14:00	20	17	22	24	1
8	580221	5013345	17/07/2013	12:10	14:13	10	10	13	12	1
9	580347	5014324	17/07/2013	12:35	14:35	10	13	13	17	1
10	579922	5014963	17/07/2013	13:00	15:00	10	12	17	19	1
11	581294	5015231	18/07/2013	10:10	12:10	10	13	15	16	1
12	580316	5015155	18/07/2013	10:30	12:40	40	42	44	44	1
13	580072	5015087	18/07/2013	10:50	13:00	30	32	32	33	1
14	580248	5014514	18/07/2013	11:10	13:15	20	20	22	25	1
15	580727	5013752	18/07/2013	11:30	13:35	20	24	25	26	1
16	580863	5014998	18/07/2013	11:50	13:54	10	12	16	18	1
17	581246	5015456	18/07/2013	12:20	14:20	10	11	12	15	1
18	580428	5014619	18/07/2013	12:55	14:55	40	44	44	43	1
19	580659	5015097	18/07/2013	13:10	15:10	30	32	35	39	1
20	580802	5013612	18/07/2013	13:30	15:30	20	21	22	26	1
21	585693	5013186	22/07/2013	10:50	12:55	3	7	8	10	1
22	586002	5012804	22/07/2013	11:10	13:10	10	13	13	13	1
23	582788	5013179	22/07/2013	11:30	13:40	10	10	18	20	1
24	580379	5012882	22/07/2013	11:50	13:55	3	7	8	9	1
25	581005	5013415	22/07/2013	12:10	14:10	30	31	31	31	1
26	581716	5013436	22/07/2013	12:30	14:30	20	22	23	23	3
27	584283	5013005	22/07/2013	13:00	15:00	10	10	12	13	1
28	581125	5012759	22/07/2013	13:25	15:25	10	12	12	13	1
29	580605	5013501	22/07/2013	13:40	15:40	20	29	25	20	1

Five lake trout did not have any fin clips. They were also of a large average size, ranging from 532 to 680 mm total length. The assessed ages ranged from 6 to 13 years old, indicating they had all been produced since the cessation of stocking. The three that were lethally sampled were all mature and would be expected to have spawned in the fall of 2013.

Table 3 Catch summary, Otter Lake SPIN, 2013

Effort	Depth Stratum	lake trout	cisco	white sucker	smallmouth bass
1	10	1			1
2	20	1			
3	3				1
5	20	1	3		
6	10	1			
7	20		1		
9	10				1
11	10	1			
13	30	1			
14	20	1			
15	20		1		
16	10	1			
20	20	1			
22	10				1
24	3			2	3
Total		9	5	2	7

Table 4 Individual fish data, Otter Lake SPIN, 2013.

Effort	Species	Fish	Fate	Fork Length (mm)	Total Length (mm)	Round Weight (g)	Sex	Gonad Condition	Fin Clip	Age (years)
1	lake trout	2	R	607	666	3200			no clip	8
2	lake trout	3	R	479	532	1400			no clip	6
11	lake trout	12	D	628	690	3500	F	developing	no clip	9
13	lake trout	13	D	590	650	2700	M	fully dev.	no clip	9
14	lake trout	14	D	620	680	3400	F	fully dev.	no clip	13
5	lake trout	5	R	615	670	2600			left pelvic	20
6	lake trout	9	R	672	722	3700			left pelvic	20
20	lake trout	17	R	674	745				left pelvic	20
16	lake trout	16	D	600	657	3000	M	fully dev.	adipose	16
5	cisco	6	D	261						
5	cisco	7	D	229						
5	cisco	8	D	222						
7	cisco	10	D	227						
15	cisco	15	D	236						
24	white sucker	22	R	550						
24	white sucker	23	R	530						
1	smallmouth bass	1	R	467						
3	smallmouth bass	4	R	375						
9	smallmouth bass	11	R	460						
22	smallmouth bass	18	R	410						
24	smallmouth bass	19	R	260						
24	smallmouth bass	20	R	250						
24	smallmouth bass	21	R	240						

The estimated density and abundance of natural lake trout was 0.5/ha (1.22 kg/ha) or 144 fish (0-603, 68% prediction level). The estimated density and abundance of stocked lake trout was 0.4/ha (1.39 kg/ha) or 123 fish (0-581, 68% prediction level).

All of the stocked fish and four of the five natural lake trout were larger than the upper end of the protected slot size limit and would have been eligible for harvest by anglers (Figure 2).

The five cisco caught ranged from 222 to 261 mm fork length (total lengths were not recorded). Smelt were observed in the stomachs of two of the dead lake trout. The presence of these large forage species results in relatively rapid growth and large ultimate size of the lake trout (Figure 3), compared to lakes where these species are not present.

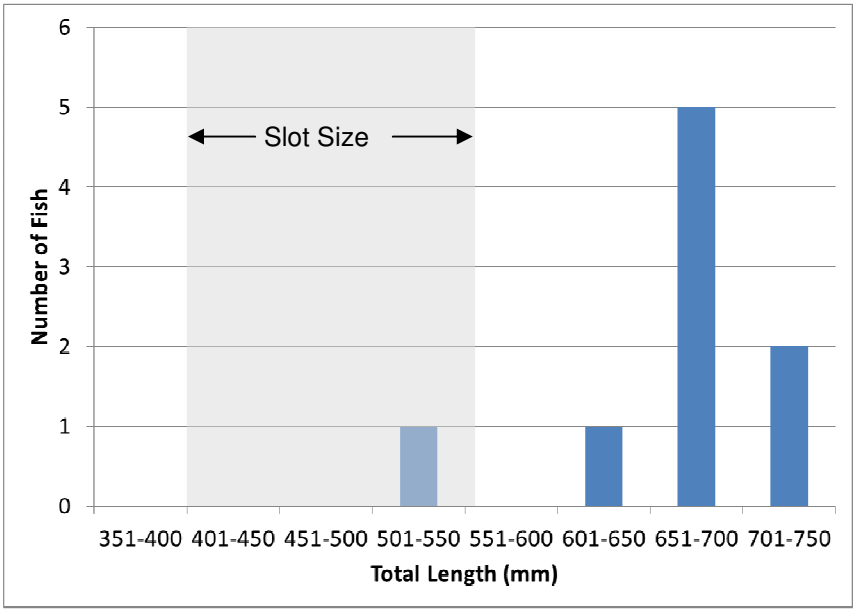


Figure 2 Total length size distribution of lake trout, Otter Lake SPIN, 2013. Shaded area is protected slot size range.

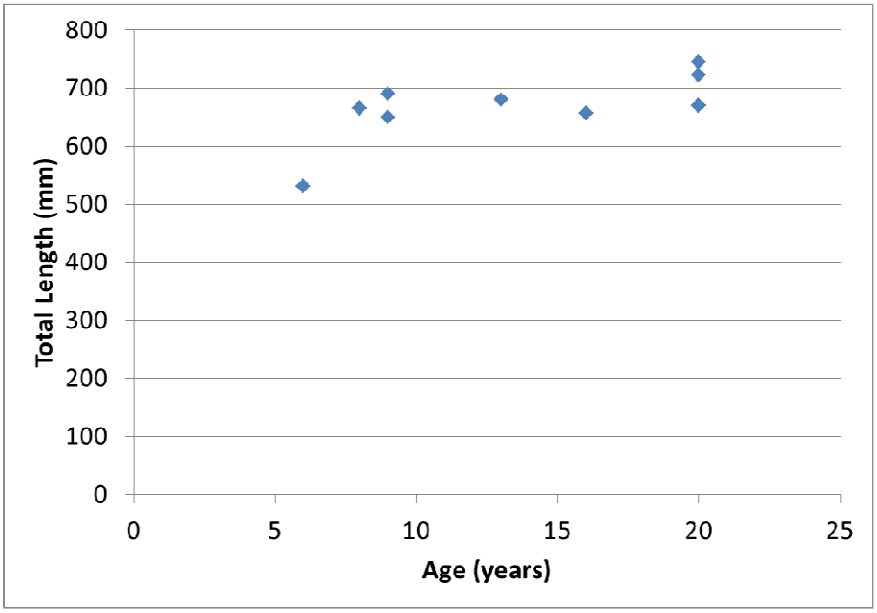


Figure 3 Size-at-age, for lake trout, Otter Lake, SPIN, 2013.

Discussion

The SPIN methodology samples large-bodied species that live in and below the thermocline in the summer. Warm water species such as bass are not typically captured other than as incidental catches. The amount of netting effort in this survey was enough to describe the basic status of the lake trout population. The estimates of abundance had a high level of variability associated with them and additional sampling would have improved the precision of the abundance estimates but it is unlikely that the overall conclusions would change. Much more netting effort would be required to obtain enough samples of individual fish to enable a robust analysis of the population structure (age, composition, mortality, etc.).

Overall, there are 'a few hundred' catchable-sized (>330 mm total length) lake trout in Otter Lake. About half are old stocked fish. The other half are naturally produced fish; most of which have been produced since stocking was stopped. The abundance of lake trout (stocked natural or combined) can be classified as low, based on the biomass estimates (S. Sandstrom, Pers. Comm.). The biomass of a 'good' or 'healthy' population would be expected to be in the range of 5 kg/ha for an exploited population; whereas the biomass in Otter lake was 2.6 kg/ha (natural and stocked combined).

Several nets were set in the shallow east arm and south bay. While some useable habitat occurs in these locations, it is unlikely to be used extensively due to the distance from available deep water. No lake trout were caught there as was expected. These net sets were used to calculate overall population density for the whole lake, as presented above. However, if the east arm and south bay and the net sets in them were removed from the habitat area and catch calculations the density estimate for the remaining 'core' habitat in the central part of the lake would be somewhat higher (although the overall abundance estimate (number of fish) would be similar). That is, the density of lake trout in the central part of the lake would be closer to moderate.

Catch rates between the 1999 and 2013 surveys cannot be directly compared because of the different protocols used. SPIN was developed after 1999 and since that time Spring Littoral Index Netting has fallen out of favour due to a number of limitations (and therefore was not used for this survey). The higher proportion of natural fish in the catch and observation that they were all produced after the last stocking and assessment suggests that the natural population has increased since 1999.

Supplemental stocking was discontinued after 1998. Since then the proportion of stocked lake trout in the population has declined from being mostly stocked fish to about half of the lake trout being stocked. That proportion will continue to decline as the stocked fish age, die and leave the population. As that occurs, the impact of the stocked fish on the natural population will also decline, hopefully allowing the natural population to achieve its full potential. Whether the natural fish simply replace the stocked fish or if overall abundance actually increases remains to be seen.

The 1999 assessment caught a large number of cisco, while this one caught only five. Some of the difference may be due to random variation as most of the catch in 1999 came in only two nets. If those two shoals of cisco had not encountered the nets in 1999 the overall catch would have been low; or, similarly, the SPIN nets could have yielded one or two high catches, but did not. The time of year may have also been a factor; SLIN occurring in spring, and SPIN in summer. However, most of the difference was probably due to net size differences. The SLIN nets are composed entirely of small mesh sizes (1.5 to 2.5 inches), to which small cisco are most vulnerable; whereas SPIN nets have only short panels of these mesh sizes. It is likely that cisco are still common in the lake. They are an important part of the fish community and greatly impact the lake trout population. Lake trout feed on them resulting in the rapid growth to a large average size, compared to lakes where this species is absent. Conversely, lakes with large-bodied lake trout tend to occur at lower densities. The low density and large average size of lake trout observed over several surveys, regardless of whether the lake is stocked, seem to be the natural state for lake trout in this lake.

While previous reports have suggested that the lake trout population is capable of being 'rehabilitated' to a higher abundance than currently, we believe that expectations must be tempered. The complex shape of the lake basin with a fairly small area of deep juvenile habitat and large areas (and shoreline length) of shallower water which favour other species are generally not associated with high abundance populations. Compared to other lake trout lakes of similar size in Parry Sound District, the mean depth of Otter Lake is fairly low, a

reflection of the complex basin shape (Figure 4). McIntyre (1999) also speculated that the abundance of other species may be a factor limiting lake trout abundance. The biomass of other species, as the proportion of the total catch was higher in Otter Lake than other lakes sampled with SLIN in the Parry Sound area. Further evidence of inherent limitations to lake trout abundance is that even with regular stocking the population abundance was fairly low (McIntyre 1999). However, we are hopeful that as stocked fish decline the increase of the natural population will improve the overall abundance somewhat. A follow up assessment in 5-10 years is recommended.

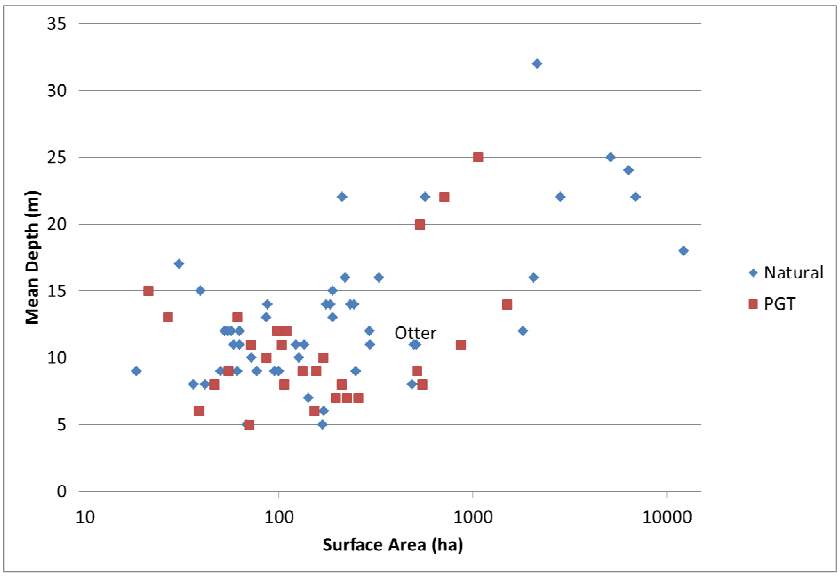


Figure 4 Relationship between surface area and mean depth for natural and put-grow-take (PGT) stocked lake trout lakes in Parry Sound District.

Spawning habitat enhancement was completed on Otter Lake in 2005. Many of the lake trout lakes in the same part of the District have very small areas of good spawning habitat. However, the amount of spawning habitat is probably not the factor that limits population size (the amount of deep water juvenile habitat is probably more limiting, for instance). It is however, the one aspect of habitat that we have the ability to enhance and on lakes like Otter where the habitat type is not obviously abundant, shoal enhancement is probably a worthwhile endeavour. At a minimum, it adds resilience to this component of the habitat. Monitoring of shoal use is a relatively low cost, low skill activity that is well suited to volunteers and should be conducted if there is interest from local residents.

Otter Lake is currently classified for management of a natural lake trout population. Based on this assessment, this designation should remain. Natural reproduction is occurring and there is some indication that the population is growing as stocked fish decline in abundance. The current management approach should be continued until stocked fish are essentially gone from the population and the natural population has reached its full potential.

The standard regulation for a lake greater than 100 ha with a large bodied population is the 40-55 cm protected slot size (OMNR 1995). Otter Lake has the protected slot size but also is closed to lake trout fishing in the winter, a regulation normally applied only to lakes less than about 100 ha. Most of the lake trout caught in this survey were larger than the protected slot size and would have been legal to harvest suggesting the slot size is not effective at limiting harvest in this population, especially considering that the population abundance is already low. It is recommended that the winter closure be retained in addition to the slot size limit.

In summary, the lake trout population in Otter Lake is currently at a moderately low density. The proportion of naturally reproduced fish in the population has increased from a small proportion to about half, since supplemental stocking was discontinued after 1998. The observation that most natural lake trout were produced after stocking ceased is an encouraging sign of increased reproduction. The lake appears to have a natural tendency for relatively low abundance but a large average size, regardless of whether stocking is occurring, due to the natural characteristics of the lake basin and the composition of the fish community. It is recommended that the current management strategy be continued.

Acknowledgements

Katya Zielonko and Aaron Owens assisted with the field work. Steve Sandstrom conducted the abundance analyses.

References

Deary Environmental Consultants, 1990. Summary report for lake trout (*Salvelinus namaycush*) assessment of thirteen lakes in the Parry Sound District. Unpublished OMNR Parry Sound District technical report.

Hicks, F. 1999. Manual of instructions: Spring Littoral Index Netting. Ontario Ministry of Natural Resources, Fish and Wildlife Branch, Peterborough.

McIntyre, E. 1999. Spring Littoral Index Netting Report for Otter Lake (Foley Geographical Township). Ontario Ministry of Natural Resources, Parry Sound.

McIntyre, E. 2002. Otter Lake Lake Trout Spawning Activity Observations, Fall 2002. Ontario Ministry of Natural Resources, Parry Sound.

McIntyre, E. 2005. Otter Lake Lake Trout Spawning Assessment Fall, 2005. Ontario Ministry of Natural Resources, Parry Sound.

MOE, 2011. Lake Partner program raw data. http://www.ene.gov.on.ca/environment/en/local/lake_partner_program/index.htm

OMNR, 1995. Management plan for naturally reproducing populations of brook trout and lake trout in south central Ontario. Brook Trout/Lake Trout Management Committee.

OMNR, 2006. Inland Ontario lakes designated for lake trout management. Ontario Ministry of Natural Resources, Fisheries Section, Fish and Wildlife Branch. Peterborough.

Sandstrom, S. J. and N. Lester. 2007. Summer Profundal Index Netting Protocol; a Lake Trout Assessment Tool. Ontario Ministry of Natural Resources. Peterborough, Ontario. Version 2007.2. 25 p. + appendices.

Sandstrom, S. 2014. Personal Communication. Muskoka Lake Fisheries Assessment Unit, Ontario Ministry of Natural Resources, Bracebridge, Ontario.

Thurston, L. 1976. Assessment of lake trout plantings Parry Sound District. Unpublished OMNR Parry Sound District Office technical fisheries report.

Thurston, L. 1977. Summary of two years (1976-77) of lake trout assessment work Parry Sound District. Unpublished OMNR Parry Sound District Office technical fisheries report.

Appendix SPIN Support Spreadsheet Reports

SUMMER PROFUNDAL INDEX NETTING REPORT

Lake: Otter (natural) | Office: Bracebridge Area | Secchi: | TDS: Secchi | Phosphorus: | Linf: | GDD: | Xfield 1:

Date: 2013 (Year) 7 (Month) | Total Area: 465 | Sampled Area: 277 | Max Depth: 44 | Mean Depth: | Lmat: | Z: | Xfield 2:

Using Large Body Conversion

Area Wt. Selectivity Adj Values	Total Catch	Arith CUE	SE CUE	RSE CUE
Lake Trout >=300 and <=1000mm	5	0.14	0.06	0.44

Density (ha)	Pop Est	Low Est	Upper Est	Pred. Level
0.5	144	0	603	68%

Stratum Info	Sites #	Total # Nets	% Sites	% Samp Area	Tot Catch #	Tot Catch %	Mean CUE	SE CUE	RSE CUE	Mean FLEN	SE FLEN
Stratum 1 (6-10m)	3	3	10%	29%	0		0.00				
Stratum 2 (10-20m)	12	12	41%	39%	2	38%	0.17	0.08	0.48	618	10.50
Stratum 3 (20-30m)	8	8	28%	21%	2	43%	0.28	0.13	0.47	550	70.50
Stratum 4 (30-40m)	3	3	10%	4%	1	19%	0.34	0.34	1.00	590	0.00
Stratum 5 (40-60m)	3	3	10%	7%	0		0.00				
Stratum 6 (60-80m)	0	0			0						
Stratum 7 (80+m)	0	0			0						
Total	29	29	100%	100%	5	100%	0.14	0.06	0.44	593	24.09
				actual	5						

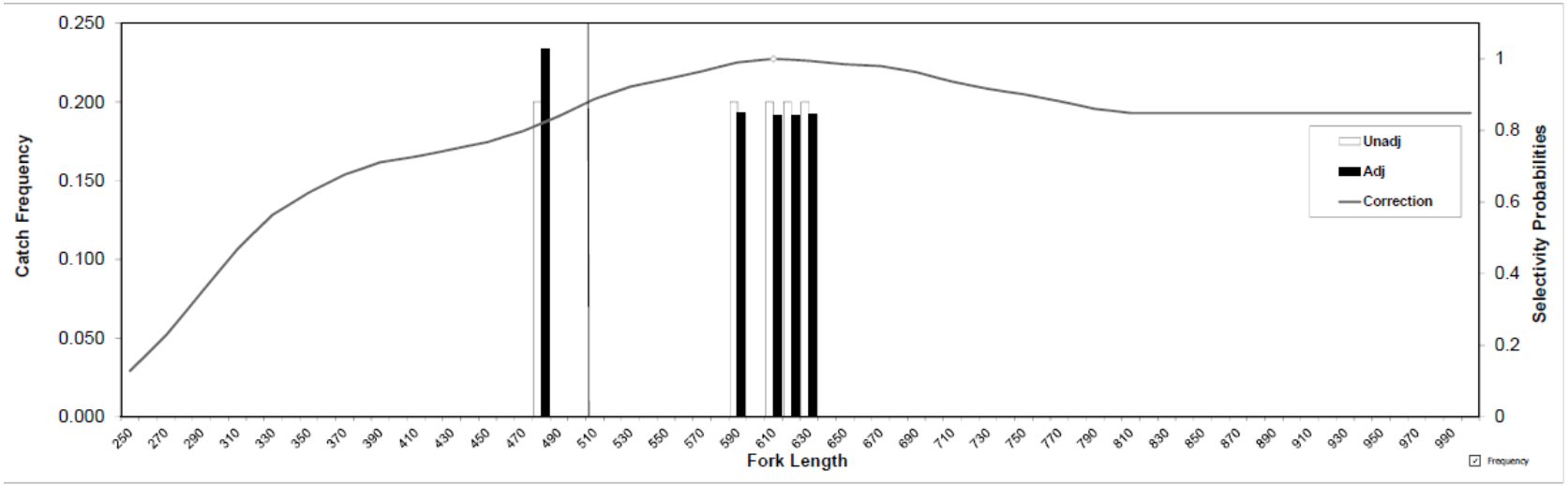
Total Biomass >300mm: 1.22 kg/ha sampled

avg wt of a fish: 2.36 kg

Previous Arith Mean:
Previous Arith Stdev:
Previous n=
p-Value:
Previous Mean,Stdev, n= not specified

Power Observed: 23%
Power Desired: 80%
Change Detectable: 25%
Sets Required (n=): 398

Thermocline(top): n/a m
Thermocline(bottom): 0 m



Selectivity Model
- no correction
- J_Paloheimo
- gamma
- S_Walker (use this)
- bi-modal

(only relationship available)

% zero S1	100%
% zero S2	83%
% zero S3	75%
% zero S4	67%
% zero S5	100%
% zero S6	
% zero S7	
Area Wt % zero	87%

No. of Sets Next Day	
Stratum 1	2
Stratum 2	2
Stratum 3	2
Stratum 4	1
Stratum 5	1
Stratum 6	
Stratum 7	

Report generated with ver. 9.07

Print Date 01/24/2014

SUMMER PROFUNDAL INDEX NETTING REPORT

Lake: Otter (stocked) | Office: Bracebridge Area | Secchi: | TDS: Secchi | Phosphorus: | Linf: | GDD: | Xfield 1:

Date: 2013 (Year) 7 (Month) | Total Area: 465 | Sampled Area: 277 | Max Depth: 44 | Mean Depth: | Lmat: | Z: | Xfield 2:

Using Large Body Conversion

Area Wt. Selectivity Adj Values	Total Catch	Arith CUE	SE CUE	RSE CUE	Density (ha)	Pop Est	Low Est	Upper Est	Pred. Level
Lake Trout >=300 and <=1000mm	4	0.12	0.06	0.47	0.4	123	0	581	68%

Stratum Info	Sites #	Total # Nets	% Sites	% Samp Area	Tot Catch #	Tot Catch %	Mean CUE	SE CUE	RSE CUE	Mean FLEN	SE FLEN
Stratum 1 (6-10m)	3	3	10%	29%	0		0.00				
Stratum 2 (10-20m)	12	12	41%	39%	2	50%	0.17	0.08	0.48	636	36.00
Stratum 3 (20-30m)	8	8	28%	21%	2	50%	0.25	0.12	0.46	645	29.50
Stratum 4 (30-40m)	3	3	10%	4%	0		0.00				
Stratum 5 (40-60m)	3	3	10%	7%	0		0.00				
Stratum 6 (60-80m)	0	0			0						
Stratum 7 (80+m)	0	0			0						
Total	29	29	100%	100%	4	100%	0.12	0.06	0.47	639	25.51
				actual	4						

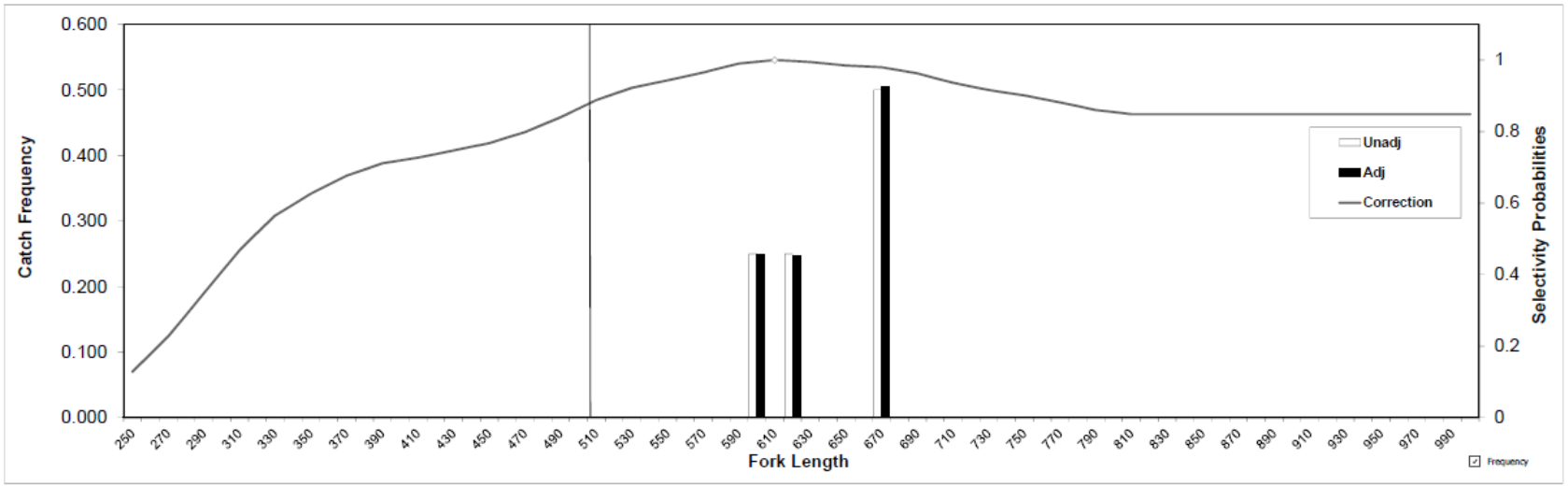
Total Biomass >300mm: 1.39 kg/ha sampled

avg wt of a fish: 3.14 kg

Previous Arith Mean:
Previous Arith Stdev:
Previous n=
p-Value:
Previous Mean,Stdev, n= not specified

Power Observed: 22%
Power Desired: 80%
Change Detectable: 25%
Sets Required (n=): 470

Thermocline(top): n/a m
Thermocline(bottom): 0 m



Selectivity Model
- no correction
- J_Paloheimo
- gamma
- S_Walker (use this)
- bi-modal

(only relationship available)

% zero S1	100%
% zero S2	83%
% zero S3	75%
% zero S4	100%
% zero S5	100%
% zero S6	
% zero S7	
Area Wt % zero	88%

No. of Sets Next Day	
Stratum 1	2
Stratum 2	3
Stratum 3	2
Stratum 4	0
Stratum 5	1
Stratum 6	
Stratum 7	

Report generated with ver. 9.07

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