McDougall Lake (a.k.a. Portage Lake)
McDougall Township

Synoptic Trapnet Survey Report
Summer 2000

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Executive Summary:

A synoptic trapnet survey consisting of 11 overnight, trapnet sets was conducted on McDougall Lake from June 4 – 9, 2000. The primary purpose of the study was to assess the status of the fish community and in particular that of the walleye population prior to a planned rehabilitative stocking of fall fingerling walleye in 2000 by the Parry Sound Anglers and Hunters organization. Due to supply problems with the private hatchery providing the fish, the stocking did not occur.

Overall fish productivity as measured by C.U.E. by weight was 10.1 kg. / net set. This is well below the average of 19.7 generated from 14 similar and recent surveys (since 1994) conducted in the Parry Sound Area. Walleye comprised 25% of the total catch weight of 130.8 kg. followed by common white sucker at 23%, northern pike 19%, redhorse sucker 13%, smallmouth bass 10%, brown bullhead 7%, black crappie 3% and rock bass at less than 1%. We acknowledge that catch composition is not representative of fish community composition due to gear selectivity.

Walleye and smallmouth bass abundance as measured by C.U.E. (number) was very low relative to other surveys conducted in the Parry Sound Area over the past two decades. Northern pike abundance was 'average'. Age class distribution of walleye was highly irregular and inconsistent in year class strength. It was not representative of a healthy population. Recent recruitment has varied from low to negligible. Notwithstanding the foregoing, the existing walleye population is of sufficient size to rehabilitate and rebuild the walleye fishery on McDougall Lake. We recommend onerous walleye fishing regulation changes to promote natural rehabilitation of this population.

Recruitment, mortality and abundance of smallmouth bass and black crappie are probably all low. These populations appear to be languishing, but are nonetheless probably stable at this low level. Pike recruitment and mortality rates are also low but abundance appears higher.

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1.0 Introduction:

McDougall Lake is a relatively small, 69-hectare (171 acres) lake located in McDougall Township. It is adjacent to the village of Nobel, located on Highway 69 approximately 7 kilometers north of Parry Sound. The lake is also locally known as Portage Lake. McDougall Lake is part of the Seguin River watershed that flows westerly to Georgian Bay.

The lake is relatively shallow with a maximum depth of 7.0 metres (23 feet) and a mean depth of 3.6 metres (11.7 feet) (OMNR, 1976). Watercolour is yellow-brown with a secchi reading of 2.4 metres (8 ft.). Areas of extensive vegetation are limited but the lake does have an extensive littoral zone (light penetration to bottom) comprising 86% of surface area. The lake has one major inlet – that being a creek that originates from Nine-Mile Lake approximately 2 kilometers to the north. This creek provides the only known walleye spawning area on the lake. Habitat conditions on this lake are highly suitable for walleye.

An Aquatic Habitat Inventory Survey (lake survey) conducted in 1976 by the Ministry of Natural Resources list the following fish species as being present: walleye, smallmouth bass, northern pike, brown bullhead, yellow perch, pumpkinseed, common white sucker, common shiner, bluntnose minnow and Iowa darter. At some unspecified time since the ’76 survey, black crappie have been illegally introduced into the lake. No further fisheries assessment work had been conducted on the lake since the 1976 lake survey.

It is not known if the smallmouth bass population is native to the lake or descendants of fingerlings planted in 1939, ’55, ’57 and ’63 by the then Department of Lands and Forests. Walleye fry and eggs were also planted in 1939, ’52, ’53 and ’55, however there is anecdotal record that walleye were native to McDougall Lake (OMNR, 1976).

In 1998, the Ministry of Natural Resources was approached by the *Parry Sound Anglers & Hunters* to sponsor a *Community Fisheries Involvement Program* (CFIP) to reintroduce walleye into McDougall Lake. Anecdotal reports from the public suggested that walleye had been extirpated from the lake or a remnant population might exist. The group initiated their reintroduction program by rehabilitating the walleye spawning bed in Nine-Mile creek in 1999 (OMNR, 2000). This was to be followed by a planting of fall fingerling walleye purchased from a private hatchery in 2000. Prior to this introduction however, the Ministry wished to conduct a “before introduction assessment” of the fish population to facilitate future assessment of the success of the stocking program. This report represents that assessment project.

2.0 Methods:

"Synoptic surveys" are intended to provide a 'snapshot in time' of the status of the fish community and individual populations that comprise it. We selected 8' trapnets as the gear of choice due to the non-lethal nature of the gear and it's proven effectiveness at capturing walleye and smallmouth bass – which were the particular species of interest in this survey. Results must be viewed in light of 'species selectivity' of the gear. This is further discussed in the *Results and Discussion* section of the report.

Due to severe limitations that the gear imposes on net set location, netting sites were not pre-determined. Site selection was at the discretion of the field crew. However, site selection was based on the following guidelines:

- The site had to be suitable for the net to fish effectively. (Consequently – factors such as: contours of the lake bottom, absence of obstructions, depth, sufficient lead length, etc. were to be considered.)
- Nets were to fish all habitat types in approximate proportion to their abundance on the lake in order that the catch would reflect the 'whole lake' as accurately as possible.
- Nets were to be set far enough apart such that they were not competing with each other.
- Nets were to be approximately randomly distributed throughout the study area.

We completed 11 over-night, trapnet sets that met the above guidelines. Nets set locations are indicated in Figure 1.

Field operations were conducted from June 4 – 9, 2000. In this report the unit of effort is recorded as a "net set" – and approximates a set of 24 hours duration. Nets were relocated daily.

Complete catch enumeration was conducted for all sets (Appendix A). Only fish captured in the "house" of the net were included in the catch. Fish caught in the wings or gilled in the lead were not considered part of the catch.

Biosampling data collection for all game fish included total length, fork length and round weight determination (Appendix B – E). Scale samples were also collected for age determination of walleye (Appendix B). For non-game fish, round weights were recorded (Appendix F).

Age determination for walleye was by the scale reading method. As there were no known-age walleye in McDougall Lake – we had no method of validating the accuracy of our scale aging. Campbell and Babaluk (1979) concluded that scale aging consistently underestimate the true age of walleye – particularly in older age classes. The reader should bear in mind, that our mean age determination (Appendix B) probably underestimates the true mean age of walleye that we sampled.

Insert Figure 1 on this page

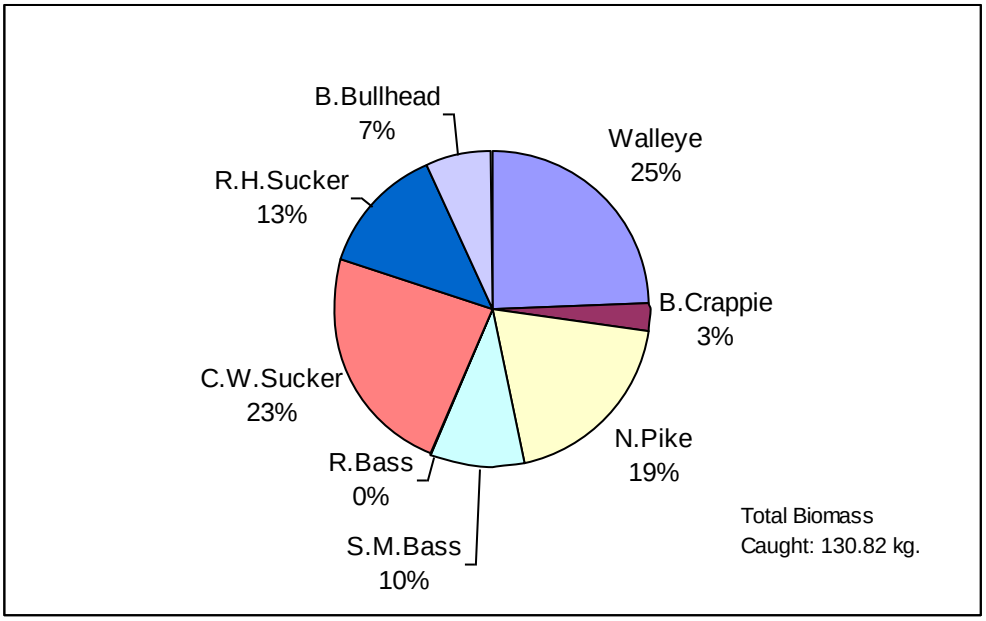
3.0 Results and Discussion:

3.1 Catch composition and Productivity

From 13 overnight trapnet sets, we captured a total of 130 fish that cumulatively weighed 130.8 kilograms. Our Catch-per-Unit-Effort (C.U.E.) by weight was 10.06 kilograms / net night (Appendix A). Relative to 14 similar synoptic trapnet surveys that have been conducted on various Parry Sound Area lakes since 1994, this measure of fish productivity ranks 11th of 14. The mean C.U.E. by weight for these 14 surveys was 19.78 kilograms per net set, - almost double what we observed on McDougall Lake. Clearly, the fish productivity on McDougall Lake is well below the Parry Sound average and ranks very close to the bottom for surveys recently completed.

Fifty-six point one percent (56.1%) of the fish biomass caught in this survey was accounted for by game fish (walleye, smallmouth bass, northern pike and black crappie). Coarse fish (brown bullhead, common white sucker, redhorse sucker) comprised 43.5% of the total catch weight and panfish (rock bass) accounted for less than 1% (Appendix A). For the previously mentioned 14 surveys conducted in the Parry Sound Area, catch composition averaged 65.2% game fish, 30.6% coarse fish and 4.1% pan fish. Relative to these surveys, production of coarse fish is higher on McDougall Lake, and production of game fish is lower. We caution the reader that our catch composition is not proportionally representative of the fish community. Eight-foot trapnets exhibit species selectivity in their catch. Species such as walleye and smallmouth bass are highly vulnerable to the gear, but panfish species as well as brown bullhead and northern pike are not particularly vulnerable.

Figure 2. Catch composition by weight for a synoptic trapnet survey conducted on McDougall Lake during the summer of 2000.



Walleye comprised 25% of the total catch weight of 130.82 kilograms, followed by common white sucker at 23%, northern pike 19%, redhorse sucker 13%, smallmouth bass 10%, brown bullhead 7%, black crappie 3% and rock bass at less than 1% (Appendix A).

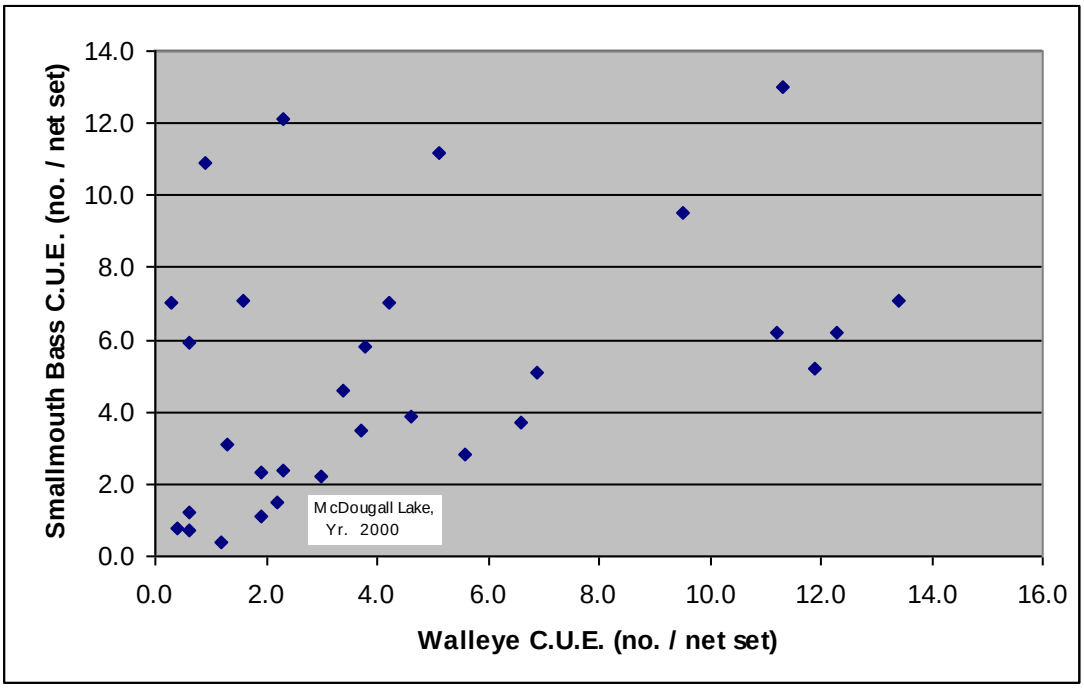
3.2 Relative Abundance:

Since 1982, the Ministry of Natural Resources has conducted over 30 synoptic trapnet surveys on various lakes throughout the Parry Sound Area. The primary focus on these investigations has been to assess the status of walleye and smallmouth bass populations and secondarily those of other fish species in the fish community. The catch rate or Catch-per-Unit-Effort (C.U.E.) by number is the statistic used to indicate the abundance for a particular species. We call this a "relative abundance index" because it does not specifically delineate the size or the population, but rather the C.U.E. index generated on one lake is compared "relative" to that generated on a number of others.

We captured 28 walleye in 13 trapnet sets for a C.U.E. by number of 2.2 walleye per net set ± 0.61 (standard error) (Appendix A and Figure 2). Relative to 30 other synoptic surveys conducted since 1982 that captured walleye, McDougall Lake ranks 19th in walleye abundance. The average walleye C.U.E. for these surveys is 4.5 walleye per net set, - approximately double what we observed on McDougall Lake. This index points to a low abundance of walleye on McDougall Lake relative to other surveys conducted in the Parry Sound Area.

We also captured 19 smallmouth bass for a C.U.E. of 1.5 per net set ± 0.69 (standard error) (Appendix A and Figure 2). This index ranks 24th out of 30 and is well below the C.U.E. average of 4.79 for all surveys. Certainly the abundance of smallmouth bass on McDougall is very low relative to other surveys conducted in the Parry Sound Area.

Figure 3. Walleye C.U.E. vs. smallmouth bass C.U.E. for 30 lakes in the Parry Sound Area, 1982 – 2000.



We captured 17 northern pike in 13 trapnet sets for a C.U.E. of 1.3 per net set ± 0.31 (standard error) (Appendix A). This pike index of abundance ranks 8th of 29 surveys conducted in the Parry Sound Area that captured northern pike as well as walleye and smallmouth bass. The average pike C.U.E. for these 29 surveys was 1.29 per net set. The abundance of northern pike on McDougall is approximately "average" relative of similar surveys conducted in the Parry Sound Area. We caution the reader about placing too much emphasis on this index of abundance for northern pike however. Pike are 'ambush feeders' and not

as vulnerable to capture by trapnets as other species. They do not travel in search of prey and are less likely to contact the gear. This reduced vulnerability is reflected in the low C.U.E. numbers for this species. This low catch rate reduces the 'reliability' of the C.U.E. index for northern pike because the difference between a high abundance index and a low abundance index is much narrower.

We captured 11 black crappie for a C.U.E. of 0.8 per net set ± 0.32 (standard error). We only have two other surveys in which black crappie were part of the catch. Crappie C.U.E. for Dollar's lake in 2000 was 1.9 (report in preparation) and for Six-Mile Lake in 1999 it was 4.7 per net set (McIntyre, 2000). Notwithstanding the lack of comparative data, we believe that the McDougall Lake crappie C.U.E. of 0.8 is indicative of a very low abundance for this species. We found this observation rather surprising. We had heard several anecdotal reports of black crappie having been illegally introduced into McDougall Lake for several years. However this survey represents the first documented confirmation of these reports. Kerr and Grant (2000) concluded that due to predation and competition, crappies could become dominant predators especially in waters where the normal top predator is suppressed. We were surprised that the black crappie population appears to be languishing in McDougall Lake in spite of good crappie habitat as well as a somewhat suppressed top predator population (see Section 3.1).

Catch-per-Unit-Effort indices for other species caught in the survey were: common white sucker – 1.5 per net set ± 0.42 (Standard Error); brown bullhead – 1.6 ± 1.0 (S.E.); redhorse sucker – 0.6 ± 0.62 (S.E.) and rock bass – 0.4 ± 0.31 (S.E.) (Appendix F). Excluding redhorse sucker, these indices are well below the average C.U.E. for these species relative to past surveys conducted in the Parry Sound Area. This is the only survey that has caught redhorse sucker.

3.3 Biosampling Data:

3.3.1 Walleye

From a sample of 28 walleye, mean total length was 45.8 cm., mean fork length 43.4 cm., mean weight 1142.0 grams and mean age 6.1 years (Figure 4, Figure 5 & Appendix B).

Figure 4. Size distribution of walleye sampled from the McDougall Lake synoptic trapnet survey during the summer of 2000.

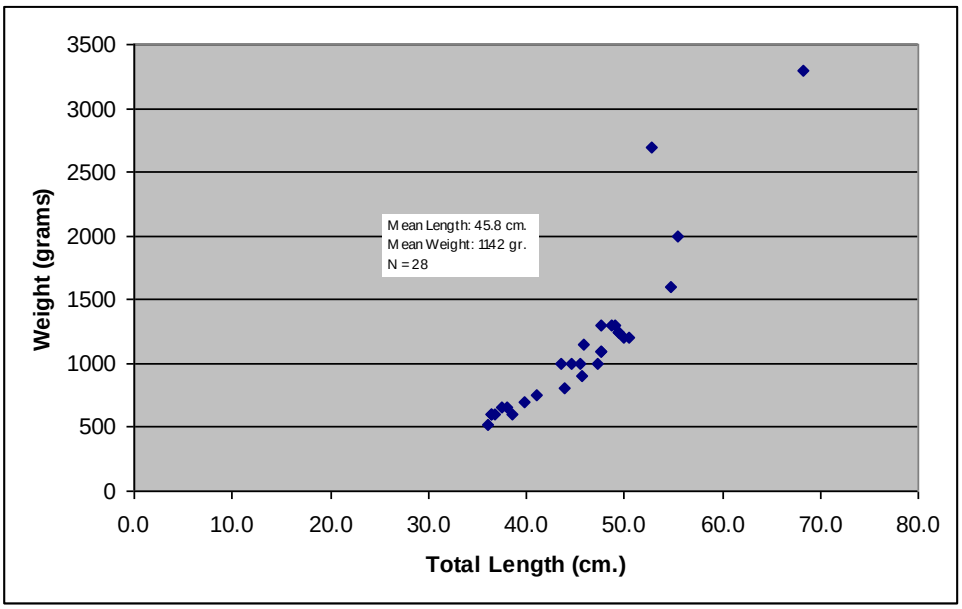


Figure 5. Age class distribution of walleye sampled from the McDougall Lake synoptic trapnet survey, summer 2000.



The size and age class distribution for walleye is somewhat perplexing. The 1995 year class (age class 5) appears weak, but the 1994 (age 6) and 1996 (age 4) year classes are considerably better. Optimistically, there is recruitment to the adult spawning population, but the level of this recruitment as reflected in the number – is rather low. The Ministry of Natural Resources also conducted a synoptic trapnet survey on Cecebe Lake during the summer of 2000 and observed very strong 1997 (age 3) and 1998 year classes (age 2) (McIntyre, 2001). This was certainly not evident on McDougall Lake. Walleye from these year classes would have been vulnerable to our gear and we conclude that recruitment from these year classes is likely to be negligible. We conclude that recent year class recruitment has varied from low to negligible on McDougall Lake. Spawning bed enhancement work was conducted on Nine-Mile Creek in 1999. Hopefully this work will have a beneficial impact on walleye reproductive success in this lake.

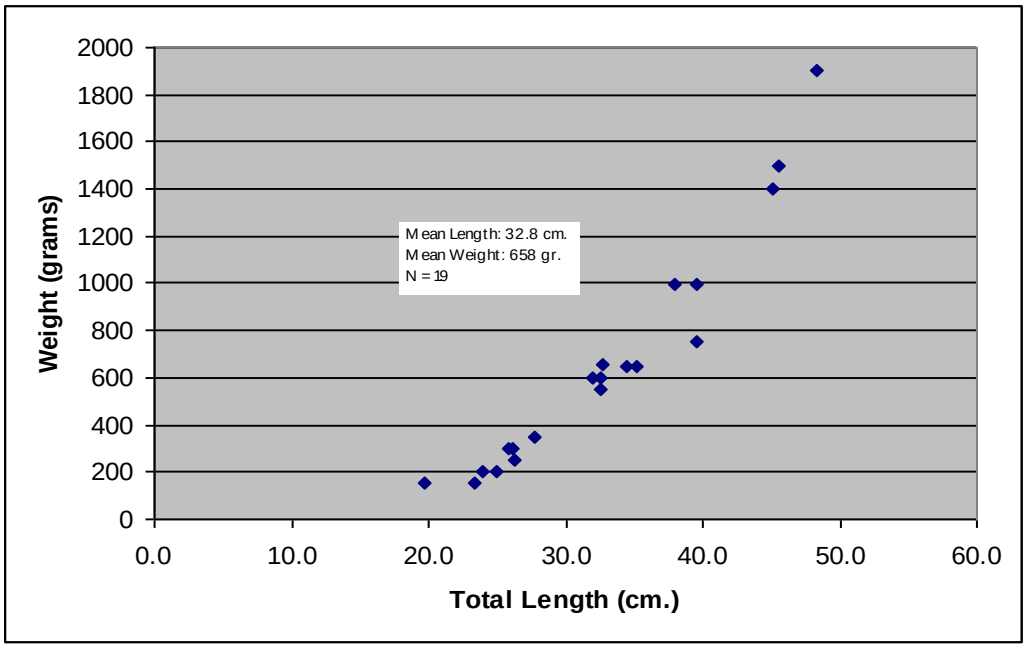
We are unsure if the apparent poor representation of age classes from 7 years and beyond is attributable to low reproductive success, or if natural and/or fishing mortality has been considerable for these age classes. Whatever the cause, the age class distribution presented in Figure 5 is not one of a healthy population.

3.3.2 Smallmouth Bass

From a small sample of 19 fish, the mean size of smallmouth bass in the catch was: 32.7 cm. total length, 30.9 cm. fork length and 658 grams (1.5 lbs.) (Figure 6 and Appendix C). We calculated the mean age of these bass to be 4.2 years (Appendix C).

The dispersion of smallmouth bass sizes is good, with all size classes being represented in the catch. This data, in conjunction with low abundance indices (C.U.E. by number) suggests low smallmouth bass productivity, but with regular recruitment and sustainable mortality levels. We are at a loss to explain the low productivity of bass in this lake, - although it would be nice to know angling harvest levels for bass as well as other species in this lake.

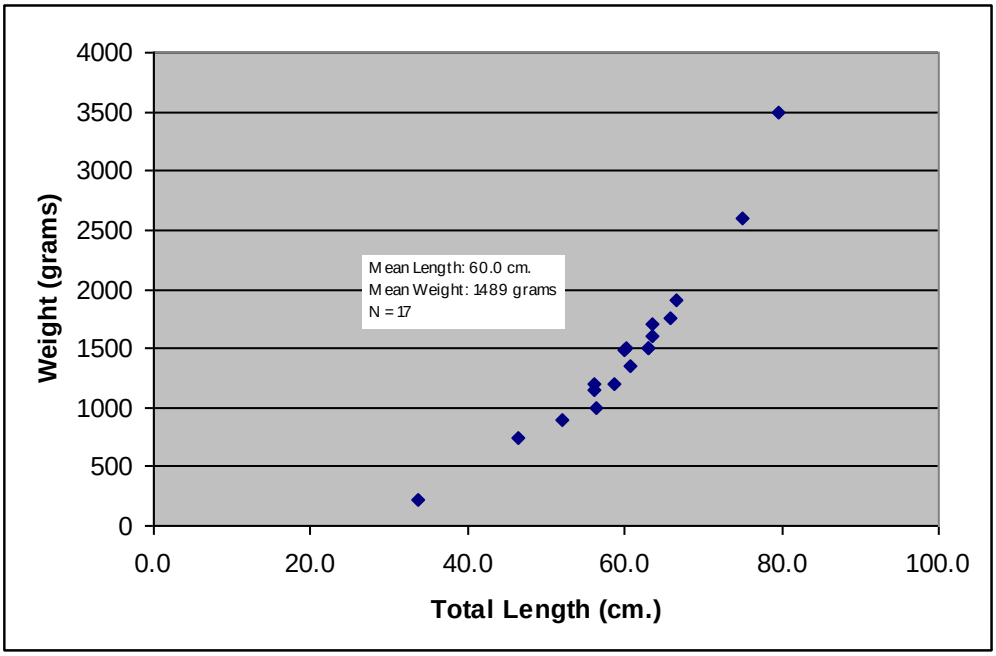
Figure 6. Size distribution of smallmouth bass from McDougall Lake captured in a synoptic trapnet survey, Summer 2000.



3.3.3 Northern Pike

From a small sample of 17 fish, mean age of northern pike in the catch was: 60.0 cm. total length, 56.5 cm. fork length and 1489 grams (3.3 lbs.) (Figure 7 and Appendix D).

Figure 7. Size distribution of northern pike from McDougall Lake captured in a synoptic trapnet survey, Summer 2000.

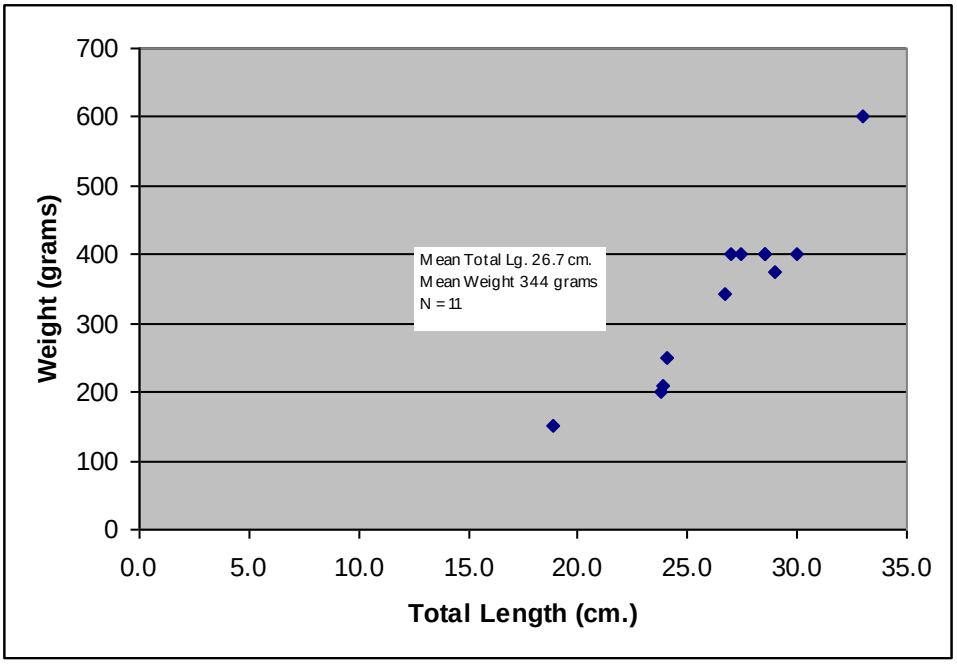


The majority (82%) of our pike samples is clustered in the 45 – 67 cm. size range. These fish probably range in age from 3 – 6 years, and the smaller pike are probably sexually immature (Scott and Crossman, 1973). Acknowledging the small sample size, it nonetheless appears that recruitment is low but sustainable – as is the mortality rate.

3.3.4 Black Crappie

From a meagre sample of 11 black crappie, mean size was 26.7 cm. total length, 25.7 cm. fork length and weight 344 grams (3/4's of a pound) (Figure 8 & Appendix E).

Figure 8. Size distribution of black crappie from McDougall Lake captured in a synoptic trapnet survey, Summer 2000.



The above size distribution combined with indices of low abundance (C.U.E. by number) suggests that population is languishing. It appears that recruitment, mortality and abundance are all low. Nonetheless, the population is probably stable at this very low level.

4.0 Summary :

- Overall fish productivity (as measured by C.U.E. by weight for all species) on McDougall Lake is low relative to similar, recent surveys conducted in the Parry Sound Area.

- The proportion of coarse fish in the catch is higher on McDougall Lake relative to similar, recent surveys conducted in the Parry Sound Area. Walleye comprised 25% of the total catch weight of 130.8 kg. followed by common white sucker (23%), northern pike (19%), redhorse sucker (13%), smallmouth bass (10%), brown bullhead (7%), black crappie (3%) and rock bass (<1%).

- Walleye and smallmouth bass abundance (as measured by C.U.E. by number) on McDougall Lake is very low relative to other surveys conducted in the Parry Sound Area over the past two decades. Northern pike abundance was 'average'. We have little comparative data for black crappie but suspect that abundance is low.

- We are unsure how to interpret the age and size class distribution of walleye other than to say that it is not representative of a healthy population and recent recruitment has varied from low to negligible. The population is not in imminent danger of extinction however.

- Recruitment, mortality and abundance of smallmouth bass and black crappie are probably all low. These populations appear to be languishing, but are nonetheless probably stable at this low level. Pike recruitment and mortality are also low but abundance appears higher.

5.0 Recommendations:

We are very much encouraged to discover that McDougall Lake has a natural, self-sustaining walleye population of low, but nonetheless appreciable size. These fish are of sufficient number to form the nucleus of a spawning population with which to rebuild the walleye population in this lake. It is not necessary to introduce walleye to augment this spawning population. Therefore, in accordance with Ministry guidelines (Kerr, et al. 1996), we recommend that walleye not be stocked in McDougall Lake and the resident population be used for rehabilitative purposes.

Walleye, as well as other game fish populations are languishing on McDougall Lake. We are unaware to what degree angling – either past or present, is or has contributed to this. We suspect that if angling has had a detrimental impact on the sport fishery of McDougall Lake, its origin was in the distant past as today the lake is not known to be a quality fishery and is lightly exploited to the best of our knowledge. Notwithstanding the present-day light fishing pressure, we recommend that onerous catch restrictions for walleye be implemented to speed up and promote the expansion of the walleye population on this lake. Once this is achieved, less rigorous regulations could be implemented. However, it should be clearly understood that once rehabilitation is complete walleye regulations should not revert to the open and highly exploitative regulations that are currently in effect.

6.0 Acknowledgements:

Jim Palmer supervised Field operations with assistance from Ken Molyneaux, Miles Seegmiller and Dean Timson.

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Appendix A

Trapnet Catch Record
McDougall Lake Synoptic Trapnet Survey, Summer 2000

Catch (number)

Net Set Number	Walleye	Northern Pike	S.Mouth Bass	Black Crappie	C.White Sucker	Brown Bullhead	Redhorse sucker	Rock Bass
1	8	0	2	3	0	13	0	0
2	1	3	0	0	3	0	0	0
3	3	1	0	0	0	0	0	0
4	1	2	0	3	3	3	0	0
5	2	1	1	0	0	0	0	0
6	2	1	1	0	1	0	0	0
7	0	0	0	1	1	0	0	0
8	4	2	0	2	3	0	0	0
9	1	0	2	1	1	0	0	0
10	1	3	0	0	4	0	0	1
11	4	2	9	1	3	0	8	0
12	1	0	3	0	0	2	0	4
13	0	2	1	0	0	5	0	0

	walleye	n.pike	sm bass	b.crappie	c.w.sucker	b.bullhead	rh. Sucker	rock bass	Total
Mean	2.2	1.3	1.5	0.8	1.5	1.6	0.6	0.4	
Standard Error	0.61	0.31	0.69	0.32	0.42	1.00	0.62	0.31	
95% Confidence level	1.33	0.67	1.49	0.69	0.91	2.19	1.34	0.68	
Standard Deviation	2.193	1.109	2.470	1.144	1.506	3.618	2.219	1.121	
Sample Variance	4.808	1.231	6.103	1.308	2.269	13.090	4.923	1.256	
Sum	28	17	19	11	19	23	8	5	130
Count	13	13	13	13	13	13	13	13	
Total Catch Wt. (kg.)	31.975	25.320	12.500	3.785	30.660	8.910	17.300	0.370	130.820
% of total wt.	24.4	19.4	9.6	2.7	23.4	6.9	13.2	0.3	99.9
C.U.E. wt (kg./net set)	2.460	1.948	0.961	0.291	2.358	0.685	1.330	0.028	10.061

Appendix B

Walleye Biosampling Data
McDougall Lake Synoptic Trapnet Survey, Summer 2000

Net Set Number	Total Length (cm.)	Fork Length (cm.)	Weight (grams)	Assessed Age
1	47.6	44.9	1100	7
1	45.6	43.0	900	6
1	36.8	34.5	600	4
1	49.9	46.8	1200	6
1	36.1	33.4	525	4
1	37.5	35.5	650	4
1	36.5	34.5	600	4
1	38.5	36.5	600	4
2	49.5	47.1	1250	6
3	41.0	39.0	750	5
3	43.5	41.2	1000	6
3	47.3	44.2	1000	6
4	49.0	46.5	1300	7
5	45.5	43.0	1000	6
5	49.5	47.0	1250	7
6	54.8	53.0	1600	8
6	47.6	45.0	1100	6
8	68.2	65.6	3300	14
8	48.7	46.5	1300	7
8	55.5	52.4	2000	8
8	47.7	45.2	1300	6
9	39.9	37.9	700	4
10	44.6	42.0	1000	6
	36.5	34.4	600	4
	43.9	41.0	800	5
	50.4	48.1	1200	6
	52.8	49.8	2700	12
	38.1	36.2	650	4
Mean	45.8	43.4	1142.0	6.1
Standard Error	1.371	1.341	119.433	0.439
Confidence Level(95.0%)	2.812	2.751	245.057	0.900
Standard Deviation	7.252	7.094	631.982	2.321
Sample Variance	52.594	50.330	399400.628	5.386
Sum			31975	
Count	28	28	28	28

Appendix C

Smallmouth Bass
Biosampling Data
McDougall Lake Synoptic Trapnet Survey, Summer 2000

	Total Lg. (cm.)	Fork Lg. (cm.)	Weight (grams)	Assessed Age
	23.3	21.8	150	2
	26.3	25.3	250	3
	39.5	37.5	1000	6
	45.6	43.7	1500	7
	25.0	23.6	200	3
	19.7	18.6	150	2
	32.0	30.1	600	4
	34.5	32.7	650	4
	26.2	24.9	300	3
	25.8	24.2	300	3
	32.5	30.7	550	4
	32.6	30.7	600	4
	27.8	26.3	350	3
	24.0	23.1	200	2
	35.2	32.9	650	4
	39.6	37.1	750	5
	48.3	45.6	1900	9
	45.1	42.7	1400	7
	38.0	35.6	1000	5
Mean	32.7	30.9	657.9	4.2
Standard Error	1.906	1.804	114.916	0.436
Confidence Level (95.0%)	4.005	3.790	241.429	0.917
Standard Deviation	8.309	7.863	500.906	1.903
Sample Variance	69.037	61.826	250906.433	3.620
Sum			12500	80
Count	19	19	19	19

Appendix D

Northern Pike
Biosampling Data
McDougall Lake Synoptic Trapnet Survey, Summer 2000

	Total Lg. (cm.)	Fork Lg. (cm.)	Weight (grams)
	63.0	59.0	1500
	56.0	52.5	1200
	46.5	43.5	750
	65.8	62.0	1750
	75.0	70.5	2600
	63.5	59.6	1600
	60.3	56.6	1500
	79.5	76.2	3500
	56.3	53.0	1000
	60.6	57.0	1350
	66.5	63.0	1900
	52.0	49.0	900
	56.0	52.5	1150
	63.5	60.0	1700
	58.7	55.3	1200
	63.0	59.1	1500
	33.6	31.4	220
Mean	59.99	56.48	1489.4
Standard Error	2.511	2.420	177.984
Confidence Level (95.0%)	5.323	5.130	377.309
Standard Deviation	10.352	9.977	733.847
Sample Variance	107.167	99.542	538530.882
Sum			25320
Count	17	17	17

Appendix E

Black Crappie Biosampling Data McDougall Lake Synoptic Trapnet Survey, Summer 2000

	Total Lg. (cm.)	Fork Lg. (cm.)	Weight (grams)	Assessed Age
	27.0	26.1	400	5
	33.0	31.9	600	7
	23.8	22.7	200	2
	28.5	27.5	400	5
	28.5	27.5	400	5
	27.4	26.5	400	5
	29.0	28.3	375	5
	24.1	23.0	250	3
	30.0	29.0	400	5
	18.9	18.1	150	2
	23.9	22.6	210	3
Mean	26.7	25.7	344.1	4.3
Standard Error	1.155	1.156	39.004	0.469
Confidence Level(95.0%)	2.574	2.576	86.905	1.045
Standard Deviation	3.831	3.834	129.360	1.555
Sample Variance	14.677	14.701	16734.091	2.418
Sum			3785	
Count	11	11	11	11

Appendix F

Mean Weight Determination for Non-Game Fish Species
McDougall Lake Synoptic Trapnet Survey, Summer 2000

	Brown Bullhead	Rock Bass	R.horse sucker	C.white sucker
	Wt. (gr.)	Wt. (gr.)	Wt. (gr.)	Wt. (gr.)
	450	130	1900	2150
	300	140	2100	1900
	350	25	2400	1700
	400	25	1500	1900
	400	50	2600	1800
	500		2100	1500
	400		2000	1600
	60		2700	1610
	400			1100
	400			1600
	400			1600
	500			2300
	500			1500
	400			1500
	500			200
	400			1800
	250			1900
	400			1400
	400			1600
	400			
	400			
	300			
	400			
Sum	8910	370	17300	30660
Mean	387.4	74.0	2162.5	1613.7
Standard Error	19.85	25.37	138.79	100.13
Count	23	5	8	19