LAKE CHAMPLAIN
ANGLER DIARY COOPERATOR SUMMARY REPORT

2012 FISHING SEASON

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INTRODUCTION

The Lake Champlain Angler Diary Cooperator Program, begun in 1971, is designed to monitor Lake Champlain's trout and salmon fishery.

This report summarizes data collected by volunteer salmon and trout anglers during 2012. The study area comprises Lake Champlain and its tributaries up to the first impassable barrier.

As a volunteer, if you maintained and returned a diary of your 2012 fishing season, your cooperator number should appear in Table 1. (Your angler cooperator number appears on your 2013 diary.) If your number does not appear in the table and you returned a diary to us, please contact Beth Kress at the New York State Department of Environmental Conservation's (NYSDEC) Ray Brook headquarters, 518-897-1333.

Figures and tables are attached for your reference.

RESULTS

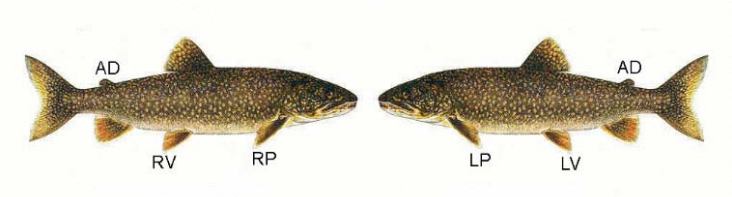
Participation

Twenty-six cooperators returned diaries of their 2012 fishing season, a slight decrease from 29 in 2011. They recorded information from 540 fishing trips (Table 1), up slightly from 2011's total of 513. Diary's returned after February 1, 2013 may not have been included in analyses; however data were entered into the long-term database. No ice fishing trips were reported for 2012.

Lake Fishing

Cooperators fished most in Main Lake during 2012, followed by Inland Sea (Table 2). There were no reported trips in Malletts Bay or South Lake for 2012. Catch rates for legal-sized trout and salmon continue to be highest in the Main Lake. There were more trips and effort in the Inland Sea, but a lower catch than in 2011. Main Lake catch rates for trout and salmon continued to improve in 2012.

Numbers and average lengths of trout and salmon caught and creeled are listed by species in Table 3. Essentially all of lake trout continue to come from Main Lake. Lake trout length-frequency and fin-clip information are presented in Figure 1. Lake trout are fin clipped on a 5 year rotation to help determine the age of the fish. The current rotation of fin clip is as follows: fish stocked in 2008 LP, 2009 RP, 2010 AD, 2011 LV, 2012 RV, 2013 LP. The length-by-fin-clip figure for 2012 (Figure 1) shows that the RP and LP clips were reported more than twice as often as the other clips. This could be due to the fact that a pectoral clip is more easily noticed than a ventral clip and that the 2008 and 2009 stocking year classes are entering the fishery in good numbers. The percent of lake trout with no reported fin-clip was 29% in 2012 which is on par with previous years. This high percentage is most likely due to unreported clips. In surveys conducted by biologists in 2012 unclipped lake trout made up only 1.4 % of the sample. The following diagram explains the fin-clip abbreviations used in Figures 1 and 4.



The overwhelming majority of lake-caught salmon also came from Main Lake, followed by Inland Sea (Table 3). Numbers of salmon caught in the tributaries declined in 2012. The length-frequency distribution of landlocked salmon by season (Figure 3) shows the growth of the salmon stocked in spring of 2012 at about 10 inches to an average of approximately 16 inches in the fall. Figure 3 also illustrates the survival of the cohort stocked in spring of 2011 with a strong spring catch in the 17-21 inch range. Catches of larger-sized salmon that have spent multiple years in the lake showed continued signs of improvement in 2012.

The salmon catch by lake anglers who targeted only salmon is listed by season in Table 4. Main Lake's highest catch rates for salmon were during the winter and spring months. Summer trips on the Main Lake decreased by more than 50% from 255 in 2011 to 82 in 2012, while spring trips increased greatly in 2012. In the Inland Sea spring trips were similar in number to previous years, but summer trips increased to 20 in 2012 from 12 in 2011. There were no trips targeting salmon in Malletts Bay in 2012.

The catch of brown trout decreased in 2012 to 31 from 85 in 2011. However, the steelhead (rainbow trout) catch slightly increased in 2012 to 45 (Table 3). The increase in steelhead catch in 2012 was due to the catch in Lewis Creek.

Catch statistics for lake anglers who were targeting a single species are presented in Table 5. The catch rate by lake trout anglers in Main Lake for legal-sized lake trout (0.68 fish per hour) was a significant increase from 2011's rate of 0.51 fish per hour. The catch rate by salmon anglers of legal-sized landlocked salmon (0.18) was slightly better than the 2011 rate, but similar to recent years. No lake trips solely targeting brown or rainbow trout in 2012. However, cooperators indicate they are targeting any salmonid during many fishing trips.

The number of hours of Main Lake fishing required to catch a legal-sized lake trout or a legal-sized landlocked salmon during the past 23 years is presented in Figure 4. The number of hours required to catch a legal lake trout decrease from 2.1 hours in 2011 to 1.5 hours in 2012.

The number of hours of Main Lake fishing required to catch a legal-sized landlocked salmon (5.0) is also a decrease from 6.3 hours in 2011, considering only trips where landlocked salmon were the sole target species. The time to catch a legal salmon and lake trout in 2012 continues an improving trend in recent years.

The length-frequency distribution for all landlocked salmon caught by cooperators in 2012 is presented in Figure 4. The length distribution shows a good proportion of the catch in the 18 to 22 inch range again indicating fish surviving for more than one year in the lake.

Tributary Fishing

In New York, the Boquet River received the most tributary fishing hours in 2012 (Table 2). The Saranac River had the next highest number of hours fished, followed by the Ausable. In Vermont, Lewis Creek received the most tributary fishing hours, followed by the Winooski, LaPlatte rivers, and Otter Creek. For the first time one trip was recorded on Mill River. The highest combined catch rate for legal-sized trout and salmon in 2012 was in the LaPlatte River with 3 steelhead being caught in 2.8 hours. The highest catch rate for landlocked salmon was in the Boquet River at 0.24 salmon per angler hour. Numbers and average lengths of salmon and trout caught and creeled in tributaries are presented in Table 3. There were only 2 brown trout reported from tributary catches in 2012. The number of rainbow trout or steelhead reported from tributaries in 2012, 27 was a considerable increase over the number caught in 2011, 14.

Tributary salmon fishing in 2012 was again concentrated in the spring and fall (Table 4). Effort as reported by angler trips and angler hours was up in the Saranac and Boquet rivers for spring of 2012, but declined considerably for the Ausable. In the fall, Boquet river trips and effort increased in 2012, but effort and trips declined in the other rivers. Tributary catch rates for legal-size salmon also decreased very slightly in 2012 compared to 2011.

Catch statistics for tributary anglers targeting specific species are presented in Table 6. Most trips on the various rivers targeted landlocked salmon. Again the Boquet River received the most trips targeting brown trout.

The number of hours of river fishing required to catch a legal-sized landlocked salmon during the past 24 years is presented in Figure 6. The time required to catch a legal salmon in 2012, 7.9 hours per, is up slightly from 2011, but is still greatly improved from the 14.3 hours required in 2009.

THANK YOU AND MISCELLANEOUS UPDATES

Thank You

Sincere thanks are extended to all angler cooperators for your support and participation in the diary program. You are playing an important part in Lake Champlain's fish management. Your diaries are the single best source of information we have on Lake Champlain's trout and salmon fishery. As a small token of our appreciation, we would like to mail you an Angler Diary Cooperator patch for your cap or shirt. If you would like one, please call or drop us a line.

New York State's Stocking Program

As indicated in the 2006 angler diary report, New York State has suspended steelhead stocking in Lake Champlain due to concerns about Viral Hemorrhagic Septicemia (VHS) and other fish diseases that could be introduced into Lake Champlain from the Great Lakes. The Salmon River Hatchery in Altmar, NY, where New York State's steelhead for Lake Champlain have been raised, is located on a tributary to Lake Ontario. Until a state-wide hatchery realignment occurs, New York State will not be able resume steelhead stocking in Lake Champlain. The lack of steelhead has been made up with an increase in landlocked salmon.

Lake Champlain Stocking report for 2012 is as follows. All numbers are reported as smolt equivalents.

Species	Main Lake		Malletts Bay/Inland Sea		Total number stocked in 2012
	Target	2012	Target	2012	
Landlocked salmon	227,000	229,888	60,000	81,916	311,804
Lake trout	82,000	89,877	0		89,877
Steelhead	73,000	52,913	12,000	4,455	57,368
Brown trout	38,000	44,273	40,000	33,000	77,273
Total	400,000	416,951	112,000	119,371	536,322

Sea Lamprey Control Update

We are on track with a long-term sea lamprey control program in Lake Champlain. The US Fish and Wildlife Service (USFWS) is now the lead agency for the sea lamprey control program with NYSDEC and Vermont Fish and Wildlife providing vital support.

In 2012 lampricide treatments were conducted on the Saranac River delta, Mt. Hope Brook, Mill Brook and its delta, and the Great Chazy, Winooski and Missisquoi rivers. At this time, we believe all treatments were successful. For additional information, see the Lake Champlain sea lamprey control program website: http://www.champlainlamprey.org, or http://www.fws.gov/lcfwro/projects/lamprey.html

Wounding rates on lake trout and salmon rose slightly during 2012 (Figure 5). There are a number of treatments scheduled for 2013. We are planning to treat two systems that have not been treated since the early 1990's the Saranac River, and Stone Bridge Brook. We also will treat Putnam Creek and the Lamoille River. We hope the addition of the Saranac River and Stone Bridge Brook will help to further reduce wounding rates.

As we proceed with our long-term program of sea lamprey control, it is important that we continue to monitor the Lake Champlain trout and salmon fishery. In order for us to better monitor the fishing, we need additional cooperators. If you know of someone who may be interested in helping us by maintaining a diary, please have him or her complete the attached form and mail it. We will then send them materials and instructions for keeping a diary. The number of cooperators has declined over the past few years. Additional volunteers would be appreciated, but we thank those currently dedicated to the program immensely. Keep up the good work!

If you have any comments or suggestions about the angler diary reports, or the diary program itself, please contact us by mail or give a call at 518-897-1333, or e-mail me at STEPHEN_J_SMITH@fws.gov

Thanks again and good fishing!



Interested in becoming an angler diary cooperator? Mail in this form if you fish Lake Champlain or its tributaries for trout and salmon and we will send you the details.

Name: _____

Address: _____

_____

Telephone: _____

Mail to:

NYS Department of Environmental Conservation
Fish Management
P.O. Box 296
Ray Brook, N.Y. 12977-0296
ph: (518) 897-1333
fax: (518) 897-1347

Region 5 Fisheries Home Page:
http://www.dec.ny.gov/outdoor/28244.html

Table 1. List of active cooperators and the number of trips each cooperator fished in 2012. This represents the total trips reported.

Angler Number	# of trips
104	5
111	61
182	8
226	46
234	3
298	13
383	120
391	40
394	10
506	14
529	2
627	13
650	9
683	11
689	8
710	9
712	6
713	8
714	7
716	16
717	10
719	12
732	14
767	22
773	62
776	12
Total trips	540

Table 2. Fishing diary catch and effort summaries for Lake Champlain and its tributaries for all trout and salmon combined. These statistics include fishing trips where a particular species was targeted, as well as trips where no species was targeted.

LAKE CHAMPLAIN and TRIBUTARIES
DIARY COOPERATORS FISHING RESULTS
2012 FISHING SEASON

Lake Zone/Trib	Number of Cooperators	Number of Cooperator Trips	Number of Angler Trips	Effort in Angler Hours	Mean Trip Length	Catch per Angler Hour	Leagal Catch per Angler Hour	Creeled per Angler Hour
Main Lake	19	288	643	3,398.2	5.1	0.49	0.46	0.15
Malletts Bay	0	0	0					
Inland Sea	4	23	51	364.8	6.8	0.23	0.18	0.03
Saranac River	5	26	31	88.9	2.4	0.01	0.01	0.00
Ausable River	3	4	6	8.8	1.4	0.00		
Boquet River	5	138	140	152.8	1.1	0.24	0.23	0.08
Otter Creek	1	1	2	4.0	2.0	0.00		
Lewis Creek	1	18	19	73.5	4.0	0.34	0.33	0.04
LaPlatte River	1	2	2	2.8	1.4	1.10	1.10	0.00
Winooski River	1	9	9	19.2	2.1	0.00		
Lamoille River	0	0	0					
Mill River	1	1	1	0.5	0.5	0.00		
Total	41	510	904	4,113.3	3.8	0.44	0.41	0.13

Table 3. Number and lengths of all lake trout (LT), landlocked salmon (LLS), brown trout (BT), and rainbow trout (RT) recorded by angler diary cooperators for year 2012 in Lake Champlain and its tributaries.

Lake Zone/Trib	Number LT Caught	LT Mean Length Caught	Number LT Kept	LT Mean Length Kept	Number LLS Caught	LLS Mean Length Caught	Number LLS Kept	LLS Mean Length Kept	Number BT Caught	BT Mean Length Caught	Number BT Kept	BT Mean Length Kept	Number RT Caught	RT Mean Length Caught	Number RT Kept	RT Mean Length Kept
Main Lake	1,250	22.9	296	23.5	368	17.5	182	18.6	29	17.0	10	18.6	18	16.3	9	18.5
Malletts Bay	0		0		0		0		0.0		0		0		0	
Inland Sea	47	23.0	0		39	15.2	10	19.5	0		0		0		0	
Saranac River	0		0		1	19.5	0		0		0		0		0	
Ausable River	0		0		0		0		0		0		0		0	
Boquet River	0		0		36	21.4	12	22.8	0		0		1	16.0	0	
Otter Creek	0		0		0		0		0		0		0		0	
Lewis Creek	0		0		0		0		2	13.3	0		23	16.6	3	17.9
LaPlatte River	0		0		0		0		0		0		3	19.0	0	
Winooski River	0		0		0		0		0		0		0		0	
Lamoille River	0		0		0		0		0		0		0		0	
Mill River	0		0		0		0		0		0		0		0	
Total	1,297	22.9	296	23.5	444	17.6	204	18.9	31	15.9	10	18.6	45	15.4	12	18.4

Table 4. Year 2012 landlocked salmon fishing results by season for Lake Champlain and tributary trips.
Only lake trips with landlocked salmon as the sole target are included; stream trips can include other targets.

SEASON	ZONE/TRIB	NUMBER ANGLER TRIPS FISHED	NUMBER of ANGLER HOURS	MEAN Angler Hours per Trip	NUMBER CAUGHT	NUMBER CAUGHT per ANGLER HOUR	NUMBER KEPT	MEAN LENGTH CAUGHT	MEAN LENGTH KEPT
WINTER (December thru February)	Main Lake	4.0	28.0	7.0	8.0	0.29	1.0	16.1	18.5
	Inland Sea	2.0	13.0	6.5	0.0				
	Boquet	2.0	1.5	0.8	0.0				
	Total	8.0	42.5	5.3	8.0	0.19	1.0	16.1	18.5
SPRING (March thru May)	Main Lake	133	628.5	4.7	176	0.28	102	18.0	18.2
	Inland Sea	9	44.0	4.6	5	0.11	3	16.3	18.8
	Saranac	10	21.8	1.9	1	0.05	0	19.5	
	Ausable	4	6.3	1.4	0	0.00	0		
	Boquet	52	38.5	0.7	1	0.03	0	19.5	
	TOTAL	208	739.1	3.55	183	0.25	105	17.97	18.22
SUMMER (June thru August	Main Lake	82	507.2	6.1	87	0.17	34	16.6	19.5
	Inland Sea	20	166.3	7.8	23	0.14	3.0	15.2	21.0
	Saranac	4	34	8.5	0				
	Boquet	2	1.0	0.5	0				
	TOTAL	108	708.5	6.6	110	0.16	37	16.3	19.6
FALL (September thru November)	Main Lake	15	62.9	8.5	11	0.17	3	16.5	21.6
	Saranac	17	33.2	2.3	0				
	Ausable	2	2.5	0.5	0				
	Boquet	84	111.8	0.5	35	0.31	12	21.4	22.8
	Winooski	7	15.7	2.2	0				
	Mill River	1	0.5	0.5	0				
	TOTAL	126	226.6	1.8	46	0.20	15	20.2	22.6

Table 5. Summary statistics for 2012 for lake trips where only a single species was targeted. There were no lake trips solely targeting brown or rainbow trout in 2012.

Target Species Landlocked Salmon					
Lake Zone	Number of Angler Trips	Number of Angler Hours Fished	Catch per Angler Hour	Number of Legal-Sized LLS Caught per AH	Number of LLS Kept per Angler Hour
Main Lake	234	1,227	0.23	0.20	0.11
Malletts Bay	0				
Inland Sea	31	223	0.13	0.07	0.03
Total	265	1450	0.21	0.18	0.10

Target Species Lake Trout					
Lake Zone	Number of Angler Trips	Number of Angler Hours Fished	Catch per Angler Hour	Number of Legal-Sized LT Caught per AH	Number of LT Kept per Angler Hour
Main Lake	135	724	0.70	0.68	0.15
Malletts Bay	0	0.0	-	-	-
Inland Sea	2	14.0	0.56	0.56	0.00
Total	137	739	0.70	0.68	0.15

Table 6. Summary statistics for 2012 tributary fishing trips targeting either a single species, or a combination of salmonid species.

	Landlocked Salmon				Brown Trout				Rainbow Trout/Steelhead			
River	Number of Trips	Effort in Angler Hours	LLS Caught per Angler Hour	Legal LLS per Angler Hour	Number of Trips	Effort in Angler Hours	BT Caught per Angler Hour	Legal BT per Angler Hour	Number of Trips	Effort in Angler Hours	RT Caught per Angler Hour	Legal RT per Angler Hour
Saranac River	27	84.2	0.01	0.25	0	0.0	-	-	0	-	-	-
Ausable River	6	8.8	0.00	0.03	0	0.0	-	-	0	-	-	-
Boquet River	138	151.3	0.24	0.21	0	0.0	-	-	0	-	-	-
Otter Creek	0	-	-	-	2	4.0	0.00	-	0	-	-	-
Lewis Creek	0	-	-	-	0	-	-	-	23	79.8	0.33	0.30
LaPlatte River	0	-	-	-	0	-	-	-	2	2.8	1.09	1.09
Winooski River	7	15.7	0.00	-	0	-	-	-	2	3.5	0.00	-
Lamolle River	0	-	-	-	0	-	-	-	0	-	-	-
Mill River	1	0.5	0.00	-	0	-	-	-	0	-	-	-
Total	179	260.5	0.14	0.13	2	4.0	0.75	0.25	27	86.1	0.34	0.31

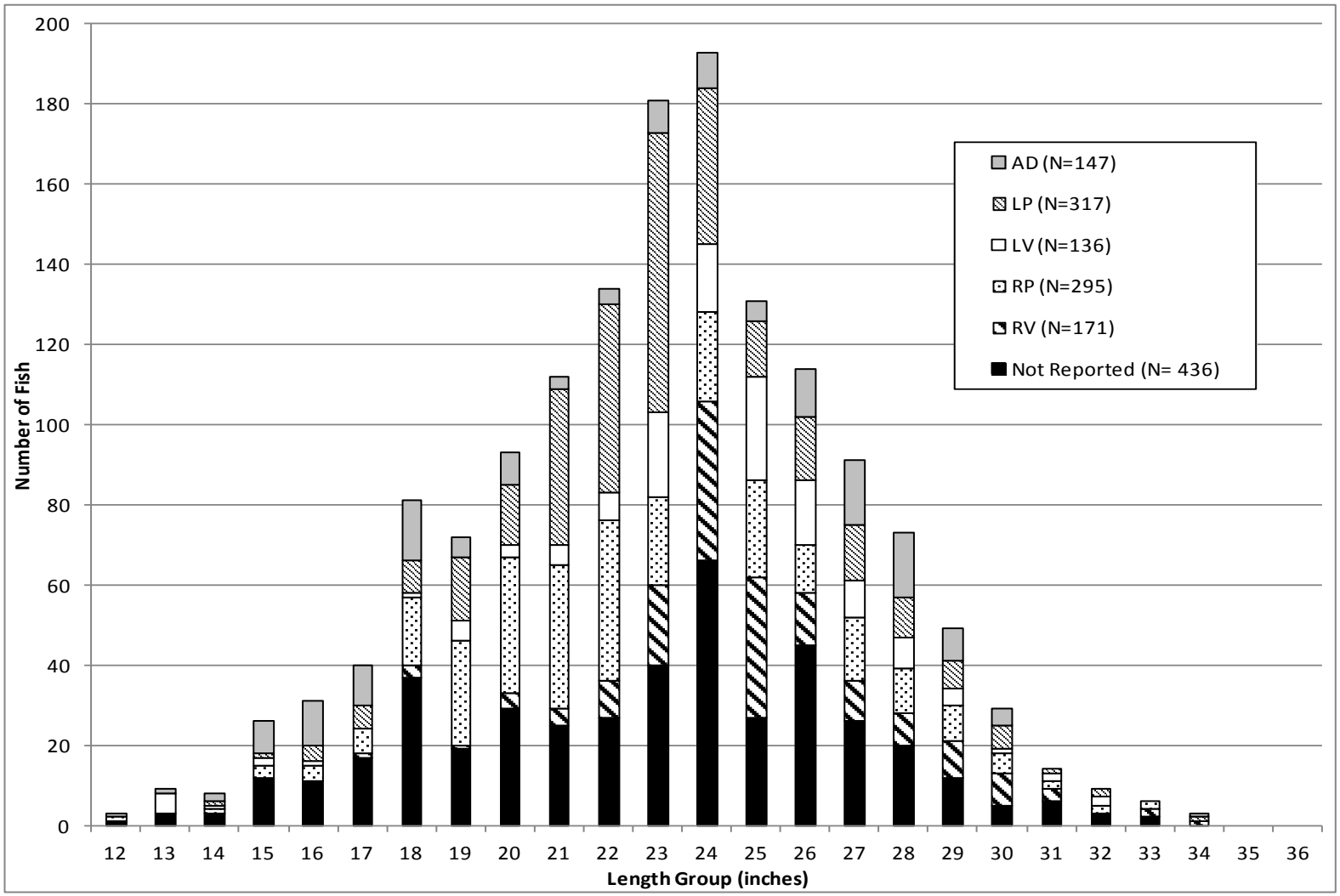


Figure 1. Lake trout length in inches by fin clip from the 2012 Lake Champlain angler diaries

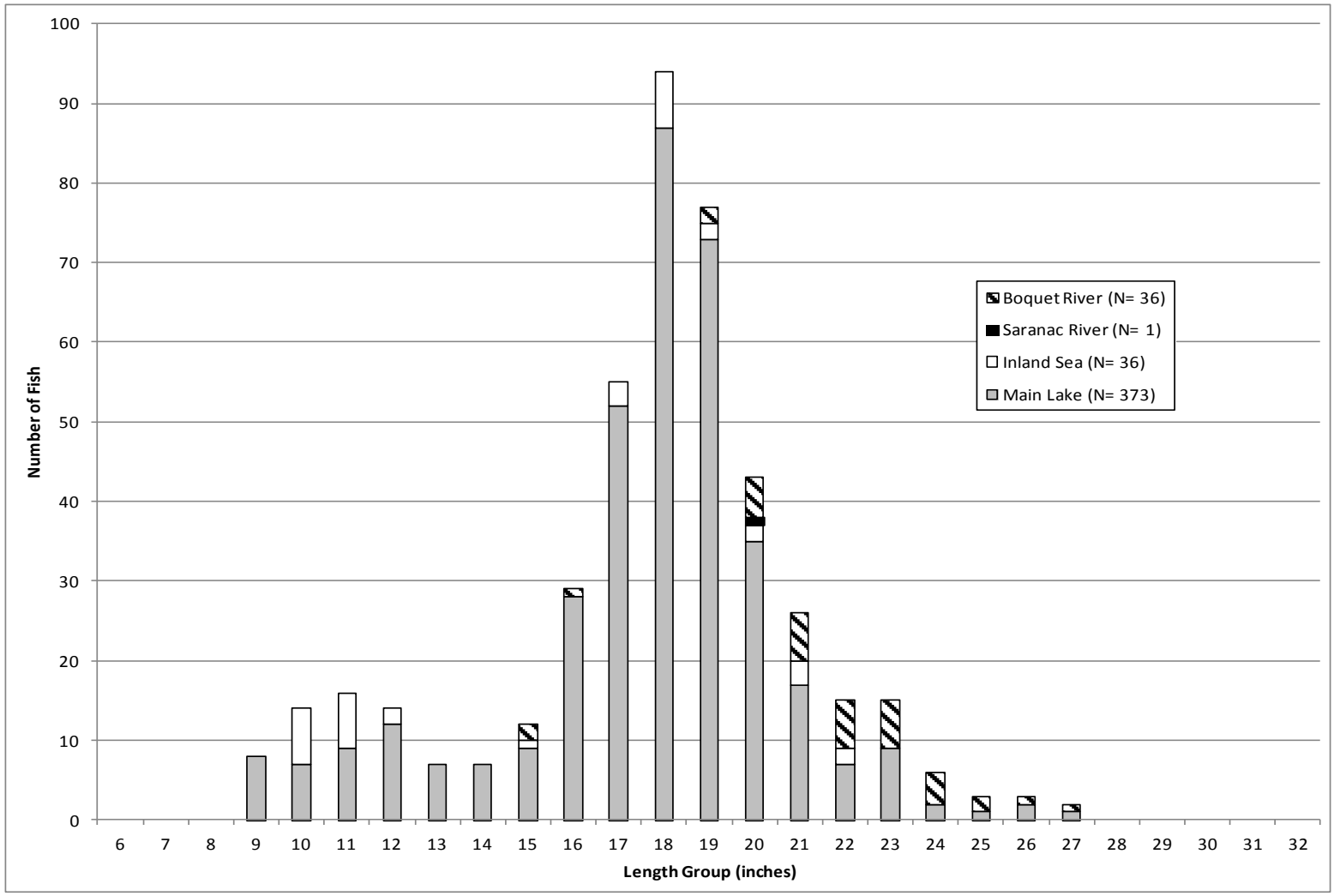


Figure 2. Landlocked salmon lengths in inches by lake zone or tributary from 2012 angler diaries.

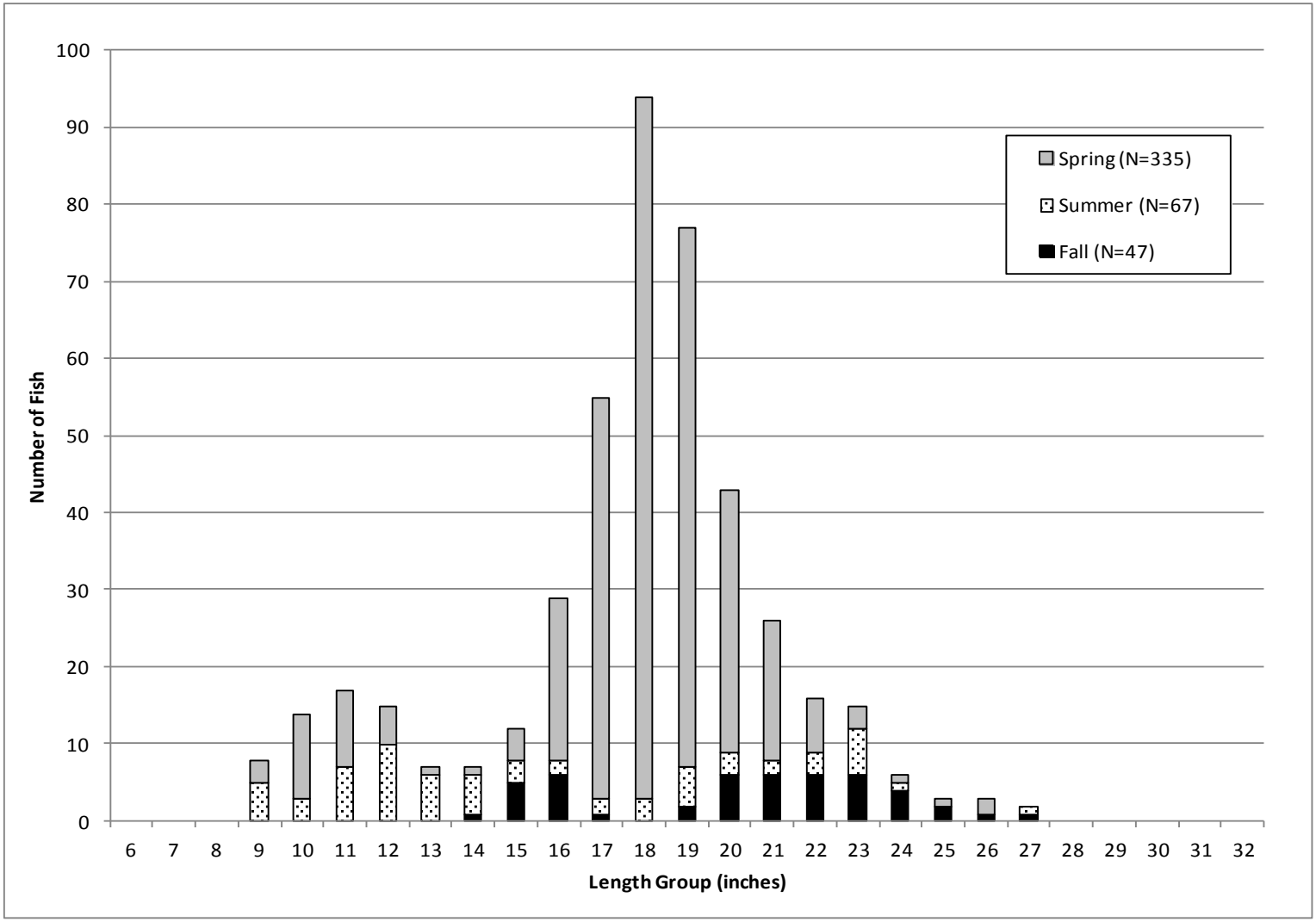


Figure 3. All landlocked salmon reported, lengths in inches, by season for 2012 (Spring = March-June; Summer = July-September; Fall = October-December).

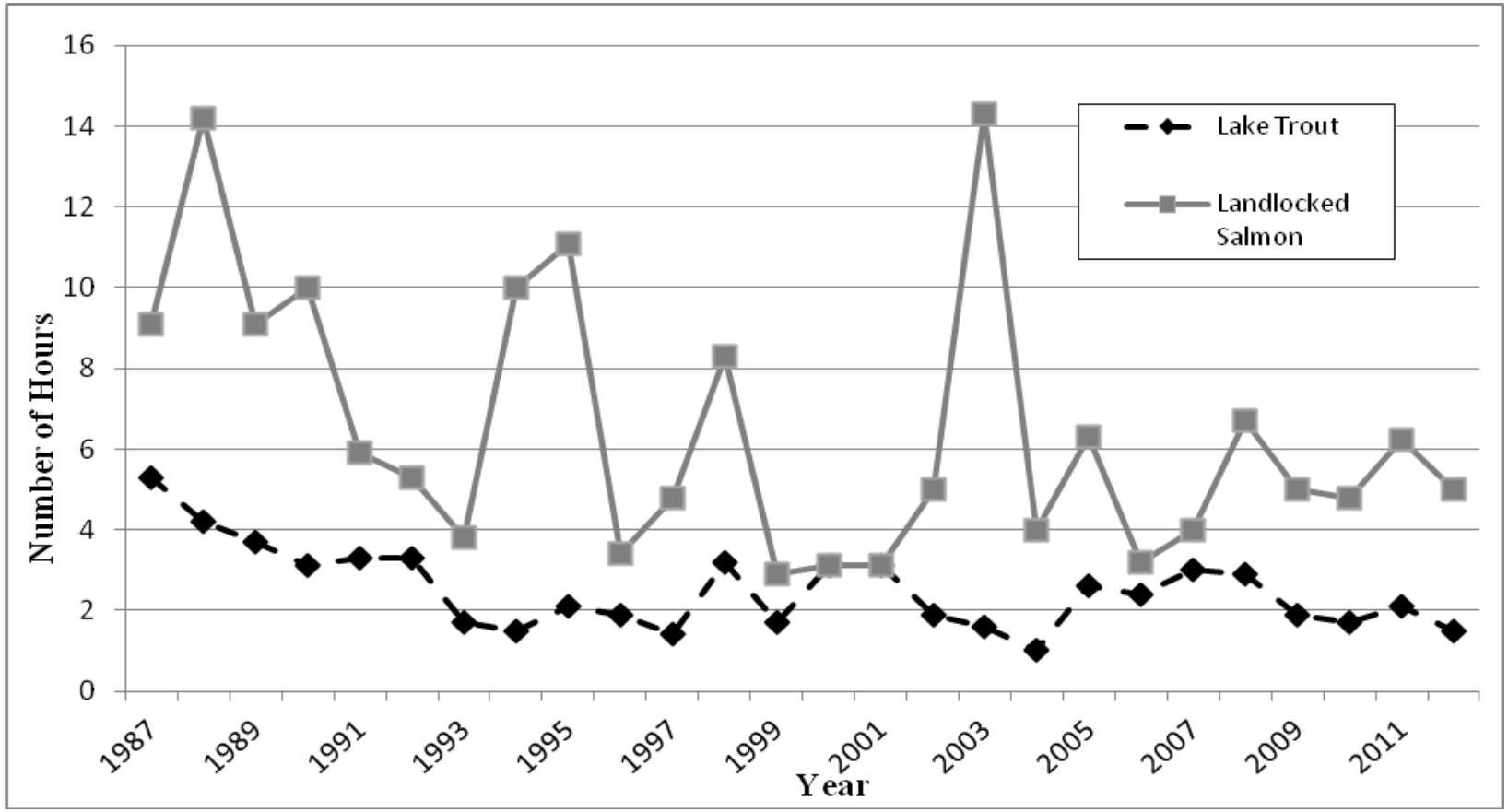


Figure 4. Number of fishing hours required to catch a legal-sized lake trout and landlocked salmon in Lake Champlain (years 1984-2012).

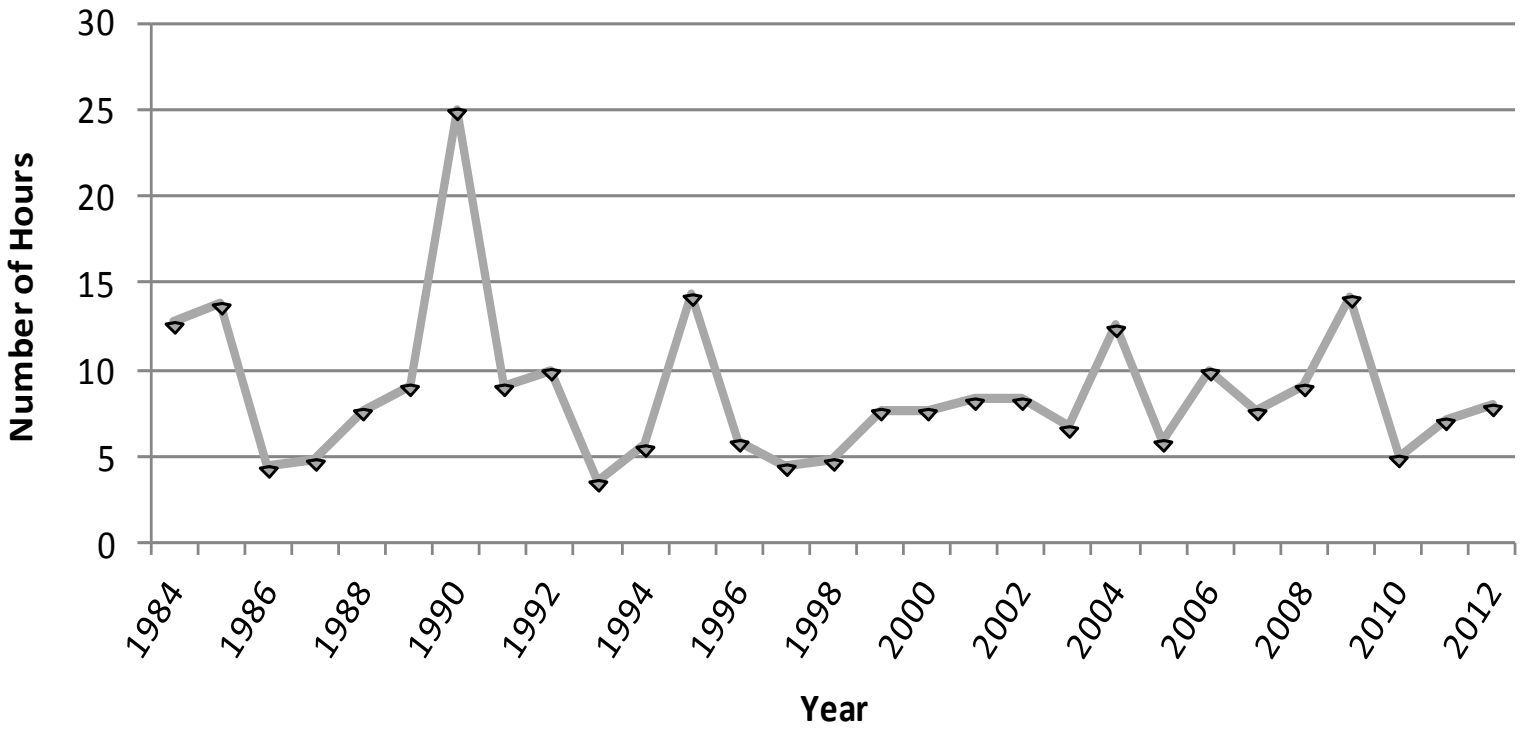


Figure 5. Number of fishing hours required to catch a legal-sized landlocked salmon in Lake Champlain tributaries (years 1984-2012).

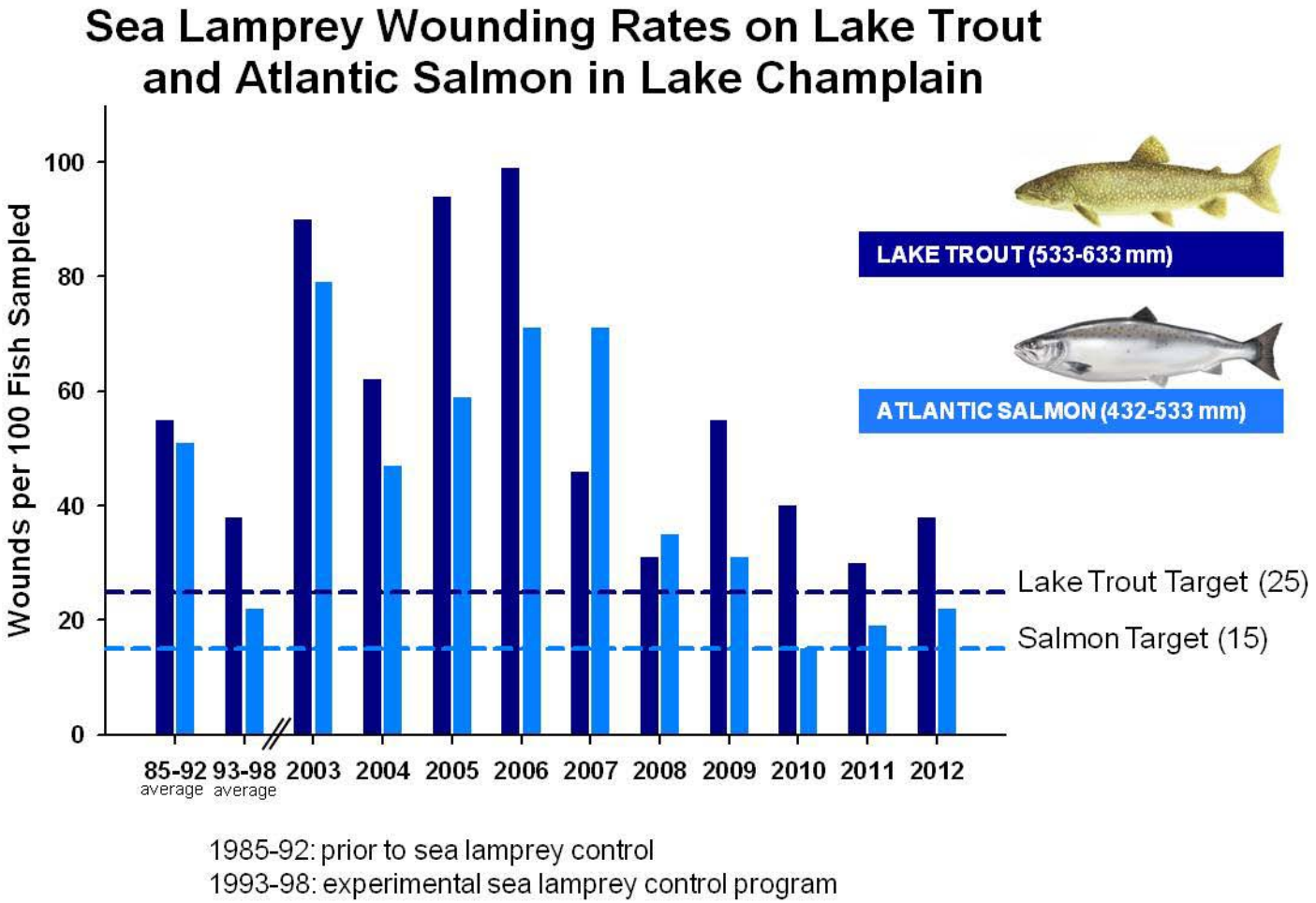


Figure 6. Number of sea lamprey wounds on lake trout and landlocked salmon per 100 fish sampled. For reference, the target wounding rates for lake trout and landlocked salmon are provided. Fall electrofishing is used to sample lake trout and landlocked salmon for wounding information.