

**LAKE CHAMPLAIN
ANGLER DIARY COOPERATOR SUMMARY REPORT**

2004 FISHING SEASON

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INTRODUCTION

An Angler Diary Cooperator Program designed to monitor Lake Champlain's trout and salmon fishery began in 1971.

This report summarizes data collected by volunteer salmon and trout anglers in Lake Champlain and its tributaries up to the first impassable barrier during 2004. Figures and tables are attached for your reference.

If you maintained and returned a diary of your 2004 fishing season, your cooperator number should appear in Table 1. (Your angler cooperator number appears on your 2005 diary.) If your number does not appear in the table and you returned a diary to us, please contact Tom Shanahan or Lance Durfey at DEC's Ray Brook headquarters, 518-897-1333.

RESULTS

Participation

Thirty-three cooperators returned diaries of their 2004 fishing season. They recorded information from 461 fishing trips (Table 1), up slightly from 2003's total of 448 trips.

Lake Fishing

Cooperators fished most in Main Lake during 2004, followed by Inland Sea and Malletts Bay (Table 2). There were no reported trips in South Lake for 2004. Overall trout and salmon catch rates were highest for Main Lake and Inland Sea; Malletts Bay had less than half the catch rate of either Main Lake or Inland Sea. Main Lake showed a similar catch rate to 2003, Inland Sea catch rate almost doubled and Malletts Bay decreased substantially.

Numbers and average lengths of trout and salmon caught and creeded are listed by species in Table 3. All of the lake-caught lake trout came from Main Lake. Lake trout length-frequency and fin-clip information are presented in Figure 1. The length-by-fin-clip figure for 2004 (Figure 1) shows the younger fish were dominated by the 3-year-old, RV-clipped lakers. The next most frequently reported mark was the RP fin-clip, which peaked at around 24" and are likely 6 years old. Also seen in roughly equal proportions are LV, AD and LP-clipped lakers in the 20"- 27" size range, representing 4, 5 and 7-year-old fish, respectively. The percent of lake trout with no

observed fin -clip was 22% in 2004, down slightly from last year's 28%. 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 and Malletts Bay (Table 3). The length-frequency distribution of lake-caught landlocked salmon (Figure 2) is similar in overall shape to last year's, although the total number of salmon reported was up considerably in 2004. This included a relatively large number of small, smolt-sized salmon from Main Lake. Unfortunately, catches of legal-sized salmon are still dominated by the younger, smaller salmon that have spent just one year in the lake after becoming smolts. Continued sea lamprey predation seems the most likely cause for the lack of larger, older salmon in lake catches.

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 fall, while the largest number of angler trips was in the summer. For Inland Sea, both the number of trips and catch rates were highest during summer. The highest catch rate in Malletts Bay was in the spring.

The catch of brown and rainbow trout from the lake (Table 3) continues to be very low, with only 11 browns and 2 rainbows reported from the entire lake. All of the recorded rainbows came from Main Lake, while the browns were split between Main Lake and Inland Sea. No lake trips specifically targeting rainbows or browns were made in either year (Table 5).

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 (0.44) was down from 2003's rate of 0.59. The catch rate by salmon anglers of legal-sized landlocked salmon (0.15) more than doubled from 2003's rate of 0.06.

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 18 years is presented in Figure 3. The number of hours required to catch a legal lake trout increased from 1.7 hours in 2003 to 2.3 hours in 2004. Lake Champlain's lake trout catch rate of 2.3 hours per fish is similar to Raquette Lake's, where in 2003 it took 2.2 hours of fishing to catch a lake trout.

The number of hours of Main Lake fishing required to catch a legal-sized landlocked salmon (5.3) was a marked improvement from 2003's 16.7 hours. There is still room for improvement, however, to get to the relatively good lake fishing for landlocked salmon seen during the mid to late 1990s during and shortly following the experimental sea lamprey control program.

The length-frequency distribution and fin-clip information for all landlocked salmon caught by cooperators in 2004 is presented in Figure 4. Less than 12% of the salmon caught had any mark. The RV clip was the most frequently reported mark on salmon. Vermont Fish and Wildlife used RV clips from 1999 to 2002 for some of their Inland Sea stockings. A change in the salmon fin-clipping regime occurred in 1999. Starting then, New York discontinued clips on salmon stocked directly into Lake Champlain. The AD-clip was used for salmon stocked into the Boquet River, and RV and LV clips were used by Vermont for their Inland Sea stockings for evaluation of strain and stocking location. Beginning in 2003, all three clips were used on landlocked salmon stocked into the Boquet River to evaluate three separate salmon strains: Adirondack, Sebago and Memphremagog. In addition, Vermont discontinued the LV and RV clips in Inland Sea in 2003 and began a double clip (RV-AD) on Sebago strain salmon for all their Lake Champlain stockings, regardless of stocking location. These fish, stocked in 2003 and 2004, may be seen by anglers this year.

Tributary Fishing

The Saranac River received the most tributary fishing hours in 2004 (Table 2). The Ausable River had the next highest number of hours fished, followed by the Boquet. The highest combined catch rate for legal-sized trout and salmon in 2004 was in the Ausable River, followed by the Saranac River. Numbers and average lengths of salmon and trout caught and creel in tributaries are presented in Table 3. The total number of rainbow trout reported (84) was up substantially from 2003's total catch of 34, as was the total number of browns reported (24 in 2004 versus just 3 in 2003).

Tributary salmon fishing in 2004 was concentrated in the spring and fall (Table 4). Spring catch rates on the Ausable and Boquet rivers were quite good relative to the fall, while on the Saranac the opposite was true. Fall salmon fishing on the Ausable and Boquet was especially poor during 2004, with only two salmon reported from the Boquet and none from the Ausable.

The length-frequency distribution of river-caught landlocked salmon by tributary is presented in Figure 5. The length-frequency distribution shows peaks in the 7" - 12" and 15" - 19" ranges, with relatively few fish above 20". The vast majority of the sub-legal salmon were smolts from the Saranac River.

Catch statistics for tributary anglers targeting specific species are presented in Table 6. Most trips on the various rivers targeted landlocked salmon, with the exception of Lewis Creek, where rainbow trout (steelhead) were the primary target. There was also a good number of steelhead-targeted trips on the Saranac River, which yielded the best steelhead catch rates. The Saranac River also received the most trips targeting brown trout. For all tributaries combined, catch rates for legal-sized salmon and for salmon regardless of size both decreased in 2004 from 2003 levels, while both brown and steelhead rates improved.

The number of hours of river fishing required to catch a legal-sized landlocked salmon during the past 18 years is presented in Figure 6. The catch rate in 2004, 12.5 hours per legal fish, was a substantial worsening from last year's catch rate of 6.7 hours. However, both are still well below the good tributary salmon fishing we had back in the early to mid 1990s following the positive

effects from the experimental sea lamprey control program. For example, in 1993 it took just 4 hours of tributary fishing to catch a legal-sized landlocked salmon.

SEA LAMPREY CONTROL UPDATE AND THANK YOU

A sincere thanks is 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. We have a good supply of Angler Diary Cooperator patches available. If you would like a patch for your cap or shirt, call or drop us a line, and we will mail one to you.

We are back on track with a cooperative, long-term sea lamprey control program in Lake Champlain. NYSDEC, Vermont Fish and Wildlife, and the US Fish and Wildlife Service are all cooperating in the program. In fall 2004, all three agencies helped treat the Winooski River in Vermont, and on the New York side, the Great Chazy River, Mount Hope Brook and the Saranac River delta. No treatments are scheduled for 2005. Streams scheduled for treatment in 2006 include Vermont's Lewis Creek and New York's Putnam Creek and the Salmon, Little Ausable, and Ausable rivers.

It is hoped that 2004's Saranac delta treatment combined with our other river treatments in New York and Vermont will be enough to "turn the corner" on the sea lamprey population. Wounding rates during 2004 did decrease from the very high rates of 2003 (Figure 7). However, wounding rates in 2004 were still more than double our program objective of 25 wounds per 100 lake trout. Hopefully, wounding rates will continue to decrease, and the fishing will rebound.

We continue working toward construction of a barrier dam on Morpion Stream in Quebec to prevent sea lamprey from reaching their spawning grounds there. Morpion Stream serves as the primary spawning ground and source for the sea lamprey population inhabiting the Pike River/Morpion Stream system, which currently has the single largest uncontrolled sea lamprey population in Lake Champlain. A feasibility study and preliminary site design have been completed and forwarded for review by the Provincial Government of Quebec. It is hoped that the Quebec officials will find the report complete and will select a barrier dam design from the four potential designs included in it. Once a barrier dam design is selected, we can begin the permit application process and hire an engineering firm to draft detailed plans of the entire design. Under a best-case scenario, construction could begin as early as spring 2006.

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 to determine whether your license money and our efforts are bearing fruit. 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.

If you have any comments or suggestions about the angler diary reports, or the diary program itself, please drop me a line, give me a call at 518-897-1333, or e-mail me at lxdufey@gw.dec.state.ny.us. 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 :
www.dec.state.ny.us/website/reg5/r5fish/index.html

Table 1. 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
2004 FISHING SEASON

ZONE/TRIB	NUMBER OF COOPERATORS	NUMBER OF ANGLER TRIPS	EFFORT IN ANGLER HOURS	MEAN TRIP LENGTH	CATCH PER ANGLER HOUR	LEGAL CATCH PER ANGLER HOUR	CREELED PER ANGLER HOUR
Main Lake (Open water)	23	349	1782.3	4.8	.37	.32	.11
(Ice fishing)	2	17	133.0	8.2	.07	.07	.02
Malletts Bay (Open water)	6	32	185.3	5.5	.09	.04	.01
(Ice fishing)	2	13	72.0	5.6	.03	.03	.00
Inland Sea (Open water)	7	51	383.2	7.0	.31	.22	.03
(Ice fishing)	1	4	35.0	8.8	.11	.09	.09
Saranac River	9	70	259.9	3.5	.44	.22	.01
Little Ausable	1	4	6.0	1.5	.17	.17	.00
Ausable River	5	46	111.5	2.2	.39	.32	.21
Boquet River	5	81	81.3	1.0	.12	.11	.06
Lewis Creek	1	14	13.8	1.0	.00	.00	.00
Winooski River	1	3	2.7	0.9	.00	.00	.00
Lamoille River	1	14	53.5	2.5	.13	.13	.00
TOTAL	64	698	3119.4	3.7	.32	.25	.08

Table 2. 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 2004 in Lake Champlain and its tributaries.

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	546	22.5	163	23.2	286	14.5	65	17.9	6	18.0	1	17.0	2	19.0	2	19.0
Malletts Bay	0	-	0	-	17	11.8	2	18.5	0	-	0	-	0	-	0	-
Inland Sea	0	-	0	-	114	16.3	12	17.8	5	13.1	1	18.0	0	-	0	-
Saranac River	0	-	0	-	39	13.4	2	20.8	20	10.1	0	-	55	13.6	1	17.0
Salmon River	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-
Ausable River	0	-	0	-	14	16.5	12	16.7	1	15.5	1	15.5	28	13.6	10	14.7
Boquet River	0	-	0	-	8	16.6	3	17.2	2	15.8	2	15.8	0	-	0	-
Lewis Creek	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-
Winooski River	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-
Lamoille River	1	23.0	0	-	5	19.4	0	-	0	-	-	-	1	15.0	-	-
Unknown	0	-	0	-	3	18.2	0	-	1	16.5	0	-	0	-	0	-
Total	547	22.5	163	23.2	486	14.9	96	17.8	35	12.5	5	16.4	86	13.8	13	15.6

Table 3. Year 2004 landlocked salmon fishing results by season for Lake Champlain and tributary trips.

SEASON	ZONE/TRIB	NUMBER TRIPS FISHED	NUMBER OF ANGLER HOURS	MEAN TRIP LENGTH (HOURS)	NUMBER CAUGHT	NUMBER CAUGHT PER ANGLER HOUR	NUMBER KEPT	MEAN LENGTH CAUGHT	MEAN LENGTH KEPT
WINTER (December thru February)	Saranac River	1	2.5	2.5	0	0	0	0	0
	TOTAL	1	2.5	2.5	0	0	0	-	-
SPRING (March thru May)	Main Lake	14	93	4.1	31	.33	20	16.8	16.8
	Malletts Bay	6	80	6.7	13	.16	0	9.7	-
	Inland Sea	3	32	5.3	4	.13	2	12.0	16.0
	Saranac River	18	58	2.9	4	.07	1	15.3	18.0
	Ausable River	21	87	2.9	14	.16	12	16.5	16.7
	Boquet River	24	25	1.0	6	.24	3	15.9	17.2
	TOTAL	86	375	3.2	72	.19	38	15.0	16.8
SUMMER (June thru August)	Main Lake	34	223	4.8	87	.39	12	13.2	18.6
	Malletts Bay	5	76	6.3	2	.03	0	18.5	-
	Inland Sea	19	352	7.8	110	.31	10	16.5	18.2
	Saranac River	2	14	4.7	0	0	0	-	-
	Ausable River	1	0.5	0.5	0	0	0	-	-
	Boquet River	3	5	1.8	0	0	0	-	-
	TOTAL	64	671	6.1	199	.30	22	14.9	18.4
FALL (September thru November)	Main Lake	13	62	4.4	28	0.45	2	15.5	22.6
	Malletts Bay	2	13	3.3	0	0	0	-	-
	Saranac River	38	182	4.1	35	0.19	1	13.2	23.5
	Ausable River	14	24	1.6	0	0	0	-	-
	Boquet River	53	51	1.0	2	0.04	0	18.5	-
	Winooski River	3	3	0.9	0	0	0	-	-
	Lamoille River	9	18	1.9	5	0.29	0	19.4	-
	TOTAL	132	353	2.5	70	0.20	3	14.7	22.9

Table 4. Summary statistics for 2004 for lake trips where only a single species was targeted. There were no lake trips solely targeting rainbow or brown trout in 2004.

Target Species Landlocked Salmon					
Zone	Number of Angler Trips	Number of Angler Hours Fished	Catch Per Angler Hour	Number of Legal-Sized Landlocked Salmon Caught Per Angler Hour	Number of Landlocked Salmon Kept Per Angler Hour
Main Lake	83	510.7	0.29	0.19	0.07
Malletts Bay	28	289.3	0.05	0.02	0
Inland Sea	51	443.2	0.26	0.18	0.03
Total	162	1243.1	0.22	0.15	0.04

Target Species Lake Trout					
Zone	Number of Angler Trips	Number of Angler Hours Fished	Catch Per Angler Hour	Number of Legal-Sized Lake Trout Caught Per Angler Hour	Number of Lake Trout Kept Per Angler Hour
Main Lake	139	742.5	0.44	0.44	0.18
Malletts Bay	3	19.0	0.05	0.05	0
Inland Sea	0	0	-	-	-
Total	142	761.5	0.43	0.43	0.17

Table 5. Summary statistics for 2004 tributary fishing trips targeting either a single species, or a combination of salmonid species.

LANDLOCKED SALMON					BROWN TROUT				RAINBOW TROUT			
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 CAUGHT PER ANGLER HOUR	NUMBER OF TRIPS	EFFORT IN ANGLER HOURS	RT CAUGHT PER ANGLER HOUR	LEGAL RT PER ANGLER HOUR
Saranac	68	255.9	0.15	0.05	35	141.4	0.08	0.01	37	176.4	0.31	0.23
Ausable	46	111.5	0.13	0.13	14	30.8	0	0	10	17.2	0.29	0.29
Boquet	81	81.3	0.10	0.09	1	2.5	0	0	0	0	-	-
Little Ausable	0	0	-	-	4	6.0	0.17	0.17	0	0	-	-
Lamoille	9	17.5	0.29	0.29	0	0	-	-	1	2.0	0	0
Lewis	0	0	-	-	0	0	-	-	14	13.8	0	0
Winooski	3	2.7	0.0	0.0	0	0	-	-	0	0	-	-
Total	217	466.0	0.14	0.08	54	180.7	0.07	0.07	56	209.3	0.28	0.22

Figure 1. Lake trout lengths by fin-clip from 2004 Lake Champlain diaries.

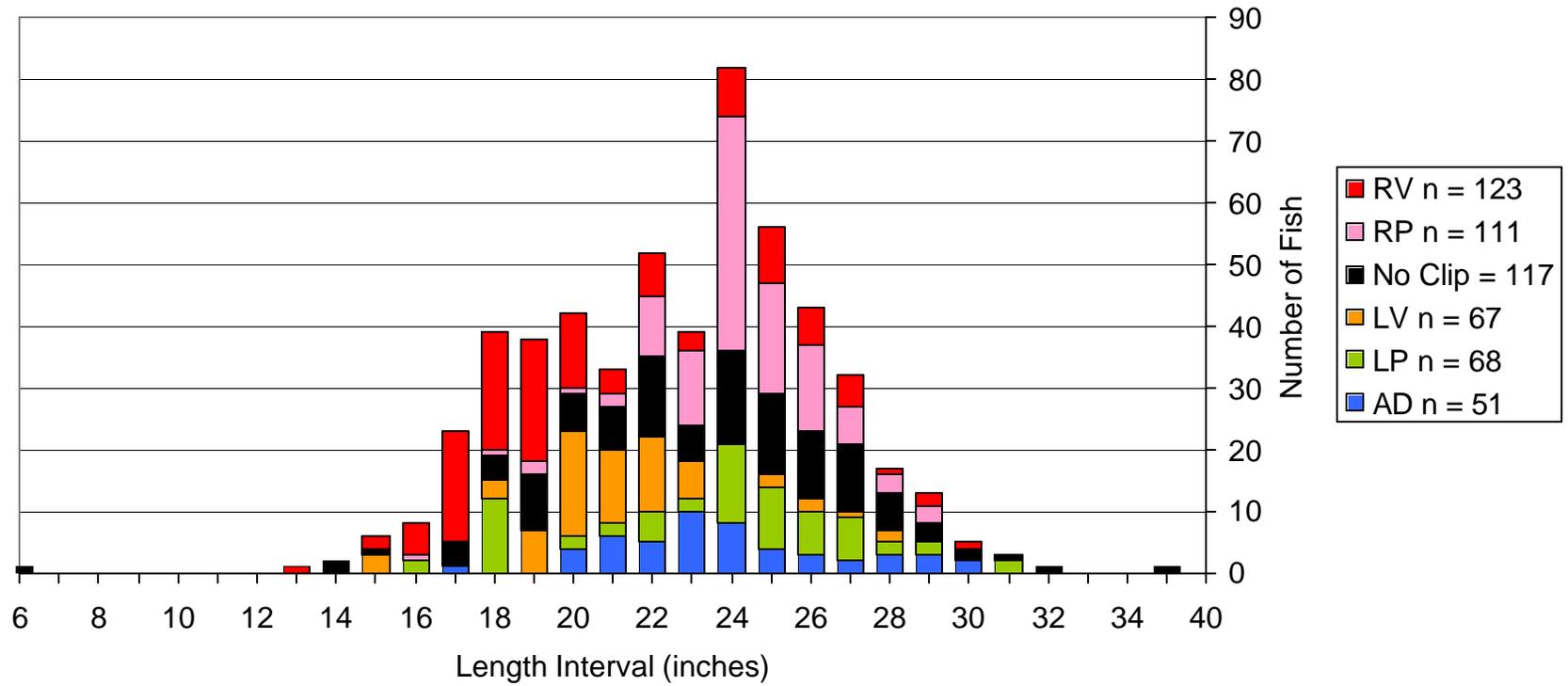


Figure 2. Landlocked salmon lengths by lake zone from 2004 angler diaries.

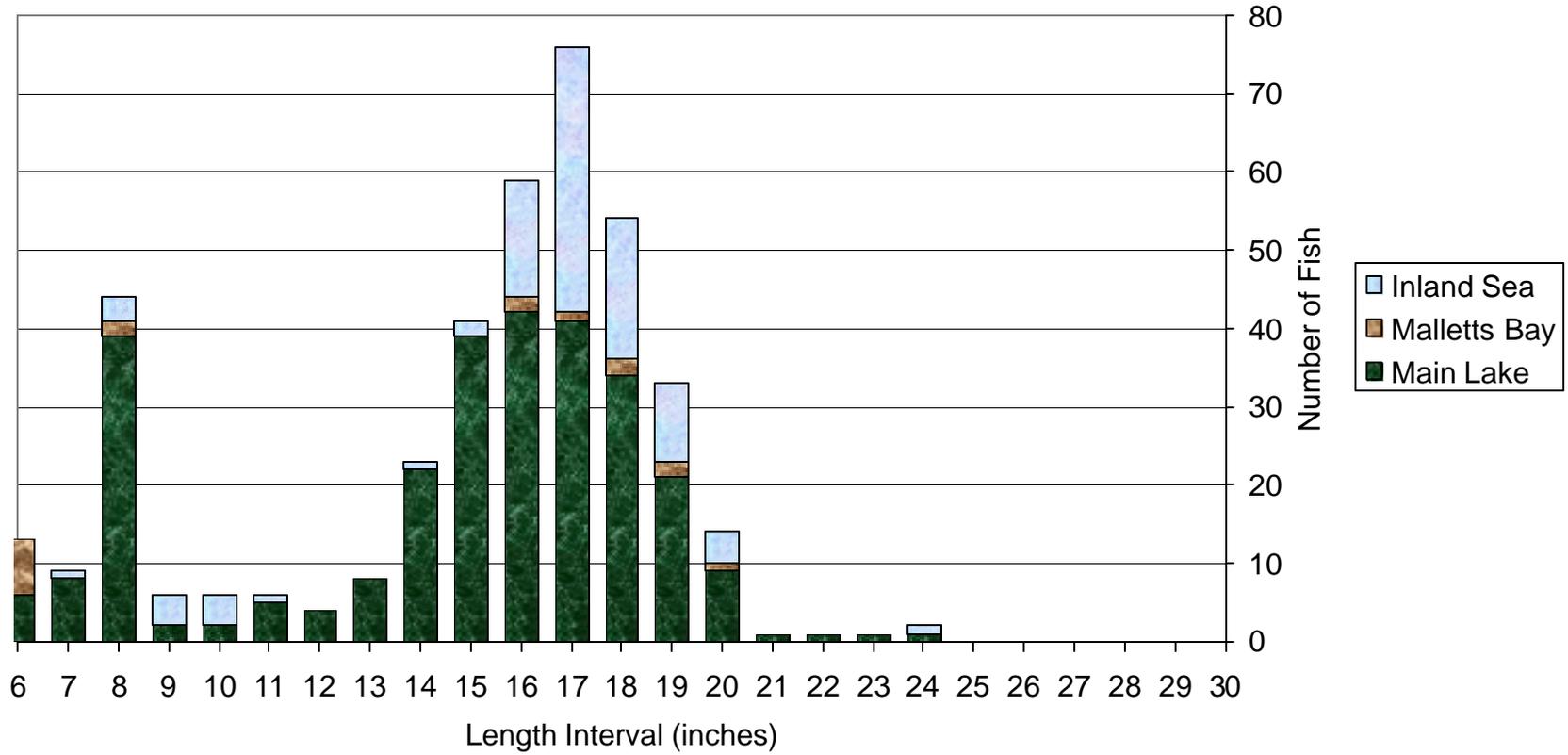


Figure 3. Number of hours of main lake fishing required to catch a legal-sized lake trout or landlocked salmon (years 1987 - 2004).

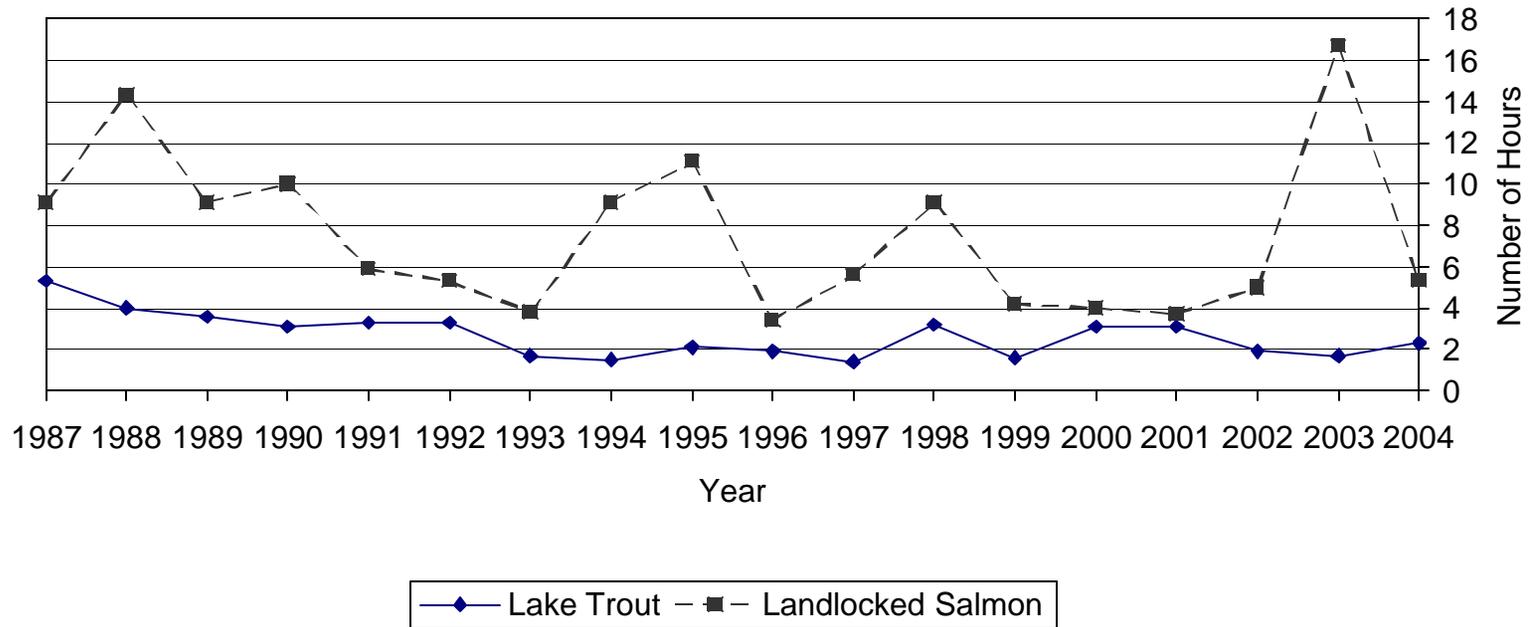


Figure 4. Landlocked salmon lengths by fin-clip from 2004 Lake Champlain diaries

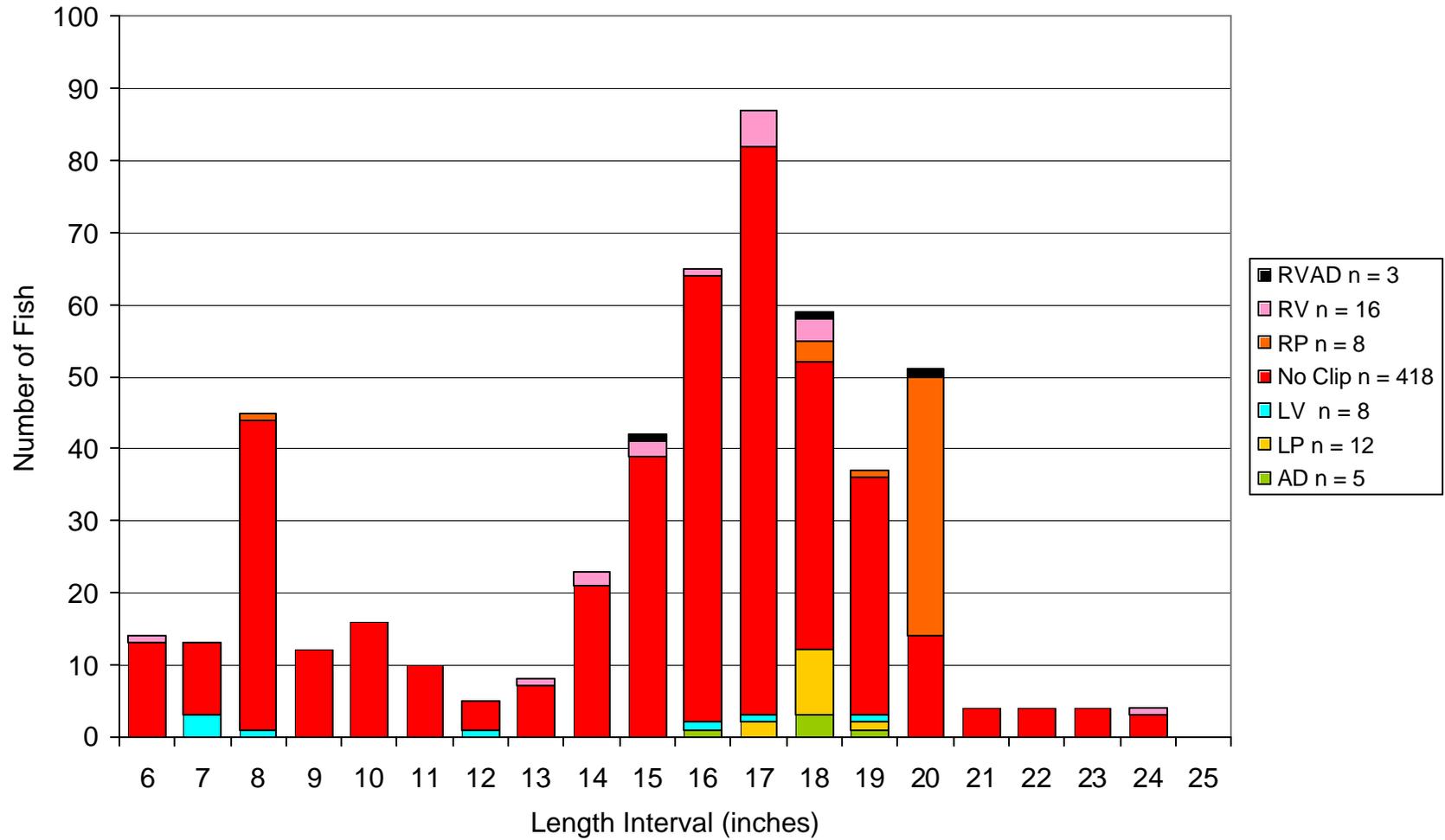


Figure 5. Landlocked salmon lengths by tributary from 2004 Lake Champlain diaries.

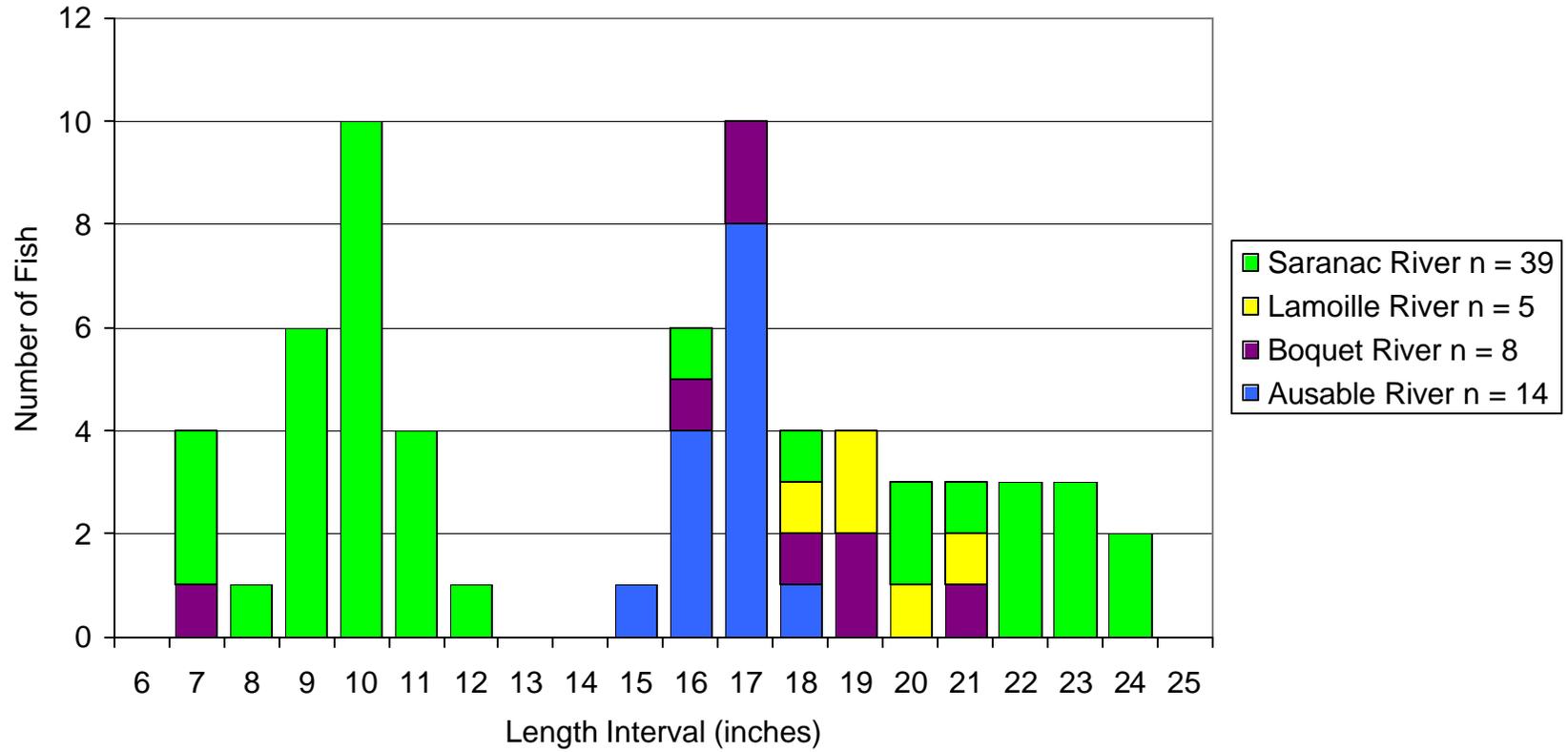


Figure 6. Number of tributary fishing hours needed to catch a legal-sized landlocked salmon for years 1984 thru 2004.

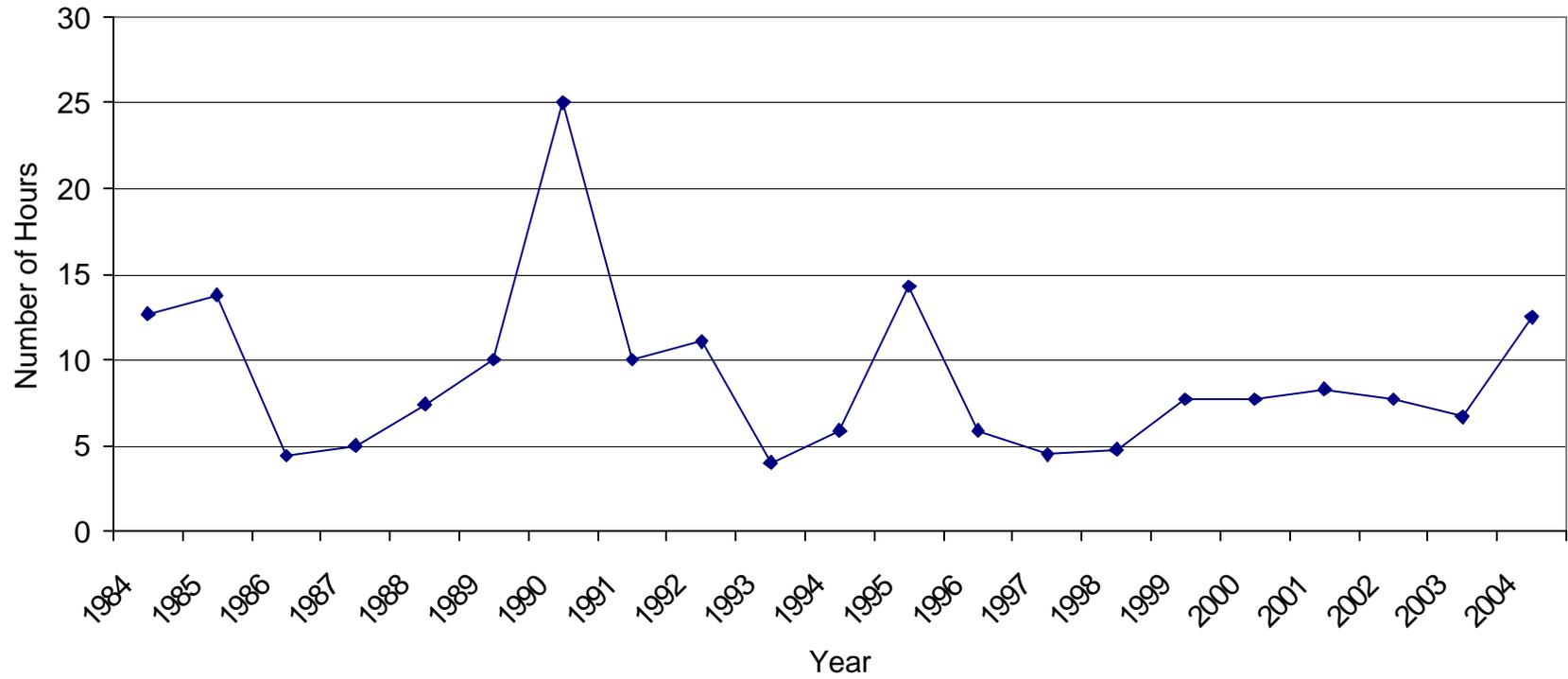


Figure 7. Number of sea lamprey wounds per 100 lake trout (21.0-24.9"), and for reference, our target wounding rate of 25 wounds per 100 fish. Fall electrofishing is used to sample lake trout for wounding information.

