

This is the first St. Croix River anadromous fisheries report for 2014. This report series provides weekly updates on river herring (alewife/gaspereau and blueback herring) and other fish recorded at the St. Croix's Milltown fishway during the 8-10 week river herring run. Other St. Croix anadromous fisheries information is also provided, when available.

The 2014 reports are prepared on a 7-day cycle that ends on Friday evening and will be issued through the Atlantic Salmon Federation office early the following week.

RIVER HERRING

The Milltown fishway and research trap were activated together on May 5. High water flows precluded any fishway attraction for the first week: the lower section of the fishway was 6 feet underwater and huge standing waves and turbulence below the dam further compounded the situation. No fish were recorded that week. Flows last week were still high but had dropped sufficiently to allow the fishway to operate. The first river herring entered the fishway on May 13, for a total of 7 to date.

A comparison of alewife returns to this date in other recent years:

To May 16	# alewife
2014	7
2013	704
2012	1336
2011	1657
2010	9748
Last 10 year (2004-2013) average to this date: 1405	

The St. Croix run typically peaks between +May 17 and June 13, so this year's slow start is not unusual.

OTHER FISH

Twenty-one white suckers, one smallmouth bass and one brook trout were recorded at the trap this week and released upstream. These fish have dropped downstream of the dam via the gates or spillage in recent weeks and are returning upstream to freshwater.

TRACKING STUDY

The Atlantic Salmon Federation, fisheries agencies and the Passamaquoddy Tribe are collaborating on a St. Croix river herring tracking study in 2014. Thirty river herring will receive acoustic tags at Milltown and be tracked by stationary receivers placed along the river and in Woodland and Grand Falls Flowages as they move into and out of the watershed. More information will be available later.

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This is the second St. Croix River anadromous fisheries report for 2014, covering fish counts at the Milltown (head-of-tide) fishway for the seven-day period ending +May 23.

RIVER HERRING

The Milltown research trap is operated for an 8-10 week period each year to record the run of alewives (or gaspereau) and closely-related blueback herring, these collectively called river herring. Other fish entering the trap are also recorded.

Heavy rains on +May 17-19 again raised river flows above those that favor fish passage and only 16 fish were recorded at the trap. At week's end, the flows remained high but on+Thursday the first river herring could be seen gathering below the fishway and may be expected to move upstream as soon as water conditions improve.

A comparison of alewife/blueback herring returns to this date in other recent years:

<u>To +May 23</u>	<u># river herring</u>
2014	23
2013	882
2012	13,596
2011	14,710
2010	27,479

Ten year (2004-2013) average to this date: 7,042

The low count to date is not a concern: counts to +May 23 have been lower than this week's in 4 of the last 10 years.

OTHER FISH

Three white suckers were also recorded at the trap this week and released upstream, These fish have dropped downstream of the dam via the gates or spillage and are returning upstream to freshwater.

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This is the third St. Croix River anadromous fisheries report for 2014, covering fish counts at the Milltown (head-of-tide) fishway for the seven-day period ending +May 30.

RIVER HERRING

The Milltown research trap is operated for an 8-10 week period each year to record the run of alewives (or gaspereau) and closely-related blueback herring, these collectively called river herring. Other fish entering the trap are also recorded.

During the week, river flows dropped into the range that favors fish passage at Milltown but few fish were seen below the dam. Late in the week, cormorants were beginning to gather: a sign

that fish are on the move.

A comparison of alewife/blueback herring returns to this date in other recent years:

<u>To +May 23</u>	<u># river herring</u>
2014	52
2013	11,424
2012	34,786
2011	15,937
2010	44,487

Ten year (2004-2013) average to this date: 11,743

The St. Croix run has peaked later than this date in five of the last 10 years and lower returns to+May 30 have occurred in three of the last 10. Nearby rivers are also experiencing a late 2014 run.

NEWS FLASH: The river herring run started in earnest on +Sunday afternoon, +June 1. Next week's report will tell more!

OTHER FISH

No other fish species were recorded at the trap this week.

This is the fourth St. Croix River anadromous fisheries report for 2014, covering fish counts at the Milltown (head-of-tide) fishway for the seven-day period ending June 6.

RIVER HERRING

The Milltown research trap is operated for an 8-10 week period each year to record the run of alewives (or gaspereau) and closely-related blueback herring, these collectively called river herring. Other fish entering the trap are also recorded.

Over 10,000 fish suddenly moved up the fishway on Sunday afternoon (June 1) and smaller numbers followed throughout the week, to give a one week total of 19,971. This was the highest count for the seven-day period of May 31-June 6 since 1996.

A comparison of alewife/blueback herring returns to this date with other recent years:

<u>To June 6</u>	<u># river herring</u>
2014	20,023
2013	16,531
2012	35,961
2011	23,687
2010	53,007

Ten year (2004-2013) average to this date: 15,964

OTHER FISH

One sea lamprey, 11 white suckers, four smallmouth bass and one brook trout were also recorded in the trap this week. The sea lamprey is a returning anadromous fish, the others are freshwater fish that presumably dropped below the dam via gates or spillways into brackish water and came back up the fishway to the river.

This is the fifth St. Croix River anadromous fisheries report for 2014, covering fish counts at the Milltown (head-of-tide) fishway for the seven-day period ending +June 6.

RIVER HERRING

The Milltown research trap is operated for an 8-10 week period each year to record the run of alewives (or gaspereau) and closely-related blueback herring, these collectively called river herring. Other fish entering the trap are also recorded.

Just under 6,000 river herring moved up the fishway on +Sunday- +Tuesday this week with very few on the days either side, for a weekly total of 6,775. River temperatures are now consistently above 19C (66F), getting warm for these fish, and the run has historically been on the decline by now.

A comparison of alewife/blueback herring returns to this date with other recent years:

<u>To +June 13</u>	<u># river herring</u>
2014	26,798
2013	16,568
2012	36,158
2011	25,074
2010	57,453

Ten year (2004-2013) average to this date: 17,526

OTHER FISH

Five white suckers and two smallmouth bass were also recorded in the trap this week. These presumably dropped below the dam via gates or spillways into brackish water and came back up the fishway to the river.

ALEWIFE TRACKING STUDY

In last two weeks, 30 alewife/blueback herring have been implanted with internal transmitters at Milltown and are now being tracked by 21 underwater receivers in the St. Croix watershed and 2 receivers in the St. Croix estuary during their June-August spawning migration. The results of

this experiment, to be known later in the year, will provide insight on their movements and help to direct future fisheries research and management efforts on the St. Croix.

This is the sixth St. Croix River anadromous fisheries report for 2014, covering fish counts at the Milltown (head-of-tide) fishway for the seven-day period ending +June 20.

RIVER HERRING

The Milltown research trap is operated for an 8-10 week period each year to record the run of alewives (or gaspereau) and closely-related blueback herring, these collectively called river herring. Other fish entering the trap are also recorded. This year's count began on +May 5.

The run dropped off significantly this week with only 95 river herring passing upstream. A comparison of alewife/blueback herring returns to this date with other recent years:

To +June 20 # river herring

2014 26,893

2013 16,651

2012 36,168

2011 25,124

2010 58,579

Ten year (2004-2013) average to this date: 18,374

OTHER FISH

No other species were recorded at the Milltown trap this week.

This is the seventh St. Croix River anadromous fisheries report for 2014, covering fish counts at the Milltown (head-of-tide) fishway for the seven-day period ending +June 27.

The Milltown research trap is operated for an 8-10 week period each year to record the run of alewives (or gaspereau) and closely-related blueback herring, these collectively called river herring. Other fish entering the trap are also recorded. This year's count began on +May 5 and will continue until the river herring run appears to have ended and no fish are recorded for three consecutive days, usually sometime between +July 4 and 19. We anticipate 1-2 more weekly reports before the trap is lifted for the year.

RIVER HERRING

Small but steady numbers continued to ascend the fishway with 143 passing upstream this week. A comparison of alewife/blueback herring returns to this date with other recent years:

To +June 27 # river herring

2014 27,036

2013	16,674	
2012	36,168	season total
2011	25,134	
2010	58,719	

Ten year (2004-2013) average to this date: 18,427

OTHER FISH

No other species were recorded at the Milltown trap this week.

This is the eighth St. Croix River anadromous fisheries report for 2014, covering fish counts at the Milltown (head-of-tide) fishway for the seven-day period ending July 4.

The Milltown research trap is operated for an 8-10 week period each year to record the run of alewives (or gaspereau) and closely-related blueback herring, these collectively called river herring. Other fish entering the trap are also recorded.

At this time, we anticipate one more weekly report before the trap is lifted for the year.

RIVER HERRING

Another 267 fish ascended the fishway this week, an unusually large number for this late in the season. A comparison of alewife/blueback herring returns to this date with other recent years:

<u>To July 4</u>	<u># river herring</u>	
2014	27,303	
2013	16,677	season total
2012	36,168	season total
2011	25,141	
2010	58,764	

Ten year (2004-2013) average to this date: 18,550

OTHER FISH

One sea lamprey was recorded at the Milltown trap this week.

This is the ninth and final St. Croix River anadromous fisheries report for 2014, covering fish counts at the Milltown (head-of-tide) fishway.

The Milltown fishway research trap was activated at the same time as the fishway on May 5. The trap was lifted for the year on July 8 however the fishway itself continues to operate, passing fish without monitoring, until November.

Extremely high flows and debris from the previous weekend's tropical storm made it impossible to keep the trap operating. These flows also eliminated any fishway attraction for the few, if any, late spawners that might still be seeking passage.

These conditions will persist into next week, well beyond the time when river herring would typically enter the river and counts in previous years have been discontinued.

Nine alewives and one smallmouth bass managed to ascend the fishway after last week's trap count and before the onset of the extreme flows; these are included in the totals below

RIVER HERRING *2014 FINAL*

Year total # river herring

2014 27,312

2013 16,677

2012 36,168

2011 25,142

2010 58,776

Ten year (2004-2013) average total: 18,553

OTHER FISH *2014 FINAL*

Anadromous: 2 sea lamprey

Freshwater: 40 white sucker, 8 smallmouth bass, 2 brook trout.