

## How you can Help

Please sponsor a smolt on the Restigouche, Miramichi, St. Jean (Côte Nord) or Grand Cascapedia River by purchasing one or more pingers. Pingers cost \$500 each and in return ASF will provide you with three chapters of A Great Fish Story as the research season unfolds.

**Chapter One** – A sonic tracking unit will be surgically implanted into your wild Atlantic salmon smolt. You can even indicate your river of preference.

Because each smolt has a unique pinger number, we will be able to inform you of the date, time and specific location in which your smolt was tagged.

**Chapter Two** – Your smolt will be followed. At mid season, ASF's researchers will download and forward critical information about your smolt to you.

**Chapter Three** – The end of the field season will bring more information on your smolt's travel patterns and we will send you a summary of our field research.

Please help us continue  
our research in 2007.

Sponsor a salmon smolt!



# What a Great Fish Story

For more information or to contact  
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*is writing*  
VOLUME III  
OF A  
GREAT  
fish story



# Why this Story Matters

One of the most significant problems facing wild Atlantic salmon today is excessive mortality as salmon shift from their native rivers and dwell in the sea. Fewer and fewer smolt are returning to their native rivers from the ocean feeding grounds.

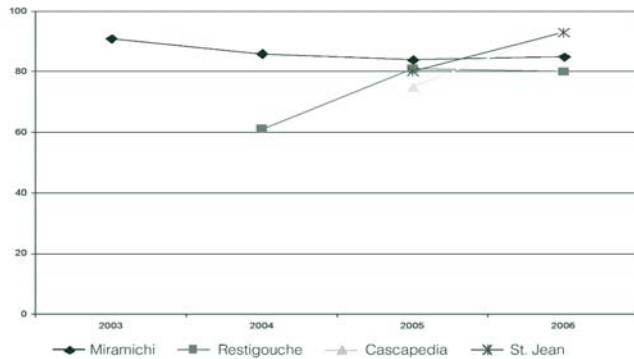
The Atlantic Salmon Federation (ASF) has developed and refined sophisticated ocean tracking equipment so that we can determine what is happening on this journey. Acoustic tags, known as pingers, and automated underwater receivers are used to map migration routes and patterns over time.

The primary goals of this research are to determine the locations, timing and causes of mortality during their trip from river to sea. ASF will use this information to identify common threats to smolt survival and to help design effective river by river management plans.

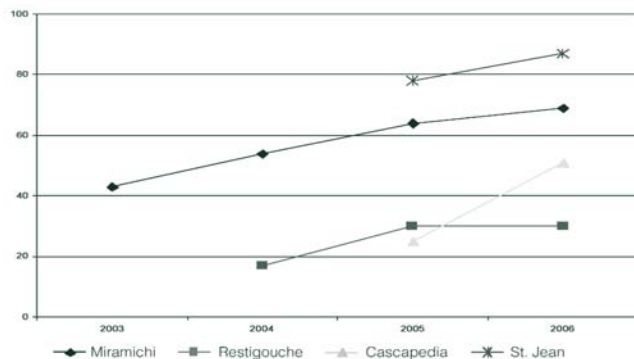
## Recap of Volumes I and II

ASF completed the second all encompassing year of multiriver tracking in 2006. Pingers were implanted in 200 fish on the Miramichi, Restigouche, Cascapedia and St. Jean river systems. Smolt survival through the estuaries and out to sea are summarized in the following graphs.

2003 - 2006 Trends in Smolt Survival to the Head of Tide



2003 - 2006 Trends in Smolt Survival Out to Sea



## GOALS OF ASF SMOLT TRACKING RESEARCH:

- Determine migration patterns of smolt and adult salmon
- Discover critical habitats and feeding areas
- Determine the impacts of birds, seals and other predators
- Estimate losses of smolt in fresh water, The Baie des Chaleurs and Miramichi Bay
- Correlate movements of fish with environmental variables, notably currents and water temperatures
  - Determine when and where mortality occurs

## Key Findings & Activities:

- For the first time, smolt were tracked as far as the Strait of Belle Isle between Newfoundland and Labrador last summer.
- Patterns of smolt survival in fresh water and through the estuary are consistent among years for individual rivers. This is important information for the targeting of river-specific management measures.
- There are consistent differences among the rivers in the percentage of tagged smolt which survive to enter the ocean. Fractions getting out to sea are consistently high for the St. Jean River; however, there does not appear to be a consistent relationship between geographic position and survival rates.
- In the course of their migration through fresh water, the estuary, and the Gulf of St. Lawrence to the Strait of Belle Isle, the fish leapfrogged each other. Clearly, they are not sticking together with the same traveling companions in the same school as they undertake their journey.
- There is evidence that the Miramichi smolts that leave the rivers later in the run travel faster than early run smolts. In effect, they "catch up" to cross into the ocean within a similar window of time.
- In exiting the Gulf of St. Lawrence through the Strait of Belle Isle, the fish did not follow the dominant ocean currents in the Gulf of St. Lawrence which should have brought them out to the Atlantic Ocean through the Cabot Strait between Cape Breton and Newfoundland.

## Volume III Plans for 2007 and the Future

The 'Adopt A Smolt' research program will continue to focus on determining the locations, timing and causes of mortality during the migration to the sea. ASF will use this information to identify common threats to smolt and to help design effective management plans.

In 2007 we will once again be tagging 200 smolts (50 Miramichi, 50 Cascapedia, 70 Restigouche and 30 on the St. Jean). In 'Adopt a Smolt' - Volume III - 2007 ASF will continue to chronicle the migration of these smolt and provide research updates as we attempt to better understand the causes of smolt mortality. With luck, we may be able to add additional rivers to our list. With the acoustic array operational in the Strait of Belle Isle, researchers look forward to further examining the migration path of these smolts on their ocean voyage.

