



To submit your observations during the season, or if you have any questions, you can contact:



Capelin Observers Network (CON)
Téléphone : 1-877-227-6853
Courriel : ROC-CON@dfo-mpo.gc.ca

Site Web : www.qc.dfo-mpo.gc.ca/signaler-report/capelan-fra.asp

Fisheries and Oceans Canada would like to thank the organizations listed opposite for their support in promoting the Network and its data collection activities. Thanks to these organizations, more people are learning about the Capelin Observers Network, which is essential to its objectives.



Comité ZIP Baie des Chaleurs
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Web site : www.zipsud.org



Comité ZIP de la rive nord de l'estuaire
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Web site : www.zipnord.qc.ca



Comité ZIP Côte-Nord du Golfe
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Réseau d'observation de mammifères marins (ROMM)
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Le Réseau des observateurs sous-marins (ROSM)
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Amphibia-Nature
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CAPELIN OBSERVERS NETWORK 2010 OBSERVATION REPORT



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Magdalen Islands - Gulf

The Magdalen Islands area encompasses all the islands in the archipelago.

Observations

Since the establishment of the Network, only one spawning observation has been reported in this area; it was made in June 2008 at Cap de l'Hôpital in Fatima by lobster and flounder fishers. No observations have been reported since then.

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Table 9: Dates of observations of capelin spawning or presence between 2003 and 2010 in the Chaleur Bay

Location	2002 to 2008	2009	2010
Maria	May 2005	---	---
Bonaventure	---	May 10 [‡]	May 12 to 15
New Carlisle	May 2005 to 2007	May 23 and 24	---
Paspébiac	May 2003 to 2005	May 15, 27 [‡] , 30	---
Port-Daniel-Gascon (Port-Daniel)	May and June 2003	May 21 [‡] , 25 June 4 and 5	---
Chandler (Newport)	May 2005 to 2008 June 2006 and 2008	May 26 to 28 June 1 and 2 juin	May 13 [‡]
Chandler (Chandler)	June 2006 and 2008 2007	---	---
Chandler (Pabos)	May 2006 June 2008	---	---
Grande-Rivière	2006	May 25 [‡] and 27 [‡] June 2 [‡] , 7 [‡] , 20 [‡] to 30 [‡] July 1 [‡] to 3 [‡]	April 29 [‡] May 13 [‡] , 20 [‡]

Names in parentheses represent sectors of municipalities.

[‡]Date of observation of capelin presence, with no report of spawning.

Since 2003, in Chaleur Bay, capelin spawning has been observed mainly in May, and to a lesser extent in June.

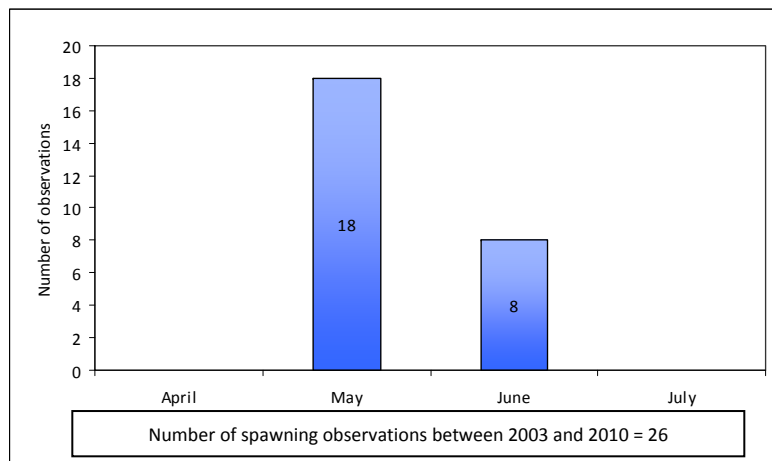


Figure 14: Timing of capelin spawning observations in the Chaleur Bay between 2003 and 2010

“There was a 12-year-old boy with us who was getting impatient and wanted to leave. All of a sudden, we saw a capelin at the edge of the water. I told him it was a ‘scout.’ He scooped it up and put it in his bucket. I told him that it wouldn’t be able to inform the others and so he took it out of the bucket and put it back into the water. The capelin began rolling in, forming shoals 7 inches [roughly 18 cm] deep. The young boy went wild, scooping them up with his hands. He told me I was right and that he’d believe me in the future.”

Gérald Thériault, observer since 2005, May 21, 2010



Capelin Observers Network (CON)

The Capelin Observers Network (CON) was established to promote a better understanding of capelin spawning grounds and habits in the Estuary and Gulf of St. Lawrence. Efforts to monitor capelin spawning began in 2002 on the North Shore. In 2003, Fisheries and Oceans Canada (DFO) - Quebec Region and various partners, such as certain ZIP (area of prime concern) committees and coastal committees, developed a network of contacts to collect data on capelin spawning.

From 2002 to 2009, the number of Network observers and observations has steadily increased, providing an overview of the distribution of the capelin spawning sites in nearshore areas. However, the 2010 season yielded less information. We do not know precisely [exactly] whether this was due to a smaller spawning event or whether fewer observations were reported. In the 2010 season, there were 44 observers and a total of 129 observations.

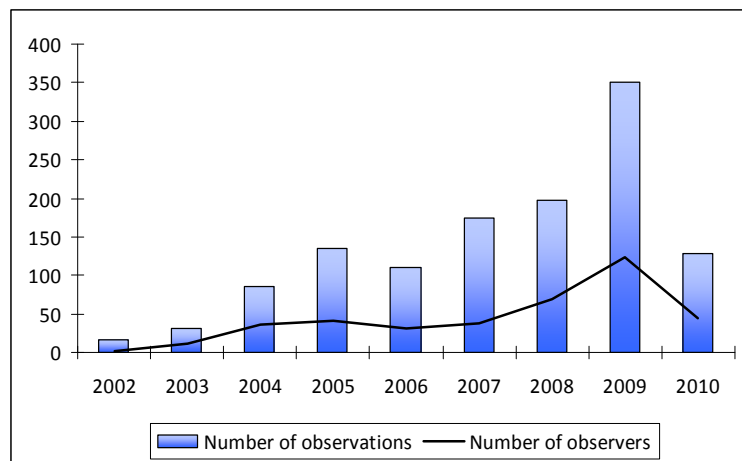


Figure 1 : Change in the number of observers and observation records over time

This growing body of knowledge on the location of capelin spawning grounds and habits will improve our understanding of this important component of the St. Lawrence ecosystem. This information will also help to better protect spawning grounds, particularly during the spawning and incubation period, and will lead to the

Data from the Network indicate that capelin spawning in the Gaspé Peninsula begins in late May and is observed primarily in June.

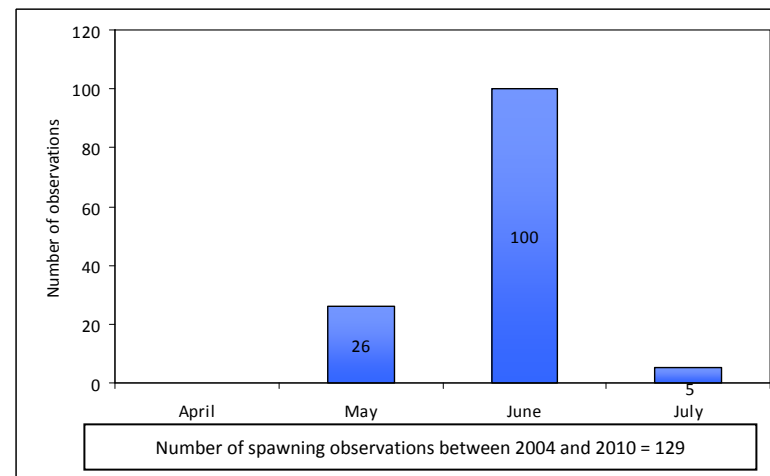


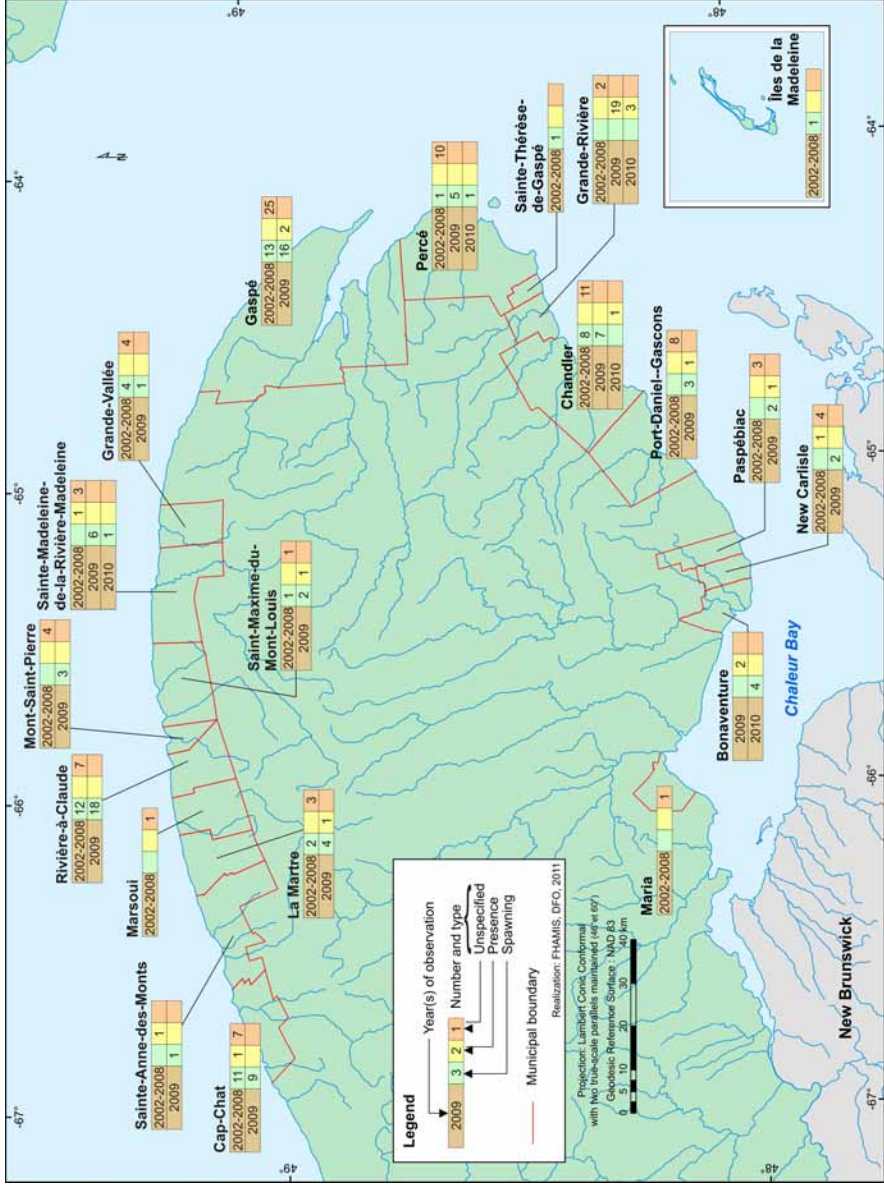
Figure 13 : Period of capelin spawning observations in the Gaspé Peninsula between 2004 and 2010

Chaleur Bay - Gulf

The Chaleur Bay area encompasses the southern Gaspé Peninsula, from the mouth of the Restigouche River to Grande-Rivière.

Observations

In 2010, 3 observers reported 8 observations for this area, including 4 spawning observations. Northern gannets were also observed in foraging flight during the same period. This year, the first observation was in April, which has almost never been seen in this sector since the Network was created. In contrast to previous years, capelin spawning was not observed in the municipalities of New-Carlisle or Paspébiac. Spawning observations were reported at Bonaventure (neighbouring municipality).



Canada
 Figure 12 : Location of capelin spawning or presence in the Gaspé Peninsula and Chaleur Bay between 2003 and 2010

recommendation of measures aimed at mitigating the impacts on capelin habitat of work carried out near spawning grounds. The data gathered by the Observer Network may also help improve our understanding of the impacts of human activities and climate change, such as shoreline erosion or beach modifications, on the capelin's life cycle.

Observers in Atlantic Canada are invited to participate in the Capelin Observers Network by calling 1-877-227-6853 or by visiting the online registry at <http://www.qc.dfo-mpo.gc.ca/signaler-report/roc-con/capelan-capelin-eng.asp>.



Capelin Spawning Habits

Since its creation, the Network has gathered 747 observations of spawning activity and 189 observations of signs of capelin presence. The information collected, such as the date and time of the observation, tidal conditions and type of spawning grounds, is used to identify trends that can help answer some of the following questions: Do capelin spawn more often at night? Do they take advantage of high tide? What type of substrate do they prefer?

Time of Day

Capelin appear to spawn more often in darkness, at least when spawning activity takes place along the shore. Data from the Network show that spawning was observed almost five times more often at night, between 6:00 p.m. and 6:00 a.m., than during the rest of the day.

Table 1 : Breakdown (in percentage) of capelin spawning observations by period of the day

<i>Time of day</i>	<i>Number of observations</i>	<i>Percentage(%)</i>
Day (between 6 :00 a.m. and 5 :59 p.m.)	86	16.4
Night (between 6 :00 p.m. and 5 :59 a.m.)	437	83.6

(Number of spawning observations from 2002 to 2010 with information on the time = 523)

Tide

A comparison of spawning records with tide data reveals that 11% more capelin spawning occurs during the flood tide than during the ebb tide.

Table 8 : Dates of observations of capelin spawning or presence between 2004 and 2010 on the Gaspé Peninsula

<i>Location</i>	<i>2004 to 2008</i>	<i>2009</i>	<i>2010</i>
Cap-Chat (Capucins)	June 2004	---	---
Cap-Chat (Cap-Chat)	May and June 2007, 2008 June 2004 and 2006	May 25 to 28 June 10, 11,23 May [‡]	---
La Martre	June 2004, 2006, 2007	June 5, 9, 10 and 12	---
Sainte-Anne-des-Monts	May 2008	June 10	---
Marsoui	June 2004	---	---
Rivière-à-Claude	May and June 2008 June 2004 to 2007 July 2004	June 11 to 17, 20 to 23	July 7, 9
Mont-Saint-Pierre	June 2008 July 2004	June 16	---
Saint-Maxime-du-Mont-Louis (Mont-Louis)	June 2005 and 2008	June	---
Saint-Maxime-du-Mont-Louis (L'Anse-Pleureuse)	---	May 28 [‡] June 18 et 23	---
Sainte-Madeleine-de-la-Rivière-Madeleine (Manche-d'Épée)	June 2004 and 2005	---	---
Sainte-Madeleine-de-la-Rivière-Madeleine (Rivière-Madeleine)	June 2004 and 2008	June 10 to 12, 15, 16	June 9
Grande-Vallée	June 2004, 2006 to 2008 July 2006 August 2005	June 14	---
Gaspé (Saint-Maurice-de-l'Échourie)	2005, 2006 and 2007	---	---
Gaspé (Rivière-au-Renard)	May and June 2007 Mid-june 2006	---	---
Gaspé (Cap-des-Rosiers)	June 2005 to 2008	June 3, 7 to 9, 11, 13, 14, 23 [‡]	---
Gaspé (Cap-aux-Os)	May and June 2007 June 2004	---	---
Gaspé (Cap-Bon-Ami)	May and June 2007	---	---
Gaspé (Gaspé)	May and June 2007 June 2004 to 2006 July 2004	May 28 [‡]	---
Gaspé (Petit-Cap)	July and August 2005	June 9 to 11	---

Names in parentheses represent sectors of municipalities.

[‡]*Date of observation of capelin presence, with no report of spawning.*

Since 2002, capelin spawning on the Lower North Shore has been observed primarily in June and early July. No observations were reported in 2010.

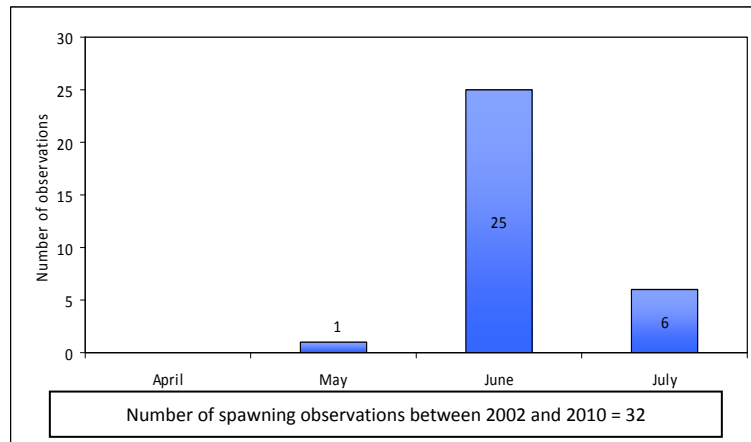


Figure 11: Timing of capelin spawning observations on the Lower North Shore between 2002 and 2010

Gaspé Peninsula - Gulfe

The Gaspé Peninsula/Gulf area covers the north shore and the tip of the Gaspé Peninsula, from Cap-Chat (Capucins sector) to Grande-Rivière.

Observations

In 2010, three observers reported five observations of capelin spawning between late May and mid-June and in early July.

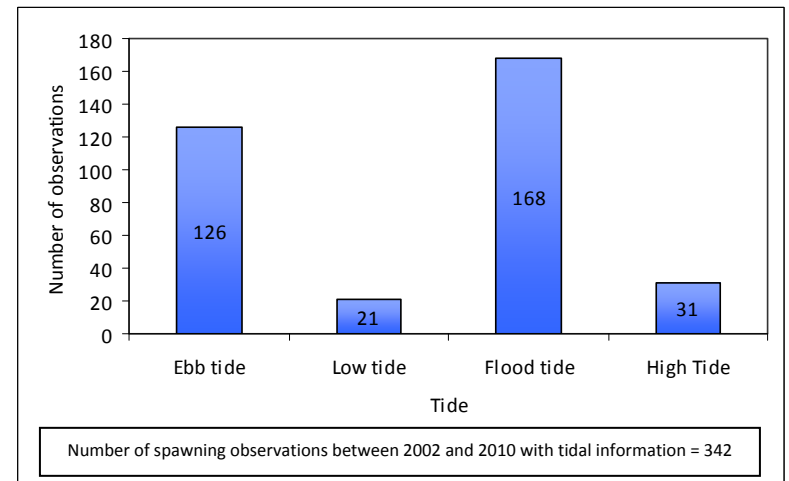


Figure 2 : Number of capelin spawning observations by tidal cycle

Type of Spawning Ground

The vast majority of spawning observations are of spawning on sand beaches. However, the data collected do not specify the size of the substrate. One out of ten times, spawning occurs on gravel beaches.

Table 2: Breakdown (in percentage) of capelin spawning observations by type of substrate

<i>Substrate</i>	<i>Number of observations</i>	<i>Percentage (%)</i>
Sand	479	87
Gravel	52	10
Cobble	13	2
Bedrock	3	1

(Number of spawning observations between 2002 and 2010 with information on substrate = 547)

Where there more capelin in 2010?

This question is difficult to answer because annual monitoring of capelin abundance is not carried out. The data collected by the Network from 2007 to 2009 show that most observers estimated that the number of spawning capelin was high. That was not the case in 2010. Over the past year, the number of spawning capelin was described equally as high, moderate and low. It should be noted that the number of observers and observations generally fell between 2009 and 2010. As a result, we are unable to say whether there were actually fewer capelin on the shore.

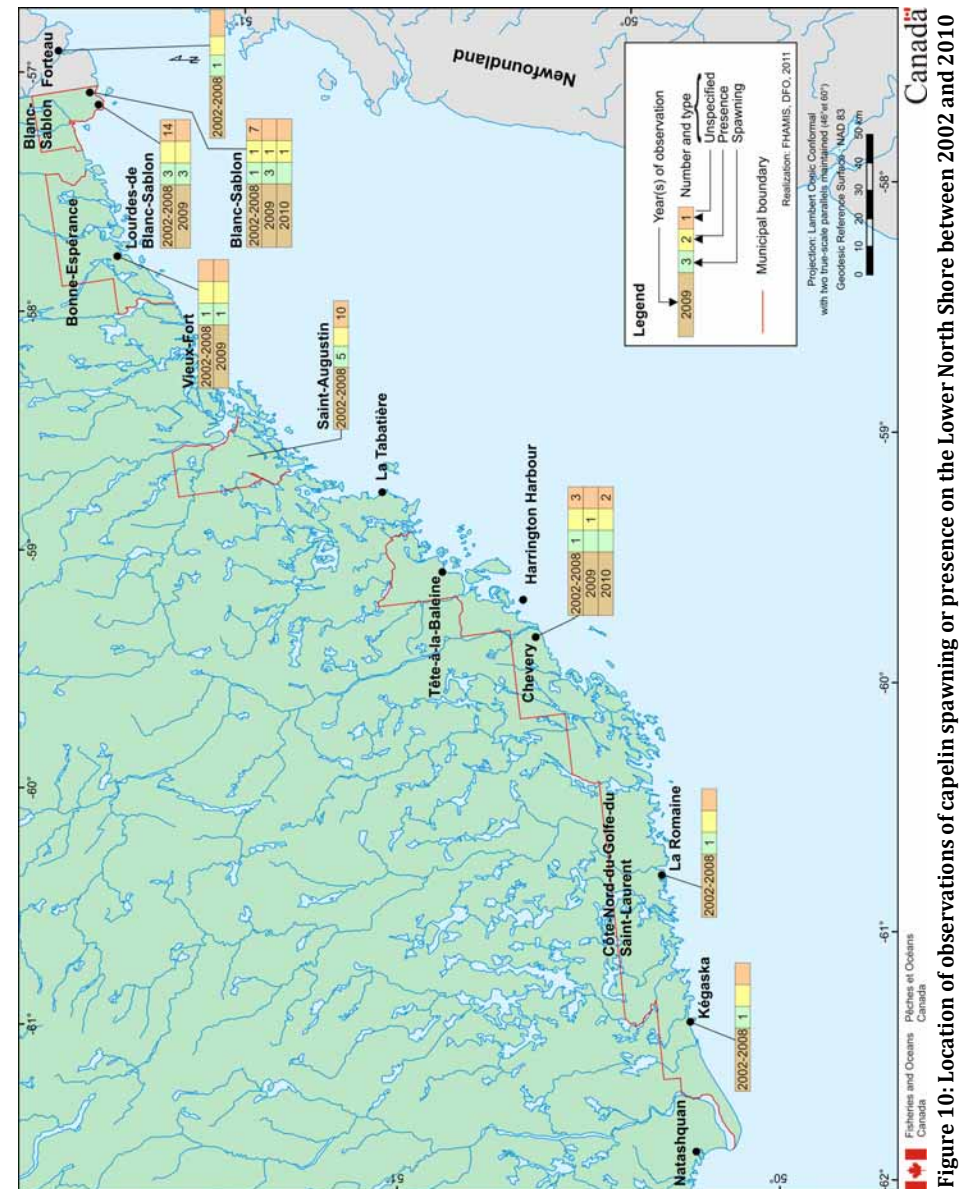
Table 3 : Compilation of estimates of number of spawning capelin

Year	High	Average	Low
2006	25	0	75
2007	66	17	17
2008	62	23	15
2009	49	29	22
2010	43	33	24

The number of spawning capelin is influenced by a number of factors. For example, a milder winter, a change in ice cover or a change in freshwater inflows can all have an effect on variations in spawning.

According to some observers, capelin rolled on the same date and in comparable numbers as in previous years in their location. Others reported a change in beach and the formation of a sand bank several metres from the shore. Capelin are said to have rolled at this location rather than moving in to the beach.

Your participation in the 2011 Network is needed in order to monitor capelin spawning and identify new trends. It is also important that your observations be well documented.



Lower North Shore - Gulf

The Lower North Shore stretches from Natashquan (Pointe du Vieux Poste sector east of the Natashquan River) eastward to the Labrador border.

Observations

In 2010, two observers reported three observations of capelin presence in this area, but no spawning activity was reported. On June 28, the presence of capelin was observed by fishers who caught them in their capelin traps.

Table 7: Dates of observations of capelin spawning or presence between 2002 and 2010 on the Lower North Shore

Location	2002 to 2008	2009	2010
Côte-Nord-du-Golfe-du-Saint-Laurent (Kégaska)	May 2008	---	---
Côte-Nord-du-Golfe-du-Saint-Laurent (Chevery)	June 2004, 2005 and 2008 July 2006	June 20 [‡]	---
Bonne-Espérance (Vieux-Fort)	June 2002	June 29	June 20 [‡] July 20 [‡]
Blanc-Sablon (Lourdes-de-Blanc-Sablon)	June 2002, 2006 to 2008 June and July 2004	June 23 July 6, 8 and 9	---
Blanc-Sablon (Blanc-Sablon)	June 2006 and 2007	June 7, 9, 22 [‡] and 24	June 28 [‡]
Forteau au Labrador	July 2008	---	---

Names in parentheses represent sectors of municipalities.

[‡] *Date of observation of capelin presence, with no report of spawning.*

Observations for the 2010 season by area

In 2010, 129 observations were reported, as follows: 93 spawning observations, 32 observations of signs of capelin presence, and one observation of the absence of capelin. There were three other observations that did not indicate whether they were spawning observations or another type of observation. The observations were made in 31 different sectors and on 32 beaches or beach sections. A new site was included this year, namely the sector of Anse à Mouille-Cul, at Bic (Rimouski). The observations were compiled in the form of tables accompanied by maps. Once again this year, the tables distinguish spawning observations from observations of signs of capelin presence (e.g. presence of diving birds or dead capelin on the beach) using a (‡) symbol next to the date.

For practical reasons, the Estuary and Gulf of St. Lawrence were divided into seven observation areas, the boundaries of which are described below.



Figure 3 : Capelin Observers Network observation areas

Middle Estuary

This area covers both shores of the estuary of the St. Lawrence River, from Saint-Joachim to Baie-Sainte-Catherine (west shore of the Saguenay Fjord) on the north shore and from Montmagny to Cacouna on the south shore.

Observations

In 2010, capelin were observed on the shores of the Middle Estuary between April 15 and May 29. Fifteen observations of capelin presence were reported by four observers. No spawning activity was observed in 2010.

Table 4: Dates of observations of capelin spawning or presence between 2003 and 2010 in the Middle Estuary

Location	2003 à 2008	2009	2010
Saint-Irénée	April and May 2003 May and June 2004, 2006 and 2008 May, June and July 2005	April 13 [‡] , 14 [‡] , 20 [‡] to 24 [‡] May 2 [‡] , 10 [‡] to 14 [‡] , 17 to 20, 27 to 30 June 11 to 18, 27 [‡]	April 15 [‡] , 20 [‡] to 23 [‡] , 25 [‡] , 28 [‡] to 30 [‡] May 1 [‡] , 6 [‡] , 7 [‡]
La Malbaie (Port-au-Saumon /Anse aux Indiens)	June 2005	June 2009	---
Île-aux-Coudres	June 2007 April to early June 2008	---	May 28 [‡] and 29 [‡]
Kamouraska	June 2003	---	---
Rivière-du-Loup	---	June 17 [‡] to 19 [‡]	May 29 [‡]

Names in parentheses represent sectors of municipalities.

[‡]Date of observation of capelin presence, with no report of spawning.

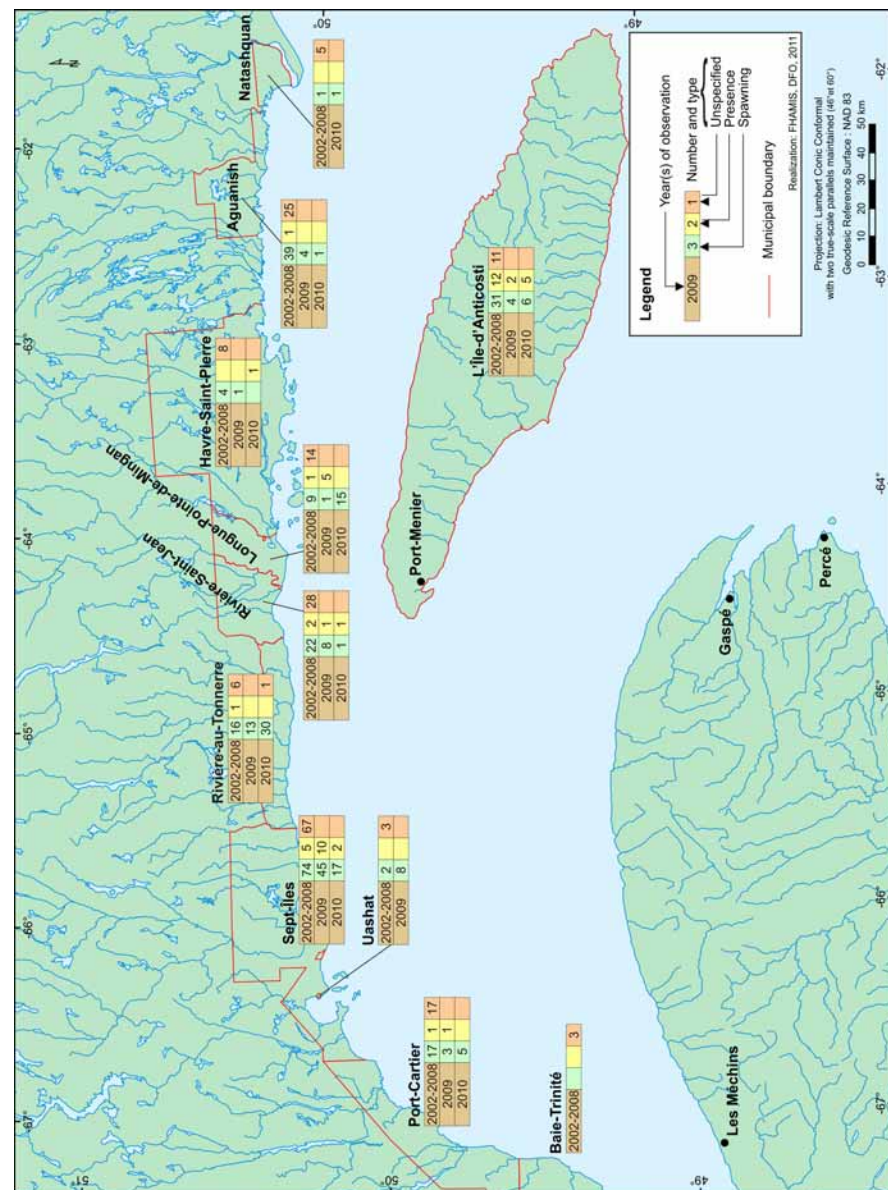


Figure 9 : Location of observations of capelin spawning or presence on the Middle North Shore between 2002 and 2010

Localtion	2002 to 2008	2009	2010
Aguanish	May 2003 and 2008		May 17
	June 2002 and 2008		
	May and June 2004 to 2007 July 2008	June 9, 12, 17	
Natashquan	June 2007 June and July 2006	---	May 20
Anticosti Island	June and July 2004 July 2005 June 2006 to 2008	June 26, 29 [†] July 1 [†] , 14 and 15	June 16 to 20 and 17 [†] July 27 [†] August 2 [†]

Names in parentheses represent sectors of municipalities.

[†]Date of observation of capelin presence, with no report of spawning.

Since 2002, capelin spawning on the Middle North Shore has been observed primarily in May and June, and in some years until mid-July.

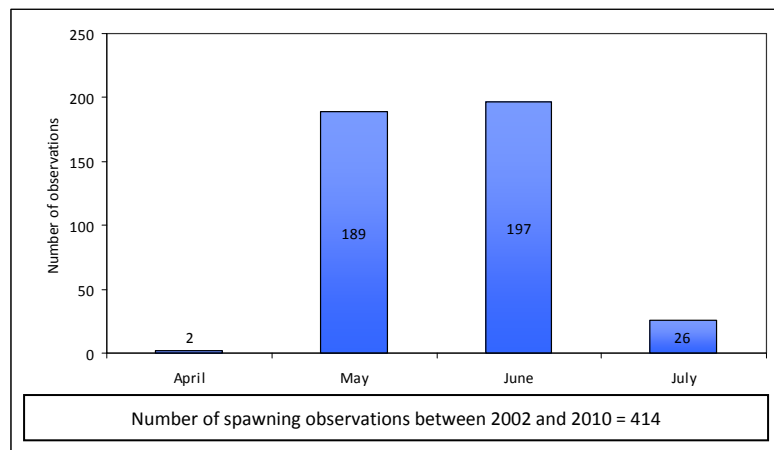


Figure 8: Timing of capelin spawning observations on the Middle North Shore between 2002 and 2010

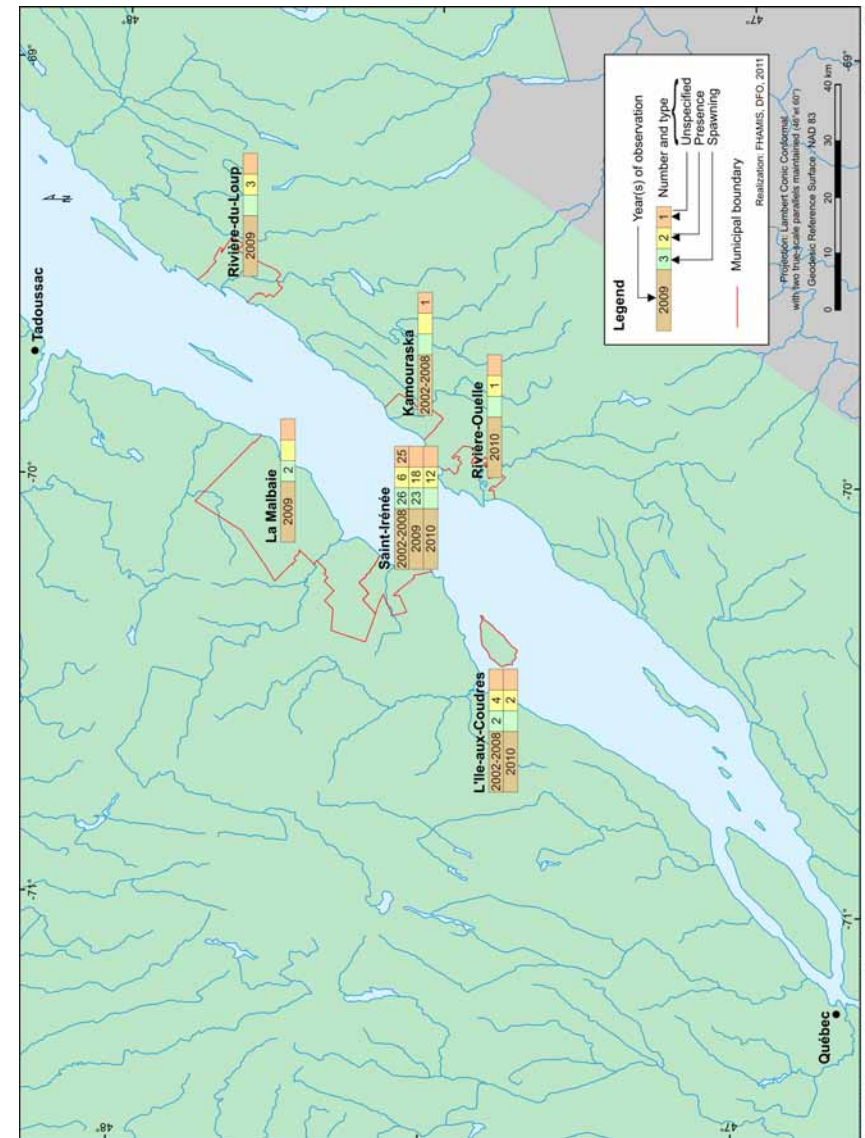


Figure 4: Localisations of observations of capelin spawning or presence in the Middle Estuary between 2003 and 2010

Since 2003, capelin spawning in the Middle Estuary is observed primarily in May and June, peaking in May.

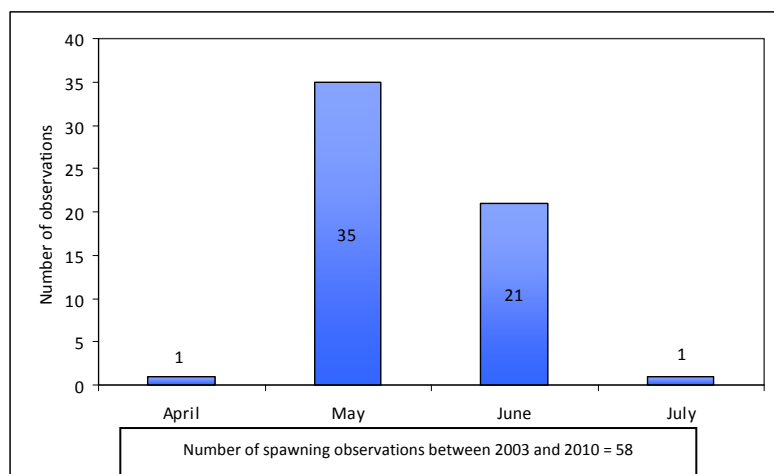


Figure 5: Timing of capelin spawning observations in the Middle Estuary between 2003 and 2010

Lower Estuary

This area encompasses both shores of the estuary of the St. Lawrence River, from Tadoussac to Baie-Trinité (Pointe-des-Monts) on the north shore and from Isle-Verte to Les Méchins on the south shore.

Observations

In 2010, there was a clear reduction in the number of observers and observations compared to 2009. In this sector, the number of observers fell from 44 to 8 and the number of observations from 81 to 11. Of the 11 observations, 8 were spawning observations. They occurred from May 21 to June 3 and from June 29 to July 1. Unusually, an observation of an egg mass on the beach was reported on July 1 and 2 at Sainte-Flavie.

One observer reported recently dead capelin downstream from dam PN-1 on the Portneuf River at Portneuf-sur-Mer on July 12.

Table 6 : Dates of observation of capelin spawning or presence between 2002 and 2010 on the Middle Nord Shore

Localtion	2002 to 2008	2009	2010
Baie-Trinité (Îlets Caribou)	May 2005 and 2006 June 2006	---	---
Port-Cartier (Pointe-aux-Anglais)	May 2002, 2004 yo 2008 June 2006 and 2007	May 13 June 3 and 6	May 8, 9 and 17
Port-Cartier (Rivière-Pentecôte)	May 2004, 2005 and 2008 June 2008	July 8 [†]	June 4 and 9
Sept-Îles (Gallix)	May and June 2003, 2005 to 2008 June and July 2004	May 15 [†] , 17, 19 to 22, 24 to 29, 31 June 2, 3, 5, 6, 7, 9, 10, 12, 13, 16 [†] , 18, 19, 21 to 23 [†]	May 12 [†] , 12, 15, 17 to 23, 28, 29 June 5, 8 to 29 [†]
Sept-Îles (Sept-Îles)	April to June 2002 and 2007 May and June 2004, 2005 and 2008 May 2006	May 26 June 1, 5, 6, 8 July 5 [†] September : 10 [†]	---
Sept-Îles (Moisie)	May 2007 and 2008	July 6 [†]	---
Sept-Îles (Matamec)	July 2008	June 8	---
Uashat mak Mani-Utenam (Uashat)	May 2006 and 2008 June 2008	May 21 to 23, 27 June 4, 10, 11	---
Rivière-au-Tonnerre (Sheldrake)	May 2005 July 2008	---	June 3, 4, 8, 11, 12, July 4
Rivière-au-Tonnerre (Rivière-au-Tonnerre)	May 2005, 2006 and 2008 June 2004 and 2007 July 2008	May 29 June 1, 4 to 6, 11 to 15, 18	May 31 June 1, 5, 7, 9, 10, 12 to 22, 25, 26 and 28
Rivière-Saint-Jean (Magpie)	May 2006 to 2008 June 2004 to 2008 July 2006	May 24 to 29, 30 [†] , 31 June 12 and 13	May 20
Rivière Saint-Jean (Rivière Saint-Jean)	July 2008	---	July 11 [†]
Longue-Pointe-de-Mingan (Longue-Pointe-de-Mingan)	May 2005 to 2008 June 2002, 2004, 2005 and 2008 July 2006 and 2008	May 12 June 8 [†]	May 1 to 5, 20 June 2, 20 to 31 July 1, 2, 3 and 6
Longue-Pointe-de-Mingan (Mingan)	Mid-May to mid-June 2006 and 2007 June 2002	June 4 [†] to 6 [†]	May 22, 28, 31 June 1, 2, 3
Havre-Saint-Pierre	May 2007 and 2008 June 2002 and 2004 May and June 2005	June 13	July 15 [†]

Since the establishment of the Network, capelin spawning in the Lower Estuary has been observed primarily in May and June, with the peak in June.

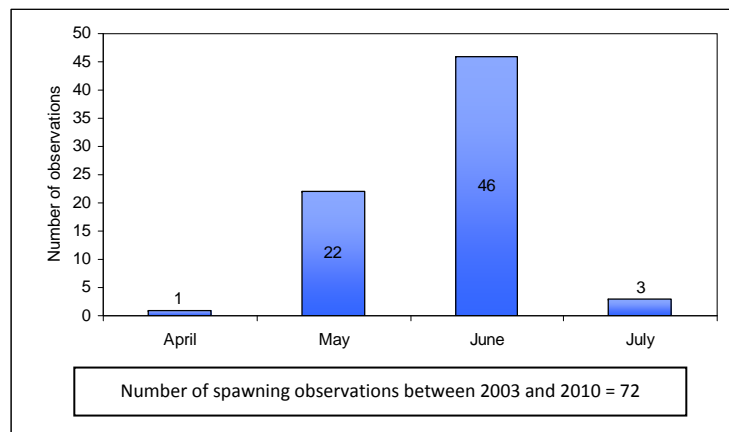


Figure 7: Timing of capelin spawning observations in the Lower Estuary between 2003 and 2010

Middle North Shore - Gulf

The Middle North Shore stretches from Baie-Trinité (Pointe-des-Monts) eastward to Natashquan (Pointe-Parent), and includes Anticosti Island.

Observations

The Middle North Shore is the sector which saw the smallest decline in the number of observations between 2009 and 2010. In 2010, 23 observers reported 86 observations for this area, including 76 spawning observations between May 8 and July 6. Observations of capelin presence were made between May 12 and July 2.

This year, the presence of capelin was reported for the first time in the sector of Anse à Mouille-Cul, at Bic.

Table 5: Dates of observations of capelin spawning or presence between 2003 and 2010 in the Lower Estuary

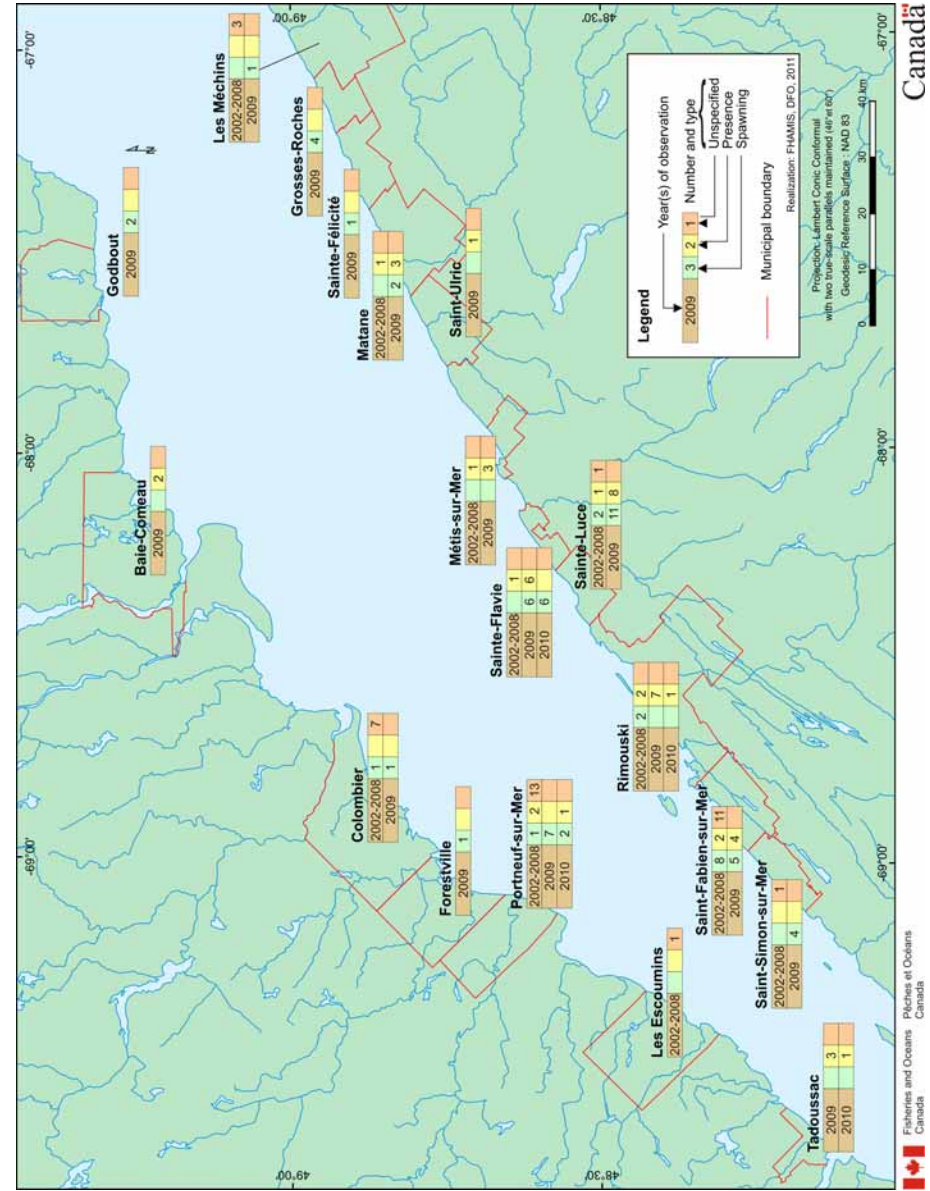
Location	2003 to 2008	2009	2010
NORTH SHORE			
Tadoussac	---	June 4, 5 et 10	June 14 au 20 [†]
Les Escoumins	April 2003	---	---
Portneuf-sur-Mer	May 2003, 2007, 2008 May and June 2004 to 2006	May 27 to 31 June 5	May 21, 25 July 12 [†]
Forestville	---	June 9	---
Colombier	May 2005, 2007 and 2008, June 2005	May 17	---
Baie-Comeau	---	June 7 [†] , July 6 [†]	---
Godbout	---	June 6, July 7	---
SOUTH SHORE			
Saint-Simon (Saint-Simon-sur-Mer)	June 2003	May 23 et 26	---
Saint-Fabien (Saint-Fabien-sur-Mer)	May 2006 June 2003 to 2005 and 2008	May 24, June 11, 12 [†] , 14 [†] , 16 [†] and 28, July 1	---
Rimouski (Bic – Anse à Mouille-Cul)	---	---	July 11 [†]
Rimouski (Cap-à-l'Orignal)	---	June 19 [†]	---
Rimouski (Rivière-Hâtée)	June 2007	June 23 [†]	---
Rimouski (Rimouski)	June 2008	July 5 [†]	---
Rimouski (Pointe-au-Père)	May and June 2008	June 28 [†] July 6 [†] and 7 [†]	---
Sainte-Luce	June 2003 and 2008	April 30 May 25 [†] , 26, 27, 30 June 1 [†] , 3, 9 to 11, 16, 22 [†] and 23 [†] July 4 [†] and 6 [†]	---
Sainte-Flavie	June 2008	May 25 June 2 [†] , 11, 22 and 23 July 5 [†] and 7 [†]	June 2, 3, 20, 30
Métis-sur-Mer	June 2008	June 23 [†] , July 7 [†] et 8 [†]	---
Les Méchins	June 2004 and 2006	June	---

Localisation	2003 à 2008	2009	2010
Matane	Juillet 2008	May 27, June, July 5 [†]	---
Matane (Petit-Matane)	---	June 24 [†]	---
Grosses-Roches	---	May, June 24 to 26	---

Names in parentheses represent sectors of municipalities.

Names in italics designate new observation sites.

[†]Date of observation of capelin presence, with no report of spawning.



Canada
Fisheries and Oceans Canada
Figure 6: Location of observations of capelin spawning or presence in the Lower Estuary between 2003 and 2010