

Mosquito Control

Bi-Monthly Report on Mosquito Control

Introduction

The General Director of the Greater Moncton Pest Control Commission (GMPCC) has requested that by-monthly reports be compiled and distributed to member municipalities and citizens. These reports are to include a synopsis of the activities and status of the mosquito control project. I am pleased to submit this report for the months of July and August, 2005

General Program Notes

Early July we change ecological monitoring programs as the marsh bird nesting survey comes to completion. The monitoring crew completed two stream surveys which included Rabbit Brook and Fox Creek. Fox Creek included the main stream and two tributaries, one of them crossing through the Fox Creek golf course and housing development.

The results of all of the monitoring projects can be found in the upcoming Commission's Annual Report.

Larval Abundance

For the first half of the summer, representative areas of the marshes were sampled rather than sampling the entire marsh for detection of larvae. The months of July and August being much drier than May and June, the entire marsh needed to be sampled to ensure that all small patches of water were found. During such times, larvae are very concentrated in these spots due to the poor availability of mosquito breeding sites, it is therefore important to ensure that none of these spots are missed. Although the whole marsh is surveyed, data from the chosen representative sites is still being used to calculate breeding indexes to assure consistency with the data from earlier parts of the summer.

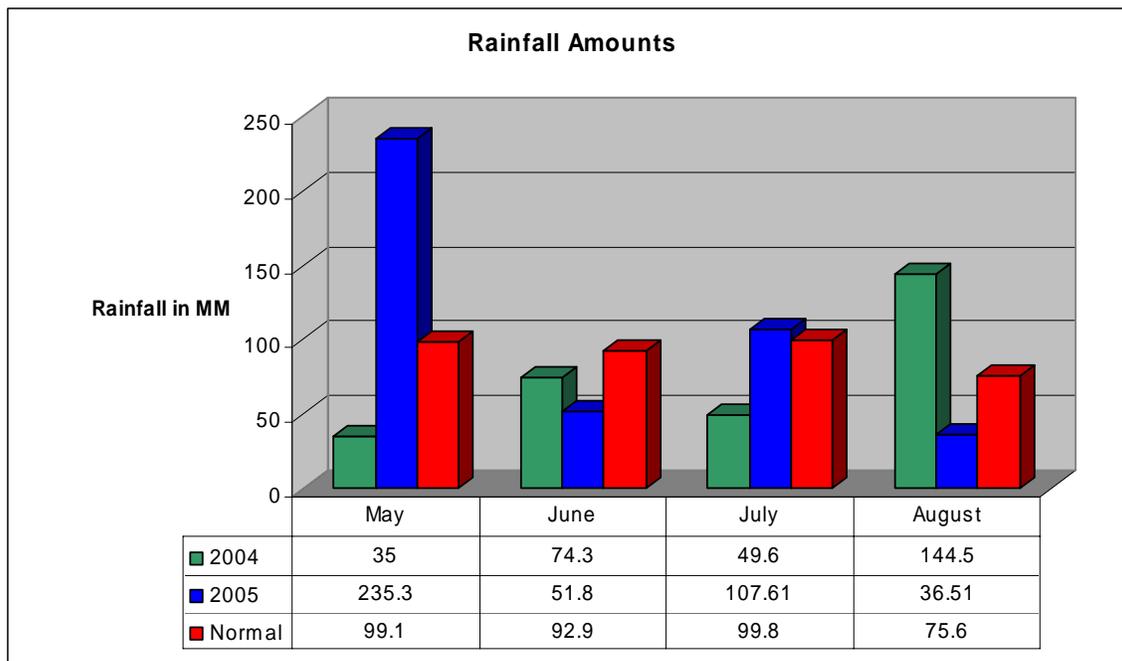
Due to the changes in surveillance protocol, comparisons between this year and previous years cannot be made. The Breeding Index indicated in the table below is a loose comparison of larval presence between each of the participating communities.

<u>Municipality</u>	<u>Larvae/Dip</u>	<u>Breeding Index</u>
Moncton	2.0	659.6
Riverview	1.9	1162.4

Dieppe	4.6	2696.9
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Weather Patterns

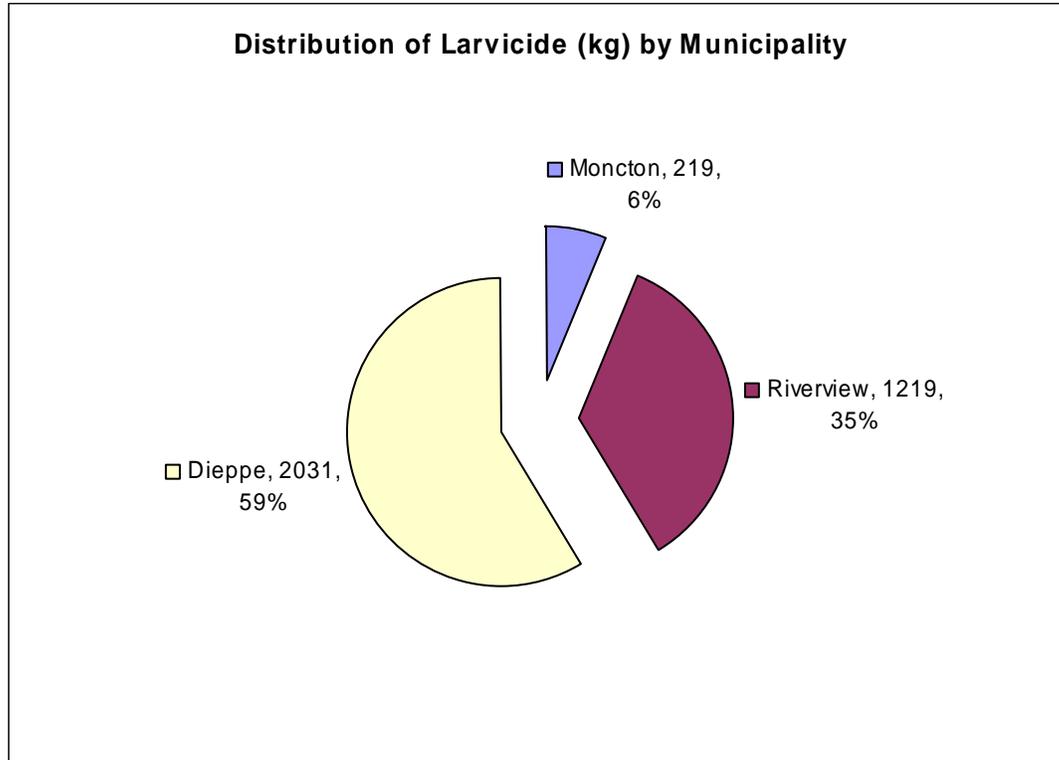
There is a large contrast in the amount of precipitation received during the month of July from the same month in 2004. This year has seen more than double the amount of precipitation that was seen last year. The 2005 precipitations were closer to normal than last years exceptionally dry month. This caused flooding in the Petitcodiac River marshes and therefore a large increase in larval abundance, comparable to what is seen during the month of May, in late July which required extra larviciding efforts. On the other hand, August 2005 has had a less precipitation, to date, than the same month last year with 36.51 mm this year as opposed to 144.5 mm last year. This dry period was ideal for helping control larval populations.



Larvicide Distribution

The GMPCC only utilizes larvicides based on the active ingredient *Bacillus Thuringiensis Israelensis* (BTi). Distribution of larvicide is required when mosquito larvae have been determined to be in the water and in the appropriate life cycle stage. The quantity of larvicide required is partially based on larval concentrations but mostly on the surface area of the larval development site. Due to the significant period of rain in

late July, an unexpected amount of larvicide was needed to treat the marshes. This was a much larger amount than was expected and our supplies exhausted by the end of this larval emergence. An additional supply of larvicide was obtained prior to the next emergence.



Adult Mosquito Trapping

The GMPCC does not have anyone on staff qualified to conduct mosquito identification this year. Consequently, a full scale trapping program is not in place. A limited scale trapping program has been initiated where numbers of adults trapped in three different sites will be carried out.

The trapping sites are the Fox Creek Golf Course in Dieppe, the transition between Centennial Place and Centennial Park in Moncton, and a residential yard on Ashburn Avenue, Riverview.

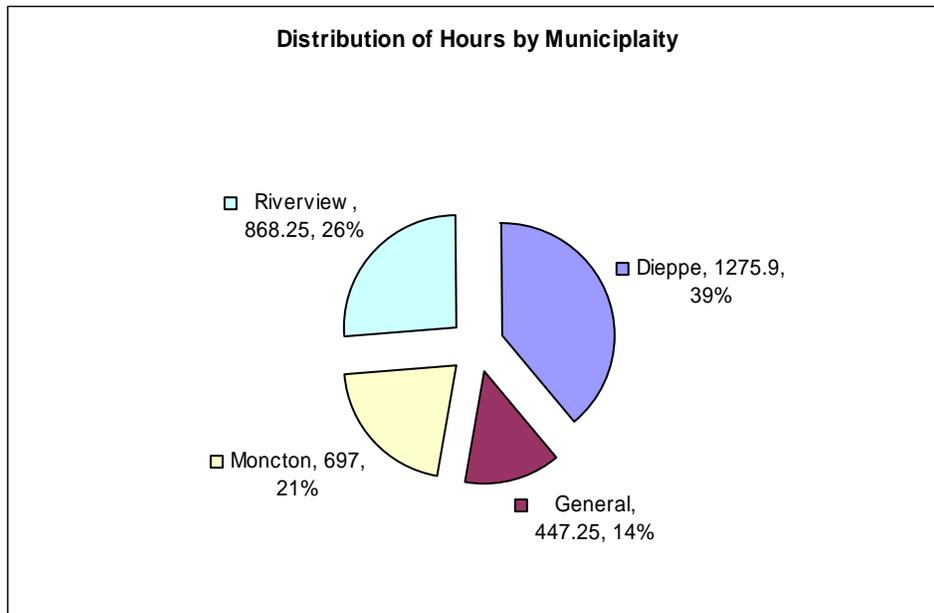
Trapping results have shown a consistent amount of mosquitoes with a peak coinciding with the late July emergence. Numbers are continuing to decline as the season progresses.

Public Education

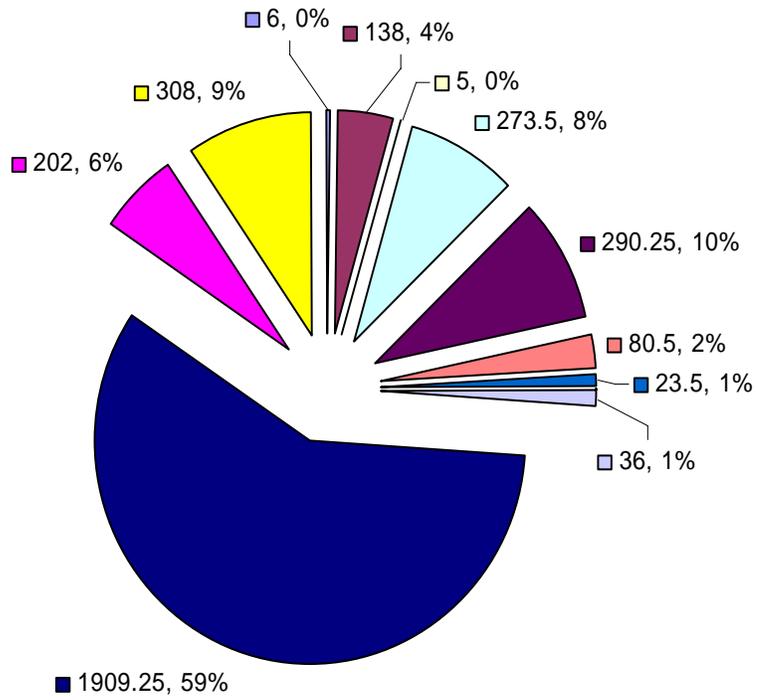
In order to make the activities of the GMPCC more apparent to the residents of the region, a display was set up at the Westmorland County Agricultural Fair. The display included posters and photos of the Commission's activities as well as information on Bti based larvicides and promotion of natural mosquito predators.

Distribution of Resources

Tracking hours for each major program component and the location where it is conducted is performed. The following charts indicate how many hours are attributed to the program components and their distribution. These hours do not include those of the Assistant General Director or any of the Executive management. The GMPCC now staffs an Office Clerk whose duties are attributed to the general operations of the Commission.



Distribution of Hours by Project



■ Adult Trapping	■ Eco-Monitoring	■ Equipment Maintenance
■ Larvicide	■ Office Work	■ Other
■ Public Relations	■ Reports	■ Site Inspection
■ Special Study	■ Stream Survey	