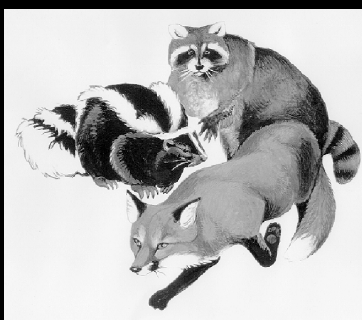


The Rabies Reporter

Volume 12, Number 2

August 2001

ISSN 1186-8961



Inside this issue:

<i>Rabies in the Second Quarter</i>	1
<i>Two New Bait Machines</i>	3
<i>Proposed Fall Bait Drops 2001</i>	4

The Rabies Reporter, a scientific newsletter about current issues in rabies research and control, is a joint effort of the Rabies Research Unit of the Ontario Ministry of Natural Resources; the Rabies Laboratory at the Animal Diseases Research Institute of the Canadian Food Inspection Agency; the Ontario Ministry of Health; and the Geographic Information Systems Laboratory of the Department of Geography at Queens University, Kingston. Articles for future issues will be welcomed by the editor. The Rabies Reporter is not refereed, and should not be cited in papers intended for refereed journals. Send contributions, letters and inquiries to:

The Rabies Reporter
Rabies Research &
Development Unit
Ontario Ministry of Natural
Resources,
P.O. Box 4840
Peterborough, ON K9J 8N8

Visit: www.gis.queensu.ca/RReporter/mnr.html or
www.mnr.gov.on.ca/mnr/rabies/rabmenu.html

RABIES IN ONTARIO SECOND QUARTER OF 2001 PLUS ÇA CHANGE, PLUS C'EST LA MÊME CHOSE

There were 23 more rabies cases in Ontario in the second quarter of 2001 than in the same period of 2000. For the first half of the two years, the difference is also 23 cases. Once again, it is necessary to look at four situations to tell what is going on, and to see where the increases came from.

Let's start in Northern Ontario. There were 17 rabies cases in the region this quarter, compared to only 5 a year ago. The interesting feature is that the outbreak has moved quite dramatically. All of the cases last year were in the Cochrane-Iroquois Falls area. The last case in that district was a rabid cow near Timmins on

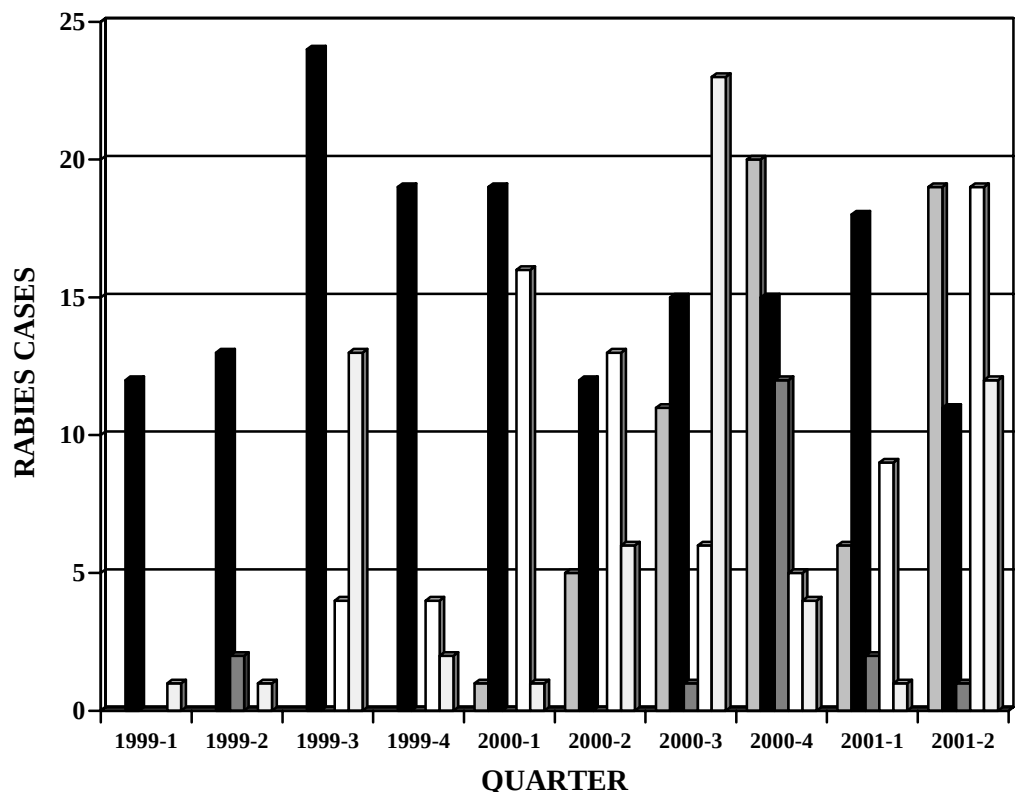


Figure 1. Summary of quarterly rabies cases in selected regions of Ontario, 1999-2001. The left bars (pale gray) show arctic fox strain rabies in northern Ontario. The next bars (black pattern) show the Western Region. The center bars (dark gray) show arctic fox strain rabies in skunks in the Central Region, which has Peterborough in its center. Raccoon rabies is shown by the next-to-right-hand (almost white) bars, while the rightmost bars show rabid bats.

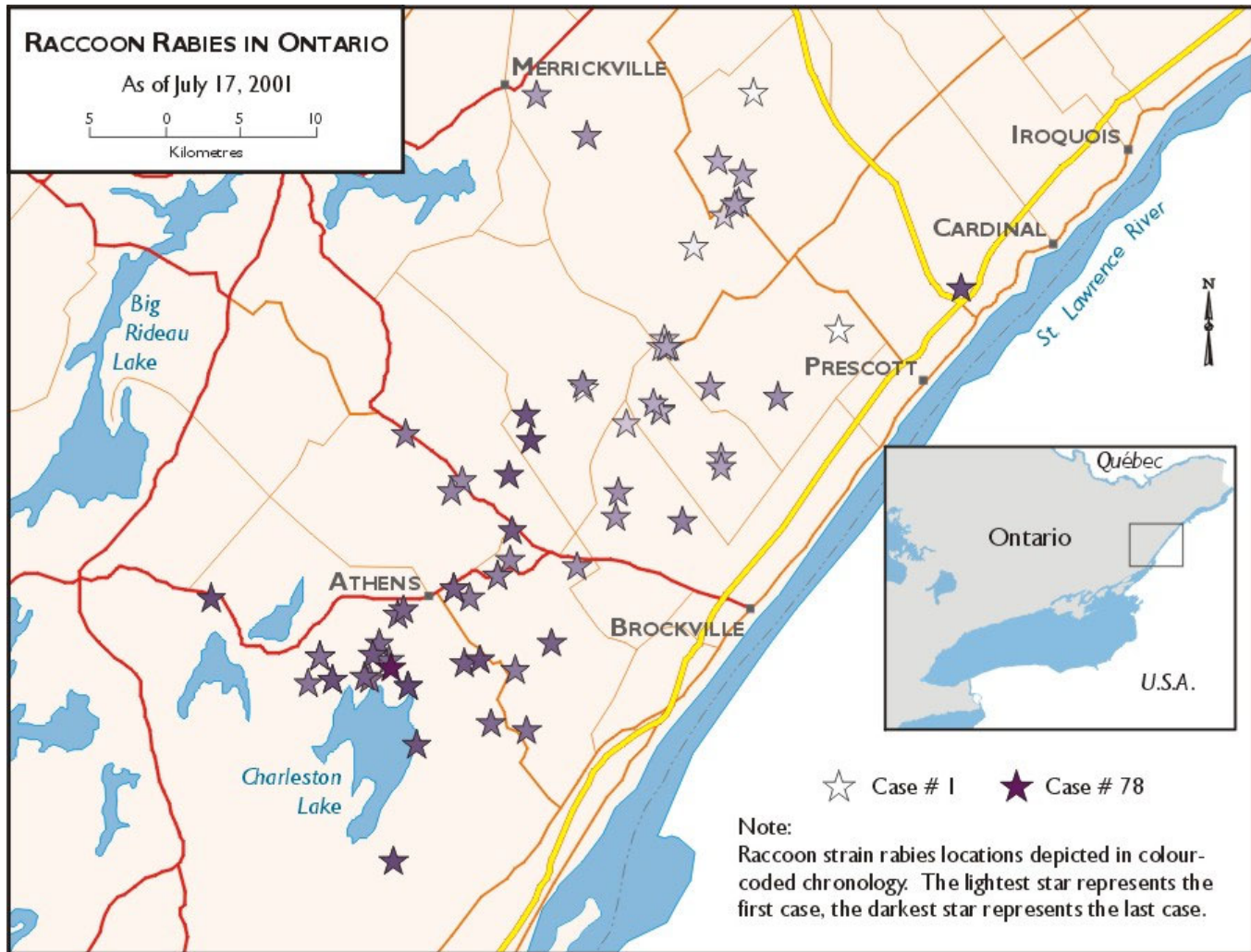


Figure 2: Map of raccoon rabies cases in eastern Ontario. Darker stars represent the most recent cases.

24 April 2001. Before that, there was a rabid fox (also near Timmins) on 8 April. The center of action shifted south this quarter, first to the northeast side of the City of Sudbury, then to the northern and western sides of Lake Nipissing, southeast of Sudbury. The last mentioned area is where we will drop baits this fall. It looks as though the Cochrane outbreak has died out naturally, as predicted, based on studies of previous outbreaks in the area.

Arctic fox strain rabies in western Ontario seems to be slipping. However, the few cases were spread across most of the area where this strain has been maintained by skunks for the past years.

The Peterborough outbreak seems to have almost disappeared, too.

The raccoon rabies situation has become very interesting (Figure 2). Although there has been almost as many cases in the first six months of 2001 as there were in January-June of 2000, the 2001 cases are almost all in a very small area. There have been 28 cases. All but three of those were in an area roughly 35 by 25 km. The first exception was the easternmost case of the whole situation, near the Ontario end of the Prescott-Ogdensburg bridge. However, that case occurred within (by about 1 km) the TVR band, and there have been no new cases near it. In the "core" of this year's cases, the

cases have been cropping up thick and fast. From 50 cases at the end of 2000, we are now up to 81, as of 31 July.

The last two exceptions are more worrisome. They are well described by the following note from Laura Bruce of the Rabies Unit Team. "An adult female raccoon was submitted to the CFIA in Brockville on 30 July 2001 (*editor's addition*). The raccoon had been in a fight with the landowners' dogs over this past weekend (28-29 July). Vaccination status of the dogs is undetermined at this time. This case is approximately 5.5 km west of case #74, which was confirmed on Friday June 29, and is our most westerly

located case to date.” Case # 74 was near Delta (if, like me, you are consulting your road map). The good news is, that although this represents significant westward movement, the distance moved is very small. Remember that in New York State, raccoon rabies moved 40—80 km per year.

Laura further reports “Due to our current activity in this area and the large bodies of water which offer us natural protection to the west, we will only be adding four additional TVR cells. This takes our current work north to the Big Rideau and west to Newboro Lake.” Our strategy is to watch carefully, and adapt as best we can to the new circumstances. I am proud of the accomplishments of the raccoon rabies team.

There has been a lot of activity directed at wiping out the whole outbreak of raccoon rabies. Point Infection Control has covered all the territory within 5 km of active cases. About 2200 raccoons and over 100 skunks were removed from these areas. In a future issue, we will present results from depopulation areas. Getting every last raccoon out of an area has turned out to be difficult, especially as, over all of eastern Ontario, raccoon densities seem to be high this year. Reproduction was very successful last year.

Trap-Vaccinate-Release along the St. Lawrence River began early this year, and to date 3500+ raccoons and 273 skunks have been vaccinated.

The news along the New York side of the St. Lawrence is also very good. In the whole of Jefferson and St. Lawrence counties, which make up the whole raccoon rabies area along the St. Lawrence shore, there have been only three rabid skunks and two rabid raccoons in the first 6 months of 2001. We, in Ontario, say “Well

done” to Laura Bigler; her boss, Don Lein; and all those people who cooperate with her in these counties. The Ontario investment in this operation is clearly working out well.

Case numbers were also low in Niagara County NY, but numbers were also low in adjacent Orleans County, the “control” area for the joint Cornell-MNR experiment. However, Laura Bigler points out that there are many more residents in Niagara County, so rabid animals are considerably more likely to be reported than in the much more rural Orleans County.

Bat rabies cases were up a bit from last year. Also, the majority were from eastern and central regions, with unusually few from the west and southwest. As can be seen in Figure 1, the July-September quarter always produces the biggest bat rabies totals. That coincides with the period when young bats begin to learn to fly, etc, so bats are more readily noticed or encountered than at most other times of the year.

*Charlie MacInnes
and
Bev Stevenson
RRDU
Peterborough*

TWO NEW BAIT MACHINES

The rabies unit is updating its capabilities. Two projects are currently active.

A team, led by Andrew Silver, is building the prototype for a new machine to disperse the coated sachet baits developed by Sam Linhart (see Rabies Reporter vol. 11 #1) and supplied by Merial. Much of the work in New York this year

will be done with sachet baits, and we will use 100,000 in eastern Ontario. The big advantage of the sachets is that they are 30% cheaper, but many ORV projects are still doubtful that they work as well as more conventional baits. In Ontario, we believe that they can be improved and may be the bait of the future.

Why develop a special sachet thrower, when we have successfully used the current bait machines to drop sachets for the last three years?? Well, the current system is very rough and ready. It gives no indication of how many baits are being dropped at any given moment. We want a more precise measure of that. Also, as there is more pressure to drop baits during summer, we have a problem getting aircraft. The MNR Twin Otter fleet is mostly dedicated to forest fire fighting and prevention until early September. The Turbo Beavers are not as busy. The coated sachets are very light, 3-4 grams, compared to 13-14 grams for Ontario Slim baits and 24 grams for Fishmeal Polymer baits. Thus, while a flight with normal baits involves 20—30 tubs of bait, each weighing about 60 pounds, the same number of sachets will fit in 5 tubs. That has two ramifications. First, it means that we would not be using the lifting capability of the Twin Otter, so the flying would be more expensive than necessary. The Turbo Beaver can easily lift five tubs of bait, whereas the larger loads would be too heavy, and, in any case, there isn't room in the cabin for 20 tubs. The present bait machine is too big to fit in the Turbo Beaver. Even if it did, there would not be room for the 2-3 people needed to load the current machine.

The new machine will be smaller, lighter, and need fewer people. The team consisting of Andrew Silver, Ken Fowler (Trent

University), and Chris Maybey (Computer Splicing Specialties Inc.) are working on a number of interesting features. Chris believes that the baits can be dispensed from a hopper, and is working out details. This would mean only one person in the cabin, and that person would only have to refill the hopper from time to time. What luxury compared to the concentrated activity used on the current machine.

We hope the prototype will be ready for testing during the New York bait drops in mid-August.

The second project is more ambitious. The goal is to achieve an integrated system which manages the computer flight line files, relieves the navigator of many jobs, and logs where the flight actually went, and many other details. Currently we do not have accurate records of what really happened on a flight. Also, the navigators main job is to switch the bait machine on and off as the plane passes over houses, etc. That job requires full-time concentration, so the navigators other jobs, such as changing the bait drop rate in response to changes in ground speed, and record data. In addition, there are features of the software in GPS of the current Twin Otters which have lost us significant amounts of flying time.

Another objective of the project is to achieve a general controller. This implies that it will work in different aircraft types without major modifications, and that it can run different types of bait machine. Eventually, it will certainly run the Turbo-Beaver sachet thrower.

The current state of this project is that a Request for Proposals was issued, and three proposals were received. We are currently evaluating those, and asking questions for clarification.

Charlie MacInnes
RRDU
Peterborough

FALL BAIT DROPS, 2001

Area	No. of Baits	Bait Type
Vermont	270,000	Coated Sachet
St. Lawrence, New York	600,000	Coated Sachet
St. Lawrence, New York	90,000	Fishmeal Polymer
Niagara, New York	190,000	Coated Sachet
Chataqua, New York	200,000	Coated Sachet
Eastern Ontario	100,000	Coated Sachet
Eastern Ontario	560,000	Ontario Slim
Quebec	160,000	Fishmeal Polymer
Ohio	1,280,000	Fishmeal Polymer
Southwestern Ontario	510,000	Ontario Slim
Central Ontario	160,000	Ontario Slim
Northern Ontario	173,000	Ontario Slim

Table 1: Proposed bait numbers to be dropped in August and September 2001. Data for Pennsylvania and West Virginia have not been included since the areas and bait numbers have not been determined.

The baiting schedule for 2001 will already have started by the time you receive this issue of the Rabies Reporter.

Table 1 outlines the plans for this year's bait drops. However as usual, plans are subject to change with little notice.

Baiting will begin in Vermont on 7 August 2001. From Vermont, the planes and Rabies Unit staff will move to New York and finish up the month of August in eastern Ontario and Quebec.

In September, the planes will be busy in the skies of Ohio, Pennsylvania, West Virginia, and regions of Ontario.

New Hampshire which had planned a bait drop will not be distributing any baits this fall. The areas in Pennsylvania and West Virginia have not been decided upon yet but portions of these states

will be baited.

A more detailed summary will be available in the next issue of the Rabies Reporter.

Bev Stevenson
RRDU
Peterborough

RABIES RESEARCH UNIT

Rabies Research Unit
Ontario Ministry of Natural Resources
P.O. Box 4840
Peterborough, ON K9J 8N8
Canada

Office phone: 705-755-2270
Office fax: 705-755-2276
Home office phone: 905-640-6832
Home office Fax: 905-640-4317
Email: macinnch@netrover.com
or charlie.macinnnes@mnr.gov.on.ca

Animal Rabies Report: April to June 2001

[illegible]

[illegible][illegible]

Animal Rabies Report: April to June 2001

Animal Type	Fox			Raccoon			Skunk			Other Wildlife			Bat			Dog			Cat			Livestock			Totals		
County or Region	#	Cumulative		#	Cumulative		#	Cumulative		#	Cumulative		#	Cumulative		#	Cumulative		#	Cumulative		#	Cumulative		#	Cumulative	
		01	00		01	00		01	00		01	00		01	00		01	00		01	00		01	00			
Northern																											
Muskoka																								0	0	0	
Parry Sound																								0	0	0	
Nipissing	2	2													1	1					1	1			4	4	0
Sudbury	10	11					1	1																11	12	0	
Cochrane	1	2	4							2						1					1	3			2	8	4
Timiskaming										1															0	1	0
Algoma																									0	0	0
Thunder Bay																									0	0	0
Rainy River																									0	0	0
Kenora			2																						0	0	2
Regional Totals																											
Eastern				19	28	29	2	2					8	9	5										29	39	34
Central							1	3					2	2											3	5	0
Western			1				7	17	25						1						1	8	5		8	25	32
Southern													2	2	1										2	2	1
Northern	13	15	6				1	1			3					1	2				2	4			17	25	6
TOTALS	13	15	7	19	28	29	11	23	25	0	3	0	12	13	7	1	2	0	0	0	0	3	12	5	59	96	73

Notes for this quarter:

All livestock this quarter were cattle.

One of the two bats in Frontenac was a little brown bat, all other rabid bats this quarter were big brown bats

