

The Rabies Reporter

May 1995

Volume 6, Number 1

ISSN 1186-8961

- Now *THAT* Is Rabies Control
- Fox and Skunk Predictions for April to September
- MNR Rabies Team in Texas
- The Leader's Report
- Texas Adventure/95
- Raccoon Rabies Update
- A Note of Interest
- Congratulations

NOW *THAT* LOOKS LIKE RABIES CONTROL

A classic New Yorker cartoon shows two skunks staring at each other in consternation, with their noses wrinkled to their eyebrows. The caption reads "I think it's us!" A careful look at the first quarter data, and especially the maps of distribution of rabid foxes and skunks indicates that the widespread bait drop last fall

is a major contributor to record low rabies levels in 1995. This is the first quarter since 1961 with fewer than 100 rabies cases. The real clue, however, is that 14/23 of the rabid red foxes in all of Ontario occurred in the southern region. About 2/3 of that southern region was not baited in 1994 (see the map in Rabies Reporter 5[2]), the only part of southern Ontario left out of the program. In fact, you can almost draw the eastern part of the baited area's boundary on this quarter's fox map, because rabid foxes are almost all in townships which were not baited.

For those who live in the unbaited area, be assured that it will be fully covered in 1995. We have 1.8 million baits on order, enough to cover the whole of western Ontario.

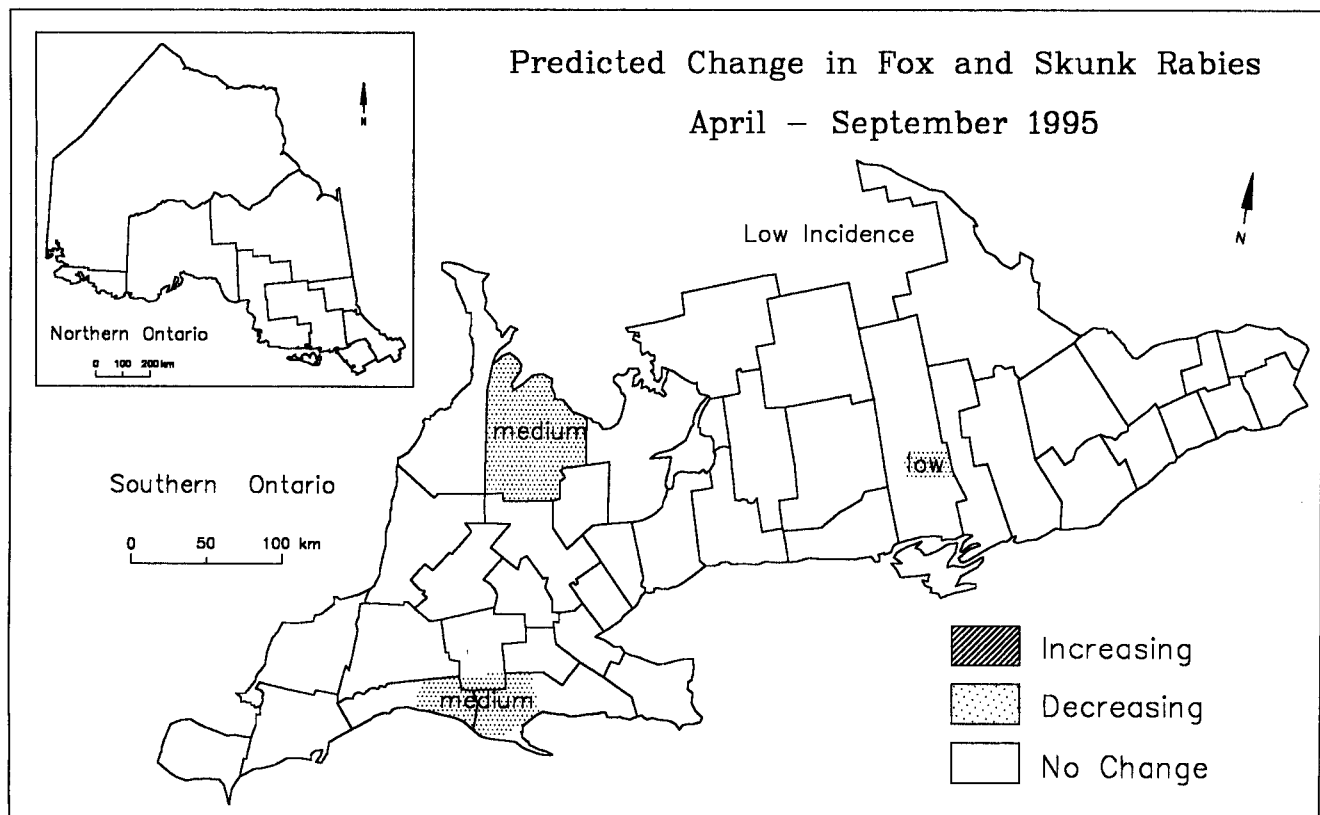
You may remember that the choice of extreme southwestern Ontario as the area not to be baited was based on there being fewer rabies

cases there than anywhere else in southern Ontario, except the original baited area in eastern Ontario. The persistence of rabies in the unbaited area mirrors the experience in Germany, where attempts at cost cutting were repeatedly frustrated by the fact that rabies moved into areas where rabies was low after the decision not to bait had been made.

Charlie MacInnes
Rabies Unit
Maple

FOX AND SKUNK PREDICTIONS FOR APRIL TO SEPTEMBER 1995

Hopefully this is the penultimate article on prediction of rabies in foxes and skunks. As the attached tables



show, rabies incidence is at its lowest since 1961. We believe the drop in incidence reflects the Ministry's oral vaccination campaigns that continued in eastern Ontario since the fall of 1989, expanded to central Ontario in 1993, and then covered most of southern Ontario in 1994. This success also means that our previous method of prediction is no longer viable. In the past, predictions were made on the basis of the fairly regular cycle of incidence in various areas of the province augmented by knowledge of the seasonal variation in incidence and the current rate of spread from foci of infection. The vaccination campaigns have altered the pattern of incidence in the baited areas and have constrained spread from and to the unvaccinated areas. Thus the following predictions are made on the assumption that (i) no further foci will develop, and (ii) that infection in the current foci will decline partly because of an expected seasonal decline and partly because the combination of infection and vaccination is reducing the supply of susceptibles.

At present there are only three foci of infection: Grey County, the Counties of Elgin-Oxford-Norfolk, and Hastings County. Grey County is a traditional high incidence area but was vaccinated in the fall of 1994. Hence we expect that incidence will decline. The infected parts of Elgin-Oxford-Norfolk are within or very near the parts of southwestern Ontario that were not vaccinated in the fall of 1994. In the past these areas have experienced medium levels of incidence before incidence dropped. Since these areas have had rabies continuously for over a year we expect a decline in incidence over the summer months. Finally, we also believe that the small focus of infection in Hastings County will decline. That area has been baited, and rabies should decline this summer.

A word of warning! Although rabies in foxes and skunks appears to

be disappearing across the province, there have been a very small number of cases in other species in the baited areas. In eastern Ontario, for the past two years, half of such cases have been bats, while the rest were mostly domestic, with a few skunks up to early 1994. First, these cases may be related to long-term dispersal of foxes from infected areas. Second, the disease reporting system is geared to reporting cases with human involvement and, as overall incidence decreases, we may be missing a higher proportion of the wildlife cases than domestic cases. In either case, the longer we go without reported cases, the more confident we will be in declaring success. This fall's article predictions will examine this question further.

Roly Tinline

Department of Geography

Queen's University

MNR RABIES TEAM IN TEXAS - THE LEADER'S REPORT

This February was an historic date for the Ontario Rabies Research Program. Thirteen OMNR staff from Rabies Research, Air Services, Communications and co-operators from the GIS Centre, Queen's University, travelled to Texas to take part in the first large scale distribution of oral rabies vaccine in the United States.

Texas canine strain rabies is becoming a significant health risk in southern Texas. Movement of the outbreak of this strain of rabies in coyotes northward from the Texas - Mexico border has already resulted in two human deaths. Concerns about incursion of rabies further into Texas, and especially into large cities, prompted authorities to look to Ontario for help.

At the request of the Texas Border Rabies Project, Texas Department of

Health, OMNR aircraft, baiting equipment, personnel and expertise were made available to Texas to help combat the further northward spread of this disease.

From 15 February to 28 February 1995, two OMNR Twin otters, outfitted with bait dropping machinery, flew daily from a small airport in Pleasanton Texas, approximately 50 miles south of San Antonio. Designed for rabies control in Ontario, the machinery was easily modified to distribute the larger and heavier Texas coyote bait, which contained VRG rabies vaccine produced by Rhône-Mérieux, USA. During the two week period, staff from OMNR and Texas Department of Health distributed 850,000 such baits over southern Texas, in a pattern designed to place a barrier of vaccinated coyotes in the path of the rabies front.

Operations went extremely well. Once initial teething problems were overcome, and staff from Texas became comfortable with working in and around the aircraft, a routine was quickly established. The Texas weather helped as well. Initial foggy, rainy days which held up the start of operations gave way to clear sunny skies and 25C temperatures - ideal weather for the low level flying that baiting operations require. At the height of the operation, aircraft were flying a total of 15 hours/day, and bait distribution approached 4500 baits/flight hour.

Dr. Gayne Fearneyhough, Assistant Director Zoonosis Control, Texas Department of Health and Dr. Christopher Nunan, Co-ordinator, Texas Baiting Project, OMNR, would like to congratulate staff from Texas and Ontario for an excellent job. We would also like to acknowledge the numerous people who spent long hours in preparation of the legal, contractual, scientific and operational aspects of the project. Their contributions made the project the smooth operation that it was.

Texas is now monitoring the success of the operation. The number of coyotes which contacted the baits is being investigated and incidence of rabies cases relative to the baited zone is being closely watched.

Planning has begun on a second operation in spring 1996 to continue eradication of Texas strain of canine rabies from Texas.

*Christopher Nunan
Rabies Research Unit
Maple*

[Editor's note: Chris Nunan has barely mentioned the literally months of hard bureaucratic negotiation that he put in to get the legal and contractual agreements in place before the operation could take place. He has described only the interesting parts of the Texas project. Chris deserves special thanks for having stuck with the lawyers and risk managers, and smoothly talked them into line. Without his efforts, there would have been no Texas operation, this year or ever! In addition, he was helped by senior air service personnel, from the director down, especially Marty Treitz and Neil Ayers, who, early in the process, believed that this was a viable and worthwhile venture. Tim Trow in Legal Services also did yeoman service. There will be a video available on the Texas operation, filmed and edited by MNR's Lloyd Walton.]

TEXAS ADVENTURE 1995

We packed up our two Twin Otters, C-GOGA and C-GOGC on February 7th in Sault Ste. Marie. The next day, Wednesday, was the planned day of departure from Sudbury to Toronto for the installation of the baiting machines. The temperature was a lovely minus 20 degrees with a

north wind of 20 miles per hour - Texas sure was looking good. Three days in Toronto were full of last minute ends to be tied up as well as the flight planning for the trip to Austin. We had done quite a bit of work in Sudbury well in advance, but we had to wait until the day before to get the forecast wind and weather to enable the formal flight plan legs to be filed. On Saturday the 11th, the day that a lot of people had worked for was finally at hand, we were actually leaving for Texas! Mother Nature gave us a good weather forecast as well as reasonably favourable winds. She also threw in a little snow in Toronto to make the desire for southern warm temps that much more real.

Our flight was planned to stop in Dayton, Ohio, for customs and fuel, and then on to Sercy, Arkansas, for one last fuel stop before going on to Austin, a proposed 9-hour flight. The first event en route to Dayton was the realisation that the forecast winds that we had been given were not totally correct, and we were moving about 20 miles per hour slower than we had planned. We were not concerned, as there are lots of airports on our route, but it required some quick recalculation of fuel and distance times. We arrived in Dayton at approximately 10:30 am and were warmly greeted by U.S. Customs, who were waiting for us. That was the first of many indications that the long hours making sure all the proper people were notified of our plans would pay off. The total time for one customs agent to complete the papers on two Twin Otters fully loaded with gear and equipment as well as twelve people with personal bags was only 10 minutes! After filling with fuel and rechecking the weather and winds we departed Dayton for Sercy hoping that the forecast winds would develop en route. It became obvious early that they would not cooperate this day, so we had to realign our flight plans to include an extra fuel stop. Following much conversation on the MNR

radios, as well as furious paper shuffling we decided that we would land at Paducah, Kentucky, for fuel, and again at Texarkana, Arkansas before Austin. The flight to Paducah was interesting, providing all on board with nice scenery of the Ohio River as well as the farming country along the way. At approximately 2:00 pm we landed in Paducah, to a real nice surprise: NO SNOW! We fuelled up quickly and left the junction of the Ohio and Mississippi Rivers in our rear view mirrors, so to speak. The next leg was a pleasant surprise, the winds had shifted behind a cold front we were following and we were making up some time. As we went by Little Rock, Arkansas, we were happy to see that we could make it all the way to Austin without another stop for fuel. The nice weather changed just as we crossed the Texas state line and we had to climb above some rain, losing our view of the ground, but allowing a pleasant and smooth flight above a warm Texas cloud deck. At about 7:30 pm we landed in Austin to a surprise, the cold front we had been following was just that, a COLD front! The temperature was only about 40 degrees and the north wind made it feel more like a Moosonee Monday than a south Texas Saturday. Nonetheless, we were here and happy to have the 1200 miles behind us, albeit very tired. The people who met us at the Pooling Board (the Texas equivalent of our Provincial Air Service) were very helpful and in no time we were in our hotel rooms looking forward to a meal and maybe just one of those funny American beers. My first sleep in Texas was a very comfortable one and just maybe not as long as I would have liked, because all too soon the sun was up and we were off to enjoy what turned out to be our only day off until the project was complete 19 days later. We found our first stop, thanks to a good map and some understanding Texas drivers, the boot store! The selection was too good and we quickly bought too much stuff at great prices.

Which reminds me again how happy I was to get home before the AMEX bill came in - it was easier for my wife to accept after she and my daughter had the gifts I had bought for them! That evening we were treated to some real Texas hospitality at the home of Dr. Fearneyhough. We enjoyed a nice ride through the area north of Austin, and we met some of the people we would be working with. The next day, Monday, was set aside to train the Texas personnel on aircraft safety and machine operations. This was a full day interrupted only by a lunch stop at an interesting Cajun, southern Louisiana style place called Papadeuxs. Tuesday would be our travel day to Pleasanton to start the actual bait dropping.

Tuesday morning we all met at the airport to find that the fog was so thick that the airport in Austin was closed for a short time. We ended up spending the whole day in Austin waiting for fog, and after quite a search found rooms to stay one more night. The one good thing that came out of that was we got to try the famous Texan specialty, chicken fried steak. A mouth-watering piece of beef was pounded to pulp, dipped in batter then deep fried. The result is a piece of beef-flavored cholesterol that is then smothered in what we came to know affectionately as WHITE GRAVY. While I never did actually find out what went into the gravy, I was told that there was enough fat in the base to keep a cowboy regular over two weeks of sitting in his saddle!.

Finally, on the 15th, we arrived in Pleasanton. It was a short 30 minutes from Austin to Pleasanton, and despite the forecasts, the weather was quite good. Our approach into the airport at Pleasanton was over the same countryside that we would come to find very boring, but that time it was new and interesting, with flat prairies landscapes and lack of much vegetation, punctuated by cows everywhere!. After an uneventful landing we were besieged by what I

really think was more press than the O.J. trial. The cameras were lined up down the side of the runway like dominoes ready to fall. To a poor old bush pilot it was quite a sight, but it paled in comparison to the frenzy of interviews that began and lasted the next four days. Thankfully, most of the questions that were flying around from the media were well handled by the Texas folks, and the reporters were more interested in taking pictures of the aircraft than quizzing the flight crews.

After a few quick discussions, we decided to try to get one flight in for each aircraft that first day. We unloaded the gear from the 'planes, and quickly took on the first load of baits. After some discussions with the more venturesome media we took off, circled for ten minutes (photo-ops), then we were able to start the bait machines and get the program underway.

The first flight came off as all the future flights would - very smoothly. After about 30 minutes we turned around and started for home. The sky got very busy as four media helicopters were leaving the airport in Pleasanton to meet us half way home. About 15 minutes out from Pleasanton we encountered this swarm of 'swingwings' and were besieged by requests from the other pilots to "make a turn to the left" or "slow that thing down", etc. Anyway, the last 30 miles of the trip took 40 minutes. When we finally landed in Pleasanton there was an impromptu celebration marking the end of the first 'production' flight over Texas, and, finally, the project was really underway.

Pleasanton is a very nice community with about 8000 people, located 40 miles south of San Antonio. Our motel, called The Executive Inn, was a newer motel providing excellent accommodations for us. The people from the motel, the local restaurants and even the community were very warm and hospitable. They knew that the

program was going on and that there were a bunch of funny talking Canadians in town. Everywhere we went we were treated with real small town hospitality. We have all travelled to small towns in Canada, and we all said that we never been treated better than those Texans treated us. One thing that piqued our interest was the unlimited number of guns that the people carried with them EVERYWHERE. This fascination was answered by some of the local residents who invited some of us out to the local shooting range. This was one of the most entertaining times I had on the whole trip. We were greeted by local enthusiasts and invited to shoot some of the guns they had brought to show us. In the end we were shooting six different types of handguns and rifles from .22 pistols to AR-15 rifles. It was an experience that will not be forgotten by those of us who able to get out there and listen to their attitudes about guns.

As the program progressed, we felt a real sense of family among the people we were working with. The friendships that were created there will last a very long time. We all found that we could relax with any of the group and enjoy the different cultures and lifestyles that these people take for granted. One fun example was a different type of tailgate party, which included cooking tortillas on a giant frying pan made of an old plough disk, and heated over an open torch attached to a propane tank. This was only one time of many when we traded stories of home and what it was like to live where we do.

By the way, those Texans really do things in style. We call came home with jackets, hats, bumper stickers and T-shirts done specially for the Border Rabies Control Project, some complete with a Twin Otter front and center. And, you should see the pictures of OGC with genuine Texas Longhorns sprouting from the nose!

The program was progressing well until Saturday Feb 25, when rain caused us to shut down early. This

allowed us the afternoon to take a drive to San Antonio for dinner. It was a good time, and too bad that the rain limited our time to walk and enjoy the sights. The next day we were back at work full blast, and kept that up to the end on Feb. 28th. We all flew to Austin for what we Canadians thought would be a little get-together to celebrate the end of the work. Boy, were we wrong! Our host, in true Texas style, had prepared a formal ceremony at the State Legislature, where we were all made honorary Texans! It was overwhelming to be recognised in that way for doing something that we all know is very important, but which we who have been doing it for so long take for granted. It was with a real sense of pride that I accepted the certificate, having been part of a team that had not only been the first to take this technology out of Canada, but also completed a job that had gone so well.

The following day we left Austin for the flight back to Toronto. We planned to reverse the original flight plan, and stop in Sercy, Arkansas then Dayton. We left Austin in a foggy rain, and going home to snow was actually a welcome thought considering, after everything was said and done, that it was home! We picked up excellent winds on the trip home, and extended our first leg all the way to Paducah, Kentucky. That ended up as our only fuel stop, and we landed in Toronto just after 5:00 pm on March 2nd. The customs stop was short, and we were soon in a warm hotel. The next morning we off-loaded the bait machines and flew home to Sudbury and Timmins, only to find that the fabled Canadian snow had melted quite a bit. Not to worry, the very next day we were hit with the biggest snow storm of the season, but at least we were home in time to clean the driveway!

*Bill Turcotte
MNR Air Service
Sudbury*

RACCOON RABIES UPDATE

Raccoon rabies started moving early in the year in upstate New York. In April there were three cases in Niagara Falls, New York and north. One of these was within 2 km of the Niagara River just across from Niagara-on-the-Lake, Ontario. However, at the time of writing there were still no cases in Ontario.

Preparation of contingency plans is progressing well. At the time of writing, 8 completed plans had been received, and many others were promised. A lot of people have put forward much effort to get these plans ready. Thank you for your efforts. I hope we never have to use these plans, because raccoon rabies can be kept out of Ontario, but that view is very optimistic.

*Charlie MacInnes
Rabies Unit
Maple*

A NOTE OF INTEREST

Each year the Rabies Unit collects carcasses from trappers in order to evaluate success of our bait experiments and rabies control operations. One facet of evaluation is that a sample from the brain of each animal is submitted to A.D.R.I for rabies screening. The Fluorescent Antibody Test (FAT) results for our 1994 collections were received recently. Of 603 foxes, there were 4 positive for rabies (0.66%). All the positives were in south-western Ontario. Of 323 skunks, there were 11 positives (3.4%). Of 4475 raccoons, only 1 was positive.

Antibody and tetracycline results are still to come. So far, foxes have shown high acceptance for Icing Sugar-Marshmallow baits, but that is only a preliminary result.

*Charlie MacInnes
Rabies Unit
Maple*

CONGRATULATIONS

On 08 January, right on schedule, Heather Anne Crosgrey arrived to enrich the lives of Sarah, Steve and sister Caitlin. Then, on 16 April, Laurie Calder presented her husband Mike Ladouceur with a son, Eric Jackson. All concerned are thriving.

Congratulations of a different sort are due to our New York colleague, Laura Bigler, who successfully defended her Ph.D. thesis at Syracuse University. Her thesis included studies on T-V-R and baits in and around Ithaca, New York.

1995 T-V-R BEGINS

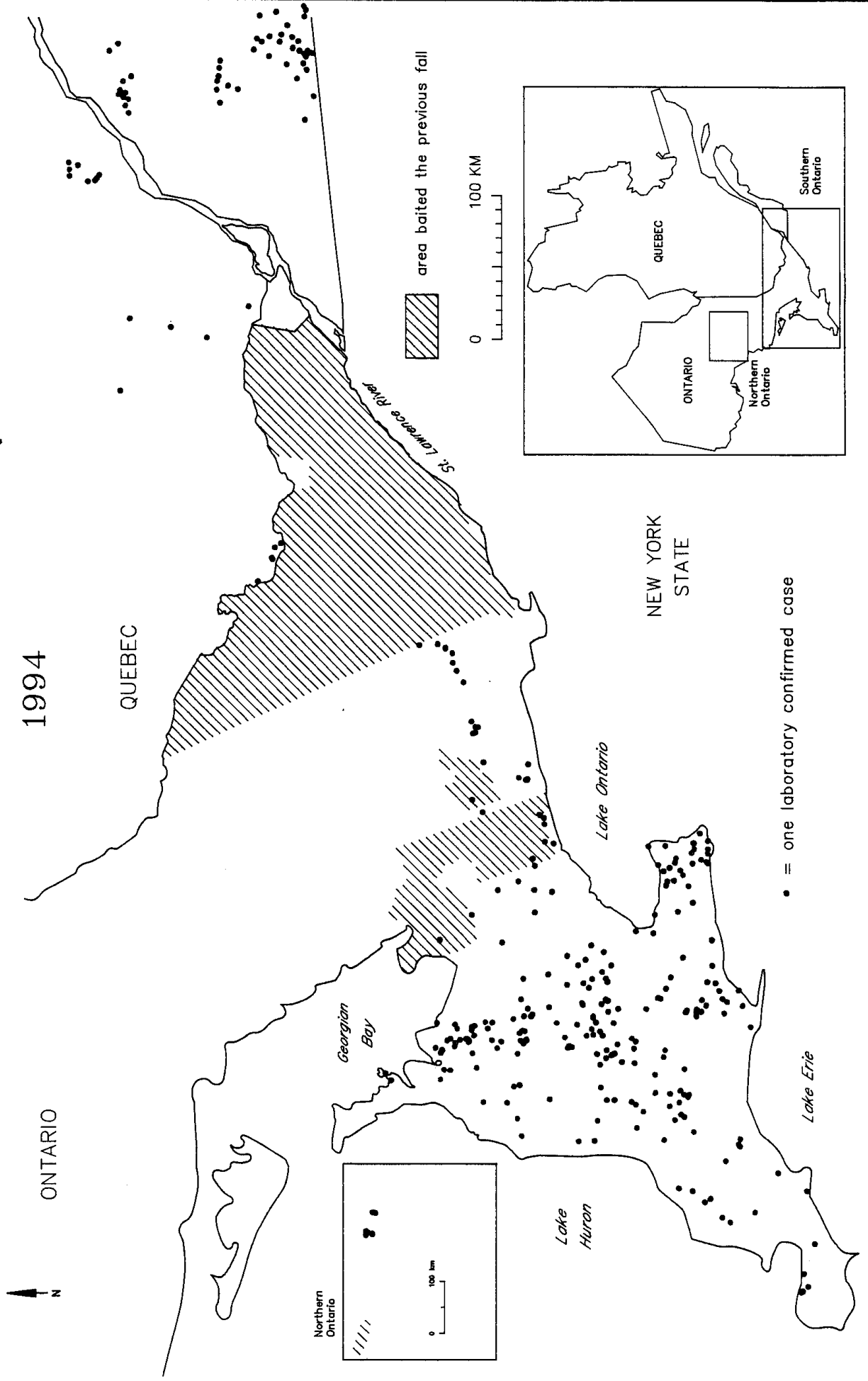
There will be three T-V-R projects going this summer. The Niagara project will begin June 19. The plan is similar to last year, except that rural areas will each be trapped for two weeks instead of one, and 75 traps will be used per cell instead of 100. Trapping for recaptures will be done 3 and 6 weeks after the initial trapping, compared to 1 week after as last year. T-V-R will also begin at the bridgeheads and dam ends along the St. Lawrence. There will be a 9-km radius around the Ivy Lea bridge, and 3-km bands around the other bridges. The Scarborough study will also continue, beginning in early July.

The Rabies Reporter, a scientific newsletter about current issues in rabies research and control, is a joint effort of the Rabies Research Unit, Ontario Ministry of Natural Resources; the Food Production and Inspection Branch of Agriculture Canada; The Ontario Ministry of Health and the Department of Geography, Queens University, Kingston.. Articles for future issues will be welcomed by the editor. Comments, letters, submissions and enquiries should be sent to:

The Rabies Reporter
Rabies Research Unit,
Southern Terrestrial Ecosystems Research
Ontario Ministry of Natural Resources
P.O. Box 5000,
Maple, Ontario L6A 1S9
Telephone: (905) 832-7110
Fax: (905) 832-7149

Rabid Foxes in Ontario and Quebec

1994



• = one laboratory confirmed case

Animal Rabies Report: January to March 1995

Animal Type	Fox			Skunk			Other Wildlife			Dog			Cat			Livestock			Total		
County or Area	#	Cumulative		#	Cumulative		#	Cumulative		#	Cumulative		#	Cumulative		#	Cumulative		#	Cumulative	
		95	94		95	94		95	94		95	94		95	94		95	94		95	94
Eastern																					
Stormont																			0	0	0
Dundas																1	1		1	1	0
Glengarry																			0	0	0
Prescott																		1	0	0	1
Russell																			0	0	0
Carleton										1	1								1	1	0
Renfrew																			0	0	0
Lanark																			0	0	0
Grenville																			0	0	0
Leeds																			0	0	0
Frontenac																			0	0	0
Lennox-Addington																			0	0	0
Hastings	1	1	1				1		2				1						1	1	5
Prince Edward																			0	0	0
Northumberland																			0	0	0
Victoria			2	2	2													2	2	2	4
Haliburton																			0	0	0
Peterborough				1	1	5						1	1						2	2	5
Durham			3			1										1	1	3	1	1	7
York Region			5	1	1	2										1	1	1	1	1	8
Scarborough																			0	0	0
East York																			0	0	0
City of Toronto																			0	0	0
City of York																			0	0	0
North York																			0	0	0
Etobicoke																			0	0	0
Simcoe	1	1	1	1	2	2			2										3	3	3

Animal Rabies Report: January to March 1995

[illegible]

Animal Rabies Report: January to March 1995

Animal Type County or Area	Fox			Skunk			Other Wildlife			Dog			Cat			Livestock			Total		
	#	Cumulative		#	Cumulative		#	Cumulative		#	Cumulative		#	Cumulative		#	Cumulative		#	Cumulative	
		95	94		95	94		95	94		95	94		95	94		95	94		95	94
Thunder Bay																			0	0	0
Rainy River																			0	0	0
Kenora							1	1											1	1	0
Subtotals																					
Eastern										1	1					1	1	1	2	2	1
Central	2	2	12	6	6	9			4			1	1	1		1	1	6	10	10	32
Western	7	7	49	12	12	13			3			2	1	1	8	11	11	21	31	31	96
Southern	14	14	25	4	4	11				1	1	5			8	5	5	8	24	24	57
Northern			2				1	1										1	1	1	3
Totals	23	23	88	22	22	33	1	1	7	2	2	8	2	2	16	18	18	37	68	68	189

Livestock this quarter: 12 cattle; 2 goat; 2 sheep., 2 horse

Other wildlife this quarter: 1 arctic fox (Peawanick, on Hudson Bay, Kenora District).

