

The Rabies Reporter

January 1991

Volume 1, Number 4

In This Issue:

Unusual Rabies Events II:

Sudbury and North Bay 1988-1991.
October-December Zoonosis Reports
October-December Fox and Skunk
Rabies incidence Maps
Late Breaking News: Errors in Sault
Ste. Marie Newspaper Articles
Distribution of the Rabies Reporter
Ken Lawson Retires

In the Insider

Rabies Predictions:

Spring-Summer 1991
Call for Submissions of Articles

Unusual Rabies Events II: Sudbury and North Bay 1988-1991

The North Bay - Sudbury area is not known as a center of rabies, having been virtually free of rabies from the late

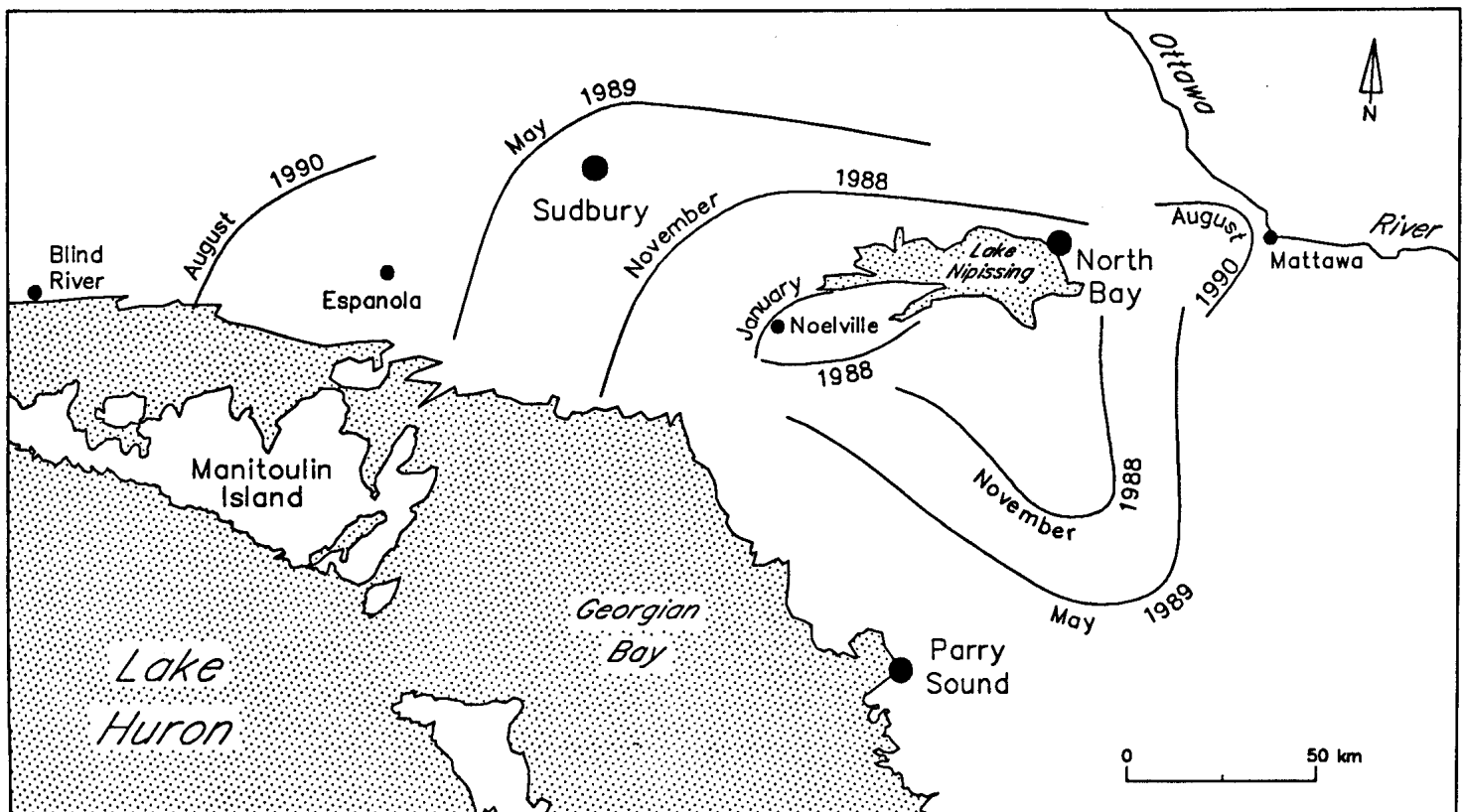
1960s' until 1987. This enviable record ended in late 1987 with the development of a rabies outbreak centered around Noelville, southwest of Lake Nipissing. The initial outbreak in the Noelville area has been linked to the 1986 rabies event in Huronia. The suggested path of rabies to Noelville is a movement up the Georgian Bay shoreline from the Parry Sound area. Since 1987-1988, the outbreak has spread both east and west from the Noelville area (see map: isobars indicate rabies front (from UTM co-ordinates) for indicated date).

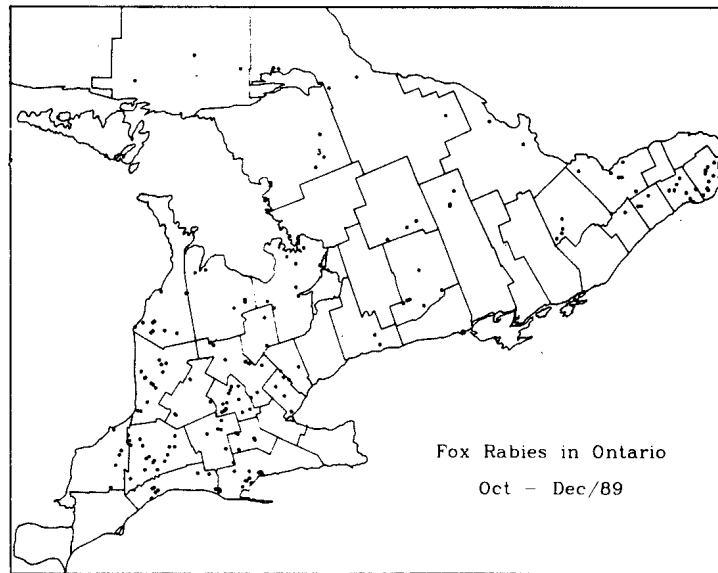
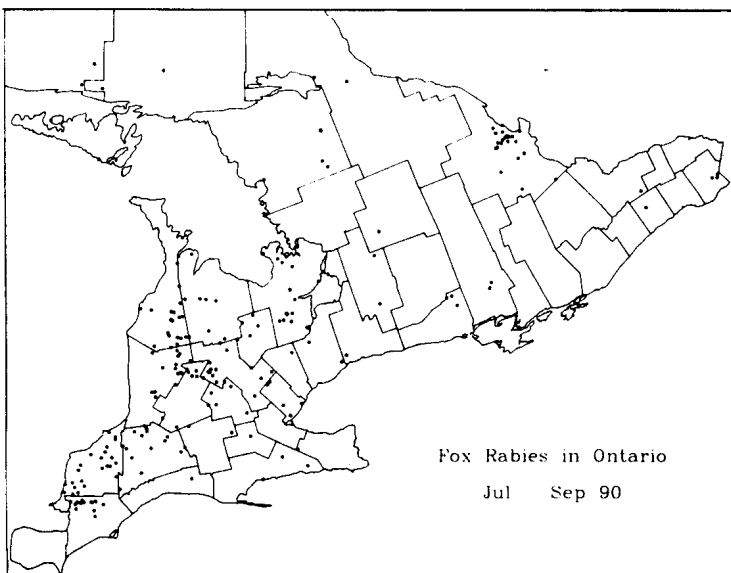
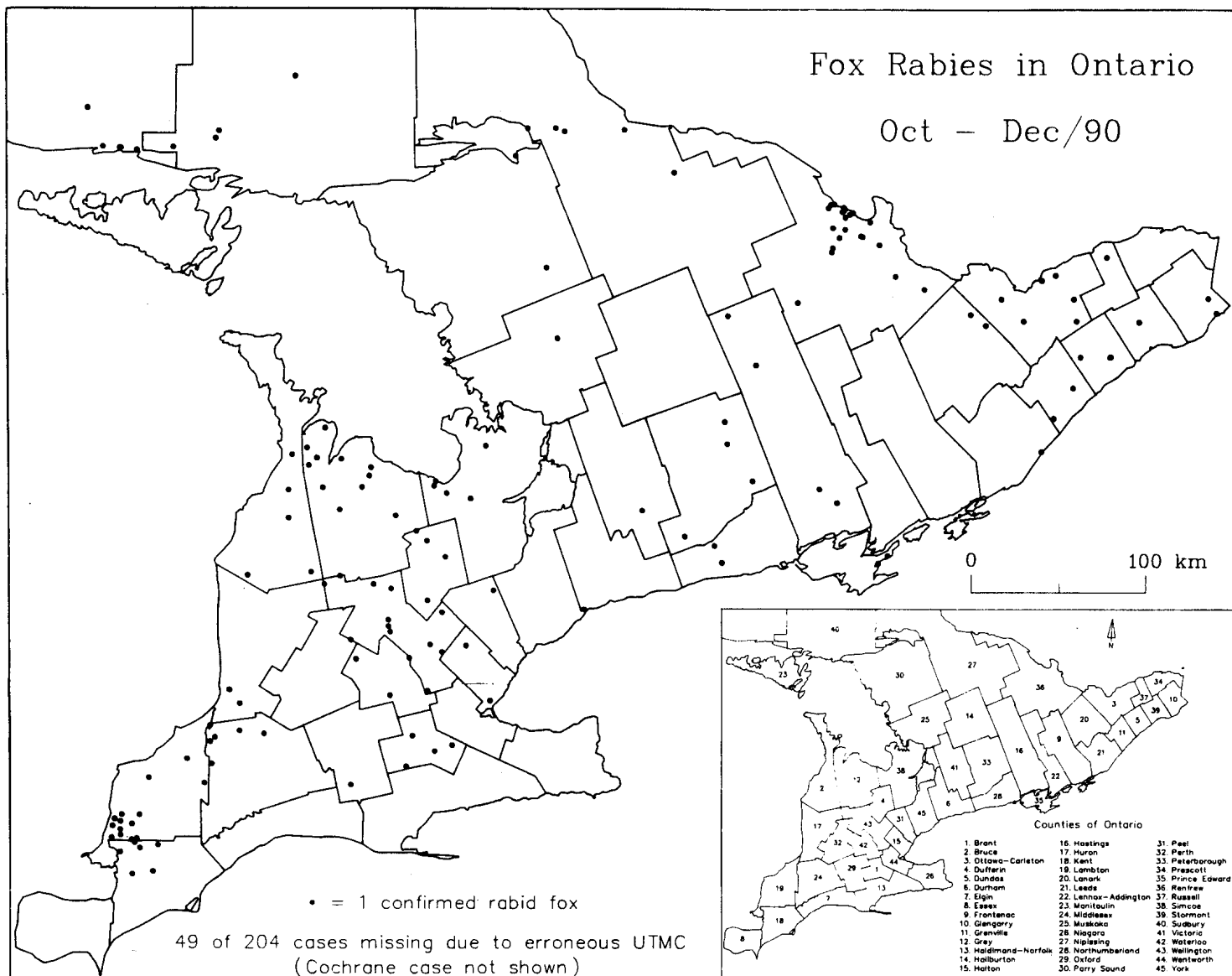
Contrary to popular convictions, rabies is not new to Northern Ontario. There were outbreaks of rabies in the early 1960's both in the Cochrane-Hearst and Claybelt areas. However the disease died out in less than a decade. It is likely that the present invasion will also die out, although the time this will take cannot be predicted with any certainty.

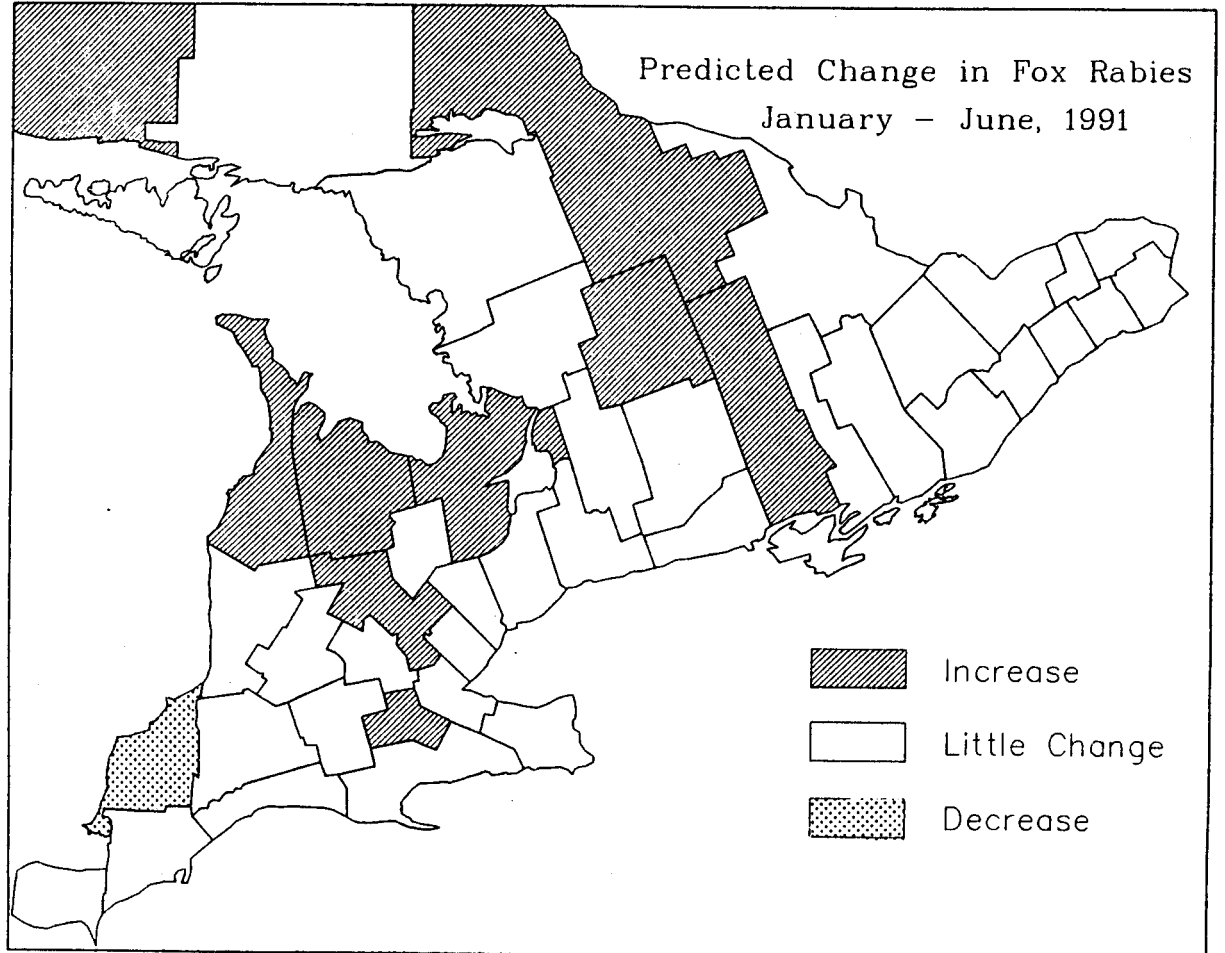
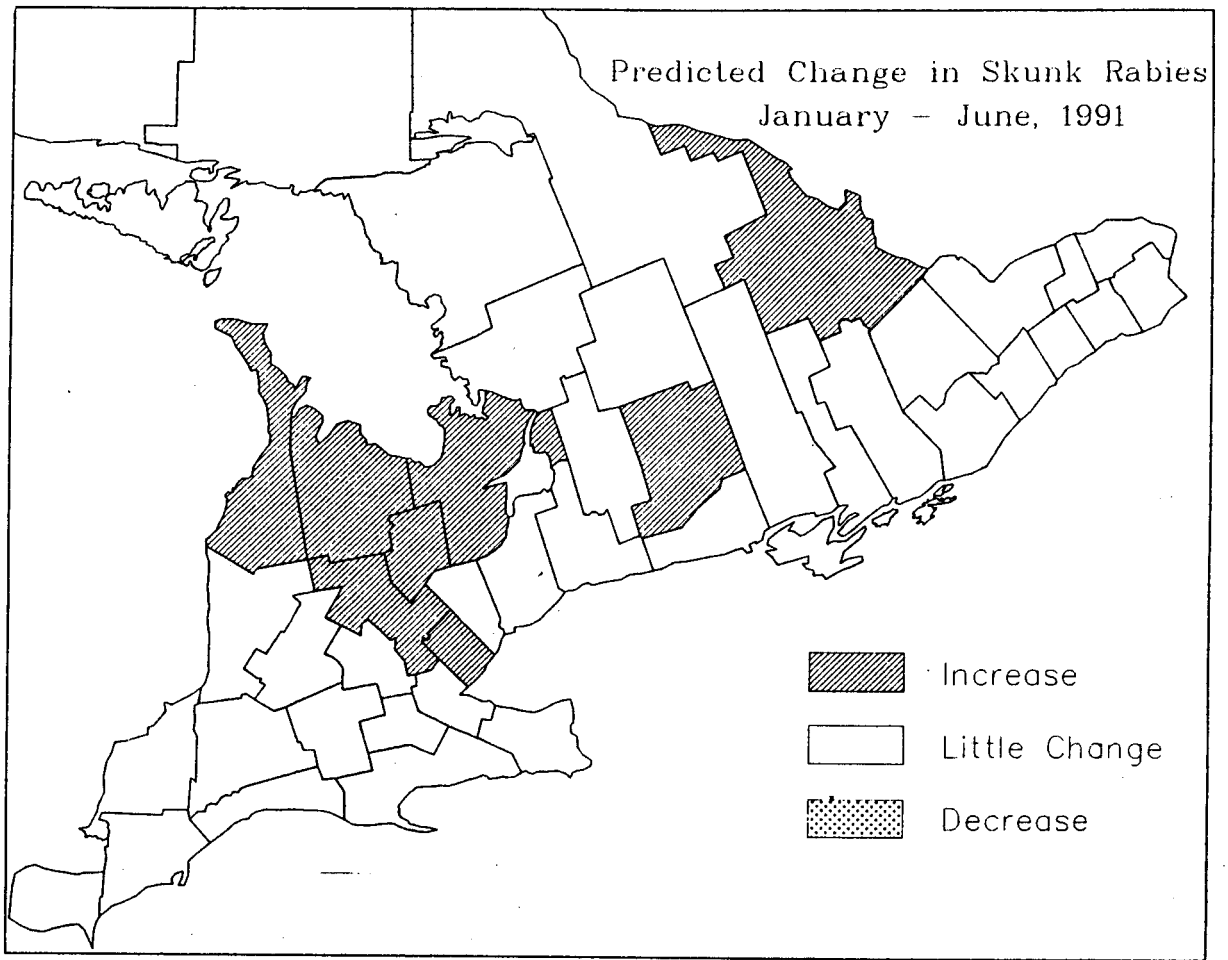
The primary factor limiting the persistence of rabies in Northern Ontario is the boreal forest itself. Thick boreal for-

est impedes the movement of rabies outbreaks. This is due to the effect of the boreal forest on red fox (*Vulpes vulpes*) populations. Foxes are the "legs" of a rabies outbreak, spreading rabies during the fall dispersal of juvenile animals from the natal burrows. In boreal forest fox populations are lower than in preferred farmland habitats. Presence of wolves further reduces fox numbers. Reduction of the numbers and movements of foxes will reduce the ability of rabies to spread and persist.

Large bands of unbroken forest north and west of North Bay and west of Sudbury should impede the movement of rabies in these directions. Similarly, movement north from Sault Ste. Marie or along Highway 11 from North Bay into the Claybelt may be slowed. Unfortunately, the moderate amounts of farmland along the Highway 17 between Sudbury and Sault Ste. Marie may provide an corridor for rabies movement. The boreal forest is no substitute for an active surveillance program, since a rabid fox







Animal Rabies Report: October to December 1990

Animal Type		Fox		Skunk		Other Wildlife		Dog		Cat		Livestock		Total							
County or Area	#	Cumulative		#	Cumulative		#	Cumulative		#	Cumulative		#	Cumulative							
		90	89		90	89		90	89		90	89		90	89						
Eastern																					
Stormont	1	6	29		7	2		1	4			2	1		2	11	1	18	48		
Dundas	4	6	17	1	5	1		1				1		1	5	11	6	17	29		
Glengarry	2	10	36		3	5						1	5		6	36	3	20	82		
Prescott		1	3		1	1		2								3	0	2	7		
Russell	1	1			2												1	3	0		
Carleton	8	16	16	1	7	4	1	2	4				2	9	10	5	19	35	31		
Renfrew	36	92	32	13	15	7	2	4	1	5	11	5	2	3	2	45	16	79	170		
Lanark	2	9	40	1	3	7	1	3	1		2	3		2	5	25	4	22	78		
Grenville	2	2	12			1						2				4	2	2	18		
Leeds	1	1	3			1			1			1					1	1	6		
Frontenac	1	2	7			1			1				3				1	2	12		
Lennox-Addington			11	1	1											2	1	1	13		
Central																					
Hastings	4	10	52	1	5	10			3	1	2	7	1	1	3	4	5	13	10	21	88
Prince Edward	2	2	1			1	1												3	3	2
Northumberland	2	7	13	1	4	12		1	7			1		1	4	2	7	14	5	20	51
Victoria	1	8	6	2	9	9		2	1					1	1	1	3		4	23	17
Haliburton	3	7	10			4		1									1	2	3	9	16
Peterborough	5	14	22	4	7	27	2	5	6				2	3	1	1	5	6	14	34	62
Durham	2	6	12	1	9	21		3	3			1		1	1		3	18	3	22	56
York Region		2	10	1		13			7			1			2			2	1	2	35
Scarborough		2	1			2			1			1							0	2	5
East York																			0	0	0
City of Toronto						1		1											0	1	1
City of York																			0	0	0
North York						1		1											0	1	1
Etobicoke						10			1		1								0	0	11
Simcoe	7	74	28	10	22	23	1	7	3		3	3		6	3	8	26	33	26	138	93

Animal Rabies Report: October to December 1990

[illegible]

Animal Rabies Report: October to December 1990

Animal Type	Fox			Skunk			Other Wildlife			Dog			Cat			Livestock			Total		
County or Area	#	Cumulative		#	Cumulative		#	Cumulative		#	Cumulative		#	Cumulative		#	Cumulative		#	Cumulative	
		90	89		90	89		90	89		90	89		90	89		90	89		90	89
Northern (continued)																					
Thunder Bay																				0	0
Rainy River																				0	0
Kenora																				0	0
Subtotals																					
Eastern	58	146	206	17	44	30	4	11	12	5	13	20	3	6	16	31	73	113	118	293	397
Central	26	132	155	20	56	134	4	22	32	1	6	14	3	13	15	16	50	88	70	279	438
Western	46	265	192	47	128	156	4	15	14	4	10	16	7	33	15	60	199	126	168	650	519
Southern	47	196	200	23	70	166	1	13	12	11	29	26	10	37	21	41	108	72	133	453	497
Northern	29	95	110	4	14	30		4	3		4	5		1	4	4	9	13	37	127	165
Totals	206	834	863	111	312	516	13	65	73	21	62	81	23	90	71	152	439	412	526	1802	2016

Clinically Diagnosed Cases Included: 49

Livestock: 133 bovine, 9 equine, 3 carpine, 10 ovine

Other Wildlife: 4 bats, 6 coyotes, 1 groundhog, 2 raccoons, 4 wolves

Rabies Predictions: January to June 1991

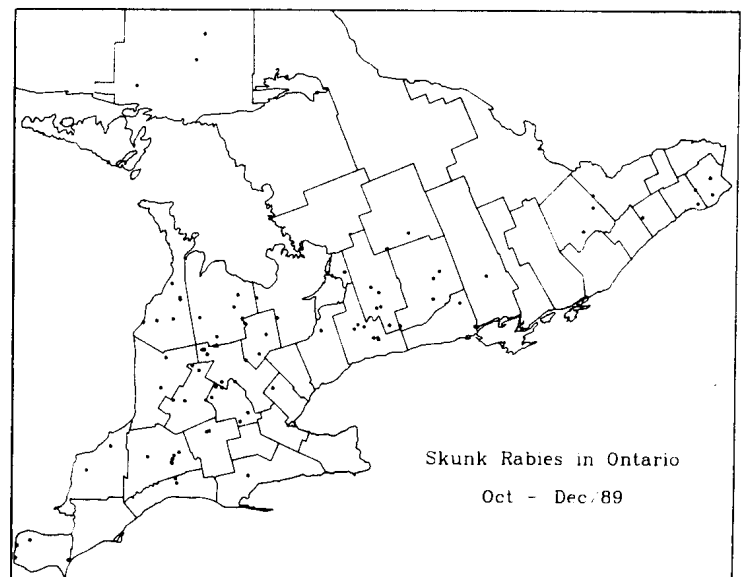
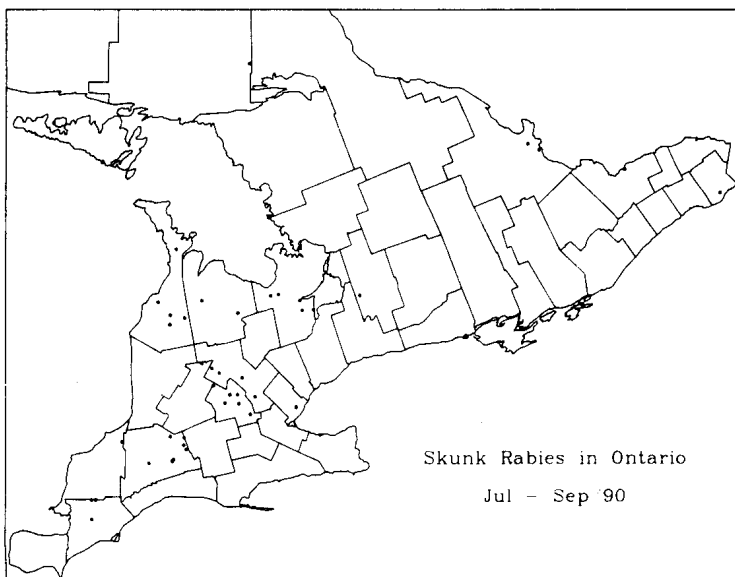
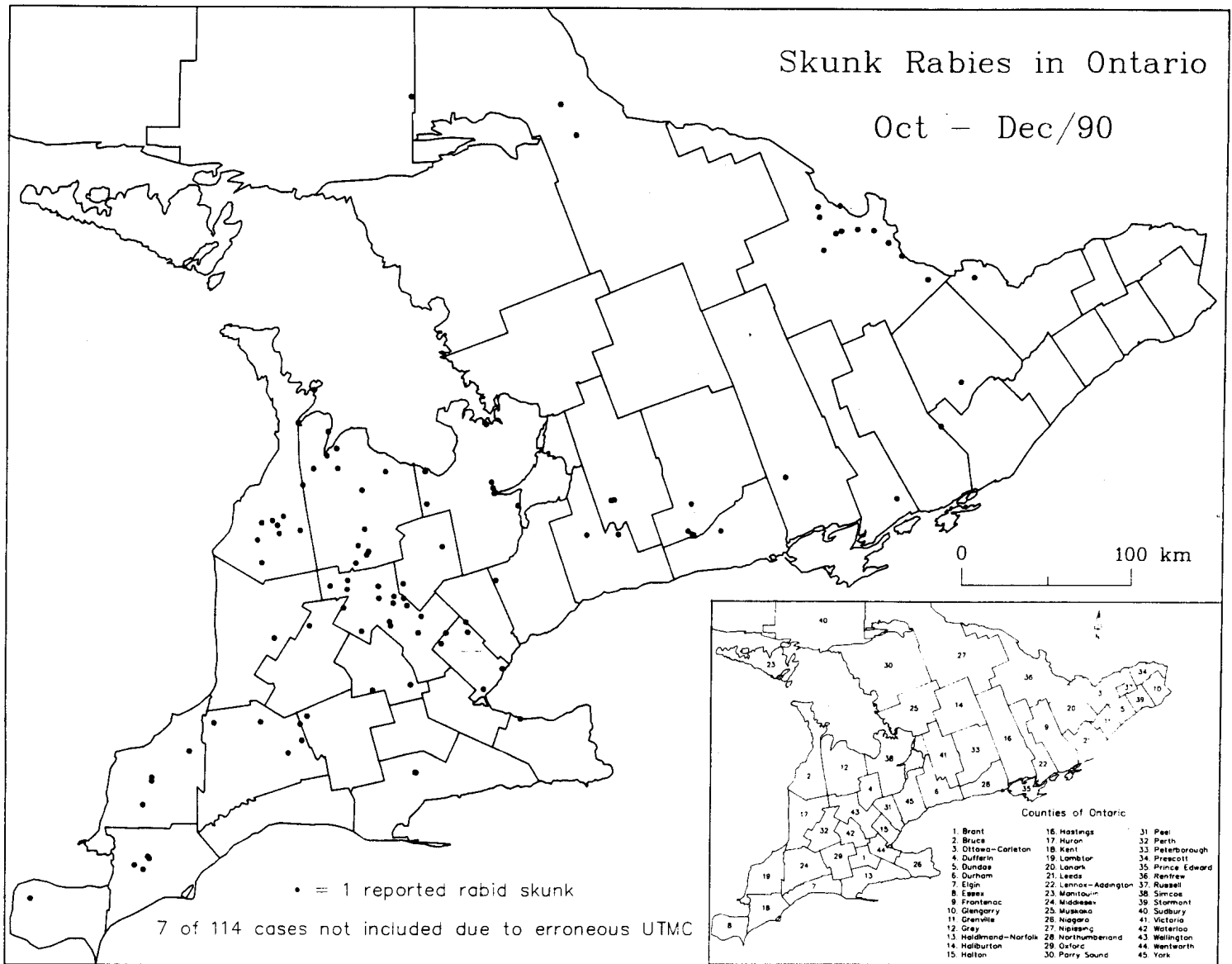
This issue includes "predictions" of anticipated changes in the distribution of fox and skunk rabies to the end of June 1991. The major purpose of these predictions is to help local authorities allocate time and funds for public information programs.

Predictions indicate changes from the current levels for individual areas as indicated on the October to December maps and the summaries of cases to date in the Zoonosis Reports. Current levels of rabies may be high, normal or low relative to "historical" rabies incidence for that area.

The predictions are based chiefly on examination of time-series patterns of rabies incidence for each county. The predictions deal only with rabies in foxes and skunks. These two species account for 97% of wild animals reported with rabies and about 65% of all domestic and wild rabies cases. Foxes and skunks are the primary source of infection involving domestic animals. Incidence of rabies in domestic and companion animals lags about 1-6 months behind changes in wild rabies.

Submissions to the Rabies Reporter

The Rabies Reporter welcomes submission of articles on all aspects of rabies and rabies control in Ontario. Articles should be less than one page in length, (approximately one thousand words), although longer articles will be considered (please contact the editor directly). Articles can be sent either on hardcopy or disk. Output from most text processors can be directly imported into the Rabies Reporter, although if you are using something really different you may wish to check with the editor before submitting. Graphic output from most spreadsheet and graphic packages can also be imported, however, please do contact the editor before submitting graphics on disk.



could easily travel along a highway or railway right of way.

There is some speculation that the rabid fox found in the Cochrane area (December 13, 1990) may have been part of an invasion from the north, similar to the original movement of rabies into Ontario in the 1960's. MNR goose banding crews reported seeing dead foxes in the James Bay area in spring 1990 and there has been reports of rabid arctic foxes on the western shore of Hudson's Bay near Churchill and Eskimo Point. The 1960's invasion passed through Northern Ontario to establish the rabies endemic situation in the south. It did not persist in the north and this 1989-1991 rabies event is expected to die out as well.

There has been suggestions that the collapse of the fur harvest in general (culminating in the recent collapse of the Ontario Trapping Association) and the lack of market for fox fur may be contributing to the increase of rabies in the north through decreased trapping activity. Analysis suggests that trappers have little influence on the timing and course of rabies outbreaks (Voight, D. and R. Tinline. 1982. Fox trapping and rabies. pp. 139-156 in Proceedings of the Midwest Furbearer Management Conference (editor G. Sanderson)). Intensive trapping may remove 45% of the fall fox population. A healthy fox population can replace up to 60% of its numbers in a single breeding season.

Rabies events like the one in the Sudbury-Northbay area usually result in calls for government action. The experimental oral baiting program of the Ontario Ministry of Natural Resources offers a future response to rabies outbreaks. At present, maintaining vaccination of domestic and companion animals, and ensuring potentially rabid animals enter the Agriculture Canada data stream is the best defense against rabies. C.D. MacInnes/ C.P. Nunan.

Late Breaking News

Rabies Warning

Sault Ste. Marie, Ont. - The Medical officer of Health for the Algoma District is warning Sault Ste. Marie residents of a rabies outbreak. Dr. Felix Li has advised trappers, taxidermists and other high-risk groups to wear gloves. He said 14 rabid animals have been found in the district

since January. Eight people exposed to rabid animals are being treated. *Globe and Mail, March 11, 1991.*

Rabies Spreading

The number of rabid animals found in Algoma since the start of the year is up to 14, the Algoma Health Unit reports.

Dr. Felix Li, medical officer of health said that rabies have now reached Thessalon, only 100 kilometers from Sault Ste. Marie. He added it is only a matter of time before rabies are reported in the Sault.

Eight residents in the district are receiving anti-rabies vaccinations. The health unit urges people to have their pets vaccinated, and to avoid touching any stray animals. *The Sudbury Star, Monday March 11, 1991.*

Queries to Agriculture Canada and the Ontario Ministry of Health provided the following statistics of rabies positive cases:

- ♦ January: 2 foxes, 2 skunks
- ♦ February: 2 foxes
- ♦ March: 1 fox (incomplete stats)

It appears that the rabies cases for the last quarter of 1990 (7 foxes) were inadvertently added into the 1991 totals reported in the news stories. The wide circulation of this story and its possible repercussions again reinforces the need for accuracy in reporting rabies statistics. Full statistics for the Algoma area will be included in the next Rabies Reporter. C.P.N.

Distribution of the Rabies Reporter Newsletter

The Rabies Reporter is now being distributed via a number of channels. The Ontario Ministry of Natural Resources, Wildlife Research Branch sends copies to its own district and regional offices, as well as to interested individuals who have asked to be included in our mailing. The Ontario Ministry of Health adds the Rabies Reporter to its FIRO publication. As well, Agriculture Canada mail significant numbers of the Rabies Reporter to their own staff.

If you wish to receive the Rabies Reporter directly, please write to the address below and ask to be put on the mailing list. The OMNR can accommodate a limited number of direct mailings.

Ideally we would like to supply copies of the Rabies Reporter to interested organizations and have them include the newsletter in their regular mailings. As well, we can provide galley proofs to allow organizations to produce the Rabies Reporter as part of their own newsletter(s). If your organization is interested in either of these arrangements, please write the editor directly. Due to limited funding we cannot promise to fulfil all requests. Requests will be evaluated in terms of the identity of the target group, possible overlap with mailings by other groups and the supply of the Rabies Reporter.

Retirement of Ken Lawson

Dr. Ken Lawson has retired after 39 years with Connaught Laboratories. Dr. Lawson began with Connaught in 1951, after completing his DVM at the Ontario Veterinary College.

Dr. Lawson has been involved with the oral rabies baiting program of the Ontario Ministry of Natural Resources since its inception.

All aspects of the program have had the advantage of Dr. Lawson's input. He has been instrumental in design and production of the oral vaccine bait and the unique machinery necessary to produce the large numbers of baits needed by the Oral Vaccination Program.

Ken insists that he is taking it easy in retirement. However, he has been convinced to help move the bait production program from Connaught to Langford Laboratories in Guelph (details on Langford Laboratories next month).

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, Queen's University, Kingston.

Comments, letters, submissions and enquiries should be sent to:

The Rabies Reporter
Rabies Research Unit,
Wildlife Research Branch
P.O. Box 5000,
Maple, Ontario L6A-1S9