

The Rabies Reporter

June 1991

Volume 2, Numbers 1 and 2

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Note on Volume Numbers

As you may have noticed, this first issue of Volume 2 is labelled numbers 1 and 2. This was done at the behest of Hellè Arro, head librarian of the Research Station Library. The purpose is to bring the Rabies Reporter in line with the standard practice of having all issue numbers of a newsletter to fall within a single calendar year.

Humane Solutions to Problems with Urban Wildlife Conference.

Members of the Rabies Research Unit attended a conference on "Humane Solutions to Problems with Urban Wildlife", May 3, 1991 sponsored by the Humane Society of the United States and co-sponsored by the Toronto Human Society. The conference dealt with wildlife-problem prevention, wildlife problem solutions and humane answers to problem wildlife.

Rick Rosatte of the Rabies Research Unit, Ontario Ministry of Natural Resources gave a presentation profiling urban raccoon populations in the Metro Toronto area.

John Hadidian, Urban Wildlife Specialist, National Park Service, Washington, D.C., described problems and mitigation of problems caused by urban

raccoons. Of primary interest was the attitude towards removal and relocation of problem raccoons.

Problems caused by raccoons can be reduced or avoided by some basic procedures. These deal with making an area less attractive to raccoons by reducing the opportunities for feeding and denning. Animals which have taken up residence in chimneys, attics or houses can be evicted by blocking up the access point(s) when the animal is out. However, care should be taken that females are not separated from nests containing young. Disturbance or repellants such as naphthalene or ammonia will often cause animals to relocate themselves. Raccoons often have a number of dens within their home range and readily move between them.

Dr. Hadidian stressed that both removal and/or relocation should be viewed as final and drastic measures in dealing with problem raccoons. This conclusion was primarily based on work done by the Rabies Unit, OMNR.

In 1986, the Rabies Unit relocated 24 radio-tagged raccoons to study their subsequent survival and movements. Animals were moved 25-45 km north of the original captures site in Toronto, Ontario. Following release, extensive exploratory movements were undertaken by raccoons, covering distances of 2-7 km/night. Home ranges for raccoons varied from 39-72 km² and far exceeded areas utilized by raccoons in urban environments. Mortality of the raccoons approached 50% in the first three months. A further 25% of the raccoons were of a condition which indicated that they would likely not survive the winter.

This work indicated that relocation of raccoons may result in transfer of rabies, distemper and other infectious diseases into previously "clean" areas. As well low survival of raccoons call into question the humaneness of relocating animals. Another potential problem of relocating raccoons is the transfer of a problem animals from one area to another. A animal that is a problem in one place will likely be as much a problem in another.

"Relocation of city raccoons", 1989, R.C. Rosatte and C.D. MacInnes ; presented at the Great Plains Wildlife Damage Control Conference, Fort Collins, Colorado, April 17-20, is available from the Rabies Reporter. Another useful publication, "Pocket guide to the humane control of wildlife in cities and towns" 1990, edited by Guy Hodge, produced by the Humane Society of the United States, is available for \$4.00 (US) for the Humane Society of the United States, 2100 L St., NW, Washington, DC 20037, USA..

Notes on the Zoonosis Reports

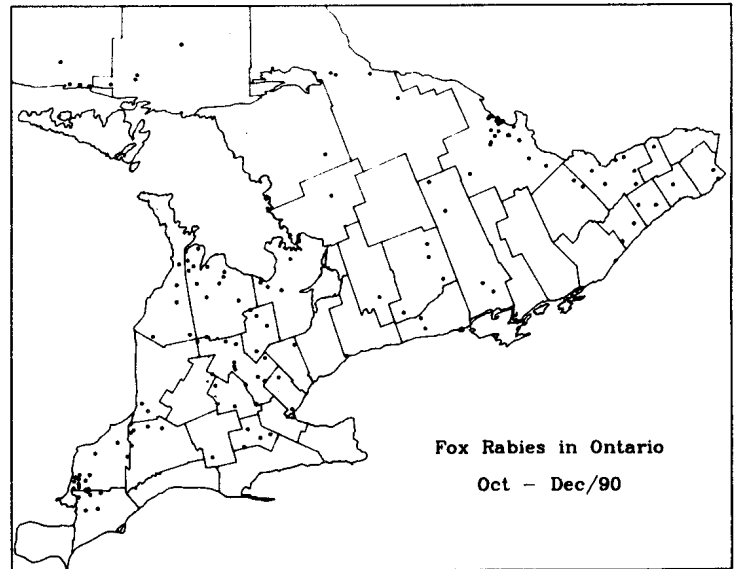
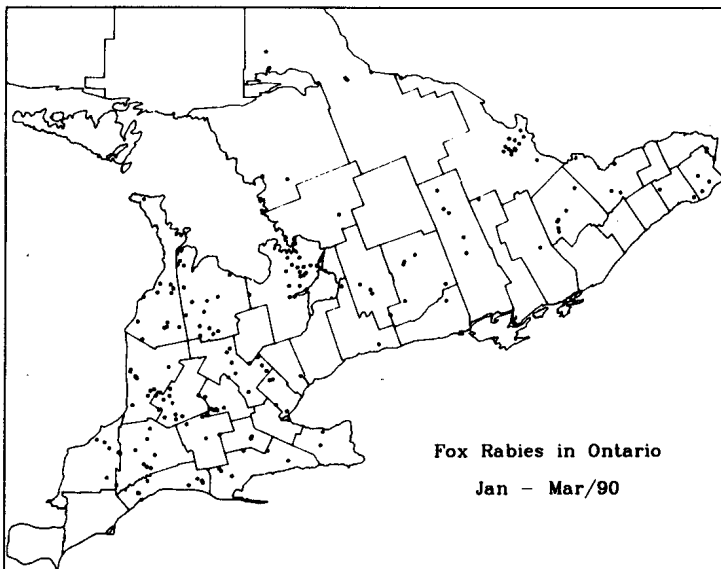
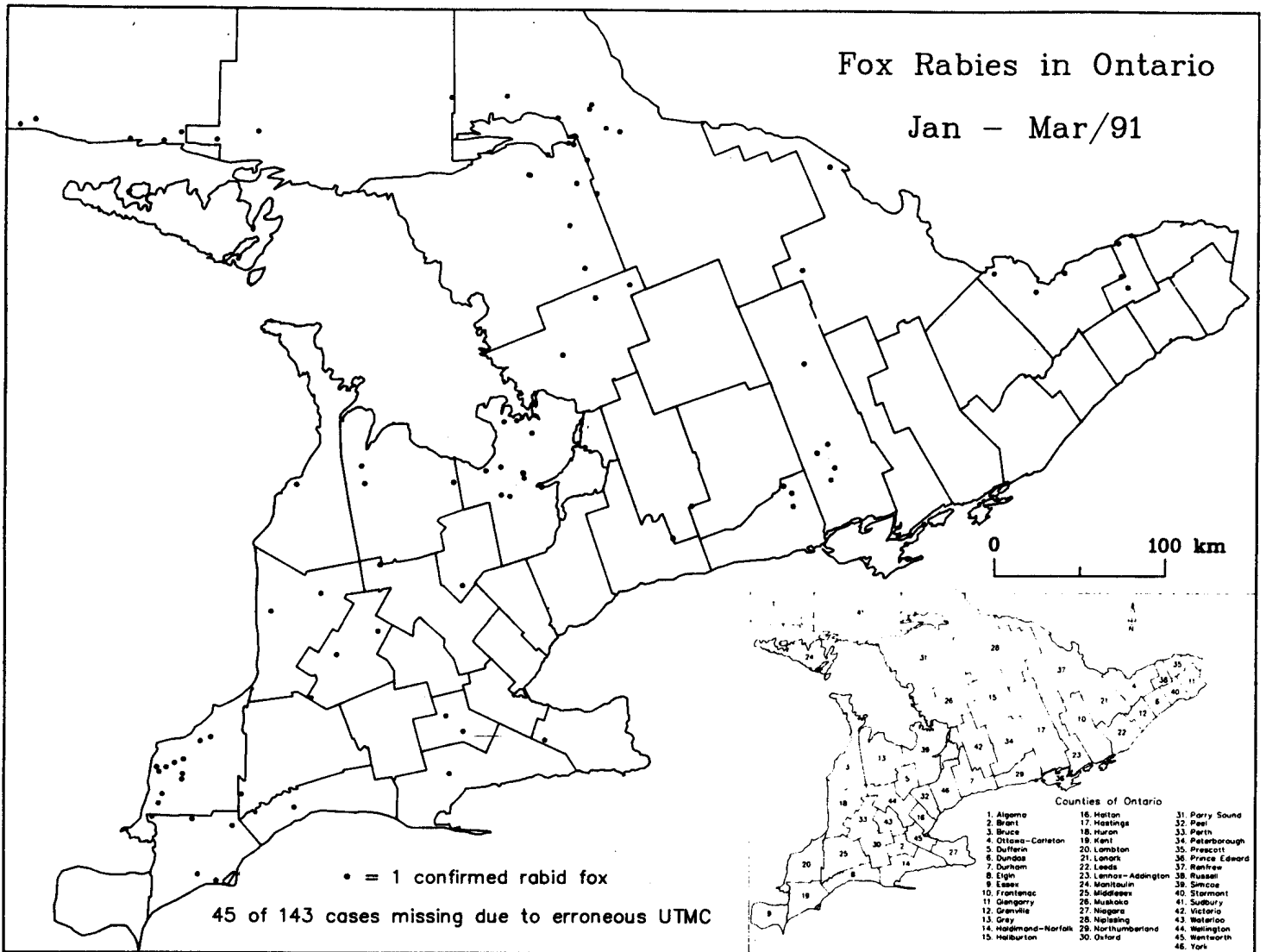
Beginning this issue, the zoonosis reports will no longer contain clinical rabies cases. In an attempt to standardize reporting of rabies cases, they are being compiled directly from the Agriculture Canada Rabies database which contains only cases which pass through the Agriculture Canada laboratory procedure. The Rabies Reporter will attempt to produce periodic tabulations of the number of clinical rabies cases.

Also, geographic breakdowns of rabies cases in the Metropolitan Toronto and surrounding area will only be done on the basis of UTMC coordinates. We apologize for any inconvenience this may cause.

Our attempts to develop a Northern Ontario rabies database and include northern rabies cases in the Zoonosis reports are continuing.

Preliminary Results of the 1990-1991 Baiting Season

Preliminary results of the 1990-1991 baiting season in Eastern Ontario. A total of 1133 foxes were collected from trappers and hunters in the eastern Ontario area between 1 November 1990 and 1 April 1991. Samples were taken from each animal to determine if the animal had eaten a bait, if the animal had devel-



An Interesting UTM Quirk

In the initial issue of the Rabies Reporter (May 1990) we addressed some of the problems found in the locational coding of specimens submitted to Agriculture Canada for rabies testing. These UTM problems were mainly incorrect identification and coding of map sheet numbers. Further investigation has revealed significant errors are also occurring in the coordinate portion of the UTM. Fifty-one percent of errors in fox cases for the first quarter of 1991 represent coordinate errors.

Again, the UTM, as read from the NTS 1:50,000 map series consists of two parts - the map sheet number, and the easting/northing coordinate pair. In Ag-Can's computer system, if the map sheet is correct for the District Office listed, the eastings and northings are automatically

accepted into the database. There is no further checking performed.

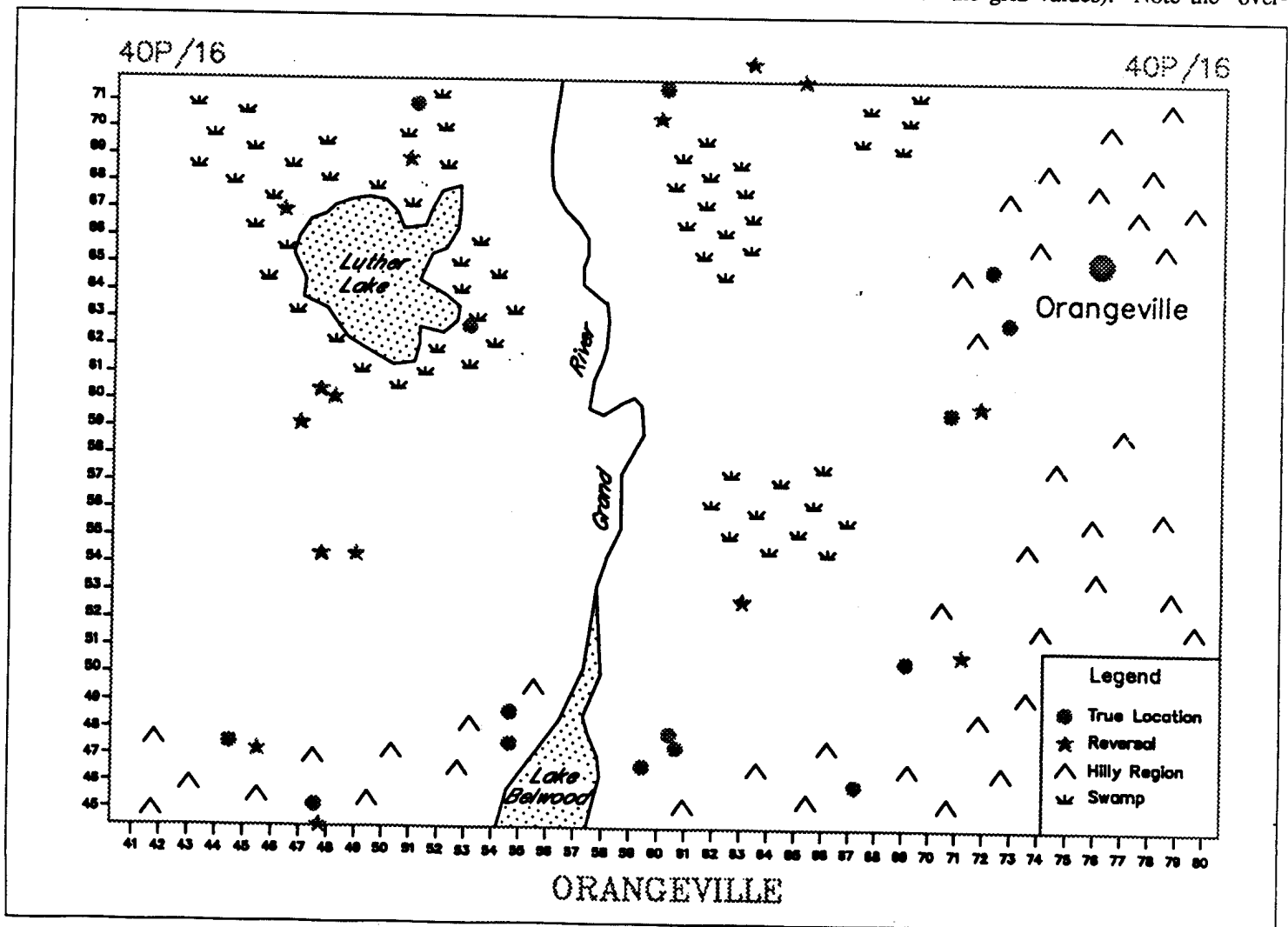
In the Department of Geography at Queen's University a crosscheck of easting/northing coordinate and map sheet number, however, is performed in the process of mapping the rabies cases. This check has revealed coordinates accepted into AgCan's database that are actually invalid for the map sheet listed - that is the coordinate listed does not fall on the map sheet specified. Such cases are errors and cannot be corrected or mapped.

Furthermore, some cases were rejected because they were reversals - that is the northing value was listed first in the coordinate pair, followed by the easting, rather than the other way around. Reversals are errors. Most would also be rejected in the mapping process, (as the easting/northing coordinate would not be

valid for the map sheet) and, thus, would not be included in the map.

Some reversals, however, could be accepted in the mapping process due to the overlapping of ranges of the easting and northing values on some map sheets. These cases cannot be identified as reversals or errors as in their reversed form they are also valid locations on the given map sheet. The figure below shows an example of such a situation. It represents an actual Ontario map sheet. The cases involved are actual rabies cases and as a demonstration we have reversed them to illustrate the problem.

Figure 1 shows map sheet number 040P16. The easting grid ranges, approximately, from 41 to 80 and the northing from 45 to 80 (remembering that the third value of the easting and northing is an estimate in tenths of the distance between the grid values). Note the "over-



Animal Rabies Report: January to March 1991

Animal Rabies Report: January to March 1991

Animal Type County or Area	Fox			Skunk			Other Wildlife			Dog			Cat			Livestock			Total		
	#	Cumulative		#	Cumulative		#	Cumulative		#	Cumulative		#	Cumulative		#	Cumulative		#	Cumulative	
		91	90		91	90		91	90		91	90		91	90		91	90		91	90
Eastern																					
Stormont	1	1	2	0	0	4	0	0	1	0	0	0	0	0	1	0	0	1	1	1	9
Dundas	0	0	2	0	0	3	0	0	0	0	0	0	2	2	0	1	1	1	3	3	6
Glengarry	0	0	5	0	0	1	0	0	0	0	0	0	0	0	0	0	0	4	0	0	10
Prescott	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1	1
Russell	5	5	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	5	5	1
Carleton	5	5	3	2	2	2	1	1	2	1	1	3	1	1	0	3	3	0	13	13	10
Renfrew	3	3	22	5	5	0	0	0	0	0	0	0	2	2	0	2	2	2	12	12	24
Lanark	0	0	6	0	0	1	0	0	0	0	0	0	0	0	0	0	0	3	0	0	10
Grenville	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Leeds	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Frontenac	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
Lennox-Addington	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Central																					
Hastings	6	6	3	2	2	2	0	0	0	0	0	1	0	0	0	0	0	1	8	8	7
Prince Edward	5	5	0	1	1	0	1	1	0	0	0	0	1	1	0	1	1	0	9	9	0
Northumberland	3	3	2	1	1	2	0	0	0	0	0	0	0	0	1	1	1	2	5	5	7
Victoria	1	1	3	1	1	5	0	1	0	0	0	0	0	0	0	0	0	0	2	2	9
Haliburton	3	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	2
Peterborough	1	1	5	2	2	2	0	0	0	0	0	0	0	0	1	0	0	3	3	3	11
Durham	1	1	3	1	1	5	0	0	0	1	1	0	0	0	0	0	0	0	3	3	8
York Region	0	0	1	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	1
Scarborough																					
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	12	12	25	4	4	3	0	0	1	1	1	1	0	0	0	8	8	0	25	35	30

Animal Rabies Report: January to March 1991

[illegible]

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Animal Type	Fox			Skunk			Other Wildlife			Dog			Cat			Livestock			Total		
County or Area	#	Cumulative		#	Cumulative		#	Cumulative		#	Cumulative		#	Cumulative		#	Cumulative		#	Cumulative	
		91	90		91	90		91	90		91	90		91	90		91	90		91	90
Northern (continued)																					
Thunder Bay																			0	0	0
Rainy River																			0	0	0
Kenora																			0	0	0
Subtotals																					
Eastern	14	14	42	8	8	12	2	2	3	1	1	3	5	5	1	6	6	11	36	36	72
Central	32	32	44	14	14	19	1	1	1	2	2	1	1	1	2	10	10	6	60	60	73
Western	22	22	68	41	41	16	0	0	2	2	2	1	2	2	5	25	25	27	92	92	119
Southern	28	28	44	10	10	11	0	0	0	2	2	7	6	6	8	22	22	14	68	68	84
Northern	46	46	27	6	6	5	3	3	1	1	1	0	0	0	0	0	0	1	56	56	34
Totals	142	142	225	79	79	63	6	6	7	8	8	12	14	14	16	63	63	59	312	312	382

Clinically Diagnosed Cases Not Included

Livestock: 43 bovine, 3 equine, 17 ovine

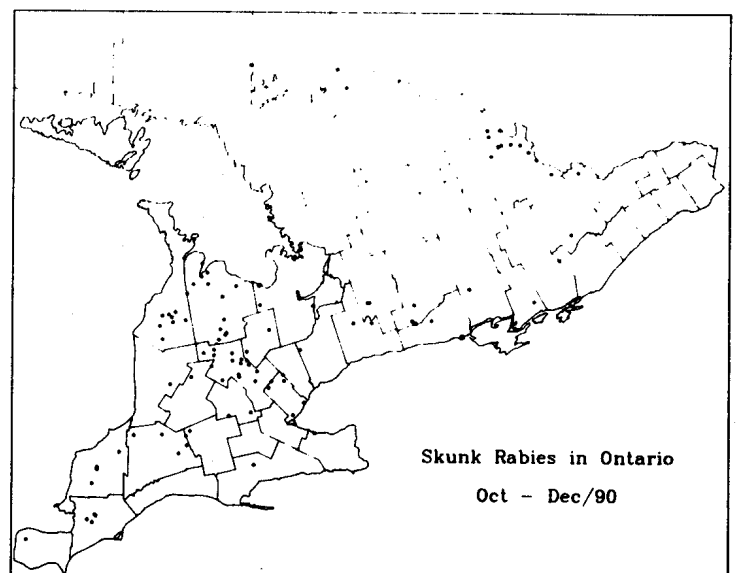
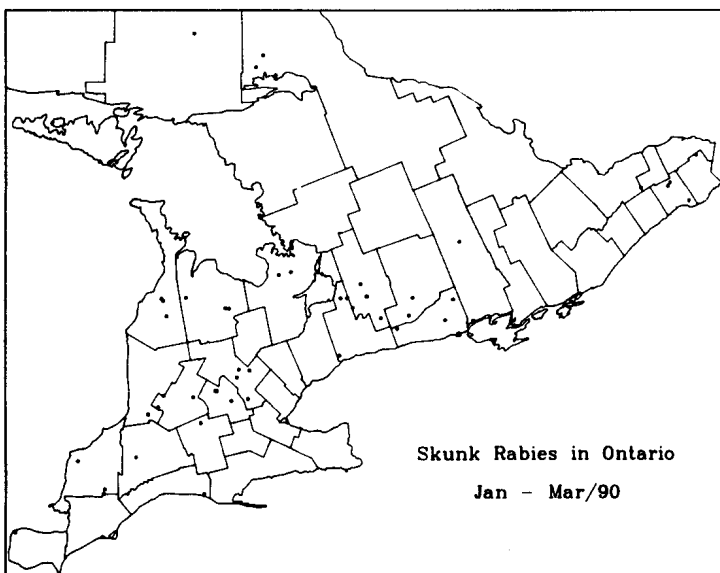
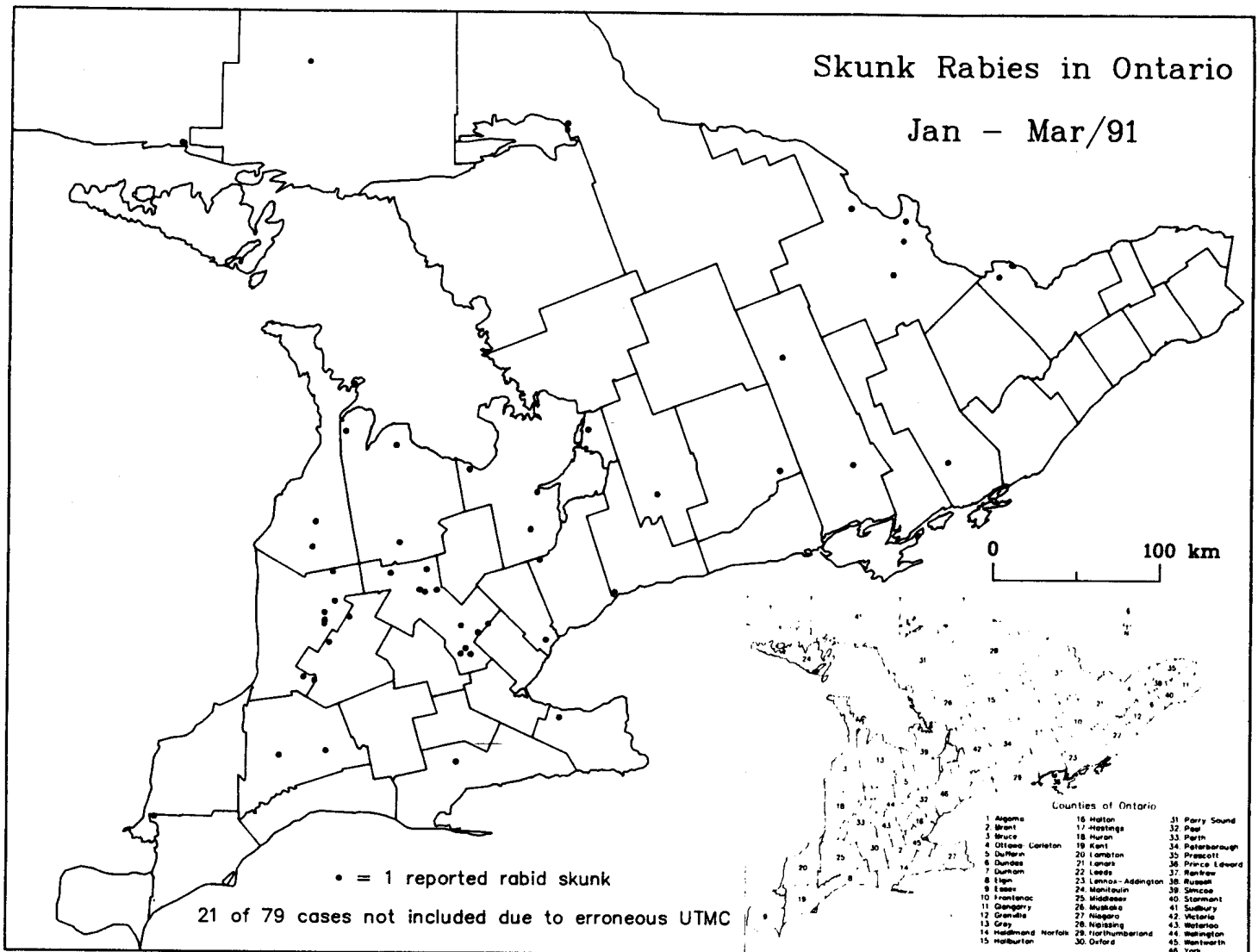
Other Wildlife: 1 coyote, 1 raccoon, 4 wolves

lap" in the ranges. Rabies cases with correct UTM's are noted by circles. When we reversed the easting and northing values the computer check did not detect these errors as the overlapping ranges caused each reversed coordinate pair to also be valid (found) on the map sheet. The pattern of rabies cases, consequently, is changed as indicated by the stars. Reversals on such map sheets cannot be detected.

Many analyses make use of incidence data and Figure 1 below readily demonstrates how habitat analyses could be hampered by erroneous location coding. A simplification of the landscape pattern of the 040P16 map sheet shows that a relationship may exist between rabies cases and hilly landscapes. The reversals, however, do not reflect the same relationship. In fact, they suggest an association with wetlands. An incorrect conclusion applied to control strategies may reduce their effectiveness.

Over the long run, if a spatial relationship exists between the incidence or reporting of a disease and variables such as landscape or population densities, it should become evident. At this time, however, the record of rabies locational information, at a high level of resolution (100m), only starts in 1988 when the UTM became the required locator. Thus, to avoid a loss of information or the recording of misinformation, it is important to record, accurately, the UTM on rabies submission forms.

(This article does not reflect on those District Offices responsible for map sheet 040P16. This map sheet was used as an example simply because it displayed, readily, the problem and implications). Caroline Fielding, Department of Geography, Queen's University, Kingston.



oped immunity to rabies (ie. if the animal had been vaccinated) or if the animal was rabid.

A total of 27 of 1133 foxes collected were determined to be rabid to be rabid.

In all, 66% of foxes collected from baited areas had eaten a bait. This is an increase of 18% from the results of the 1989-1990 trials in the same area. Fifty one percent of foxes which had eaten a bait had blood antibody levels determined necessary for vaccination. Twentyfour percent of foxes which did not have tetracycline in their teeth also were determined to be vaccinated. (It is thought that these animals contact the vaccine in the bait without eating sufficient tetracycline to be marked).

The overall vaccination rate for all foxes in Eastern Ontario baiting area was 48.5%, a significant increase from the 29.4% result in 1989-1990.

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.

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

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