

QUESTIONNAIRE REPORT

Heartworm in Dogs in Canada in 1978

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I. M c M I L L A N *

In December 1978, 3035 questionnaires were sent to federal, provincial, industrial, institutional and large and small animal practitioners throughout Canada. The number returned was 779 (26% response). There were a few additional questionnaires which were not used because of lack of addresses. The findings are presented in two tables and two figures. A few brief comments should be made.

1. The overall percent response for 1978 was similar to that for 1977 and this is most encouraging. However, in 1978 there was a 46% increase in response from mixed and small animal practices over that for 1977. The increase for 1978 was offset by a decrease in responses over that for 1977 from veterinarians whose activity did not include the examination of dogs and cats. Of the total responses, 91% indicated that they would complete the questionnaire if it was offered again. We propose, therefore, to continue the surveillance by an annual questionnaire while there appears to be continued interest.

2. Heartworm was diagnosed again in all provinces except Newfoundland and Prince Edward Island. The total number of cases in 1978 (319) was about a 20% reduction from that in 1977 (398 cases). However, about 32% of the respondents indicated an increase in number of cases over 1977. The most frequent cases were in the companion dog, primarily outdoors in rural areas and one to three years of age.

3. About 8000 more dogs were checked for microfilariae in 1978 when compared with 1977. However, the number of respondents who used blood tests as a technique in diagnosis decreased from 1977 and it is hoped that this is not significant. There appeared to be a continuation of the trend to use concentration techniques and less reliance on the smear in the examination of blood for microfilariae. Previously, we have encouraged the testing of dogs at least once a year and before the onset of the mosquito season.

4. Although there were fewer dogs diagnosed with heartworm in 1978, the proportion (65%) of infected dogs which had never left Canada continued to increase. There is no doubt that there are two enzootic regions in Canada — one in Manitoba around Winnipeg and the other in the lower peninsula area of southwestern Ontario. It would appear that in Ontario the Brantford-Simcoe focus is merging with the more heavily infected districts surrounding Wheatley, Windsor through Sarnia and Forest.

5. The number of cases of heartworm in cats and of *Dipetalonema reconditum* in dogs decreased in 1978. No case of *Dirofilaria immitis* was reported for other animals.

6. A large number of respondents (33%) did not see the results of the 1977 questionnaire, and a high proportion indicated that they would welcome information on heartworm and supported news releases on the subject to the public. Recently in Guelph, there was a very successful Heartworm Symposium and audio tapes should be available for distribution.

7. Your comments on the questionnaire were appreciated and we thank you for your support.

Acknowledgments

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TABLE I
RESULTS OF A QUESTIONNAIRE WHICH WAS SENT TO 3035 VETERINARIANS IN CANADA
IN DECEMBER 1978 AND COMPILED FROM 779 REPLIES

HEARTWORM IN CANADA — 1978

Name: _____ Address: _____

1. Does your professional activity include the examination of dogs and cats?
YES 621 NO 158
If YES go to Question 2. If NO go to Question 20.
2. Which category would fit your activity best?
Mixed practice 256 Small animal practice 320
Research Laboratory 19 Diagnostic Laboratory 19
Other (specify) 15
3. Did you diagnose heartworm in 1977? (note year)
YES 14% NO
4. Which technique(s) do you use for diagnosis? %
Clinical signs 39 Radiography 16 Blood Test 76 Necropsy 20
5. If blood tests are used check those done routinely. %
Knotts 27 Filter 53 Smear 22 Microcapillary tube 10
Submitted to a Diagnostic Lab 25
6. *Approximately* how many dogs were blood tested in 1978? 24,224
7. *Approximately* how many dogs were diagnosed with heartworm in 1978? 319
If None go to Question 16.
8. If heartworm was diagnosed in 1977 are the number of cases for 1978 an
Increase 32% Decrease 8% Similar 40%
9. *Approximately* how many cases in 1978 had clinical signs of heartworm disease. 112
10. Circle the month(s) you diagnose most heartworm cases in dogs: %

Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
0	1	0	11	14	21	27	11	6	8	0	1
11. In 1978 how many cases had the following histories?
Six months or more prior to diagnosis was outside of Canada 55 (17%)
Six months or more prior to diagnosis was in another Province 10 (3%)
Never left the Province or Canada 206 (65%)
Movement Unknown 48 (15%)
12. Use numbers 1, 2, 3 and give frequency (most frequent = 1) for the domicile of dogs with heartworm in 1978.
City 2 Suburban 2 Rural 1
13. Use numbers 1, 2, 3, 4 and give frequency (most frequent = 1) for the ages of dogs with heartworm in 1978. Less than 1 year 4 1-3 years 1
Greater than 3 years 2 Age unknown 3
14. Use numbers 1, 2 and give frequency (most frequent = 1) for the following classification of dogs with heartworm in 1978.
Primarily indoors 2 Primarily outdoors 1
15. Use numbers 1, 2, 3, 4 and give frequency (most frequent = 1) for the following classification of dogs with heartworm in 1978.
Companion dog 1 Show dog 4 Hunting dog 2 Farm dog 3
16. Do you recommend to your clients a preventive program for your area?
YES 14% NO
17. *Approximately* how many cases of *Dipetalonema reconditum* did you diagnose in 1978? 44
18. *Approximately* how many cases of *D. immitis* in cats did you diagnose in 1978. 6
19. *Approximately* how many cases of *D. immitis* in other animals. If so specify type and number. 0
20. Would you be interested in the results of this questionnaire? % YES 91 NO 6
21. Would you be interested in information on heartworm? % YES 86 NO 8
22. Would news releases on heartworm be helpful to the public? % YES 77 NO 11

23. Did you respond to the 1977 heartworm questionnaire? %	YES 63	NO 25
24. Did you see the results of the 1977 questionnaire? %	YES 60	NO 33
25. Would you respond to the questionnaire if it was offered again? %	YES 91	NO 2

TABLE II
AREAS WITH TWO OR MORE CASES OF DIAGNOSES OF HEARTWORM IN DOGS IN 1978

Area	Number of Cases	
	Had Been Outside Canada or Movement Unknown	Never Left Canada
Surrey, British Columbia	2	5
Edmonton, Alberta	0	2
Morden, Manitoba	0	3
St. Norbert, Manitoba	0	2
Selkirk, Manitoba	2	28
Winnipeg, Manitoba	2	8
Brantford, Ontario	6	1
Chatham, Ontario	3	0
Delhi, Ontario	1	2
Essex, Ontario	9	5
Forest, Ontario	1	1
Guelph, Ontario	2	0
Hamilton, Ontario	4	0
Leamington, Ontario	2	0
London, Ontario	0	6
Oshawa, Ontario	2	0
Ottawa, Ontario	1	1
Port Elgin, Ontario	10	0
Sarnia, Ontario	1	5
Simcoe, Ontario	3	0
Stratford, Ontario	2	0
Whitby, Ontario	4	5
Windsor, Ontario	26	130
St. Stephen, New Brunswick	0	12

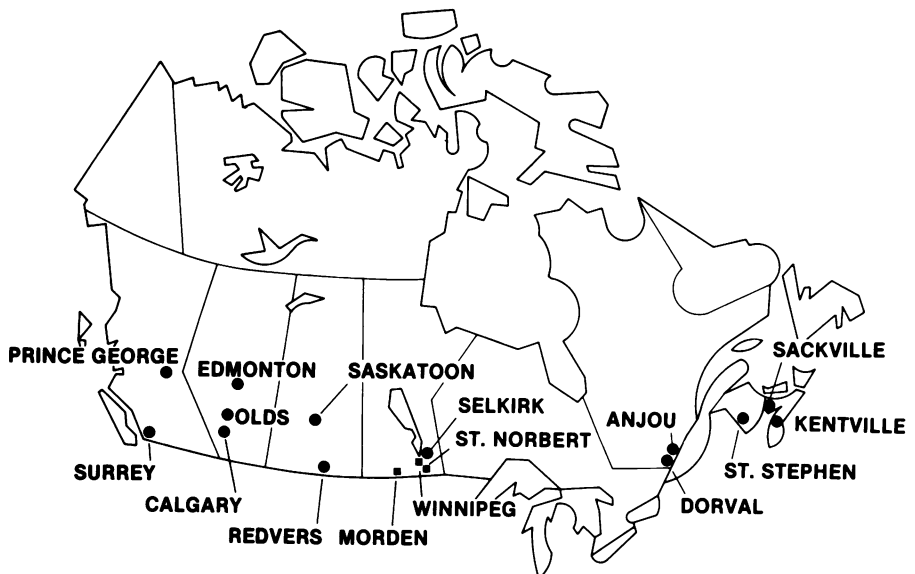


FIGURE 1. Areas with diagnoses of heartworm in Canada in 1978.

- Areas with dogs which had been outside of Canada previously and presumed infected before returning or with dogs whose movements were unknown.
- Areas with dogs some of which had never left Canada and were infected in Canada.

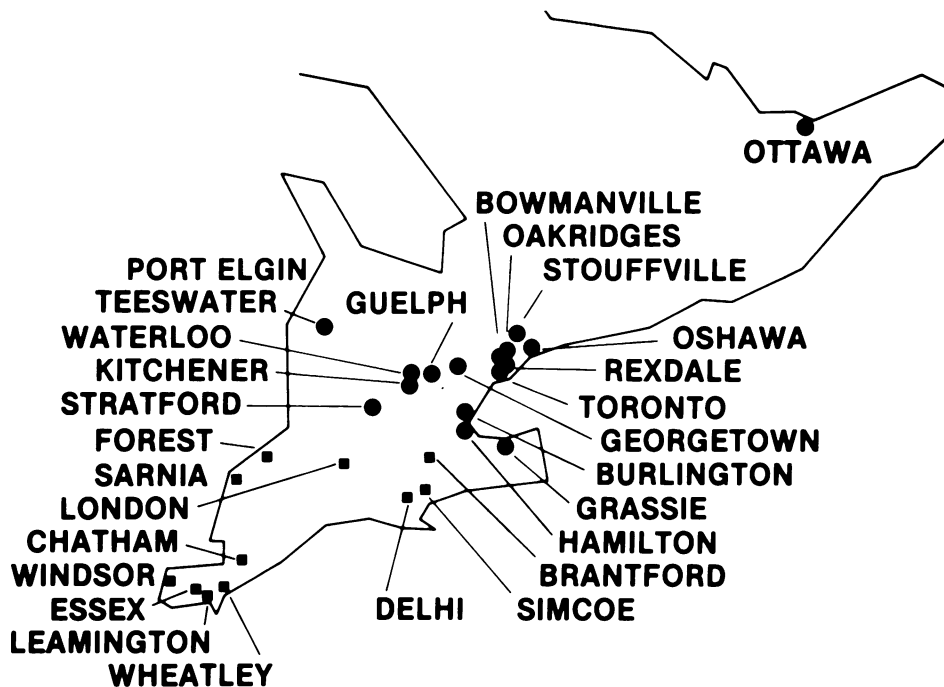


FIGURE 2. Areas with diagnoses of heartworm in dogs in Ontario in 1978.

- Areas with dogs which had been outside of Canada previously and presumed infected before returning or with dogs whose movements were unknown.
- Areas with dogs some of which had never left Canada and were infected in Canada.

BOOK REVIEW

Rabies: the Facts You Need to Know. G.N. Henderson and Kay White. Published by General Publishing Co., Limited, Don Mills, Ontario. 1978. 145 pages. Price \$13.95.

Written by a veterinary surgeon and a journalist, this publication is aimed primarily at reinforcing the British Government's "rabies awareness" campaign, the goal of which is to keep that country rabies-free.

Although not a text per se, it contains several chapters on the disease, its history, an account of rabies in the 19th and 20th centuries. However, while noting the veterinary profession's support of the current campaign, the book appears to be intended primarily for emphasis of the dangers of the disease and the education of pet owners and the general public. To this end the publishers provide a somewhat sensationalistic dust jacket proclaiming "Your Pet Could Kill!"

One of the most interesting chapters deals with rather ingenious smuggling methods.

The British public appears to be aware of the desirability of keeping rabies out of that island, not only from a health point of view but from the aspect of the threat of increased taxes if rabies control became necessary. They seem eager to report any suspicious incidents to authorities and readily, even eagerly, inform on would-be animal smugglers. Fines for conviction are enormous: in several cases fines of £1000 have been levelled, with threat of imprisonment for default of payment.

The authors report that John Hillaby, in his book "Journey Through Love" quotes a yachtsman contemplating smuggling as fearing the massive fines, adding: "The man who told me something about landing anaesthetised dogs considered it safer to ship contraceptives to Ireland".

"Britain will have no tolerance for animal smugglers, whether they are motivated by greed, or by affection for their pets, for with extraordinary unanimity, we mean to Keep Rabies Out", the authors declare.

Hopefully, this publication will reinforce this determined resolve. *H.C. Rowsell.*