

HALIFAX FIELD NATURALISTS NEWSLETTER

c/o Nova Scotia Museum
1747 Summer Street
Halifax, Nova Scotia
B3H 3A6

OCTOBER - DECEMBER 1979

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NUMBER: 22

Meetings are held on the first Thursday of every month, at 8.00 p.m. in the Auditorium on the ground level of the Nova Scotia Museum, 1747 Summer Street, Halifax.

Field Excursions are held at least once a month.

Membership is open to anyone interested in the natural history of Nova Scotia. Membership is available at any meeting or by writing to - Membership, Halifax Field Naturalists, c/o the Nova Scotia Museum. Individual membership is five dollars yearly; family membership is seven dollars. Members receive the Newsletter and note of all excursions and special programs.

Directors for 1979-80:

President	Joe Harvey
Vice-President	Anne Greene
Membership Secretary	Marjorie Willison
Treasurer	Pat Cunningham
Directors	Mike Burke Nancy Davis Erick Greene Linda Morris

Newsletter Anne Greene
Mike Burke
Doris Butters

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HFN is a member organization of the Canadian Nature Federation.

HFN is incorporated under the Nova Scotia Societies Act.

reports

HALIFAX CITY TREE SURVEY - RESULTS -

At a meeting 5 June 1979, Halifax City Council heard presentations from a variety of people on the subject of the spraying of the street trees of the city with insecticide. The brief history of the subject is that the trees had been sprayed in early summer for a number of years using a large air-blast sprayer but that this programme had been discontinued a few years ago after some citizens protested (see HFN Newsletter No.18, Nov.-Dec., 1978). The June Council meeting was asked to consider the matter anew since City Field staff felt that by not spraying there was a danger that the trees would become weakened and a request had been put to Council to allow spraying to be carried out in 1979.

After hearing arguments from David Patriquin, Ken Neil and Susan Mayo (Susan representing Ecology Action Centre) against the spraying and Mr. Ben Scallion representing City Field staff in favour, Council voted against allowing spraying in 1979, but asked that the Dalhousie University Biology Department conduct a survey of the trees and report back in the autumn. Well, winter succeeded autumn and it was not until the Christmas break that time was found to write this report.

As a result of Council's request David Patriquin and myself decided that a complete survey of the City trees, unfinanced, was beyond the scope of two people, but that this was just the sort of community natural history for which HFN was founded. A single page leaflet was hence sent out in the summer with the usual flyer of events to over 200 members. The leaflet contained a guide to the identification of the common street trees and a table to score how many of each species on a street were healthy (Class "A"), had some damage (Class "B") or were badly affected by insects (Class "C"). People were asked to survey the trees on their street or elsewhere and return the form.

A total of eleven people did so but the great majority of the streets were surveyed by either David Patriquin or myself.

RESULTS -

Thirty-nine streets or portions of streets were surveyed resulting in a total of 2588 trees being scored. An attempt was made to keep a balance between the North and South ends of the city and to include older neighbourhoods (e.g. Old South End) as well as streets built in the last 30 years. The West of the city was not included appreciably nor were the suburbs such as Fairview or Spryfield. Had these latter been included it might have increased the maple total somewhat. Oak Street, with solid oak planting (a nice idea) was deliberately omitted lest it over-emphasise the proportion of oaks in the city.

The Table of Results shows some interesting figures and points out unequivocally where the problem lies.

MAPLES -

Fifty per cent (50%) of all the trees in the city are maples of one sort or another. However, of the five maples identified in the streets, norway maple makes up 47% of all trees, the remaining maples (sycamore, silver, sugar and red) constitute only 3% of the city trees. Of the total maples, 95% were judged to be perfectly healthy 'Class A', 4% showed some leaf damage and less than 1% were distinctly unhealthy (11 out of 1274). This shows that the most abundant tree in the city is norway maple and that it is a vigorous and healthy species. The policy of City Field staff over the past 30 years of planting predominantly norway maple is thus handsomely vindicated (there is, however, a proviso later).

TABLE OF RESULTS

Species	No. and % in 'Class A' - (healthy leaves)	No. and % in 'Class B' - (some damage)	No. and % in 'Class C' - (unhealthy)	Total %
Norway maple	1163 (95.4)	46 (3.7)	10 (0.8)	1219 (47)
Sugar maple (?)	9 (90)	1 (10)	0 (0)	10 (0.4)
Silver maple	22 (91.7)	1 (4.2)	1 (4.2)	24 (0.9)
Sycamore maple	14 (93)	1 (6.7)	0 (0)	15 (0.6)
Red maple	5 (83)	1 (16.7)	0 (0)	6 (0.2)
MAPLE totals	1213 (95.2)	50 (3.9)	11 (0.9)	1274 (49.2)
Elms	194 (24.2)	401 (50.0)	208 (26.0)	803 (31.0)
Linden	285 (85.1)	36 (10.8)	14 (4.2)	335 (13.0)
Oak	36 (100.0)	0	0	36 (1.4)
Mountain Ash	20 (45.5)	18 (41.0)	6 (15.6)	44 (1.7)
Ash	11 (45.8)	10 (41.7)	3 (12.5)	24 (0.9)
Horse chestnut	8 (100.0)	0	0	8 (0.3)
Hawthorne	13 (100.0)	0	0	13 (0.5)
Paper birch	10 (41.7)	12 (50.0)	2 (8.3)	24 (0.9)
Poplar	10 (52.6)	6 (31.6)	3 (15.8)	19 (0.7)
Crab apple	4 (100.0)	0	0	4 (0.2)
Willow	3 (100.0)	0	0	3 (0.1)
Pine	1 (100.0)	0	0	1 (0.04)
Totals	1808 (69.9)	533 (20.6)	247 (9.5)	<u>2588</u>



This means that we probably have english elm, Ulmus procera; wych elm, U. glabra and probably other of the elms and hybrids grown in Europe in addition to our native Ulmus americana, which is so characteristic of the richer soils along streams in our various valleys and in the agricultural towns of the Maritimes. These elms are distinguished one from the other chiefly by characteristics of the fruits; whether they are round or oval, large or small, hairy or glabrous, with the seed central or to one side. The fruits are found only in early summer since elms flower before the leaves open and the fruit, which looks like small rounded scales about 1 cm. diameter, is soon dropped. (Maybe some HFN member could make a collection in 1980).. The leaf survey did not get underway until the fruit had been shed.

Ignorant as we are about the species present it does seem likely that the most susceptible one was the one with larger leaves than the rest; presumably wych elm. This is an elm which sets abundant fertile seed which germinate in neglected gardens and odd corners and provides most of the self-sown trees in the city. Particular localities examined included some along the railway on Beaufort Drive opposite the end of Regina, and on the bank by the sidewalk on Robie Street between St. Francis and Gorsebrook Schools. These saplings had a large proportion of their leaves turned brown and crinkly by early summer. In contrast, the planted elms in the boulevard on Robie in the same region were some of the more healthy looking specimens in the city and were obviously different from the elms on South Park Street by the School for the Blind which were turned brown.

Recovery of the affected trees was also recorded over the summer. On attacked trees the initial branchlets bearing leaves put out in spring had practically all the leaves attacked by leaf miner and hollowed out, turning brown and crinkly and causing the leaves to drop off. This is the stage which particularly upsets people and

ELMS -

The next most common group of trees are the various species of elm, 31% of all trees. Considering elms alone, 50% were considered slightly damaged, 26% heavily damaged and only 24% reasonably healthy. That makes 76% of elms in 'Classes B' plus 'C' with something wrong with the leaves (mainly elm leaf miner damage).

This year we were watching the elms closely and it became obvious that different degrees of susceptibility to leaf miner were operating. In some streets trees with healthy leaves were growing adjacent to trees which looked very healthy indeed. It was obvious that the trees differed in their resistance to attack by leaf miner and that this was due to the elms belonging to a different species. It would be nice at this point to say which elm species were resistant and which susceptible but the elms in Halifax are peculiarly difficult to identify because, being formerly better connected to Britain than to Upper Canada, we must have imported a great deal of nursery stock from Britain.

