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[See table of contents](#)

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OF BUTTERFLY NETS AND BEETLE BOTTLES:
THE ENTOMOLOGICAL SOCIETY OF CANADA, 1863-1960

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The Entomological Society of Canada (ESC), founded in 1863, is Canada's oldest national and specialized scientific society. Over its 120 years of activity, the ESC has been the subject of several historical studies, most of which were written for commemorative purposes by Society members. While such studies provide valuable factual information about the Society's affairs, they are incomplete narratives. Furthermore, they do not offer any in-depth historical analysis of the Society because their authors did not address themselves to issues or themes of current interest to historians of Canadian science.¹ In an attempt to supplement these existing studies, this discussion will present a more detailed narrative of the Society's early affairs; it will also focus on relationships and actions that significantly affected the development of the Society. Specifically, such issues as the Society's status (amateur/professional), its geographical influence (local/national/international), membership, sources of funds, intended audience and so on will be examined.² However, any attempt to classify the ESC -- especially during its early decades -- into convenient categories such as 'local society' or 'professional organization' should be done with caution, for the Society often acted simultaneously as both a local and national, and as an amateur and professional body.

The discussion outlines the pursuit of entomology previous to the ESC's founding in 1863, and then covers the Society's activities in some detail until 1906, by which time the ESC assumed a position that can be considered professional in intent, structure and organization. The period until 1960 is also considered briefly, by which date the Society officially assumed national status. The activities of the London, Ontario, members of the Society form the basis for much of this analysis, since this group assumed the bulk of the responsibility for the Society's affairs at large. As will become evident, two men acted as guiding lights for the Society. One of these, the Reverend Charles J.S. Bethune, was active in the pursuit of entomology from well before the Society's inception in 1863, until his retirement as Chairman of the Department of Entomology and Zoology at the Ontario Agricultural College in 1920. Even after retirement he continued as Editor Emeritus of the Society's journal until his death in 1932. The other stalwart Society member, William Saunders, was also active in the organization's affairs for many years following its formation.

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The founding of the ESC in 1863, although it marked the initiation of a new era of Canadian entomology, also marked the culmination of an earlier one as at least a decade before this date, the pursuit of entomology had not been neglected by Canadians. In 1853 the *Canadian Journal*, the organ of the Canadian Institute (founded in 1849), published several descriptive entomological articles. The *Journal*, while being a record of the proceedings of the Institute, also claimed to be a 'repertory of industry, science, and art' and thus functioned as a general scientific journal.³ Furthermore, during this early period it was under the editorship of Henry Y. Hind, Professor of Chemistry in the University of Trinity College, who had an interest in entomology and took first prize in a government-sponsored competition related to that science. This award was offered in 1856 by the Bureau of Agriculture for Upper and Lower Canada, which called for essays on the

. . . origin, nature and habits, - and the history of the progress from time to time, - and the cause of the progress, - of the Weevil, Hessian-fly, Midge and other such insects as have made ravages on wheat crops in Canada; and on such diseases as the wheat crops have been subject to, and on the best means of evading or guarding against them. ⁴

Although this government gesture could be construed as an important stimulus for entomological study, it perhaps should be put into perspective. As Charles J.S. Bethune ironically remarked,

The Department of Agriculture, however, cannot be said to have shown much zeal or liberality in so serious a crisis. Though it was acknowledged that the wheat crops in Canada West were damaged in 1856 alone, the Department expended the munificent sum of \$320 in prizes and a few hundred more in printing the best of the essays, and that was all! Nothing more seems to have been done, and the circulation of Hind's essay appears to have been thought enough for the extermination of the worst insect pests that have ever been known in this country⁵

Despite Bethune's pessimism, the distribution of the essays could have acted as an incentive to some, for in 1857 a series of articles with such titles as 'The Distribution of Insects,' 'Instructions for Collecting and Preserving Insects,' and 'Insects injuring crops in the vicinity of Montreal,' appeared in *The Canadian Naturalist and Geologist*, a journal published by the Natural History Society of Montreal. This medium became an important one for entomologists; both Bethune and William Saunders, a pharmacist in London, used it to communicate news of their captures as well as other pertinent information to their colleagues.⁶

Perhaps the most important role that the *Canadian Naturalist* played in the development of the ESC, however, was its

publication of a list of entomologists in Canada which was prepared by Bethune, assisted by Saunders.⁷ The original purpose of this list was to acquaint collectors of different parts of the country with each other's location, thereby enabling them to trade specimens of local species. Examination of Bethune's published list reveals that of the thirty-six people named, nine were from Canada East and included Léon Provancher and Cornelius Krieghoff, as well as other religious, military and medical men; the remaining twenty-seven from Canada West were predominantly from the London-Hamilton-Toronto region. Of those mentioned, only Henry Croft, Professor of Chemistry and Experimental Philosophy, and the Reverend William Hincks, Professor of Natural History, both of University College, Toronto, possessed formal scientific training and held full-time academic appointments. Thus, they may be considered to be the only 'professional' scientists listed.

The response to initial enquiries was so encouraging that Bethune felt that a club for the advancement of entomology ought to be formed, and suggested that those interested should meet at the Provincial Agricultural Association's annual exhibition to be held in Toronto in 1862. Accordingly, on 26 September of that year, nine 'ardent votaries' of entomology met at Professor Croft's Toronto residence with the intent of forming an entomological club. Owing to the small number present, no steps to formalize a society were taken; however, those present did decide upon objects of their contemplated society. These were:

the preparation of as complete a collection as possible of Canadian insects, to be kept in some central place for general information and reference;

the charge of a depository of duplicate specimens contributed by Entomologists for distribution amongst its members;

the holding of meetings from time to time for mutual information and the advancement of science throughout the country at large.

The rest of the meeting was devoted to the examination and convivial discussion of the various insect collections that each gentleman had brought.⁸

The formal founding of the ESC occurred on 16 April 1863 in the meeting rooms of the Canadian Institute in Toronto. Although invitations had been sent to interested parties, again only nine attended this meeting; however, another six gentlemen sent letters of apology and further, pledged to do all in their power to support the fledgling organization. Hence, those assembled resolved to form the Entomological Society of Canada, an organization open to 'all students and lovers of Entomology, who shall express their desire to join it ...' with Professor Croft as President, William Saunders as Secretary-Treasurer and James Hubbert as Curator. As before, the meeting concluded with examination and friendly discussion of the assembled entomological collections.⁹ By the close of

the year the ESC had met twice in the Institute's rooms and had attracted a membership of thirty-six. Similarly, the Society's library grew as volumes accumulated, as did its cabinet which now included more than 425 different species of insects.¹⁰

The pursuit of entomology in Canada at this time may be viewed in the Victorian tradition of natural history, as those who studied insects did so mainly as an appreciation of nature and the intrinsic beauty of the specimens. Only as a secondary motive did the notion of the applied aspect of entomology figure as a justification for such studies. Nonetheless, as entomology developed in Canada, the applied aspect of the discipline increased in importance. For example, at the second annual general meeting of the ESC, several committees were struck to study the various insect classes, especially those insects injurious to vegetation and the works of man. Furthermore, this utilitarian notion was underscored by a discussion which considered using the journal *Canada Farmer* as a 'suitable medium for collecting and circulating information on the insect tribes, either injurious or beneficial to man, their habits, and the best means of counteracting and preventing the ravages of destructive species.' Yet another applied aspect of the ESC was one other committee consisting of Croft, Saunders and Hubbert, who were to research and report on the feasibility of using silk made by Canadian silk-producing moths.¹¹

Also in 1864 the ESC formed two branches, one in Québec and the other in London, thus increasing its total membership to forty-eight distributed as follows: twelve in Québec, fifteen in London and twenty-one in the parent society in Toronto.¹² Thus, the ESC fulfilled its desire to act as a national organization by allowing the establishment of chapters of the Society in localities other than Toronto. The Québec group met in the rooms of the Literary and Historical Society, and it too maintained a cabinet of insect species. In common with the parent body, this branch of the Society also wished to pursue practical entomology, for at its first annual general meeting on 5 January 1865 its Council decided to publish short articles in both French and English language newspapers on insects injurious to agriculture.¹³

Details of the early activities of the London branch show that the order of the day was subsistence: revenue was limited to membership fees, and expenses were primarily for cork and pins.¹⁴ Although subscriptions did increase (twelve in 1864, nineteen in 1866), this delicate balance between revenue and expenses persisted. Like the parent and Québec groups, the London branch did not possess its own meeting facilities; thus during the period of 1864 to 1867, meetings were held in the homes of various members. However, from April 1867 until July 1872, the Society had permission to use rooms free of charge in London's city hall.¹⁵

Analysis of these early years of the ESC reveals its modest nature. Despite the fact that membership was non-restrictive and open to all those who were interested in entomology, the Society enlisted only about fifty members. Moreover, any

possible collective action by the Society was reduced by its fragmented nature: most members belonged to a smaller local sub-group of the parent body, which itself may be considered to have been a local branch in Toronto. The ESC was to some extent an ephemeral organization, then, for it lacked permanent headquarters for both the parent Society and its branches. All meetings were conducted in rooms at the discretion of some other larger, more established organization or members' homes. Similarly, it relied upon other established published journals to communicate members' activities. Finally, as the only source of monetary support was members' dues, at the rate of \$1.00 per year, the ESC also lacked a sound financial base.

Probably in an attempt to overcome some of these difficulties, the London branch of the Society mounted a public awareness programme. An article in the 9 April 1867 issue of the *London Free Press* advertised an evening of combined instruction and amusement which was to serve as an inducement for the public '... to take some interest in the proceedings of this, the only scientific society in London ...' More fully, the article informed its readers that

The importance of this branch of natural history is now well understood, and very beneficial results have already been reaped from the knowledge obtained of the habits of destructive insects ...

The Society has much pleasure in announcing to the citizens of London, that they will give a series of entertainments ... the members have procured from England, at considerable expense, the oxyhydrogen Microscope with dissolving view exhibiting entomological, Astronomical and other scientific subjects ...

A military string band will be in attendance. We believe the exhibition will be exceedingly interesting and instructive, and well deserving of the patronage of the public.¹⁶

Again, we see that the applied nature of entomology is stressed as a justification for the study of this 'branch of natural history.' Also, it is evident that the London members of the ESC were 'going all out' to attract the public's attention by offering what promised to be a most entertaining evening; clearly, during this period polite, Victorian Canadian society still was a major component of the ESC's audience. Judging by the reviews that appeared in subsequent issues of the London newspapers, the evenings had been most successful with William Saunders ably explaining the entomological illustrations and aiding 'materially in making the entertainment a success.'¹⁷ This event indicates the London group's progress, for in organizing such a display, it began to show confidence in its own public standing. Furthermore, these activities suggest, what later became evident, that Saunders was one of the central figures in the Society's development. On a more pragmatic plane, the account books show these entertainments netted approximately seventy dollars, and possibly five new members.

The confidence of the London branch may also be detected in the activities of the Society at large, as in this same year (1867) it approached the Canadian government to help finance an independent publication of the Society. Funds were denied, however, owing to the impending confederation proceedings.¹⁸

Despite this setback, a publication did appear in August of the following year, funded by voluntary contributions of Society members. The first issue of the *Canadian Entomologist* was a slim eight pages, with Bethune as editor and Saunders as the primary contributor. In his opening remarks, Bethune related the rationale for the journal:

For a long time the wielders of the Butterfly-net and Beetle-bottle in Canada have been longing for some medium of intercommunication - some mode of telling one another what they have taken, how and where they have taken it, and what they are in want of. This desire the Entomological Society purpose now to satisfy to some extent by the publication of the *Canadian Entomologist*.¹⁹

No matter how modest an undertaking an organization's journal may be, it must meet at least two requisites: material to publish and sufficient funds. Bethune was obviously aware of these limitations, for he begged 'all zealous Entomologists ... [to] ... come forward and assist the enterprise with at any rate their pens, if not always with their purses too!' The journal was to be general in character, relating national and international news of entomological matters, as well as publishing original papers in the field.

Specific items of interest in the first volume included a report of the annual general meeting of the Society held at London in July, 1868. Present at the meeting were the President, Professor Croft and four other Toronto residents, including Bethune and the young William Osler; the balance of the group consisted of nine members from London. Also at this meeting, ten American entomologists were nominated as honorary members of the Society. Moreover, in a review of the *American Entomologist*, a journal first published in September, 1868 (one month after the *Canadian Entomologist*), Bethune announced that the ESC would act as Canadian agent for the journal for 'the convenience of subscribers in Canada.' Reflected in these actions is the Society's desire to become recognized not only locally and nationally, but also internationally; thus the ESC was beginning to function at three levels of geographic influence.

In this issue Bethune, in a jocular mood, noted that the pursuit of entomology had become more acceptable in Canada as, he continued,

Time was when to be an entomologist was to render oneself a source of anxiety and care to one's friends, and an object of pity or derision to one's neighbours; but now, happily, people in general are becoming rather more enlightened, and do not think that a man

has a bee in his bonnet because he catches butterflies²⁰

That people should have adopted such a viewpoint becomes understandable in light of the following anecdote of one entomological adventure also related in this volume. E.B. Reed, a London member of the ESC, recounted that while walking in Toronto he captured a fine insect specimen. However, as he did not have a box with him, he trapped it in a roll of paper. Reed then explained:

Just as I got to Yonge Street, out got my friend, and it was not until after a long and exciting chase that I finally secured it in a door-way, much to the astonishment of the surrounding public, who evidently thought me an escaped lunatic, and did not seem one whit the wiser when I informed them of the name of my prize.²¹

On one hand this account demonstrates the geographic range and availability of specimens for study for the entomologist, and the enthusiasm and dedication with which he pursued his interest. On the other, it suggests that not all Canadians had become 'enlightened' on the study of entomology, as evidenced by their reactions to Reed's antics.

On a more serious note, it was also E.B. Reed who noted that entomology in London had 'lately obtained a start in a fair and fresh field.' Reed was referring to the action of the Reverend A. Sweatman, then Headmaster of London's Hellmuth College who had 'procured a cabinet for the school, and is giving every encouragement to the boys to take an interest in the science.'²² Moreover, a father of one of the pupils had offered two prizes for the best collection of specimens presented to the College. Thus, the circle of potential entomologists was widening.

Another example of the increasing scope of entomology in Canada and the ESC in particular is offered in a paper written by Bethune and read to the Nova Scotian Institute of Natural Science in February of 1869. (Bethune had become a corresponding member of this group in January of that year.) In his paper, Bethune commented that little had been written about the entomology of Nova Scotia, and hoped that his list of lepidoptera 'may prove a small contribution towards a complete and systematic history of the order to which they belong.' As a result of his studies, Bethune considered it of interest that

Regarded as a whole the species corresponded to a remarkable extent to those taken in the neighbourhood of Toronto, and other parts of the Province of Ontario; so much so that one would hardly have imagined that they came from so far distant, and in many respects, so different a locality as the Maritime Province of Nova Scotia. It is interesting to find -- if one may judge from so limited a collection -- that the insects of the whole Dominion present so much similarity in their specific forms.²³

Thus, through Bethune's personal efforts, the Entomological Society of Canada was indeed trying to live up to its name by studying the insects of the 'whole Dominion.'

15 July 1869 saw the final issue of the first volume of the *Canadian Entomologist*; concerning the progress of the journal, Bethune cautiously remarked

Of infantile dimensions, it has crawled along through the months of babyhood, at times putting forth a little more strength and marks of growth, until now it feels able to stand upon its feet and assert its intention of living and growing, even though it may but toddle along, for a little time longer. Of course with an increase of size, it will display an enlarged appetite, not only for scientific and literary contributions, but also for the baser, but by no means less essential, sustenance of dollars and cents.²⁴

Thus the first volume closed as it had opened, with a plea for material and money.

Publication of the *Canadian Entomologist* placed the Society on more stable ground as, for the year 1870, the Council of the Agricultural and Arts Association of Ontario appropriated four hundred dollars to the ESC on condition that it 1) continue to publish its journal; 2) furnish a report to the Council on insects injurious or beneficial to agriculture; and 3) prepare a small cabinet of insects illustrating the various orders, and place this at the disposal of the Council.²⁵ In compliance with one of these conditions, the Society prepared the *First Annual Report on the Noxious Insects of the Province of Ontario*. Respecting the others, Bethune, in the introduction to the *Report*, noted that the journal was being published as scheduled; however, the insect collection 'owing to the amount of time and labour required for its proper arrangements' had not been completed.

The sixty-page *Report* was a joint effort of Bethune, who wrote about insects affecting the apple; Saunders, who wrote on those of the grape; and Reed on the plum. The authors, realizing that the *Report*'s main audience probably consisted of non-scientific readers, took 'special pains' 'to present an illustration of almost every insect referred to.'²⁶ In all, thirty-eight moths, beetles, crickets, and other noxious insects were described. Bethune concluded his introduction with the following apology:

As these Reports have been prepared by persons who are much engaged in other occupations, and who only devote to the study of Entomology what little leisure they may be able to obtain, it is trusted that due indulgence will be accorded for any imperfections or omissions that may be apparent to the reader.²⁷

Such a state of affairs underscores the still non-professional status of the Society as reflected in even its foremost members:

Bethune was a master at Trinity College School in Port Hope; Saunders, a druggist in London; and Reed, a barrister, also in London.

The Society's fortunes continued to wax when, towards the end of 1870, the Hon John Carling, Commissioner of Agriculture for Ontario and a member of the London branch of the ESC, had the Agricultural and Arts Act amended, thereby allowing the Society to be incorporated as the 'Entomological Society of Ontario,' and to be granted a yearly sum of five hundred dollars;²⁸ this procedure was finalized on 11 May 1871.²⁹ In return for this support, the Society was to publish an annual report of insects that were injurious and beneficial to farm and garden. Hence, the price for financial security was a greater commitment to applied entomology, and the loss of a national image, as reflected in the Society's new title.

The year 1871 saw other changes for the Society: Bethune became its President, Saunders its Vice-President and Reed the Secretary-Treasurer. Furthermore, a new branch consisting of ten members was formed at Kingston. A decision was also made to publish the journal in London and to 'increase its size, and issue it in a much more attractive form, embellishing its pages with suitable illustrations.' Similarly, the Society decided to move its cabinet to London as no suitable curator could be found in Toronto.³⁰

Underscoring the Society's deeper commitment to applied or economic entomology, was Bethune's recognizing more fully not only those 'who delight in the study of the wonderfully varied forms, structure and habits of Insects,' but especially those 'who hate them with a deadly hate, who give them no quarter in any case, and who devote them all alike to execration and unsparing destruction.' Indeed, to cultivate a wider readership for the journal, particularly amongst horticulturalists and agriculturists, a thousand copies of the first issue of the third volume were printed and distributed free 'to all whose addresses we can ascertain and who are known to be interested in the subjects treated of in these pages.'³¹ This issue contained articles on 'The Plum Sphinx Moth,' 'Quebec Currant Worms,' 'Hints to Fruit Growers,' and in the next issue, one 'On the Larva of the Peach Borer.'

Perhaps as a result of this campaign, fifty-four members joined the Society, making a total membership of three hundred distributed as follows:³²

Ontario, general	70
London Branch	51
Kingston	15
	<hr/>
	136 in Ontario
Québec, Province	14
Nova Scotia	3
British Columbia	1
	<hr/>
	154 in Canada
United States	138
England	8
	<hr/>
	300 Members

These figures suggest that the Society was flourishing as an active professional organization; however, this impression is misleading, when one considers that membership included a free subscription to the *Canadian Entomologist*. Thus, those one hundred and sixty-four members -- over half of the Society's membership -- in the United States, England, British Columbia, Nova Scotia and Québec (its branch having ceased to exist), probably became members only to receive the journal, and were not active in the affairs of the Society in the same sense as those members in Ontario. Furthermore, of those who received the journal, there was dissension as to its contents. As Reed reported:

Some of our members have expressed an opinion that the *Entomologist* is too exclusively scientific, and that its pages have not been made sufficiently interesting to those amongst us who are at present only beginners in the study of science.³³

An attempt to rectify this problem, the Society included a series of articles on 'beginner's entomology' in later issues of the journal. This criticism that the *Canadian Entomologist* was 'too exclusively scientific' illustrates one of the many tensions that were developing within the Society. For although leading lights like Bethune and Saunders were not professionals *per se* -- they lacked both formal education in the discipline and earned their livelihoods in other pursuits -- they were fast accumulating knowledge and pursuing scientific activities that set them apart from the mere 'beginners' in entomology. This tension between proto-professional and amateur will become evident later.

There existed other unbalanced situations in the Society. One such was the relationship between the Society's headquarters in Toronto and the fact that it had become overshadowed by the particularly active London branch. Accordingly, in 1872 the parent body of the Society rented rooms in London, part of the costs of which were to be borne by the London branch.³⁴ Thus, the London group became responsible for the Society's books, insect collection, printing of the journal and also had two of the most knowledgeable and active members, Saunders and Reed. Not surprisingly, London succeeded Toronto as the new headquarters of the Society. Elsewhere, a new branch in Montréal replaced the now defunct Québec branch of the Society; this group held its first meeting in August, 1872, and by May of the following year had twelve members.³⁵

As noted, the domestic scientific activities of Saunders and Bethune far surpassed those of the other members, but in 1872, these gentlemen further increased their profiles when they attended the annual meeting of the American Association for the Advancement of Science in Iowa as representatives of the Entomological Society. Attendance at these meetings became an annual event for them, with both Saunders and Bethune acting in executive capacities for the entomological subsection of the American society.

Another example of the leadership of the London branch and, in particular, of William Saunders, was the preparation of a collection of native insects to be shown at the American Centennial Exhibition in Philadelphia in 1876. Discussion of this event is recorded in the 8 March 1875 minutes of the London branch in which that group heartily endorsed the idea and further resolved 'to do their best toward making the collection one worthy of the Society of which [they] form a part.'³⁶ Bethune further indicated the importance of this event in his presidential address of 1876, stating

You will all, I think, agree with us in the belief that it is a matter of great importance to the Society that it should be brought in this way before the notice of the world, and that it cannot but be of some benefit to the Dominion that its Natural History, as well as its industrial resources, should be fully exhibited To gather together a fitting collection of insects, and to prepare them for exhibition, is a task that will strain to the utmost all the resources of the Society. We have commenced the work relying upon the co-operation of you all, and now we trust that every one will help us by the loan of specimens and any other aid that can be afforded. The Society is committed to the task: let us see to it that there be no failure!³⁷

Thus, as the Society entered its thirteenth year, it was to make its formal world debut and face perhaps its greatest challenge.

Although many members of the Society at large did offer their services and collections, ultimately the burden of assembling the whole exhibit was assumed by the dedicated group of London members, with Saunders becoming chief overseer, and his house becoming the headquarters for the operation. One of Saunders' sons, William E., later recalled that during this period several entomologists stayed at his parents' house for 'many weeks' to assist in preparing the collection.³⁸ Primary consideration was given to the construction of display cases; necessary materials were imported from England as they were not available in Canada. Classification of the numerous specimens of insects which were sent from the various members followed. The resulting collection amounted to eighty-six cases, covering the orders of coleoptera, lepidoptera, hymenoptera, neuroptera, hemiptera, diptera and orthoptera.³⁹

By all accounts, the Society's effort was justified, for not only did visitors become aware of Canada's entomological endeavours, but also through the medium of the insect collection itself, they came to realize that Canada was not one vast frozen wasteland. Indeed, one contemporary New York newspaper described the exhibit as follows:

Every lover of nature, every admirer of beauty in form or colour who visits the Centennial Exposition can scarcely avoid being charmed with the display of Canadian insects, exhibited by the

enterprising Entomological Society of the Province of Ontario Many of the specimens are so large and so gorgeously coloured that they have the appearance of natives of some of the tropics rather than of the more northern Canada - a country which many are apt to imagine is a land of ice and snow

The collection must not, however, be regarded merely as a display of curious or beautiful objects; it possesses a very high scientific value as well ... there is given an excellent illustration of the progress of scientific zoology in Canada, and of the energy and skill of the members of the Canadian Entomological Society in particular.⁴⁰

This otherwise festive and successful event was marred, however, by the Exhibition commission's failure to register the Society's exhibit, thus making it ineligible for any prize. However, in recognition of the Society's efforts, the Canadian government awarded it a special silver medal.⁴¹ Upon its return to London, the collection was put on display to the general public in the Society's rooms, an event which attracted a '... large number of persons who took advantage of the opportunity [and who] appeared to have enjoyed the exhibition very much.'⁴²

During the following ten years Saunders was President of the Society, and Bethune was Editor of the *Entomologist*, while both maintained their regular full-time occupations. This decade also witnessed the dissolution of the London branch of the Society in 1882, with its assets becoming the property of the parent Society. The rationale to merge is not altogether clear; the minutes state only '... that under the present condition of affairs it is advisable that the London branch should suspend its operations.'⁴³ In all likelihood, that the London branch and the parent society were, for all intents and purposes, one and the same, probably prompted such action.

Saunders and Bethune continued to produce the annual publication pertaining to noxious and beneficial insects, and in 1883 Saunders wrote *Insects Injurious to Fruits*, '... one of the best manuals of the kind that has ever been published, and which has proved of inestimable service to the professional and amateur fruit growers'⁴⁴ In 1886, as a result of this publication and his contributions over the previous decades, Saunders became Director of the newly formed Experimental Farm at Ottawa, resulting in his 'withdrawing from active participation' in the Society's affairs.

Saunders' departure had a minimal effect on the publication of the Society's journal, it being in the capable hands of Bethune; and the impact at the active member level, that is, those who attended the meetings in London, was absorbed somewhat through the activities of one of the other senior members, E.B. Reed. However, when Reed left London to assume responsibility for the meteorological station at Victoria, BC in April 1890, the London members in the same month ratified a scheme to set up four subsections within the Society:

botanical, microscopical, geological and ornithological.⁴⁵

Such action further suggests that 'two camps' existed within the Society: the aspiring professionals such as Saunders and Reed, and those who were less rigorous in their approach to science, the 'enthusiasts.' To a great extent the formation of these four groups represents a retrogressive step for the Society as they signify a return to the Victorian pursuit of natural history, a notion that was becoming less fashionable by the late nineteenth century. Examination of the minutes of the four subsections tends to corroborate this interpretation, for the ornithologists were merely bird-watchers, the botanists admired flowers, the geologists talked about rocks, and the microscopists wondered at the beauty of diatoms (although this group was the most 'professional' in its activities). From 1890 until the Society's removal of its headquarters from London to Guelph, these groups remained non-progressive in their outlook. Typical of the calibre of the bulk of their activity is the following unedited excerpt from the minutes of one of the geological section's meetings which occurred in 1895:

Specimens from Scuce's quarry Pipe Line Road, limestone, a number of fossils Trolobites - in the conversation it was brought out that there being curled up some proved they were alive when inclosed also there being in some instances broken parts being found apart at some distance why they were so broken brought out by attrition or by animals. Age lower Silurian & into Cambrian & up to Devonian where they run out; their compound eye was thought would bring confusion. Locations for finding these fossils London Ont. was praps the best. 3 lobes was why they are called Trolobites.⁴⁶

It is instructive to compare these amateur, local activities with the Society's more professional counterpart, an issue of the *Canadian Entomologist* which also was published in 1895. Volume 27 consisted of 100 articles (358 pages) of which twenty-nine were from American contributors, three were from England, one from Germany, and thirteen from Canada; thus it was by now a truly international and well-respected journal. Again we see that the Society functioned at several levels simultaneously. Just as there was a tension between amateur and professional status, so too with geographic influence; on one hand, the Society's activities were intensely local, while on the other, it functioned at an international level.

Bethune's activities as Editor of the *Entomologist* had been second to his occupation as Headmaster of Trinity College School. However, in 1899 he retired from this position and moved to London to better maintain his association with the Society's journal. In 1906, at age 68, he assumed the Chair of Entomology and Zoology at the Ontario Agricultural College (OAC) in Guelph. It is therefore not surprising that Guelph should serve as the Society's headquarters, given Bethune's new position and the non-professional state of affairs in London. This action raised some opposition from a few London

members; however, their opposition was outweighed by those in favour of the move. London's hegemony in the entomological activity of Canada was over. As John Evans, then President of the Society noted, the College at Guelph offered

new, commodious and most desirable quarters, where they will be of inestimable value, not only to the students attending the college from year to year, but to all investigators of Economic Entomology, the College being the head centre, as it were, of that department in the Province, and where they will naturally congregate and look for assistance and inspiration.⁴⁷

The move to Guelph also marked the culmination of the Society's increasing specialization in applied entomology or 'Economic Entomology,' for, with the exception of those natural historians in London, it was matters pertaining to the insects that were beneficial or injurious to agriculture that received the bulk of the Society's attention. The Society and the OAC forged a symbiotic relationship; the Society possessed both an excellent specimen collection and a respectable library, while the College could provide suitable laboratory facilities, the resources of its existing library, storage space and meeting rooms, all at no charge. However, of greater importance to the Society, and to entomology in general, was the College's ability to offer '... an enthusiastic band of young men and women students.'⁴⁸ Furthermore, this group was being trained in related agricultural disciplines, even in entomology itself, at an accredited institution. Their instructors also now filled the administrative positions of the Society: along with Saunders' and Bethune's names are present those names of others who also shared the goal of professionalization and who now had the training and facilities to train others in the discipline. For example, in 1906 the Society's Vice-President was Tennyson D. Jarvis, BSA (Lecturer in Entomology and Zoology), and the Secretary was E.J. Zavitz, BSA (Lecturer in Forestry). Now that there existed this 'critical mass' of professionals, a milieu which could promote scholarly debate and criticism and a constant supply of bright young minds, the Entomological Society of Ontario could be said more than ever to have achieved the rank of a professional, scientific society. However, this new status, conferred upon the Society as a result of its new audience, meant that it all but severed its relations with the public-at-large; now that the Society was safely ensconced in the OAC, entomology became less the domain of 'ardent votaries' and 'lovers' of the discipline, and more the domain of the laboratory specialist.

With the removal of the Society's headquarters to Guelph, interest of the London members waned greatly. Indeed, in the 1908 membership list of eighty-one Ontario members, seven were from London as compared with twenty in Guelph (all of whom were faculty members of the OAC). Moreover, the entire geographic distribution of the membership had changed and was as follows:⁴⁹

Nova Scotia	4
Québec	57
Ontario	81
Manitoba	5
Saskatchewan	2
Alberta	2
British Columbia	31

As these provincial groups expanded, an anomalous circumstance arose with respect to their affiliation with the parent group, the Entomological Society of Ontario. For example, in 1921 the Nova Scotian branch of the Society itself became the Acadian Entomological Society, thus one provincial group was the umbrella organization for another, similar provincial group.⁵⁰ Similarly, on the west coast the British Columbia Entomological Society was a branch of the Entomological Society of Ontario. But awkward nomenclature was only a minor problem; more major was the question of financial support. As the Province of Ontario, through the Department of Agriculture, was a major source of revenue for the Society, in effect, funds of one province supported activities in another. Be that as it may, this relationship continued until 1949 when the Council of the Entomological Society of Ontario discussed whether to form a 'Canadian or National Entomological Society.' However, it was the opinion of the Council that to do so at that time 'would be a little premature.'⁵¹

The following year a new Council decided that a national society should be 'created without delay,' whose chief functions were:

- 1) to publish *The Canadian Entomologist* jointly with the Entomological Society of Ontario;
- 2) to serve as a national society and as the parent association of, or as the link between, the other entomological societies in Canada. It was stressed that each regional society would be autonomous, could publish its own publication or annual report, and would not lose its identity;
- 3) to encourage the organization of additional provincial or regional entomological societies in Canada;⁵²

This same Council also decided that the Entomological Society of Ontario would continue to operate, but as a regional society only. Furthermore, the extensive library that had been assembled since 1863 would remain in Guelph and be the property of the Ontario group, but it would be available to all members of the national body.

Accordingly, in 1951 a new Entomological Society of Canada was formed and published the *Canadian Entomologist* jointly with the Ontario society. The Editor of the January, 1951 issue of the journal noted that its publication marked 'an important event in Canadian entomology: the rebirth of a Canadian entomological society of a truly national character.'

Furthermore, reflecting upon the state of affairs, he wrote:

The reestablishment of a truly national entomological Society has, it is clear, been ardently desired by all Canadian entomologists. This has now been accomplished. But when we look back over the period of a long life-time to the early years of the Society, and consider what our predecessors accomplished with their scanty membership, their meagre technical resources, the limited time at their disposal and their inadequate means of transport, we cannot feel more than a very slight satisfaction with our own efforts.⁵³

The responsibility for joint publication of the journal continued for nine years when, in 1960, the national body assumed control over it; the Ontario group published its *Proceedings* with funds granted by the Ontario Ministry of Agriculture. Thus, finally, just short of a century after the original actions of Bethune and Saunders, their goal was achieved, as there now existed a truly and officially national, professional scientific society that published its own journal and had branches spanning the country.

Discussions of the development of scientific societies usually view them as growing from a strictly local and amateur venture to a professional organization of national, if not international, scope. In a very general sense this discussion of the ESC shows that this Society too followed this path, but such development was not as straightforward as previous studies of it have suggested. From the outset the ESC intended to act as a national group; however, initially it acted regionally and tried to draw support from the general public. As the Society developed, its focus shifted from natural history concerns to the more applied aspects of entomology with a concomitant change of its audience: the typical member was less and less the amateur 'ardent votary' of entomology *per se*, and more the specialized practitioner (for example, an agriculturalist or a horticulturalist) to whom a knowledge of entomology was fast becoming essential in order that he could pursue his livelihood. The existence of these two groups of entomologists created a tension within the Society, one which was not resolved until the latter group pre-empted the former.

The Society's re-orientation towards applied entomology may be seen as a response to the development of agriculture and horticulture in Ontario; however, that Government funds were made available to the Society -- thus making it financially secure for the first time -- in return for applied entomological publications must certainly be seen as an important factor in accounting for the new direction taken by the Society.

Perhaps the most significant influences in the Society's development were the contributions of Charles J.S. Bethune and William Saunders. On many occasions, the Society was Bethune and Saunders, as these men were responsible for the Society's founding, the publication of its journal, the *Canadian*

Entomologist (from 1868 until 1909 only Bethune and Saunders acted as editors) and many of its major events. Furthermore, in addition to their duties as editor, both Bethune and Saunders served in most of the executive capacities of the Society. In particular, Bethune's industry cannot be underestimated as an essential factor in the Society's development;⁵⁴ for over seventy years he acted as a driving and cohesive force. Thus, his contribution alone all but ensured that the Entomological Society of Canada would continue to function and study the insects of the 'whole Dominion.'

Acknowledgement

I would like to acknowledge the helpful suggestions of an anonymous referee of this journal.

NOTES

1. See, for example, A.W. Baker, 'A Short History of the Entomological Society of Ontario,' *Canadian Entomologist* 71 (1939), 14-20, and other articles in this Commemorative Number of the journal (hereinafter cited as CE) for the Society's 75th Anniversary. See also G.J. Spencer, 'A Century of Entomology in Canada,' CE 96 (1964), 33-59; G.P. Holland, 'Entomology in Canada,' in *Centennial of Entomology in Canada 1863-1963*, ed. Glenn B. Wiggins (Toronto, 1966), 7-13. One can also include W.W. Judd, *Early Naturalists and Natural History Societies of London, Ontario* (London, Ont., 1979).
2. For a more complete outline of such categories respecting scientific societies, see Margaret W. Rossiter, 'The Organization of Agricultural Improvement in the United States, 1785-1865,' in *The Pursuit of Knowledge in the Early American Republic*, ed. Alexandra Oleson and Sanborn C. Brown (Baltimore, 1976), 279-98 (especially 297).
3. W. Stewart Wallace, 'A Sketch of the History of the Royal Canadian Institute, 1849-1949,' in *The Royal Canadian Institute Centennial Volume 1849-1949* (Toronto, 1949), 138.
4. Charles J.S. Bethune, 'The Rise and Progress of Entomology in Canada,' in *Proceedings and Transactions of the Royal Society of Canada*, Second Series, IV (1898), Section IV, 158. Bethune also recounted that:

In those days there were no popular hand-books, no entomological works of any kind, in fact, that a young student in Canada could obtain; all descriptions of our insects were contained in expensive European works, or in the almost equally inaccessible transactions of American scientific societies. Many an hour did the writer spend in laboriously copying out descriptions and making rough drawings in the library of Parliament and that of the University of Toronto; the

books themselves it was impossible to procure except at a cost that was absolutely prohibitory. (159)

Such remarks underscore the difficulty in pursuing the study of science in Canada owing to the poor availability of reference material.

5. *Ibid.*, 158-9.
6. See, for example, Bethune's letter to the editor, *Canadian Naturalist and Geologist* 3 (1868), 320 (hereinafter cited as CNG); and W. Saunders, 'Note on a specimen' *ibid.*, 5 (1860), 199-201.
7. C.J.S. Bethune, 'List of Entomologists in Canada,' *ibid.*, 7 (1862), 199-201.
8. C.J.S. Bethune, 'Meeting of Entomologists,' *ibid.*, 396-9.
9. William Saunders, 'The Entomological Society of Canada,' *Canadian Journal* 8 (1863), 313-15 (hereinafter cited as CJ).
10. James Hubbert, 'The Entomological Society of Canada,' *ibid.*, 9 (1864), 68-9.
11. 'Entomological Society of Canada,' *ibid.*, 282-4.
12. C.J.S. Bethune, 'The Entomological Society of Canada,' *ibid.*, 10 (1865), 216-18.
13. 'Entomological Society of Canada - Quebec Branch,' CNG, N.S. 2 (1865), 57-60.
14. William W. Judd, ed., *Accounts and Minutes of the London Branch of the Entomological Society of Ontario (1864-1881)* (London, Ont.: London Public Library and Art Museum, Occasional Paper #20, 1975), 4ff.
15. *Ibid.*, 1.
16. 'The Entomological Society's Entertainment,' *London Free Press and Daily Western Advertiser*, 9 April 1867, 3 (hereinafter cited as LFP).
17. 'The Opening Entertainment,' *ibid.*, 11 April 1867, 3: 'The Entertainment Last Night,' *ibid.*, 12 April 1867, 3.
18. William Saunders, 'Annual Address of the President,' in *14th Annual Report of the Entomological Society of Ontario* (Toronto, 1883), 9.
19. C.J.S. Bethune, 'Introductory,' CE 1 (1868-69), 1.
20. Review of *American Entomologist*, *ibid.*, 14.
21. E.B. Reed, 'Captures,' *ibid.*, 107-8.

22. E.B. Reed, 'London Branch,' *ibid.*, 108.
23. C.J.S. Bethune, 'Nova Scotian Lepidoptera,' in *Proceedings of the Nova Scotian Institute of Natural Science*, Vol. II, part II (1869), 78.
24. C.J.S. Bethune, 'Our New Volume,' CE 1 (1868-69), 103.
25. Saunders, 'Annual Address,' 10.
26. C.J.S. Bethune, William Saunders and E.B. Reed, *First Annual Report on the Noxious Insects of the Province of Ontario*, in *Annual Reports 1870-75 Fruit Growers' Association and Entomological Society* (Toronto, 1871), 66.
27. *Ibid.*, 67.
28. Saunders, 'Annual Address,' 10.
29. C.J.S. Bethune, William Saunders and E.B. Reed, *Report of the Entomological Society of Ontario, for the Year 1871*, in *Annual Reports 1870-75*, 3. It is interesting to compare this restricting of geographic/political jurisdiction (that is, the Society's change of title from Canada to Ontario) with what might be considered the Society's American counterpart. Whereas the Entomological Society of Canada developed into one of Ontario alone, the Entomological Society of Philadelphia (organized in 1859) was reorganized to become the American Entomological Society in 1867. An issue of the *Practical Entomologist* (Vol. II, March 1867), a monthly bulletin published by the American Entomological Society, reported that:

At a meeting of the Entomological Society of Philadelphia, held March 11, 1867, the following By-Law was unanimously adopted:-

'Article 1, Chapter 1. - The Society shall be called the AMERICAN ENTOMOLOGICAL SOCIETY, and is instituted for the improvement and advancement of Entomological Science, and the investigation of the character and habits of Insects.'

The above change has been made for two reasons, 1st. That the Society has to rely on the country at large for support, and in order to receive this support, the erroneous idea which is in many minds, namely, that the Society is a *local* institution, must be displaced. 2nd. It is believed that this change in the name will extend the reputation and claims of the Society, and awaken new and more extended exertions for the permanent support of the only Entomological Society in the United States.

Now that the Society has adopted a national name, it is hoped that ALL the readers of the

Practical Entomologist who recognize the usefulness of an Entomological Society, will rally to its support (p. 61)

Thus, the Canadian experience was one of consolidation, while the American was of expansion.

30. Bethune *et al.*, *Report for the Year 1871*, 3-4.
31. C.J.S. Bethune, 'Our Third Volume,' CE 3 (1871), 1-2.
32. C.J.S. Bethune, William Saunders and E.B. Reed, *Report of the Entomological Society of Ontario, 1872*, in *Annual Reports 1870-75*, 2-3.
33. Bethune *et al.*, *Report, 1872*, 3.
34. *Ibid.*, 3.
35. William Couper, 'First Annual Report of the Council of the Montreal Branch of the Entomological Society of Ontario,' CE 6 (1874), 134.
36. Judd, *Minutes of the London Branch*, 35.
37. C.J.S. Bethune, 'Annual Address,' CE 8 (1876), 2.
38. William E. Saunders, 'Entomological Memories,' *ibid.*, 71 (1939), 20.
39. William Saunders in Parliament of the Province of Ontario, *Sessional Papers*, VII, Part I (1876-76), No. 1, 336.
40. 'At the Centennial - The Exhibit of the Entomological Society of Ontario, Canada,' *New York Daily Graphic*, 26 September 1876, quoted in Saunders, *Sessional Papers*, 337.
41. Judd, *Minutes of the London Branch*, 37.
42. *Ibid.*, 38.
43. *Ibid.*, 49.
44. Bethund, 'Rise and Progress,' 163.
45. William W. Judd, ed., *Minutes of the Entomological Society of Ontario While Headquartered in London, Ontario, 1872-1906* (London, Ont.: London Public Libraries, Occasional Paper #21, 1976), 21.
46. William W. Judd, ed., *Minutes of the Geological Section of the Entomological Society of Ontario (1890-1901)* (London, Ont.: London Public Library and Art Museum, Occasional Paper #12, 1971), 28.
47. John Evans, 'Annual Address of the President,' in *37th Annual Report of the Entomological Society of Ontario 1906* (Toronto, 1907), 21-2.

48. 'Evening Session,' in *37th Annual Report*, 20.
49. 'Canadian Members of the Entomological Society,' in *Thirty-Ninth Annual Report of the Entomological Society of Ontario 1908*, in *Annual Reports of the Fruit Growers' Association: Fruit Branch and Entomological Society of Ontario 1908* (Toronto, 1909), 7-8.
50. 'Report of the Nova Scotia Branch,' in *Fifty-Second Annual Report of the Entomological Society of Ontario 1921* (Toronto, 1922), 9.
51. 'Report of Council, 1949,' in *Eightieth Annual Report of the Entomological Society of Ontario 1949* (Toronto, 1950), 6.
52. 'Report of Council, 1950,' in *Eighty-first Annual Report of the Entomological Society of Ontario 1950* (Toronto, 1951), 6.
53. 'The Entomological Society of Canada,' CE 83 (1951), 28.
54. I feel it is worth underscoring this point, for at least one historian considers '... the industry of a few outstanding gentlemen' as a factor in insuring 'the steady progress' of a scientific society to be a 'facile' assumption. Although Bethune may be an exceptional case, owing to his longevity, his efforts must not be discounted as a significant internal factor in the development of the ESC. See James M. Hobbins, 'Shaping a Provincial Learned Society: The Early History of the Albany Institute,' in Oleson and Brown, *op. cit.*, 117-59.