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Compendium 1960-2010



LAURENTIAN
FORESTRY
CENTRE



50 YEARS



Building the forests of tomorrow

Canada



Construction of the main building (1957-1959).



Greenhouses and the service building.



The insectarium.

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 Construire la forêt de demain ».



The Laurentian Forest Research Centre in 1960
 (it was first named the Forest Entomology and Pathology Laboratory).

Preface



To mark the 50th anniversary of the Laurentian Forestry Centre (LFC) of the Canadian Forest Service of Natural Resources Canada, I am very proud to present you with this collection of personal accounts by the seven Directors General that preceded my mandate as Director General of the LFC.

This collection is in fact a reprint of the historical publication produced at the time of the 25th anniversary of the LFC, to which we have added remarks by the two Directors General who have worked here since then. The original texts are reproduced in full to show our faithfulness to the history that was shared with us 25 years ago. You will find acronyms, technical terms and expressions that were used at the time, as well as information on the very first activities of the federal government in the area of forestry in Quebec. It also includes little

known historical facts, which allow us to understand and better appreciate what the LFC represented in Quebec and in Canada.

Reading this document will allow you to become familiar with the personal accounts of the Directors General. Some of them preferred to recount the important events that took place during their mandates, while others chose to tell anecdotes and to share their impressions concerning certain professional situations.

I hope that this publication will become part of the legacy left to you by the LFC and that it will make you proud to belong to or to have been associated with this establishment, which has such a rich history and promising future.

Together, let's continue building the forests of tomorrow.

Jacinthe Leclerc

Director General



Culture analysis of Dutch elm disease using a spectrometer.

Straw Hat Depot (Chapeau-de-Paille) field station in 1963.



Determining the extent of decay in a freshly cut tree.



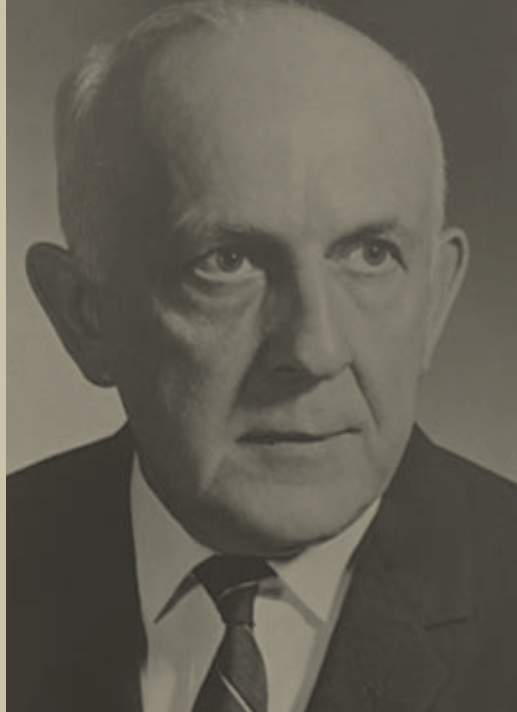
Data collection in the field in the Gaspé region.



Aerial spraying against the spruce budworm.

Lionel Daviault

1960-1970



The Laurentian Forest Research Centre (LFRC) was founded when the Quebec regional office of the Dominion Forestry Service of the Department of Northern Affairs and National Resources joined with the Forest Biology Division of the federal Department of Agriculture.

The first institution, under the leadership of André Linteau, had existed since the beginning of 1930, with headquarters at the Valcartier Forest Station near Quebec City. Since 1949, however, some of its scientists had been housed, on a provisional and precarious basis, in a few rented quarters at the Faculty of Forestry and Geodesy of Laval University. The other organization had been established only in 1952 following a decision by Dr. K.W. Neatby, Research Director of the federal Department of Agriculture, and strongly seconded by the Office for the Extinction of Insects Harmful to Forests. The federal Department of Reconstruction and Supplies created this organization in 1945. Its nine members represented the provinces, the federal government, and the forest industry. The main objective was to find a way to stop, or at least to minimize, damages caused to forests by insect pests, and mostly by the well known spruce budworm which accounted for severe wood losses in eastern Canada for several years. Before being dismantled in 1953, the Office had successfully promoted the creation of several new laboratories and reorganized and updated those already in existence.

In the beginning, the laboratory included only five scientists and seven technicians under two divisions. One division was tree pathology headed by

René Pomerleau; the other, studies in entomology, under my direction. At first, both divisions were independent, but after a few months, I was appointed Director General. Mr. Hector Richmond, then Director of the Forest Biology Laboratory of the same department in Victoria, B.C. was transferred to Quebec to help out with administration and liaison with the forest industry. A few years later he resigned and became a consultant entomologist, one of the first positions of its kind in Canada, for a major forest company on the Pacific coast. In passing, I would like to mention that he published an interesting book entitled "*Forever Green*" wherein he recalls his memories of the budding Canadian forest sector and the important concerns of forest entomology.

All laboratory personnel were also in cramped quarters near the regional forest office in the Faculty of Forestry and Geodesy. During the first few years, the laboratory budget was very modest. There was no room to splurge and, at times, it made management appear like old man Scrooge. Fortunately, the financial situation gradually improved, personnel were added and by the end of 1958, there were 22 scientists in various disciplines, 24 permanent assistants, 22 to 25 temporary aides during the summer, and 10 other people in administration and maintenance.



With the addition of personnel and programs, the first premises became much too small. In 1954, this problem was partly solved with the construction of an insectary which included several offices and rooms for insect breeding and collections. Also added was a pavilion housing some small laboratories and two adjoining hothouses for an all-season supply of plants for various experiments. However, the housing problem was solved for both the forestry unit and the biology laboratories, only when a large complex was built close to the university campus. This particular site had been selected because of the advantages of having several disciplines gathered in one place and some well supplied libraries nearby.

Close by, a small nursery was supplied with various forest species to serve for outdoor experiments. Lastly, a 10 hectare lot located at St. Étienne, 12 km from Quebec, was to serve for some specific tests and experiments requiring more space.


On a bright and sunny day, February 13, 1960, the complex was inaugurated jointly by the Honourable Alvin Hamilton, Minister of Northern Affairs and National Resources and the Honourable Douglas Harkness, federal Minister of Agriculture, in the presence of Monsignor Alphonse-Marie Parent - Dean of Laval University - and several university, government, and forest industry representatives. The next day was open house for the general public, who had been invited to visit the various facilities of the new research centre.

Both divisions remained separate. Dr. André Linteau was in charge of budget and programs for the forestry division, while I was responsible for the forest laboratory division. In April 1965, this situation changed with the regrouping of both divisions to form the Laurentian Forest Research Centre (LFRC) and my appointment as Director of the Quebec region of the Department of Forests, with full administration responsibilities for the various activities and supervision of entomology studies. André Linteau became associate director, a post he held until his death in 1966 when Robert Blais succeeded him.

The Centre then included 30 professionals, 14 entomologists, 8 foresters, several technicians, and during summer months, a varying number of students. The figure does not include administration personnel and maintenance staff.

During the same period, and in addition to the Valcartier Forest Station, some permanent seasonal stations were established - one for studying insect diseases in St. David de Falardeau near Chicoutimi, Saguenay-Lac-Saint-Jean, which was later transferred to Chute-aux-Galets, not far from the first site. Another was set up at Clova, Abitibi, for studying the jackpine sawfly before finally being installed on a permanent basis at Lac Normand, in the St. Maurice basin. As well, several temporary seasonal stations were used for the duration of some specific projects. In particular, those at Lac Chevalier, Chibougamau, Métis, New Richmond, and Caseault.

With these new facilities, the Centre soon expanded. Staffing the various available positions soon became a problem because of the small number of Quebec university graduates then interested in scientific research. Because of the lack of scientific personnel needed to carry out urgent assignments, these openings were filled by scientists from other research centres of the same department, or personnel was recruited from abroad. In spite of these first hardships, the Centre finally succeeded in hiring several newly graduated candidates from our universities, mostly from the Faculty of Forestry and Geodesy of Laval University. Several of them have found in our midst some valuable material for their theses and some of these are quite noteworthy. During this period, an increasingly close collaboration was established with the various faculties of Laval University, which proved to be quite rewarding. Several of our scientists were invited to give a series of conferences on subjects pertaining to their specific fields. No less fruitful were the relations with other research centres of the same discipline or related ones, both in Canada and abroad. The same is true of our liaison with companies and groups interested directly or indirectly in the forestry problems of our province. At periodical meetings, each scientist came to voice the results of his research, so as to inform the scientific and auxiliary personnel of the studies carried out in his respective field. These meetings, although of uneven interest, were generally well attended and followed by some interesting discussions. In a sense, they were most useful to young scientists as it trained them in learning how to discuss and defend their work and viewpoints in public.



Each year, usually in the spring, each scientist prepared a detailed program of work he intended to pursue during the coming season. He then presented and defended his project before a committee of the three divisional directors. A summary of all projects submitted was then sent to the research director in Ottawa who then came to or sent his representatives to the Centre in order to discuss each project with the scientists concerned.

During this same period, there was the departure of several scientists who, for the most part, went to teach in other provincial universities or even abroad. Some of them now occupy very important positions. Others simply asked to be transferred to other laboratories of the same department or accepted positions in provincial governments.

The exceptional competence of some of our scientists attracted foreign scientists who came here to pursue research in specialized fields. In particular, we think of one forest pathologist from the Forest Botanical Institute of Munich, West Germany, and an engineer from rural Engineering, Water, and Forests from France. Also, at least three of our scientists went to Europe to gather information indispensable to pursue their work.

In this short text, it is impossible to detail or even give a simple list of all the studies carried out by scientists of our three divisions during the period covered here. However, I would like to mention that as early as June 1952, the entomology division had already undertaken 34 projects and the pathology division 17. Therefore, I will only give an overview of the studies and will recall some details still fresh in my memory concerning some of the most important projects for the preservation of Quebec's forests.

The first problem we had to tackle on receiving a request from the authorities of the Quebec Department of Lands and Forests was the fight against the spruce budworm. Preliminary work took place at the forest reserve of Caseault owned by the International Paper Company and located at Lac Causapsal in the Lower St. Lawrence region. At this site, approximately 3 200 ha of coniferous trees were treated with DDT by aerial spraying in 1952 and again in 1953. Conclusive results led authorities of the provincial government and forest companies to organize the fight on a larger scale, starting in 1954,

in the regions of the Lower St. Lawrence, the Matapedia Valley, and the Gaspé Peninsula. During the first 2 years, the headquarters for these operations were established in Price Bros. Paper Company camps at Lac Métis. At the time, I was in charge of the biological aspect of the operation and the evaluation of the treatment results, and I had to decide which territories were to be treated. The application of the insecticide was given to New Brunswick Forest Protection. In 1956, all research on the spruce budworm was delegated to Robert Blais, a budworm specialist who, up to then had been working at the Forest Biology Laboratory in Sault Ste. Marie, Ontario and who had just been transferred to Quebec.

The Lac Métis installation was transferred to a site closer to the operations; to a farm chalet in New Richmond on the Gaspé Peninsula.

In addition to operations related to aerial treatments, entomologists gathered information on the biology of the budworm and its parasites. These last studies were essential in verifying the changes brought about by the parasite complex following insecticide treatments and their result on the behaviour of the infestation. During this period, a very interesting study was carried out to trace the history of past insect infestations, their frequency, their extent, and their duration by examining growth rings of numerous fir trees. It was expected that information gathered would serve eventually to determine which coniferous forests were less likely to be attacked by the insect.

Soon, another harmful insect - the jackpine sawfly - was noticed. Damages caused by this devastator became evident only at the end of World War II, following an increase in demand for lumber. A series of studies were undertaken by a team of entomologists (at times as many as six). Studies covered population dynamics, biology of the insect, natural control, e.g. parasites, entomophagous predators, diseases, and in relation to weather conditions. Very interesting laboratory studies were conducted in air-conditioned rooms to verify field observations regarding the effect of certain weather conditions on insect development. In 1960, 1965, and 1967, aerial spraying of a virus was tested to verify its effectiveness in controlling this insect. Also in 1965, DDT was sprayed over endangered forested areas in the St. Maurice region.



The importance of research was acknowledged at the very start of laboratory operations, especially research on microorganisms most likely to provoke disease in insects and as a means of control against most insect pests. The insect pathology section was finally organized in 1957 and it prospered rapidly under its energetic leader. The first studies concentrated on an indigenous virus of the jackpine sawfly. The acquired experience served in further experimental tests to control this insect. A systematic inventory was also developed to trace infectious micro-organisms likely to provoke disease in insects, with a view to using them as a control against some harmful species. These studies concerned diagnosis of the microorganisms, the isolation of pathogens of particular interest, a study of their pathogenicity, selection of virulent races, and research as to their usability. The most elaborate studies concerned *Bacillus thuringiensis* (B.t.) and its possible use to control the spruce budworm.

Among other studies carried out by the entomology division, I must mention the numerous bio-ecological studies on various devastators harmful to natural forest trees, farm woodlots, ornamentals, nurseries, and forest plantations. A most interesting study was to research the elements limiting the European spruce sawfly's progress, 15 years after the disappearance of an infestation which nearly destroyed all the white spruce stands in eastern Canada.

One experiment deserves special mention - the artificial introduction of the common shrew into Newfoundland to help control the larch sawfly. The first tests in 1956 and 1957 showed poor results, but in 1959, after having released a much larger number of animals the preceding year, a spectacular expansion in area was noted and led researchers to believe in its permanent establishment there.

All these studies could not have been undertaken without the active participation of personnel from the Forest Insect and Disease Survey. This survey permitted gathering data on the identity, distribution, and periodical abundance of the most important destroyers of Quebec forests. Some important collections of insects and damage they caused were compiled, as well as a herbarium. Also, a fungus collection now containing thousands of plant disease samples was set up, and fungi were gathered


all across Quebec. In addition, a large culture collection of fungi is maintained. These collections form a good documentary source to help the specialists identify diseased material. Through this survey we were able to trace some other potentially harmful insects such as: the fir woodtick, first discovered in 1964 in the Madgalen Islands and the north shore tip of the Gaspé Peninsula, the woolly beech scales in 1965 in Temiscouata County, and in 1961, the cytospora canker in a white and a Norway spruce plantation near Grand'Mere.

At the beginning of laboratory operations, the pathology division was confronted with some urgent problems. The most notable were the conifer blights which cause important damages each year. Studies were undertaken to gather data in order that one day, it would help discover exploitation methods liable to make our forests more resistant to attacks from destructive fungi. The first studies consisted in enumerating some pathogen species responsible for blights in our province and the deterioration they may cause according to the age of the stands and the various forest types. Another preoccupation concerned elements most likely to permit pathogens from penetrating the trees, such as weather conditions and the presence of other microorganisms. Diseases of fir trees in younger stands were also the subject of intensive research.

Pathologists directed their attention to the problem of conifer damping-off which greatly injured seedlings in forest nurseries. These first studies resulted in some improvement in the treatment of seeds with fungicides to reduce losses caused by fungi before planting.

It is important to underline studies on diseases of poplar and in particular, on internal factors which may play an important role for some pathogens in the infection process. From 1963, resistance tests to various deterioration agents (weather, diseases, insects) were undertaken on a large number of hybrid poplar clones in different sites under diverse climatic and soil conditions, all across the province.

Two problems were causing concern in the forest industry and they were the subject of extensive research: birch disease and Dutch elm disease. The first studies on birch disease concerned the influence of various ecological factors on tree



development and the evolution of the disease in various regions of the province. Some field observations were completed with extensive laboratory research under a controlled environment.

Studies on Dutch elm disease covered mostly the histological and cytological development of the fungal pathogen. Some control tests were carried out in various locations, especially at Cap-de-la-Madeleine, to delay, if possible, propagation of the disease by sanitary methods and treatment with DDT. Also, we tried to develop elm species more resistant to pathogen attack.

Among other work carried out by the pathology division was the research on antibiotic properties of substances extracted from bark and wood of superior plants, which provoked some highly interesting new ideas. Various commercial antibiotics were also tested to prevent propagation of white pine blister rust. We must mention the numerous studies on various cankers of deciduous and coniferous trees, on conifer rusts, on causes of heartwood coloration of deciduous trees, and decays of deciduous tree species.

As studies carried out by the forest division are less familiar to me, the following notes give, as correctly as possible, a general idea of the orientation. A major problem was silviculture in coniferous forests. Most research in this field was carried out in the experimental forest of Nicauba, Abitibi. Studies were concentrated on black spruce, in particular regeneration after clear-cutting over limited areas, the effects of mechanical cutting and of controlled fires after cutting trees of marketable size, and tree growth under various luminosities.

Research on deciduous species was carried out at the Dudswell Experimental Forest, in the Eastern Townships. The major studies covered the effect of various methods of management cutting.

The extensive conifer plantations on sandy soils around Grand'Mere, the oldest in Canada, were the subject of various studies, in particular, the periodic growth of the trees and the effect of fertilizer on their growth.

With the collaboration of specialists from the Pulp and Paper Institute of Canada, studies were carried out on the effect of fertilization on forest soils, as well as the effects of humus sterilization using gamma rays.

Some very interesting studies were carried out at York River in the Gaspé, where many acres had been destroyed by forest fires years before. Studies covered mostly natural rebirth and artificial planting.

Tree growth studies were also carried out over 15 km² in the Lac Édouard Experimental Forest, established in 1918 and located 24 km north of Grand'Mere. Permanent locations established in 1936 were reexamined in 1946, 1952, and 1967 to verify growth patterns of stands after intensive harvesting.

The effects of defoliation of young fir stands by the spruce budworm, planting containerized seedlings, black spruce aerial seeding, propagation using cuttings of certain forest species - mostly spruce, the effect of herbicides, and various studies on the genetics and physiology of forest trees were all part of the research program.

In conclusion, I must mention the 5-year bio-physical inventory which was a pilot project conducted in the Saguenay-Lac-St-Jean region by a multidisciplinary team of nine specialists, including an ecologist, a forester, a pedologist, a phytosociologist, and a geomorphologist. The main objective of this project was to develop methods for ecological inventories.

These notes, though incomplete, will give you an overview of the contribution of LFRC to finding solutions to problems concerning the protection and improvement of Quebec's forests.

Using about 40 scientists, it was possible to accumulate valuable data which was the subject of more than 1 000 special reports, most of them published in national and international scientific and professional journals. Some of the more lengthy studies, mainly in silviculture or of a fundamental nature requiring more time, led to the publication of voluminous works such as *Insects Harmful to Forest Trees*, by René Martineau and *Papillons et chenilles du Québec et de l'Est du Canada*, by Jean-Paul Laplante.

During the first part of its existence, it can be noted that the Centre has been a source of scientific production. However, each time it has been called upon, it has participated actively in the control of the major devastators of Quebec's forests.

Lionel Daviault



Examining a specimen using a stereoscopic microscope.



The laboratory at the Chute-aux-Galets field station in 1970.



A new approach to intensive production towards the end of the 1960s.



Fertilization experimental set-up (Saint-David-de-Falardeau, Québec).

Marcel Lortie

1970-1974



I began my new duties as director of LFRC on August 3, 1970. I was returning to LFRC, which I had left in 1963 when I was a scientific researcher in forest pathology. I was back to a familiar milieu, however, the climate had changed - the morale of personnel was low. The day after my arrival at LFRC, I became aware of a dossier which was still hot, re: the layoffs of 1969, and I understood the personnel's feelings.

To this already tense climate was added the uncertainty that accompanies the arrival of a new director who, in this case, was from outside the Centre.

Other events contributed to increase the already tense climate. There was, first of all, the 1970 October Crisis. During the first hours of that troubled period, three coordinators from Ottawa shortened their visits to the laboratory. In the days which followed, when events were shaking everyone, the uneasiness affected all personnel, some of whom were almost panicky. It was necessary to enact security measures and, above all, to try to reassure those most affected.

At the end of 1970, the formation of a federal Department of the Environment was announced, which would come into effect on April 1, 1971. The Canadian Forestry Service (CFS) was amalgamated. Usually, civil servants learn of such changes with apprehension because of the modifications that ensue in the hierarchy, personnel, and programs. However, this announcement was welcomed with a certain satisfaction and with the hope that the rough period was nearing its end.

A decision from management, although minor, had a significant effect on the climate in the laboratory. Following a suggestion from the building's painter, Georges-Aimé Genest, it was decided to repaint the walls of different offices and laboratories according to the colours chosen by their occupants. To set the tone, the doors leading from the corridors were painted in striking colours. During the months of the operation, most of the personnel tried to establish a certain individuality with their work spaces through the choice of colours.

The start of the 1970s was also marked by events that were affecting research and researchers. You may recall the publication of a senate committee report (the Lamontagne Report) in 1971 on research and development in Canada. Its recommendations provoked diverse, often negative reactions, among groups of government researchers. It recommended, among other points, privatization of certain government laboratories, multidisciplinary approach to solving problems, conducting research based on precise missions from government agencies, etc.



The central administration of the Canadian Forestry Service reacted quickly and decided to proceed with implementing certain ideas contained in the report even before they were published and discussed. The expression “*mission-oriented research*” was narrowly interpreted. The research of the Canadian Forestry Service was to be based on the solution of problems which, for many, was interpreted to mean the suppression of fundamental research. The multi-disciplinary approach was becoming nearly an end in itself. It was necessary to proceed with a redefinition of projects in each establishment, taking into account the financial costs.

At the request of authorities from the Canadian Forestry Service, there was a complete revision of LFRC research programs. Of some 75-80 active projects which existed in 1972, research was grouped into 20 projects, a good proportion of which involved many researchers from diverse backgrounds. The application of the formula was not always easy, nor possible. The scientific productivity of some researchers was affected and the year after, it was necessary to recognize that certain research projects were built around one person and research, by its nature, was not always conducted in a way to resolve immediate problems.


During the period 1970-1974, the Canadian Forestry Service - Headquarters (CFS-HQ) made other decisions that affected the research atmosphere at LFRC:

1. Some months after my arrival, I received a mandate to represent the Canadian Forestry Service within the Department of Regional Economic Expansion (DREE) especially during regional planning conferences in the Lower St. Lawrence and the Gaspé regions. For the first time, the post of regional director of the Canadian Forestry Service took on a greater dimension than that previously known to a LFRC director. A Liaison, Management, and Development section was set up and, in 1982, the Forestry Development section was created.
2. The ecological inventories group, directed by Michel Jurdant, was the subject of periodic debates among those who could not establish a link between this activity and current forestry practice. When asked for advice, the director general of the Canadian Forestry Service, Dr. Malcolm Prebble,

recommended that the team be kept intact. In the following years, this group became the core of the Regional Land Directorate and devoted the bulk of its work to the publication of the method developed for the biophysical inventory of the Saguenay-Lac-St-Jean region and on a biophysical inventory in the James Bay territory.

3. Requested by headquarters to establish a certain liaison with the Quebec Department of Lands and Forests (QDLF), the regional directorate of the Canadian Forestry Service developed, proposed, and made a reality a protocol for sharing the inventory of forest insects and diseases. LFRC assumed the responsibility of current surveys of forest insects and diseases - Forest Insect and Disease Survey (FIDS) - while the QDLF took on the responsibility of inventories associated with intervention decisions during epidemics. Moreover, each party assured the other of possible aid in the execution of distributed tasks depending on the availability of human resources. Because of the agreement, management could search for additional person-years for FIDS. It was also decided that each April, LFRC would publish in *Forêt Conservation*, the results of the previous year's forest survey with forecasts of possible epidemics for the coming season. Through this agreement the entomological committee was formed.
4. Following the formation of a Council on Forestry Research and Development under provincial ministerial authority, LFRC management took advantage of the special meetings of council members to form a regional advisory committee, which was well received by CFS-HQ.

While adapting to circumstances imposed by events and those by the general management of the Canadian Forestry Service, I wanted my arrival at LFRC to be an occasion to set a new course, one with a more open approach. Our first step was to sign an official agreement with Laval University by which LFRC personnel could participate in the training of students at the Master's and Doctorate levels. Then came the launching of the magazine *Milieu*. Moreover, information officers such as Henri Jalbert and Jean-Pierre Drapeau gave researchers and technicians a chance to present their research results to the general public.



LFRC responded positively to an invitation from Mirabel Airport authorities. It seemed that the Canadian Forestry Service could be able to establish its presence with Montrealers. Profiting from job creation programs, Jacques Pfalzgraf pursued the management of the deciduous forest. This was the forerunner of present research. However at the time, this was not research and the Canadian Forestry Service had considerable difficulty in identifying with anything other than research.

From 1970 to 1974, there was a steady progression of the spruce budworm infestation. Entomologists participated in an economic study on the consequences of budworm infestation, which was conducted by Dr. J.P. Nadeau of the QDLF. The first results of using *B.t.* proved positive. The decision was made to significantly reduce research on the jackpine sawfly; this insect had been thoroughly studied. The eastern hemlock looper deserved special attention on Anticosti Island. In resource management, research projects that centred on natural regeneration after harvest and on the study of effects following mineral fertilization in the forest were nearly complete. Several research projects were continuing.

During this period, LFRC lost a permanent employee, Roger Mathieu, Forestry Eng. attached to development, who died at work in the St. Maurice region. Also two temporary employees were killed in a helicopter accident in the James Bay territory.

Some months after the establishment of the Department of the Environment, departmental authorities proceeded with the creation of Regional Directors' Councils. In Quebec, the council chairmanship went to the Regional Director of the Canadian Forestry Service. Then, in 1973, Dr. Malcolm Prebble, the Assistant Deputy Minister of Lands, Forests and Wildlife, retired. After his departure, there were changes inside the department which saw the shifting of power that, until then, had been exercised by certain agencies to the benefit of other agencies. It was at this time that I accepted the post of Regional General Director for the Administration Service of the Department of the Environment. However, it was also necessary to continue occupying the position of Regional Director of the Canadian Forestry Service for almost one year.

I made the following comment on this period when I had assumed the position of Regional Director of the CFS: "this was a very rewarding period. However, I regret my inability to quickly fill the positions of research managers. At the moment where he seemed to have his sector of forest resources well in hand, Dr. Larry Roche left our Centre for greener pastures. I was late in naming his successor and even if I can evoke administrative reasons, I must assume the responsibility.

In the interim, Dr. J.R. Blais, while being Assistant Director, assumed the direction of nearly the entire program. Also, diverse departmental activities (liaison with DREE, the chairmanship of the Regional Directors' Council, etc.) took me away periodically from LFRC. Therefore Dr. Blais also assumed this job in the interim. Bob proved to be the most reliable collaborator during all my directorship. I'm taking this opportunity to thank him one more time."

At a reception marking my departure as Regional Director of CFS, I was presented with several gifts, one of which was a "gloop". It had been the subject of a story told at a wine and cheese party that was extraordinarily well organized by René Cauchon. Or, was it at an oyster party presided over enthusiastically by Lawrence Beaulieu...?

Marcel Lortie



Experimenting with the spruce budworm at the Chute-aux-Galets field station.

Spruce budworm.



Collecting samples on site.



Production of plants in containers in a greenhouse.



Reading a device for recording the measurement of solar activity and its effects on B.t.

J.S. Maini 1974-1978



This period, following the United Nations Conference on Man and the Environment held in Stockholm in 1972, was marked by increased environmental consciousness and the recognition that different components of the environment are interconnected. Consequently it was also becoming obvious that management of the individual components of the environment (e.g., forests, water, wildlife, and land) cannot be accomplished by treating one element in isolation from the other or without consequences on the other components.

In Environment Canada, these considerations were translated by bringing together the Canadian Forestry Service, the Canadian Wildlife Service, the Inland Waters Directorate, and the Lands Directorate under the Environment Management Service. While the scientific and federal administrative communities were moving towards "integration," one witnessed some opposite trends in federal-provincial relations, i.e., a more clear definition of the federal and provincial jurisdictions, role, and responsibilities in the management of natural resources.

From 1974 to 1978, the staff and the research program at LFRC experienced many significant changes that were triggered by the above-mentioned circumstances and by the decisions taken by management at the regional level.

The Environment Management Service, headed by Dr. J. Tenner, Assistant Deputy Minister, was composed of five regions, each under a regional director. Dr. Marcel Lortie, Director, LFRC, was named as the Director General, Quebec Region, and I was appointed to replace him at LFRC.



STRATEGIC ORIENTATIONS

The Regional Director General (RDG) and the Director, LFRC, reached a clear understanding about the principal organizational and research tasks to be accomplished.

These included:

- Separation of the Lands Unit from the LFRC and formation of the Regional Lands Directorate under a director;
- Evaluation of the research program, in order to reallocate resources to strengthen those programs that responded to the current forestry and environmental priorities, and to phase out those of lower priority;
- Emphasize technology transfer, both the results of LFRC's research to potential users in Quebec and to bring to Quebec technology developed elsewhere that was relevant to Quebec's needs;
- Enhance management and scientific skills of both the scientific and technical staff;
- Continue strengthening meaningful working relationships with the province, "milieu universitaire" and industry;
- Develop public information programs on forests, forestry, and the environment.

RESEARCH PROGRAM

After a comprehensive review of the projects in view of the current circumstances, it became apparent that certain projects needed increased emphasis. For example, increased concern for the side effects associated with the use of chemical pesticides led to strengthening the biological control of the spruce budworm under Drs. Wladimir Smirnov and Raymond (Ray) Finnegan, the gypsy moth under Dr. Luc Jobin, and of several other insects with exotic biological agents from the Commonwealth Agricultural Bureau under F. Wolfgang Quednau.

At the same time, some projects which had been pursued for a number of years were ready for phasing out. The most prominent among these concerned the control of the jackpine sawfly, which had been pursued for several years and required a considerable proportion of the Centre's resources and had reached a stage of diminishing returns. It

was decided to transfer the project leader, Dr. Jack MacLeod, to the University of British Columbia (UBC) to work with Professor C.S. Holling and synthesize the enormous amount of data collected to date. Mr. René Martineau was relieved of his demanding responsibilities as head of FIDS (Forest Insect and Disease Survey) to enable him to write a book on forest insects and diseases in eastern Canada.

TECHNOLOGY TRANSFER

There were three particularly important activities in this area. First, Dr. Smirnov's contribution to developing a high concentration of *Bacillus thuringiensis* (*B.t.*) at a pre-commercial stage, and the encouraging application of *B.t.* on large-scale field trials. Secondly, the adaptation to Quebec of the "spruce budworm forest interaction models" developed by Professor C.S. Holling of UBC at the International Institute for Applied Systems Analysis, Laxenburg, Austria. The task was accomplished by a team of scientists under the able leadership of Michel Boudoux from LFRC, Laval University, and the Quebec Department of Lands and Forests. Thirdly, a close collaboration was fostered between Jean Beaubien and Luc Jobin and the Canadian Centre for Remote Sensing in Ottawa; also, in collaboration with FAO, LFRC undertook a special task to do land classification of Haiti by employing satellite imagery.

UPGRADING HUMAN RESOURCE SKILLS

Following Dr. J.R. Blais' decision to return to his personal research (a rare case where this was accomplished successfully and he made exceptional contributions to our understanding of spruce budworm/forest interaction), two new Program Managers were recruited, Dr. Luc Jobin for Protection and Dr. C. Winget for Resources. After a year, Dr. Jobin returned to his research and was replaced by Dr. André Lavallée. A special effort was made to enhance their managerial skills through courses and diverse experiences. Courses on project management were also organized for LFRC scientists and on photography and plant identification for the technical staff. Two technicians, René Cauchon and Jean-Paul Laplante, were encouraged to undertake a university degree and were reclassified as professionals.

COLLABORATION WITH CLIENTS

By forming joint project teams and advisory committees, links for collaboration with the provincial agencies, forest industry, and “milieu universitaire” established by Marcel Lortie were further nourished through our projects on forest genetics, remote sensing, spruce budworm control, FIDS, and forest regeneration. These close relationships continued despite tensions in the federal-provincial relations. Dr. Lortie’s personal contacts were most helpful in this regard.

PUBLIC INFORMATION

In recognition of the increased environmental awareness by the public, provision of scientifically sound information on forests, forestry, and the environment became an important ingredient of the LFRC program. This was accomplished through programs in urban forestry, Centre Agro-forestier at Mirabel, development of “Ecotours” (brochures describing features of the landscape along the Trans-Canada Highway), and preparation of articles for *Milieu*.

SOME OTHER HIGHLIGHTS

A description of this period would be incomplete without mentioning a few other items. First, the emphasis on “integrated programs” that included other elements of EMS; getting additional resources became a challenge of playing imaginatively the game of integrating other elements of EMS into new initiatives. Secondly, the very difficult program evaluation exercise: “A Base Review”. Fortunately, our earlier comprehensive review of the program and plans for strengthening some projects while phasing out others helped us through the Review and we did not have to face any serious cuts. Thirdly, our special efforts to broaden the experience of the LFRC scientists by sending them outside Quebec on study tours and by arranging national and international assignments. Fourthly, management made special efforts to involve the scientific and non-scientific

staff in planning LFRC’s operations. Also, the important role played by the “Mutuelle” in organizing the annual - parties - for Christmas, oysters, and wine and cheese must be recognized; the “Mutuelle” contributed significantly to creating the overall close family spirit at the LFRC and prevented the “Centre” from becoming a dehumanized organization.

And, last but not least, a more personal experience; as the first (and so far the only) non-Quebecer Director of the LFRC, it was a challenging assignment. The LFRC staff and colleagues in the province, industry, and the “milieu universitaire” were most understanding in my efforts to acquire facility with the French language, to understand Quebec, and do my best to serve the interests of LFRC and forestry in Quebec. It was an enriching experience - and my special thanks to Marcel Lortie.

Jagmohan S. Maini

One of the many teams from the Chute-aux-Galets field station that contributed to the biological control of forest insect pests.



Mounting moths for future reference.



Measuring the growth of promising hybrids.



Preparing seedlings for work on genetic tree improvement.



Plants in containers for work on genetic tree improvement.

Carl Winget 1978-1982



This was a transition period, four years in which LFRC and CFS moved from having to justify their very existence to being well on the road to fulfilling a confirmed and much expanded mandate. In 1978, the CFS was a Directorate, part of the Environmental Management Service of Environment Canada. The Director of LFRC reported to the Regional Director General, Quebec Region, who at that time was Dr. Marcel Lortie, not to Dr. R.J. Bourchier, the Director General of the CFS.

LFRC was undergoing a difficult period of adapting to cuts in positions and funding partly resulting from contributing to the creation of the Environmental Management Service. These cuts had created a serious dilemma: how to respond to newly identified priorities for Environment Canada relating to environmental concerns and the energy crisis and still maintain a viable forestry research program, all with fewer resources than ever before?

This dilemma was accentuated by the "Zero A-Base Review," a major revision of programs with the operating principle that resource allocations to every project, study, and activity of CFS and LFRC had to be justified starting from zero. This exercise had been initiated in 1977 and Dr. J.S. Maini, Director of LFRC, had been nominated, rather against his own wishes, as a member of the task force. Consequently, I as Acting Director and Program Manager-Resources, along with Dr. André Lavallée as Acting Program

Manager-Protection and Roméo Lachance as Head, Finance and Administration, found ourselves in a difficult and complicated situation with a rather gloomy outlook for the future. Morale had reached a new low at LFRC.

The review process eventually provided some benefits, although at the cost of a tremendous amount of work which involved almost every person at LFRC. Environment Canada's senior management was finally convinced that CFS and LFRC programs, including the Forest Insect and Disease Survey which had been severely questioned, were valid and useful and could not simply be sacrificed to new priorities. Simultaneously, managers and scientists at LFRC became very much aware of the need for rigorous program review in relation to the needs of external clients. Tradition or continuity were simply inadequate to justify research activities. By the end of 1978, the situation had stabilized.



Dr. Maini had joined the Ministry of State for Science and Technology, I had replaced him as Director, Dr. Lavallée had been nominated as Program Manager-Protection and Dr. Michel Boudoux would shortly become Program Manager-Resources.

One important shift in the research program which was partly the result of the review was the acceleration given to the acid rain research led by Dr. Gilles Robitaille. Additional resources were made available and the complex drainage basin calibration at Forêt Montmorency was undertaken which involved Mr. Robert Boutin, Dr. T.D. Phu, Mr. Lawrence Beaulieu, and Mr. Allen Copeman.


Similarly, new funding became available for the Energy from the Forest Program (ENFOR). Dr. Gilles Frisque developed an extensive program of contract research with external organizations to study the quality and availability of forest biomass for energy purposes in Quebec.

In the meantime, events on the national scale were rapidly changing the role of the CFS. The National Forest Regeneration Conference held in Quebec City in 1977 and to an even greater degree, the 1978 study "Forest Management in Canada" by F.L.C. Reed alerted and alarmed both the forestry and political communities in Canada. Inadequate forest renewal, a low level of forest management, and limited human resources for forestry were identified as critical issues. In early 1980, the Canadian Council of Resource and Environment Ministers endorsed a 40% increase in annual allowable cut by the year 2000, requiring much more intensive forest management throughout Canada. Environment Canada reacted to these events by returning the CFS to the status of a service, having CFS Regional Directors report to the newly established position of Assistant Deputy Minister, CFS and by nominating Mr. F.L.C. Reed to that position. The Canadian Forest Congress

"The Forest Imperative" held in Toronto in September, 1980, added impetus to these developments. The Forest Sector Strategy for Canada proposed in 1981 was approved by the Federal Cabinet, calling for greatly increased funding of forest management through federal-provincial agreements as well as reinforcement of research and development and of the post-graduate educational and research capacity of forestry faculties.

All of this had immediate consequences for LFRC in addition to the strengthened relationship with CFS Headquarters. First, responsibility for managing the existing Canada-Quebec Subsidiary Agreement on Forest Development was transferred from the Department of Regional Economic Expansion (DREE) to LFRC which had previously acted only as a technical advisor to DREE. Further, LFRC and CFS would also be responsible for negotiating any renewal of the agreement. Mr. Henri LeBlanc, Ms. Denyse Rousseau, and Mr. Paul-Henri Labelle, newly recruited from DREE, formed the nucleus of what was soon to become a major new thrust for the Centre.

Further, the federal government placed high priority on job creation programs with emphasis on forest management. LFRC thus became the technical advisor to the Canadian Employment and Immigration Commission in attempting to implement these programs in collaboration with the Government of Quebec and forest industry, again an activity that was to become a major new thrust for LFRC.



When I was nominated Director General, Research and Technical Services at CFS Headquarters in September, 1982, the stage was set for a new era of development. The CFS and LFRC had quickly evolved from questionable status and a defensive posture to an aggressive position of expanded and, most importantly, confirmed research responsibilities, a major new role in forest management with great political and economic impacts and newly acquired responsibilities in the difficult but rewarding area of job creation. My successor, Dr. Gilbert Paillé, would have great opportunities, new responsibilities, and more resources, all combining to make an enormous workload.

Carl Winget

Gathering data in a greenhouse for genetic tree improvement.



Photographing insect specimens makes it easier to identify them.



Visiting a laboratory during the 1983 Open House.



The field station at Petit-Métis.



Controlled pollination for genetic tree improvement.

Gilbert
Paillé

1982-1985



In July 1982, LFRC welcomed me, with a little apprehension, as its fifth director. For the first time, a real “outsider” coming from the forest industry, was called on to direct the destiny of the Centre. At my first meeting with the personnel, I dared to mention that I had come to Quebec to “have fun” and that I would not rest until I was convinced that the 120 Centre employees were also having fun. Several months after my arrival, one would ask, tongue in cheek, if I was still having fun...

DEPARTMENTAL CHANGES

My arrival and the events that followed led the scientific personnel to believe that forest research would be progressively neglected to the benefit of forest development. The Department of Regional Economic Expansion (DREE) was dismantled in September 1982 and its responsibilities transferred to the appropriate sectorial departments. The Canadian Forestry Service inherited the “forests” of DREE. It was given the federal responsibility for the administration of the Canada-Quebec Subsidiary Agreement on Forest Development in effect since 1974 and which was due to end March 31, 1984. As Director of LFRC I became the Director of the Canadian Forestry Service-Quebec Region, responsible for the forest development of Quebec and the forest research conducted at LFRC. I was named co-chairman of the subsidiary agreement’s executive committee by the Deputy Minister, Mr. B. Seaborn,

and I became the forestry representative at the regional directors’ table of Environment Canada, presided over by the Regional Director General, Patrice Dionne.

DREE was replaced by DRIE, the Department of Regional Industrial Expansion, and a federal coordinator, Normand Plante, was soon named responsible for the economic file in Quebec. Also, the Canadian Forestry Service found itself represented at this multi-sectorial table by its Regional Director.

Nothing more was required to confirm suspicions that the new director was a promoter. But there was more to come... The Assistant Deputy Minister of the Canadian Forestry Service, Mr. F.L.C. Reed, who had just recently arrived from the private sector, saw, at the time of his visit to the LFRC in January 1983, that he was on the same wavelength as that of the Regional Director of Quebec. The times were definitely changing.



THE RESEARCH BREAK

To ensure that contact with the staff was maintained and that I had some control over the incessant rumours that were bound to shake the public service, especially in a period of upheaval, I initiated a new management practice - the director's research break. This coffee break, religiously taken the first Friday of each month, quickly revealed itself to be an extraordinary communication tool, allowing employees to air their complaints and permitting the director to pass on useful information. Distinguished visitors were also able to become acquainted with LFRC personnel. It was an occasion for the "Mutuelle" to underline the retirement of colleagues with the presentation of their magnificent photographs taken by Claude Moffet. It contributed to maintaining the family spirit. The reputation of this event continued to grow with time.

THE SUPREME COURT

Soon, the "supreme court" of the LFRC was also set up. Its given name was the Science Committee. This committee was formed by researchers who were democratically elected by their peers to oversee the scientific interests of LFRC. Its mandate was to bring to the forefront the need to study the orientation and content of the research programs, and to bring appropriate recommendations to the attention of the management committee.

THE ADVISORY COMMITTEE

The Science Committee was the internal complement of the Advisory Committee formed by representatives from the forestry sector. The Advisory Committee's goal was to provide advice to LFRC management on the conduct and direction of research programs. The participants were representatives from Laval University, the provincial Department of Energy and Resources, the wood producing industry, and other forest industries.


THE REVIEW OF RESEARCH PROGRAMS

While initiating these consultative structures, I was also hustling to meet each of the 35 researchers, the project directors, and the program directors of the Centre, in order to become acquainted, in detail, with ongoing scientific activities.

The forest protection research program comprised four major projects; three of which were in forest entomology and one in forest pathology. The research projects in entomology were concentrated on the epidemiology of the spruce budworm, on the entomopathogens and in particular on *B.t.*, on the pheromones of the budworm and the gypsy moth, as well as on the parasites and predators of injurious insects. The studies in pathology were centred on the development of the monoclonal antibodies and on chemical methods of controlling scleroderris canker, and on the fundamental physiology of Dutch elm disease.

The studies in protection were mostly oriented toward understanding the behaviour of insect pests and of diseases, and toward clarifying methods of biological control. They were conducted by internationally renowned researchers, such as J. Robert Blais, Wladimir A. Smirnoff, Guillemond B. Ouellette, Raymond J. Finnegan, and F. Wolfgang Quednau: other scientists involved were: Luc Jobin, Edgar Smerlis, Louis Archambault, and Robert Lavallée. These programs were under the direction of André Lavallée, a forest pathologist.

The forest resources research program was made up of six projects covering genetics and improvement of conifers, physiology of plants and reforestation, silviculture of deciduous forests either in natural stands or plantations, remote sensing for the inventory of forest cover types, evaluation of the biomass of major types of trees, and simulation of forest population dynamics.



Many people were responsible for these forest resources studies: Armand Corriveau, Marcien R. Roberge, T.D. Phu, Stevo Popovich, Jean Beaubien, André L. D'Aoust, Ronald M. Girouard, Antonio Gonzalez, Robert J. Hatcher, C. Huor Ung, Richard Zarnovican, Jacques Trenchia, Éric Rey-Lescure, and Denis Ouellet. The program was directed by Michel Boudoux, a specialist in biometrics applied to forestry.

These two research programs were conducted in collaboration with researchers from many universities, the Quebec Department of Energy and Resources (MER), and other Canadian Forestry Service research centres in Ontario and the Maritimes. They were also supported by four national research and development programs.

NATIONAL PROGRAMS

The best known of these in Quebec is, without doubt, the Forest Insect and Disease Survey (FIDS), which has been conducted annually since 1960, in collaboration with the MER. This program, considered as a support to forest protection research, aims to survey the major tree pests in Quebec to measure their impact on the forest and to forecast their evolution, and to permit the CFS-HQ in Ottawa to accumulate necessary data to assess the Canadian forest health situation. It was headed by Denis Lachance, with the collaboration of the diagnostic units directed by Gaston Laflamme and René Cauchon, for pathology problems; and by Paul Benoit, Jean-Paul Laplante, and Thérèse Arcand, for entomology questions.

Since its inception, the LFRC in Quebec has been recognized nearly as much for the FIDS program as for its forestry research. Numerous organizations and many people continue to call on the LFRC for solutions to entomology and pathology problems by seeking the advice of FIDS specialists, a unit renowned for sharing its knowledge.

The national program ENFOR had, for its part, contributed significantly to the knowledge of diverse aspects of production and conversion of forest biomass in Quebec. Since 1978, it permitted numerous consultants in Quebec to participate in this national activity of CFS. At LFRC it was under the direction of Gilles Frisque.

The Long Range Transport of Airborne Pollutants (LRTAP) program was set up in 1977 as part of CFS' participation in the Canadian research effort on the pollutants carried by air over long distances, and it acquired with time an importance that grew with the problem it was attacking. This program also permitted LFRC researchers to collaborate intensively with others from many federal and provincial departments, with Laval University, and with international organizations involved in the fight against acid rain. It has been directed, since its beginning in Quebec in 1979, by Gilles Robitaille.

Finally, the FORSTATS national program, which had been enacted to accumulate forest inventory data on a Canadian scale and to measure the changes which were taking place following forestry operations, fires, infestations by insects, and other natural occurrences, produced its first results in 1982 in a publication entitled *The Inventory of Forests in Canada, 1981*. In Quebec, it was under the responsibility of Gilles Chantal.



THE STATUS REPORT

While I was ensuring a good place for research at LFRC, even with my reputation of being “a promoter” I also participated in the task force that was preparing a status report on research and development in the forest sector. This group, which was put in place by the Quebec Department of Energy and Resources in 1981, published in 1983 a “best-seller” entitled *The Forest Sector: Assessment and Perspectives*. It sold like hot cakes and prompted a series of exercises in the province which led the MER to launch a consultation into research; the University of Quebec to announce its intention to organize a multi-regional forestry research centre; and Laval University to organize a centre for research on forest biology. Other tangible results may also be observed in the future in the area of harmonizing and coordinating forestry research in Quebec.

THE GLOBAL AGREEMENT AND JOINT CONFERENCES

To keep information flowing between LFRC researchers and Laval University professors, the agreement between LFRC and Laval University on research was revised and maintained. A series of joint LFRC-Laval conferences were also launched to bring together researchers, professors, and graduate students on a monthly basis.

FOREST DEVELOPMENT

While all these activities related to research continued to take place at a normal pace, we got busy setting up an administrative structure to support the new forest development program. The administration of the Canada-Quebec Subsidiary Agreement, the supervision of job creation projects, and the management of the forestry section of the Canada-Lower St. Lawrence and Gaspé region economic development plan would be, in the future, under its responsibility and directed by Normand Lafrenière.

THE RESULTS 1982-1983

When the fiscal year 1982-1983 ended, CFS Quebec region had 123 permanent employees; it had provided summer jobs to 38 students and signed with 30 promoters of the agreements that would create 2 500 jobs in the forest sector. It had spent some \$43 million, of which \$6 million went to research, \$33 million to the Canada-Quebec Agreement and \$4 million to job creation. Definitely, the CFS was really starting to grow and diversify its activities in Quebec.

THE CANADA ECONOMIC DEVELOPMENT PLAN FOR THE GASPÉ - LOWER ST. LAWRENCE

This trend was even more pronounced in 1983-1984. It began with the official announcement of the Canada Economic Development Plan for the Gaspé - Lower St. Lawrence, which had reserved \$19 million for the forestry sector over a 5-year period. By this original plan, the federal government committed itself to supplying the beneficiaries directly. CFS set up shop at Rimouski so that it could more easily give technical aid to some 12 000 private woodlot owners in the region who were most likely to participate. Under the local direction of its manager, Jean-Guy Gagnon, the forest section rapidly acquired tremendous and continuing popularity. The slogan “Knock on Wood” was a success, as were the ministers Pierre De Bané of Fisheries and Oceans and John Roberts and Charles Caccia of Environment Canada.



EXPANDING LFRC

The staff had time to recover from one surprise when another great piece of news was announced. The LFRC was going to expand. The local federal Member of Parliament, Denis Dawson, the Mayor of Sainte-Foy, J.M. Lavoie, and other dignitaries who attended the ceremony, unanimously said that after 25 years, it was about time. They acted a little surprised to learn from the Regional Director that one of the first benefits of this development would be to bring the “flock” of the LFRC under one roof and permit it to grow at a moderate pace. The architects immediately went to work. However, it was necessary to wait for more than a year before seeing the arrival of construction workers, after I had proposed that all employees “light candles” to this end.

THE INTERNATIONAL CONFERENCE ON ACID RAIN

Just after this announcement, a successful international conference on acid rain was held in Quebec City. The CFS management and officials and researchers with the national LRTAP program made a considerable contribution to it. Also they were responsible for its organization.

THE CONSOLIDATION OF RESEARCH

Then, the Assistant Deputy Minister of Forests, F.L.C. Reed, launched a brainstorming session in Toronto, on the quality of the research conducted by the CFS in its two institutes and six research centres in Canada. He indicated that it was time to find a remedy to the supposed low motivation of researchers and the decline in productivity, as measured by the number of publications in professional and scientific journals (the LFRC was producing, on average, at least 36 each year). He also indicated that he did not want merely a “shuffling of the cards”. The Director General of Research, Carl H. Winget, set to work immediately. One year later, a book of directives came from headquarters concerning the allocation of research responsibilities to the establishments of

the CFS. Because it was red, Dr. Smirnoff spoke of it as “Mao’s little book”. A call to war was orchestrated by the Regional Director, anxious to prepare a democratic response to this document on behalf of Quebec. A little later, a plan to consolidate the research of the LFRC, for the period 1985-1989, was submitted to headquarters for approval. Most of these projects were the subject of reorganization and required 39 person-years and an additional \$800 000, just to consolidate our research activities and to permit us to grow... to attain a size proportional to the importance of Quebec’s forests in Canada. At the time of this writing, Ottawa’s reaction has still not reached us.

THE ADMINISTRATIVE REORGANIZATION

Besides the proposed modifications for consolidating research, the expansion of CFS responsibilities in Quebec as mentioned above and the retirement of many LFRC pioneers (Gaston Therrien, Roméo Lachance, Fleur Côté, Esther Poisson, et al.) forced the Regional Director to reorganize the Administration and Finance section, and to create a new section - the Scientific and Technical Communications section - charged with preparing and distributing publications, looking after the library, and maintaining liaison with client organizations and relations with the Department of the Environment’s Information Service and Public Relations division. One last hand had to be played to organize the forest development program by grouping sections in operations, forestry, and in planning and economic analysis. These changes had a beneficial effect on the functioning of the LFRC, but created a certain uneasiness among those who would have preferred the status quo.



THE RESULTS 1983-1984

The year 1983-1984 ended in a kind of administrative euphoria. LFRC had provided work to 139 permanent employees, career oriented summer jobs to 60 students; 15 RELAY projects had been set up to help researchers: aid program to university forestry research permitted six groups of Laval University professors to support their research through the CFS under the scientific authority of our researchers; 60 job creation projects had used some \$4.5 million of CFS funds; 64 "Environment 2000" projects had provided work in the forest to both young and older people, necessitating an expenditure of \$6.5 million; the Canada-Quebec Subsidiary Agreement on Forest Development had ended by taking the biggest chunk of money in its history and, from this vantage point, the largest sum in Canada, with some \$47 million drawn from federal government coffers. With the wind in its sails, the Quebec government announced in March 1984 an ambitious reforestation project which would increase the number of trees planted by hand from some 60 million annually to 300 million by 1988. Meanwhile, the Office of Public Audiences of Quebec recommended that the use of chemical pesticides to protect the forest against the spruce budworm be considerably reduced and that the government prohibit the use of phytocides to manage plantations. Foresters had their plates full, so to speak, federally and provincially.

25th ANNIVERSARY CELEBRATIONS

At LFRC, an idea developed to celebrate the 25th anniversary by focusing on a reunion of current and retired employees, on the archives, and on the evolution of research. The memory and talent of a dozen volunteer workers were called on to set up various activities in line with the stature of the occasion. As the CFS had 85 years of existence in Canada, of which no less than 50 were in Quebec, there should be enough achievements to celebrate. In a place that was in full expansion and at a time when we were receiving new responsibilities every day, there was unanimous agreement to develop one theme: GROWTH.

THE LORTIE REPORT

While the monthly exercises in planning this event were multiplying to the satisfaction of organizers, the year 1984-1985 was already underway. The Quebec Department of Energy and Resources had formed a working group presided over by Marcel Lortie, a former director of LFRC, to get better acquainted with the private woodlot owners of Quebec. The Minister had also invited all the forest sectors of Quebec to present to him their views of the future forestry policy for the province; an outline of the problems was published to aid them in preparing their briefs. The soup was hot in Quebec's forestry cooking pot and the captivating aroma of many essential oils was wafting around. You could feel that forestry wanted to take the technology turn so often talked about... without skidding.

THE INTERNATIONAL FORESTRY CONVENTION

An unexpected opportunity for Quebec to show its colours presented itself in August at an international forestry convention in Quebec City that gathered some 1 900 participants representing four professional organizations. At the time, I had the honour of being President of the Canadian Institute of Forestry (CIF) - host of the convention. And the LFRC's former director, Marcel Lortie, presided over the organizing committee, HAMPCO-84. The members of CIF, the Ordre des ingénieurs forestiers du Québec, the Society of American Foresters, and of the International Union of Societies of Foresters had the opportunity to discuss an international theme, and also ponder the Quebec forestry situation, i.e. the influence of policies and laws on forest management. It was a great success.



THE ELECTIONS OF 1984

The federal elections of 1984 saw Brian Mulroney and the Conservatives replace the Liberals and Pierre E. Trudeau. A Minister of State (Forests) was named as head of the CFS. This new Minister of State was under the Department of Agriculture. After 25 years, LFRC was back to square one - the service was once again part of the Department of Agriculture. However, expectations were different. The Honourable Gerald S. Merrithew replaced the Honourable Charles Caccia as Minister and Richard Herring replaced F.L.C. Reed as Assistant Deputy Minister. The negotiations for the renewal of the Canada-Quebec Agreement, started in August 1983, were interrupted in February 1984, and were soon resumed. The CFS hired 82 students during the summer; it already was administering 260 job creation projects; the number of permanent employees had gone to 152; the field stations at Valcartier, Chute-aux-Galets, and Métis-sur-Mer were given a face lift; computers were installed to facilitate management; and construction on the new laboratory was underway. The tide was rising. There was hope for even more growth in 1985, giving good reason to celebrate success in March 1985.

Gilbert Paillé



Beginning of expansion work at the Centre.



Working with a microscope in the forest pathology laboratory.



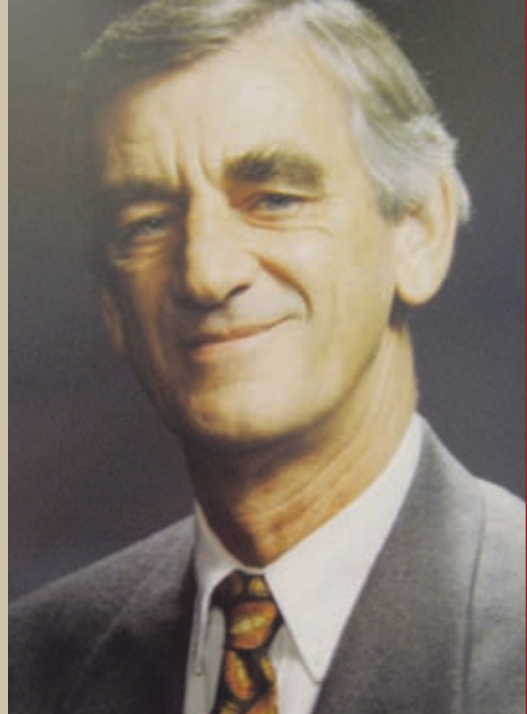
Controlling the mixture of *B.t.*



Aerial spraying of *B.t.* in the Causapschal region.

Yvan Hardy

1985-1991



After a several-month interim covered by Gilles Frisque, another “stranger” arrives, this time from the academic world. There is a warm welcome, expectations are high and there is tension in the air.

It is August 1985 and construction and renovation work has resumed; the final result will no doubt be marvellous, but in the meantime, employees are scattered in various locations, living on a construction site where noise and dust prevail. As the work progresses, our people are initially set up temporarily, and eventually move into permanent offices.

The CFS is now part of the Department of Agriculture. Our Deputy Minister, the Honourable Gerald Merrithew, and the Associate Deputy Minister, Mr. Jean-Claude Mercier, managed a brilliant feat by almost completely detaching the CFS from the rest of the Department, and we no longer need to participate in working groups on red meat or cereal crops at the annual managers’ meeting. A few months prior, the federal-provincial agreement with Quebec* was renewed; some are elated, but the scientific community is concerned. After having met each of the scientific researchers individually, I notice two recurring themes. The first, which gives me the greatest smile, is that federal researchers are less well funded than their university counterparts, although I personally marvel at the fleet of vehicles and the various technical and administrative services available to them. In a university setting, these services must be purchased out of professors’ grants, if and when they get them. The second myth is that the funds intended for financing the federal-

provincial agreement have been taken, at least in part, from funds intended for research. This perspective is further reinforced by the fact that headquarters is already talking about changing the name of our laboratories to better reflect the new image of the CFS, which became a reality in April 1986 when the Laurentian Forest Research Centre (LFRC) became the Laurentian Forestry Centre (LFC). As we would see later, the researchers’ concerns were unfounded; on the contrary, the federal-provincial agreement provided them with several new opportunities.

One month later, I attend my first CFS Management Committee meeting in Victoria. My initial contact with my colleagues from the regions, institutes and headquarters is warm and friendly, but the sociable atmosphere quickly deteriorates when the meeting officially begins. Several millions of dollars are on the table for the purchase of scientific equipment. One after another, my colleagues try to persuade the Chair that their needs supersede those of other regions and institutes. I am not prepared for such a confrontation and that’s when the Associate Deputy Minister decides to take charge and orders a pro-ration of funds; my education continues.

* Canada - Quebec Subsidiary Agreement on Forest Development, 1985-1990



Back in Québec, I have the distinct impression of having enrolled in a continuing education program. I am starting to understand the jargon of federal bureaucracy, the implementation of the federal-provincial agreement is under way, and the sometimes difficult meetings with our provincial colleagues increase, finally culminating in a consensus on the nature of eligible work. In the Lower St. Lawrence and Gaspé, delivery of the Eastern Quebec Development Plan's forestry component revolves around mobilizing forestry groups and wood producers' unions. New opportunities are created for some of our researchers through major projects like forestry drainage.

Whether it's called a program review, a spending review, a strategic review or just spending cuts, one of the truths about government is that it gives with one hand by creating new programs, and takes away with the other through these reviews. This time, it's the Neilson Task Force; all of our programs must be justified, and in this particular case the CFS pulls through without too much damage, and my education continues.

There are also moments of great satisfaction when our research efforts produce results in several areas in which our researchers achieve major successes. This is the case with the introduction of a parasitoid to control the mountain ash sawfly and the exclusive use of *B.t.* in the fight against the spruce budworm and several other defoliators. Significant progress is also being made in genetic tree improvement, where we work closely with our colleagues in the provincial government. We are also involved in hardwood silviculture, remote sensing, simulation of insect populations, and expert systems related to these populations.

The same goes for the federal-provincial agreement and the forestry component of the Eastern Quebec Development Plan. The results are now tangible because we can see them in the field. As for our Rimouski team, they become increasingly efficient and broaden their range of programs and opportunities. Advanced training courses are organized for woodlot owners who carry out their own silvicultural operations. The implementation of a vast forestry drainage project provides our researchers with exceptional experimental protocols


for measuring the impact of falling water tables on tree growth and changes in vegetation.

Expansion and renovation operations are completed by the spring of 1987. LFC staff now enjoy spacious offices and modern equipment. The official inauguration of the new pavilion is held the following year, after all employees have vacated their temporary locations and building operations are running smoothly. Minister Gerald Merrithew presides over the official ceremonies and inaugurates the conference room, which is later named the Lionel-Davault conference room. This room, which can accommodate about 100 people, was not part of the original expansion plan but with a minor modification suggested by two of our employees, we are able to create the space inexpensively and it quickly becomes a key meeting point for the Quebec forestry community.

The Forest Management Program for Indian Lands is launched in 1985, at the same time as the Subsidiary Agreement. This program aims to improve knowledge about forest resources on reserves through the creation of management plans and the implementation of silvicultural operations, thus increasing the forestry skills of Aboriginal peoples. Between 1985 and 1991, \$4 million are invested in 14 communities, making way for several thousand hectares of silvicultural operations and the creation of several Aboriginal forestry companies.

During the same period, the federal government invests over \$145 million in the Subsidiary Agreement on Forest Development for operations in public and private forests, including the production of seeds and seedlings, the planting and maintenance of regenerated areas and applied research. Once again, funds for applied research benefit many of our researchers by supplementing regular operating funds, which tend to steadily decline. The same applies to the operating costs for offices and equipment for which the Subsidiary Agreement assumes more than its share of costs from its management budgets, thereby directing a larger portion of operating budgets to support research.

This synergy between research and development takes on many forms and yields interesting dividends. During the sugar maple decline, the



popular consensus points to acid rain as the cause. Many of our researchers are reluctant to accept this hypothesis. An experimental protocol is implemented to thoroughly determine the cause of this phenomenon. However, this is insufficient because an immediate solution is needed to meet the expectations of maple syrup producers. Knowing that tree recovery depends on root health, a customized fertilization program is proposed and accepted; the fight against the decline has begun.

In the Lower St. Lawrence, the spruce budworm is still present and causes significant damage to private forests. A control program is organized, based on previous *B.t.* research coupled with the use of small aircraft. Using this approach, it becomes possible to conduct more accurate aerial spraying operations at low altitudes, thus ensuring greater effectiveness. Although initially criticized by advocates of the traditional approach, over the years this test technology became the standard in aerial spraying operations by the Société de protection des forêts contre les insectes et les maladies (SOPFIM).

With the arrival of Bill C-29 in November 1989, the Canadian Forestry Service becomes an independent department under the name of Forestry Canada with Minister Frank Oberle at its head. Although short-lived, this period is one of unprecedented growth and excitement. It is during this time that the Model Forest Program and the Tree Canada Foundation are developed under Canada's Green Plan, along with several other initiatives that the LFC will be involved in throughout development and later on during implementation.

As for me, the period during which I had the honour and privilege to preside over the fate of the Quebec Region, from 1985 to 1991, was one of both personal and institutional growth. I think it is fair to say that the LFC became a key player in Quebec forestry during this period. The record of achievement is enormous, not to mention all of the partnerships that were developed or maintained with provincial authorities, the academic sector, the forest industry, Aboriginal peoples, private forests and even the media who actively covered several events aimed at the forestry community or the general public.

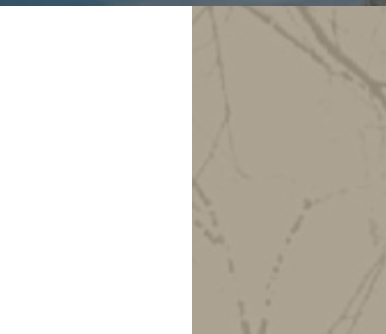
It is impossible to recount everything that occurred during those five and a half years in just these few pages, but I would be remiss not to mention a few additional cases where the LFC was called upon to make a significant contribution. This was the case, for example, when the Conseil de la recherche forestière du Québec and the Carrefour de la recherche forestière were created, where thousands of visitors familiarize themselves with the work underway at all of Quebec's research institutions. In addition, as Regional Director General, I was a member of an advisory committee on the renewal of the Quebec Forest Act. The LFC was also called upon in 1990 when the International Union of Forest Research Organizations (IUFRO) held its quinquennial conference in Montreal, during which our researchers played a leading role. Finally, our managers and professionals largely contributed to the presentation of Sylvilog, a demonstration of forestry equipment for private forests, at the same time and place that the CPPA (Canadian Pulp and Paper Association) presented equipment for public forests during DEMO.

My years with the LFC were a wonderful experience during which I had the opportunity to work with exceptionally skilled and dedicated people. When the LFRC celebrated its 25th anniversary in 1985, the theme was "growth". Growth is what I personally experienced over the years, just like the organization itself that has pursued its growth and involvement in all aspects of forestry both in Quebec and across the country. The memories will remain with me for years to come.

Yvan Hardy



Partners' Day in the Bas-Saint-Laurent Model Forest in 1994.



The Wladimir A. Smirnoff Fellowship was created in 2002.



Maple dieback and decline.



Broadcast of the CFS-LFC lecture series by videoconference.

Normand Lafrenière 1991-2007



In 2010, the Canadian Forest Service (CFS) celebrates the 50th anniversary of its operations in Quebec City. It was 50 years ago, in 1960, that the Laurentian Forestry Centre (LFC) building was inaugurated. Prior to that date, the first employees were housed at Université Laval's Faculty of Forestry, and it had become imperative that they be grouped together to make it easier for them to carry out their scientific work.

Starting in 1975, when I was working as an economic adviser reporting to Dr. Marcel Lortie, Director General at Environment Canada, I had an opportunity to become familiar with the forest research activities carried out by the LFC under the supervision of Dr. Jag S. Maini and, later on, of Dr. Carl Winget because at that time the CFS reported to the Environment Management Service of Environment Canada.

In 1982, the government of Pierre Elliott Trudeau assigned additional responsibilities in economic and forest development to the CFS, particularly the management of federal-provincial agreements and federal programs. At the time, I accepted the task of supervising new work teams in order to meet the government's expectations. A new Director General, Dr. Gilbert Paillé, was appointed. Dr. Paillé left the CFS in 1985 to become Associate Deputy Minister of Forests with the MRNQ.

Later, Jean-Claude Mercier, who had left the Quebec government to become Deputy Minister of Forests in Ottawa, appointed Dr. Yvan Hardy, former dean of Université Laval's Faculty of Forestry, to the position of Director General, CFS-LFC.

Dr. Hardy oversaw all of the scientific and forest development activities during the 1985-1990 period. In 1990, Mr. Mercier requested Dr. Hardy's services in Ottawa in order to round out his senior management team consisting of Tom Lee, Dr. Maini and other administrators and directors general at National Headquarters. Dr. Hardy became Assistant Deputy Minister responsible for operations and all regional centres of Forestry Canada.

In 1990, I was given the responsibility of supervising LFC activities and, following a competition held the next year, I became the seventh Director General of the CFS in Quebec. Augustin Lebeau was appointed Director of the Forest Development unit, and Dr. Michel Boudoux remained Research Director.

I realize that I had the privilege and the pleasure, both professionally and personally, to have provided support and assistance for over 15 years to three outstanding, highly competent and valued individuals who instilled in me a keen interest in forestry and helped me to better prepare myself for this new phase in my career. I would like to pay tribute to Dr. Marcel Lortie, Dr. Gilbert Paillé and Dr. Yvan Hardy.



1990-1995

This period was noteworthy for the many changes that took place and for the launching of several new initiatives at the LFC, both in scientific research and in forest development. The Management Committee members had to continually adapt to change, particularly Pauline Bouffard (Management Services), Claudette Goulette (Human Resources), and Jacques Babin (Communications). We relied on all of them to provide high-quality services for which they were commended highly on many occasions by the managers of the various programs.

RESEARCH PROGRAMS

Scientific activities have been the rationale and the backbone of the organization since it was established in the early 1900s. At intervals, of course, it has been necessary for National Headquarters and regional centre managers to assess the programs in order to adjust them to suit the forest context and conditions prevailing in Canada's various regions.

At the CFS in Quebec City, research scientists, program managers and management also conducted assessments in a medium- and long-term perspective (10 to 15 years in some cases). Two research programs, the forest protection research program and the forest resources research program consisted of 12 or so major projects with several dozen associated studies. Six project leaders, who were often senior research scientists, managed activities on a daily basis under the supervision of the Research Director.

Many would agree that investing the energy of six of the 30 research scientists in tasks that were often administrative in nature is not an assurance of good governance. Consequently, the Director General and Management Committee members decided to recentralize activities and set up two administrative units: the Forest Biology Program, under the supervision of Dr. Ariane Plourde, and the Forest Ecosystems Program, under the supervision of Dr. Denis Ouellet. In addition to freeing up senior research scientists so that they could continue their professional activities and provide scientific leadership in Quebec, the rest of Canada and foreign countries, this decision helped

to create greater flexibility and occupational mobility for professional and technical employees. This management model is still in effect in 2010.

To facilitate the renewal of the research scientists' workforce, a strategy was adopted to hire over 40 trainees on an annual and ongoing basis. Most of them were postgraduate and Ph.D. students in universities in Quebec, the rest of Canada and foreign countries. Several trainees were offered permanent positions in the late 1990s and early 2000s.

During that period, LFC research scientists also had considerable influence as associate professors under collaborative agreements with universities, especially with Université Laval and the Université du Québec à Montréal, particularly at the Ph.D. level.

CFS NETWORKS

After many discussions in CFS Operations Management Committee meetings chaired by Dr. Hardy in regard to opportunities for expanding collaborative scientific projects involving the regional centres, Dr. Fred Pollett, Director General of Science at National Headquarters, was given the responsibility of setting up a series of research networks. Ten networks were set up in areas such as biodiversity, pest control, genetics, biotechnology and forest productivity. Each centre was required to identify employees who would help to achieve the objectives of each network's programs and projects. This exercise took over a year and was followed by information sessions held with forest sector stakeholders, at least in Quebec.

From a management perspective, it was difficult and complex to set up these networks. Accountability in day-to-day management and the management of outcomes continued to be a concern. However, most research managers in the centres across Canada were supportive of this innovative model. Although this highly praiseworthy experiment only lasted a few years, it helped to create greater synergy between research teams as well as productive and effective partnerships that would be maintained over the coming years.

FOREST DEVELOPMENT PROGRAMS

Several major activities continued during this period. Some of them had been launched in the mid-1980s, such as the Canada-Quebec Subsidiary Agreement on Forestry Development (1985-1990), the Canada-Quebec Subsidiary Agreement on Forest Management in Public Forests of the Upper North Shore (1987-1992), the North American Maple Decline Project (1988-1993), the Aboriginal Lands Forest Management Program (1987-1996), and the Eastern Quebec Forestry Development Program, a federal initiative conducted under the overall supervision of Jean-Guy Gagnon in Rimouski, with the support of his team and 14 forestry associations in the region (1983-1996). LFC employees provided a tremendous amount of support in the implementation of these projects, whether it was administrative and financial support or the support provided by Normand Houle's team for planning and ongoing assessments.

The establishment of Forestry Canada in 1989 promoted the development of new federal initiatives to help the provinces and forest sector stakeholders implement activities during national and regional forest sector forums and conferences. In Quebec, another federal-provincial agreement was negotiated for private woodlot owners and their associations, the Fédération des producteurs de bois du Québec and its regional unions and the Regroupement des sociétés d'aménagement forestier du Québec (RESAM), in order to improve management of their woodlots (1992-1996).

New federal programs were also set up, such as the Testing, Experimentation and Technology Transfer in Forestry Program (1991-1997); the Tree Plan Canada Program, which was planned for the 1992-1999 period but was terminated in 1995 to be transformed into Tree Canada; and the Federal Lands Management Program, particularly its sites in Bagotville and Farnham (1994-2000) and Valcartier (1994-2013).

As part of the federal initiatives included in the Green Plan, Forestry Canada was given the responsibility of setting up a Canadian model forest network. A national competition was held and ten sites were selected by a committee of external experts. The Lower St. Lawrence Model Forest (1992-2007) and the Waswanipi First Nation Model Forest (1997-2007) would bring together many forest sector partners to implement the activities set out in the national program.

It would be too time-consuming to describe each of these initiatives in detail. However, a collection of summaries for each initiative was produced by the Policy and Liaison unit that replaced the Forest Development Directorate. Each summary explains the rationale, objectives, management method, types of programs and projects, achievements and investments involved in each initiative. Interested readers may want to consult this collection.

1995-2000

Starting in 1993-1994, the Government of Canada decided to restructure the entire federal administration and Forestry Canada as an independent entity was abolished. The Canadian Forest Service became a component of the new department of Natural Resources Canada, formerly known as Energy, Mines and Resources Canada.

The government also undertook an extensive program review in all federal departments and agencies in order to meet budget targets and reduce the federal deficit by several billions of dollars. The new department was hit with substantial cuts to most of its programs. At the CFS, the federal-provincial agreements were abolished upon expiry. In Quebec, the Eastern Quebec Forestry Development Program was also abolished. Dr. Hardy, the new Assistant Deputy Minister for the CFS, asked each of his senior managers to make staff reductions, which would result in the elimination of several hundred jobs across Canada. The Treasury Board then set up programs to facilitate early retirements for employees.



The Petawawa National Forestry Institute and the Newfoundland and Labrador regional office were forced to shut down their operations. The other regional centres also had to cut staff; about 40 LFC employees were affected by these measures. In the rest of Canada, the workforce reductions were achieved in most cases through the voluntary departure of some employees, while in Quebec, management considered it timely to reorganize the research teams on the basis of the Quebec forest sector's needs and priorities over the next few years. In the Forest Development Directorate, with the termination of activities related to the federal-provincial agreements and the Eastern Quebec Forestry Development Plan, it became imperative to restructure management, administrative, human resources and communications activities. This would take nearly two years and cause considerable upheaval in the workplace. At that time, research scientists arrived from Petawawa, and the LFC was assigned major responsibilities in the fields of somatic embryogenesis and tree biotechnology.

When Pauline Bouffard retired from her position, Sylvain Roy was appointed to the position while Joan Murphy was put in charge of Communications. They were very professional in taking up the challenges associated with the sound management of these two major activity areas in the organization.

CLOSING OF RESEARCH STATIONS

During this period, the research stations at Lac Normand in the Mauricie region, Chute-aux-Galets in the Saguenay-Lac-Saint-Jean region, and Métis in the Gaspé region shut down their activities, and the first two stations were transferred to the Quebec government. Only the Valcartier station remained operational.

OTHER MAJOR INITIATIVES


Despite the termination of the agreements, the Canadian Forest Service initiated a new federal program at the national level, the First Nations Forestry Program. In Quebec, this initiative became the successor to the Forest Management Program of Indian Lands (FMPIL) after 1996.

In January 1998, when Quebec was hit by a severe ice storm, the two levels of government agreed to combine their efforts to help affected woodlot owners. Natural Resources Canada and the MRNQ signed an administrative agreement, which exceptionally provided assistance during the 1999-2003 period for woodlot owners who did not derive their main income from forestry activities.

Following the scientific workforce restructuring resulting from the budget cuts, Dr. Hardy asked the Science Directorate at National Headquarters to make adjustments to the program together with the regional centres. For a few years, a new nation-wide exercise in setting priorities for activities based on results management led to the creation of more structured areas of excellence in the centres, such as forest fire research in Edmonton, biodiversity in Fredericton, forest insects in Sault Ste. Marie, databases and information management in Victoria, and tree genetics and biotechnology in Quebec City, in addition to other permanent scientific activities.

Closer relationships subsequently developed with the Direction de la recherche forestière and other entities of the MRNQ. At the time, there existed over 30 collaborative projects, which were reviewed periodically by the management of both institutions.

The Conseil de la recherche forestière du Québec continued to be a key authority in facilitating the co-ordination and planning of all forest research projects conducted in Quebec by the Quebec government, the federal government, universities, the Forest Engineering Research Institute of Canada (FERIC), Forintek and, to a lesser degree, the Pulp and Paper Research Institute of Canada (PAPRICAN). For many years, the Conseil was chaired by a high-level forest industry representative, Dr. Denis Brière of Kruger, followed by Jacques Robitaille, CEO of the Conseil de l'industrie forestière.



I was a member of the Board of Directors along with the following people: Marc Ledoux and Rémi Girard, both Assistant Deputy Ministers of the MRNQ; Claude Godbout, dean of the Faculty of Forestry of Université Laval; and Gilles Frisque from the Université du Québec, President of the Fédération des producteurs de bois du Québec. The Board of Directors was assisted by a Co-ordinating Committee made up of the directors of all the research institutes, including Dr. Denis Ouellet and Dr. Ariane Plourde of the CFS. Forums and major conferences were organized over the years to raise awareness of forest research activities carried out in foreign countries, the rest of Canada and Quebec. However, this organization terminated its activities a few years ago.

TOURS IN THE REGIONS

In the late 1990s, the CFS-LFC Management Committee deemed it necessary to increase its visibility among forest sector stakeholders across Quebec and to better understand their expectations of the organization. Planning and management meetings were held in the Lower St. Lawrence region, in Baie Comeau on the North Shore, in Chicoutimi in the Saguenay-Lac-Saint-Jean region, in Sherbrooke in the Eastern Townships, in Trois-Rivières in the Mauricie region, and in Amos in the Abitibi-Témiscamingue region. Usually, the Management Committee would meet for a working session followed by a meeting with regional forest sector leaders in order to better understand their problems, priorities and needs with respect to the CFS, in keeping with forest sector responsibilities. We found in every case that stakeholders liked this approach very much and it fostered several long-term collaborative activities, especially in scientific research.

Other major events helped to raise awareness of the organization. La Sarre, La Tuque and the Matapédia Valley were selected as Canadian forestry capitals and several activities were held every year in these towns and in the Lower St. Lawrence region. Lastly, the national CFS Management Committee held annual meetings in some of Quebec's regions where, once again, forest sector stakeholders could become familiar with the Canada-wide activities and programs of the CFS.

2000-2007

Several special activities took place at the LFC during this period, particularly the establishment of the Wladimir A. Smirnoff Fellowship, the Canada-Quebec Forest 2020 Agreement, the Forest Innovation Partnership (FIP), the World Forestry Congress, the creation of the Shared Services Office, and innovation management.

In addition, several employees participated in the work of the Quebec Federal Council in the areas of policy, science, Aboriginal affairs, informatics, administrative management, human resources and communications. Federal interdepartmental committees made a major contribution to promoting greater uniformity and an integrated approach among departments in the delivery of programs and services to Quebec citizens during the 1990s and 2000s. Our employees sat on committees on behalf of Natural Resources Canada, and thus there was a need to maintain close contacts with our colleagues in the other NRCan divisions in Quebec through an informal management structure chaired by the Director General of the CFS in Quebec.

I am also proud to highlight the significant contribution made by LFC scientific, professional and technical employees to extend our organization's influence in the province, across Canada and internationally. The vast amount of work done by our research scientists over the preceding period was recognized in annual promotion activities, and some individuals were promoted to the RES-3, RES-4 and RES-5 levels. Our research managers were called upon to take up new challenges at the national level and thus influenced key strategic directions in forest science. For example, Dr. Denis Ouellet contributed his knowledge and know-how to the development of a new strategic approach for the FERIC, Forintek and PAPRICAN research organizations during his assignment with the Forest Products Association of Canada in Ottawa. Dr. Ariane Plourde demonstrated leadership in genetics and biotechnology and chaired the interdepartmental research committee of the federal centres in Quebec. However, she eventually left our organization to become Director of the Maurice Lamontagne Institute of Fisheries and Oceans Canada in Mont-Joli.



WLADIMIR A. SMIRNOFF FELLOWSHIP

Following the death of the emeritus research scientist Wladimir A. Smirnof, LFC management decided to establish a fellowship for Ph.D. students in order to help them continue their scientific work in the field of biological control of insect pests, particularly spruce budworm and hemlock looper. A partnership was set up with the Société de protection des forêts contre les insectes et les maladies (SOPFIM) to fund a \$10,000 fellowship in equal portions. This initiative was well-received and made it possible for students to carry out projects in collaboration with research scientists at the CFS, universities and the MRNQ.

NRCan's SHARED SERVICES OFFICE

NRCan Deputy Minister George Anderson decided to rationalize the activities of management services, communications, human resources and informatics for the entire organization. Until then, managers in each division had been able to rely on the expertise of these services to manage their programs. For over a year, an extensive study was carried out by external consultants, who recommended that all of these services be centralized at National Headquarters and in the regions. There was only a limited number of employees occupying these positions in the regions, except at the CFS. The change created a great deal of uncertainty and the breaking-in period proved difficult for employees and managers because all managers of these administrative units would henceforth report to National Headquarters in Ottawa.

WORLD FORESTRY CONGRESS

In the late 1990s, Dr. Hardy had put forward Canada's candidacy to the Food and Agriculture Organization of the United Nations (FAO) in Rome for the purpose of hosting the 12th World Forestry Congress in Quebec City in the fall of 2003. The FAO authorities accepted the proposal, and the planning and organizing activities began with the hiring of Jean-Louis Kirouac as Secretary General of the Congress. Canada signed an administrative agreement with

this organization and an agreement with Quebec was also signed for the purpose of co-managing all of the events and sharing the funding costs for this initiative.

An organizing committee, an operations committee and several theme committees were set up to provide support for the Secretary General's team. Canadian and Quebec forest sector stakeholders worked together to achieve the objectives and strategic directions of the Congress. Naturally, many CFS and LFC employees provided a significant amount of assistance over a period of more than two years, and I had the honour and the privilege of overseeing their contributions on behalf of Canada.


More than 4,000 people from over 130 countries attended the sessions. A few hundred papers were presented during the week and, at the end of the meetings, the participants issued a policy statement. The Congress required an estimated total investment of \$18 million, including \$4 million contributed by the two governments.

DEPARTURE OF DR. YVAN HARDY

The 12th World Forestry Congress coincided with the departure of Dr. Hardy, Assistant Deputy Minister for the CFS since 1990, who left to take up new duties as NRCan's Chief Scientist in Ottawa. The Deputy Minister appointed Brian Emmett to be the new Assistant Deputy Minister for the CFS. Mr. Emmett held this position for nearly four years and was succeeded by Jim Farrell.

FOREST INNOVATION PARTNERSHIP (FIP) PROJECT

CFS management in Quebec City deemed it imperative to increase knowledge and technology transfer to forest sector stakeholders in the province. In 2003, FERIC, Forintek and the CFS got together to create the Forest Innovation Partnership (FIP). Demonstration sessions for regional forest sector stakeholders were held in various regions of Quebec, and employees of the three organizations helped put on the sessions.



The LFC lectures, which began in 1988, have become available to regional stakeholders through videoconferencing. This new initiative has been well-received across Quebec.

FOREST 2020

In the early 2000s, the Canadian Council of Forest Ministers (CCFM) agreed that it was necessary to accelerate the yields of Canada's forests by planting rapid-growth species on unforested lands and, at the same time, to facilitate carbon sequestration.

The CFS was given the responsibility of setting up a new program in various regions of Canada. In Quebec, we entered into a federal-provincial agreement to ensure the delivery of program activities (2004-2006) through regional private woodlot development agencies. The federal government covered all of the costs of this initiative.

Over a 30-year period, the two governments and Quebec forestry organizations have together invested over \$1 billion towards improving Quebec's public and private forest heritage. The federal government's share amounts to nearly 60% of the total cost.

INNOVATION MANAGEMENT AT THE CFS

Brian Emmett, Assistant Deputy Minister for the CFS, launched a vast operation to more effectively explain the organization's mission, mandate and strategic directions. A firm of external consultants from Boston was hired to provide support and coaching for this initiative of CFS senior management. Dr. Denis Ouellet was once again asked to oversee the project along with some of his colleagues at National Headquarters and in the other regions.

The CFS Management Committee members, including directors general in the regions and the regional directors and managers of Research and Policy and Liaison, were asked many times during the two-year exercise to determine the future priorities of the national organization. Over 35 programs and projects were selected as having priority. This exercise also helped us to more effectively

recentralize our collaborative activities with FERIC and Forintek. It also led to the creation of the Canadian Wood Fibre Centre. About 50 CFS employees, including about 10 in Quebec City, joined this new Canada-wide organization.

CONCLUSION

In November 2007, I retired after having dedicated 38 years of my professional career to the federal public service, including 25 years at the CFS in Quebec City. Starting in 1982, when I worked in the Forest Development Directorate, Lucie Labrecque and Charlotte Bédard were immensely supportive in helping me carry out my duties more effectively.

When I was appointed Director General in 1990, and during the following 17 years, I was again pleased and honoured to have the support of administrative assistants Andrée Montminy and Suzanne Doré.

I have wonderful memories of these people who sometimes shared difficult moments and intensely busy periods of work with me. I am very grateful to them.

It has already been 50 years! The Canadian Forest Service in Quebec City continues to be a great and dynamic institution serving all of Quebec's forest sector stakeholders, and its employees are making a significant contribution to the management of our forest heritage. Long live the Laurentian Forestry Centre!

Normand Lafrenière