

URBAN FORESTRY IN QUEBEC

by Emelie Desbiens

Abstract. Urban forestry is a reality in the province of Quebec, Canada. Since 1977, several major events have encouraged greater recognition of this discipline in Quebec. For the last few years, the Ministry of the Environment of Quebec has assumed a certain leadership in Urban Forestry by providing substantial assistance. An urban forestry handbook was recently published and is currently distributed to municipalities and other parties involved in urban forestry. An urban forestry assistance program is offered by the Ministry to assist them in the development of municipal urban forestry programs.

Résumé. La foresterie urbaine est une réalité dans la province de Québec, Canada. Depuis 1977, quelques événements majeurs ont encouragé une plus grande reconnaissance de cette discipline au Québec. Au cours des dernières années, le ministère de l'Environnement du Québec a assumé un certain leadership en foresterie urbaine en procurant de l'assistance technique. Récemment, un manuel de foresterie urbaine fut publié et est distribué présentement aux municipalités et aux autres intervenants en foresterie urbaine. Un programme d'assistance en foresterie urbaine est offert afin de les aider à élaborer des programmes municipaux de foresterie urbaine.

The province of Quebec (Canada) has 6,517,948 inhabitants. Only four municipalities have a population of over 100,000 (Montreal, Laval, Quebec and Longueuil) and 97% have under 25,000 inhabitants. The province is divided in 95 regional county municipalities (RCM) and three urban communities. Since 1979, each RCM is mandated by the legislature to develop a development plan. The municipalities themselves have to develop a local planning plan and bylaws.

In Quebec, legislation concerning urban forestry is not as specific as in the United States. There is no federal legislation on the matter. In the 70's, the Canadian Forestry Service was involved in urban forestry, but they dropped their urban forestry division in 1979. At the provincial level, some acts *which rule municipal and planning activities enable the municipalities to pass tree bylaws.* These bylaws can protect, maintain, plant or remove trees and establish parks. These municipal powers are discretionary rather than mandatory. Provincial legislation of the Ministry of Energy and Resources also established the "Tree and Forests Week", the first week of May.

Knowing the current economic situation in Quebec, and the municipalities restricted budgets, it is easy to understand why, even with these powers, they are not strongly involved in promoting urban forestry. The situation evolves slowly but surely. Gradually increasing concerns of the population and local leaders about the quality of the environment in cities bear some improvements and new hopes. In fact many events and achievements in Urban forestry deserve mention.

Urban forestry history. In 1977, the ISA Quebec chapter was founded. In 1979, the International Urban Forestry Symposium was held at Laval University (Quebec City) and gathered professionals and tree experts from around the world and those from Quebec involved in arboriculture and in urban forestry. During the same year, the first urban forestry consulting firm was founded. It led to the establishment of a few similar firms, in addition to the existing tree-service companies.

Since 1980, a curriculum in Urban forestry, for adults, is offered at a Forestry Technical College (evening classes). Courses of this program can also be given in other colleges in Quebec. Training courses are also sponsored by the Federal Employment Department and by private firms.

Ministry of the Environment of Quebec. Since 1980, the Ministry of the Environment has assumed a certain leadership in urban forestry by providing diverse technical assistance to better manage tree resources in cities. Assistance has been given for wooded area inventories, protection of parks or wooded areas, citizen-group actions and efforts to protect trees, and other projects related to trees.

Many documents were produced on urban forestry topics such as: tree problems in the Quebec region, incidence and control of Dutch elm disease, protection of trees during construction, inventory of wooded areas, tree bylaws and legislation, tree resources management, and others.

For my Master's degree, in 1984, I conducted a survey of the 36 municipalities located in the

most densely populated areas of the Montreal region. Nowhere was there a formal urban forestry program; however, in larger municipalities and in those with more qualified personnel, there were more positive tree resources management activities.

The main constraint evident in the overall analysis of the survey results was a lack of information on and understanding of tree planning and management. The optimal strategy calls for a clear commitment of all those concerned (municipal, regional and provincial government and citizen groups) toward the promotion and establishment of systematic urban forestry program at the municipal level.

In 1985, I was hired by the Ministry of the Environment to design an urban forestry handbook to assist the municipalities in the development of sound tree resources management programs. Detailed information is presented on tree inventory, tree management plans, tree bylaws and legislation, financing and promotion means, technical assistance and information sources, etc.

This handbook written in French (like almost all the other documents published on urban forestry in Quebec) was launched during an official ceremony with the Ministry of the Environment, last May. The handbook is given free of charge to municipalities and sold by the ISA Quebec chapter to others involved in urban forestry.

A structured assistance program for municipalities and citizen groups (tree commissions) is offered by the Ministry. I will be working full time on that program for the coming year. Training seminars will be given to municipalities who will commit themselves to establish tree commissions and to develop urban forestry programs. Our office will also represent a clearing house information center on urban forestry and arboriculture matters.

ISA Quebec Chapter. The Ministry of the Environment recognizes the great achievements of the ISA Quebec chapter during recent years. With its 140 members, the ISA Quebec chapter has accomplished a lot to promote better arboriculture practices and urban forestry programs.

The translation of the "Guide for Establishing the Value of Trees and Other Plants" has been undertaken. Many members have cooperated in

the writing of standards in arboriculture (tree planting and maintenance, nursery and security standards) published by the Office of Norms and Standards (governmental office). These standards are not mandatory; they can be requested in bids.

Gold leaf awards have been given to municipalities that have developed good urban forestry programs or activities such as Quebec, Montreal, St-Laurent, Trois-Rivieres, Sherbrooke, Lac St-Charles (involvement of a citizen group in the latter).

Quebec City has established an excellent systematic urban forestry program based on a computerized inventory. All work is done under contract. A Dutch elm disease control program assures the survival of elm trees and even allows the municipality to plant new elm trees. This program is unique in Quebec. Besides Quebec City, only a few other municipalities have made the effort to inventory and save their elms.

The association also plans activities during tree week, such as conferences and tree plantings.

The publication of a newsletter every three months also provides for up-to-date information on the status of urban forestry in Quebec and the new developments and up-coming events.

The last achievement, but not the least, in the establishment of a "Big Tree Program", in cooperation with the Quebec Forestry Association (similar to the one sponsored by the American Forestry Association).

Conclusion

As you can see, urban forestry plays an important role in Quebec, and also has a great future ahead. The Ministry of the Environment has officially committed itself to urban forestry and even the Ministry of Energy and Resources is planning to do the same. The arboriculture firms are improving their activities and more trained people and expertise are available to municipalities and citizens, for the benefit of trees.

More and more municipalities, through urban forestry programs adapted to their needs, are improving and will improve tree resources management in urban areas. Challenges still exist and better planning and cooperation between governments (provincial and municipal), citizen groups, professionals, builders and others are needed.

Solutions should be found to diversify means of financing urban forestry programs, to protect remnant wooded areas and individual trees, to improve arboriculture practices, tree planting, tree production and survival, and to strengthen citizen and political support for urban forestry.

Urban Forester
 Direction du patrimoine écologique
 Ministère de l'environnement
 3900, rue Marly
 Sainte Foy, Que. G1X 4E4
 Canada

INSECTICIDE SPRAYS FOR CONTROL OF THE NORTHERN PINE WEEVIL IN SOUTHERN ILLINOIS

by J.E. Appleby, F. Miller, and R. Randell

Abstract. The northern pine weevil, *Pissodes approximatus*, is a serious pest in Christmas tree plantations where harvesting of trees has occurred and where seedling trees have been planted. During the spring months the immature stages of the weevil develop in stumps from trees harvested during the previous November or December. When the adult weevils emerge during May and June they feed on seedling trees causing high mortality. Excellent control resulted from a carbofuran spray applied March 12, 1985 onto Scots pine boles in southern Illinois.

Résumé. Le charançon du tronc des pins, *Pissodes approximatus*, est particulièrement dommageable dans les plantations d'arbres de Noël où des arbres furent récoltés et où des semis furent plantés. Pendant les mois du printemps, les insectes passent par différents stades larvaires à l'intérieur des souches des arbres récoltés au cours des mois de novembre et décembre. Quand l'insecte adulte émerge en mai et juin, il se nourrit sur les arbres nouvellement plantés, causant un haut taux de mortalité. Un excellent contrôle fut assuré par la pulvérisation de carbofuran le 12 mars 1985 sur des plants de pin sylvestre localisés au sud de l'Illinois.

Landowners in the Midwest have found that sites which are not suitable for growing food crops can often be used for Christmas tree plantations. Profit can be gained through the sale of merchantable trees. During the period before tree

harvest, insects such as the Nantucket pine moth, *Rhyacionia frustrana*; European pine shoot moth, *R. bouliana*; Zimmerman pine moth, *Dioroctria zimmermani*; and various sawfly species can cause problems for the grower. After tree harvest, most growers desire to replant pine trees in the same area, and it is at that time when another serious insect problem may develop. Stumps of trees cut in November and December may serve the following spring as sites for the development of the northern pine weevil, *Pissodes approximatus* Hopk. Dead pine trees can also become infested as well as logs and larger pieces of slash that come in contact with the soil surface.

The northern pine weevil is found from Wisconsin and Illinois eastward, and from Pennsylvania southeastward as far south as North Carolina. Finnegan (2) reported the following pines as hosts: white pine, *Pinus strobus*; pitch pine, *P. rigida*; jack pine, *P. banksiana*; shortleaf pine, *P. echinata*; red pine, *P. resinosa*; shrub pine, *P. virginiana*; and mountain pine, *P. pungens*. Nielsen and Balderston (3, 4), Appleby et al. (1),