Wladimir A. Smirnoff
September 1, 1917-November 1, 2000

Wladimir Smirnoff died of a cerebral haemorrhage at home, on November 1, 2000. He leaves behind his wife Alexandra, his daughters Nathalie, Olga and Tania, their spouses and his grandchildren. Dr. Smirnoff was born on September 1, 1917 in St. Petersburg, Russia, which is where he completed his university studies. He received a degree in forest engineering from The Forest Institute of the Soviet Union and a Ph.D. in Biological Control from the Forestry Academy. At an early stage he became interested in the problem of protecting forests against insect pests.

Around the end of the Second World War, Dr. Smirnoff fled the USSR with his wife and their first daughter, Nathalie. He accepted a position as a research scientist with INRA and conducted leading-edge research for 10 years in Morocco that focused on developing methods for controlling the scale insect of palms. During this period, he completed a Ph.D. in Science at the Sorbonne in Paris, France. In the course of his research in North Africa, he crossed the Sahara Desert several times. He walked so fast on the sand, practically running, that his Moroccan collaborators nicknamed him “Faennec,” or sand fox.

In 1957, Dr. Smirnoff accepted a position as an insect pathology researcher with the Canadian Forest Service–Quebec Region. In his first studies, he isolated a very active strain of the nucleopolyhedrosis virus of the Swaine jackpine sawfly, a hymenopteran that causes severe damage in jack pine forests. He conducted research for the CFS for 28 years, making some very significant contributions to the advancement and recognition of insect pathology. More specifically, he isolated a number of entomopathogenic organisms such as microsporidia (*Thelohania pristiphorae*), nucleopolyhedrosis viruses (NPVs of *Erannis tillaria, Pristiphora geniculatta, Archipscerasivoranus*) and flagellates (*Herpetomonas swainei*).

Dr. Smirnoff's greatest contribution to the biological control of forest insect pests was, without a doubt, the persuasive skill he brought to bear in convincing forest resource managers and Canadian society at large of the benefits of using ultra low volume (ULV) concentrations of the microbial insecticide *Bacillus thuringiensis* for the operational control of outbreaks of spruce budworm, the most destructive pest of coniferous forests in North America. Some of these ULV

suspensions of *B. thuringiensis* were developed at the CFS-Quebec and can be sprayed at the rate of 2.0 to 2.5 L/ha using the requisite doses (20 to 30 BIU/ha). At a hearing before Quebec's public consultation board on environmental issues, he drank a glass containing a ULV suspension of *B. thuringiensis* to demonstrate to the shocked commissioners how safe he considered this product. This bacterium-based insecticide was subsequently adopted as a replacement for chemical pesticides and eventually became recognized as the microbial insecticide of choice for controlling the spruce budworm and other harmful forest lepidopterans in Canada and the United States.

Dr Smirnoff carried out most of his research at the Chute-aux-Galets Forest Research Station, located near Chicoutimi in the Saguenay-Lac-St-Jean region, 250 km north of Quebec City. This station's activities enabled several dozen researchers and students from Canada and around the world to specialize in biological control of insect pests. The Chute-aux-Galets laboratory earned international recognition, and the ambassadors of 17 countries visited it in the late 1970s.

During his career and by the time he retired in 1984, Wladimir had published more than 300 scientific articles and earned many awards, notably the Parizeau Award conferred by the Association Canadienne Française pour l'Avancement des Sciences, the medal of the Chemical Institute of Canada and the award of merit of the Quebec Order of Engineers. He was an honorary member of the Quebec Biologists' Association, and was especially proud to be made an Officer of the Order of Canada.Wladimir was not one to rest on his laurels, though. In 1987, he was appointed Researcher Emeritus in the Canadian Forest Service and until recently he was investigating ways of using the essential oils from balsam fir to purify the air.

A tireless worker, dynamic and committed, he was very demanding of both himself and his collaborators and he always kept abreast of the latest scientific advances. Although Wladimir liked to be in the spotlight, he always endeavoured to ensure that his research would benefit society. His motto might have been: "Give reign to the spirit." He was a jovial humanist, a lively and witty person, as well as a very faithful friend with an abiding concern for the well-being of others.

Wladmir's excellent communication skills and his imaginative expressions made him a very popular guest speaker. But most of all, Wladimir was a great lover of nature, especially the Laurentian forest. It was this love that he conveyed in his paintings, which are full of sunshine, flowers, dreams and symbols. Wladimir's legacy to all of us, his family and friends, is the wonder of discovery and a belief in social and humanitarian commitment in science.

José Valéro, Ph.D.
Sainte-Foy, December 5, 2000