centuries in many countries, it is only in comparatively recent years that this method of control has been placed on a scientific basis and applied on a large scale. The campaign against gypsy and browntail moths in the United States was largely responsible for this development in entomology.

Biological control has been used almost exclusively in dealing with insects accidentally imported from other countries. This was a most logical deduction from the realization that introduced insects constitute a special menace by the very fact that they are free from the parasites and predators which help in keeping them in check in the country of their origin and that, usually, they are quite immune from attack by native species. In Canada, the importation and propagation of foreign parasites have produced gratifying results. The European Lecanium scale and the satin moth have been successfully combated and a considerable measure of control has apparently been achieved in some areas by the introduction of parasites against the European larch sawfly. It was only natural, therefore, that when the problem of the European spruce sawfly arose, the importation of suitable parasitic species should have been resorted to at once. The seriousness of the situation fully warranted the expenditure of all the effort put forth in an attempt at stemming the progress of the infestation. In all, some 23 species have been tested to date and, although many of them have not been recovered in the field since the day of their liberation, this should not be interpreted too readily as being a sign of absolute failure. As a matter of fact, the latest reports tend to show that the efficacy of introduced parasites is very definitely increasing. The species most likely to play an important role in the control of the spruce sawfly are the cocoon parasite *Dalbominus* (*Microplectron*) *fuscipennis* (Zett.) and four larval parasites: *Exenterus amictorius* (Fab.), *E. claripennis* (Thom.), *E. vellicatus* (Cush.) and a species of *Sturmia*. It would appear that, for the present at least, *Exenterus* and *Sturmia* are more persistent than *Microplectron* when the numbers of the host are at low levels. In spite of many difficulties attending the collection of material for study and the consequent likelihood that actual parasitism may have been underestimated, more larval parasites were collected in 1945 than in the eight previous years combined. It seems quite probable, therefore, that at least the four above-mentioned species will increase in effectiveness from year to year.

The extensive use of insect parasites in combating introduced pests in itself constitutes an argument for further investigation of similar practices in dealing with certain native species. Several lines of endeavour are more or less clearly indicated. Among others are: the study of the effect of species already introduced; new introductions for specific purposes, especially when it appears that native parasites are not adequate; and also more intensive studies of native parasitic fauna and of methods by which its present effectiveness might be increased. Some steps have already been taken in this direction and it may reasonably be expected that, in years to come, this phase of biological control will become increasingly important in the field of applied entomology. In their work on parasites, the forest entomologists co-operate closely with the Dominion Parasite Laboratory at Belleville, Ont. This Laboratory is one of the most modern institutions of its kind in the world. It is adequately equipped for the importation, propagation and liberation of parasites in large numbers.

In the paragraph on losses resulting from insect outbreaks, casual mention was made of the "virus" disease of the European spruce sawfly. The spectacular manner in which this malady contributed to the rapid decline of one of the most dangerous