



**First Record of *Pleolophus basizona* Parasitizing *Neodiprion swainei***—*Pleolophus basizona* (Grav.), a European parasite liberated in the late nineteen thirties in an attempt to control the European spruce sawfly (*Diprion hercyniae* (Htg.)), has been found parasitising the Swaine jack-pine sawfly (*Neodiprion swainei* Midd.) during population studies on the latter in various localities in Quebec in 1964 and 1965 (Table 1). In addition to the localities shown in Table 1, *P. basizona* was also recovered from *N. swainei* during 1965 at Lake Oriskany, Laviolette County, and Lake Potherie, St. Maurice County.

Studies during 1966 have revealed that *P. basizona* is bivoltine on *N. swainei*. The estimates presented in Table 1 were obtained from collections made in the fall and thus are representative of populations of *P. basizona* overwintering on *N. swainei*. The adult parasites emerged from host cocoons in late May and early June, and immediately attacked current generation sawfly cocoons. Both pupae and adult sawflies were attacked in the cocoon. Second generation populations of *P. basizona* were considerably higher than first generation populations, undoubtedly because the second generation emerged in midsummer, before *N. swainei* spun its cocoon. Thus the parasite must restrict its attacks to as yet unemerged current generation host cocoons, or survive as adults until cocoon formation by the following generation of the host in September. Because *P. basizona* is bivoltine, its impact on host populations is potentially much greater than indicated in Table 1. Studies are now in progress to evaluate the importance of this parasite on *N. swainei*.

This is the first record of *P. basizona* parasitising *N. swainei*. It was previously recovered from *D. hercyniae* in a number of localities in Quebec and in Ontario (Finlayson, Thelma. Can. Entomologist. 92:20-37, 1960). In Ontario *P. basizona* has been known to occur in abundance on *N. sertifer* (Geoff.) (L. A. Lyons, Proc. Ent. Soc. Ont. 94: 5-37, 1964). Also, a collection of cocoons of *N. lecontei* (Fitch) from Namur, Papineau County, Quebec, made in October 1966, yielded two female specimens of *P. basizona*.

TABLE 1

Occurrence of *Pleolophus basizona* Grav. in *Neodiprion swainei* cocoon samples in Quebec in October 1964 and 1965

Year and Plot No.	Number of <i>P. basizona</i>		Number of cocoons reared	% Parasitism
	♂	♀		
1964				
Plot III.....	4	7	763	1.4
Plot IV.....	8	11	179	10.6
Plot V.....	14	33	593	7.9
1965 (by dissection—sex unclassifiable)				
Plot III.....	—	0	25	0
Plot IV.....	—	4	260	1.5
Plot V.....	—	3	61	4.9

Plot III—Lac des Iroquois, Roberval County  
 Plot IV—Rivière à Mars, Chicoutimi County  
 Plot V—Lac Caouasacouta, Laviolette County

Liberation records of *P. basizona* in Quebec have been published (B.M. McGugan and H.C. Coppell, Biological Control of Forest Insects. Tech. Comm. 2, Com. Inst. Biol. Control. Commonwealth Agr. Bur. (Gt. Brit.) 1962). The present study indicates that *P. basizona* has spread widely since its introduction in Quebec and is now well established on *N. swaini*, thus affording a reservoir of this parasite in the event of future *D. hercyniae* outbreaks. J. McLeod and R. Martineau, Forest Research Laboratory, Sillery, P.Q.