1. INTRODUCTION

The Pipevine Swallowtail (*Battus philenor* [Linnaeus, 1771]) belongs to a tribe of the swallowtail family known as the Troidini. This group of species has worldwide distribution, but is mainly found in Central and South America, as well as the Indo-Australian region (Braby 2000, p 251). In fact, the magnificent birdwing butterflies of South East Asia and adjacent regions are also of the Troidini tribe. In North America, two species from the Troidini tribe are regularly found, the Pipevine Swallowtail and the Polydamas Swallowtail (*Battus polydamas* [Linnaeus, 1758). *B. polydamas* has a more southern range and has never been recorded within Canadian borders. In contrast, *B. philenor* ranges from southern Canada to the Neotropics. Two subspecies are found in the US and Canada: subspecies *hirsuta* is found exclusively in northern California, while the rest of the populations are known as subspecies *philenor* (Fordyce 2000). Additional subspecies (*orsua*, *insularis*, *acauda*) are found in lowland tropical Mexico through to Guatamala and Costa Rica (Bauer and Frankenback 1999).

The vast majority of *B. philenor* sightings in Canada are from southern Ontario, especially in the Carolinian zone. However, there are isolated records from Killarney, Manitoba in 1942 and in Val Marie, Saskatchewan (Layberry *et al*. 1998, p 81). Within Ontario, Toronto Entomologists' Association (TEA) records show that strays have ranged far: Thunder Bay in 2001; Caribou Island in the middle of Lake Superior in 1979; and, in 2012, Kingston, Ontario (Jones *et al.* 2012; pers comm John Poland).

B. philenor is rare in southern Canada, although it can be observed in most years. TEA records show 108 observations of *B. philenor* in the past 30 years, or about 3-4 per year (Jones *et al.* 2012). The species is usually recorded in Ontario between mid-June and early October (Layberry *et al.* 1998, p 81), although reliable records exist from May 6 to October 15 (Jones *et al.* 2012). One record from St. Thomas is dated March 7, 1956, but this date is artificial and was from a reared specimen (pers comm Alan Macnaughton). There is also a very late record from Toronto dated December 6, 1933, the voucher specimen for which was examined at the Royal Ontario Museum. This was also likely a reared specimen (pers comm Colin Jones), with an artificial eclosion date.

Documented sightings of *B. philenor* ova and larvae prove that this species breeds in Ontario (Jones *et al.* 2012). However, the large changes in numbers of adult sightings from year to year suggest that most adults observed are migrants, probably from the second and third generations in the United States (Layberry *et al.* 1998). This species is believed to overwinter as a chrysalis, and one indication of overwintering in Canada is that of a "fairly fresh" adult observed at Point Pelee National Park on May 6, 1999 (Jones *et al.* 2012). One would expect more such evidence if overwintering were a regular or common phenomenon.

Even a few decades ago, it was apparent that there were permanent colonies as far north as Toronto that survived our winters (pers comm Glenn Richardson). The most probable explanation for the decline in overwintering colonies is that the foodplants, the non-native pipevines (genus *Aristolochia*), are not as popular among gardeners as they used to be. Before air conditioning became popular in the middle of the 20th