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**First Record of *Perilitus coccinellae* (Schrank) (Hymenoptera:
Braconidae) as a Parasite of *Coccinella novemnotata* Hbst. and
Coleomegilla maculata lengi Timb. (Coleoptera:
Coccinellidae) in Canada¹**

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In 1955 and 1956, while sampling corn stalks for larvae of the European corn borer in experimental plots at St. Jean, the author noted 23 adults of *Coleomegilla maculata lengi* Timb. and two adults of *Coccinella novemnotata* Hbst. that were parasitized and attached to the upper surfaces of corn leaves. Each beetle was astride a freshly formed cocoon and was held by a network of silk; many were alive when found. The parasite cocoons and the hosts were placed in closed petri dishes for observation. The parasites that emerged were identified by Dr. W. R. M. Mason, Entomology Division, Ottawa, as *Perilitus coccinellae* (Schrank) (= *Dinocampus terminatus* (Nees)).

The species was first described by Schrank in 1802 (Muesebeck *et al.*, 1951, p. 101) and its synonymy reviewed by Cushman (1922) and Muesebeck (1936, p. 12). Cushman (1913), Balduf (1926), Goidanich (1933) and many other authors mentioned by Jackson (1928) published observations on its life-history, habits and host associations. The distribution of this euphorine braconid, a parasite of numerous species of Coccinellidae, is cosmopolitan. Watanabe (1937, p. 130) reported it from Japan, Liu (1944) from China and records of it from New Zealand, Europe, North America, and Hawaii are mentioned by Balduf (1926). According to Balduf (1926), *P. coccinellae* attacks adult coccinellids only; he believed that it reproduced parthenogenetically, since the only male specimen on record at the time of his publication was one taken by Nees in 1834. Since then, two males have been reared in California (Muesebeck, 1936, p. 13) and one in Victoria, B.C., Canada (in Canadian National Collection, Ottawa). Timberlake (1916) reported that parasitism is not invariably fatal

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to the beetles, as some coccinellids fully recovered from the effects of parasitism for at least six weeks and a second generation of the parasite was reared from each of two beetles. According to Cushman (1913), the species hibernates as a larva within the host. Oglobin (1913), in an extensive study of this parasite in Russia, stated that it has four or five generations during one season and in captivity the adults lived about 20 days. Everly (1938), in his experimental corn field in Ohio, found that 0.5 per cent of *C. maculata lengi* observed were parasitized and two *P. coccinellae* were reared.

Two living parasitized adults of *Coleomegilla maculata lengi*, the most abundant predator of the European corn borer in the St. Jean experimental field in 1955 and 1956, were examined carefully to determine the point of emergence of the parasite. The author corroborated the findings of Cushman (1913) and Balduf (1926), namely that the parasite emerges through the dorsal portion of the membrane between the fifth and sixth abdominal segments, slightly to the right or left of the median line. The parasite adult always escaped from the pointed, or cephalic, end of the cocoon. Of seven adults reared during 1955 and 1956 none lived longer than two weeks. They were kept in a small screen cage in the insectary and fed with diluted molasses spread on bread placed in a petri dish. The interior of the cage was regularly sprayed with water to increase the humidity. When caged with adult coccinellids, the parasites were very active at first, but all the beetles caged with them escaped parasitism and lived for over a month. During these two seasons, parasitism by *P. coccinellae* of coccinellids observed in the experimental field was less than five per cent.

This is apparently the first published record of this euphorine braconid as a parasite of adult Coccinellidae in Canada.

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