

TABLE IV
Hosts, host plants, occurrence and percent parasitism of immature euphorine parasites of mirids in August.
N = host nymph

Hosts			Parasites				
Species	Date collected	Host plant	No. dissected	Species	Percent parasitism	Egg	Larval instar
							1 2+3 4
<i>Lygus lineolaris vanduzeei</i> Knight	22 August 1969	<i>Solidago canadensis</i>	100	<i>Peristenus pseudopallipes</i> (Loan)	8.0	0	6(2N3); 4(N4)
				<i>Leiophron lygivora</i> (Loan)			2(N4) 0

Waloff (1967) in England found that adults of the euphorines on plant bugs of broom emerged from overwintered cocoons when host nymphs were beginning to develop. Adults of *Peristenus pseudopallipes* remained in cocoons from July and August of 1970 to July of the following year and parasitized *Lygus vanduzeei* and second generation *Lygus lineolaris* on *Solidago canadensis* in late summer (Loan, 1970a).

FIELD DEVELOPMENT

The occurrence of parasite eggs and larvae is shown in Tables II-V. Most were found in May and June with fewer as the season advanced. Larvae of most parasite species completed development in, and emerged from, fifth instar nymphs. A few species, however, matured in, and emerged from, teneral adults of *Labops hirtus*, *Lygus lineolaris* (first generation), *Plagiognathus albonotatus* and *P. cornicola* (Loan, 1965, 1966). Unidentified euphorines were found in teneral adults of *Dereacoris alnicola*, *Lygocoris communis*, *Macrotylus sexguttatus* and *Monalocoris americanus*. Emergence from adults hosts appeared to follow arrested development of first instar parasite larvae in host nymphs. In a few cases, parasite larvae emerged from nymphs and adults of a host species: for example, from adult *Diaphnocoris chlorionis* in 1970 and from adult *Slaterocoris* in 1968. Parasitism of these adult hosts may have resulted from egg deposition in late instar nymphs with eggs and first instar larvae carried over to the teneral adult plant bugs. The period from egg deposition to emergence of the final instar larva ranged from four weeks for species emerging from nymphal hosts to seven weeks for species in adult hosts.

The euphorine larvae formed cocoons in the soil after emerging from their hosts. Larvae of *Leiophron maculipennis* that emerged late in June 1969 had developed into adults by late July; and larvae of *Peristenus pallipes* that emerged early in July 1967 were adults early in August. However, the adults did not emerge from cocoons until the following year.

Discussion

Near Belleville, Ontario, euphorine parasitism was found in 52 species of plant bugs on a wide range of plant hosts from late spring to late summer. The 18 reared eu-