

INCIDENCE OF APHIS CRACCIVORA KOCH. ON TRAPS AND PLANTS IN CANTERBURY

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Aphis craccivora Koch., the black bean aphid, is well known in New Zealand as a pest of broad bean (*Vicia faba* L.). Cottier (1953) recorded it from this host, and from several other legumes, viz. *Phaseolus vulgaris* L., *Pisum sativa* L., *Trifolium repens* L., *T. subterraneum* L., and *Vicia sativa* L. He also noted that this insect has been recorded in New Zealand under the names *A. laburni* Kalt. and *A. rumicis* L.

In aphid trapping in New Zealand it has been recorded as one of the less numerous aphids by Lamb (1958) and Lowe (1966). Its flights follow the general pattern of flights recorded for aphids in New Zealand, with highest numbers in the periods August to December and January to May. These are popularly known as spring and autumn flights respectively. There are marked differences in incidence of this aphid on traps, both between years and between seasons at two sites in Canterbury, viz. Lincoln and Annat. (See Table 1).

TABLE 1
Totals of *Aphis craccivora* on 3 traps
LINCOLN and ANNAT, 1959-65.

YEAR	LINCOLN		ANNAT	
	Autumn	Spring	Autumn	Spring
1959	0	43	0	8
1960	16*	5	0	0
1961	0	12	0	0
1962	3	6	—**	—**
1963	11	4	—**	0
1964	1*	0	0	0
1965	0	77	0	65
TOTALS	31	147	0	73

* All recorded in January.

** No trapping was carried out during this period.

This aphid has frequently been identified by the author on some of the hosts recorded by Cottier, and in addition on the following plants: *Chordospartium stevensoni* Cheesem., at Ashburton, 6.2.57; *Medicago lupulina* L., at Lincoln, 17.4.62, and at Timaru, 12.12.65; *Medicago polymorpha* L., at Timaru, 12.12.65; *Phaseolus multiflorus* Willd., at Christchurch, 6.12.65; *Trifolium hybridum* L., at Pukaki, 31.5.66; *Vicia angustifolia* L., at Christchurch, 3.1.63, and at Timaru, 12.12.65.

Dr. R. C. Close (pers. comm.) advises that this aphid is an efficient vector of pea top yellows virus, commonly seen in broad bean and capable of reducing yield also in peas by inhibiting seed-set. Kennedy et al (1962) in a summary of the literature on aphids and virus transfer list 13 tests of the efficiency of this vector. These show a positive result in eight tests on seven different legumes, including clovers and lucerne. No work has been done in New Zealand on the agricultural implications of the occasional high incidence of this aphid, but overseas work suggests that it could be a factor of importance in the spread of legume viruses here.

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