

Table 2.—A comparison of the pea aphid population records obtained with a sampling can by four individuals all sampling the same areas in a pea field.

INDIVIDUAL SAMPLING	AREA 1	AREA 2	AREA 3	AREA 4	TOTAL	MEAN, ¹ 25 TIPS
Stephenson	3,684	2,812	154	304	6,954	1,738
Usher	3,108	2,159	133	337	5,737	1,434
Mote	4,059	2,545	55	212	6,871	1,718
Gray	3,633	2,027	133	281	6,074	1,518
Total	14,484	9,543	475	1,134	25,636	

¹ Difference between means necessary for significance with odds of 19 to 1=444.

een inches ahead of the right foot ever so often. The number of steps taken between pickings was dependent on the size of the area to be sampled. Where it was desired to take samples on successive dates, definite markers were noted so that the later samples could be taken in the same area. An example of a field population record is given in figure 1. Four people participated in obtaining this record because the work was carried on in conjunction with another experiment station project. It was impossible for the same person to make all the counts. The record as shown in the graph indicates that two or more people can sample the same area and obtain equivalent population figures.

SUMMARY.—A method of sampling pea aphid populations by means of which two or more persons could sample the same area and obtain equivalent results was developed. It consisted of plucking the top six inches of the plants at random in an area, shaking the aphids from the plant tips, and counting the aphids. A sampling can which consisted of a funnel covered with coarse screen mounted below a gas chamber was used to separate the aphids from plant parts. The plant tips and aphids

were placed in the gas chamber containing fumes of methyl-iso-butyl ketone and left for 5 minutes. The fumes of the chemical caused the aphids to drop from the plant parts. The can containing the

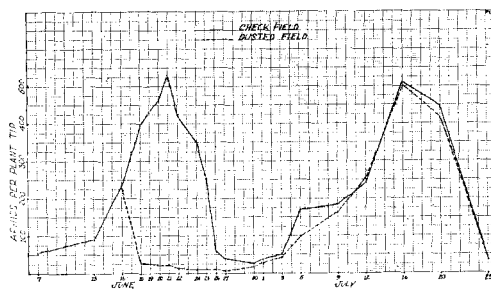


FIG. 3.—A typical field population record obtained by different individuals using the sampling can.

plant tips and aphids was given 50 shakes thus causing the aphids to fall through the screen and be caught in a 4-ounce *Sealrite* carton at the bottom of the funnel. The aphids were counted in the laboratory later. One person, without previous experience, could take 40 samples by this method and count the aphids in about 8 hours.—2-17-41.

MEGAMELUS DAVISI INFESTING WATER LILY IN HAWAII

The leafhopper, *Megamelus davisi* Van Duzee,¹ was first observed near Pearl City, Oahu by the writer on February 25, 1941. All adult leafhoppers examined were of the short-winged form. Since then, two long-winged specimens have been taken at three week intervals during April. Presumably the leafhopper was introduced with plants from aquatic gardens on the mainland.

¹ Family Delphacidae. Determination by Mr. O. H. Swezey.

The damage to old established plants, *Nymphaea* sp., is not apparent. But newly planted suckers up to six months old have been considerably set back, producing poor growth of leaves and inferior flowers. In view of the leafhopper's restricted choice of host plant and the small acreage involved, it is hoped that clean culture will eradicate this pest.—4-26-41.

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