

## Insects on Citrus

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During a survey of Tortricid leaf-rollers on citrus (*Citrus* spp.), carried out in the Auckland area from November, 1955, to May, 1957, it was found that other insects commonly inhabited leaf-rolls. These are recorded together with some interesting species not found in leaf-rolls.

Tiny insects, mainly psocids, Collembola, and small beetles, were often numerous in leaf-rolls and were sometimes found living with the leaf-roller caterpillars. Except in the general case, where other insects followed the caterpillars, no evidence of succession could be found in the leaf-roll fauna.

### COLLEMBOLA

Family ENTOMOBRYIDAE

**Entomobrya nivalis** (De Geer) (Det. J. T. Salmon)

Occurred commonly in leaf-rolls from early summer to late autumn being most abundant in March and April. This appears to be the first record of this habitat for the species.

### PSOCOPTERA

Family CAECILIDAE

**Caecilius flavistigma** Till.

A few in leaf-rolls and on open leaves in January and April.

**Ectopsocus congener** Till.

In leaf-rolls, a few in December, very common by late summer (March).

Both these species were recorded by Tillyard (1923) as being common in native bush and in orchards, and by Rawlings (1953) as being common on *Pinus radiata*.

### ORTHOPTERA

Family STENOPELMATIDAE

**Hemideina thoracica figurata** Walk. (Det. A. M. Richards).

One nymph of this weta was found in a leaf-roll in January.

### HEMIPTERA

Family LYGAEIDAE

**Pachybrachius nigriceps** (Dallas) (Det. T. E. Woodward).

One was found in a leaf-roll in April. A chance occurrence, the species being common on grasses.

Family PSEUDOCOCCIDAE

**Pseudococcus** sp.

Mealybugs were common in leaf-rolls throughout the summer and autumn, from December to May.

THYSANOPTERA

Family THIRIPIDAE

**Parthenothrips dracaenae** (Heeger)

Thrips were rarely found in leaf-rolls. This species is represented by one female taken from a leaf-roll in February. It has not previously been recorded on citrus.

Family PHLAEOTHIRIPIDAE

**Nesothrips propinquus breviceps** Bagn.

Females were taken from leaf-rolls in March and April.

LEPIDOPTERA

Family GEOMETRIDAE

**Selidosema suavis** (Butl.)

Two moths were bred from larvae taken in November, 1955, and December, 1956. This is the first record of the species on citrus.

**Selidosema dejectaria** (Walk.)

Two moths were bred from larvae taken in December, 1956. This is the first record of the species on citrus.

In December, 1956, seven looper caterpillars were found on citrus leaves and from these three of the moths recorded above were reared. Another looper was taken in April, 1957, but was not reared. As far as is known no Geometrid species have previously been recorded from citrus in New Zealand.

Family HELIODINIDAE

**Stathmopoda phlegyra** Meyr.

From time to time small brown caterpillars have been found in debris webbed to leaves, in dead small fruit, and in dead blossoms, on citrus trees. From two of these larvae, collected in November, 1956, moths emerged in January, 1957. In addition three larvae were collected from leaf-rolls in April, 1957. The species has not previously been recorded from citrus.

COLEOPTERA

Family CRYPTOPHAGIDAE

**Micrambina helmsi** Reitt. (Det. E. S. Gourlay).

Cryptophagids of three species were common in leaf-rolls throughout the summer. *M. helmsi* was the only one identified and is possibly the most common. Mr. Gourlay advised (*in pers. comm.*) that this species is widespread throughout New Zealand and may sometimes be found in large numbers on gorse flowers.

Family LATHRIIDAE

**Melanophthalma gibbosa** Herbst. (Det. D. Spiller).

Very common in leaf-rolls throughout the summer. It is a common scavenger.

Family COCCINELLIDAE

**Orcus chalybeus** Boisd.

Larvae were occasionally found in leaf-rolls where they would probably be predatory on some of the other insects recorded here.

A larva was also seen, on an open leaf on a tree, feeding on a batch of Noctuid moth eggs.

**Rhizobius ventralis** Er. (Det. D. Spiller).

One adult was found in a leaf-roll in December, 1955.

Family CURCULIONIDAE

**Pantomorus godmani** (Crotch)

Adults were common in leaf-rolls from March to May.

**Leptops squalidus** Boh.

Several specimens of this large Australian weevil were taken while eating foliage of Washington Naval Orange (*Citrus sinensis* Osbeck.) in Kerikeri in January, 1956. Specimens, in the Plant Diseases Division collection, have been taken at Kerikeri from time to time since 1945.

ACKNOWLEDGMENTS

Dr. J. T. Salmon, Victoria University, Wellington, Dr. T. E. Woodward, University of Queensland, Australia, Mr. E. S. Gourlay, Entomology Division, Nelson, Dr. Aola M. Richards and Dr. D. Spiller, Plant Diseases Division, have kindly identified some of the insects recorded here.

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