

# Pacific Pests, Pathogens and Weeds - Online edition

## Leafminers - General (110)

### Summary

- Worldwide distribution. There are several types attacking cucumber, bean, tomato, cabbage, and other families, and many plants in the cut flower trade. Damage is done by the larvae or maggot; the adult is a fly.
- Eggs laid beneath leaf surface; larvae hatch and mine the leaves, which dry up and fall early; loss of leaves may cause sunburn. Damage also done by female using ovipositors to feed on sap (both sexes feed on nectar).
- Biosecurity: not all species in all countries.
- Natural enemies: many exist giving effective control.
- Cultural control: remove weeds as they are leafminer hosts; collect and destroy trash after harvest.
- Chemical control: Bt (*Bacillus thuringiensis*), spinosad, abamectin, cyromazine; resistance to pyrethroids exists.

### Common Name

Leafminers. See other fact sheets for accounts on separate species (**Fact Sheet nos. 259, 262 and 377**).

### Scientific Name

*Liriomyza sativae* (vegetable leafminer); *Liriomyza trifolii* (chrysanthemum leafminer or American serpentine leafminer), *Liriomyza huidobrensis* (serpentine leafminer); *Liriomyza brassicae* (cabbage or serpentine leafminer).



Photo 1. Adult vegetable leafminer, *Liriomyza sativae* (side view). The adults feed on sap from leaves and nectar.



Photo 2. Adult chrysanthemum leafminer, *Liriomyza trifolii* (side view).

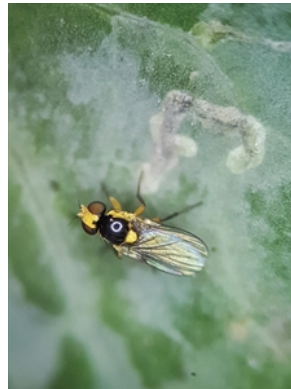


Photo 3. Cabbage leafminer, *Liriomyza brassicae* (from above).



Photo 4. Cabbage leafminer, *Liriomyza brassicae* (side view).



Photo 5. Characteristic patterns of damage on tomato made by the larvae or maggots of a *Liriomyza* leafminer feeding just under the surface layer of the leaves.



Photo 6. Cabbage leafminer, *Liriomyza brassicae*, mines on *Nasturtium*.



Photo 7. Close-up of Photo 3, showing the mines of cabbage leafminer, *Liriomyza brassicae*.

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Information from Waterhouse DF, Norris KR (1987) *Biological Control Pacific Prospects*. Inkata Press; and *Liriomyza huidobrensis* (serpentine leafminer-<https://www.cabi.org/cpc/datasheet/30956>), *Liriomyza brassicae* (serpentine leafminer-<https://www.cabi.org/cpc/datasheet/30949>), *Liriomyza sativae* (vegetable leaf miner-<https://www.cabi.org/cpc/datasheet/30960>), and *Liriomyza trifolii* (American serpentine leafminer-<https://www.cabi.org/cpc/datasheet/30965>). Crop Protection Compendium; and Leaf miner (2020) Department of Agriculture and Water Resources. (<https://www.agriculture.gov.au/pests-diseases-weeds/plant/leaf-miner/>); and from Sooda A *et al.* (2017) Multiplex real-time PCR assay for the detection of three invasive leafminer species: *Liriomyza huidobrensis*, *L. sativae* and *L. trifolii* (Diptera: Agromyzidae). *Austral Entomology* 56, 153-159. Photo 1 Pest and Diseases Image Library, Bugwood.org. Photo 2&5 J. Poorani, National Bureau of Agriculturally Important Insects (formerly PDIC), Bangalore, Karnataka, India. Photos 3&4 Ella Pirtle, cesar Pty. Ltd., 293, Royal Parade, Parkville, Victoria, Australia. Photos 6&7 and editing Peter Ridland. University of Melbourne, Victoria, Australia.

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