

# Why do many oaks have silvery and brown leaves this year?

## 1 It is a micro-moth

The leaves are attacked by a very small moth (a micro-moth) with the scientific name *Acrocercops brongniardella* (Swedish: *Snedstreckad ekstyltma*). This moth is only 10 mm long. The larvae of this moth feed inside of the oak leaves during the spring. When the larvae start to feed on the leaves, they become whitish or silvery (see photo on the right). Later in summer, the leaves will turn brown and may drop down from the tree, giving the tree canopy a less healthy look.



The area where the larvae feed within the leaf turns whitish or silvery. After the larvae exit the leaves, they turn brown (the photo on the right). Photos by Laura van Dijk



This is an adult moth of *Acrocercops brongniardella*



This are the larvae of the moth *Acrocercops brongniardella*

Photos by Heiner Ziegler and Laura van Dijk

## 2 More about this moth

This moth is from the Gracillariidae family. It has been in Sweden and around Stockholm for a long time, but became very abundant during recent years. There are often multiple larvae feeding together within the same leaf. The larva is up to 12 mm long and it is green during most of its life. However, just prior to exiting the leaf, the larvae become slightly reddish.

## 3 Lifecycle

In spring, the adult moth lays multiple eggs on the upper side of the young oak leaves. The larvae start to feed within the leaf (i.e. between the lower and upper epidermis), and this creates an empty feeding space inside the leaf. Larvae exit the leaf in late June; they descend from the leaf with a silk thread and pupate in the ground. Later in summer, the adult moths emerge from the ground. These moths typically overwinter indoors and in cracks of the bark.



Whitish leaf with larvae feeding inside of it.

Photo by Laura van Dijk



Photo by Laura van Dijk

One more example of the damaged leaf, after larvae have left.

## 4 Does the tree care?

The moth outbreaks may potentially result in reduced acorn production or tree growth, as the tree gets less energy from photosynthesis. If the outbreaks continue for many years or decades, tree growth may be more affected. Sometimes trees deal with the infestation by shedding the damaged leaves. Since leaf miner outbreaks have mainly happened in recent years it is hard to be certain of the causes and consequences.

## 5 Can I reduce the damage?

There is no specific control or management recommendation available for this moth. In nature, this species has several natural enemies (i.e. insects that feed on them). One of the most common enemies are tiny wasps. Now that the moth is so abundant, wasps may increase in abundance and this may in turn reduce the densities of the moths. This is called natural biological control.



Photo by Peter Bryant

Example of the small wasp attacking the larvae of the moth in nature.

If you have any questions, please contact [ayco.tack@su.se](mailto:ayco.tack@su.se) (Ayco Tack), [maria.faticov@su.se](mailto:maria.faticov@su.se) (Maria Faticov) or [amanda.bengtsson@su.se](mailto:amanda.bengtsson@su.se) (Amanda Gonzalez Bengtsson)