

Ledtrap manual

You have received an LEDtrap with accessories. This has been developed to count moths in a simple way and thus to expand the moth monitoring network. Not only in gardens, but also in nature reserves and agricultural areas. The big advantage compared to conventional lighttraps is that no 220V electricitypower connection is needed, so you can use it in places without power. If you want to place it in a nature reserve or on agricultural fields, first ask permission from the land owner.

This LEDtrap is composed by Amfors, a company with a social workplace.

The LEDtrap consists of the following parts:

- a bucket with a lid with a round hole in it, where the funnel can go.
- a power bank with cable with USB connection to charge it via a USB charger (not included).
- two egg cartons that can be placed upright in the bucket so that the butterflies can hide underneath.
- a cable with the USB connection to plug into the power bank, a light sensor, three Plexiglas plates and the LED strip itself. This gives you everything you need to get started right away to attract moths. The power bank may just need a little extra charging. Before you can actually start catching, you need to assemble the LEDtrap. The steps for this are explained below.



Installing the LEDtrap

Before installing the LEDtrap for the first time:

1. Peel off the protective film on both sides of each Plexiglas plate.
2. Insert the USB connection into the bucket via the existing slot on the side. This allows the power bank to stand in the bucket, and it stays dry in drizzly weather. If rain is forecast, place the power bank in a plastic bag. The equipment isn't waterproof, so don't place it with too much rain.



Open the slot slightly with your fingers to allow the USB connector to pass through.

Note: Lower the cord to the hole at the bottom of the slot. Do this very carefully, otherwise the cord may be damaged. For this reason, it is recommended to leave the cord in the bucket after use. If you use multiple LEDtraps, it is recommended to skip this step and pass the cord under the lid. This prevents damage to the wire when stacking the buckets.



Carefully lower the cord to the hole.



Placing the LEDtrap

The following steps must be followed each time the bucket is placed. This has a light sensor so that it can be placed during the day. It will then turn on automatically at dusk.

1. Put the two egg cartons upright in the LEDtrap. The butterflies can hide under these boxes when they land in the bucket.
2. Connect the power bank and place it upright in the bucket. When properly connected, a light will flash near the light sensor.



Put two egg cartons upright in the bucket.

Note: There are two different USB connections. The one with one lighting bolt on it consumes much less power than the one with two, so it's recommended to use this connector.

3. Put the lid on the bucket, but do not click it into place. Otherwise there will be such a shock to the bucket when you try to empty it that the moths will become active and possibly fly away.



4. Insert the funnel into the hole in the bucket lid and slide the tube with the LED strip on it over the tips at the bottom of the opening of the Plexiglas plates. This keeps the tube in place.



Slide the tube over the tips of the plates.



Place the slides between the studs.

5. Place each Plexiglas slide between the two studs in the funnel.



This is the screw for the light sensor.



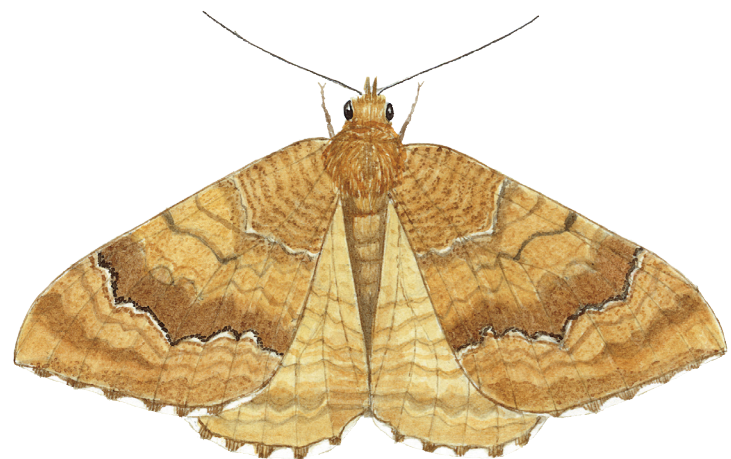
The light sensor is attached to the screw.

6. There is a screw on the side of the bucket to which the light sensor can be attached.
7. If necessary, pull the cord at the top of the LED strip a little tighter, so that the tube with the LED strip stands upright between the three Plexiglas plates.
8. Place the LEDtrap at the same location each time.



Recording data



The power of monitoring is in repeated measurements, and many people following the same protocol so densities can be compared in space and time. After fieldwork making the counts available is a vital next step. You can register your trap at butterfly-monitoring.net/my-moth-traps and use either this site to enter you counts, or the ButterflyCount app (available for Android and iPhone). That way your data can be immediately used for research and conservation. Of course you can always download your data to an excel file for personal use.



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Drawings: Renée den Besten. Photo's : Jurriën van Deijk.

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Tips

- Place the LedTrap on **solid ground**.
- **If rain is expected** you must protect the powerbank from becoming wet. You can do this by putting it in an enclosed plastic bag or plastic tub.
- When the LedTrap overturns, there is the danger that the wires may get damaged. **If strong wind is expected**, you can put a heavy stone inside or secure the trap with a tent pag through the bottom (by first making a small hole).

Emptying the LedTrap

What should you do when emptying the LedTrap:

1. Try to photograph each moth.
2. Check carefully if there are moths outside the trap. Be careful when approaching the LEDtrap, otherwise those on the outside might fly away before you have to chance to photograph them.
3. Be aware that sometimes moths settle just below the lid of the bucket, so be careful when opening the trap.



Kijk eerst goed wat voor vlinders er buiten de emmer zitten.



4. When recording species and their abundance please distinguish between moths inside and outside the trap.
5. Empty the LedTrap early in the morning. If the sun shines on the bucket, the moths might become active and fly away when you open the trap.



Moths resting on the inside of the funnel.



Moths like to sit in the deepest recesses of the egg boxes.

6. Remove the Plexiglas plate and the funnel. Beware: sometimes moths rest on the inside of the funnel.
7. Carefully remove the egg boxes from the bucket. The moths often like to rest in the deepest recesses of the egg box. When you can't view them properly, first try photographing all the other moths, and then carefully try to remove the moth by gently tapping the egg box against your hand and then take your photograph.
8. Check the inside of the bucket and make photos of all moths present.
9. Clean and store the LedTrap and charge the powerbank immediately, so it is ready to use on your next trapping night.



Manual LedTrap

