Breeding Leucanella fusca and other Leucanella and Automeris species

Dear Automeris and Leucanella Fans,

Lately I was asked by various breeders - both beginners and experienced breeders - for advice how to raise Leucanella fusca.

I cannot give advice how to do it correctly or render a complete typical breeding report since I've bred Leucanella fusca for the first time last year and maybe I was just lucky.

What I can do is to describe in detail some aspects of the way I breed Leucanella and Automeris species in general with an accent on Leucanella fusca. I especially take into consideration the questions I was asked.

Maybe an interested breeder can deduce some ideas or suggestions from this report for himself according to his own experience and breeding environment.

There are also other very good breeding reports on actias.de. I recommend strongly to read them as well to get a better overall picture.

Unfortunately I don't have many pictures and some are of poor quality. But wherever possible I tried to illustrate my descriptions.

I write this report in English since actias.de has an international audience. I hope it is ok.

The overall conditions:

- So far I breed all butterflies in my flat.
- Room temperature normally is between 20 and 22°C throughout the year. But during summer time the temperature can reach 25 to 27°C for some weeks.
- The humidity is about 50% except for rainy days or when I put up the drying rack for my laundry. Then the humidity is higher but I never measured it.
- I've raised all my Automeris and Leucanella species under these conditions.

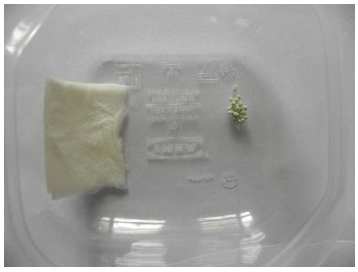
The eggs:

- Hatching time of the caterpillars: According to the breeder by whom I bought the eggs the hatching time of the caterpillars is 3-4 weeks depending on the temperature.
- The Micropyles of many Automeris species turn black after about 4-5 days. At least the micropyles of Leucanella hosmera turn black very late just a few days before hatching. Maybe it's the same with Leucanella fusca. I keep a small cluster of eggs right next to me to watch closely the color of the micropyles. We will see soon. I will tell you.

- Prior to hatching the eggs change their colour from white to light-blueish-greyish.

 Leucanella fusca: Cluster of eggs, 1 day old

- The eggs are prone to dry out. There are different methods how to avoid this (see also respective reports on actias.de). I keep the eggs in a small plastic box and do it this way: Every second day I take a piece of toilet-paper, fold it a couple of times, soak it with water and put it into the plastic box overnight opposite the eggs. The next day I take it out again. I don't want the wet piece of paper to be too long in the box because molding is the next problem that has to be avoided at all costs.

 Storage of the eggs

Caterpillars L1 – L3:

- In the beginning I use a small plastic box (10x10x4cm for L1 and 12x12x5cm for L2-L3). Sometimes the caterpillars wander around a lot. In a small box it's easier for them to find back to the food.
- The plastic box has a lid that closes the box pretty tightly. If I don't close the lid properly the small cats might escape.
- I do not put a piece of kitchen or toilet paper on the bottom of the box. The little cats might get tangled.
- I don't spray the box or the caterpillars. I snap some water with my finger onto the fresh leaf. I change the leaf every second day latest. Just a little water, not too much.

 Automeris pelaezi: Caterpillars L1

- I open the box twice a day for ventilation. If possible and the cats don't wander around too much I open the box for a couple of minutes.
- I take special attention that no frass gets in touch with the water droplets. If that happens I take a piece of toilet paper and soak up the droplet of water and remove the frass. Humidity and frass are a very bad combination for the caterpillars and lead to all sorts of problems especially infections.
- When I change food I take a second box for the fresh leaves. Then I put the cats into the new box and clean the old box thoroughly.
- I do not disturb or touch the caterpillars. I take the old leaf and cut it around the cluster with the cats and put it onto the new leaf. I remove the old leaf when the cats have crawled onto the new leaf, i.e one or even two days later.

Leucanella fusca: Caterpillars L2

Automeris randa Caterpillars L2

- If some caterpillars sit on the underside of the lid or on the wall of the box I do not touch them. I put the box and/or the lid in a bigger box, put some leaves into it and let the cats crawl off the lid by themselves. When they are on the leaf again I put them back to the others.
- I also wedge a corner of the leaf between the box and the lid. So it is easier for the little cats to find the way back to the food source when they sit on the underside of the lid.
- Especially during the molting phase I do not disturb or touch the caterpillars. So I just lay the old leaf onto the new leaf. That's normally an easy job for the cats mostly sit tightly together.

Automeris pelaezi: Caterpillars during molting phase L1 to L2

- The caterpillars spin threads to have a better hold. When I change the food or clean the box I try to not destroy the threads or tear them away. Don't force them down from their spinning threads. They seem to be very sensitive about that. On the picture below you clearly can see the spinning threads of the caterpillars.

Leucanella hosmera: Caterpillars L2

- When the caterpillars grow bigger (L3) or I have a great number of caterpillars I take a bigger box of course. The size of this box is about 14x14x6cm.

Leucanella fusca: Caterpillars L3 Automeris dagmarae: Molting phase L2 to L3

- Sometimes the caterpillars stop eating and it gets desperate. Then I try another kind of food plant. In these cases I offer different food plants and let the cats decide what they prefer. The cats of Leucanella hosmera carried it to extremes. The first 2 instars they ate Ligustrum. The next 2 instars they took Katsura tree and the last three instars they enjoyed oak.

Leucanella hosmera: Caterpillars L2

Caterpillars L4 – Final Instar:

- Caterpillars from L4 to the final instar I normally hold in an off-the-shelf aerarium, either 40x40x60cm or 60x60x100cm, depending on the size and the number of the cats.
- I put the food plants and twigs into a bottle of water and take care that the mouth of the bottle is tightly closed. On the one hand caterpillars tend to crawl into the water and drown and on the other hand no frass should drop into the water and contaminate it.
- I put some layers of newspaper on the bottom of the aerarium out of two reasons: Firstly I can clean the aerarium more easily and if necessary just take away one layer of newspaper with the frass to have a clean bottom again. Secondly some caterpillars spin their cocoons on the bottom between the layers of newspaper.
- Automeris and Leucanella species are very gregarious in the first instars. Later it's different. That varies from one species to the other. For example: Automeris dagmarae are gregarious till the last instar and even partly spin their cocoons in clusters whereas Leucanella fusca is solitary and needs a lot of space.

Leucanella fusca: Final instar

Automeris dagmarae: Final instar

At the end some facts and figures of my breeding of Leucanella fusca:

- My breeding of Leucanella fusca in numbers: I bought 20 eggs, 12 caterpillars hatched and I yielded 8 cocoons. Up to now 3 females and 4 males eclosed.
- Duration of the breeding: It took at least 3 months, from mid-May to about mid-August. The caterpillars grow slowly.
- Number of instars: I'm not quite sure. I lost track because the development time of the caterpillars varied up to almost two weeks. Maybe the "female" caterpillars have one instar more. There certainly is an expert out there who can answer this question.

- Size of the caterpillars: They get pretty large in size, at least the “female ones”. Similar size to that one of Automeris randa on the picture below.

Automeris randa: Final instar

- Size of the adults: The male and female vary considerably in size.

Leucanella fusca: Female

Leucanella fusca: Pair

- Origin of Leucanella fusca: West-Oaxaca, Mexiko – F0
- Host plant: *Prunus cerasifera* 'Nigra'

Final words:

So far my way how I raise Automeris and Leucanella species. I hope these insights are helpful. But please remember: This is only one possible way how to do it. There are certainly more ways which lead to success. And there are still more questions than answers. Therefore I would appreciate it very much if you share your experiences as well. It’s certainly worth while and many breeders can profit from it.

If you have any questions please feel free to ask.

Best regards,

Karl