

## Photos of OE on Monarchs. Prepared by Ruth Meredith 7/2017

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OE is protozoan parasite that affects Monarch and Queen butterflies. It does not kill the host butterfly but will replicate during the chrysalis stage of the monarch and will release many spores when the butterfly ecloses. Adult butterflies spread the spores as they feed on milkweed and the spores drop off onto the leaves or when an infected female lays eggs, as the spores are on the egg shell. A more in-depth explanation can be found at this site <http://monarchparasites.uga.edu/whatisOE/>

Infected monarchs may appear sick or crumpled when they eclose, or sometimes they appear perfectly formed; but their bodies can still be covered in these OE spores. For those butterfly enthusiasts that rear monarchs inside, it can be helpful to check your adult butterflies for the OE spores, and to euthanize heavily infected adults, rather than releasing them to the outdoors to continue spreading the spores to the wild population.

If eggs are collected from outside, they can be processed through a bleach rinse that will kill the spores on the egg casing (the baby caterpillar's first meal). Milkweed that is exposed to wild monarchs should also be bleached before being fed to the caterpillars raised inside, to reduce the exposure to the spores.

Last fall I had such an abysmal failure to raise healthy monarchs in August and September that I invested in a \$20 digital microscope from ebay to test my monarchs. This website gives a very nice explanation of how to use clear tape to remove a few scales from the butterfly's abdomen and adhere them to an index card. The USB microscope attached to your computer can then be used to check for the presence of OE <http://monarchparasites.uga.edu/testing/taping.html>

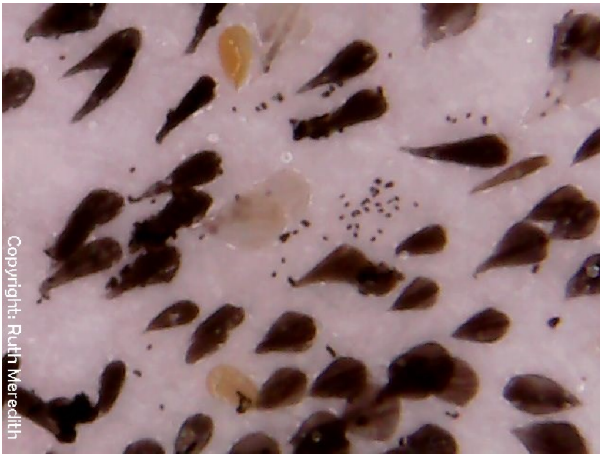
I hope that you all will find these photos beneficial, and might even spur some of you to invest in the inexpensive microscope to check your own stock. Below are some of the images I have made with the \$20 microscope. Both healthy and diseased.



Healthy scales and no OE spores

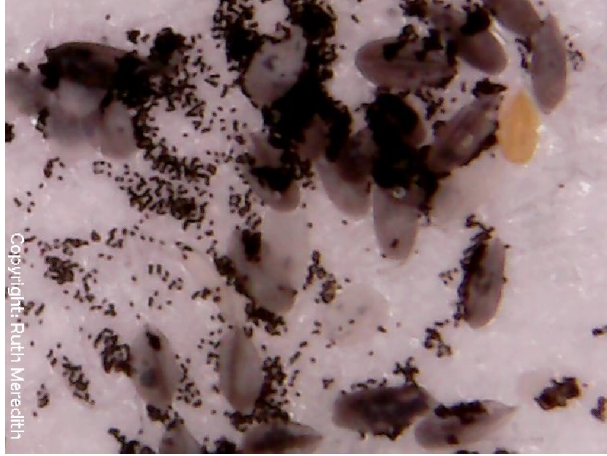
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Copyright: Ruth Meredith

Some OE present  
(those little black football shaped dots)



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Heavily infested with OE

Link to microscope on ebay. (If this listing has ended, search on "USB microscope 1000")

<http://www.ebay.com/itm/2MP-1000X-8-LED-USB-Digital-Microscope-Endoscope-Zoom-Camera-Magnifier-Stand-/391444129697?epid=22003058116&hash=item5b23e367a1:g:3IEAAOSwaZdXla9G>



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