

### Sample suggestions

# It's a small world: using microscopy to link science, technology, and art

- **Mushroom lamellae**

As shown in the article, the lamellae found on the underside of mushroom caps can look captivating under the microscope when using reflectance microscopy.

- **Insects**

You can place an insect on a small Petri dish and use this instead of a microscope slide. Usually, reflectance microscopy is a good choice here, but, if you happen to find a (partially) translucent insect, you can also test out transmission microscopy.

- **Artemia (brine shrimp)**

Brine shrimp eggs can remain dormant for a long time. They can be bought from the pet store and hatch in salt water after one day. These can then be placed in a Petri dish for imaging. Since brine shrimp are not fully translucent, using reflectance microscopy to image them is the way to go.

- **Any plant leaf, stem, or root**

Some plants have interesting leaf structures. Geraniums, for example, have plant hairs, also known as trichomes, on its leaves. Gallium species are another good example; the hooks can be seen on leaves and fruits when using reflectance microscopy. The leaves of the common houseplant *Tradescantia zebrina* look spectacular under a transmission microscope because most of the leaf cells are purple but the stomata remain bright green.



*Tradescantia zebrina* leaves

Image: Mokie/[Wikipedia](#), [CC BY-SA 4.0](#)

Stems (such as celery) and roots are also interesting specimens. To see different structures and cells, the sample first needs to be sliced thinly enough, perhaps with additional staining, and then imaged using transmission microscopy.

- ***Silene vulgaris* seeds**

*Silene vulgaris* is a common wildflower often found close to meadows, in the woods, or in open fields. They are easy to spot by their flowers.



*Silene vulgaris* in Aspen, Colorado  
Image: Rhododendrites/[Wikipedia](#), [CC BY-SA 4.0](#)

Opening up the flower gives you access to the seeds, which show an amazing texture and pattern. The photos below were taken at 40× (left) and 200× (right) magnification using reflectance microscopy.

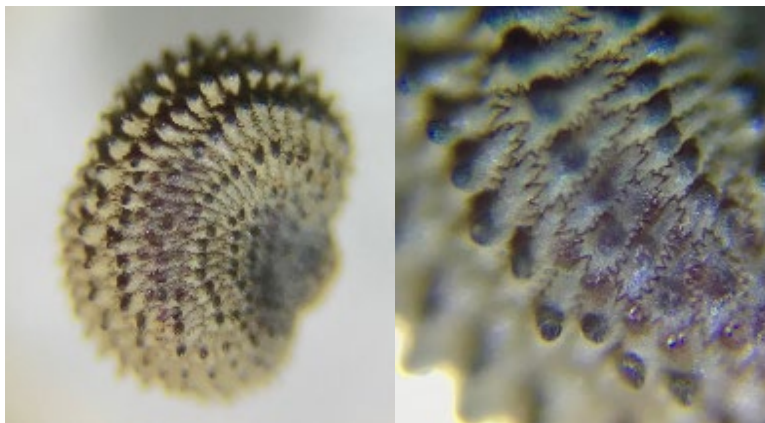


Image: ©Julianna Patricia Varga