Lachnum virgineum

Tiny Treasures of the Forest

Alison Pollack

My happy place is a wet forest, on my knees scanning decomposing wood and leaf litter. At each dot of color I spot, I catch my breath, and hover over it with a lit magnifying lens to see what I can discover. The hunt is for tiny fungi, primarily Ascomycetes and Myxomycetes (slime molds).

Those dots of color, you might have noticed them—a tiny spot at your feet, a freckle on the edge of a leaf. They reveal themselves with the magnification of my camera lenses, and that's when I'm lost to the world. An entire structure encased on the head of a pin, tiny hairs, crystals, water droplets, rainbows of color. The smaller the fungus, the bigger the revelation.

And there are some so small, like the *Graddonidiscus*, *Neodasyscypha cerina*, and *Perrotia flammea* shown here, smaller than the head of a pin, 0.2 mm and 0.5 mm across, that can't be captured with a macro lens in the forest. Those miniature marvels are cradled home in a tackle box, their substrate attached, and photographed with an extreme macro lens or a 10x microscope objective mounted to my camera. You can see the results here. They are tiny in stature, huge in beauty.

To photograph with such high magnification, the depth of field, i.e., the portion of the subject that is in sharp focus, can be as small as a few microns (a thousandth of a millimeter). To create an image with the entire fruiting body in focus requires a technique called focus stacking. My camera is mounted on an electronic rail that moves it a few microns between each image. To create a single photo of a sub-millimeter sized mushroom, hundreds of individual images, each with a different

Scutellinia scutellata

Crepidotus crocophyllus

focal length, are composited using software that combines the in-focus portions of each individual image.

Unveiling this world in photographs is one project and identifying them another. A favorite reference is the two-volume set, *Fungi of Temperate Europe*, which includes 7,000 photos and descriptions of hundreds of tiny fungi not included in most other mushroom guides. Social media ID groups and the worldwide mycologist community are also great resources.

Discovering this fungal world, so tiny in scale and fragile in structure, is a recurring exciting revelation. From that first naked eye dot of color on the forest floor to creating and sharing finished images online with an identification, I am spellbound. I hope you are too!

You can see more of Alison's Photos on Instagram @marin_mushrooms, and Facebook @AlisonKPollack.

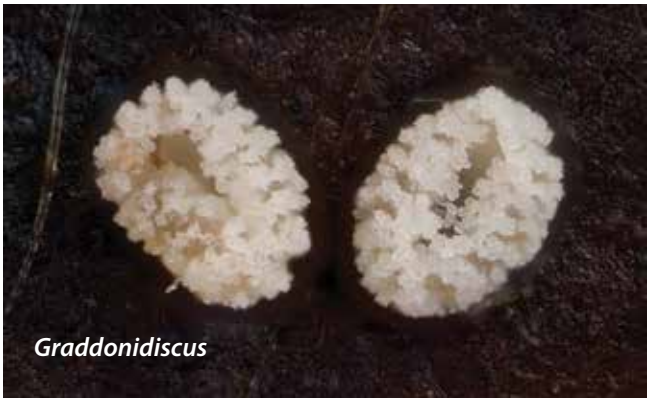
Cyphelloid

Amicodisca

Lachnellula calyciformis

Plectania melastoma

Images continue through page 57.



Graddonidiscus

Pilobolus

Ascomycota and anamorph

Typhula

Anthina flammea

Chloroscypha

Perrotia flammea

Trichophaeopsis

Chlorociboria aeruginascens

Unknown

Microstoma protractum

Lachnum virgineum

Neodasyscypha cerina