

SAND COLLECTION FOR A MICROSCOPIST

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I'm an inveterate collector: stamps, coins, minerals, fossils, you name it... A friend of mine afflicted by the same incurable disease gave me a nice idea to present and preserve my sand collection: glue it on microscope slides.

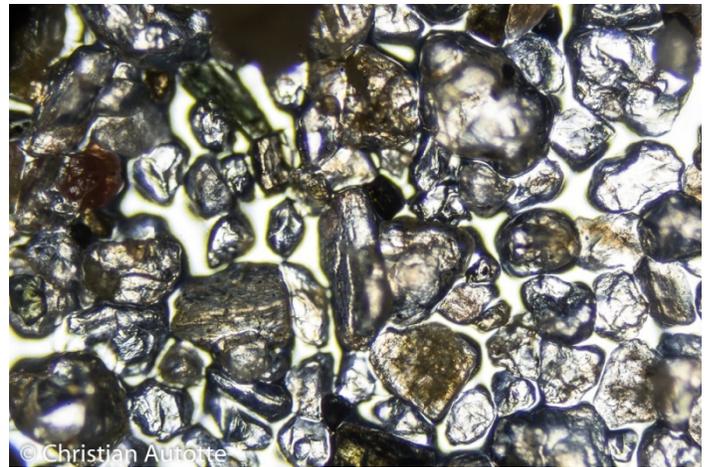
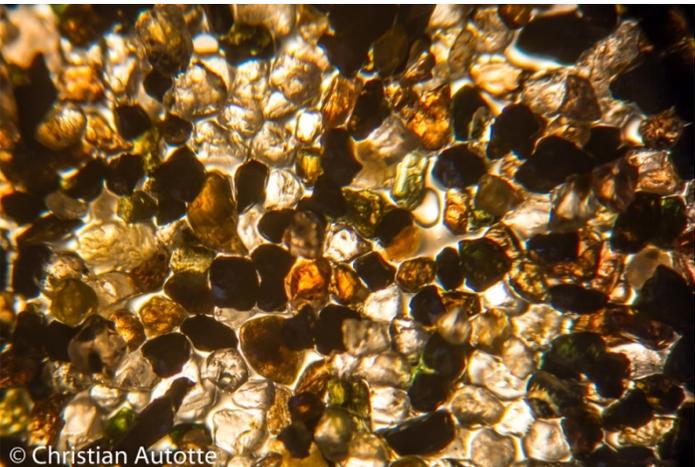
At first, the idea didn't appeal to me. I keep the bulk of my sand collection in plastic film containers; each is properly labelled and the whole collection can be stored in a small box. But to examine a sample in detail (i.e. under the microscope) means opening the container, pouring a small amount of sand on a slide, and hope you don't sneeze while examining it... Then the sample has to be returned to the right container, making sure that only the right grains of sand end up where they belong. Gluing a sample on a slide eliminates the risk of confusion, but it does result in a slightly different look, not totally unpleasant.

Start with a clean sand sample: no bits of vegetation and properly dried and sterilized by a short passage in the oven at 300F / 150C (about 30 to 45 minutes is enough). Take a clean slide and "paint" it with glue. The one recommended by my friend is Weldbond: it pours white but turns crystal clear when dry. It also holds very well on non-porous material and doesn't turn yellow with time (like some epoxy glues have a tendency to do). Cover most of the slide, but keep a space for the necessary identification tag. Sprinkle sand directly on the glue, trying to keep the sample thin and only one grain thick. If you put too much sand, the glue could creep up by capillarity resulting in a slide that could be difficult and less attractive to view with the microscope. Let it dry overnight with an upside-down container over the slide to avoid dust from settling over the slide and get glued along with the sand.

The next day, take each individual slide and shake it over a sheet of paper; the loose sand will fall off and can be recuperated. Stick a label with the provenance and the date when it was collected. To see how well the whole process will age over time, you can also include the date when the slide was made. There is no need to place a cover slide over the sample. To keep everything clean, simply keep the collection in a normal slide box.

Depending on the nature of the sand itself, viewing can be done with either bright field or episcopic illumination. Sand mostly composed of quartz is largely transparent and can easily be observed with standard brightfield. Dense minerals and tropical beach sand, which are made largely of grounded shells and coral, are best viewed with episcopic lighting. Either way, glued sand often looks as if it stands in a thin film of water, which may not be the ideal way to view mineral samples for purists of mineralogy, but for those interested in the visual aspect of their sand collection it may be a very valid way to keep at least part of their samples.





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