

Aesthetic inclusions.

by Jim Finlayson

What is an inclusion? From the point of view of a faceter an inclusion is any foreign matter inside your piece of rough which detracts from its appearance, either as an eye visible blemish or any obstruction which restricts good light transmission. These inclusions can be seen as tubes, veils, needles, fingerprints (two dimensional sheets of tiny liquid bubbles, normally), unrelated crystals, blobs of incoherent stuff, etc. In addition, cracks and incipient cleavages are loosely considered as inclusions to the faceter. Generally speaking, these inclusions are unwanted and usually found in the material some time after purchase, in spite of "careful" inspection for them before purchase.

However, many inclusions can be useful to the gemmologist as a means of identifying the mother material and/or the provenance of the material. Also, some inclusions are actually sought after by the mineral collector and faceter for their collector or aesthetic value, or both.

This mini article will concentrate on the type of inclusion that can be incorporated into a faceted stone to give it added interest and occasionally be quite impressive.

The most difficult part of cutting to display inclusions is actually finding the rough with suitable inclusions in the first place. Usually it is a "fun" project that you are interested in so you don't want to pay a lot for the rough. Fortunately, many of the visible, displayable inclusions come in Quartz which is relatively freely available and is not too expensive. These pieces of rough can occasionally be found on the mineral stands at gem and mineral shows. It is useful to cultivate acquaintances among the mineral dealers so that they may keep their eyes open for pieces of rough with inclusions, as they have access to more mineral rough than most of us do.

The inclusions most commonly seen in Quartz are Rutile or Tourmaline needles, Fluorite crystals, Pyrite crystals, liquid bubbles, with or without enclosed crystals. It is desirable that the inclusion that you wish to exploit is stand alone, not in a group of crystals. Also, if the individual crystal is well inside the host material you will be able to display the crystal to better advantage than a crystal that is close to the surface. Fig. 1 shows a single Pyrite crystal that is located well inside the host Quartz.

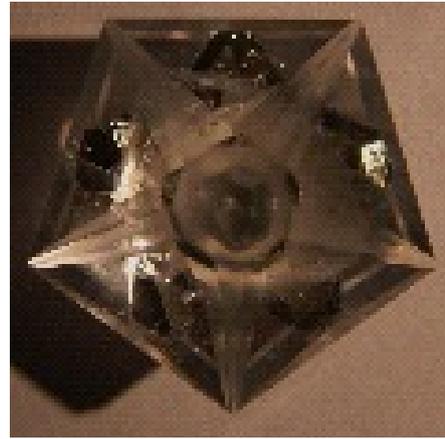


Fig 1

The single crystal is a few millimeters below the frosted table, but its image can be seen in each of the five crown main facets. On the other hand Fig. 2 shows a small group of Pyrite crystals that were too close to the surface to have them reflected in the main facets of the crown, so instead the table was made large enough to encompass the whole group for easy viewing.



Fig 2

Another interesting use of inclusions is to make a single Rutile or Tourmaline crystal, running from the centre of the table to the culet, be reflected in all the crown main facets. Fig. 3 serves two purposes. The first is to show what this looks like (making a lot of allowances for my less than adequate photographing skills) and the second is an object lesson in a really bad design for this effect. The effect is best displayed with say, not more than six main crown facets, which are cut at the correct angle and are cut from the girdle to the table. The design shown in Fig. 3 has three tiers of sixteen facets making the effect an incoherent hotch potch. I have stones of this type cut to a proper design for this effect, but unfortunately cannot lay my hands on one in order to photograph it; sorry.

Inclusions can be used in many ways in addition to these outlined above. Sometime in the past I was fortunate enough to purchase a nice piece of Quartz that was evenly filled with randomly orientated, very fine Rutile needles.

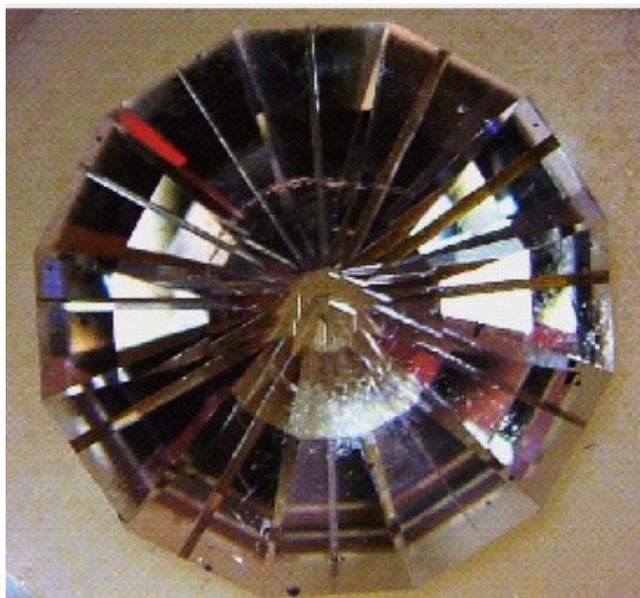


Fig 3

At this time cutting images of spiders was in vogue so I decided to cut a spider in this web of Rutile needles. Fig. 4 shows the result.



Fig 4

These are just a few of the uses that can be made of naturally occurring inclusions. How you use them is only restricted by your luck in finding suitable material and your imagination.