

THE PHOTOGRAPHIC CHALLENGE OF ELBAITE

As a professional mineral photographer, tourmaline provides some of the most spectacular specimens for work. Elbaite, a lithium-bearing variety of tourmaline, is one of my favorite minerals and not too difficult to photograph, but it does provide some challenges. This sample, from the famous Pederneira mine, near São José da Safira, Minas Gerais, Brazil, is a good example (FIG.1).

The first problem was its size. While not really very large, it was too big to fit on the nonglare glass used for my typical photography. In order not to foreshorten the specimen by shooting down on it, I set it on a 4 × 8 foot sheet of black laminate with a slight orange-skin texture. With a very slight upward curve at the far end, I was able to get a low angle and shoot at close to right angles to the main crystals. Luckily, the sample required only minor propping with a little bit of putty to get it to stand upright.

Lighting is critical to an excellent photograph. I usually use studio flash (strobe) for my lighting. The main light was diffused through a “soft box” and was above and slightly in front of the specimen. Another light was to camera right with a 10° honeycomb spot grid on it and was aimed directly at the specimen. A spot grid severely reduces the angle of coverage of the light and comes closer to being a point light source. This “kicker light” gives the specimen life and dimensionality and also saturates the colors. The final light I used was diffused and was placed opposite the camera on the far side of the specimen. Aimed at the bottom of the specimen, it creates the halo around its base. It



FIGURE 1 Elbaite, Pederneira Mine, Minas Gerais, Brazil (19.6 cm high). SCOTT RUDOLPH COLLECTION



FIGURE 2 Elbaite, Paprook, Kunar, Afghanistan (9.5 cm high). THE CRYSTAL CIRCLE



is necessary to backlight gemmy tourmalines to reveal their colors, zoning, and transparency. I usually accomplish this by placing tall, narrow reflectors behind each of the crystals. A simplified version of this can be seen in FIGURE 2. This setup gives me even backlighting along the full length of the crystal, with no burnt-out areas or spillover of the light along the edges or termination. The final step in lighting the crystal group was to place specular, metallic reflectors to the upper left, upper right, and lower right of the specimen. These were carefully placed so as to bring out the characteristic elbaite striations.

The camera used was a Nikon D2xs with a 60 mm Micro Nikkor lens set at f32, and the shutter speed was 1/80 second. I was tethered to a MacBook Pro computer and used Nikon's Cameral Control Pro 2 software. With some knowledge of mineralogy, an artistic bent, and good equipment, you too can take great mineral photographs.

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