

Spessartite Garnet

Tangerines and Orange Crush captured in stone

One never knows what type of gemstones will appear in the street markets of Thailand. I still remember the fall of 2001 when parcels of bright clean rubellite tourmaline and brilliant orange spessartite were everywhere. Both of these gemstones had been available to gem collectors but the spessartite available was usually small expensive crystals from California, and the rubellite was mostly heavily included stones from Brazil. The new spessartites coming out of Nigeria and Namibia were common in two to five carat sizes and were unbelievably bright, saturated orange in color. When trying to describe the new colors people would call them Mandarin Orange, Fanta Orange and Orange Crush making reference to orange soda pop!

The initial discovery of the African spessartites was made in the Northwest corner of Namibia near Angola along the Kunene River. At the time it was over nine hours to the nearest settlement and extraction of the gemstones was difficult and costly. Unfortunately the initial deposit played out in a few years, but the demand had been created and spurred further exploration. That exploration produced several new small deposits but really paid off in 1994 when a much larger deposit of the bright orange garnets was discovered in the Southwest of Nigeria, near Benin. The Nigerian stones tended to be less included and more reddish-orange than the Namibian material. Over the last several years, the initial discovery has tailed off and demand

has risen resulting in higher prices, but there is still a significant amount of Nigerian spessartite in the market. Since there are also several smaller sources of production now, both in Nigeria and elsewhere throughout Africa, it ap-

pears that spessartite is finally a jewelry staple.

Garnet is actually the name given to a group of related silicate minerals. When calcium is part of the mineral, the collective term *ugrandites* is used. This includes the *uvarovite*, *grossular* and *andradite* garnets. Grossular garnets are best known for the bright green variety from East Africa called *tsavorite*. The remainder of gem garnets contain aluminum and are referred to as *pyrospites*. These include *pyrope*, *almandine*, which is the dark red variety most commonly seen in jewelry, and *spessartite* garnets. In addition to aluminum, spessartite garnet contains manganese. It is this addition of manganese that gives spessartite its fantastic orange color. As iron is substituted for part of the manganese the garnet becomes a mixture of spessartite and almandine, and more brown and red is introduced. In the international market, the brighter orange color with minimal red is preferred, but in the US people seem to prefer the more fiery orange color with some red in the mix.

Most garnets occur as dodecahedrons, meaning they have twelve pentagonal faces. Since these are usually evenly sized, the resulting crystal is like a ball with twelve flat surfaces. In practical terms, the even shape means that the most common cuts for spessartite tend to be those with even sides rather than long thin cuts as are common with tourmaline or Imperial topaz. In the early days all of the material being cut was virtually free of inclusions. Now that the market is maturing, a wider variety of clarities are available. When the inclusions are dense enough to interfere with light transmission, but not durability, the rough will be cut into cabochons. Since garnet does not have cleavage and is 7-7.5 in hardness, it makes a durable gemstone for all types of jewelry including rings.

4.25ct spessartite in 22KT gold \$2500

Spessartite, pietersite and diamond in 18KT cross pendant \$3590

Spessartite, 22KT gold, silver cuttlefish casting \$980

Spessartite, pietersite 18KT yellow gold and silver tiebar \$1590