

FELDSPAR GROUP GEMSTONES: PLAIN TO PHENOMENAL.

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The dreamy blue moonstone to glittering sunstone varieties, feldspar group consists of 26 species, 9 of which are known as gemstones. A complicated aluminosilicate mineral group that crystalizes in a solid solution series, it is the single most common mineral in the earth's crust. Feldspar species have been known and used since ancient times for personal adornment as well as for industrial purposes, especially in glass manufacturing.

Gem quality feldspar species are more commonly sought as collectors' stones and seldom for jewelry since they are not very durable. They tend to be colorless, light yellow, sometimes gray. The unusual variety of microcline feldspar, which displays an attractive greenish blue color is called amazonite. The common transparent feldspar species become more desirable when they display phenomenon such

as adularescence (moonstone effect), labradorescence (blue, green, yellow flashes of light caused by interference through twinning planes), aventurescence (sunstone effect), chatoyancy, and asterism.

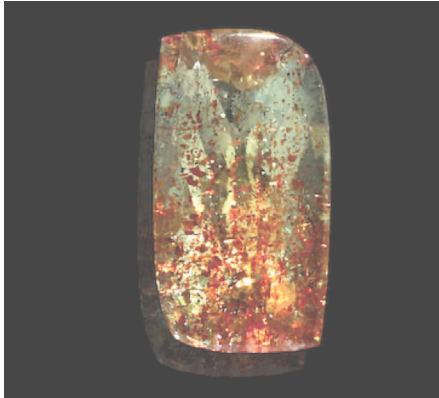
It is pertinent to explain the concept of group, species, and variety in gemology. Let's start with the mineral species description by Britannica; *a mineral is a naturally occurring homogeneous solid with a definite chemical composition and a highly ordered atomic arrangement; it is usually formed by inorganic processes.* A mineral group is made out of closely related mineral species, meaning the species have very close properties but with their own definite identity. Up to this point mineralogy has clear boundaries to define a group and species, however, it does not offer any scientific formulas to define variety other than color and phenomena. Enter gemolo-



Rainbow moonstone feldspar, 5.11ct.
Photo by Geoffrey Watt. Courtesy of Mayer and Watt.



Rainbow lattice sunstone feldspar from Australia, 42.15ct.
Courtesy of Bonham's.



Orthoclase feldspar with hematite inclusions from Tanzania, 42.33ct. Courtesy of Bonham's.



Yellow sanidine feldspar from Madagascar, 164ct. Courtesy of Heritage Auctions.

gy! While the importance of group and species apply to gem testing, varietal differences are the vital additional identification points for value in gemology. After all, all gemstones are judged by their color, clarity, transparency, and phenomenon when it comes to value. Most gemstones are known by their varietal names, such as emerald or aquamarine, but only gemologists pay attention to their species as beryl for identification purposes. Note that beryl and its varieties are not complicated at all.

Most professionals get confused when it comes to gem groups such as garnets and feldspars because they not only are made of a number of species, but also divide into several varieties. Furthermore, both are solid solution series, meaning within the same sample there exists at least two species at microscopic level. While this mostly manifests itself with color differences in garnets; feldspars tend to display more phenomena based on zoning. If we add the unusual inclusions, twinning, and cleavage into the picture, we end up with a plethora of phenomenal stones in the feldspar group. The fairly new exciting variety, a.k.a., rainbow lattice feldspar, is an ortho-

class feldspar with adularescence, additional to aventurescence, that is caused by small hematite and ilmenite inclusions, which also grow parallel to the twinning planes giving the "lattice" look. How more interesting can it get? Another exciting and high value feldspar is rainbow moonstone feldspar. Unlike the traditional moonstone displaying blue billowy adularescence, it displays a billowy labradorescence in transparent labradorite feldspar so it is not an adularia or orthoclase as most moonstones. The addition of asterism and chatoyancy is not unusual to see within all phenomenal varieties, making it all the more valuable.

Prices for traditional feldspar gems such as moonstone and sunstone are fairly stable allowing for the consistency that manufacturers look for when developing a new line. However, exceptional pieces are priced individually in a few hundred dollars per carat or more. There has been an increased popularity of feldspars in general, especially when they are exceptionally large and transparent in non-phenomenal varieties. Any feldspar with striking phenomenon in large sizes are highly desirable and priced individually. ♦

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