

THE ELUSIVE GREEN DIAMOND

While public awareness of colored diamonds has soared in recent years, fancy green diamonds remain inscrutable.

BY DIANA JARRETT

Relatively few green crystals make up the global harvest of fancy colored diamonds. The difficulty in verifying the color origin of green diamonds has kept these goods shrouded in mystery. There's also a scarcity of information on their production, although South Africa and South America are thought to be key mining regions.

The historic Dresden Green diamond, an egg-shaped, slightly grayish GreenVS1 stone, is estimated to weigh approximately 41 carats. No exact measurements are possible for this legendary gem housed in Dresden, Germany. The celebrated



Princess cut lime green diamond earrings by L.J. West Diamonds Inc. Photo courtesy Natural Color Diamond Association.

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Dresden underwent its first complete gemological examination in 1988, but was not removed from its mounting for fear of damage to the age-old bezel. The diamond boasts an unbroken paper trail dating back more than 250 years. It most likely originated in Golconda, India, home to the earliest diamond mines. "The Dresden's documented history predates laboratory irradiation techniques, making its natural green color an important one to characterize," explains color diamond authority John M. King, technical director of the Gemological Institute of America (GIA) Laboratory in New York.

WHAT MAKES IT GREEN?

Is the cause of the color in these green-tinged crystals as obscure as the occurrence of the elusive stones themselves?

According to King, "The cause of color for most green diamonds is proximity to a source of natural radiation in the earth."

The appearance produced by natural radiation and radiation produced in a laboratory is similar. Therefore, it is important to observe those



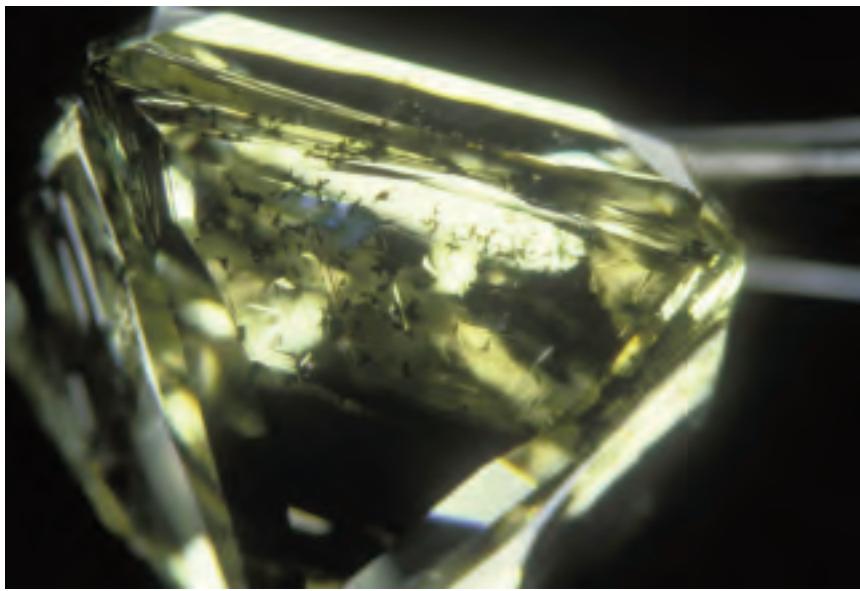
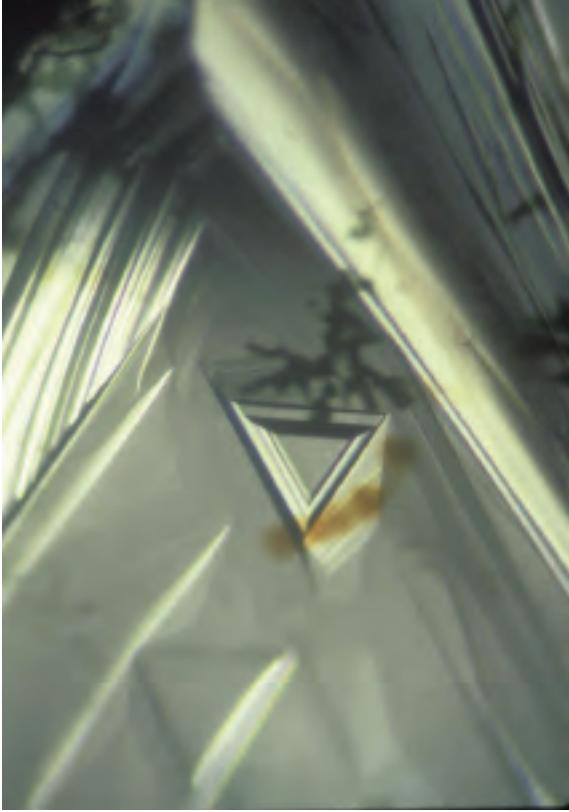
Top: Green diamond ring with fancy pink and white diamond accents by L.J. West Diamonds Inc., photo courtesy Natural Color Diamond Association; *left:* Green diamond ring by Scarselli Diamonds/NBS Diamonds.

green diamonds with known provenance in order to help establish a database of information to assist in origin determination."

A dazzling variety of green diamond, called a chartreuse in a nod to the French liqueur bearing that name, owes its dramatic look to an overwhelming fluorescence that obscures any yellow body color in that stone. Other causes occasionally create a green tint, including hydrogen-related defects within the crystal structure. A subset of these hydrogen-rich diamonds is named chameleon. These stones' curious behavior involves an infinitely repeatable ability to temporarily change from green in their stable condition to yellow when subjected to direct heat or prolonged periods of storage.

HOW RARE?

To underscore the rarity factor of green diamonds, the GIA publication, *Gems & Gemology in Review: Colored Diamonds*, included a comprehensive study on the nature of green diamonds. The report, "The Legendary Dresden Green Diamond," a collaborative effort by Robert E. Kane, Shane F. McClure and Joachim Menzhausen, concluded: "Natural green body-color diamonds are extremely rare in nature, and there are few documented examples. The Dresden Green falls into this category. The vast majority of natural-color green diamonds are only green on the surface of the rough, with the color produced by surface



Left: Both brown and green stains are seen near a trigon on this rough diamond. Such stains are a result of exposure to a radioactive source; **right:** To retain as much of the shallow green color as possible, the cutter has left large naturals with green staining on the pavilion.
Microphotos courtesy of John M. King, technical director, Gemological Institute of America (GIA) Laboratory, New York.

stains and coatings. These stones are usually no longer green when they are cut.” King goes on to say that “The radiation that causes the color often does not penetrate deeply into the diamond, so care must be taken in selecting the best shape and faceting style to enhance the color without removing too much from the surface.” King also points out that the optical center responsible for the green color is unstable under high temperatures, adding another variable to the polishing process — excessive heat during this process may result in a drastic color change.

Gem enthusiasts who collect rare jewels increasingly seek out dealers who specialize in fancy colored diamonds. To be sure their selected diamond’s color is indeed of natural origin, collectors often require a laboratory certificate, a valuable safeguard, according to color diamond dealers Pete and Bobbi Flusser of Overland Gems. The intricate process involved in determining origin of color for green diamonds could tie it up in the lab for a long time, Pete Flusser asserts.

AVAILABILITY

The scarcity of green goods entering the marketplace has complicated efforts to stabilize pricing and valuation for the assorted green diamonds. Very few of these are “straight greens,” points out Pete Flusser. One is more likely to see yellowish or grayish greens in numerous combinations of modifiers. More rarely will bluish-greens appear on the market, causing that particular green diamond to be very

expensive. Pete Flusser developed the only existent color diamond grid that corresponds to the nomenclature for color established by GIA and assists with pricing the fancy colors. Flusser, who taught a class on color diamonds in China in 2006, foresees increased global demand for color goods.

The more available shades of green diamonds deliver more affordable pricing to the consumer. Online merchant Blue Nile, which launched a rare fancy colored diamond category on its site in early 2007, offered a 0.54-carat Fancy Vivid green radiant-cut diamond for \$153,300. Another example of the value placed on these gems is a 0.90-carat, GIA-graded, Fancy Intense green diamond that sold at auction in 2005 for \$328,889 per carat, according to GIA’s King.

Israel-based Fancy Diamonds’ extensive inventory of colored diamonds showcases the sweeping range of natural-color green diamonds. The company’s managing director Leibish Polnauer forecasts a greater demand for these jewels. “The increased production of rough in Africa added many new colors, and the grayish-greenish Yellows have great appeal in color and price. A select few of the new rough get graded as straight green or Intense green; only one in one thousand gets graded Vivid green. These stones usually spend a summer and winter at GIA’s laboratory before getting their origin of color [certified] as natural. The hottest green diamonds are the chameleons,” says Polnauer. ♦