Gemology - By Elisha Ralph Morgan, G.G., A.G.A.

For people interested in precious gem stones and shopping for that particular stone or stones which suit their tastes, the choices can seem endless and sometimes confusing. In the following few paragraphs we will remove some of the mystery of finding a desired stone of choice. When properly informed of the basic elements involved and questions to ask, you can save yourself time, energy and money.

To begin, familiarize yourself with your favorite gemstone by reading any technical data about the stone you can find. Ask as many questions of informed jewelers and gemologists as you can. And shop ardently for the finest quality you can afford. The following may help you organize a few questions while searching.

You might want to ask yourself a few key questions while you venture forth, such as: does the stone I 'm seeing have the color I want! Is the stone's brilliance and fire (light dispersion) lively enough? Is this shape appealing to me? And finally, can I afford the color and quality I prefer? This last question can sometimes put a dimmer on things since a fine quality emerald, ruby, sapphire, or diamond, is rarely inexpensive. There are alternative naturally-occurring gemstones that you can choose which are sometimes equally attractive if you're looking for a color instead of the real McCoy. This is simply another option to consider in the quest. Your favorite jeweler or gemologist should be able to inform you along those lines.

Learn the important steps in analysis of the stone you wish to purchase. An introduction to the "Four C's" of gemstone valuation at this point is essential.

The four factors commonly referred to as the "four C's" of gemstone evaluation are: Clarity, determined by the number of flaws visible a 10X magnification, color, the level of color saturation affecting the appearance of the stone; Cut, the exactness of the stone's proportioning (this is sometimes referred to as a stone's "make"); and carat weight, the actual weight of a gemstone.

The four C's are easily described by a knowledgeable gemologist or jeweler as to how the affect quality and value. Clarity is described by 11 different grades within the Gemological Institute of America's grading system. This system is frequently used in jewelry stores. Each of the grades reflects the degree of "flaws" or inclusions visible to the eye at 10X magnification beginning with FL (flawless and ending with I 3 (imperfect).

Color is described by various letters of the alphabet beginning with D (exceptional white) and ending at Z when referring to diamonds. These letters refer to varying degrees of color tint which usually occur as a yellowish, grayish, or brownish in diamonds, depending on the trace element tinting each stone. To an inexperienced eye, being able to see the difference in color between a D to an H or even a J color diamond mounted in jewelry is often very difficult without other comparison diamonds.

Color has a direct effect on price as do the other three C's used to determine value. If a diamond is to be mounted in yellow gold setting, the purity of the color will not be as large a concern to the thrift-

oriented buyer as if the diamond were to be mounted in a white gold or platinum setting. The reason for this is that the yellow metal will mask the color of a slightly tinted diamond.

When possible, view the diamond as a loose stone and ask to see comparison colors beside your stone under proper lighting. Color is of crucial importance for value. Fancy colored diamonds are in a class by themselves and are stones that are color graded as being deeper than a Z in color. Diamonds are found in many natural colors such as green, yellow, red, purple, pink, etc.

The third C stands for carat, which is a measure of the weight of a stone. One carat is equal to 200 milligrams or one-fifth of a gram. A one-carat diamond of similar cut will not have the same dimensions as a one-carat sapphire or a one-carat emerald because the density (specific gravity) of each stone will vary from one to another.

Due to increasing degrees of rarity and cost, size difference will play a large part in your decision between one quarter of a carat stone or a one-carat stone. The larger the gemstone you choose, the more the price per carat will increase, reflecting varying degrees of rarity. Carat weight is a very important consideration in 'valuation.'

The fourth C mentioned is cut. Cut is responsible for the ultimate brilliance and fire (light dispersion) demonstrated by a stone. If a stone is cut with improper proportions it may have a lifeless look. This is due to the light escaping from the lower portion of the stone or the sides of a stone instead of being evenly reflected back to the observer's eye. Cut is not quite as critical with colored stones as it is with diamonds because we are most often concerned with the colored stone's depth of desirable color.

Many types of cut are available for gemstones. A properly cut and proportioned gemstone will hold value better than a poorly cut stone and will be proportionately more expensive. Certain cutting styles such as a modern round brilliant, as in the case of majority of diamonds, will reflect more light to the eye than an emerald (rectangular) cut stone, for example. The choice is entirely your own according to your preferred shape.

Some other considerations or question to ask in the search for your stone follow: Is the stone certificated? This simply means that the stone was graded by a gemological laboratory such as the Gemological Institute of America's Gem Trade Laboratories located in either Santa Monica or New York. There are a few other qualified laboratories in the United States which you can locate through a gemologist or an informed jeweler. A certificated stone is a stone with a written, certified pedigree which shows the detailed analysis of the four C's we've discussed. Most diamonds under one-half carat in weight are not certified, due to the additional cost. This service is not necessary but is available and advisable for diamonds of a very high value which a prospective buyer is considering. This service makes a valuable stones easier to resell in the even a person desires that options.

In summary, use the information we have discussed, ask as many questions as possible, view as many prospective stones as you can, and consult the most knowledgeable, trustworthy person you have access to.

The information we've discussed here is merely an introduction to more knowledgeable purchasing. Remember, one brief article cannot hope to give expertise where technical training and experience are the bywords in a field traditionally steeped in mystery. Ask questions, read prolifically, and listen carefully to information regarding your search for your "favorite" stone. Above all, enjoy yourself; it's a fascinating world.

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