

Opal

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The opal is a close relative of quartz. It consists of silica containing a variable percentage of water (8-12 per cent). But, unlike quartz, the silica is noncrystalline, and has solidified into a kind of stone jelly.

Opal counts among the most colorful and effective gem stones. The material itself is almost colorless, and its play of color, which embodies all shades of the spectrum, is caused by the regular arrangement of rows of tiny spheres, which produce this optical effect.

Black opal is particularly valuable. This shows red flashes of light against a dark background. Other forms are white opal, water opal, and fire opal. The fire opal is found in Mexico and looks very different from the other two kinds. Indeed, the layman would hardly recognize it as an opal, since it is clearly transparent and bright orange, with no play of color.

In earlier times, most opals used to come from Hungary, and then, early in this century, the opal fields of Australia were discovered. Today most opals come from that continent. They are found in association with sand-stone that has been colored brown by the iron it contains. The opal mate-rial (silica) has infiltrated into cracks of the rocks, where it has solidified.

Opal mining is a difficult undertaking, and only a few organized mines exist. Most of the work is done by small groups of prospectors, who look for the precious opals among inhospitable scrub or desert country in Queens-land and New South Wales. Since opals are formed within the cracks and cavities of sandstone many a prospector has destroyed a small fortune by striking a boulder a careless blow and thereby shattering what might have been a valuable opal core within the boulder. As with most prospecting of this type, much has to be left to chance. One may strike it rich in a week, or climate and disease may force him to give up altogether without any reward.

Some people consider opal an unlucky gem, and there may be a scientific reason for this belief. Perhaps it lies in the fact that these stones are liable to shatter easily if subjected to sudden shock or even through changes of temperature. Perhaps also, it is because some opals will show their fine fire only after they have been immersed in water. The effect is, however, only temporary and the stone becomes lifeless as the water evaporates. Opal has a hardness of only 6Vi on the Mohs scale, but with reasonable care it should have a long life as a gem stone.