

AMMOLITE: THE IRIDESCENT FOSSIL

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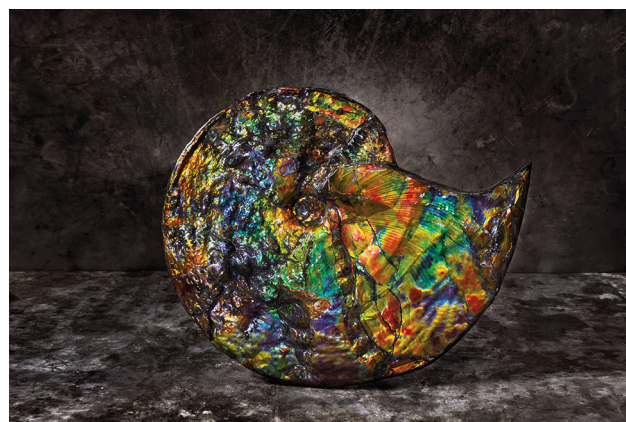
Biogenic and organic materials never fail to fascinate. Add in a single provenance and a background that involves prehistory and you've got a material that's sure to capture customer attention.

This is exactly where ammolite falls, the gems cut from the fossilized shells of extinct marine invertebrate called ammonite.

Though ammolite is one of the most recent gemstones to be added to the official list, granted gemstone status by CIBJO's Coloured Stones Commission in 1981, an article in GIA's Gems & Gemology journal said ammonites—squid-like creatures with sharp, beak-like jaws surrounded by tentacles—were around at a time when there were only two large landmasses on Earth, Gondwana and Laurasia. Ammonites died out about 66 million years ago, according to the Natural History Museum.

Ammonites were found in the waters of the Bearpaw Sea, a warm, shallow sea that extended from the Gulf of Mexico to the Arctic, including a significant amount of Western Canada. When the Bearpaw Sea receded, it left a layer of marine deposits known as the Bearpaw Formation.

A few species of ammonites—*Placenticas meeki*, *Placenticas intercalare*, and *Baculites*—slowly turned into colorful fossils called ammolite. But it wasn't an easy process to get there. For ammolite to become ammolite, a few things have to happen: it has to be buried quickly, deprived of oxygen and protected from heat and excessive weight, and can't be scavenged, GIA said.



*A full ammonite fossil with iridescent colors.
(Image courtesy Iniskim International Canada)*



*Ammolite necklace.
(Image courtesy Iniskim International Canada)*



*Free-form ammolite piece.
(Image courtesy Iniskim International Canada)*



*A natural ammolite stone.
(Image courtesy Iniskim International Canada)*

Though many fossils can be found throughout the Bearpaw Formation, gem ammolite is only extracted in Alberta, Canada. Only small amounts of specimens found are considered usable gem-quality material, according to ammolite supplier Iniskim International Canada, with supply cut to provide full ammonites, free-form ammolites, or handheld specimens.

The fossilized shells are iridescent as a result of replacement by aragonite. The iridescence in the ammolite comes from the interference of light bouncing off stacked layers of thin microscopic platelets that make up the replaced aragonite in the ammonite shell, according to GIA.

Most ammolite is red/orange or green, but it can also be blue and violet, though those pieces are more unusual and, as such, also more valuable. Overall, ammolite can showcase seven different colors and as such has been recognized by feng shui masters as the

“seven color prosperity stone,” said to promote the flow of “chi” throughout the body and reduce toxins. It has also been long revered by the Blackfoot tribe, which refers to it as the “buffalo stone” and believed in its powers to bring good luck.

Ammolite is described in its forms as either fractured, which looks like stained glass, or sheet, an unbroken piece with continuous colors. Sheet ammolite is often impregnated with a polymer to stabilize the thin layer on the surface, GIA said. Because its layers are thin, ammolite is usually made into a doublet or triplet, often backed with material such as shale, black onyx, or glass for the doublet and synthetic spinel or quartz on top to form a triplet.

It’s only a 3.5 on the Mohs scale and can be damaged easily with heat and chemicals, like acid, perfume, and hairspray, so it should only be cleaned with a soft, damp, non-abrasive cloth, GIA confirmed. ♦

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