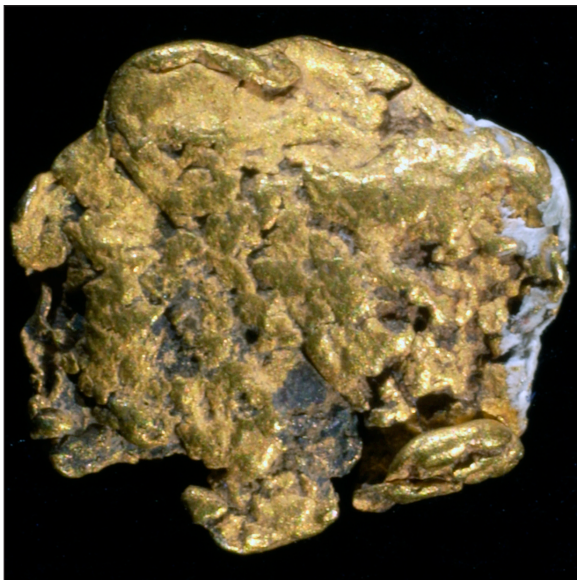


## Pyrite (Fool's Gold): An Often Misunderstood Iron-Sulfide Mineral

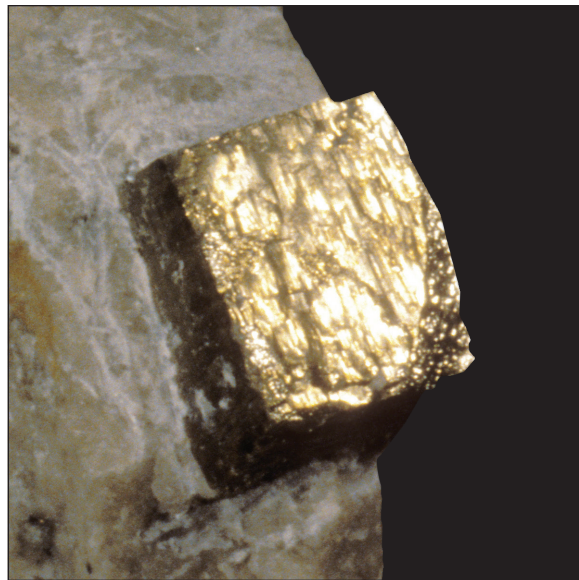
Pyrite is often mistaken for gold because it is brassy yellow, although most gold is bright orange-yellow. But similarity in color is about all pyrite and gold have in common. Pyrite is hard enough to scratch some metals but is brittle and breaks up easily when struck with a hammer. Gold is soft and malleable and can be pressed into very thin sheets. Pyrite occurs in geometric crystal forms, such as cubes or octahedra, but can be massive or granular. Gold also forms in geometric crystals, but it often occurs as roundish globs, wiry masses, or, in Indiana, as flakes. Gold is also much denser than pyrite.

Pyrite, the most common sulfide mineral, is found in many kinds of rock in Indiana. Pyrite is not mined in Indiana but is a source of sulfur for sulfuric acid, fertilizers, and other products. Today, most sulfur comes from deposits on the Gulf Coast or is recovered from the refining of sulfurous crude oils.

When coal containing pyrite is burned, sulfur dioxide is formed. Sulfur dioxide mixes with water molecules in the air, producing acid rain. Sulfur dioxide can be removed by a process called "scrubbing." One scrubbing process uses finely ground limestone in a water slurry that reacts with sulfur compounds in exhaust gases, removing the sulfur and eliminating it from the exhaust.



*Gold nugget*



*Pyrite*