Mineral of the Month - Limonite

Limonite is an amorphous mineral that contains iron, oxygen, and hydrogen, part of the oxygen and hydrogen forming a water portion. Pure limonite contains 25.7% O2, 59.8% metallic iron, and 14.8% water. It is a secondary mineral that is formed by weathering. Limonite stains existing rocks and forms dendrites in some rocks (moss agates). Characteristics may include botryoidal and reniform crusts and stalactites. It may be powdery or earthy. If fibrous texture is present, the mineral is not limonite, but goethite. The luster is dull to glassy (in botryoidal forms). Limonite has a hardness of 5.5 and a specific gravity of 2.7-4.3. The streak is brown to yellow with a conchoidal to earthy fracture. It has a different streak than wad, a manganese relative, and is magnetic after heating.

Limonite is found wherever iron-containing sedimentary, igneous, or metamorphic rocks are found, most common in areas with high precipitation or high humidity. The loss of the water in limonite results in the conversion to hematite. Limonite "powder" can be found inside ironstone concretions, also known as "paint pots".

The term 'limonite' is best used for unidentified hydrous iron oxides or mixtures of the same. It is derived from the German *Limonit*, which comes from the Greek *leimon* (wet meadow), from which the yellow to brown material was acquired in Germany (basically bogs).