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Iron-rich Ochre; Heartbeat of the Earth

Sand and wood, marigolds and dry grass, turmeric and curry, heat and dust; the ochre color has captivated the Arabs, Turks, Greeks and Romans for centuries. Ochre permeates Marrakesh's souks and Cappadocia's caves; the sands of the Sahara and Palmyra's now destroyed Colonnade. Call it wild madder, Indian yellow, mustard, or xanthic, the golden light of ochre has danced in the imagination of many artists.

Ochre is earth's iron oxide, found in the soil and sediment. The planet's core is largely composed of iron, and comprises 5% of the earth's crust. Ochre contains small amounts of sand, chalk, gypsum, barite, and silicates that produce variations in color and tinting strength. Iron not only bleeds, producing rust, but it also breathes. When crushed, ochre creates a mineral powder known as an earth pigment. Levels of hydration can bring out the yellows or reds, with oxygenation revealing the richest colors.

Heating yellow ochre, a process called calcining, creates sienna and the redder burnt sienna. Dutch painters in the 18th century heated yellow ochre and sold it as English Red. The coreopsis flower combined with copper makes orange and red ochre. Sienna and umber pigments contain different amounts of manganese, which makes them even more brown. Turmeric added to dark brown mustard seeds turns them yellow.

Ochre is considered the first human paint medium. In 2008, archeologists found images drawn using the mineral in the Blombos Cave in South Africa – 100,000 years old. In ancient Australian Aboriginal Art, ochre was painted on eucalyptus bark. The pigment was used to depict Dreamtime stories and maps, as well as body paint and rock paintings. Thousands of years later, the Yalmarralpana ochre pit is still in use as a source. Australian tribal people today mix the iron oxide with animal fat to produce a glossy paint and to make it last longer. They also use ochre to treat animal skins, as an insect repellent, to stop bleeding and as a protection from the sun.

The prehistoric art in the Lascaux Caves in France and the Altamira Caves in Spain were painted with unheated ochre, charcoal and magnesium, and are still vibrant today. In Provence, most cities are painted in varying colors of ochre, like the city of Roussillon situated next to an abandoned ochre quarry. From 1740 to 1780 in New England, yellow ochre and iron oxide were mixed with white lead and linseed oil to paint the walls of houses.

All ochres are durable, inert and lightfast. They are used in all types of paint medium but also as colorants in ceramic slips and glazes, often added as a reducing agent in luster glazes. Ochre (or ocher) ranges from pale yellow to orange to deep red. There is golden ochre, English ocher, Roman ochre, sienna, oro de ocre, Oxford ochre, terra di Pozzuoli, terra rosa, red chalk, bole, red iron ore, iron oxide red, Mars yellow, bolus, sinopia, rubica, ruddle, Venetian red, Indian red, light red. Online you can buy pure yellow or red ochre powder for under \$10.

Vermeer used ochre blended with lead white to produce his golden light in windows, on floors, and in his skin tones. Edward Hopper used a dark mimosa yellow to offer light into his brooding diners. In her *Ochre Red and Blue* oil painting (1950), Lilly Fenichel used earth pigments in broad areas of shifting color, similar to Bernice Bing's oil on canvas, *Two Plus* (1960). Painting today, Tom Ferrara uses a bold swath of ochre across *Harbor*, acrylic on canvas, 68" x 60" (pictured). Ferrara created a striking contrast to the icy mix of cerulean in the background with a fiery blend of cadmium and yellow ochre in the center of the painting. "When I'm painting, I'm trying to generate electricity with chemicals through opposing forces, in a way similar to what happens in nature and in our bodies," Ferrara said.

Disease was once treated according to the color of the disease. Jaundice remedies were yellow turnips, gold coins, saffron, yellow spiders rolled in butter, and gold beads. Indian yellow pigment was manufactured from cows fed only on mango leaves and water; the bright yellow of Indian miniatures.

Ochres are the oldest pigments in the first paintings created by humans. Ochre is not a true prismatic color and therefore, for many artists, a welcome relief to the wattage, cleanliness, and perfection of the primary colors. Hardworking ochre has continued for centuries to enrich and enliven the artist's palette.



Tom Ferrara "Harbor" 68 x 60 acrylic/canvas 2014