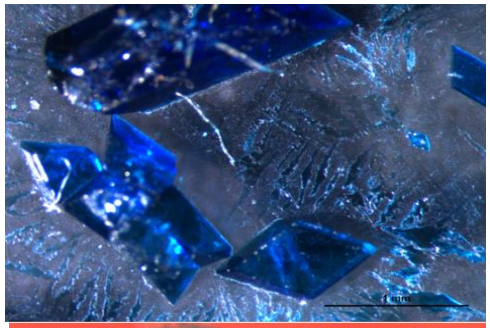

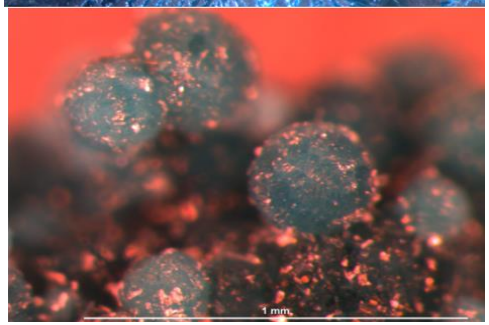

The Vagaries of Verdigris: Analytical Study of Artificially and Naturally Aged Verdigris Pigment

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From antiquity through the 20th century, the synthetic pigment called verdigris offered artists an important alternative to natural green ores, dyes or mixtures of blues and yellows. Verdigris was particularly favored by book colorists, who required fairly transparent color washes that would not obscure printed lines. Historical recipes provide evidence that verdigris could be made from numerous methods involving corrosion of copper with acetic acid from fermented materials such as wine products. When reproduced, these recipes result in permutations of two distinct types of copper (II) acetate salts: (1) neutral copper acetate monohydrate, or (2) basic salts that take on a baffling array of stoichiometric and hydrated forms. While the former is invariably bright teal-blue in color, basic verdigris is more bluish-green. Lab experimentation shows that neutral verdigris will convert from teal-blue to green basic verdigris over several months, or even overnight under conditions of high humidity. However, there is conflicting information in the literature about color variation and conversion in each form of the salt. Thus, it has not been well understood whether artists favored the bluish green of basic verdigris or tended to admix yellow colorants in the teal-blue of neutral verdigris to achieve their desired hue from the outset.

In addition, it is not well understood why this copper-based pigment often, but not always, causes degradation of paper supports, or how this degradation may be related to chemical and physical properties of the pigment in its various forms. Therefore, verdigris remains an important area of investigation, both in terms of its specific identification and preservation. This research study focuses on tracing the path of verdigris alteration under different conditions to better understanding both its historical use and relative stability.

MCI

Topics in Museum Conservation

July 25, 2019
3:00 pm
Thursday

MCI Theater
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