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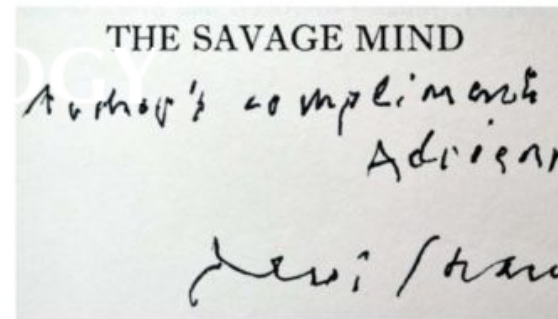


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Protected: Arsenic and Old Pelts: Deadly Pesticides in Museum Collections

DECEMBER 29, 2017 / ALICE B. KEHOE AND MARSHALL J. BECKER

All museums use pesticides and preservatives, though their health impacts are not always known; ethnographic collections can thus pose a health risk. Here we open one cold case file, in which we believe a prominent American anthropologist may have directly suffered from such effects. Our own experience and inquiries confirm this hunch.

Clark Wissler fell ill in 1905, soon after he began working in the American Museum of Natural History in New York City. At some point during the period of Wissler's illness, Museum Director Henry Fairfield Osborn recommended that his own physician examine Wissler. But despite this additional medical consultation, the illness persisted and was never successfully diagnosed—making him appear frail until 1928 when it mysteriously cleared up. The symptoms were severe enough to cause Wissler to give up his fieldwork on the Blackfeet Reservation.

What could this illness have been, with symptoms so debilitating as to disrupt his anthropological studies on the Northern Plains? Wissler (1870-1947) grew up in rural Indiana, collecting artifacts on farm fields, and took a Ph.D. in psychology at Columbia University in 1901. He took courses with Franz Boas, strengthening his interest in anthropology. Boas took him on as assistant in ethnology at the American Museum of Natural History in 1902, where he began his career as Curator of the Department of Anthropology until his retirement in 1942.

Wissler's position put him in charge of the American Museum's collections in anthropology, as well as its department staff and associated researchers. For most of his

working years, the museum's approach emphasized accumulating objects, to bring specimens to the intellectual center, to preserve disappearing crafts, and to facilitate comparative studies in cultural and biological anthropology. Wissler spent thirty-seven years in his AMNH office and its adjacent collection storage and laboratories.

Our initial interest was piqued when one of this article's authors (Kehoe), who has been visiting the Montana Blackfeet Reservation for many years and has drawn on Wissler's publications and notes, wondered whether pesticides used in the collections stored around Wissler's office might have contributed to his mysterious illness. She discussed her suspicions with Becker, whose reflections on his experience lent credence to Kehoe's suspicions and provoked this article.

During the first three months of 1963, Becker held the position of Registrar for the Civic Center Museum in Philadelphia, formerly the Commercial Museum. Among his many tasks, he was charged with the destruction of approximately 98% of the collection by volume, which, incidentally, and tragically, included one of only two complete sets of Eadward Muybridge's stop motion photographs— as well as the world's best animal pelt collection. "This peculiar task did not compute in my ethnographic brain," he wrote, reflecting on the experience, "leading me to stumble along until I realized that my instructions were exactly as I write them here— destroy the collection! When it finally dawned on me that everyone was serious, I quit. Fortunately! The animal pelts were all heavily treated with arsenic! Every work night I went home looking like a coal miner, covered in a black grime that also coated my lungs. In those three months I had inhaled a significant dose of arsenic and had become, strangely, mad as a hatter!" Could arsenic ingestion have caused Wissler's woes?

Becker also recalls later work on excavations in Guatemala: "The

laboratory work involved extensive use of

Duco cement, acetone, and other products that exacerbated problems from heavy metal poisoning. The primary symptoms were a vague feeling of being unwell, lethargy, and proclivity to spontaneous outbreaks of rage. In addition to being crazy as a coot, advanced symptoms included the ulceration of mucous membranes. As that phase progressed, and my mouth became a raw mess, I could no longer eat solid food, and could barely speak." A nose and throat specialist diagnosed him with "plumber's colic," or lead poisoning.

Becker's experiences led us to look further into the possible link between Clark Wissler's museum appointment and his never-identified ailment. We queried the Council of Museum Anthropologists, and promptly received copies of horrifying accounts of pesticide use. David H. Thomas, at present a curator at the AMNH, checked with the staff and reported that their conservators "use XRF [X-ray fluorescence] to test our collections on loan... in addition to arsenic, they routinely identify methyl bromide on a huge number of objects, and sometimes mercury as well" (personal communication, 6/12/17). Further, one study on pesticide use in collections noted that "salt, herbs, alum, spices, or tobacco" had been used in the eighteenth century to preserve natural history specimens, but collectors found these to be unsatisfactory; "Naturalists then decided to try new techniques for preserving bird and mammal skins. They substituted techniques that had

been used in dried collections for a new group of very strong and effective poisons, for example, mercuric chloride dissolved in water, corrosive sublimate, or arsenic” (Marte, Péquignot, Von Endt 2006, 143-144). Catherine Hawks has noted collectors’ evolving practices of pest control: “Collection growth, the use of cabinets to store specimens, and discoveries in organic chemistry eventually led to the use of gas-phase chemicals as fumigants for the contents of individual cabinets or for large-scale treatments. The legacy of pesticide use continues to pose problems for staff and various collections users, especially the recipients of repatriated objects” (Hawks 2001, 2; see also Henry 2015 on toxins in repatriated materials). Indeed, such concerns apply to collections at the AMNH; as Lisa Goldberg’s work shows, during a number of years the Smithsonian regularly used arsenic and mercury compounds for similar ends (Goldberg 1996, 29).

Clark Wissler did not leave an archive of personal papers or a memoir of his museum work. We probably will never know the cause of his twenty-three-year illness, nor why it cleared up in 1928, but poisoning from the pesticides that surrounded his working quarters is a tenable hypothesis. If only he had gone out to the pure air of the Blackfeet Reservation, despite his symptoms, he might have enjoyed healthy summers and perhaps figured out that his illness was associated with his home or work environment. Had he relocated to an office removed from the collections storage areas lining the corridors of the Anthropology Department, he might have reduced his intake of poisons. If our hypothesis is correct, Wissler’s exposure to toxins was more diffuse, less intense than young Marshall Becker’s, yet both men’s researches were curtailed in some respects: Becker’s for sure from toxins, Wissler’s perhaps.

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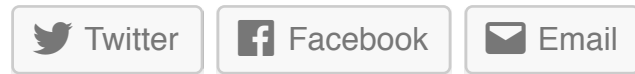
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