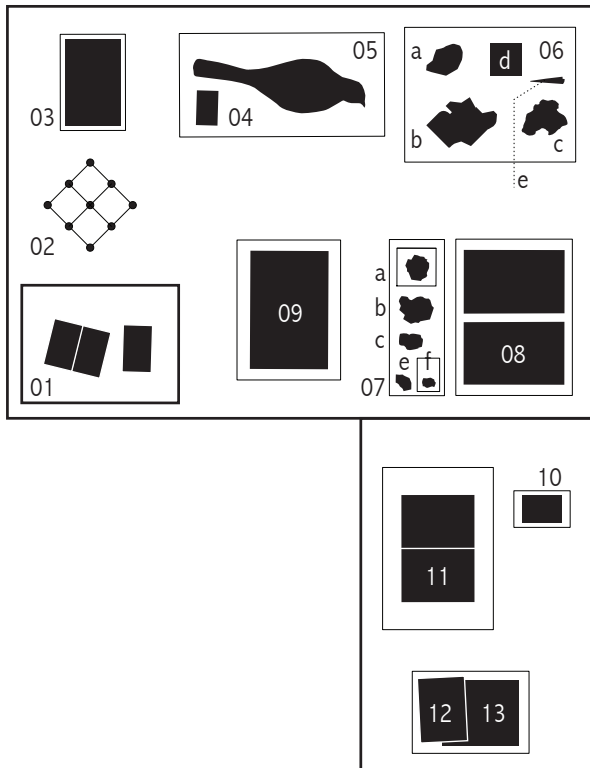
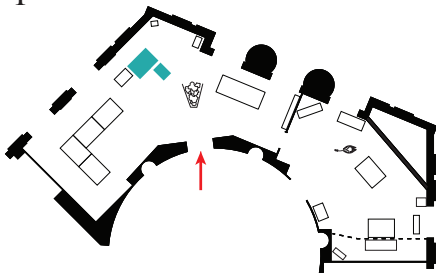


I



01 ***Bela Hubbard Field Notebooks***

Geological Survey of Wayne Co.

Notebooks, 1838-1839

Bentley Historical Library, Bela Hubbard Papers

Houghton appointed Hubbard as his assistant. He served the First Geological Survey from 1837-41 and surveyed Wayne County, the shores of Lake Michigan, and Lake Superior.

02 ***Molecular model of salt crystal lattice***

University of Michigan

Department of Earth and Environmental Sciences

The search for salt mines was an important motivation for the expedition and geological survey. In 1837, Houghton and Hubbard investigated a number of salt springs that were later economically exploited.

GEOLOGICAL SURVEY

03 ***Sketch of the geological formation of the Upper Peninsula*** (reproduction)

from Houghton's field notes, 1840

Bentley Historical Library

04 ***Abram Sager, portrait***

Photograph with autograph, 1860s

Bentley Historical Library, Abram Sager Papers

Abram Sager (1810-1877), Professor of Botany, Zoology, Medicine, Obstetrics and Gynecology. Sager accompanied Houghton on the first geological survey and collected flora and fauna. In 1850 he became the first president of the U-M Medical School.

05 ***Buteo lagopus (rough-legged buzzard)***

Bird skin, Southeastern Michigan, c. 1838

Collected by Sager as part of the state's biological survey
Museum of Zoology, Division of Birds

The buzzard was among several hundred birds collected during the first two years of the survey, which marked the beginning of the University's zoological collections.

06a-c ***Sandy quartz and prehnite on amygdaloid, quartz (chalcedony), native copper***

Minerals collected by Houghton, c. 1940

Keewanaw Peninsula and Ontonagon River, MI

A.E. Seaman Mineral Museum, Michigan Tech University

The Great Lakes Anishinaabe people have known about the region's copper mines for 7000 years. In 1842, the Ojibwe signed the Treaty of La Pointe ceding the mineral rich lands in the Upper Peninsula to the United States.

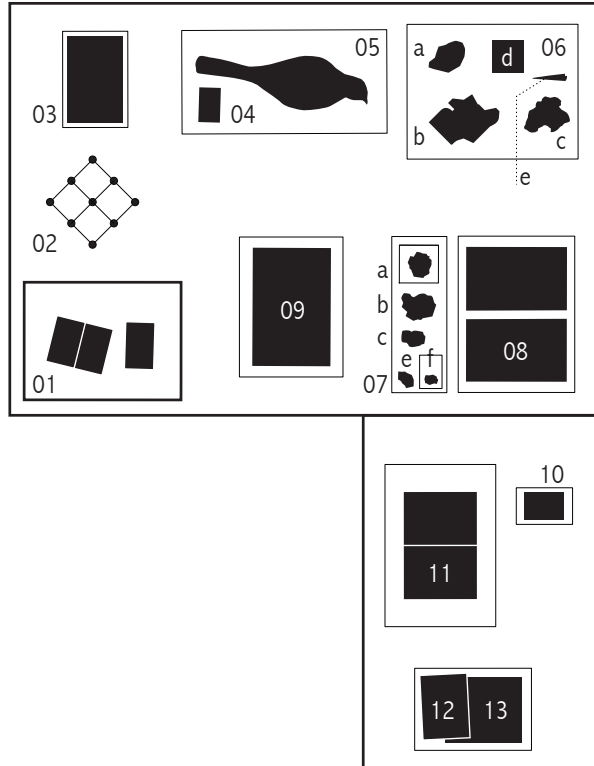
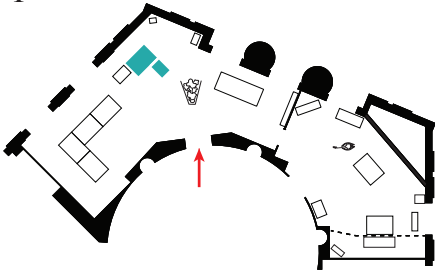
06d ***Douglas Houghton, Portrait, 1850***

Painted by Alva Bradish (reproduction)

Bentley Historical Library

Houghton (1809-1845), a physician and geologist and U-M's first professor of geology, mineralogy, and chemistry, became Michigan's first state geologist in charge of the state's survey activities. His 1840 report set the stage for Michigan's copper mining boom.

I



06e ***Valvata sincera (mossy valvata)***;
Mollusk, Lenawee, Round Lake, MI, c. 1861
Museum of Zoology, Division of Mollusks
Collected by Winchell during the Second Geological Survey

07a-f ***Ctenodonta hubbardi, Terebratula sp., Spirifer keokuk, Solen scalpriformis, Goniatites allei, Nucula stella (prehistoric molluscs)***
Fossils, collected by Winchell from Marshall Sandstone throughout Michigan, 1861-64
Museum of Paleontology, Invertebrate Paleontology
Winchell described 308 new species of fossils from the Marshall group of Strate. The specimens constitute the beginning of paleontological collecting at the U-M.

08 ***C. P. Whitfield, pencil drawings of fossil types***
Scientific illustrations based on Winchell's findings, c. 1862
Bentley Historical Library, Alexander Winchell Paper

GEOLOGICAL SURVEY

09 ***Replica of "An Act to provide for a Geological Survey of the State" 1837***
University of Michigan Museum of Paleontology

10 ***Alexander Winchell, portrait***
Photograph
Bentley Historical Library, Alexander Winchell Papers
Alexander Winchell (1824-1891) served as Professor of Geology at the University of Michigan starting in 1855, and was appointed State Geologist of Michigan from 1859-1863. As museum curator, he was the first to catalogue and to systematize U-M collections.

11 ***"Preadamites; or a Demonstration of the Existence of Men before Adam"***
1880, Alexander Winchell
University of Michigan Libraries
As a theistic evolutionist, Winchell accepted parts of Darwin's theory of evolution but simultaneously maintained a belief in divine creation. With this treatise, Winchell advanced the argument that there was a single, common origin of all humans thousands of years prior to Adam and Eve in the Old Testament. From this point of origin, Winchell held, specific branches – or "races" – of humankind diverged and developed in different directions. He treated this development hierarchically, assigning inferiority and superiority of humans based on the color of their skin. In line with many of his contemporaries, Winchell developed a theory that essentially legitimized white supremacy and slavery.

12 ***Report, Historical and Statistical, on the Collections in Geology, Zoölogy and Botany in the Museum of the University of Michigan***
Alexander Winchell, 1864
University of Michigan Museums Library

13 ***Statement of Operations in the Museum, in the Department of Geology, Zoology, and Botany, and the Department of Ethnology and Relics***
Alexander Winchell, 1866
University of Michigan Museums Library