UW-Madison: Campus museums recreate ‘cabinet of natural history’ digitally

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MADISON – In 1849, the Board of Regents of the new University of Wisconsin directed the curation of the state’s plants, animals and minerals in a “cabinet of natural history.”

Now, that founding piece of scientific inquiry is re-forming – digitally.

A new UW2020 initiative will centralize the databases of the university’s five natural history museums, which have separated over the decades to specialize and accommodate growing collections. The 1.3-million-specimen Wisconsin State Herbarium will coordinate with the zoology, geology, entomology and anthropology museums to merge records in a way that allows researchers to study the full scope of natural artifacts in one central location. This digital cabinet of natural history will link the museums’ combined 9 million-plus specimens that span all seven continents, the moon and Mars.

“We’re coming back together, not in a physical way, in a common building, but through a virtual platform,” says Ken Cameron, the director of the herbarium and the lead scientist of the project. The curators hope the project will be up and running and available online in about a year. “One hundred sixty-some years later, the cabinet, the museum of natural history, is re-forming, but in this new 21st century online way.”

The new database would allow a researcher to query specimens from each collection at once. For example, they could look up a time and place in Wisconsin and uncover the plants and animals that resided there and then, which minerals or fossils have been found there, and whether any human-made artifacts have been recovered at the site. With some specimens intact back to the founding of the cabinet, the century and a half of records provides a boon to scientists trying to track how populations have shifted over time.

Each contributing museum curates and digitizes its collections in unique ways, while facing its own challenges. Nearly microscopic insect larvae from entomology are just as hard – only in different ways – to document and catalog as massive rock or fossil samples from geology. Jars of fish and boxes of bones are difficult for zoology to image, while anthropology struggles without a universal system of terms for different items.

Many of the museums capture images of as many specimens as possible to give even remote researchers a chance to inspect the samples up close. These pictures can help scientists verify that the specimen is labeled correctly while documenting variation across a species.