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**Lazarus Project to shine a new light on oldest map in UWM collection**

Written by David Lewellen

A worldwide audience will soon get a better look at the subtleties of one of UWM’s most spectacular artifacts.

[The Leardo Mappamundi](https://collections.lib.uwm.edu/digital/collection/agdm/id/538/), a hand-drawn map of the world from 1452, is one of the star items in the collection of the American Geographical Society Library, which has been housed at UWM for nearly 50 years.

“The greatest significance is that it exists,” said Marcy Bidney, the curator of the collection. “We don’t have a lot of maps from that era.” The cartographer Giovanni Leardo produced it in Venice for an unknown patron – most likely a church official, since it places Jerusalem at its center, with east pointing up. In the circle around the edges is a calendar, with moon phases, saints’ days and more information.

The geographical library now contains more than 2 million items, including maps, photos, atlases, other books, globes and more. But the [Leardo map](https://www.loc.gov/item/2021668432/) is the oldest item in the collection.

The original is kept in a dim room controlled for temperature and humidity, and Bidney has become more reluctant in recent years to bring it out for guests. Getting a state-of-the-art reproduction is one reason why UWM is bringing the [Lazarus Project](https://lazarusprojectimaging.com/) to the university in March. But it may also highlight details that have faded over the centuries.

The Lazarus Project applies multispectral imaging to fragile or damaged documents to bring out missing or faded details. By processing the photos taken under different frequencies of light, new details can emerge.

“With the right object, it’s like magic,” said Chet Van Duzer, a board member of the Lazarus Project who specializes in maps. Since most rare manuscripts are too fragile to travel, the imaging experts come to the institution that holds them – and for most jobs, the equipment fits in a golf bag. It is carefully designed to emit less light than normal overhead lighting, to avoid damaging the documents.

“It’s fascinating to watch for the first 10 minutes,” Van Duzer said. “After that, it’s like watching paint dry.” The map will be scanned with at least a dozen frequencies of light, and probably more, ranging from infrared through visible light up to ultraviolet. But in the months after taking the original images, “the real magic is in processing,” Van Duzer said. Different combinations of images at different strengths may reveal faded writing that used various pigments of ink.

The project is based at the University of Rochester, where director Greg Heyworth is an associate professor, and it travels to institutions that can pay for their rare documents to be digitized. The UWM Libraries are funding this project through the generosity of private donations made to the AGSL.

The Leardo map was the topic of a small book by an American Geographical Society official in 1912, not long after the society had acquired it (the archives don’t show from where). “It’s a great candidate for multispectral imaging,” Van Duzer said, “and it was time for a fresh look anyway.”

The original is on vellum, or treated animal skin, and Bidney hopes that when the library has the digital image for a better facsimile, it can be printed on a vellum-like material. “The printer would scream if you put vellum in it,” she said.