

Indispensible for 125 Years

The University of Minnesota Herbarium is celebrating an anniversary this year.

by *Martin Moen*

How do you find out whether the buckthorn bush in your backyard is the invasive *Rhamnus cathartica* or the native *Rhamnus alnifolia*? Answering that fundamental question is a herbarium's central purpose. But that is just the terminal bud—to use a botanist's nomenclature—of the herbarium's role. Staff at the University of Minnesota Herbarium can help you answer this and many other important questions.

Whether assisting law enforcement in forensic investigations, helping policy makers understand where and when invasive plants appeared and moved across our state, serving clinical toxicologists in the identification of poisonous organisms, assisting landscape architects involved in ecological restoration, or helping land use planners with environmental impact assessment, the herbarium handles hundreds of requests for expertise annually.

In addition, the Minnesota Department of Natural

Resources makes extensive contributions to and use of the herbarium in biological surveys and management of rare, threatened and invasive species.

A critical purpose

Herbaria fulfill several necessary functions. They preserve and organize priceless biological artifacts called specimens—a mission they share with museums. Through further research the specimens can document what chemicals were in the plants, when they flower, and what habitats they inhabit. Well-preserved specimens can provide DNA to support scientific research. The most valuable specimens in any herbarium, the “type” specimens, are like birth certificates for species—the quintessential example of what a species, named for the first time, should look like.

At the University of Minnesota Herbarium, over 938,000 specimens of plants and fungi, both lichenized and non-lichenized, are stored on the Twin Cities campus in St. Paul. The herbarium features the only complete representation of Minnesota flora, and excellent representation of the Upper Midwest, boreal and arctic floras. Reflecting the University of Minnesota's international reach, the herbarium also has specimens from throughout the world.

The collections also serve an

important academic purpose. More than \$5 million in sponsored projects were received and over 75 peer-reviewed papers were published in high impact academic journals over the past 10 years by researchers using the herbarium. In addition, herbarium specimens support under-graduate and graduate courses taught every semester.

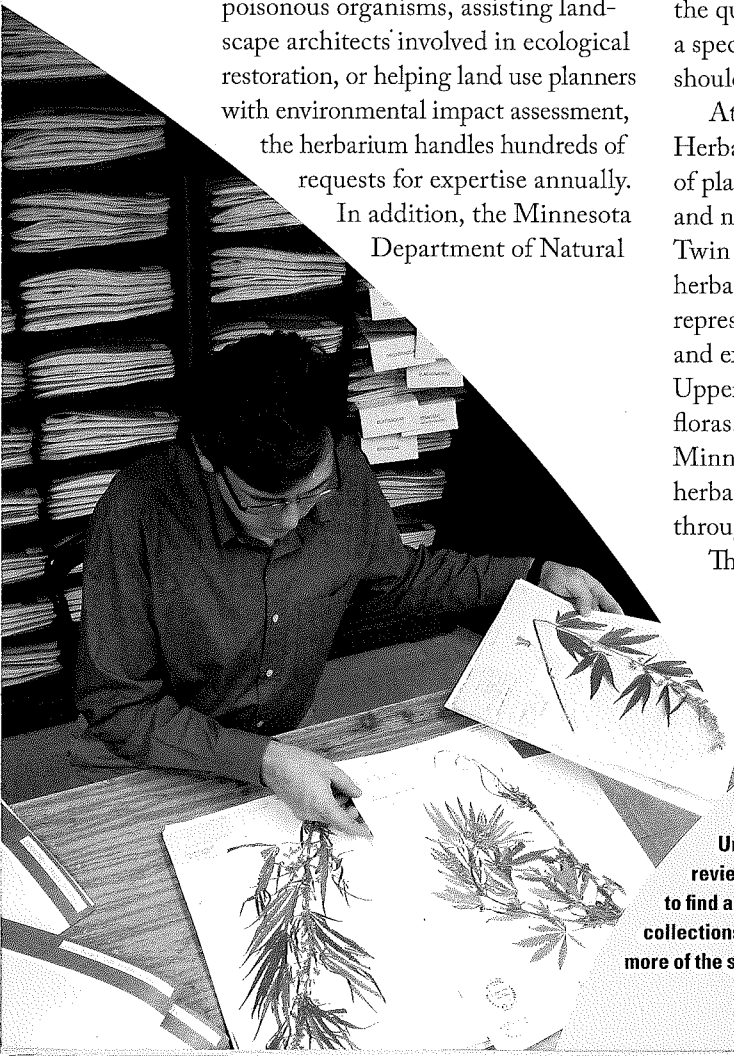
Future Growth?

While there is little doubt that the herbarium specimens will continue to be preserved and the herbarium will pursue its mission, the level of service is in question. “Our low level of staffing is inadequate compared to similarly sized collections around the world,” says curator of plants professor George Weiblen. “And this puts our level of service at risk.”

In addition to the staffing, the herbarium's storage cabinets are overcrowded and their combined weight is a structural issue for the building.

A review of the herbarium's 125-year history reveals that a lack of staff and cramped space have been chronic concerns. In the late 1960s those concerns resulted in construction of a new building on the campus in St. Paul, with an entire floor devoted to the herbarium.

“Forty years later,” Weiblen says, “we find ourselves in similar straits, which is a testament to our strong growth and quality over recent decades. Hopefully with new investments we can continue to grow and increase our service to the state and science worldwide.”



A wide variety of people travel to the University of Minnesota Herbarium to review specimens. Efforts are underway to find additional space for the overflowing collections, as well as to make information about more of the specimens available online.