

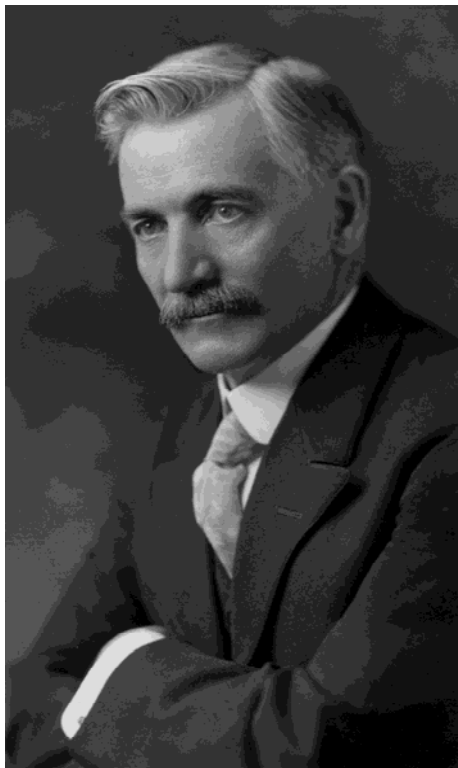
The Flathead Lake Biological Station and the Flathead Lake Monitoring Program

By Tom Bansak

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Following the founding of the University of Montana (UM) in 1893, a biologist was needed. Fortunately they hired Dr. Morton J. Elrod in 1897 as UM's first Professor of Biology. Dr. Elrod was a Renaissance man of diverse interests, was tirelessly productive and greatly influenced UM and Western Montana.

Elrod immediately recognized the splendor of the Flathead valley, particularly Flathead Lake and what is now Glacier National Park. Subsequently within just two years of his arrival, he established the UM Biological Station on Flathead Lake in 1899, which is today called the Flathead Lake Biological Station (FLBS), to serve as the "Sentinel of the Lake" and a base from which to conduct ecological research expeditions. The Bio Station was one of the nation's first freshwater laboratories (the oldest, Ohio State University's Stone Lab, is just two years older) and remains one of the oldest biological stations in the US.



Elrod immediately began studying Flathead Lake and the Crown of the Continent ecosystem. He promoted and conducted ecological research and education in the region, hosted famous naturalists of the era from around the nation, established a science program and summer field courses at the Bio Station, and wrote prolifically. Early students and researchers arrived at Yellow Bay by horse or steamboat. Elrod served as the Bio Station's director until 1933.

Additionally, Elrod played a role in the creation and promotion of Glacier National Park, was its first naturalist and wrote its first guidebook and first scientific papers. He also helped establish the National Bison Range and operated Montana's first weather station from his home in Missoula.

At UM he was the head of the science department, established the first scientific collections which became the Wright Zoological Museum, taught seven subjects, served as a photographer, and helped start the school newspaper, the Montana Kaimin, and the student government association.



Today at FLBS we proudly continue the tradition of Dr. Elrod. Our mission of Ecological Research, Education and Outreach stems from Elrod's founding vision. Central to our work is Flathead Lake and its watershed.

Flathead Lake is the 79th largest freshwater lake in the world, and of those large lakes it is one of the cleanest. The Lake's high water quality results from its watershed being mainly protected forest lands (eg, Glacier National Park and the Bob Marshal Wilderness); having a relatively low human population (less than 100,000); being dominated by very old, low nutrient geology; and receiving high amounts of precipitation (mostly as mountain snow). Plus, the Lake flushes rapidly (about 2.2 years for all the water in the Lake to be replaced). In contrast, Lake Tahoe's flushing time is roughly 650 years. (More information about the Lake is available at <http://flbs.umt.edu/lake/flatheadlake.aspx>)

At FLBS we continue to serve as the "Sentinel of the Lake". We have information about the Lake and its inhabitants going back over 100 years. Due to declines in water quality and threats associated with coal mining in the North Fork Flathead River, in 1977 FLBS instituted a rigorous scientific Monitoring Program for the Lake. With this continuous Monitoring Program and other historical data, FLBS has one of the most complete records in the world for a large lake.

Although water quality of the Lake is still very high, it has shown declines and the Lake is technically listed by state and federal agencies as "impaired" due to human-caused inputs of nutrients. The FLBS Monitoring Program has provided the evidence of these changes, which has resulted in significant conservation successes such as the phosphorus-detergent ban in the 1980s and the modernization of sewage treatment facilities throughout the watershed completed in the 1990s. The Monitoring Program allows us to address threats such as these before they become major problems.

As you surely know, Flathead Lake is worth protecting. The Lake provides us with abundant water; opportunities to swim, boat, fish and recreate in its amazingly transparent waters; as well as the creation of friendships and family memories. Additionally, UM economists estimate that the Lake increases shoreline property values by \$6 to \$8 billion, and nature-based tourism (which relies upon a healthy Flathead Lake and watershed) accounts for more than 20% of the economy of the appropriately named Flathead and Lake counties.

Today, however, the Monitoring Program is at a crossroads. With dramatic recent declines in government funding, philanthropic contributions have become essential to the continuation of the Monitoring Program. Fortunately, the local community has answered the challenge and become active stewards of Flathead Lake. Over the past several years through an outpouring of support, philanthropic giving has established an endowment of over \$1 million to help FLBS continue the Monitoring Program to ensure that the Flathead Lake of the future is as spectacular as the one that inspired Morton Elrod and that we enjoy today.

For more information about or to contribute to the Lake Monitoring Program, please contact Tom Bansak, FLBS Research Scientist and Development Coordinator, at (406) 982-3301 x229 or tom.bansak@umontana.edu, or visit our website at <http://flbs.umt.edu/>.