

EXPLORATION

Volume 2, Number 2 *Quarterly*



◊ *We shall not cease* ◊

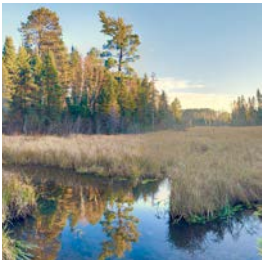


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ABOVE: Kofa National Wildlife Refuge; Lisa Spangler photo. OVERLEAF: Pulpit Rock, Norway (58°59'11.353"N, 6°11'17.761"E); Jason Spafford photo. COVER: May 19, 2005, NASA's Mars Exploration Rover Spirit captured this stunning view as the sun sank below the rim of Gusev crater (14.6°S and 175.4°E). Panoramic camera mosaic: 6:07 in the evening of the rover's 489th Martian day, or sol (NASA/JPL/Texas A&M/Cornell).

EXPLORATION

Vol. 2, No. 2 (October 2025)

Quarterly

**“WE SHALL NOT CEASE FROM
EXPLORATION**

And the end of all our exploring

Will be to arrive where we started

And know the place for the first time.” – T.S. Eliot

*Welcome to **Exploration Quarterly**, the publication for those
who do not cease to BE CURIOUS . . . to LEARN . . .*

to EXPLORE . . .

We define exploration in the broadest sense:

Exploration can be geographical.

Exploration can be fractal.

Exploration can be introspective.

Exploration can be expansive.

Exploration can be structured.

Exploration can be unplanned.

Exploration can happen every day.

Exploration is continuously seeking new places,
new ideas, new knowledge.

Exploration is the essence of being human, what
brought us from the forests into the savannahs, and
beyond the horizons of Earth to the edges of the
known universe.

We shall not cease from exploration.

Thank you for joining us.

Jonathan Hanson

Roseann Hanson

Founders, Curators, Editors, Designers



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LISA MORRIS & JASON SPAFFORD



For over two decades Lisa Morris and Jason Spafford have pursued meaningful adventure across every continent—by fin, foot, and on two wheels and four. After a decade teaching and leading scuba-diving expeditions, they traded the ocean for overland life and an 80,000-mile, almost five-year motorcycle pilgrimage from Antarctica to the Arctic, followed by five years exploring Europe in a 2015 Toyota Hilux known as *Rhino*. More recently, the duo traversed the American West's backcountry on two KTM 500 EXC-Fs, and now continue with *Rhino* on the Mega Transect Expedition through the Americas, Africa, and Europe.

Lisa is an accredited British travel writer whose narratives have appeared in leading publications across the UK, Europe, and North America. A passionate advocate for female riders, Lisa has been a consultant to help develop women's motorcycle gear, and in 2022, she was named 'Overlander of the Year' by a leading vehicle-based adventure travel platform.

Jason is an internationally published adventure and commercial photographer with a career spanning more than three decades. From editorial features and commercial campaigns including a BBC wildlife production to film screenings, Jason's work captures the thrill of the journey and the texture of the untamed. Jason is the recipient of several film festival accolades and photography competition awards.

Lisa and Jason founded Four Wheeled Nomad—a creative platform devoted to documenting the Earth's wilder side.

Fourwheelednomad.com

@fourwheelednomad_

@fourwheelednomad

JANET RITH-NAJARIAN

Janet Rith-Najarian, Ph.D., is a biogeographer and educator in the northwoods of Minnesota, among the "Sky-Blue Waters" of her home state's storied 10,000 lakes. Along with survey work and research for various natural resource agencies, she is a National Geographic certified educator and teacher-consultant who works with the Minnesota Alliance for Geographic Education. She is also a Minnesota Master Naturalist, a teacher-ranger with the National Parks Classroom, a naturalist, and a Wild Wonder Foundation-certified nature journaling instructor. With her interest in historic cartography and scientific illustration, she was recently invited to join the Art of Exploration Collective of the Royal Geographic Society. Along with fellow explorer and filmmaker Norwood Hall, Janet's most adventurous work is now as a storyteller, creating a documentary series about expeditions and famous explorers of the past with a special focus on the Mississippi River. Their next presentation will be in October 2025 for the National Council for Geographic Education.

Rivergeo.org

@riversedgegeographics



NORWOOD F. HALL, II

Norwood F. Hall II is a multidisciplinary artist and researcher from Puposky, Minnesota. His recent work focuses on the, historical, cultural, and geographical



significance of the Mississippi Headwaters region. He is a lifelong paddler, explorer, and adorer of northern Minnesota's abundant and intricate waterways, particularly the Upper Mississippi and its sources. With a background in music, performance, and visual storytelling, Norwood integrates historical reenactments and primary resources with his original music and soundscapes to examine the river's role in history and identity. Norwood has presented his work for the Minnesota Alliance for Geographic Education, the Society for the History of Discoveries, and numerous other local educational institutes and organizations. Through his research and creations, Norwood seeks to preserve and interpret the stories and sounds of this landscape for both academic and public audiences.

GRAHAM JACKSON



A scientist by trade and an explorer by passion, Graham Jackson has been combining both for three decades as a guide, instructor, and expedition leader. Born in Lesotho in southern Africa, Graham started racing motocross at age six, as well as helping his father design, build, and race off-road buggies. At age 10, Graham completed his first safari across the Kalahari in a

Range Rover with his family. That trip planted the seed for Graham's lifelong obsession with deserts, off-road vehicles, and overland travel.

In 2004, Graham and his wife Connie Rodman led a 30,000-mile overland adventure from London to Cape Town, which, arguably, was a key inspiration for the launch of the overland industry in the U.S. and formed the feature story in the first edition of *Overland Journal*. He spent several years as *Overland Journal's* gear editor and has written for *Outdoor X4*, *Land Rover Owner International*, and Exploring Overland's online blog. He also contributed to two of Chris Scott's books—*Overlanders' Handbook* and *Sahara Overland*—as well as Tom Sheppard and Jonathan Hanson's *Vehicle-dependent Expedition Guide*.

Graham has run and guided expeditions in Africa, Australia, South America, the American West, Mexico, and Central America. He is recognized as one of the premier expedition trainers in the world, conducting overland training in the U.S., Central America, and Africa as well as co-founding Overland Training and 7P Overland. He was director of training for Overland Expo for its first decade, helping develop it into the premier overland event in the world.

In 2023 Graham started Overland Passage and Barefoot Productions to produce adventure-travel-related content of competent people exploring the remote reaches of the magnificent planet we call home.

Graham is a member-national of the Explorers Club, a fellow of the Royal Geographical Society, and a member of the Field Guides Association of Southern Africa. He holds an NPTC assessor's certification for off-road driver and recovery training.

Overlandpassage.com

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 @overland-passage

JONATHAN and ROSEANN HANSON

Born and raised in southern Arizona, the Hansons have worked together for 41 years as writers, photographers, artists, biologists, and explorers. They are endlessly curious humans who love nature, the visual arts, the written word, and above all, they love to learn, constantly reading, exploring new ideas, new crafts, new skills, and new places.



The Hansons met and married in 1984 while studying at the University of Arizona under many renowned field ecologists, solidifying their passion for fieldwork and science. They have worked as resident naturalists and caretakers for U.S. Fish and Wildlife in Arizona's Baboquivari Mountains; managed a nature lodge in the Chiricahua Mountains; taught dozens of nature, field arts, and writing workshops; lead safaris in Kenya and Tanzania and overland journeys in Mexico and the American Southwest; explored five continents together by overland vehicle; and founded Overland Expo, the world's largest do-it-yourself adventure travel event, which they sold in 2018. Jonathan is an accomplished solo bicyclist and sea kayaker, and Roseann worked for three years as a conservation program director for a Kenyan organization and traveled solo extensively in East Africa.

Their co-authored books include *Southern Arizona Nature Almanac*, *Basic Essentials: Animal Tracking*, *National Park Tours of the Southwest*, *Desert Dogs*, *The Ragged Mountain Guide to Outdoor Sports*, which won a national book award, and *50 Common Reptiles and Amphibians of the Southwest*, which won a National Park Service award for Interpretive Excellence. Jonathan was founding editor of *Overland Journal* and collaborated with Tom Sheppard on the reprint of the seminal *Vehicle-dependent Expedition Guide*. Roseann wrote a nature guide to the San Pedro River and published two popular guides to nature journaling and field arts.

Both are elected fellows of the Explorers Club and the Royal Geographical Society for their work as explorers, writers, and conservationists. They are pleased to be returning to their roots as writers and publishers with the founding of this magazine.

ExploringOverland.com

 @roseannhanson @jonathanhansonwriter

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 @exploringoverland

TRUE SOURCE

for the Mississippi headwaters

An Adventure in Storytelling
by Janet Rith-Najarian, Ph.D.
with Norwood F. Hall, II

Northern Minnesota's Nicollet Valley, home of DeSoto Lake—the “true source” of the Mississippi River. Explorer Joseph Nicollet named the creek he found in 1836 flowing into Itasca Lake the “infant Mississippi.”

It was well over 90 degrees on an August afternoon in 2012, and we were all dripping with sweat. The humidity was fast approaching the dew point, and our only relief was an occasional light breeze as we paused in the shade of trees hanging over stones at the water's edge.

There had already been three takes of the scene we were filming: footage captured from the front, side, and back of a vintage birchbark canoe as it slid down the current of the Turtle River. Jeremiah Liend, the sole occupant of the canoe, was paddling hard but had “lost control” of the craft, flipping over again and again. Mike Bredon was knee-deep on the far side of the water, adjusting the polycarbonate housing over his handheld camera. Norwood Hall splashed along the near shore with another camera on a tripod, trying to avoid tripping over submerged boulders. I was stationed along the bank ready to reload the canoe with travel trunks and maps and baskets of gear so Jeremiah could go overboard with it all once again. And this time, according to the call sheet on the clipboard, we’d be filming underwater.

Norwood pondered angles again. How to get the best shots on this take? Mike would need to crouch and use snorkel gear so he could stay underwater close to the canoe and Jeremiah’s paddle, and Norwood needed to be walking along the far side of the canoe with camera above the water, avoiding both the rocks and Jeremiah’s flailing limbs as the canoe capsized. I made sure Jeremiah’s moccasins were laced tightly before he launched the canoe for the last time, then I sized up the layout of the scene from the sandy bank above. I double-checked the direction of the late afternoon sunlight for blocking purposes, watching as it filtered down through cedar branches and birch leaves to the dappled river water flowing by, crystal clear, out of Three-Island Lake. It was a good day to be playing dress-up and

make-believe in the cool waters of Turtle River here in northern Minnesota, surrounded by the deep quiet of the Buena Vista State Forest.



We had turned back the clock to re-create and film the historic journey of Giacomo Costantino Beltrami (1779–1855), a hapless but adventurous Italian who had passed by these very cedars in a canoe nearly two centuries before. We wanted to tell the tale of Beltrami and his intrepid search for the source of the Mississippi River in all its glory—and all its misadventure—in time for the upcoming bicentennial celebration of Beltrami’s 1823 expedition. In addition to this day of reenacting along the Turtle River, we had incorporated several afternoons on a steamboat on the Mississippi River; a day trekking with horses on a dusty trail leading west towards Pembina, North Dakota; a sole-sucking slog through marshes of the Mud River downstream from Puposky, MN; an early evening climb to the heights of the Continental Divide at Buena Vista Hill; and a final exhilarating sacramental plunge into the northern headwaters lake named for Beltrami’s beloved lady friend, Julia. There was also our subsequent re-creation of Beltrami’s momentous meeting with President James Monroe, his perilous sojourn to Fort St.

Anthony, the encounters with numerous Ojibwe who assisted his journey en route to the north, and many scenes foraging in survival mode in the wilderness after his Ojibwe guides abandoned him.

There is a world of difference between the wild Mississippi river near its source and what it’s like as it flows south through more developed metropolitan areas



The 440,000-square-mile watershed of the Mississippi River, showing from its source to the Gulf of Mexico, flowing 2,340 miles. (Map courtesy Shannon1, Wikipedia, from USGS sources, 2016; GNU Free Documentation License, Version 1.2)

*“From an eagle’s eye view,
this area shines like a mirror
to heaven; in fact, within the
Mississippi River headwaters
region there are places where up
to 75% of the land is
under water.”*



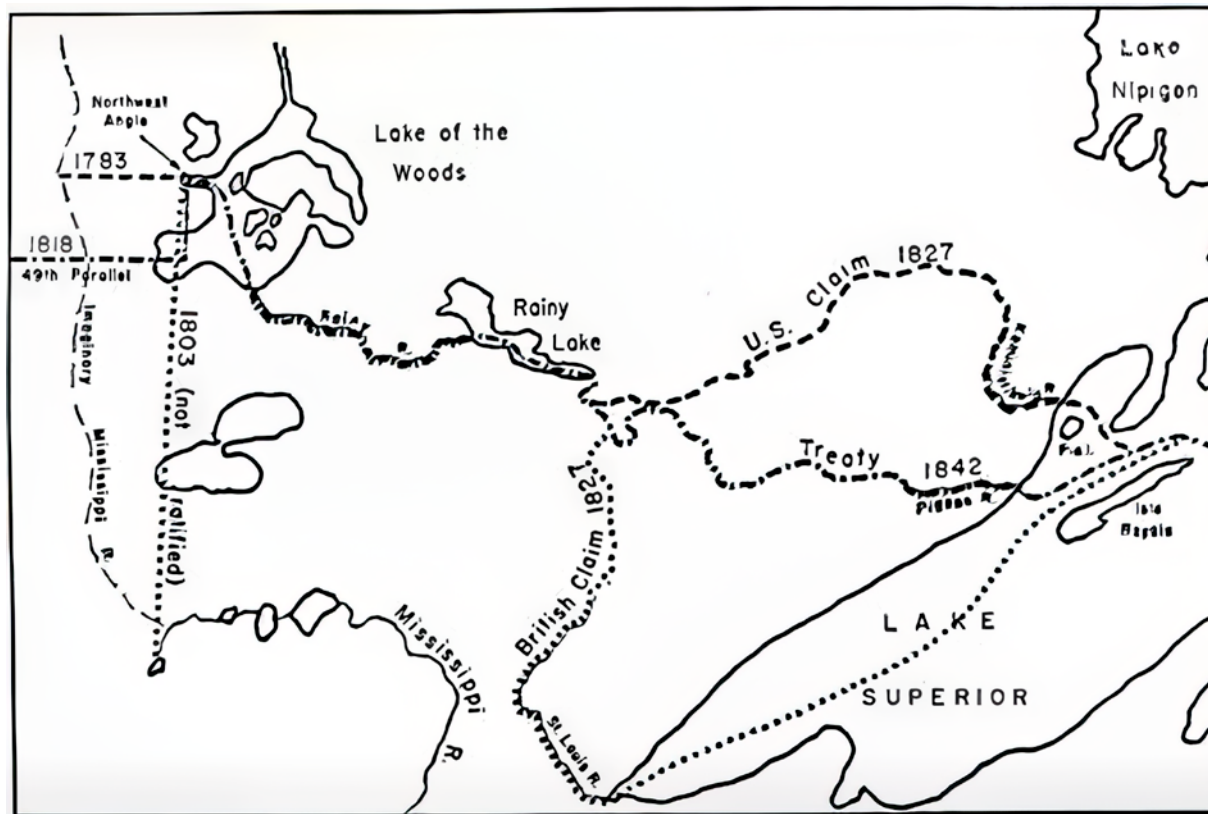
and farther into the heartland of American agriculture, where barges transport freight to the port of New Orleans. The infant river in northern Minnesota is stunning in its wildness. I often paddle to its confluence with the Schoolcraft River near my home, and both Norwood and I have spent many hours trekking between the Lake Itasca basin to Lake Bemidji and Cass Lake and beyond. By map, this distance through the headwaters stretches about 45 miles on land; but by water, the shifting flow of the emergent Mississippi covers more than 120 winding miles, not including its myriad tributaries flowing in through hundreds if not thousands of regional lakes, ponds, marshes, oxbows, and bogs.

From an eagle's eye view, the area shines like a mirror to heaven; in fact, within the Mississippi River headwaters region there are places where up to 75 percent of the land is covered by water. This relatively flat mid-continent watershed, with its numerous slow gentle channels springing from multiple sources, creates unending opportunities for local paddlers; but for early explorers trying to pinpoint the ultimate source of the mighty Mississippi River, the headwaters region proved to be difficult to decipher, much less survey and map. The significance and urgency of determining the source and the course of the Mississippi River was not just a geographer's academic question, however, nor was it just an adventurous lark up the river for restless frontier

travelers. It was actually a task of great geopolitical importance in the late 18th and early 19th century: not only does the river encompass the fourth largest watershed on earth, but colonial powers considered it a critical boundary between the territories of early European traders and frontiersmen, native American tribes, and emerging nations sparring over conflicting land claims across North America.

As a biogeographer working in research and education, I have a longtime interest in historic cartography and early expeditions—something I share with colleague and friend Norwood Hall, a historian and musician. As the crow flies, our hometown of Bemidji is some 30 miles northeast of what is considered to be the “official” source of the mighty Mississippi River in northern Minnesota. Although the river is a mere trickle here compared to its depth and breadth farther downstream, the headwaters region around our home encompasses quiet forests and pristine waters nearly unchanged since Beltrami's expedition of two hundred years ago.

The stories of various explorers who tried to take on the herculean task of mapping the river's route to its source have intrigued me ever since I first visited Minnesota's Itasca State Park 40 years ago. At that time I had obtained a brochure for the park which said something to the effect of “Here, winding 2,552 miles to the Gulf of



The question of officially defining and mapping the river's “true source” had great importance politically and historically, due to land deals made with the U.S., France, and Britain where boundaries were defined by the length of the Mississippi River; but defining the source was a complicated process due to the challenges posed by unique aspects of northern Minnesota's geography, hydrology, landscape, and ecosystems. The source was assumed to be somewhere just west of where the Rainy River flows into Lake of the Woods. (See page 42.)

TRAILER FOR THE TRUE SOURCE

Giacomo Costantino Beltrami

When you're born the 16th of 17 children, it would be easy to resign yourself to a life of obscurity. Giacomo Costantino Beltrami refused to accept that fate.

Born in 1779 (the exact date is unknown because his baptismal records were destroyed in a fire), he left school at the age of 18 to fight in the army of the Cisapline Republic, a region in what is now northern Italy that was then controlled by France. He worked as a magistrate in Napoleon's government and was accepted into the Masons. In 1815, however, with Napoleon's defeat, Italy regained control of then Cisalpine Republic, and Giacomo found himself suspected of unpatriotic or even heretical beliefs, making life uncomfortable.

In the meantime, he had developed a very close friendship with Giulia Spada de Medici, of the wealthy and famous family. When she died in 1820 at the age of 39, Beltrami was extremely distressed by the loss; he put together a collection of writings as a memorial.

Giulia's death, combined with the constant harassment from Papal police, convinced Beltrami to abandon Italy. He traveled widely around Europe, then, in late 1822, embarked from Liverpool for the United States. After arriving in Philadelphia, he traveled to Washington, D.C., for a meeting with President Monroe; then to Pittsburgh, where he took a steamboat down the Ohio River, intending to travel down the Mississippi to New Orleans. On board, however, he met the Indian agent Major Lawrence Taliaferro and Missouri governor William Clark, who

Continued, page 48



Giacomo Costantino Beltrami by Enrico Scuri; painted in 1861, six years after Beltrami's death.

Mexico, lies the source of the Mississippi River at Lake Itasca. It was discovered in 1832 by Henry Rowe Schoolcraft (who was led here by Indian guides).”

That statement baffled me, because I felt Schoolcraft couldn’t have “discovered” the source if he was led to it by the local inhabitants. Over the years that followed, as I began to explore the river for myself along with various adjacent waterways that contributed to it, I wondered how this single spot on the north end of Lake Itasca could be officially considered the sole *veritas caput* (“true head”) for this whole jewel of a river system.

I mulled over the question with like-minded friends: Reis Hall, his son Norwood, and our mutual friend Jim Miller. All were avid paddlers, and Reis himself guided local river trips, a legacy he passed on to his adventurous son. In the 1980s, all of us had participated in a local Mississippi River Revival conservation group, and it became a passion for us. Though lumberjacks had cut some wide swaths of forest on their way through this region a century ago, much of the land and water in this part of northern Minnesota has been preserved in a natural state within a mosaic of county and state parks, state and national forests, privately conserved land, and the tribal reserves of the local Anishinabe, who are native to these sacred lands and waterways. For those of us who live here today, the history and nature of the Mississippi River headwaters form an iconic part of local identity, and we are passionate about preserving the remaining forest and the waterways that traverse it. But as many local people know, the story of defining (and thus conserving) the headwaters basin is not as clearcut as the official story would lead outsiders to believe.

As I dug further into the history of our area, I realized that numerous explorers had come to valid—but sometimes very different—conclusions about where the

What Makes a River?

Today the source of a river is defined as “the distance from the mouth to the most distant headwater source” (U.S. Geological Survey). But definitions and techniques used by early-1800s scientists to define river sources in mountainous Europe did not translate well to the Mississippi, whose source meandered somewhere in the flats of northern Minnesota’s bogs and marshes; definitions changed frequently.

Indigenous Americans, French fur trappers, and early American hunters and tradesmen had a familiarity with the headwaters region that, while not defined on paper in the form of published accounts or maps, nonetheless aided other early explorers in finding their way along various headwater tributaries. Early European-Americans concurred with the Ojibwe reference to the Mississippi River officially starting at its confluence with the Raven’s Feather or Crow Wing River (see right, and page 45, end).

In the winter of 1806, Zebulon Pike (for whom Pike’s Peak was later named) traveled as far north as what is now called Pike Bay, between Leech Lake and Cass Lake. As he went, he looked at every confluence he encountered and calculated which was the main channel and which was a smaller contributing stream or river. At the confluence of the Mississippi and the Leech Lake River, he determined the latter was the larger of the two, based on the width of the two frozen rivers joined together. However, as it was winter he wasn’t able to compare the volume of each. So he followed the Leech Lake River to the large Leech Lake, and declared that the source. If Pike had been there in summer, he would have seen that the volume of the Mississippi was greater than that of the Leech Lake River, and would have disqualified it. (The distance along the Leech Lake River to Leech Lake is also shorter than the Mississippi to either Elk Lake—later renamed Itasca—or Lake Julia farther upstream.)

When Lewis Cass paddled up the Mississippi in 1820, using the same techniques as Pike, he was looking for the largest lake upstream that would be considered a source reservoir for the river. When he got to Red Cedar Lake, now known as Cass Lake, it looked to be an ideal candidate. He asked the local Ojibwe if they considered the river to go farther upstream from there, and they mentioned that there were three small tributaries: a short one connecting to Pike Bay to the south, one to the north called Turtle River that they definitely did not consider to be the Mississippi, and a small river coming in from the southwest corner of Cass Lake and flowing west and south to a couple of much smaller lakes along what they called the Elk River. The mosquitos were bad that summer and the Cass expedition had experienced many cold, rainy days on their trip, so Cass neglected to investigate these small tributaries and proclaimed Cass Lake as the source.

In the early 1820s, when Giacomo Beltrami began his “pilgrimage” to the headwaters, a river’s source was generally defined by European hydrologists as being that tributary source which sprang from the farthest end of a river’s flow, and in the cardinal direction opposite the river’s mouth. Using that definition in 1823, Beltrami was justified in claiming Lake Julia and the Turtle River as the northernmost source of the Mississippi, as it was the farthest north one could paddle in the opposite direction from the mouth at the Gulf of Mexico. And while it is indeed the farthest north source, the distance to it from the Gulf of Mexico is somewhat shorter than if paddling to Lake Itasca (Elk Lake).

Continued, page 45

“true source” was located. Throughout the 1800s, the various proposed sources had become the topic of heated debate amongst Americans, as well as explorers, travelers, and scientists from abroad. With every expedition came a new theory and a new definition of how to identify a river’s source, and the competing theories led to different sites being identified as the ultimate wellspring of the river. As a geographer, this dilemma fascinated me. I wanted to know more, so I tracked down the journals, expedition reports, and maps of the different explorers, and began to delve more into their journeys.

Around this time, in addition to spending time hiking and paddling around the area, our family got involved with our local community theater. My paddling friend Norwood Hall was already active in local theater productions, as were a number of our other mutual friends. Backstage, we sometimes discussed our love for the river, and I shared copies of explorer journals with Norwood, who, as an avid outdoorsman and historian himself, read them with gusto. I had begun thinking about possibilities for creating documentaries, and was undertaking an internship in production at our local PBS station. As Norwood and I delved further into the world of historic river explorers, and as I developed some skills in film production, we hatched a crazy idea: with our joint knowledge of paddling in the headwaters, with the stories of explorers becoming more and more a part of our imaginations, and with our connections in local college and community theater, could we possibly

stage reenactments of different explorer expeditions, on location, true to the maps and expedition reports they each produced?

But—how to go about it? We had the courage that comes to those who are passionate about an idea and are naïve to the possibility of it becoming a gargantuan undertaking. Intrigued theater friends were willing to join us in some imaginative storytelling, and several also knew their way around a camera. Norwood and our friend Jim Miller are also accomplished musicians and composers, so we figured we had the soundtrack covered. Norwood had some experience with directing and could develop artful production storyboards, so he could take the lead on setting up scenes, and I had spent a few years backstage apprenticing in costume design, prop management, and stage makeup. We figured we had all the bases covered, and would soon follow in the footsteps of the venerable documentarian Ken Burns.

We applied for a few small grants from our regional arts council and our state historical society and, along with support from the Minnesota Alliance for Geographic Education, set our project in motion. Our small pool of funds allowed us to research almost a dozen notable headwaters explorers, develop action storyboards based on their different expeditions, obtain or borrow production equipment and props and costumes, and launch headlong into re-creating various expeditions in the area. We were lucky that we not only



Drafts from all five of Joseph Nicollet’s expeditions were compiled to create the first scientific map of the region, *Nicollet’s Hydrographic Map of the Upper Mississippi River Basin*, published in 1843. Visit [David Rumsey Map Collection](https://www.davidrumsey.com) website for a high resolution, zoomable, interactive version of this map.

However, as the sciences of hydrology and geography evolved over the next few decades, the definition of a river's source would evolve as well. Henry Rowe Schoolcraft had been an assistant on the Cass expedition and was troubled that they hadn't investigated the tributaries flowing into Cass Lake when they had journeyed there in 1820. By 1830, the source of a river as defined in the U.S. would not be found at the farthest large lake you could travel too, as Cass and Pike had thought, or the farthest in a cardinal opposite direction from the mouth, as Beltrami had thought, but the farthest you could navigate upstream on the longest tributary. Thus Schoolcraft claimed the source as the northern outlet of Elk Lake, which he renamed Itasca, a portmanteau of *veritas caput* (true head), "itas-ca. Although he was told by Ozawindib, his Ojibwe guide, that there were several tributary stream farther upstream in the Itasca Basin, Schoolcraft didn't consider these navigable and therefore too small to qualify as a river.

Four years later, in 1846, the noted French hydrologist Joseph Nicollet followed Schoolcraft's path to Lake Itasca, but when he investigated the tributary streams upstream from Itasca, he found one that was paddle-able and which led to three more small lakes farther upstream, and he declared *this* waterway to be the source of the Mississippi. The tributary is called Nicollet Creek, which Nicolette gave the nickname "the infant Mississippi."

William Morrison may have been the first European-American to officially visit the Mississippi headwaters area around Lake Itasca and to recognize its significance as the basin that was the longest tributary to the Mississippi. However, his only documentation was informal letters to family and in addressing the state historical society in the 1850s; he never published an official expedition account or maps, and many of his logbooks and papers were lost in a canoe accident.

When the territory of Minnesota became a state in the 1850s there was much debate as to whether Beltrami, Schoolcraft, or Nicollet should get credit for finding the source of the Mississippi River. The new state legislature decided they needed an American hero to credit, so they proclaimed Schoolcraft as the official discoverer, and ruled out Beltrami or Nicollet and any other claims. This led to a flurry of debate and complaints by everyone from the French Academy of Sciences, who favored Nicollet, to Beltrami and his Italian supporters, to the Canadian William Morrison who had been at Itasca as early as 1804. But the laurels went to Schoolcraft, according to the state legislature.

In 1881, the adventurer Willard Glazier became intrigued by the debates about the source. After researching his predecessors, he mounted an expedition of his own, which he repeated ten years later. During this time there had a prolonged period of dry summers, and what had appeared as a bay in the southwest corner of Lake Itasca when both Schoolcraft and Nicollet traveled there in the rainy years of the 1830s was now separate from the main lake and only connected by a very short, shallow stream. Glazier proclaimed this body of water as Lake Glazier, called it the True Source, and for the next few years he usurped Schoolcraft's claim.

Finally, after Lake Itasca and its environs were designated as a State Park in 1891, the first commissioner, Jacob Brower,

decided to survey the entire Itasca basin to settle the question once and for all. He followed Nicollet's path to Nicollet Lake, but then pushed farther. Nicollet had designated the source as being the farthest you could paddle upstream on the longest tributary, but by the 1890s the official definition of a river's source was the longest a raindrop could travel from anywhere in a river basin in its journey to the mouth. That being the case, Brower noted uninterrupted flow of water farther upstream from Lake Nicollet, traveling through tiny rivulets and under sphagnum mats in bog lakes, the ultimate source being in the *haute terre* on the glacial ridge above DeSoto Lake. He thus declared DeSoto Lake as the source of the Mississippi.

However, there was an uproar in the state legislature when Brower made this declaration and published his findings: they had already paid for a big state park sign to be placed at the north end of Lake Itasca, crediting Schoolcraft at that location, and they didn't want to have to pay for a new sign.

Determined to prove the legislature wrong, Brower invited Minnesota state geologist Dr. Newton Winchell to survey the basin with him over the course of the next few years. Winchell examined Schoolcraft's claims, conducted his own hydrologic surveys around Lake Itasca, and then concurred with many aspects of Joseph Nicollet's, Willard Glazier's, and Jacob Brower's claims. He also noted Morrison's precedence, acknowledged the contributions of the Cass and Pike expeditions, and affirmed that Beltrami's reasoning was sound and scientific for his era.

However, Schoolcraft remained the official "discoverer" of the source—simply because the geological and hydrological facts as determined by Winchell's final scientific surveys were obscured by the politics of the day, against a backdrop of a battle to define the headwaters basin, determine how local natural resources would be used versus preserved, and to delineate what would officially become Itasca State Park.

The timeline of the explorers and the evolution of theories about the "true source" can be viewed [>here<](#); an interactive map with explorers' routes can be viewed [>here<](#).

What's in a Name?

"Mississippi" appears to have Algonkian origins (*Misi-zibi*), a name meaning "Great River" bestowed by early Indigenous woodland settlers whose Ojibwe (Anishinaabe) descendants today recognize the river as "The Father of Waters." We don't know if any one individual ever traveled the length of the river from source to sea prior to the 1800s, as there are no written accounts; however, it is well known that for thousands of years Indigenous Americans traded up and down the river. While investigating ancient mound sites near the source in Itasca State Park, archaeologists found cultural items made of sea shells from the Gulf of Mexico.

Of note, the name Mississippi was generally used by Minnesota Ojibwe and neighboring Dakota peoples only for the river as it flows south from its confluence with the Crow Wing River, near Brainerd, Minnesota (see map, page 43). The river's upstream reaches, winding around like the top part of a question mark and including Lake Winnibigoshish and Red Cedar Lake (now called Cass Lake), the river was called the "Gichi-Ziippi" by the Ojibwe, meaning roughly "Pretty Big River."

had theatrical friends willing to volunteer their time to join us, but even more remarkable was that some of our friends actually looked like the people they were chosen to portray. The dream started to become a reality.

Our actor, Jeremiah, was no stranger to the stage; he is the technical coordinator for performing arts at Bemidji State University, after decades of acting in and directing both college and local community productions. But reenacting the role of explorer Giacomo Beltrami was probably one of the more challenging and quixotic roles he has had to play thus far. Almost all of the scenes we staged with him were outdoors, literally immersed in the elements; there was seemingly no end to getting dirty and muddy, or dry and dusty, or being dunked many times into various waterways of northern Minnesota. If that wasn't enough, he also swapped out Beltrami's top hat and persona in front of the camera for additional duty as a videographer, joining a local pilot and crew to help capture aerial footage of Beltrami's route. And he did it all for nothing more than the honor of being the first actor to depict Giacomo Beltrami's largely unknown story.

In the end, our detective work allowed us to bring to life the stories of a number of headwaters explorers, some of them largely forgotten. We recreated both the winter and summer travels of fur trader William Morrison from Rice Lake to Itasca in 1804, and followed Zebulon Pike's almost-fatal trek to Leech Lake during the subzero winter of 1806. We retraced Michigan Governor Cass's paddle west from Lake Superior as far as Red Cedar Lake in the cold wet summer of 1820, followed by Beltrami's journey up north to Lake Julia in 1823. Of course, there was also the perspective of those who already lived here when the "explorers" arrived: the Ojibwe, or Anishinabe, people who had lived here for generations, who had their own ideas of where the Mississippi River started, and who gave directions and birchbark maps of their own design to many of the adventurous Europeans and Americans who passed through the territory (see right).



Fortunately, the Itasca Basin was protected as a state park in 1891. Jacob Brower, who had campaigned to prevent the area being logged by timber barons, was named the first commissioner; he and his geologist friend Newton Winchell conducted exhaustive surveys and concluded that DeSoto Lake—not Beltrami's Lake Julia or even Schoolcraft's Lake Itasca—was the ultimate source of the river, as it was the farthest distance a raindrop would travel from "source to sea." Mary Gibbs, who came after Brower as a conservationist and the first female state park commissioner in the U.S., stood fast against poachers and loggers to protect the whole basin of Lake Itasca and its tributaries, as Brower before her had advised.

For several years we spent one splendid summer after another, along with several winter seasons, with our

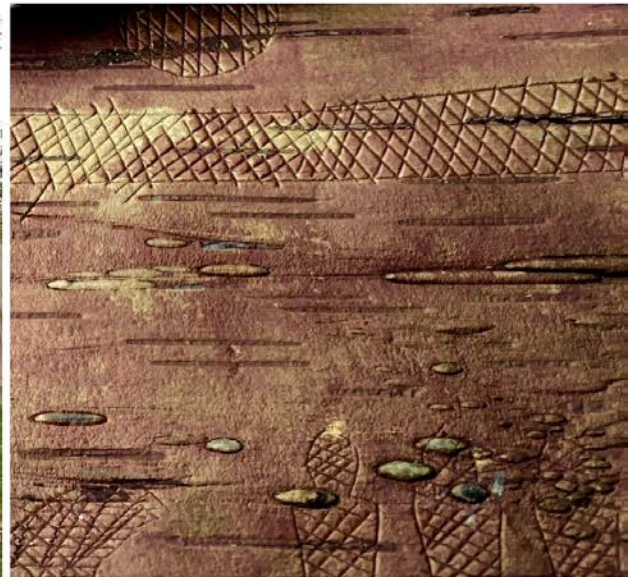
cameras, our actors, our period-correct costumes and props, our maps, our intensely-researched scenes and locations and backstories, and watched as these many stories came to life with a depth beyond what had once been just dusty words on the pages of forgotten tomes.

As of today, all our explorer re-enactments have finally been staged and completely filmed, with hours and hours of raw footage yet to be edited. We have finished one full episode in our documentary series, the

hour-long story of Giacomo Beltrami and his claim to have found the northernmost source of the Mississippi River, and were thrilled to have a premier showing at the recent Beltrami bicentennial celebration. All the other stories are still works in progress in terms of editing, but should result in a documentary series of approximately eight full episodes that have been hard work—and more difficult than we ever imagined—but a labor of love for a groundbreaking pilgrimage of our own. We went on a journey to find the "*Veritas Caput*"—the "True Source" of the Mississippi River—but found much more.

* * *

The Beltrami documentary has not yet been released publicly; for details on the series, visit [Rivergeo.org/true-source](https://rivergeo.org/true-source)



FAR LEFT: On display at the Bergamo Museum of Natural History are the birchbark top hat that Beltrami describes in his journal as having made himself, along with a beautiful moosehide coat presented to him at Leech Lake by the Ojibwe. Norwood Hall photographed the items, then painstakingly recreated them by hand with the help of his wife, Moni Schneider. Moni designed a custom pattern and Norwood sewed the leather and handpainted the exact designs using paint made from local pigments, including iron oxide and Minnesota pipestone. These replicas are shown in the photo at upper left, in the film.

UPPER RIGHT AND NEAR LEFT: The Ojibwe, who are known as Anishinaabe in their own language, not only had

written language, they also produced maps. Using runic symbols, the Ojibwe produced thin birchbark scrolls to record stories, histories, instructions for ceremonies, as well as maps with step-by-step instructions for getting from point A to point B, similar to those provided by a GPS today (an example is reproduced as a drawing on [this website](#)). We know from journal descriptions from several Mississippi headwaters explorers that the Ojibwe provided them with rough maps and instructions on birchbark. The scenes above show modern Ojibwe actors in the documentary preparing birchbark scrolls.

Beltrami brought home numerous scrolls, which are now in the Bergamo Museum of Natural History. Although the scrolls were known to the archivists of the museum, and Beltrami had written that he used them to draft his map of northern Minnesota for his book, it wasn't until a few years ago that their exact contents were revealed. Over the 200 years since Beltrami's expedition, the scrolls had dried and hardened, and archivists weren't sure how to try to unroll them to view the contents without damaging the scrolls. With the assistance of Smithsonian Museum curator Dr. Cesare Marino, they worked on carefully steaming open Beltrami's collection of scrolls, and discovered on one of them the first known accurate map of Red Lake (now Cass Lake) and vicinity, including the northernmost source and tributary to the Mississippi River at Lake Julia, and the Turtle River flowing from it to Red Cedar. Dr. Marino presented information about the newly discovered information on these scrolls at the 2023 Celebration of the Bicentennial of Beltrami's expedition in Bemidji; he is preparing a new publication about them.

inspired in him a new plan: to find the source of the Mississippi River. Clark disembarked at St. Louis while Taliaferro and Beltrami continued to Fort Snelling, at the confluence of the Mississippi and Minnesota Rivers, on the *Virginia*, the first steamboat to reach that far north. There Beltrami met and joined the expedition of Major Stephen Long, who planned to travel up the Minnesota River and down the Red River until he was able to determine the 49th parallel, the newly-agreed dividing line between western Canada and the U.S. At Fort Pembina the two parted, apparently over disagreements between Beltrami and Long. Long headed into Canada; Beltrami, after recording a detailed account of the fort and the native Ojibwe and Dakota customs, set out on August 9, 1823, with several Ojibwe guides.

Just a week and a half later, the Ojibwe abandoned Beltrami, yet he struggled on alone, sometimes with the help of other indigenous groups. On August 28 he found a lake he believed to be the source of the Mississippi River. He named it Giulia (now Lake Julia), after his deceased Medici friend (and named several nearby lakes after her children). He returned south to Fort Anthony, carrying two Native American flutes he had obtained along the way—one of these is in the *Museo Civico di Scienze Naturali* in Bergamo, Italy, and is thought to be the oldest intact Indigenous American flute.

Beltrami continued south all the way to New Orleans, where he stayed for eight months while writing and publishing (in French) *La Découverte des Sources du Mississippi et de la Rivière Sanglante* (*The Discovery of the Sources of the Mississippi and the Bloody River*). He then left immediately for Mexico, where he explored extensively and compiled copious notes on natural history and politics.

On his return to New Orleans, however, he was chagrined to find that his book had been dismissed as fantasy by several critics. He returned by roundabout routes to London, where the book was printed in English with the laborious title *A Pilgrimage in Europe and America Leading to the Discovery of the Sources of the Mississippi and Bloody River, with a Description of the Whole Course of the Former, and of the Ohio*. Intriguingly, the book is thought to have heavily influenced *Last of the Mohicans* by James Fenimore Cooper, who might or might not, depending on which source you consult, have lifted some descriptions nearly straight out of Beltrami's work.

Despite the critiques, Beltrami was eventually nominated to membership in a half dozen prestigious scientific organizations. Despite *that*, he was still *persona non grata* with the Vatican, which condemned both his *Pilgrimage* and his later book on Mexico, *Le Mexique*.

Weary of the struggle to be accepted as a legitimate authority in his home country, Giacomo Beltrami eventually retreated to his home in Filottrano, where he styled himself as a Franciscan monk, Fra. Giacomo. He died at the age of 76 on January 6, 1855.

Despite the fact that the actual source of the Mississippi River was eventually located to the south and west of Lake Julia—although Julia is technically the farthest *north* source from the mouth of the river—Beltrami is now recognized for having pushed the search for the true source farther than any European had at that time, and his accounts represent valuable history and observations of the people and landscape in the early 19th century.

— Jonathan Hanson



ABOVE: The authors would like to mention in memoriam two people who were important to this project. First is Reis Hall, local paddler, conservationist, and river guide (farthest left in the photo at upper right), who helped inspire them to undertake the project and who shared his knowledge of the tributaries in the headwaters region. Second, and integrally involved with the project, is renowned regional musician Jim Miller (playing the banjo with Norwood Hall in the photo at upper left), who composed ballads and played instrumentals for the soundtrack, and who played William Morrison in the series of documentaries.

RIGHT: Filming the reenactment of Beltrami's expedition in the cool waters of the Mud River, northern Minnesota, 2016.





*“I soon realized that no journey carries one far
unless, as it extends into the world around us, it goes
an equal distance into the world within.”*

– Lillian Smith

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