

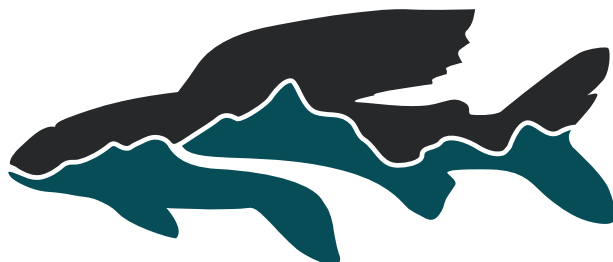
# Free Flows

A Quarterly Publication

Fall 2014

## This Issue

Grayling Listing  
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Driftboat Winner  
Big Hole River Day Recap  
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**BIG HOLE RIVER**  
**FOUNDATION**

The Big Hole River Foundation's mission is to conserve, enhance and protect the free-flowing character of the Big Hole River, its unique culture, fish and wildlife.

## 2014 Events

Nov 2014 to May  
2015 - Sweetgrass  
Bamboo Fly Rod  
Raffle

Nov 22-23 Winter  
Bazaar Booth at  
Butte Civic Center

## Grayling Listing Not Warranted

The U.S. Fish and Wildlife Service announced on the 19<sup>th</sup> of August, 2014 that protecting the Upper Missouri River Distinct Population Segment (DPS) of Arctic grayling under the Endangered Species Act (ESA) is not warranted at this time.

The Service reached this conclusion after analyzing the significant conservation efforts carried out by private landowners as well as federal and state agency partners to improve conditions for Arctic grayling in the Upper Missouri River basin. These efforts have helped bring the species to the point that it is not in danger of extinction now or in the foreseeable future, i.e., does not meet the definition of an endangered or threatened species under the ESA.

Many people do not realize, but the first status review by the Service for the fluvial Arctic grayling was conducted in 1982, where they designated the fluvial Arctic grayling a Category 2 Species. Category 2 Species are those that listing was possibly appropriate but they did not have sufficient data to support a proposed rule to list the species. Twelve years later in 1994, the Service listed the fluvial Arctic grayling as a candidate species for listing under the Act. Historically, Arctic grayling inhabited the mainstem rivers and larger tributaries in the Missouri River basin from present-day Great Falls, upstream into northwest Wyoming. Grayling face a number of stressors including habitat loss, modification, degradation, fragmentation, climate change and nonnative species introductions within its occupied and historic range.

Private landowners in the Big Hole and Centennial valleys worked through a voluntary Candidate Conservation Agreement with Assurances (CCAA) to achieve significant conservation of grayling within its range. Since 2006, over 250 conservation projects have been implemented under the CCAA to conserve Arctic grayling and its habitat, including: riparian fencing, irrigation flow reductions, improved irrigation infrastructure, fish ladders, improved stock water systems, and both passive and active stream restoration. Habitat quality has improved and grayling populations have more than doubled since the CCAA began in 2006.

*see Listing on Page 5*

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# President's Message

Summer's gone, the browns are spawning, and another year is drawing to a close. A 'state of the Foundation' analysis is in order. It seems an organization like ours consists of four attributes: staff, board of directors, membership, and fiscal condition of the organization.

Our staff is about as good as it can get. Executive Director Mike Bias is a sound, creative, respected scientist who works well with the landowners of the valley as well as other organizations concerned with the health of the Big Hole River valley and all its inhabitants. He is adept at raising money to support our several initiatives and to maintain our presence in the valley. Simply put, he is critical to the success of our mission and our image. His ED report in this Newsletter gives an indication of breadth of his work for the River.

Operations Manager Corky Logan is indispensable. She's been with the Foundation for over 13 years, longer than anyone else has held her position. She knows well each of the regular activities we undertake each year, such as Kid's Day and Big Hole River Day, which allows the rest of us to concentrate on policy issues that show up regularly and to which the Foundation must respond. She provides the steady hand on the tiller and alerts us to the occasional declining balance in the checking account.

We've had a very good Board for as long as I've been a member, but we strengthened things in the last few years. Steve Clark is a sound thinker who brings a point of view formed over years in out-of-valley circumstances. He can spot the parochial bent long before the rest of us sense it. Michael Cooperman is a fisheries biologist working for the State of Vermont, and has been a significant supporter of the Foundation for some time. He brings a wealth of clear thinking and expertise on issues affecting the River that the rest of us on the Board might miss. Bill Melvin was a Butte-Silver Bow County Commissioner in the recent past, during which he dealt with several issues directly affecting the River, such as requests for permits to build bridges across the River, etc. We are all better off because they've joined the Board. This is not to belittle the contributions of long-standing Board members and ranchers in the valley, Ray Weaver and Hans Humbert, or Chuck Bulen, who owns and operates the Sportsman's Motel in Melrose, or Joe McBride, a financial planner by profession, who's watched over our very limited investments over the last several years. We also have the time and talent of Wade Fellin, a fishing guide from Wise River who is studying law and Sheila Youngblood a retired educator without whose excellent editing skills, our publications would not be what they are today. We couldn't have a stronger Board.

We could have a stronger fiscal condition, however. We are well below normal income levels, although Big Hole River Day was very strong this year and we've been doing great work for the past several years. We have to change how we do business, focusing more on grant writing and income and less on the contributions of major donors to fund our activities over the next few years. Mike Bias has assured me he can get that job done, and I'm confident he can do it. As always, we'll count on your continued support as well.

Thank you for sticking with us through these lean times.

*Tom*

# Executive Director's Message

Dear Members and Supporters:

Wow, summer has flown by. Last time I was telling you about our preparations for Big Hole River Day and projects for the summer. And now, 2014 Big Hole River Day has come and gone. As many of you know, it was quite a success. In fact, at this month's board meeting we are discussing details of Big Hole River Day 2014 and planning for the 2015 event.

Our major donor float the day prior to Big Hole River Day was a success as well. Several guests were treated to a day's float on the Big Hole with board members and a small reception that evening. While some fish were caught, most of the day was spent discussing current projects and planning future projects.

August was a bit exciting. On the 19<sup>th</sup> of that month, I attended the Grayling Landowner and Partner Appreciation BBQ. The event was well-attended by conservation staff and landowners from the Big Hole involved in grayling conservation. It was sponsored by Fish, Wildlife & Parks, Department of Natural Resources Conservation, Fish and Wildlife Service, and the Arctic Grayling Recovery Program. It also coincided with the Fish and Wildlife Service's announcement that the grayling was NOT warranted for listing. We were honored by the group to receive a Grayling Conservation Award for our help in the conservation efforts of the grayling. Three other non-profit groups also received an award as well, The Nature Conservancy, the Big Hole Watershed Committee, and the Arctic Grayling Recovery Program. All individual landowners working to conserve grayling received awards. It was an exciting evening for everyone involved.

Spring and summer field sampling for this year's work on our macroinvertebrate study were completed. The progress report for that work was written and posted on our website ([www.bhrf.org](http://www.bhrf.org)).

We continue to look at and seek funding for additional conservation projects along Moose Creek, an important tributary to the Big Hole for water quantity and quality. We are planning another project on Moose Creek to manage grazing along additional portions of the creek through our Stewardship Fence Program. After more detailed field work, the channel restoration work necessary along Moose Creek was more extensive than initially thought. However, both landowners are onboard with doing the work necessary to restore Moose Creek to a more fully-functioning tributary to the Big Hole.

We began proposals to seek funding for bringing Trout Unlimited's Trout in the Classroom program to the Melrose and Twin Bridges schools along the Big Hole River. Trout in the Classroom (TIC) is a conservation-oriented environmental education program for elementary, middle, and high school students. Through the school year, students raise trout from eggs to fry. The process of raising, monitoring, and caring for young trout fosters a conservation ethic within participating students and promotes an understanding of their shared water resources. Most programs end the year by releasing their trout in a state-approved pond near the school or within a nearby watershed. Both schools are excited at the opportunity to raise trout from eggs.

Thank you for your help and support.

Respectfully,

*Mike*

# Thank You

We are grateful for the following members and donors who have renewed or made recent contributions and gifts in support of our mission as of September 30, 2014.

Every effort has been made to maintain accuracy. If we have made any errors, please call 406-560-7089 or email [bhrf@bhrf.org](mailto:bhrf@bhrf.org).

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### Memorials

Judy Corbin in memory of Joe Seymour  
Ray & Maureen Shiflett in memory of Robert Kay

## Sweetgrass Rod Raffle

**Our next raffle will be a Sweetgrass Series Hex 8'3" 5 wt 3 piece 2 tip fly rod with downlocking reel seat and half wells grip.**

**Tickets will be available**

**November 22-23 at our booth at the Winter Bazaar at the Butte Civic Center and will also be available at fly shops around the watershed and by mail.**

**Pre orders for tickets can be made now by calling the Foundation at (406)560-7089. Tickets are \$10 each or 3 for \$20. Drawing will take place at Kid's Day on May 2, 2015. Don't miss your chance on this top of the line Sweetgrass fly rod.**

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## Foundation Welcomes New Board Member Bill Melvin



Bill has been married to his wife Danette for over 30 years and has three children, Kerra, Hallie and Ross. He has been enjoying recreation on the Big Hole his entire life and loves to float and fish the Big Hole. He also enjoys bird hunting and camping. He has worked for many different businesses in Butte and currently manages the Butte Civic Center. He is looking forward to being an active member of the Board of Directors.

Welcome Bill!



*Listing continued from Page 1*

“This is a prime example of what a CCAA can do, not only for wildlife, but also for sustaining the way of life in a rural ranching community,” said Service Director Dan Ashe. “The conservation progress for Arctic grayling would not have been possible without the amazing support we have received from willing landowners and other partners in the Big Hole River and Centennial valleys.”

The cooperation between the federal and state partners serves as a model for voluntary conservation across the country. Montana Department of Natural Resources and Conservation developed a new system to improve in-stream flows in the Big Hole

Watershed, while the USDA’s Natural Resources Conservation Service helped implement conservation measures for grayling. Montana Fish, Wildlife & Parks administered the Big Hole CCAA, hired biologists to work directly with landowners, raised grayling to bolster existing populations and worked to better understand the needs of grayling.

We think this is a rather unique decision by the Service, as it demonstrated their trust in the private landowners and state agencies to adequately manage grayling populations into the future. The responsibility is now ours to continue to successfully manage the Arctic grayling.



## Congratulations to our 2014 Drift Boat Raffle Winner Darrell Scharf of Whitehall



# Big Hole

Big Hole River Day 2014 was an astounding success. The day began with a pancake breakfast hosted by the 4-H Club at the Hitchin' Post followed by a wide variety of vendors and crafts booths open throughout the day. The afternoon started rocking with The Cold Hard Cash Show, a Johnny Cash tribute band, hosted by Headwaters Fly Shop, Melrose Bar and BHRF. The Sunrise Fly shop held the largest attended to date fly casting competition in the specially made fly casting pool. They had to get all the kids out of the pool first though as it had become a slip and slide during the hot afternoon. Following the end of the Cash Show, the Heather Lingle Band began playing for the dinner crowd and after a stunning rendition of the Star Spangled Banner at the end of their set, over 100 people sat down to a dinner like no other with Ray & Rich Weaver's stuffed BBQ pig and delicious sides served by Front Street Market. The live and silent auctions were filled with quality merchandise and trips and the culmination of the event was the drawing for the Hyde Drift Boat. Congratulations to Darrell Scharf of Whitehall on winning a new drift boat.

All proceeds from the event go to support the mission and work of the Big Hole River Foundation. A big thank you to our sponsors, donors, vendors, bands, cooks, 4-H Club, volunteers, Town of Melrose and our attendees.

We hope to see you again next year on the 3rd Saturday in July in Melrose.



# River Day





# What does that mean?

~ Didymo (rock snot) by Mike Bias

The alga, *Didymosphenia geminata*, commonly referred to as “didymo” or “rock snot”, is a freshwater microscopic diatom. It is native to, and found in, mountainous streams and rivers across much of North America and Europe. In recent years didymo has expanded into lower elevations, latitudes, and new regions of the globe. In Montana, didymo was first reported in 1929 at Flathead Lake and has likely been present in the northern Rockies since at least the end of the last ice age, about 10,000 years ago. Didymo can form extensive mats (or blooms), which can be several centimeters thick and up to 20 km (12 mi) in length. Larger blooms can inhibit growth of other algal species, change the composition of aquatic communities, decrease the amount of suitable spawning habitat for fish, and cause changes in stream chemistry. Blooms of didymo also greatly decrease the aesthetic appeal of streams.

Didymo attaches to the streambed by a stalk and it forms thick mats. These mats have a rough texture similar to wet wool and can look like strands of toilet paper. Research has shown that didymo isn't like most species of algae. Under normal nutrient conditions, didymo exists in the cellular form and does not produce the dense nuisance mats, but under low-nutrient conditions, it shifts from cell production to mat production. Thus, for didymo the amount of material grown increases as nutrients decrease. This is contrary to most other species of algae. The two most common nutrients that most plants (including algae) require are nitrogen and phosphorus.

In recent years, streams in New Zealand, South America, and Asia – where didymo is a non-native invasive - have noted

unprecedented masses of didymo. This diatom is able to blanket up to 100% of stream surfaces with thicknesses of greater than eight inches, potentially altering physical and biological conditions within streams.

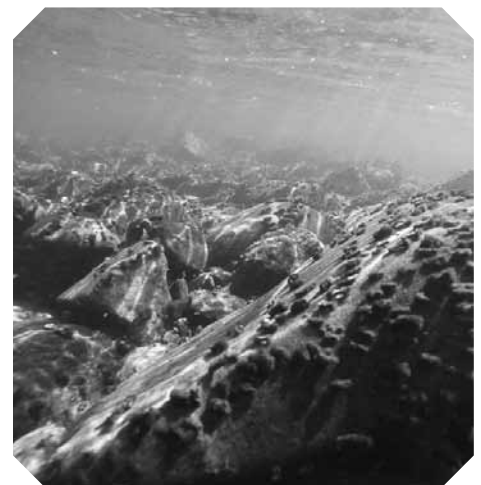
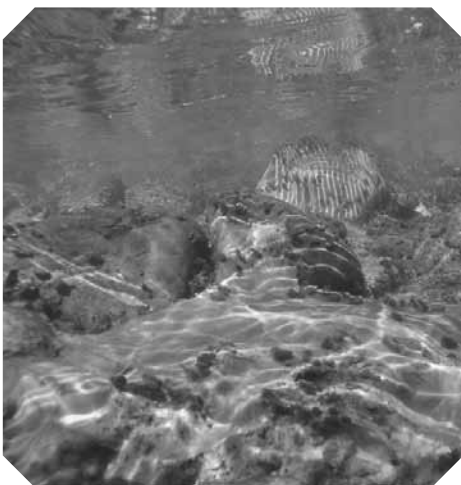
## Prevent the Spread of Didymo

Cleaning equipment between uses on different freshwater systems is important to prevent the spread of didymo and other invasive species. If you can follow the simple Inspect, Clean and Dry steps, then you will do a world of good. Take a close look at your equipment for any rocks, mud, plants, moss or other materials. Physically remove it. Thoroughly clean your equipment with water and a brush to remove any attached materials. Completely dry your equipment in the sun.

For decontamination methods specific to didymo, visit the links below in the report “Decontaminating Equipment”. For more information on general cleaning practices, go to [www.cleanangling.org](http://www.cleanangling.org).

## References:

- Clean Angler, <http://www.cleanangling.org/>
- Dunnigan, Jim. 2014. Didymo research grows interesting Kootenai River facts. The Western News. <http://www.thewesternnews.com>.
- Invasive Species Action Network, [www.stopans.org/didymo.html](http://www.stopans.org/didymo.html)
- Kootenai River Network. 2014. Kootenai River Fishery Updates. [www.kootenairivernetwork.org](http://www.kootenairivernetwork.org)



Photos by Wade Fellin taken just below Dickey Bridge. First two show didymo on the rocks and the third shows healthy rock covered in caddis cases.



# Species Spotlight ~ Pronghorn (*Antilocapra americana*)



The pronghorn, is a species of artiodactyl mammal indigenous to interior western and central North America. Though not an antelope, it is often known colloquially in North America as the prong buck, pronghorn antelope, cabri (native American) or simply antelope.

Pronghorns have distinct white fur on their rumps, sides, breasts, bellies, and across their throats. They have a highly developed sense of curiosity compared to related animals. The eye sockets are prominent and set high on the skull giving the animal vision comparable to a set of binoculars for humans.

Each "horn" of the pronghorn is composed of a slender, laterally flattened blade of bone that grows from the frontal bones of the skull, forming a permanent core. As in giraffs, skin covers the bony cores, but in the pronghorn it develops into a keratinous sheath which is shed and regrown on an annual basis.

Males have a horn sheath about 5-17 inches with a prong. Females have smaller horns that range from 1-6 inches and sometimes barely visible; they are straight and very rarely pronged. Males are further differentiated from females in having a small patch of black hair at the angle of the mandible. Pronghorns have a distinct, musky odor. Males mark territory with a scent gland which is located on the sides of the head. They also have very large eyes with a 320° field of vision.

The pronghorn is the fastest land mammal in the Western Hemisphere, being built for maximum predator evasion through running. The top speed is very hard to measure accurately and varies between individuals; it can run 35 mph for 4 miles and 55 mph for 0.5 miles. Compared to its body size, the pronghorn has a large windpipe, heart, and lungs to allow it to take in large amounts of air when running. Additionally, pronghorn hooves have two long, cushioned, pointed toes which help absorb shock when running at high speeds.

Pronghorns were brought to scientific notice by the Lewis and Clark Expedition, which found them in what is now South Dakota. Their range extends from southern Saskatchewan and Alberta in Canada south through the United States (southwestern Minnesota and central Texas west to coastal southern California and northern Baja California Sur, to Sonora and San Luis Potosí in northern Mexico. They are widely distributed and fairly plentiful in the Big Hole.

Pronghorns prefer open, expansive terrain at elevations varying between 3,000 and 5,900 feet. They eat a wide variety of plant foods, often including plants unpalatable or toxic to domestic livestock (sheep and cattle), though they also compete with them for food. Cougars, wolves, coyotes, and bobcats are their major predators. Golden eagles have been reported to prey on fawns.

Pronghorns form mixed-sex herds in the winter. In early spring, the herds break up, with young males forming bachelor groups, females forming their groups, and adult males living solitarily. Some female bands share the same summer range, and bachelor male bands form between spring and fall. Females form dominance hierarchies with few circular relationships. Dominant females aggressively displace other females from feeding sites.

Adult males either defend a fixed territory that females may enter, or defend a harem of females. A pronghorn may change mating strategies depending on environmental or demographic conditions.

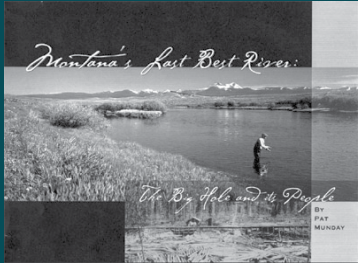
Pronghorns have a gestation period of 7–8 months, which is longer than is typical for North American ungulates. They breed in mid-September, and the doe carries her fawn until late May. This gestation period is around six weeks longer than that of the white-tailed deer. Twin fawns are common, newborn pronghorns weigh 4.4–8.8 pounds. In their first 21–26 days, fawns spend time hiding in vegetation. Fawns interact with their mothers for 20–25 minutes a day and this continues even when the fawn joins a nursery. The females nurse, groom, and lead their young to food and water, as well as keep predators away from them. Their lifespan is typically up to 10 years, rarely 15 years.



# BHRF Merchandise

The Big Hole River Foundation has books, logo fishing shirts, vests and hats for sale.  
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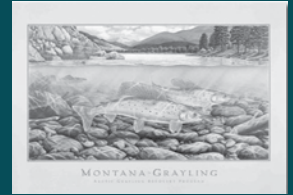


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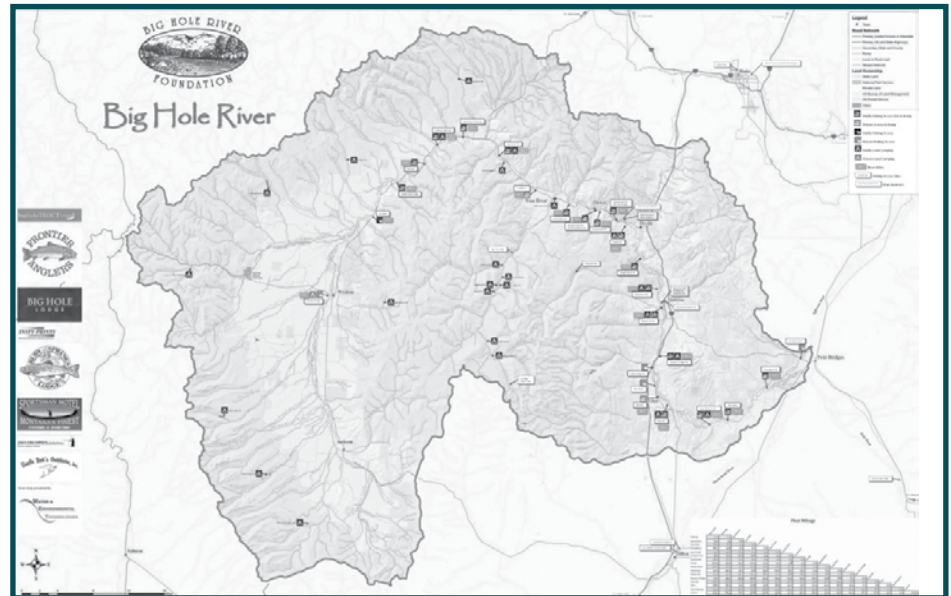


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