

YBRA UPLIFT



Issue 21

Annual Newsletter of the Yellowstone-Bighorn Research Association (www.ybra.org)

2015



Moving Forward in 2014 - 2015

From the President,

This past year YBRA has made important strides in fund raising, establishing new alliances, reconnecting with alumni, and promoting our story. Donations totaling over \$15,000 were received from a long time YBRA member and the Stephen M. Seay Foundation Inc. arranged by a former student in the YBRA geology field course. These funds will be applied toward building a student dormitory, named in honor of Russ Dutcher, and other needs that will enhance the educational and career goals of YBRA students. We are continuing to contact key individuals, corporations, and organizations that have alliances with YBRA and can provide future support. Locally, we are participating for the first time in the Red Lodge Fun Run for Charities sponsored by the Red Lodge Area Community Foundation. Donations to YBRA through this group generate matching funds. To support YBRA in this manner go to www.rlacf.org/fun-run/ and follow the “donate” and “select charity” links. This is a great way for us to become further involved in the community and generate interest in our story.

We are very pleased to have added two new members to our Advisory Board, Amanda Dasch with Shell Exploration and Production Co. in Houston, TX, and Murray Dighans with SM Energy Co. in Billings, MT (see their biographies in this Uplift). Amanda and Murray bring a petroleum business perspective to our strategic planning as well as regional and national connections to industry leaders and organizations. Murray is an exploration geologist working in the Bakken Oil field and Amanda manages Permian Basin assets for Shell. They and Tyler Krutzfeldt, introduced last year, have added a welcome new dimension to our team.

The 2014 YBRA Alumni-Industry Symposium, our first, was a great success. About 25 alumni and supporters gathered in the lodge for an delicious luncheon prepared by Jeanette and her staff, an afternoon of excellent presentations, and a cocktail hour. We heard an inspiring business success story from Steve Gose of Retamco Operating Co. (Red Lodge, MT), update on the Bakken Play from Murray Dighans, overview of the discovery, mining, and geology of the Stillwater Pt-Pd deposit from Enis Geraughty, and about regulatory and legal resource issues in Alaska from Joe Perkins, a YBRA alumnus. It was particularly gratifying to witness the ensuing discussions and networking that lasted well into the evening. The symposium was followed by a YBRA Open House, replete with camp tours, attended by 45 – 50 people from Red Lodge and the surrounding region. The event was well received by the community with requests for future outreach activities. The **2015 YBRA**

Industry Day Symposium will be held in the lodge on **Tuesday, August 18**, and will feature presentations on 100 years of oil production from Elk Basin, a Tyrannosaurus-Rex discovery in the Bighorn Basin, recent Montana business legislation applicable to the resource industry, and unconventional oil and gas plays (agenda on p. 6).

Our website, www.ybra.org, redesigned in 2014, is continually being updated and improved. It has a blog where news items, images, videos, and interesting stories are posted, a mechanism to subscribe to YBRA communications, a “*donate button*” for making contributions and paying dues, and a link to the growing YBRA LinkedIn group. Additionally, booth materials and packets are being prepared for promoting YBRA at professional meetings, such as those sponsored by GSA and AAPG, and will be unveiled at this year’s venues.

Momentum is building for increasing the impact of YBRA in fulfilling its educational, research and outreach mission. All of our efforts will benefit students directly or indirectly. Although we are reaching out to companies large and small, the involvement of individual YBRA members is at the core of our success. We rely on your help, suggestions, and contributions in all forms.

When you receive this Uplift please do the following:

- 1) **Provide your e-mail address** to update our records (rhfifarek@gmail.com),
- 2) **Join the YBRA LinkedIn Group**; invite other alumni/supporters to join,
- 3) **Join us for the annual YBRA meeting, or work days, August 19 – 22,**
- 4) **Send in your proxy** and, if possible, donate to one of our funds by check, or electronically by credit card using the “donate button” at www.ybra.org.

We greatly appreciate the past support we have received from members and with continued effort we can ensure YBRA thrives well into the future.

Richard Fifarek...

rhfifarek@gmail.com



Fom the Camp Manager...

YBRA is actively making progress in upgrading the campus. Last summer we were able to accomplish a long list of improvements. Many of the projects were funded through donations from alumni. Without this kind of support improvements can be very slow in accomplishing. Thank you very much to all those that help support YBRA.

Foose cabin had a new deck and railing installed. Princeton cabin had the cedar shake roof replaced with metal. Laminate was installed on all kitchen serving tables. New battery-operated power tools were purchased for the maintenance department. A gate was installed in the fence below the fire pit area. All of these projects were funded through contributions.

Other camp improvements included both water storage tank interiors being sandblasted and painted. All dead trees around camp buildings have been removed. Road improvements are starting to show results.

Also a grant funded the installation of a GPS and weather station on camp property.

Progress of camp opening can be followed on <http://www.ybra.org/>, under the news tab, and then latest news.

Come join us for work week, August 19 - 22. Work a little, play a little, and enjoy yourself at YBRA. I hope to see all of you this summer. See what we are doing for improvements this year. Be a part of making YBRA the best camp for teaching our future leaders.

Ray Raymond...



New gate at "the point" for emergency exit from camp.

2015 Camp Schedule

This year we welcome four new groups to YBRA: Montclair State University, Lehigh University, the US Forest Service (2 nights), and the The Woods Project (<http://www.thewoodsproject.org/>), which provides a wilderness education and exploration experience for disadvantaged youths from the Houston area. Camp users will total about 300 this year of which about 200 are geoscience students. Virtually all camp use will be in June and July and at times slightly exceed our capacity to house all participants. ***This situation highlights the need for 2 additional student dormitories and a small conference center/study hall complex, the centerpiece of our fund-raising campaign.***

JUNE

May 31-June 11: Montclair State Univ.
June 2-20: Univ. of Houston/YBRA Geology Course I
June 7-13: Pennsylvania State Univ. Geology Course
June 10-30: Roger Williams Univ. Biology/Ecology Courses
June 22-29: Lehigh Univ. Geology Course
June 14-30: Southern Illinois Univ. Geology Course

JULY

July 12: YBRA council and general meetings
July 1-2: Roger Williams U. Biology/Ecology Courses
July 1-7: Southern Illinois Univ. Geology Course
July 5: Univ. of Houston/YBRA Geology Camp I
July 6-25: Univ. of Houston/YBRA Geology Camp II
July 8-9: US Forest Service
July 9-26: Ohio Univ. Geology Course
July 12-31: New Jersey State Museum
July 26-31: Woods Project

AUGUST

August 1: New Jersey State Museum
August 8: Univ. of Houston/YBRA Geology Camp II
August 18: YBRA Alumni-Industry Symposium 2015
August 19-22: Volunteer Work Days



New porch on Foose cabin.

Meet Our New Advisory Board Members

Amanda Ash Dasch

currently works for Shell E&P as an Area Manager on the Permian Basin Asset, responsible for subsurface technical evaluation and maturation of exploration and development opportunities. She has worked as a production and development geologist in multiple onshore assets and deep water Gulf of Mexico, and as an energy analyst and consultant in finance, business planning and strategy. Prior to working at Shell, Amanda was the Paleobotany Collections Manager at the Smithsonian Institution in Washington, D.C., where she researched the ecological and environmental impacts of ancient climate change through the study of fossil plants and insects. She holds a B.A. in geology from Amherst College and a Ph.D. in geological sciences from the University of Michigan. Amanda is passionate about delivering safe, responsible energy and inspiring a love and appreciation of science in people of all ages.



Her first trip to YBRA was as an infant to visit her grandparents, Richard “Pete” and Dottie Foose, and she has been making regular trips to YBRA ever since. She attended field camp as an undergraduate at Amherst College and that experience solidified her love of earth science. In 2004, she and her husband were married in Red Lodge and thanks to Jeanette and many others, had the privilege of holding the rehearsal gathering at Fanshawe Lodge. Amanda lives in Houston with her husband, John, son, William, and daughter, Riley Grace, and the whole family is excited to be an active part of YBRA.

And...

Murray Dighans

I grew up on a farm and ranch in Peerless, Montana collecting rocks and driving tractors. After high school I pursued an education at Rocky Mountain College in Billings, Montana, a short forty five minute drive from the YBRA. I completed my degree at Rocky receiving a B.S. in Geology and a minor in Environmental Science. While at Rocky under the advisement of Dr. Kalakay, a professor in the UH-YBRA course, I gained an appreciation for the local geology. I am a member of the American Association of Petroleum Geologists and the Montana Geological Society.

Following college, I worked as a wellsite geologist in the Williston Basin for 3 years before gaining employment for SM Energy. I have worked for SM Energy since 2012 as an operations geologist in their North Rockies Asset Team. Currently, I am evaluating the effects of certain facies in the Middle Bakken and Three Forks Formations on drilling, completions, and overall productivity. Recently, I was accepted to Utah State University to pursue a Master’s degree part time.

Crowdfunding Science is Going Mainstream

Jason P. Schein, *New Jersey State Museum*

Crowdfunding in its modern, internet-based form, is less than 10 years old, and yet it has already grown into an enormous industry. It reached \$5.1 billion worldwide in 2013, and some projections foresee it surpassing \$95 billion by 2025. In March 2014 alone, more



than \$60,000 was raised *each hour* around the world.

Those numbers are staggering - no doubt - and some corners of the economy were early adopters of this new medium. Artists and entrepreneurs, especially, were quick to embrace crowdfunding (think [Kickstarter](#)), and now commonly rely on it. Scientists, though, and particularly earth scientists (and especially paleontologists!) have been very slow to adapt to this new source of funding.

That is beginning to change. A number of crowdfunding sites exclusively for scientific research have entered the fray in recent years. Sites like [Petridish.org](#), [RocketHub.com](#), [SciFund Challenge](#) and [Experiment.com](#) have raised millions of dollars for hundreds of successfully-funded projects in just the last few years alone.

I’ve experienced some of this success first hand. In February of this year, the Bighorn Basin Dinosaur Project (the group of paleontologists from the NJ State Museum that invade YBRA each summer) launched a crowdfunding campaign to raise extra funds needed for what is expected to be an unusually extensive excavation in the upcoming field season. The campaign has expired, but you can still see our project here: www.Experiment.com/Dinosaurs. Our campaign was enormously successful. We raised nearly 50% of our goal of \$5,985 in the first 24 hours, and surpassed our goal by the midpoint of the 35-day campaign. But the success wasn’t just financial. The campaign was *enormously* successful in raising awareness of the BBDP, and

at least 25% of the participants joining us this season found out about our project solely via the campaign. There is little doubt that the campaign will leave a significant imprint on our program for many years to come.

This success also has inspired me to become a crowdfunding evangelist for the scientific community. Several colleagues and I recently submitted an abstract for the annual meeting of the Society of Vertebrate Paleontology detailing the successes of our campaign, including data regarding what groups of people donated (e.g., colleagues, past participants, unknowns), how much they donated, etc. We also combined our data with two other successful paleontology-themed campaigns on Experiment.com (“The Dig School: Hands-On Paleontology Experiences for K-12 Science Teachers,” and “Bring a *Triceratops* to Seattle”) to analyze the timing and amount of individual donations over the duration of those campaigns. We also plan to submit an abstract for a similar, but much more extensive project, detailing these aspects from *all* of the successful earth science and paleontology-themed campaigns on Experiment.com, later this summer. If accepted, this project will be presented to the annual meeting of the Geological Society of America.

Our hope is that the success we’ve enjoyed throughout the campaign and since its conclusion, will become the norm among researchers, especially within the earth-science (including paleontology) community. In an age of shrinking government support, crowdfunding presents a viable alternative to fund mission critical aspects of scientific research. However, the payouts go far beyond a simple dollar amount. Crowdfunding forces scientists to tell their research story to the general public, which gives the “average Joe” a far better appreciation for what it is we do than they might get from traditional sources, like the all-too-often sensationalized news headlines. Educating the public about our research can only help build support for our sciences, which I think most of us would agree is desperately needed.



BBDP crew members mapping and excavating dinosaur remains in Elk Basin, Wyoming, in 2014.



BBDP expedition leadership and crew members in 2014 in the Bighorn Basin.



BBDP crew members near Johnsonops Hill, near Powell, Wyoming, in 2014.

Book Review

Review of *Midnight Sun, Arctic Noon: Mapping the Wild Heart of Alaska* by Mary Albanese

In my previous book reviews for the Uplift, I always read fiction that uses geology as the backdrop for the story. This year, I found a compelling non-fiction book by a creative writer, Mary Albanese. She grew up in rural New York State and got the bug to go to the last Frontier in Alaska. After completing her undergrad degrees at SUNY Long Island, she goes to Alaska thinking she'll work as a teacher but ends up doing her M.S. degree in Geology in Fairbanks. The chance to go exploring and see the world was more tempting than a one-room school or municipal school district teaching science and art. She immediately fell in love with field work from field trips and field camp. This should be a familiar theme to all those who read the Uplift. She got to live her dream for a decade until opportunities in the lower 48 and overseas took her away from the adventures associated with field work. Her book is filled with typical stories of rugged traverses, hard conditions, bear encounters that pervade after work retelling of the days events. Even if you have never worked in Alaska, any geologist will appreciate her insights into working in the wild. This is an enjoyable read for its memorable adventures. We can all hope to live up to Mary's motto of "If at first you don't succeed, try something that's harder," "If at first you don't succeed, try something that's harder..."

Jinny Sisson, University of Houston

YBRA Industry Day Symposium 2015

Tuesday, August 18

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|-----------------------------|--|
| 12:00 – 1:00 pm | Lunch at YBRA Main Lodge (sponsored) |
| 12:45 – 1:00 pm | <i>YBRA's Legacy and Vision</i> Richard Fifarek, President |
| 1:00 – 1:30 pm | Special Guest, <i>A New T-Rex Discovery in the Bighorn Basin</i> |
| 1:30 – 2:00 pm | Mark Vredenburg, Vanguard Natural Resources, LLC
<i>100 Years of Oil Production from Elk Basin</i> |
| 2:00 – 2:30 pm | Amanda Dasch, Royal Dutch Shell <i>Unconventional Oil Plays</i> |
| Coffee Break & Tour of YBRA | |
| 2:30 – 3:00 pm | Emily Geraghty Ward, Rocky Mountain College
<i>Update on Exxon-Mobil collaboration</i> |
| 3:00 – 3:30 pm | Dustin de Yong, State of Montana
<i>2015 Legislative Update, Natural Resource Sector</i> |
| 3:30 – 4:00 pm | Tyler J. Krutzfeldt, Mont Vista Capital <i>YBRA: Building Bridges</i> |
| 4:00 – 4:30 pm | Questions & Answers; Wrap up |
| 4:30 – 5:30 pm | Bighorn Beverages (sponsored by Mont Vista Capital) |

YBRA Who's Who?

Officers

President: Richard Fifarek, Southern Illinois Univ.
Past President: Jinny Sisson, University of Houston
Vice President: Peter Crowley, Amherst College
Secretary: Laurel Goodell, Princeton University
Treasurer: Betsy Campen, Billings, MT

Councilors

Tom Anderson, University of Pittsburgh
Jerry Bartholomew, University of Memphis
Eric Ferre, Southern Illinois University
Robert Giegengack, University of Pennsylvania
Tom Kalakay, Rocky Mountain College
Marv Kauffman, retired, Franklin & Marshall Coll.
Jennifer Lindline, New Mexico Highlands Univ.
Mike Murphy, University of Houston
Phil Robertson, retired, Southern Illinois University
Jennifer Smith, Washington University
Mari Vice, University Wisconsin-Platteville
John Weber, Grand Valley State University

Advisory Board

Tyler Krutzfeldt, Founder & Managing Director, Mont Vista Capital
Amanda Dasch, Area Manager, Shell Exploration and Production Co.
Murray Dighans, Exploration Geologist, SM Energy Co.

Staff

Ray Raymond, Camp Manager
Jeannette Reinhart, Camp Cook
Greg & Peggy Creasy, Camp Handypersons
Betsy Campen, YBRA accountant
Dennis McGinnis, Financial Advisor



“Beau” in lieu of master Ray Raymond.



Greg Creasy building new YBRA sign.



Peggy Creasy and Jeannette.



Burning slash piles in winter.



Viewing wild turkeys in camp.



Young bucks passing through camp.

Photos on cover (TL to BR): 102 for dinner!; Jeanette ready for business; long-time volunteer, forester Martin Stolpe; SIU departing class photo 2014; students on Mt. Maurice, view overlooking Red Lodge and front range; new sign at base of camp road near Hwy 212

Yellowstone-Bighorn Research Association
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ATTN: Proxy Enclosed